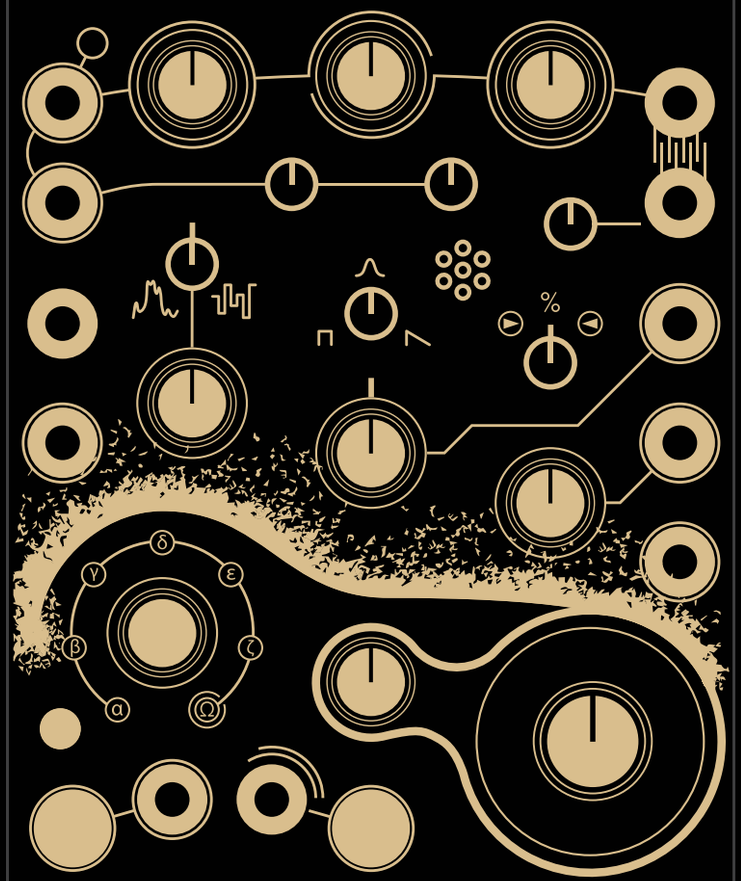
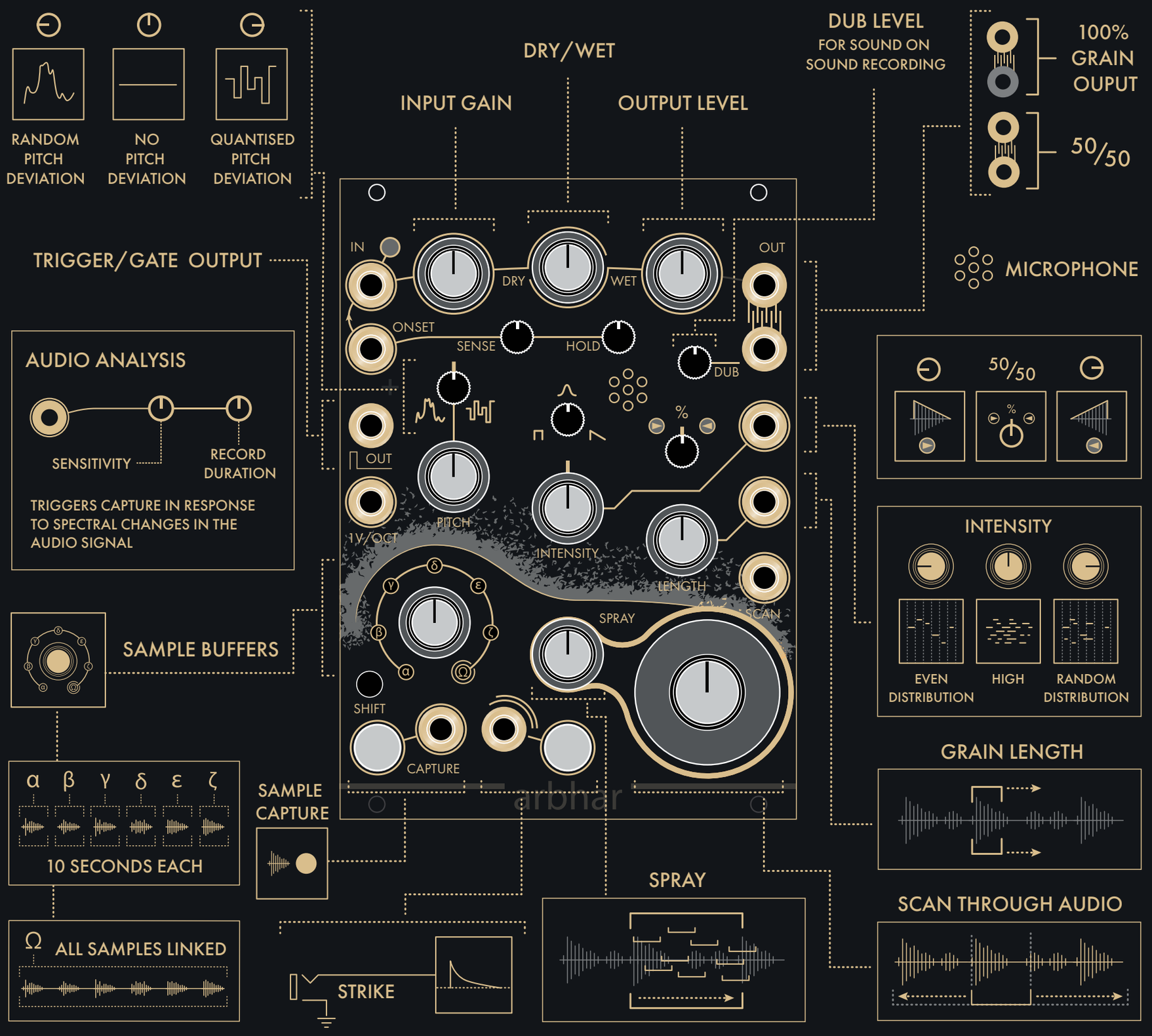
INSTRUŌ | SPECIALIST SYNTHESIZERS



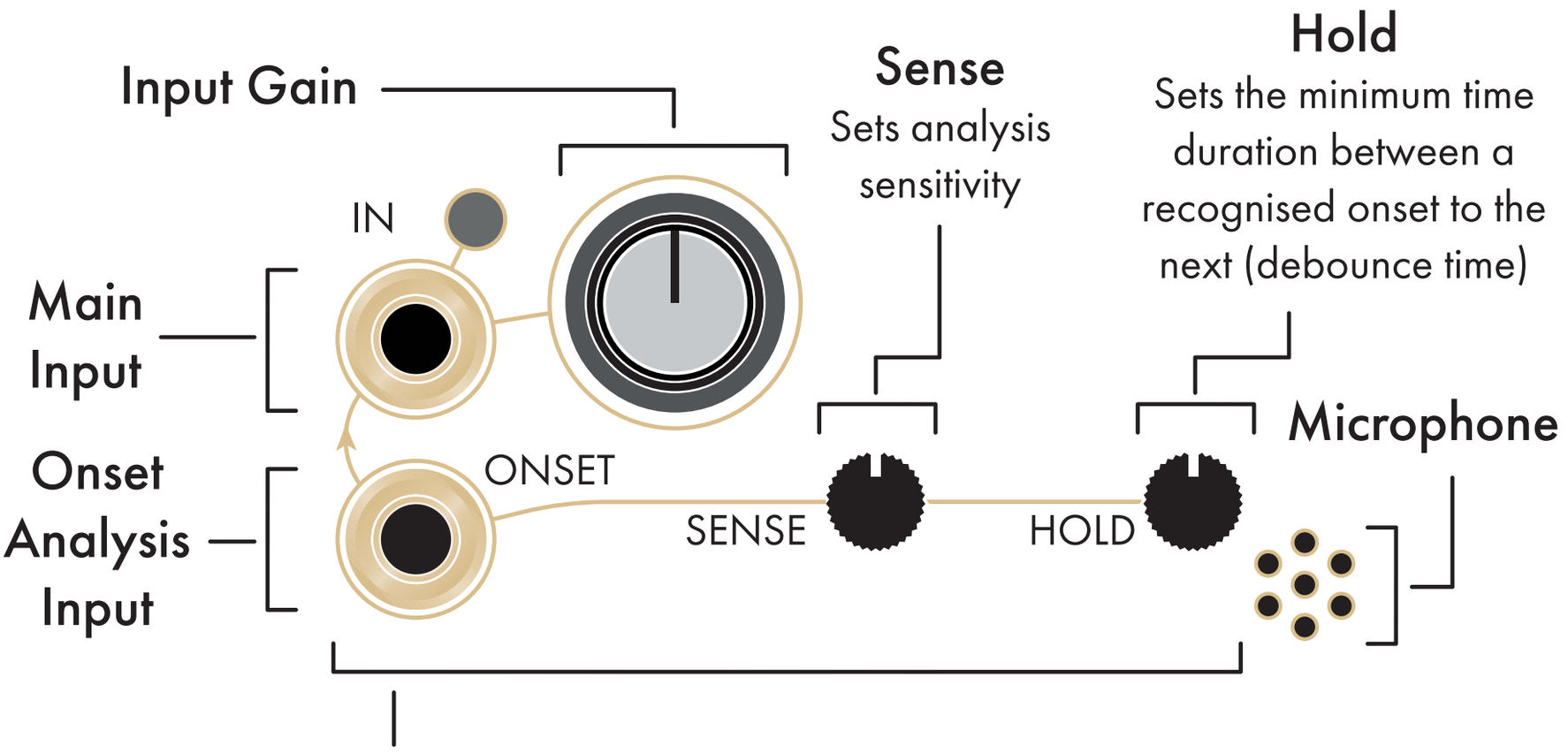
arbhar

Granular Audio Processor

Overview


RANDOM PITCH DEVIATION
NO PITCH DEVIATION
QUANTISED PITCH DEVIATION
DRY/WET
INPUT GAIN
OUTPUT LEVEL
DUB LEVEL
FOR SOUND ON SOUND RECORDING
100% GRAIN OUPUT
50/50
TRIGGER/GATE OUTPUT
MICROPHONE
IN
OUT
DRY
WET
ONSET
SENSE
HOLD
DUB
AUDIO ANALYSIS
SENSITIVITY
RECORD DURATION
TRIGGERS CAPTURE IN RESPONSE TO SPECTRAL CHANGES IN THE AUDIO SIGNAL
PITCH
INTENSITY
LENGTH
SCAN
SPRAY
1V/OCT
SHIFT
CAPTURE
SAMPLE BUFFERS
α β γ δ ε ζ
10 SECONDS EACH
Ω ALL SAMPLES LINKED
SAMPLE CAPTURE
STRIKE
EVEN DISTRIBUTION
HIGH
RANDOM DISTRIBUTION
GRAIN LENGTH
SCAN THROUGH AUDIO

Input Section and Audio Capture



Onset Analysis Section: Takes an audio signal input and looks for 'attacks' defined by sharp spectral changes of the incoming sound. These 'attacks' are used to trigger capture.

Normalised Input Path

Microphone

Onset
Signal to be Analysed

In
Signal to be Recorded

Audio capture via the input can be triggered by the capture button or the onset analysis section.

Dub Parameter

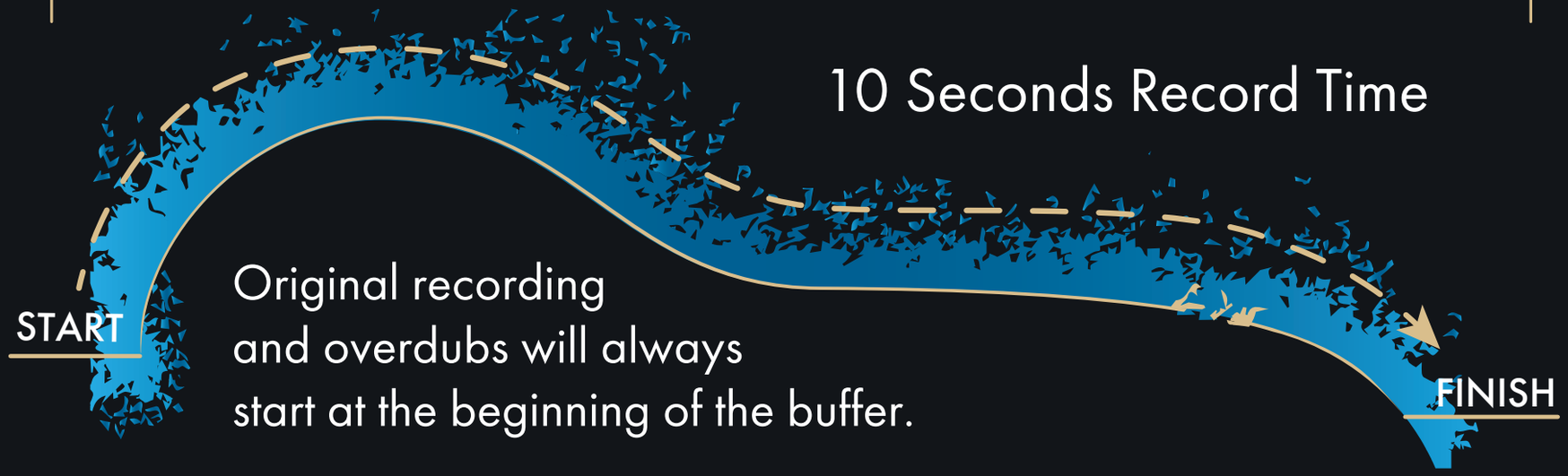
The dub parameter sets the level of the previous recording to be mixed in with new audio capture. New audio will always be recorded at the input level set.

New audio capture destructively replaces previous audio.

Previous audio will be attenuated by 50% and summed with new audio.

New audio will sum with previous audio at full amplitude.

Record Buffer



Original recording and overdubs will always start at the beginning of the buffer.

Erase and Undo

To undo an overdub hold 1, press 2.

When pulsing orange the action will undo.

Doing this a second time will erase the buffer completely.

When pulsing white the action will erase.

Playback

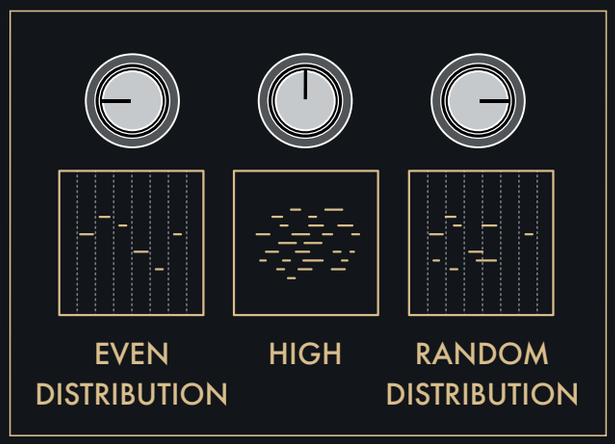
Scan

Determines the playhead position in the buffer.

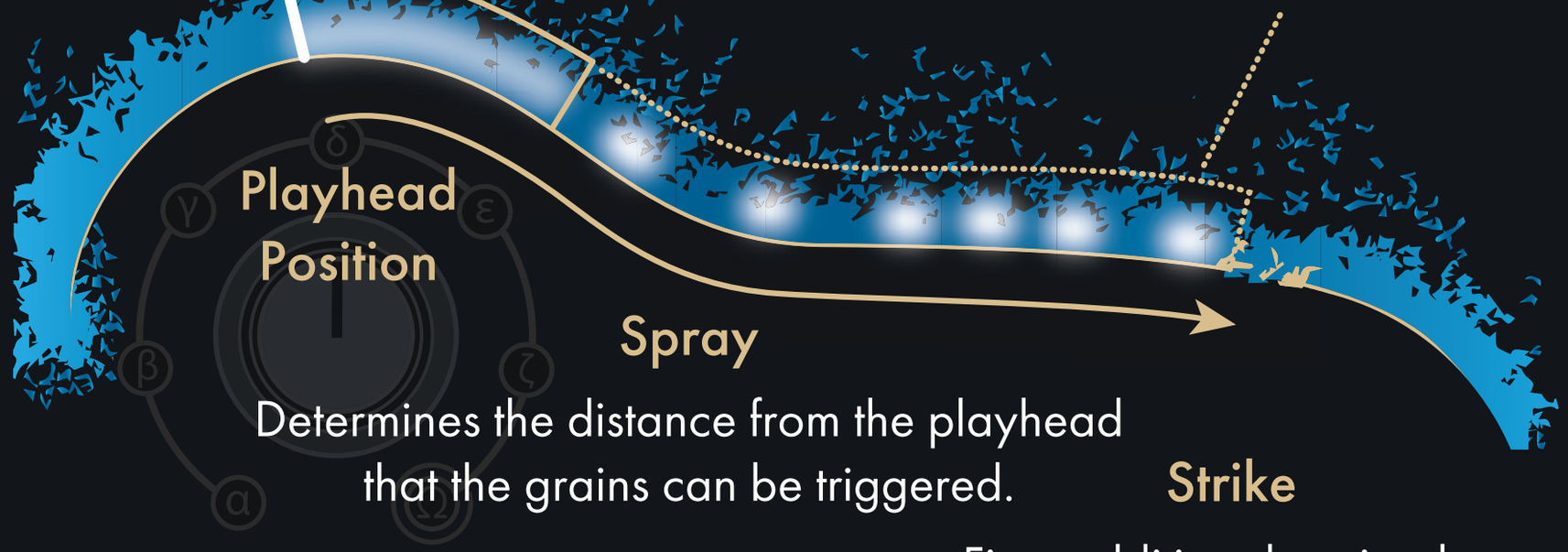
Length

Determines the grain playback length (up to 3 seconds, when very short arbhar morphs into single cycle wavetable synthesis.

Intensity

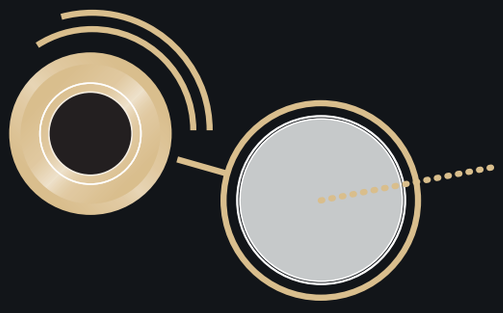


Determines the amount of grains triggered (from 0 to 24 grains).



Determines the distance from the playhead that the grains can be triggered.

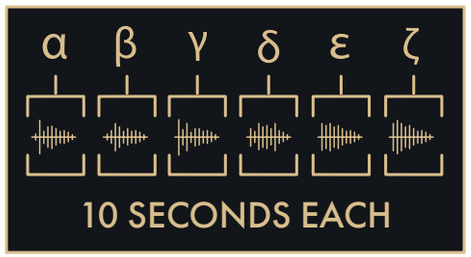
Strike



Fires additional grains that sum with intensity settings. It is possible to fire up to 20 grains in addition to the original 24 grains.

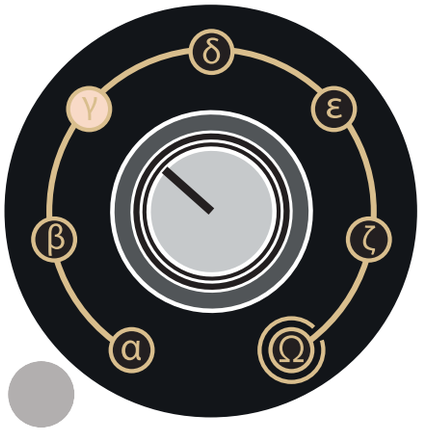
GRAIN

Layer Selection

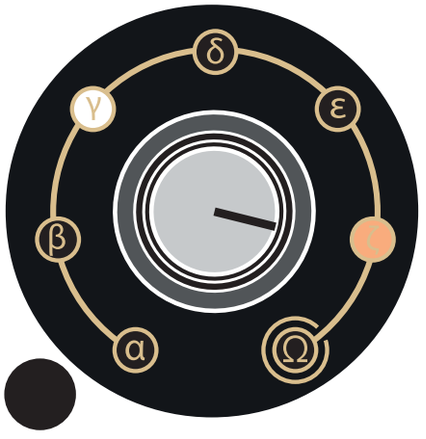


The layer selection knob allows you to navigate through the six buffer layers and omega (Ω).

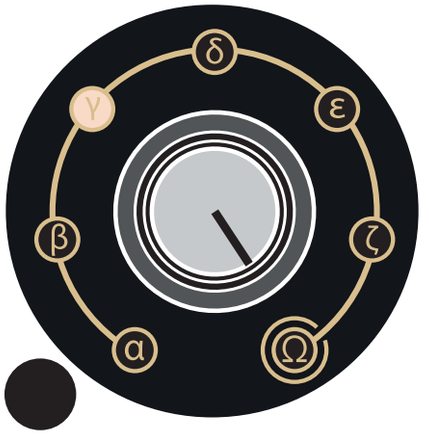
When 'omega' is selected, the scan knob can continuously sweep through all six layers.



Move layer knob to desired location to select record and playback layer (illuminated off white).



Holding shift and moving the layer knob will decouple record layer (illuminated amber) from playback layer (illuminated white).



Holding shift and moving layer knob to 'omega'will recouple the layers.

Note: Layer selection can be CV controlled via the expander. CV acts as a bipolar control over layer playback. When layers are CV controlled 'omega' (Ω) is left out, leaving the CV to cycle between the six layers.

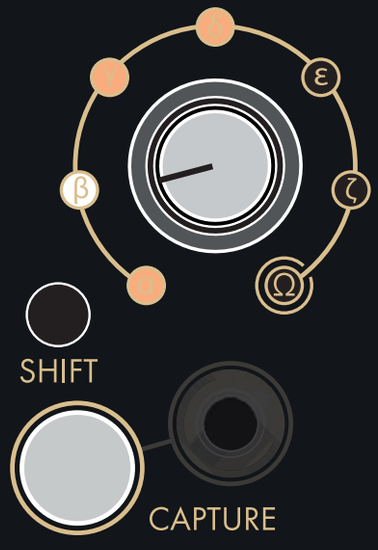
Trigger Out and Onset Analysis Settings

The trigger output and onset analysis section can be set to one of four different settings. By holding the shift and capture buttons together and turning the layer knob, you can select which setup you want to use.

Alpha

Onset analysis controls and triggers capture via onset audio signal.

Trigger output produced whenever a grain is fired.



Beta

Onset analysis controls and triggers capture via onset audio signal.

Trigger output becomes a gate held high for as long as the hold duration of onset analysis.

Gamma

Onset analysis doesn't control capture.

Trigger output produced whenever a grain is fired and when an onset is detected.

Delta

Onset analysis doesn't control capture.

Trigger output becomes a gate held high for as long as the hold duration of onset analysis.

Follow Mode

Follow mode introduces automated movement of the playhead. The speed of the playhead is now determined by the scan knob.

To enage follow mode, press and hold 1 and 2.

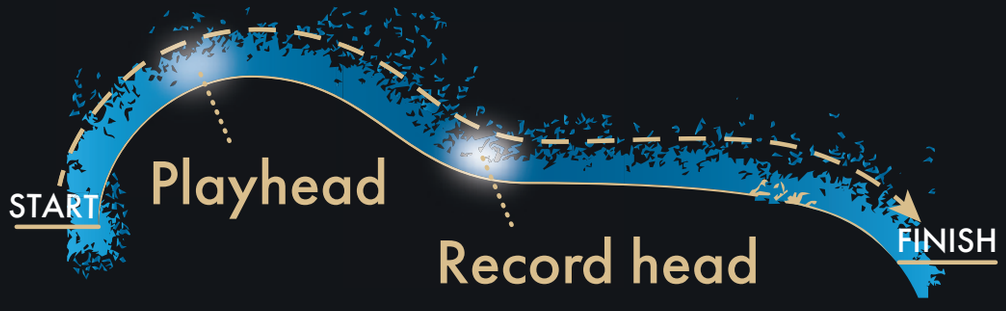
Turn 3 all the way to the left or right, twice.

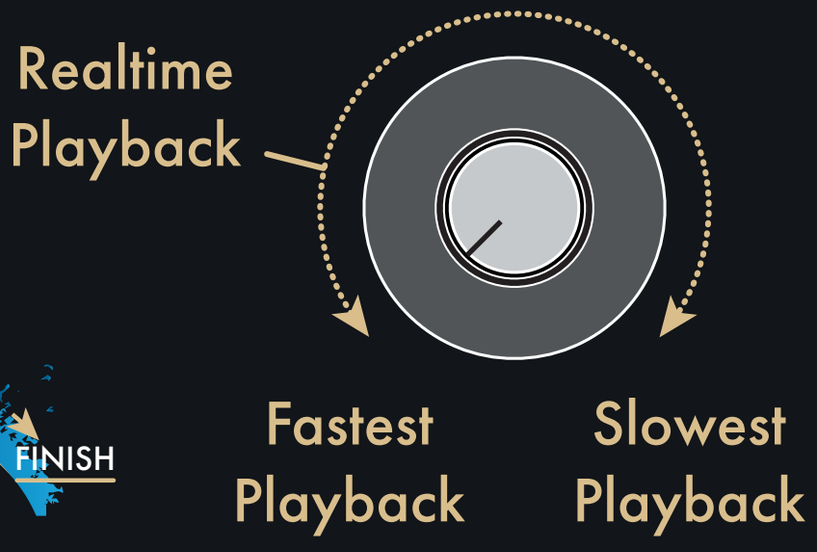
4 will illuminate white to indicate that follow mode is engaged.

In follow mode, 2 resets the record and play heads back to the start of the buffer.

4 only resets the play head back to the start of the buffer.

