

# gLEETechLab2021

Users' Manual

v6.3

Welcome and thank you for choosing Gleetchlab 2021.

Gleetchlab 2021 is a major upgrade with tons on new and different features

As usual please, try this the software before buying.

Gleetchlab is not a traditional DAW, and by all means it's experimental.

TAKE YOUR TIME!

Even if Gleetchlab hasn't a timeline, it's a full electroacoustic workstation DAW. With it you will create, process, record and reprocess samples, synths, and external sounds infinitely as an ever-flowing live process. It's not a plugin!

And there is no "END" anywhere in the software as there is no sequencer.

Time just flows and it's relative. You can sync sounds, but most likely you will

find yourself inspired by asynchronous ever-changing organic sounds that will surprise you.

## Demo unlocking

By default Gleetchlab will be in demo mode allowing a full trial of the software for 8 minutes.

To unlock your demo please purchase the software on my website using paypal.

I will send you a serial number in 24/48 hours (changes my apply during holydays).

Customers who bought GleetchlabX in 2021 are elegendible for free upgrade. Just drop me a line with your PayPal transaction.

To unlock click "Unlock Demo" button at the top of the main window, enter FIRST your paypal email, THEN your serial number, as is, with spaces.

When the demo is unlocked you will see SOFTWARE AUTHORIZED

AUTHORIZATION PROCESS (please read carefully)

Step 1) Go to [www.giorgiosancristoforo.net](http://www.giorgiosancristoforo.net) and pay for the software with Paypal

Step 2) In 24/48 hrs you will receive an email with your serial number (changes my apply during holydays)

Step 3) Enter your email address  
(the one you have used for your papyal transaction)

Enter Email

Step 4) Enter your serial number (to paste press CTRL + CLICK > Paste)

Enter Serial Number

**SOFTWARE IN DEMO MODE**  
In DEMO mode this software will quit after 8 minutes

0 min 8 min

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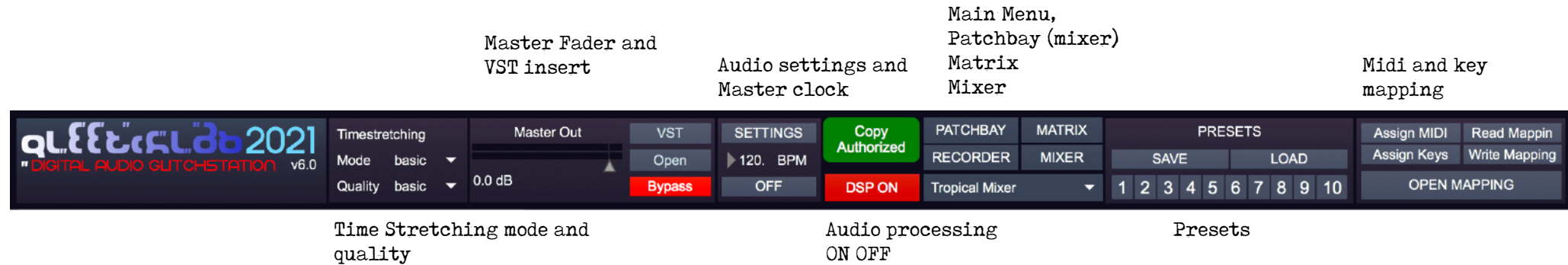
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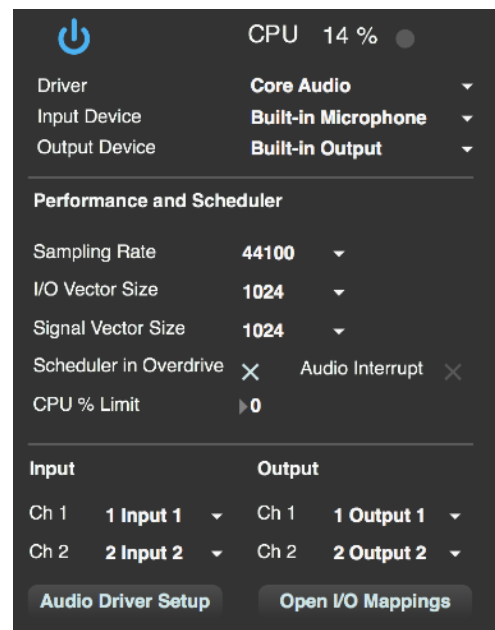
As usual Gleetchlab is composed by a main window and a number of sub windows which can be selected by the menu.



