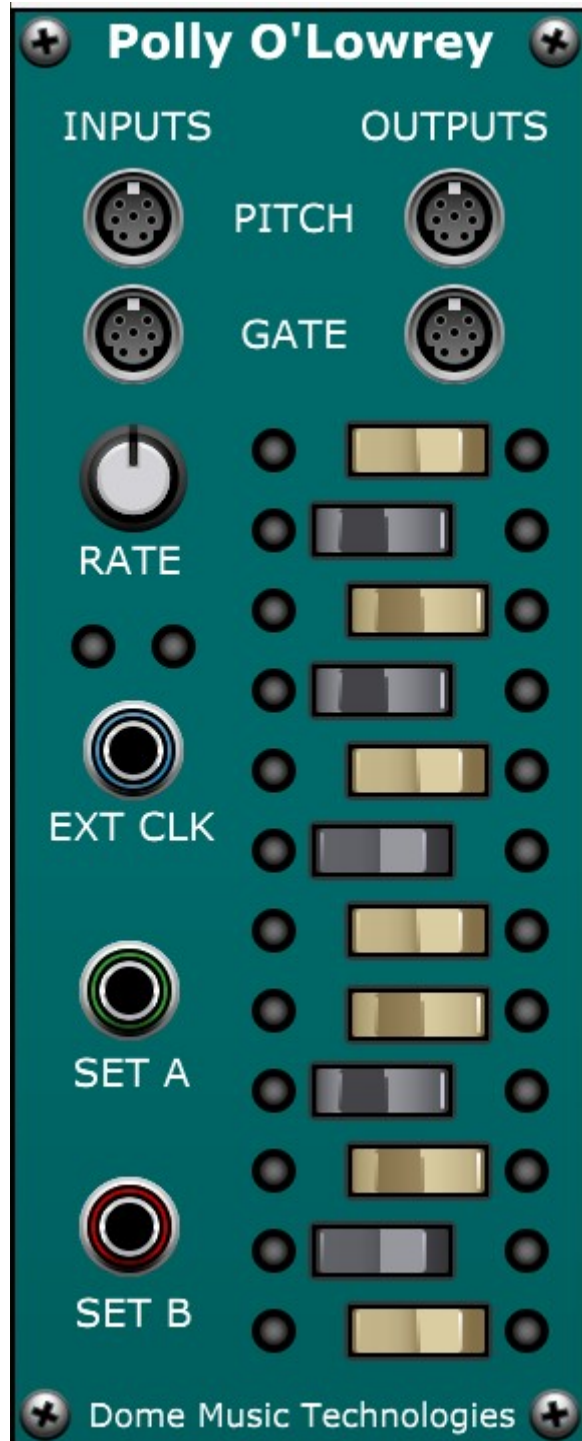


Polly O'Lowrey from Dome Music Technologies




The Polly O'Lowrey module from Dome Music Technologies is inspired by the 'Marimba Repeat' function, which was a feature on several models of Lowrey electronic organ. The most famous use of 'Marimba Repeat' was when Pete Townshend performed the intro to "Baba O'Riley" on his Lowrey Berkshire Deluxe TBO-1. Many people assumed those rippling arpeggios were generated by his massive ARP 2500 modular synthesizer, but it was all done on the Lowrey.



Getting Started with Polly O'Lowrey (for new Voltage Modular users)

If you are new to the world of Cherry Audio's Voltage Modular environment, and you want to get Polly O'Lowrey up and running straight away, then this quick-start guide is for you. On the other hand, if you are already familiar with Voltage Modular, then the remainder of this manual describes the module's operation in detail, and you can skip this section.

1. Download Voltage Modular "Nucleus" from Cherry Audio
Voltage Modular is [available in three 'flavours'](#):

 Voltage Modular Core + Electro Drums Includes: <ul style="list-style-type: none">• Voltage Modular Core (90+ modules)• Misfit Audio Electro Drums (15 modules)• Voltage Modular Software• Core Presets (551 presets)• Electro Drums Presets (94 presets) \$99.00 \$99.00 Add to Cart Demo	 Voltage Modular Ignite Includes: <ul style="list-style-type: none">• 40+ modules• Voltage Modular Software• Ignite Presets (296 presets) \$50.00 \$50.00 Add to Cart Demo	 Voltage Modular Nucleus Includes: <ul style="list-style-type: none">• 20+ Modules• Voltage Modular Software• Nucleus Presets (176 presets) \$0.00 \$0.00 Add to Account
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Polly O'Lowrey will work equally well in each of these environments. By contrast, Polly's sister module "[Baba O'Lowrey](#)" (released in 2022) could only really be used within Voltage Modular Core edition. So, if you're new to Voltage Modular and you just want to get your hands on a 'Marimba Repeat' emulator, then simply go for the free-of-charge [Voltage Modular Nucleus](#) edition. If you don't already have an account with Cherry Audio, you'll need to set one up, but you won't be charged anything to download VM Nucleus. Once you have the appropriate installer software downloaded on your system, run the stand-alone application and configure it for your MIDI keyboard and audio card.



