CREATURE FROM THE ID

A KRELLOTRON ELECTRONIC MUSICAL INSTRUMENT

v1.0

PRESETS BY TODD BARTON

FOREWORD

The history of what we call electronic music, not merely understood as music created using technology but as an entirely new form of music endowed with its own syntax and symbolism, where the creation of new sounds evolves side to side with a new way of organizing sound, begins in the 1951 in Europe at the radio studios of WDR in Cologne and in 1954 at RAI in Milan, almost coinciding with the birth of musique concrète at the GRMC in Paris. Almost at the same time, other radio studios and university institutions began to take an interest in this new music, including those in the United States, Poland, the Soviet Union, Japan, and nearly a decade later, the United Kingdom.

In the United States, in the 1950s, electronic music found its epicenter at Columbia University and among the so-called "New York School" circle led by John Cage. However, alongside serial music and Cage's aleatory compositions, another form of electronic music emerged on the East Coast of the United States, thanks to two sound designers employed by Hollywood: Louis and Bebe Barron.

The Barrons were not interested in serialism and musique concrète but developed an entirely original idea, partly due to the limited resources available to them. Besides magnetic tape and a few function generators, Louis Barron approached the challenge of new music by creating electronic circuits capable of self-generating musical articulations. In a sense, we could say that the Barrons' work created a concept of generative music. Today, self-generating patches are very popular on modular synthesizers, but in the 1950s, the idea of a circuit not only capable of generating sounds but also articulating them in a complex way, was completely unprecedented with the exception of the giant and clumsy RCA synthesizer. The Barron's circuits were based on tube oscillators, modulators, and filters, connected in feedback loops to amplify instability and transform it into a new music language, their inspiration was Norbert Wiener's Cybernetics.

All of this happened at least 10 years before the creation of the first modern voltage-controlled analog synthesizer. The concept of control voltage was completely unknown to the Barrons; for example, the envelope generator and the sequencer were absolutely unimaginable at that time. However, if we listen to the Barrons' work on "Forbidden Planet" (MGM 1956), it is evident that, in addition to classic tape editing, they had developed circuits capable of modifying the amplitude, duration, timbre, and frequency of sounds, using other techniques. These techniques, after all, were not a secret; they were already part of the cultural knowledge of any competent electronic engineer.

For example, to create a volume envelope, one could take a low-frequency square wave and filter it with a first order high-pass filter and a first order low-pass filter. The result would then pass through a wave rectifier and be applied to a ring modulator, which would serve as a VCA.

"Creature From the ID" is a software inspired by the pioneering work of the Barrons, designed to emulate their self-generating circuits using only the (virtual) techniques available in the 1950s, thus avoiding the tools of control voltage and all those devices born from the minds of Don Buchla and Robert Moog that characterize the classic synthesizer.

With "Creature From the ID" I challenged myself, simply by listening to the Barrons' work and reading the very few available pieces of information published on the internet, to recreate as faithfully as possible their sounds.

This is not a work of reverse engineering because I have not gained any access to the documents of the foundation that manages the Barron archive, despite having requested it.
Unfortunately, I received no response.

Therefore, I must be completely honest here; this is pure guesswork. I leave it to you to judge whether I have succeeded in capturing the spirit of those sounds, those years, and that vision of an unlimited and magnificent future that the Barrons so eloquently conveyed through their music. And just to be clear on this, no AI or samples were used in this software.

Creature from the ID is an act of love that honors the Barron's legacy and a new tool for teachers and students of electronic music who want to explore the history of electronic music in class, outside the mass market software's paradigms.
As a professor of electronic music, I am and will always be dedicated to creating educational tools accessible to all.

I wish you infinite hours of joyful sounds.