The first thing you need to do is to set your audio interface, sampling frequency etc...

In the top bar pres the "SETTINGS" button. This will open the following window.

Select first the driver and your audio interface ins and outs.



Set the sampling frequency and you audio interface.

Vector Sizes set the size of the data vectors that come or go from the audio interface (I/O) and the size of the data blocks that are processed by the software (Signal).

Low latency needs low vectors, but higher vectors are less CPU intensive. Set the best compromise for your system. By default both I/O and Signal VS are 1024 This is the proper settings to work with TAMS. You can change these numbers but TAMS may experiences unwanted glissandos.



Scheduler in Overdrive must be always selected  
it gives priority to timing.

Audio interrupt must be off.

I/O mappings lets you route your audio interface  
in Gletchlab.

Gletchlab uses up to 8 audio INs and 8 audio OUTs.



## PRESETS

To SAVE a preset (all the potentiometers, faders, sliders) press SHIFT + one number from 1 to 0 on the computer keyboard.

To RECALL a preset: press one number from 1 to 0 on the computer keyboard.

To include a file stored in the looper (the file's position on your hard drive) before storing a preset you must select FILE 1 at the looper's far right.

When you LOAD a preset bank which contains audio files locations, select FILE 1 then recall the preset

After that set the button to FILE 0 to avoid loading again your file when you change preset.

TO SAVE A BANK OF PRESETS press SAVE

TO LOAD A BANK OF PRESETS press LOAD then recall one preset with the computer keyboard.

PRESETS do not save VSTs plugins

## MAIN WINDOW, PATCHBAY, MATRIX and MIXER

The main window has six identical loop players/recorders

Every looper, as well as every process in Gletchlab, is routed with the MATRIX and the PATCHBAY.

The PATCHBAY connects every looper and process of Gletchlab with the MIXER.

The MATRIX connects everything else.

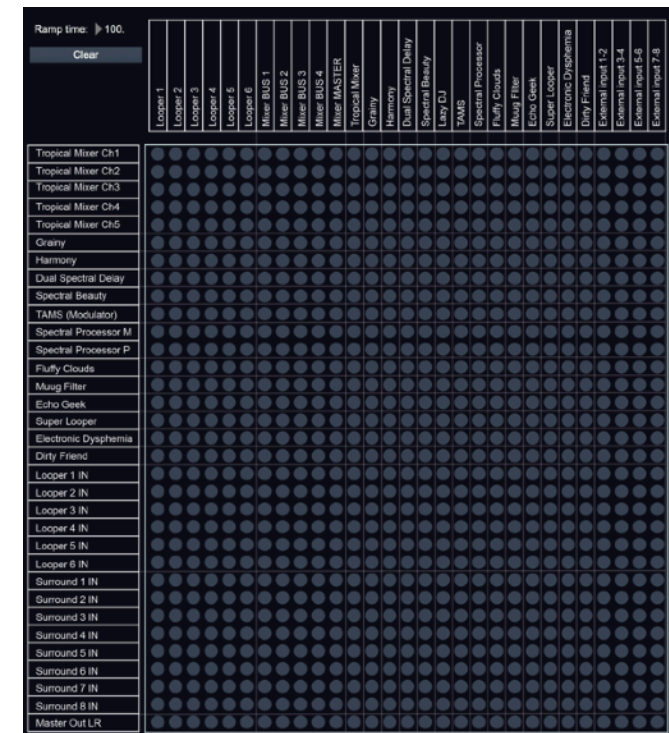
A connection is made by clicking the x/y coordinate.

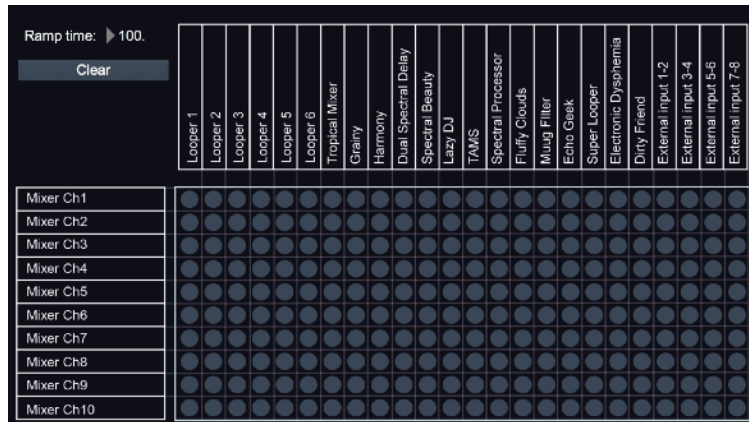
OUTPUTS are on TOP, INPUTS are on the LEFT.

