Blending parameters

The **BLEND** knob and CV input can control one of these four mixing and post-processing parameters:

	Dry/wet balance
	Stereo spread/random panning
	Feedback amount
	Reverberation amount

To select which parameter is controlled by the **BLEND** knob and CV input, press the **Blend parameter/Audio quality button**. The current parameter is temporarily indicated by a green LED.

When turning the **BLEND** knob, the color of the four status LEDs temporarily shows the value of the four blending parameters (from black when the parameter is set to its minimum value to green, yellow and then red for the maximum value).

It could happen that the position of the knob does not match the value of the parameter. If this is the case, turning the **BLEND** knob clockwise (resp. counterclockwise) causes a small increase (resp. decrease) in the value of the parameter, and turning it further causes larger changes, until the value progressively catches up with the knob's position.

Audio quality

Hold the **Blend parameter/Audio quality** button for one second, then press it repeatedly to select the recording quality. The current quality setting is indicated by a red LED.

	Rate	Resolution	Channels	Buffer time
	32kHz	16-bit	stereo	1s
	32kHz	16-bit	mono	2s
	16kHz	8-bit μ-law	stereo	4s
	16kHz	8-bit μ-law	mono	8s

⚠ Changing audio quality erases the recording buffer.

Saving and loading buffers

Up to 4 frozen audio buffers can be saved and reloaded.

Saving

1. Hold the **Load/Save** button for one second.

2. Press the **Blend parameter/Audio quality** button repeatedly to select one of the four memory slots. The selected slot is indicated by a blinking red LED.

3. Press the **Load/Save** button to confirm.

Loading

1. Press the **Load/Save** button.

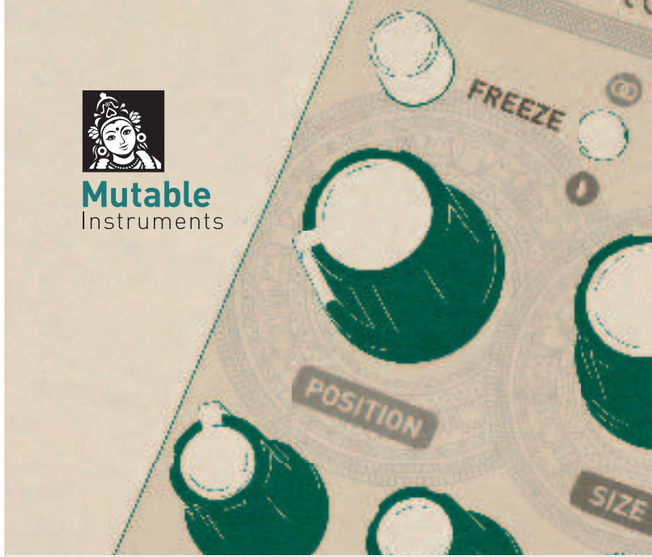
2. Press the **Blend parameter/Audio quality** button repeatedly to select one of the four memory slots. The selected slot is indicated by a blinking green LED.

3. Press the **Load/Save** button to confirm.

If you press the **Load/Save** button by mistake, do not press any button for a few seconds and the module will return to its normal state.

Tips and patch ideas

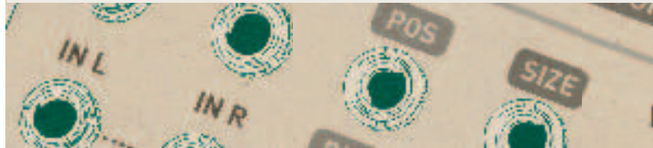
- If you need a rapidly changing noise source to randomize grain position or pitch, try using one of the audio outputs through a multiple.
- Very dense clouds sound best when at least one parameter receives random modulations. Otherwise, the identical echoes created by the repeating grains will sound like a feedback comb filter.
- Raw material like sawtooth or sine waves sound very good, especially with heavy random modulation. Experiment with capturing many short waveforms and using them as a kind of wavetable.
- Contact microphones, touch controllers or random sources are Clouds' best CV friends!



Mutable Instruments

Clouds

Texture synthesizer



About Clouds

Clouds is a granular audio processor. It creates textures and soundscapes by combining multiple overlapping, delayed, transposed and enveloped segments of sound taken from an audio recording buffer.