2. Download the Dome Music Technologies Freebie Collection

This bundle is also available completely free-of-charge and includes some modules which are necessary to get Polly O'Lowrey up-and-running on Voltage Modular Nucleus. In particular, the "[Micro Stringer](#)" module is a self-contained polyphonic instrument which recreates the [Lowrey TBO-1 organ sounds](#) within The Who's track "Baba O'Riley". Download the Freebie Collection here:

<https://store.cherryaudio.com/bundles/dome-music-technologies-freebie-collection>

3. Download the Polly O'Lowrey module

This is the only point at which you'll have to crack out your credit card! Polly O'Lowrey will cost just US \$2.00 to purchase. (If you already own "Baba O'Lowrey" or the Dome Music Technologies "Ultimate Collection", then Polly O'Lowrey will be available to download free-of-charge in your Cherry Audio account). Once you have Polly in your account, it will become available in your Voltage Modular "Library" (Under "Polyphonic Utilities") then next time you run Voltage Modular and it syncs with Cherry Audio's servers.

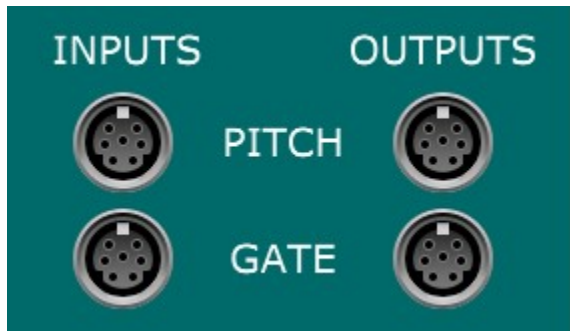
4. Download the Polly O'Lowrey presets pack

There are patch presets already created so that you can immediately start playing tracks from the "Who's Next" album, including "Baba O'Riley" (of course!), "Won't Get Fooled Again", "The Song Is Over" and "Going Mobile". There are also variations of the patches to run from the internal clock, or to sync to a host DAW's tempo.



Module Detailed User Guide

Poly In and Out Sockets



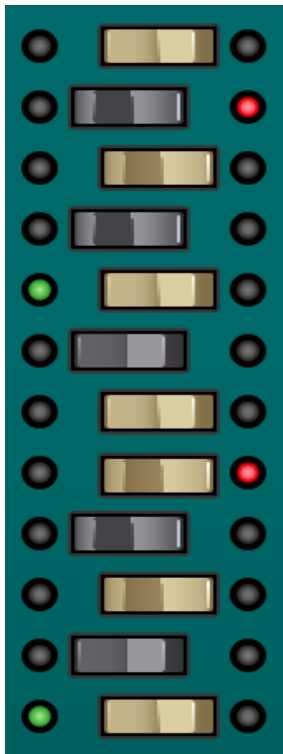
The INPUTS sockets on the left hand side are *'normalised'* to the polyphonic PITCH and GATE signals from Voltage Modular's "POLY SOURCES" panel:



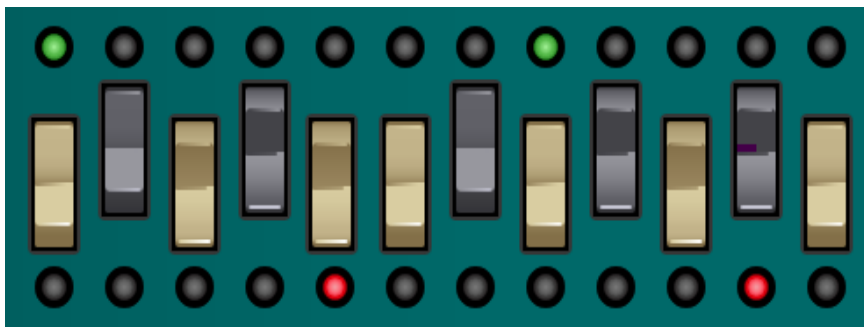
This means that Polly O'Lowrey will receive keyboard pitch and gate signals by default from whatever hardware is driving Voltage Modular (MIDI from a controller keyboard or from a DAW track). If other POLY cables are inserted into these sockets, then the PITCH and GATE signals will be driven by another module's POLY outputs.

The OUTPUTS sockets send processed POLY PITCH and GATE signals onwards to other sound-generating modules which have POLY inputs. For example, "Micro Stringer" from Dome Music Technologies is a very versatile, self-contained polyphonic instrument which is available completely free-of-charge.

Bank Select Switches



The POLY note-on messages received are sorted into two 'storage bins' depending on the settings of the Bank Select Switches. If you turn your head 90 degrees to the left, you can see that the switches are laid out in the pattern of one keyboard octave (C to B). To save you pulling a muscle in your neck, here's what it looks like in horizontal orientation:



When a key's switch is set to the left, all those notes will be stored in Bank A. When a note is played that is destined for Bank A, the green LED to the left of the switch is illuminated until the key is released. Similarly, when a key's switch is set to the right, all those notes will be stored in Bank B. When a note is played that is destined for Bank B, the red LED to the right of the switch is illuminated until the key is released. In the image above, a C7 chord is being held down. The notes C and G have been assigned to Bank A (in green) and notes E and Bb have been assigned to Bank B (in red).