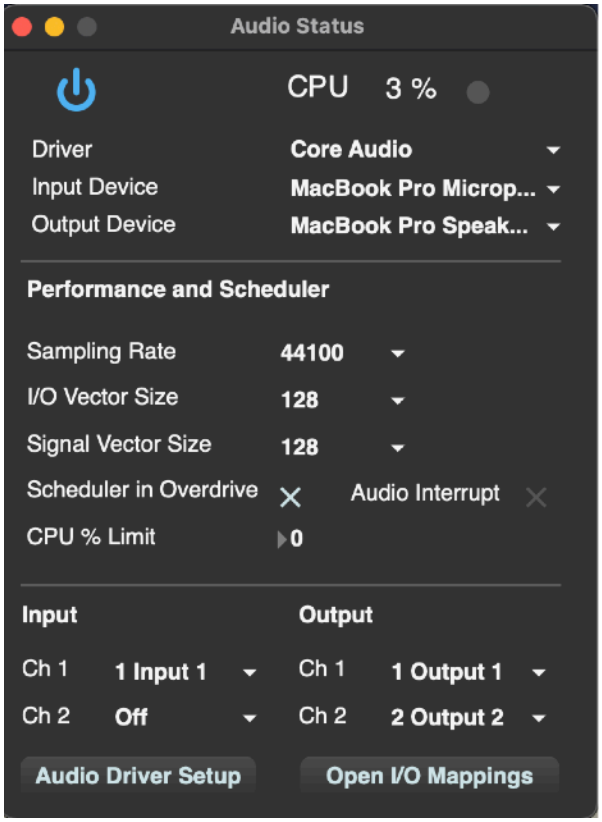
Milan, June 2024

Creature From the ID is not a VST plugin, but it can be connected to any DAW using a virtual audio driver such as Blackhole.

After setting up the audio options in Creature From the ID you can take a look at the ROBOT buffon in the software that will randomize some parameters to understand the vast range of sonic possibilities of Creature From the ID

Please read this manual that will cover all the important informations you will need to start using Creature From the ID.

At the top left of the window of CFTI you will find a button called Audio Option, press it and it will open a new window:



The blue I/O button at the left turns on and off the audio scheduler. If you modify some settings you must to restart the audio processing by turning off and on again this blue button. If it is yellow it means that you need to restart the audio scheduler.
By default this will be ON when you run the application.

Output device: select here your audio interface. If you want to use a virutal audio interface select here the driver (eg. Blackhole 2ch)

Input Device: not important, there is no audio input in Bentō

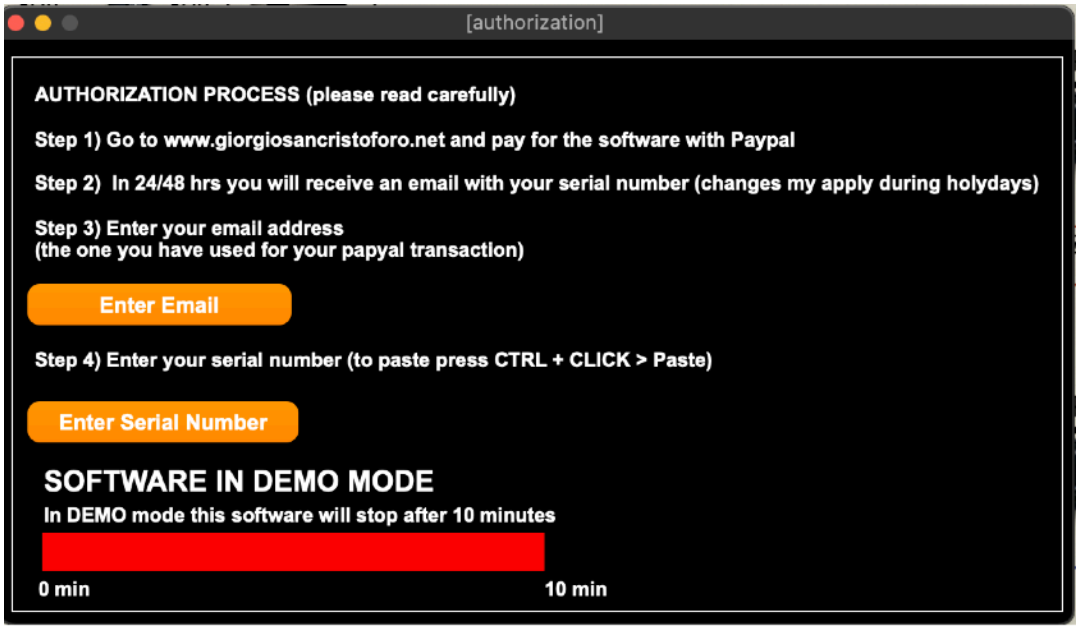
I/O and Signal Vector Sizes: these set the number of samples calculated at the I/O of your audio interface and inside the software (Signal Vector Size). It would be best to keep this number at least at 128 for both. If opening the software you hear some glitches you must try to rise both I/O and Signal vector sizes to 512 or 1024.

Scheduler in Overdrive is ON to give priority to timing messages.
There are two clocks inside the software and this option gives to the clocks a priority on graphic refresh.
If you have CPU% values too high, try to uncheck this option

Output CH: you can route the output 1 2 (L R) of CFTI, to other output channels if you have an audio interface with more than 2 outputs.