The Clear button clears the matrix from any connection.

Ramp sets the ramp time (fade in and out in milliseconds) of each connection.

Very long ramp times can be used (e.g. 2 minutes = 240.000). Default ramp time is 1 second = 100 ms.





The PATCHBAY and the MIXER give you the possibility of creating a complex mix including all your favourite VST efxs, using 10 channels plus 4 sub mixes. Every Submix can be recorded (but this is not the only recorder in Gletschlab!). The MIXER outputs can be found in the MATRIX.







Gleetchlab has 2 kind of master outs

Stereo: MASTER OUT LR (Stereo)

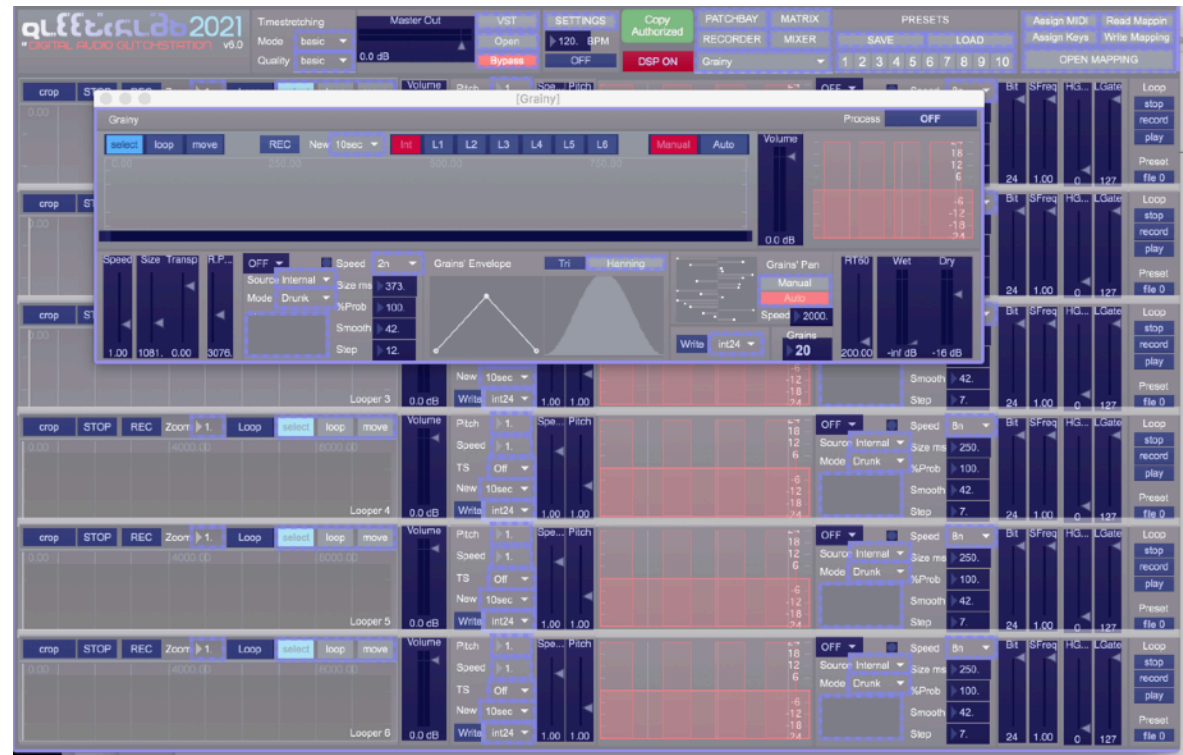
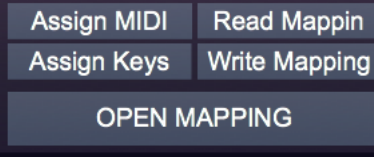
Surround: CH 1,2,3,4,5,6,7,8 IN (STEREO, QUADRAPHONIC OR OCTAPHONIC)

Surround controls can be found in the Surround window in the main menu.

