FLUORINE

VER 1.0

USER GUIDE

Fluorine is a high definition modern take on a classic 8 bit synthesis called Bytebeat and discovered in 2011 by the encomiable Viznut.

When I found it I got instantly hooked to the richness of that sounds. After a lot of hours of experimentation I got the sensation that it was a bit limited and there should be new modes of explorate it. Six months later, maniatically coding I developed some totally new approaches to the classic Bytebeat.

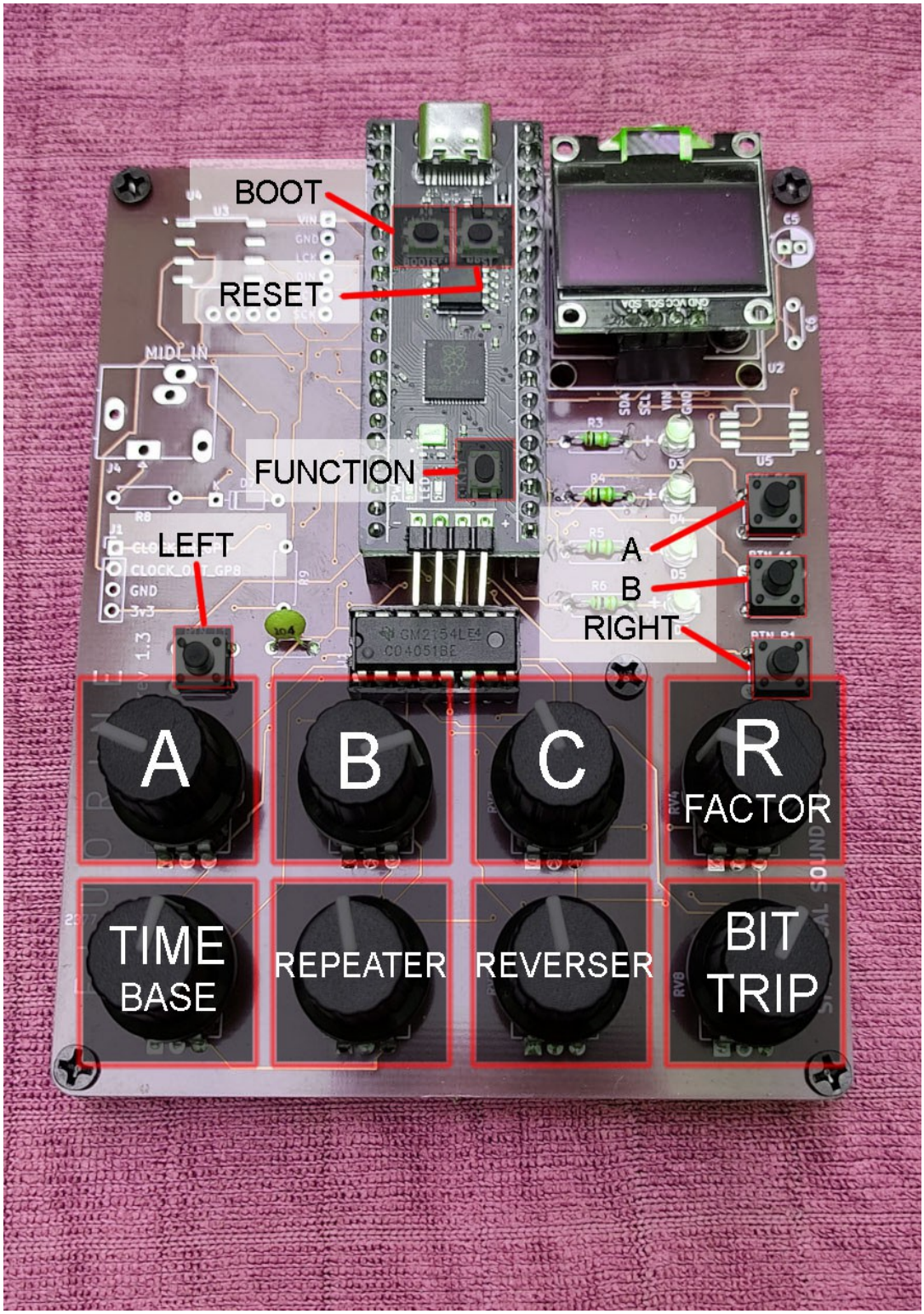
First, running it in various other Bitdepths. The higher the Bitdepth, the softer, rounder and higher definition it becomes. But it also more difficult to get interesting melodies and progressions for it.