Software Authorization (THE DEMO RUNS FOR 10 MINUTES THEN MUST BE RESTARTED)

Press "Unlock Demo" at the right of the CFTI top menu and a window will open. After purchasing the software on the website you will receive in your PayPal's account email the serial to unlock the software.
The process usually takes 24 to 48 hours maximum.



FIRST: Input your PayPal's account email address
NEXT: Input the serial code you have received, as it is with spaces.
To paste use mouse's right click > paste

When your software is authorized the red bar will become fully white and you will see SOFTWARE AUTHORIZED instead of SOFTWARE IN DEMO MODE.

Troubleshooting if this does not work, check the following:
1) the serial is correctly pasted
2) the email is your PayPal's account email
3) you have installed the software in the system HD.

THE CREATURE FROM THE ID LAYOUT

CFTI has 2 identical sound generators and a master interface at the center, with delay, saturation and output volume control. The sound can be recorded in a separate window: see RECORDER.

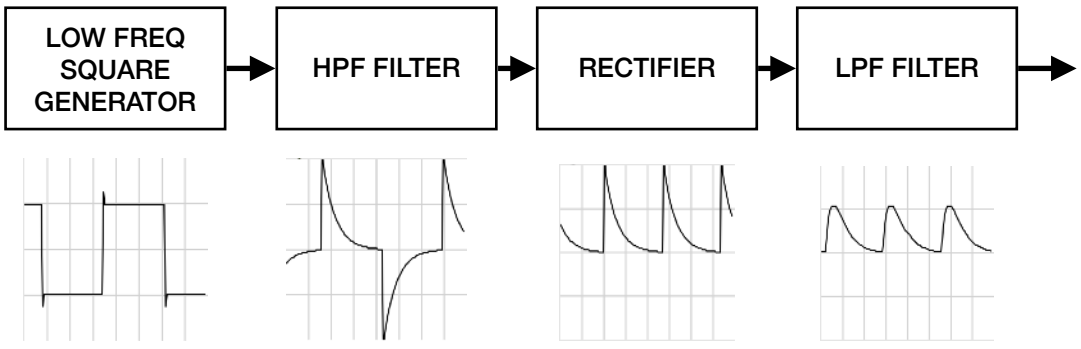
The sound generator is divided in two sections: pitch and timbre control (in light gray) and time/envelope (in red).
Let's see them:

The sound generator is the core of the software.

FREQUENCY: Controls the base frequency of the oscillator
SAW/SIN: Selects the waveform
VOLUME: Output volume of the generator
PAN: left and right panning of the generator
FM IN: the two generators can make FM and cross feedback FM. The generator at the left modulates one at the right and vice-versa.
SEND: Delay send volume
ID: Speed of the instability of the circuit
MOD: Index of the instability of the circuit

At the top of the generator's control there is a red panel that deals with the clock and volume envelope of the generator.
First and foremost: the filters do not change the TIMBRE!
Here we use first order HPF and LPF to control the shape of the envelope!

Confused? Let me explain. To create envelope curves as if we were in 1958 we can't use an envelope generator with triggers, because those didn't exist yet back then.
But we can use some elementary filter theory to create AR envelopes with exponential curves.



Let's say we have a 2Hz square waveform, if we apply a first order High Pass filter (Cutoff equal or > 2Hz) we get a sort of exponential fall at the end of the cycle.
We then rectify the waveform so we obtain a simple AR curve with exponential release. An LPF filter can be used just after that to smooth the attack. The signal is then sent to a ring modulator to control the amplitude of the generator's sound.

The clock can be made unstable with ID and MOD. Just like the generator, these parameters will create irregular voltages, which here, will result in irregular timing.

TIP: if you want to make a drone without any envelope keep the filters, ID and MOD at zero and clock to maximum.

The main panel at the center has a master Volume control, Saturation, and delay controls: Time, Feedback and Level.

At the bottom of the blue panel you can see 4 meters. The two top meters show the ID level of the generators and the lower meters show the audio levels.