## MIDI and Key Mapping

Gleetchlab X takes full advantage of the new Max8 midi mapping functions.

To map your controller press Assign MIDI or Key in the main window.



The windows will show you what controls can be mapped.

Click on one control and move your controller, it will be automatically mapped.

To exit from MIDI assignment press ESC on your keyboard.

Assign Keys refers to the computer keyboard.

# LOOPERS

In Gleecthlab X we have 6 identical loopers.

The looper is a special kind of sampler. It uses a buffer in the RAM to store a sound and it plays in loop or one shot. The form and speed of the loop may be fixed or random. To load a sound, drag and drop any kind of sound file in the space reserved for the waveform

These are the panel's controls:

The screenshot shows the looper control panel with the following annotations and arrows:

- Crop a loop (can't be undone)**: Points to the 'crop' button.
- PLAY OR STOP THE LOOP**: Points to the 'PLAY' button.
- RECORD A LOOP**: Points to the 'REC' button.
- Zoom (vertical)**: Points to the 'Zoom' control.
- Record a Loop**: Points to the 'REC' button.
- Loop or One Shot**: Points to the 'Loop' button.
- Select, loop or zoom loop points**: Points to the 'select', 'loop', and 'move' buttons.
- Volume**: Points to the volume slider.
- Time Stretch ON OFF**: Points to the 'TS' toggle.
- Erase loop**: Points to the 'New' button.
- Save Loop**: Points to the 'Write' button.
- Speed**: Points to the 'Speed' control.
- Pitch (if TS is ON)**: Points to the 'Pitch' control.
- EQ**: Points to the EQ spectrum display.
- Random loop points**: Points to the 'Random loop points' section.
- Sample Rate and bit reducer**: Points to the 'Bit' and 'SFreq' controls.
- Spectral Gate (HIGH FREQ, LOW FREQ)**: Points to the 'HG...' and 'LGate' controls.
- Rec and play Loop points automations**: Points to the 'Loop stop', 'record', and 'play' buttons.

Additional text annotations:

- Random loop points can use different algorithms. You can use the internal clock or an external clock connected to your audio interface.** (Points to the 'Source Internal' and 'Mode Unique' dropdowns)
- If you want to store a sample in a preset bank use FILE 1. After you load a band and recall the first preset, set this to FILE 0 to avoid reloading the file every time you change preset inside a bank** (Points to the 'Preset file 0' dropdown)

The speed (and pitch) of the sample is defined by a floating point number.

1. = (1. x sample frequency speed). Negative numbers play the sound in reverse.

(see midi mappings for range settings)

The pitch value is selectable once Time Stretching (TS) is activated.

Time stretching (TS button) separates speed from pitch and has different quality and algorithms.

There are three main commands on the waveform/loop display: "select, loop move" buttons.

Select = Select and drag a part of the waveform to make set the loop time.

Loop = Loop. Click and drag to size and move the loop.

Move = Magnify the display to work in smaller pieces of sound, you can magnify a loop like a microscope.

(NOTE: Using Magnify and random loop points, the random numbers generated will be within the display size, in other words the random loop will follow the magnifier and the position of the wave on the display.

The Looper has two main MODES: PLAY and RECORD.

By default the looper will NOT play automatically (NOW YOU MUST PRESS the red button "PLAY" to play the sample)

When you want to record live a Looper, just patch the source to the Looper IN in the matrix and press RECORD.

A looper can be initialised with different lengths creating an empty buffer using "NEW"

Every Looper has a 4 bands parametric channel with 2 Shelving and 2 peak EQs.

The STOP, RECORD and PLAY buttons at the right, save and reproduce automations of the loop size and position.

Random Loop Points is connected to the CLOCK in the Main Window or the external clock and sets the random In/Out points of the loop.

You can set the time (expressed in musical values) and thee values:

Speed (in note values), Probability of trigger, Size (in ms), Smooth and Step

Step refers to the [drunk] Step Size of the random function while the size in note values sets the time of the trig and is a function of the internal clock time. Probability is a number between 0 and 100 and sets the probability of change of loop points at every clock trig. Smooth soften the passage between two different loop points.



Every looper can export the sample with the WRITE button. You can select the bit depth before exporting.

