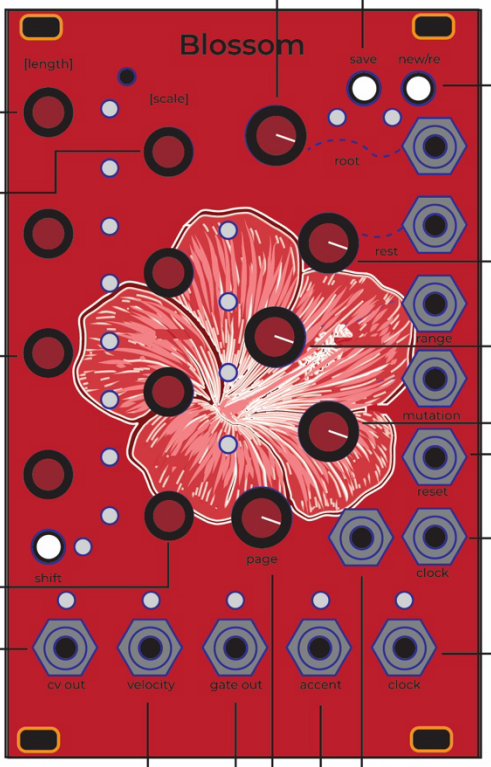
Blossom

Alternative firmware for Qu-Bit Bloom



root
transposes the root tone (cv is 1v/oct)

save
Press to save the currently playing melody to memory. This melody will stay in memory even after restart.

new/re
Press to create a new melody. Long-press to recall the last saved melody.

length
Hold shift and turn to set the number of steps

scale
Hold shift and turn to set the scale

rest
Set the probability that new notes are rests

step encoders
Turn to change note. Press to turn a step on/off. Notes sound on change. Press in and turn to change ratchets.

range
Sets the max/min range for new notes and note mutations (1-2 octaves)

mutation
Sets the probability that a mutation will occur on each cycle

reset
trigger here returns Blossom to step 1

follow
Shift-click to toggle follow mode. Shift-turn to adjust brightness

clock in
Blossom will advance one step every time a trigger is detected

cv out
Outputs v/oct pitch

clock out

new
A trigger here creates a new melody

velocity out
Velocity is a random value betwen 0 and 3 volts

accent out
trigger generated on some steps

gate out
Sends a gate on every unmuted note

page
Turn to select page 1-4. Selecting a page makes its notes visible and availale for editing.

Download here: https://github.com/abluenautilus/Blossom/releases

Install with the Daisy Web Programmer: https://electro-smith.github.io/Programmer/

Firmware and panel by Blue Nautilus / Seaside Modular

seaside modular

Installation

NOTE: You can install Blossom on your Bloom module **if you have the Daisy version of the module**. There are two versions of the Bloom. Check this page to figure out which version you have.

To install Blossom, you will need a micro-USB cable. If you are having trouble getting the module to be recognized by your computer, chances are, it's an issue with your cable. Try a different cable. You need one that supports data as well as power transfer.

1. Download the firmware .bin file: https://github.com/abluenautilus/Blossom/releases

2. Connect the micro-USB cable to the back of the module, and connect the other end to your computer.

3. Open the Electrosmith Web Programmer page in Google Chrome: https://electro-smith.github.io/Programmer/

4. Click Connect and select your module. You should see DFU in FS Mode.

5. Click the button to select a file from your computer and select the Blossom .bin file.

That's it!

Introduction

Blossom is designed to be simple and playable. In contrast to the Bloom's two channels, the Blossom only generates a single melody. However, it also generates a "velocity" output and an "accent" output. More on those later.

There are two ways to create a starting sequence. If you press the "new" button, a sequence will be generated for you, algorithmically. You can also turn the encoders to adjust the notes. By default, you will hear the notes change as you turn the encoder to give you feedback on the sequence you are creating. You can control the range of notes generated using the "range" control.

Each time the sequence repeats, there is a probability that a note will mutate, that is, randomly change. The probability of a mutation is controlled by the mutation knob and cv input.

If you wish to save the current sequence, press the save button. If the sequence mutates, or you change it, or a new one is created, you can return to the saved sequence by long-pressing the “new/re” button.

Detail

Length. You can change the number of steps from 4 to 32 by holding the shift button and rotating the first encoder. Once the sequence is more than 8 steps, you can access the other steps by turning the Page knob. If you wish the display to follow along with the current step, hold shift and click the last encoder to toggle the “follow” option on and off.

Scale. All of Blossom’s sequences are quantized. You can change the scale by holding shift and rotating the second encoder. The available scales are, in order:

1. Major
2. Minor
3. Harmonic minor
4. Major Pentatonic
5. Minor Pentatonic
6. Dorian
7. Mixolydian
8. Bhairav
9. Chromatic
10. Tuning

The “tuning” scale only produces the root note of the scale and can be used to easily tune your oscillator.

Step encoders. You can change the pitch of each individual step by turning its encoder. The pitch will stay in scale. The color of the associated light will indicate the pitch and you will hear the new pitch as you turn the encoder (turning the encoder initiates a gate out as well as sending out the cv of the new note). Press in and turn the encoder to change the number of ratchets at that step.

Rest. The rest knob and cv input control the probability that new notes will be rests, that is, that they will be silent. When the knob is fully clockwise, there

will be no rest notes. This parameter applies both to mutations and to new melody creations.

Range. This controls the range within which new notes are constrained. Currently there are only two values: when the knob is to the left of noon, notes are constrained to 1 octave. To the right of noon, they may vary 1 octave above or below the base octave.

Clock in. Blossom will advance one step every time a trigger is received. This means that Blossom is not calculating tempo and does not care if your clock is steady or unsteady.

Reset. Reset sets the sequencer such that the next trigger will initiate step 1.

New. A trigger into this input creates a new melody.

Root. The root knob and cv input can transpose the root note of your scale. The voltage in plus the knob position will sum with the voltage out.

Ratchets. Press in a step encoder and turn while pressing in to change the number of ratchets.

Settings

Follow. Hold shift and click encoder 8 to toggle Follow Mode. In Follow Mode, the page will advance to follow along with the active step.

Brightness. Hold shift and turn encoder 8 to set the global brightness setting.

Gate length. Hold shift and turn encoder 7 to change the gate length.

Accent probability. Hold shift and turn encoder 6 to change the accent probability.

FREQUENTLY ASKED QUESTIONS

Is Blossom supported by Qu-Bit?

No. Blossom is not supported by Qu-Bit Electronix. Please do not bother them with questions about it, or about your module if you install it.

Can I install Blossom on my module?

You can install Blossom on your Bloom module **if you have the Daisy version of the module**. There are two versions of the Bloom. Check this page to figure out which version you have. If you have a screw above the Scale encoder, that's the Daisy version.

If I want to go back to the default Bloom firmware, can I do that?

Yes. You can download the Bloom firmware from the Bloom product page and install it using the same method you installed the Blossom firmware.

Change log

Version 1.0, March 13, 2024.

Version 1.1, March 23, 2024

- Added ratchets