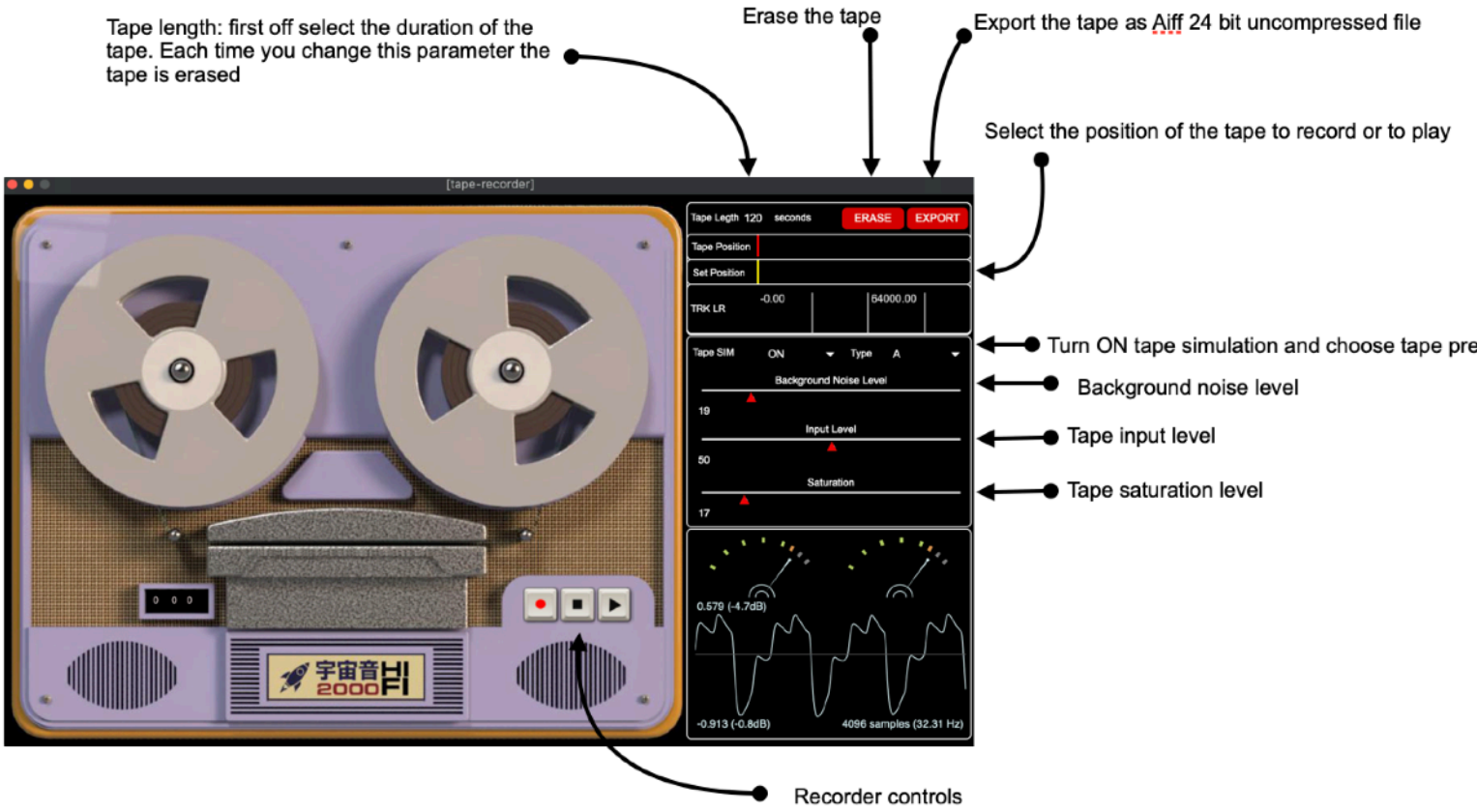
THE ROBOT BUTTON!
The ROBOT button randomizes some of the controls of the generators and the delay. TRY IT!

TIP: every time you turn on the CFTI the ROBOT function will randomize the parameters. If you want to start from basic settings press the DEFAULT PATCH button in the top menu.

RECORDER

CFTI has an internal tape recorder with different tape and saturation controls

BEFORE RECORDING you can select the tape style, set the specific background noise, input level and saturation.



MIDI and KEYBOARD mapping

You can assign MIDI CC to the dials and controls of CFTI or assign your computer keyboard to buttons.
CFTI do not accept MIDI NOTE ON/OFF messages.
It can't be controlled with a standard midi keyboard, it would not make sense.

On the upper window's menu press MIDI MAP, now click on one dial and move a dial on your controller, it will be automatically mapped.

To exit from MIDI or KEYBOARD MAPPING press ESC on your keyboard.

Remember to SAVE the mapping before quitting the program. The MIDI MAP is not saved in the user presets.

KEYBOARD MAP works in a similar way but with computer keyboard instead of MIDI CCs.

SAVING AND LOADING PRESET

Simply press Save Preset and your patch will be stored into a json file
To load a User Preset, simply press Load Preset and load the json file you have saved.

TODD BARTON'S PRESETS

In the ZIP folder you will find a large number of presets
created by the synth virtuoso Todd Barton.
I wish to express my deepest thanks to Todd for his generosity.