In my explorations I discovered that 6 Bits sounds particularly good. Also 12 Bits, that along with 8 Bits are probably my favourite Bitdepths. The odds numbers (7, 9, 11, 13) sounds a bit more discordant to my ears but in some programs that ones are like the more adecuated because of this.

I have also developed 2 new ways to calculate the the native mono Bytebeat synthesis in native stereo that sounds frankly good, wide and tridimensional.

Another bit that I have added to the classic bytebeat synthesis is the addition of modular and stackable algorithms that process the mathematics under the hood and a recursive Mode that cycles between this algorithms and that turns it all into a really new whole synthesys technique that I called Recursive HD Bytebeats", that altogeher with the stereo modes and Bitdepth features turns this machine, the Fluorine, in probably most advanced way to explore Bytebeat synthesis as I write this in november of 2023.

MAP OF CONTROLS



///KNOBS////

A, B and C are the parameters of the selected program. This are the most used knobs you will use to tune and modify your sounds.

R Factor is the Recursive Factor. Generally, the lower the factor, the most it modifies the sound, being 63 the minimum, 1 the max and 0 disabled. You will probably want to tune it when you choose a new program, but of course you are free to play it as you prefer.

Time Base is the general speed at which the programs run. The higher, the most hight pitched and faster the sound becomes. It´s a way to set the general tempo and pitch of the sounds. Normaly is a set and forget parameter that you will want to combine with the R Factor knob to finetune your base sound.

Repeater is the frequency that the Recursive factor happens. It mostly works when in Recursive Mode, with the sweetest spots in the middle zone. It also sounds kind of like a strange octaver and bass liner.

Reverser is a kind of time freeze and time fast fordward and reverse parameter. Is quite experimental and maybe will dissapear or be modified in subsequent firmwares. It should be placed in the middle position, where it is disabled, as you turn it to the left side it starts to slow time and past some point, even reverse it. Turning to the right it fast forward the time. It plays in conjuntion with the Repeater knob and should be both tweaked together to get the desired flow. It´s kind of advanced parameter and at the beginning it is better to left it on the center as moving the time can degrade the sound quality in some configurations.

Bit Trip cycles between the selected Bitdepth of each program. Normally you turn it to the most right, where it is disabled. As you start turning it to the left it start cycling the Bit Depths, going faster as you turn it more to the left.

///BUTTONS///

Left button. It cycles to the next program.

Right button. It toggles on/off the Recursive Mode

A Button it cycles between the available Bit Depths for that specific program

B Button it cycles between algorithms and algorithms sets.

Function Button is used to modify the other buttons:

Function + Left button. It cycles to the previous program.

Function + A Button. It cycles between the Stereo Modes.Currently there are 3 modes.

1 Stereo Type 1 (ST1)
2 Stereo Type 2 (ST2)
3 Mono (Mono)

Function + B Button. It changes the clock out multiplier. It is used to sync with external machines like Korg Volcas, TE Operators, Eurorack, etc

Function + Right Button.It toggles between sound modes. Currently there are two sound modes: LIQUID and SOLID. It changes the character of the sound engine and also can be affected by the REPEATER knob

BOOT button. You will use this button to update the firmware when new updates appear

RESET button. Once every 2 moons, using the most extreme settings (and abusing the infamous algorithm number 5) it can get stucked. Press this button to reset the sound engine.

///OLED///


TIME
STEREO MODE
PROGRAM NUMBER
T 31455
ST 2
SOLID
SOUND CHARACTER
ALGORITHMS
0:0103
BITDEPTH
B 12
-->Mode
RECURSIVE MODE

///UPDATES///

As 1 of november of 2023 the firmware is in version 1.0 but I still have a nice chunk of ideas that I will be exploring and implementing in future firmware updates.

To update to the newest version, you may indicate your mail when ordering the Fluorine. I will mail you the new fimrwares when ready. You can be dead sure that I will only use your mail for the firmware notifications and nothing more.

Please keep the firmware only for you and dont share it with nobody else until Fluorine goes open source one day in case in happens.

To update your firmware you have to coonect a USB C cable to the machine. Connect to your computer. Press BOOT button, and while pressed, press RESET button, release RESET button and then release BOOT button.

A window will open in you computer, like if it were a pen drive. Drop the fimware.uf2 file there and that´s it. Your machine is updated with the latest version.