## THE MIXER

All of Gleetchlab windows must be activated in order to work (this saves processing power).

The new Gleetchlab Mixer is a 10channels + 4 bus mixer featuring 2 VST efx for every channel and bus.



To use the mixer you must patch the sounds using the PATCHBAY (this is for the INPUTS).

The mixer output can be found in the MATRIX

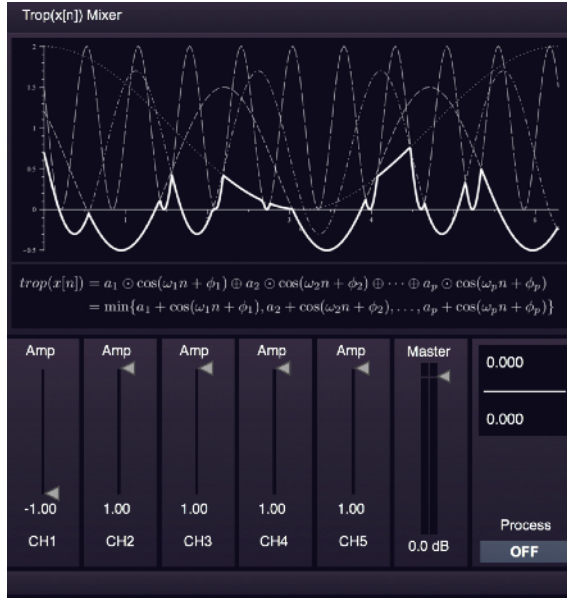
You can route any channel to Master OUT or one of the busses.

Every BUS has an independent audio recorder at the right of the window.

To record press ARM, then set a file name using SET, then press RECORD to start and to STOP the recording.

The BUS RECORD CTRL can be used to RECORD all four BUSSES (YOU NEVERTHELESS MUST ARM AND SET THE FILENAMES FOR EACH BUS RECORDING) and therefore to record 4 stereo files at once.

REMEMBER TO PRESS RECORD AGAIN TO STOP RECORDING!!!!



## THE TROPICAL MIXER

This is not your usual mixer but instead it is derived from the TROPICAL ADDITIVE SYNTHESIS (Bocci-Sancristoforo 2018).

Basically each input is part of a tropical function.

Amplitude goes from -1 to +1

The function is:

$$\text{Trop}(x[n]) = \min\{A1+CH1, A2+CH2, A3+CH3, A4+CH4, A5+CH5\}$$

In tropical maths the \* becomes a + and the + becomes the minimum.

Which means that the amplifier will SUM and not multiply and the output will be the MINIMUM between the signals.



GRAINY is a new version of Michele Tadini's T-Grain granulator.

In MANUAL mode you can use the horizontal fader under the waveform to set the point you want to granulate, otherwise using AUTO you can set two loop points and the software will play that zone granulating it.

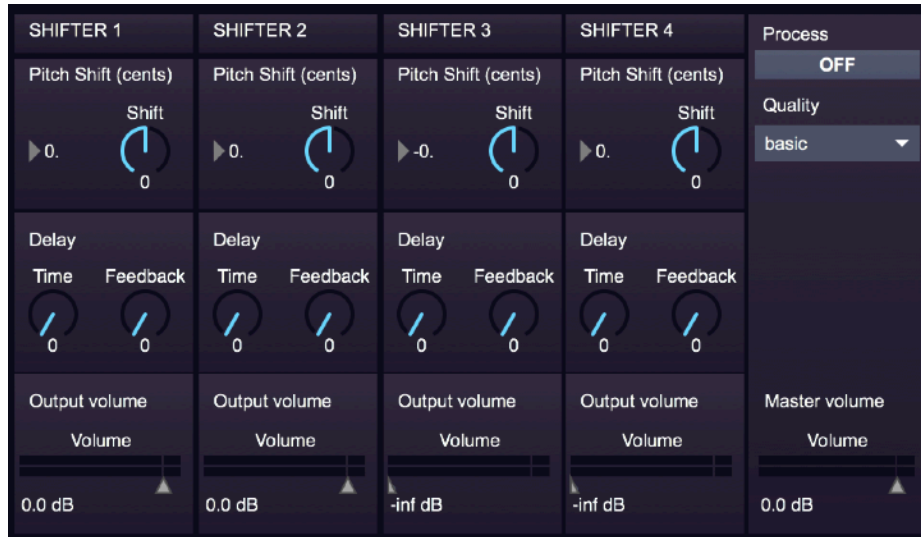
You can choose 7 inputs for the granulator: the 6 loopers or an internal buffer (you can drop a file in the waveform space).

