Suggested Initial Position
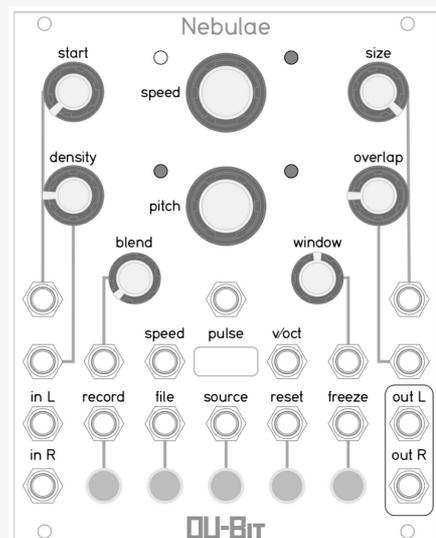
Start Knob - Controls Audio Offset

Fully CCW	Start of file
Fully CW	End of file

Start CV input range: -5V to +5V

Speed Knob - Controls Playback

CCW: Backwards	CW: Forward

LED **Unlit**: Frozen

White: /8	**Blue**: x1
Orange: /4	**Green**: x2
Yellow: /2	**Violet**: x4

Press Encoder	Reset to default(press again for reverse default)
Press and Hold	Enter instrument select mode

Speed CV input range: -5V to +5V

Size Knob - Audio Sample Length

Size is relative to original sample length. If Size is larger than length determined by start knob, then entire length will loop. Further increase of Start results in length decrease regardless of Size knob.

Size CV input range: -5V to +5V

Blend Knob - Controls Engine Mix

File Mode (Source LED Off)	
CCW	Phase Vocoder Only
CW	Mixes in granular engine
Live Mode (Source LED On)	
CCW	Mixes in phase vocoder
CW	Mixes in granular engine

Blend CV input range: -5V to +5V

Pitch Knob (Independent of Speed)

LED **Blue**: Original Pitch

CCW - Decrease	CW - Increase
Yellow: -1 Octave	**Green**: +1 Octave
Orange: -2 Octaves	**Purple**: +2 Octaves
White: -3 Octaves	
Press encoder	Reset to default
Press and hold, turn	Jump octaves

Pitch CV input range: -5V to +5V

Overlap Knob - Grain Size / Spacing

Adjusts the size of the grains, as well as the amount of overlap between successive grains. As the grain size becomes larger than the space between grains (Density), the grains begin to overlap. Grain size ranges from 1% of the grain rate, to 600% of the grain rate.

Overlap CV input range: -5V to +5V

Density Knob - Amount of Grains

CCW	Single grain every few seconds
CW	Grains produced at audio rate

Density CV input range: -5V to +5V

Window Knob - Controls Envelope

Adjusts the amplitude envelope applied to each grain.

CCW	Softer
CW	Harder

Window CV input range: -5V to +5V

Record Button

File Mode	Records portion of current sample
Live Mode	Records portion of input audio

Send gate to **Record** to start, gate again to stop.

To overdub, punch in anytime.

To clear buffer, hold **File** and press **Reset**.

To save buffer, hold **File** and press **Freeze**.

Record gate input threshold: 0.4

File Button

Press **File** or send gate to cycle through files.

File gate input threshold: 0.4V

Source Button

Switches between File Mode (LED off) and Live Mode (LED on). **Tap quickly** to avoid the secondary function.

Source gate input threshold: 0.4V

Reset Button

Resets playback to start. During playback, LED flashes at the loop point.

Reset gate input threshold: 0.4V

Freeze Button

Toggles freeze mode. Pauses playback position while retaining the spectral characteristics of the audio.

Freeze gate input threshold: 0.4V

Boot Animation LEDs

White: Nebulae is booting up.

Blue: Nebulae is loading firmware files.

Aqua: Nebulae is loading USB files

Green: Nebulae is updating the firmware.

Red: Nebulae update has failed.

By **Bill Smith** (Naenyn)
cheatography.com/naenyn/

Published 9th May, 2025.
Last updated 9th May, 2025.
Page 1 of 1.