

KNOBULA

Thank you for purchasing the Knobula Poly Cinematic polyphonic synthesiser.

Here at Knobula we set out to provide smart modules that deliver great sounds without degree level complexity, so you can concentrate on the clever stuff of patching it all into your rack of dreams.

This manual will help you to understand how to get the most out this powerful unit.



Envelope Section

The envelope section controls both the amplifier and filter to modulate the volume and filter cutoff (using the Env Depth).



Attack

Controls the attack portion of the envelope

Decay | Sustain

This knob controls the Decay portion of the sound until the pointer is past the half way point where the decay becomes infinite. At this point the Sustain mode kicks in and will instead control the Sustain level. Further turning of the control will lower the sustain level. The decay rate in this instance is now controlled by the Release knob.

Release

This knob controls the release portion of the envelope after a key is released. When in Sustain mode (see above) it also controls the initial decay rate to the sustain level.

Trigger

Pressing this button will play the last note or chord that was played, If a midi keyboard was connected.

If the unit is factory fresh, or factory reset, it will play a single note that can be played monophonically over CV Gate.

Holding down shift and pressing Trigger will save all the chords into persistent memory so they can be recalled after a power cycle.

Filter Section

Each Poly cinematic voice contains a 12db/octave multimode resonant filter with 3 different modes.



Frequency

Controls the cut off frequency of the filter.

Env Depth

This knob controls the cut off frequency over time using the envelope generator.

Low|Notch|High

This switch selects which filter mode to use. **Low** is a lowpass filter which attenuates frequencies above the cutoff frequency, this is the standard go-to type for most sounds. **Notch** removes frequencies at the cut off frequency and has a nasal, phaser like quality ideal for thicker retro string sounds, and **High** is a highpass filter that cuts frequencies below the cut off frequency, good for thinner glassier type sounds.

Resonance

The Resonance knob controls the feedback through the filter and accentuates the sound at the cut off frequency, making sounds more squelchy. Use carefully as it can self-oscillate at higher settings.

Oscillators

There are 3 wave types in the Poly Cinematic, featuring between 3 and 7 oscillators per voice. Much thought has gone into controlling these different groups of oscillators using minimal controls in an intuitive musical way but without sacrificing any significant functionality.



Detune

This big knob controls the tuning of each selected oscillator type. Turning the knob to zero will produce a unison tuning of all oscillators, as you rotate the knob the tuning is mapped to musically blend different frequencies both up and down, with a central oscillator always playing the root note. At some point the frequencies break away into a discordant mush and regroup at a 5th above and below, continue turning and again the flock of frequencies continue to spread apart and regroup into an octave above and sub octave. It's the most powerful knob in your rack, use it responsibly.

Pitch

This knob controls the root note of the unit, turning it will change the frequency in discrete chromatic steps up or down up 1 octave. Holding down **Shift** will fine tune in cents.

Wave

This switch selects between 3 different oscillator types:

Wave - Supersaw, a 7 oscillator monster that can produce rich trance leads or super smooth pads depending on your detune setting and the mode switch. Mode I is classic full on 7 oscillator mayhem, Modes II and III are different blends of the 6 side oscillators, III being the most subtle, mostly featuring the centre oscillator with detuning less audible.

Wave - Square

Square is a triple wave-shaped square wave oscillator array featuring 3 configurations of 3 oscillators to help you control the harmonic content. Its good for percussive piano sounds , distorted guitar and ring modulated cymbal effects. There are 3 configurations selected by the Mode switch: mode I is 3 oscillators operating in parallel through a distorted wave shaper, keeping things moving but gnarly. Mode II is one oscillator with two side oscillators synched to it, a static sound that can have harmonics added by twisting the detune control. Mode III is a hybrid between synched and free running oscillators, again forced through a wave-shaper to accentuate the harmonics.

Wave - Tonewheel

Tonewheel is a blend of pure sine waves in 3 different classic drawbar combinations. Furthermore the tonewheels are a threesome that can be in unison or detuned 5ths or octaves apart. See where this is going yet? It's an organ on top of an organ on top of another organ. A simple tweak of the detune control at unison sounds like a Leslie speaker speeding up and slowing down, a further tweak introduces $2\frac{2}{3}$ drawbars and further still 8 foot and 2 foot drawbars. And in-between? Uncharted sonic territory.

Tip: If you want a click on your organ sound, turn the Decay|Sustain control past 12 o'clock and set Release to 0. Add a bit of EnvDepth to the filter.

Mode

Mode affects each wave type in different ways, see note above on how it applies to each wave type



Shift

Shift is used to access alternative functions on Poly Cinematic, of which there are deliberately very few. In the oscillator section it controls fine tuning in combination with the Pitch knob.

Setting The Midi Channel

To set a midi channel hold down Shift and turn the resonance knob. Midi channels are mapped to the knob as follows: Knob set at zero - omni mode (all midi channels received) as you turn the knob channels 1 through 16 can be selected. If you are troubleshooting your midi connection, best to set it to omni mode (factory default) until you hear something playing, then tune into the unique midi channel using Shift and Resonance knob.

FX - Reverb

No pad sound is complete without being soaked overnight in a 24bit stereo reverb. Just one knob offers more reverb and increasing decay times the more you turn it, it's that simple.



Chord Memory and CV Patching

The chord memory is the most powerful feature of Poly Cinematic as it represents the missing link between Midi and CV/Gate. Without connecting Midi, a factory fresh (see Factory Reset) Poly Cinematic will play a single note when you either press the Trigger button or send a gate signal to Trigger in, it will continue to play until you release the button or the gate signal drops (technically not a trigger I suppose). If you connect via Midi and play it, the chord memory will continuously keep the last note/chord you played in memory and assign it to the button, unless the gate/trigger is being pressed. So beware of erasing over the last wonder chord you played, but read on and find out how you can store more chords. Connect CV to the Osc Freq input and you can play your chord or single note or 8 note octave stack using a CV sequencer or keyboard, so you could think of your Poly Cinematic like a regular monophonic oscillator module with midi addressable chords. Connect a CV into the Chord Select input and you can choose different memory slots to record chords into, 8 in total. It can be quite tricky to manage but once you get it, it's a fun compositional tool that just keeps on giving. If you like what you've programmed into the chord memory, and you've remembered not to play any Midi over them, you can save them to persistent memory by holding down Shift and Trigger together and despite what happens later, your chord set will return when you power cycle the unit.

Factory Reset

To return the unit to its original factory settings: While powering up the unit, hold down Shift for 2 seconds. The chord memories will be reset to factory chords/notes, Fine Tune is reset and the midi channel will be set to Omni (all channels)