Speed, Size, Transpose and RP (Random Position) refer to the granulator Speed, Grain Size, Grain Pitch and random position of the grains in respect of the playbar.

Grainy has a Random Loop Point algorithm identical to the looper to be used when in AUTO mode.

The grain's envelope can be designed with the breakpoint function (Using alt + mouse you can set the curve to exponential or log). The number of grains can be set between 1 and 40. Each Grain can be panned (manually or automatically).

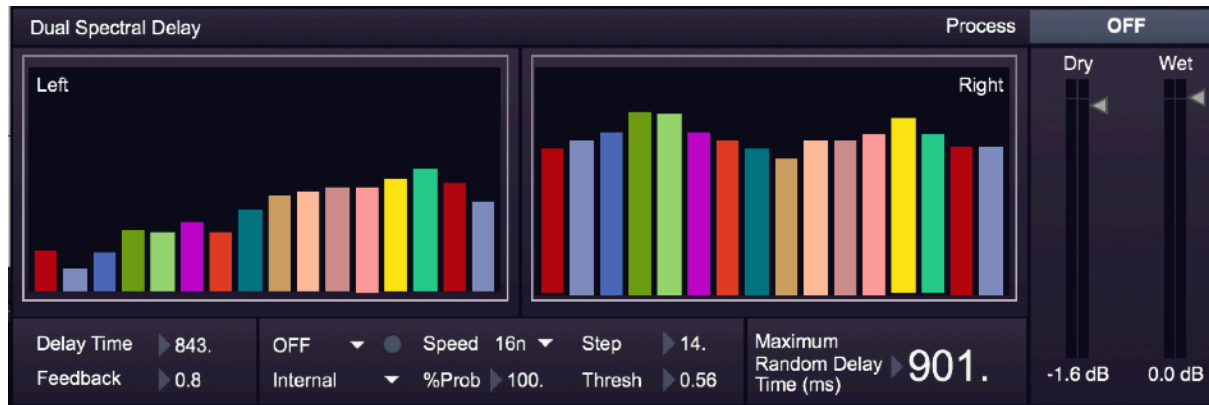
Grainy has also a handy reverb (WET signal) and a full parametric EQ.



HARMONY is a multiple pitch shifter with delay.

You have 4 parallel pitch shifter and every shifter can be delayed (delay also have feedback).

The quality of the pitch shifting is selectable, of course a better algorithm requires more CPU.



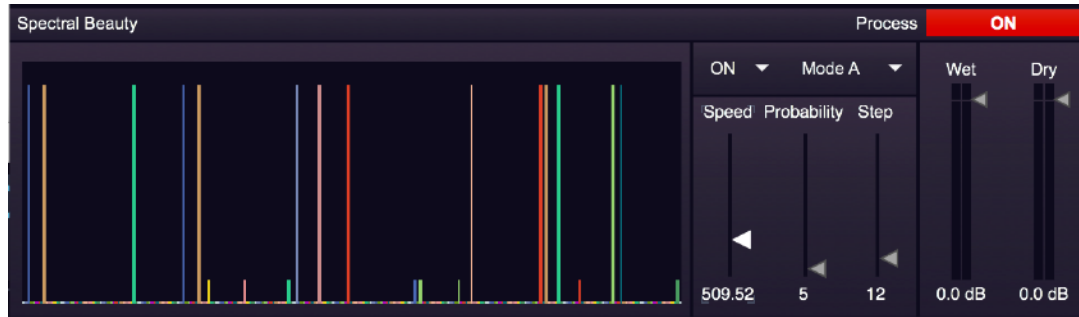
The DUAL SPECTRAL DELAY is a stereo 16 band spectral delay.

Every band can have a different delay time within a MAXIMUM RANDOM DELAY TIME.

The random time can be triggered with the master clock or using an amplitude threshold of the incoming signal.

The random function is a DRUNK function, so you can control also the step size of the function.

Feedback over 0.89 can cause random noise bursts (BEWARE!).



SPECTRAL BEAUTY is a 256 Spectral EQ with an internal random automation clock.