Clouds differs from other granular Eurorack modules in that it focuses on the real-time processing of audio sources from your modular system itself, rather than the playback of pre-recorded samples from a storage device. It rewards the freezing, fragmentation and dissolution of the unexpected instant, rather than the careful planning of what might very well not come.

Installation

Clouds requires a **-12V / +12V** power supply (2x5 pin connector). The red stripe of the ribbon cable (-12V side) must be oriented on the same side as the "Red stripe" marking on the board. The module draws **10mA** from the **-12V** rail and **120mA** from the **+12V** rail.

Online manual and help

The full manual can be found online at
mutable-instruments.net/modules/clouds/manual

For help and discussions, head to
mutable-instruments.net/forum

Front panel

Controls

A. FREEZE button. This latching button stops the recording of incoming audio. Granularization is now performed on the last few seconds of audio kept in memory in the module.

B. Blending parameter/Audio quality button. Selects which of the blending parameters is currently controlled by the **BLEND** knob and CV input, or selects one of the four audio quality settings.

C. Load/Save button.

D. Grain POSITION. Selects from which part of the recording buffer the audio grains are played. Turn the knob clockwise to travel back in time.

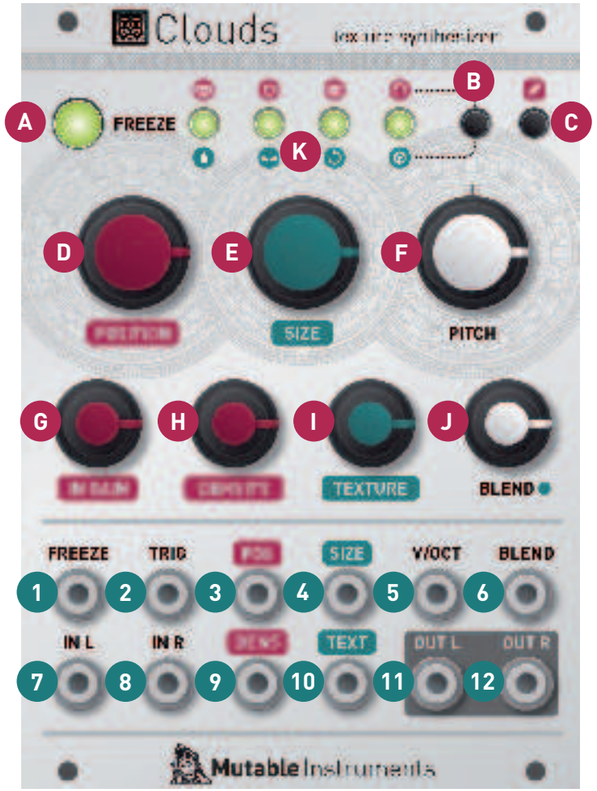
E. F. Grain SIZE and PITCH.

G. Audio INPUT GAIN, from -18dB to +6dB.

H. Grain DENSITY. At 12 o'clock, no grains are generated. Turn clockwise and grains will be sown randomly, counter-clockwise and they will be played at a constant rate. The further you turn, the higher the overlap between grains.

I. Grain TEXTURE. Morphs through various shapes of grain envelopes: square, triangle, Hann window. Past 2 o'clock, activates a diffuser which smears transients.

J. BLEND knob. This multi-function knob is described in the *Blending parameters* section.



K. Indicator LEDs. They work as an input vu-meter (or output meter, when **FREEZE** is active). They can also indicate the quality setting (red), the function assigned to the **BLEND** knob (green), or the value of the four blending parameters (multicolor).

Inputs and Outputs

1. FREEZE gate input. Stops the recording of incoming audio when the gate signal is high – just as latching the **FREEZE** button would do.

2. TRIGGER input. Generates a single grain. By moving the grain **DENSITY** to 12 o'clock, and sending a trigger to this input, Clouds can be controlled like a micro-sample player. A LFO or clock source can thus be used to sow grains at the rate of your choice.

3. 4. Grain **POSITION** and **SIZE** CV inputs.

5. Grain **PITCH** CV input, with V/Oct response.

6. BLEND CV input. This CV input can control one of the following functions: dry/wet balance, random panning, feedback or reverb amount. Learn more about blending parameters in the next section.

7. 8. Stereo audio **input**. When no patch cable is inserted in the right channel input, this input will receive the signal from the left channel.

9. 10. Grain **DENSITY** and **TEXTURE** CV inputs.

11. 12. Stereo audio **output**.