By default, the Bank Select Switches are set up to reflect the hard-wired configuration of the Lowrey TBO-1 organ:

Bank A: B, C, C#, F, F#, G

Bank B: D, Eb, E, Ab, A, Bb

Clock Controls



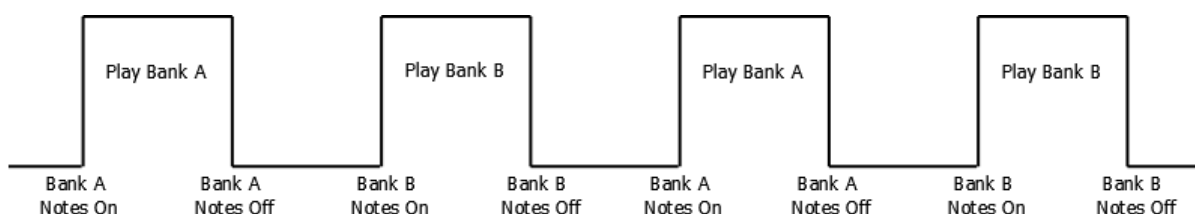
The module works by sending out ON gate signals for all the keys stored in Bank A for a short duration, then OFF gate signals. Then, the Bank B notes are played for a short duration, and the cycle repeats. It can be thought of as a two-stage arpeggiator which can play block chords on each step.

The RATE knob controls the speed of the cycle from 30 BPM (fully counter-clockwise) to 160 BPM (fully clockwise). Each Bank plays at a rate of $1/16^{\text{th}}$ notes, and the two banks are out of phase by $1/32^{\text{nd}}$ note, so it has a 'ratcheting' character to it, even at moderate tempos.

When Bank A is sounding, the left-hand green LED is illuminated. Conversely, when Bank B is sounding, the right-hand red LED is illuminated. At faster rates, the screen redraw rate can't keep up, and the LEDs can appear to flash at erratic rates, unrelated to the sound.

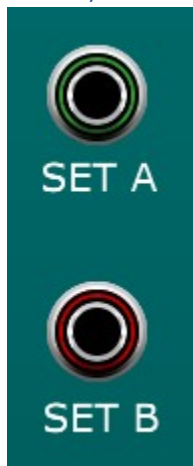
The EXT CLK socket allows you to drive the cycle from an external clock. When this socket is disconnected, the internal clock is enabled, and cycle speed is determined by the RATE knob. When the socket is connected, the internal clock is disconnected and the RATE knob setting is ignored.

The signal at the EXT CLK input is expected to be a logic-level voltage. That is, it is considered to be logic 'high' when above 2.5V and logic 'low' when below 2.5V. Notes will play for the duration of the 'high' phase of the external clock, and will be released during the 'low' phase. When the next 'high' phase starts, the alternate Bank will be selected and only its held notes will play:



The square-wave output of the MINI LFO module (in Voltage Modular Nucleus) is a perfect example of how to drive the EXT CLK input. There are also preset patches which demonstrate how to derive a clock signal which synchronises to the tempo of the host DAW (and plays SET A notes on the downbeat).

The Cycle Mode Control Sockets



The SET A and SET B sockets are logic-level inputs which allow you to modify the Bank-switching behaviour of the internal or external clock. There are four different modes which can be selected according to whether SET A and SET B are logic-high ($> 2.5\text{ V}$) or logic-low ($< 2.5\text{ V}$):

Cycle Mode 1 – Free Running (SET A low, SET B low)

Each time the clock pulses high, the alternate Bank is selected. This is the default behaviour as described in the previous section (and also reflects the default operation of a Lowrey organ).

Cycle Mode 2 – Hold Current Bank (SET A high, SET B high)

Each time the clock pulses high, the cycle does not switch to the alternate Bank. This will cause the current bank's held notes to be repeated every $1/32^{\text{nd}}$ note – i.e. at double the normal rate. This mode can be used to generate 'ratcheting' effects.

Cycle Mode 3 – Hold Bank A (SET A high, SET B low)

Each time the clock pulses high, the cycle will remain on Bank A. This will cause Bank A's held notes to be repeated every $1/32^{\text{nd}}$ note.

Cycle Mode 4 – Hold Bank B (SET A low, SET B high)

Each time the clock pulses high, the cycle will remain on Bank B. This will cause Bank B's held notes to be repeated every $1/32^{\text{nd}}$ note.

The "[ACE Constants & Multipliers](#)" module (included in the Dome Music Technologies Freebie Collection) can be used to drive the SET A and SET B inputs to logic high (+5V) or low (0V) as required.

Synchronising to Host Tempo and Transport Controls

It is a little bit convoluted to derive a suitable EXT CLK signal when synchronising Polly O'Lowrey to your host DAW's tempo. However, there are preset patches already set up for playing the "Baba O'Riley" 'sequencer'...



...and the "Won't Get Fooled Again" chopped and filtered organ:

