

GAUSS

Creative Field Looper

INTRODUCTION

DAWs encourage you to make music in blocks, everything ordered to a grid. For the past 15 years I have been looking for ways to escape the grid, and I found it with tape loops.

Tape loops, cuts of tape spliced in a circle and guided around household items instead of neat spools, don't care for BPM or measures. They warble along their path, each round is imperfect and drifts in time. Combine two and you hear all kinds of exciting things, as Steve Reich already discovered in the fifties. Now add more, and whatever you put on them, even if it's the same sound, you will never hear the same thing twice.

After experimenting with this constantly shifting effect for years I felt the need to add structure again, so developed techniques that preserve the uniqueness while adding rhythmic elements. With Gauss, you hold the essence of my artistic process in your hands.



Like its tape pre-decessors you can shake your phone and add warble, but unlike tape its sound is a homage to digital. Slow the recording speed and you will get gritty alias effects, sequence the loop while recording and that pitch and speed will be printed in. Record at 0.01 speed - *here be dragons!*

Gauss Field Looper is an elegant tool, at home on the phone and on the iPad, as a casual creative recorder and as a stage ready looper for the musician that likes to go off the grid, yet still be ready to go four to floor (or 19/16) at any moment.

HAINBACH

BASIC CONCEPTS

To understand Gauss, imagine it is just a magnetic tape with both ends glued together which loops and loops and loops. The basic GAUSS workflow is really simple:

- Set your loop length
- Tap record to start recording
- Tap record again to stop recording

Both recording to- and playing back the tape are done at a variable speeds. If you play back at the same speed as the recording speed, the audio will sound normal. If you play back at lower speed, the audio will sound lower and 'grittier'. If you raise the tape speed, the sound will be higher and brighter.

If you record at 1x speed, your audio quality will be normal tape-quality. If you record at lower speeds you can make much longer recordings onto the same length of tape, but your audio quality will deteriorate proportionally. The grungy 'lofi digital shimmer' of audio that was recorded at extremely low tape speeds is an intentional feature which can be used creatively to add character to a recording.

GAIN

Gain lets you adjust the strength of the incoming audio signal. At center position, the incoming signal is passed through untouched.

LOOP LENGTH

This sets the duration of the looped tape. The specified time represents the length of the tape at 1x tape speed. If you set the tape speed to 0.5x, your maximum recording time will be double.

Note: double tap the knob to change loop length setting between Seconds, Beats and Centimeters.

RECORD

Starts and stops recording. When overdub is enabled, all new audio recorded on top of previously recorded sound. With overdub disabled, a new recording take will be initiated. When stopped the loop will be then automatically resized to the correct length. Recording stops automatically when the specified loop length is reached.

MONITOR

This lets you hear the incoming audio. Be careful, because this may result in audio feedback loops when using a microphone for input.

OVERDUB

With overdub enabled new recording takes are recorded on top off already existing recording takes.

When overdub is disabled recordings are treated as a new take, overwriting any existing audio.

Note: with overdub disabled the loop length will automatically be cropped to fit your recording.

1989

This mode takes you back to the low end sampling devices of the late 80s with a lo-fi recording quality of 11KHz/8bit (at 1x speed). It's a grungy digital character which gets dirtier the slower you play/record your loop.

UNDO & ERASE

Undo undoes the last recording take or accidental deletion of a recording with the erase button.

Double tap the Erase button to remove the current audio data and replace it with silence.

WARBLE

A kind of wow/flutter effect that degrades the stability of the tape speed and makes the sound warbly and jerky.

SEQUENCER

The sequencer doesn't play notes, but changes the tape speed relative to the currently set tape speed. The steps let you create a sequence of 4 speed changes. Positive step settings increase the tape speed, negative step settings decrease the tape speed.

The trig knobs send rhythmic pulses at a specified number of times per measure. At every pulse the sequencer will advance one step. For example: if you set a trigger knob to 1/4 the sequence will advance 4 times per measure: in a 4/4 timesignature that's one pulse every beat.

By combining multiple trigger knobs you can create interesting polyrhythms. If two knobs trigger simultaneously, the sequencer will advance two steps at once. Mutate lets you specify the chance the order of the steps will be randomized.

TRIG: every new step will also trigger the VCA envelope
LOOP: the tape will loop without triggering the VCA envelope
OFF: disables the sequencer completely

VCA ENVELOPE (VCA ATTACK & VCA DECAY)

The VCA envelope is only used when the sequencer is set to TRIG mode. Each time the sequencer advances the envelope is triggered. Use this to turn long sustained sounds into separate 'notes'.

FILTER (CUTOFF & MOD)

The multimode filter (highpass, bandpass and lowpass) is applied to the outgoing audio. When the filter mod knob is set to 0, no modulation is done. If filter modulation is set, an LFO will be applied to the cutoff frequency. The higher the modulation setting, the faster the LFO speed.

TAPE SPEED & INERTIA

This is the primary way of controlling the playback (and recording) speed of the tape loop. If you go below 0 the tape direction will be reversed. The inertia setting determines how fast the tape drive motors adapt to a new speed setting. This ranges from virtually instantaneous to very slow.

VOLUME

This is the output volume of the audio. The default setting is at center position. At this setting the audio is neither amplified nor attenuated.

DELAY (AMOUNT & TIME)

The simple delay effect helps to add rhythm and structure to otherwise unsynchronized and unstructured audio.

Delay amount sets the strength of the effect and the feedback amount.

Delay time is synced to the tempo of the host (or the tempo specified in the standalone app), but the sync can be disabled if needed.



SYNC MODE

To bring some structure and predictability in the unsynced chaos of a tape loop, "Sync" optionally restarts the tape (and sequencer) from the beginning after a set number of measures. E.g. You can let it resync every bar, or every 4 bars, etc.

Note: the host's transport must be running/playing for this feature to work!

SHARE/SAVE/LOAD LOOP (STANDALONE APP ONLY)

These features let you store, load and share your tape loops as project files. Think of this as storing and sharing your loop tapes. These project files are stored in the iOS Files app, inside the Gauss folder.

CAPTURE SESSION (STANDALONE APP ONLY)

This lets you capture everything you do as a WAV file. The resulting WAV file is stored in the iOS files app, inside the Gauss folder.

GOOD TO KNOW

- Gauss' internal recording engine works independent from the currently selected audio settings in your device or host. This means Gauss will sound pretty much the same on any hardware.
- Headphones are recommended: the standalone app will use the device's internal microphone. It is best to use headphones (wired or bluetooth) for monitoring your recording. When using the device's built-in speakers, iOS will limit the output volume to minimize the risk of feedback.
- While recording all tape-speed changes will be 'imprinted' into the recorded sound. So if you have the sequencer enabled, change the tape speed/direction or have warble or inertia set you will record the corresponding speed changes. Use this to your advantage!
- If you shake your device you may upset the playback and record heads of the app.
- Gauss can be loaded into your favorite Audio Unit plugin host as a AU effect (AUV3)
- Loops made in the standalone app will be available in the AU plugin as factory presets