The algorithm has 4 modes: A,B,C,D

A is a drunk function. Probability will decide how many bands (in %) will be affected

B is a random function. All bands are affected

C is a drunk function with STEP size

D is a random function. All Bands are affected.



LAZY DJ is a sort of crazy automixing processor.

Choose a Looper buffer and the algorithm will create a remix by gently crossfading between layers.

You can chose 2,4, 8, 16 or 32 layers. The shorter is the buffer the higher number is suggested.

The processor has an EQ, bit reduction, samplig freq reduction, spectral-gate and a distortion





## TAMS

Gleetchlab2021 now features the same modal engine of Substantia.

You can feed the engine with an internal click or with a sound coming from the matrix.

TAMS can be played only with your MIDI keyboard.



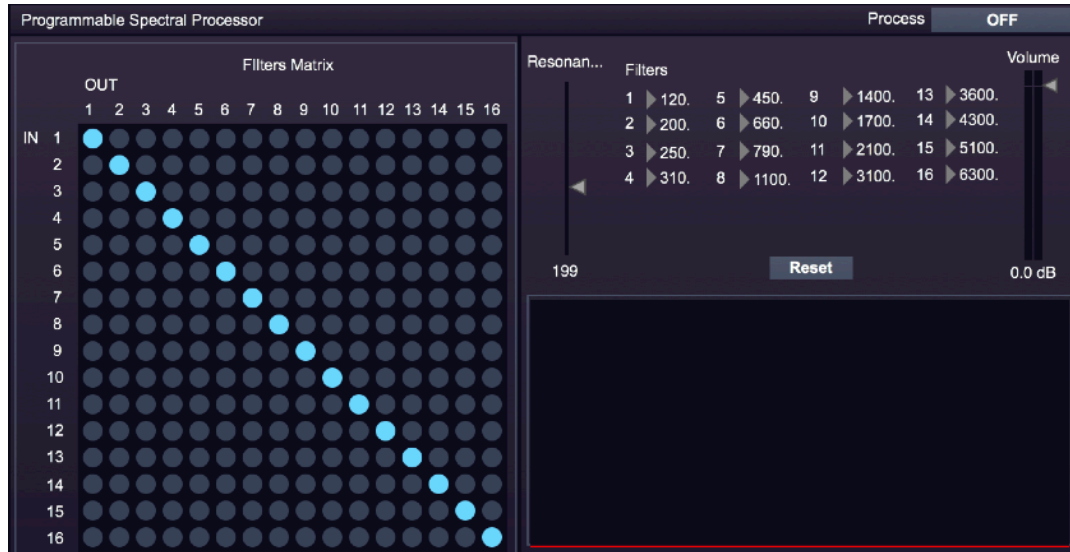
DATA RECORDER can translate to sound any kind of file (I suggest you PDF and images).

Select the destination buffer (Looper 1-6) and load a file.

Press PLAY/STOP to transfer the data into sound.

Rewind button sets the file reading point to the beginning.

Speed (ms) affect the number of bytes written in the sound buffer. The shorter values will write the data in a smaller portion of the buffer.



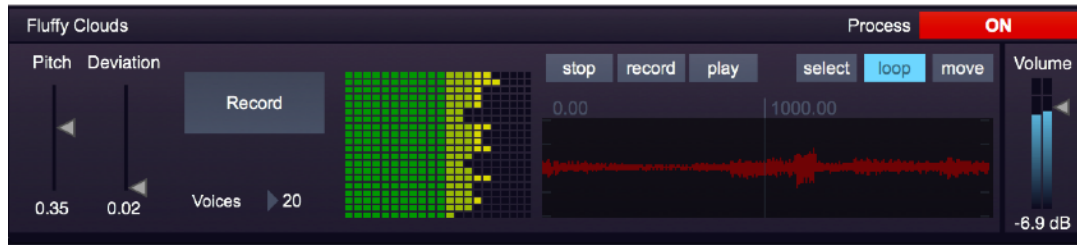
The SPECTRAL PROCESSOR is similar to the Buchla 296e module.

It is basically a fully programmable 16 channels vocoder.

You can set new band pass frequencies and also change the connections between the filters.

The OUT is the modulator signal, the IN is the carrier signal.

To use this processor, therefore you need two different signals.



FLUFFY CLOUDS records sound into a buffer and multiplies it for n times (Voices).

Pitch sets the pitch of all the voices, deviation sets a random value of deviation of the pitch for each voice.

Complex clouds of sound can be therefore created.

You can record and play automations of the loop points if you want.



The MUUG Filter is a nice sim of a 24dB/OCT transistor ladder filter with emphasis control and cutoff.

You can modulate the cutoff with the random algorithms.



The ECHOGEEK is a delay inspired to the famous Binson Echorec.



The SUPERLOOPER is a stompbox style overdubbing looper

You have 60 seconds of buffer.

Press record and you will record your loop. Press play to start immediately playing (and trim) the buffer.

Pressing record again you will overdub adding a new layer of sound to the previous loop.

To create a NEW loop press stop and Record again.



ELECTRONIC DYSPHEMIA is a stutter effect.

The size of the stutter can be automated with random values triggered by the internal or external clock, OR with a level threshold.

You can also EQ the WET signal.





DIRTY FRIEND is a TUBE saturator with 10 noise flavors.  
Bland control will select different tastes of tube saturation.



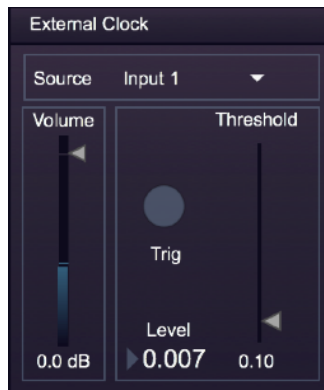
As usual GLEETCHLAB is designed for surround performances with a selection of QUADRAPHONIC or OCTOPHONIC speakers placement Sources are MONO! These can orbit FFWD or REW, or have random position using the internal or external clock. You can also record and play the sources' positions with S(stop) R(record) P(play).



You can feed Gleetchlab with 8 (4 stereo) sources (see the MATRIX and the PATCHBAY for connections)

If your source is mono, use an odd channel (1,3,5,7) and press MONO.

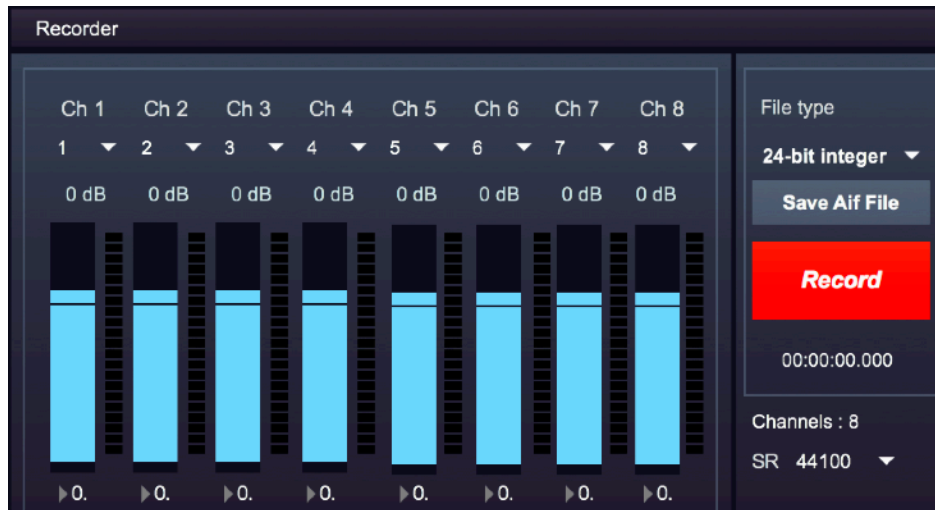
This way the signal will be replicated also on the even channels(2,4,6,8).



The external clock is a trigger generator that you can use with all the random algorithms in Gleetchlab.

Select the channel INPUT( 1,3,5,7) and set the threshold.

This is useful if you want to make your modular to communicate with Gleetchlab.



The RECORDER can record anything that is routed to the MASTER LR out or to the SURROUND  
(In order to record multiple channels you must use a multichannel audio interface, otherwise only Ch1 and 2 will be available).

Select file bit dept, press SAVE AIF FILE to set the file name, then press RECORD to record the file.  
To STOP RECORDING PRESS THE SAME BUTTON AGAIN!!!!!!

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Windows porting by Andrea Cerrato

Additional credits can be found in the License File.