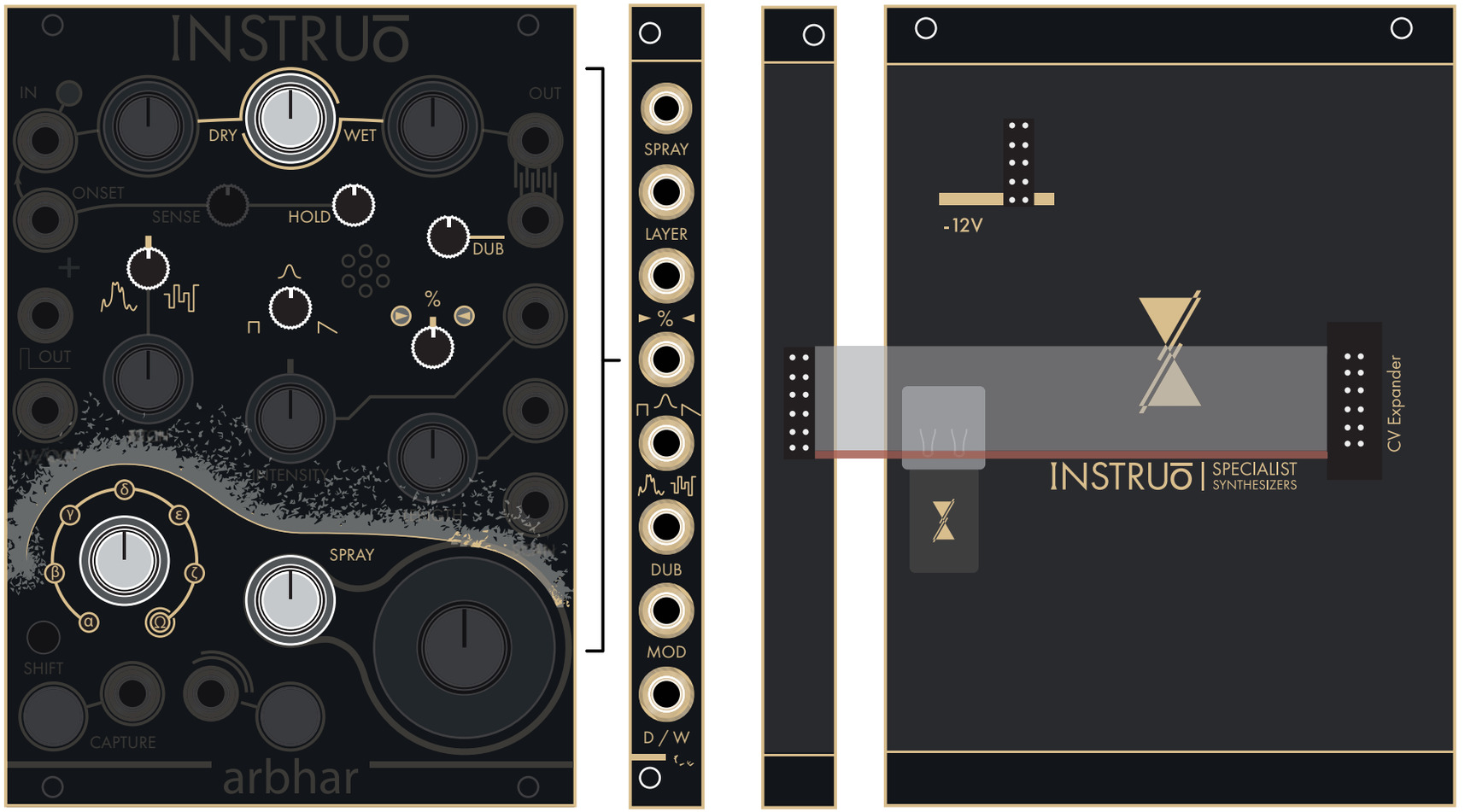
Scan Knob now controls the speed of the playhead.





CV Expander

Included with the arbhar is a CV expander, which is connected to the module via a ribbon cable to the CV expander headers. The expander allows for additional CV control over all remaining parameters. Default setting for ‘MOD’ is CV control over panning.



Front

Back

MOD CV Parameters

On the lower side of the rear PCB are two switches. These can be toggled to select alternative parameter options for the expander ‘MOD’ CV. The four parameter options are: Stereo Panning, Hold, Stereo Reverb and Delay (Output 1: Dry, Output 2: Wet).

Note: All CV inputs are bipolar.

A B X Y	5V 0V -5V Mono Left Right Panning	A B X Y	Expander ‘MOD’ CV controls the Reverb Parameter
A B X Y	Expander ‘MOD’ CV controls the Hold Parameter	A B X Y	Expander ‘MOD’ CV controls the Delay Parameter