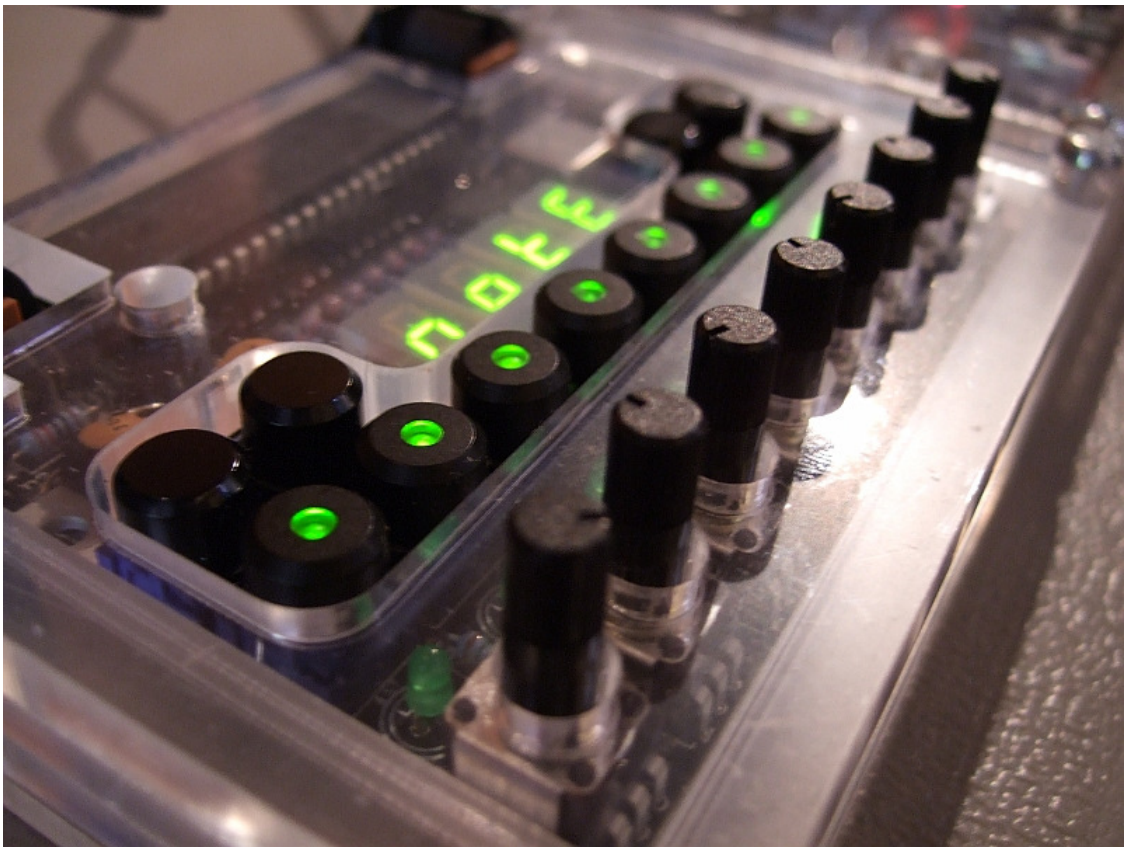
GorF V2 MIDI Step Sequencer
Quick Start User Guide



Version 1.0
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Introduction

GorF was originally designed as a tool to help me with the development of my synthesiser projects. It needed to be small, easy to use and be able to handle different types of MIDI event, like notes, MIDI CC and MIDI Clock.

GorF became very popular in 2010 receiving wide acclaim from the synthesizer community at large.

GorF was designed to be open source and “hackable” by users who wanted new features. Peter Kvitek kindly picked up this challenge and added several new features to the original code. This inspired me to pick up the code again and add a couple of other features version 1 users had asked for.

The firmware for Version 2 is fully compatible with the version 1 hardware, so owners of the older version can easily upgrade their firmware and gain access to the new features.

I’ve written this guide as a way to get people familiar with the basics of operation and how to get started. I’ve found that once you understand what each mode can do at a basic level, the best way to learn is really to mess around with each function and experiment.

I would like take this chance to thank you for purchasing a GorF sequencer and I hope you have many hours of fun with it. I would also like to thank Peter Kvitek and the whole synthesiser community for their support for GorF. It’s nearly 2 years after my original prototype was first demonstrated and I am still amazed at it’s popularity and so very pleased that people continue to enjoy GorF.

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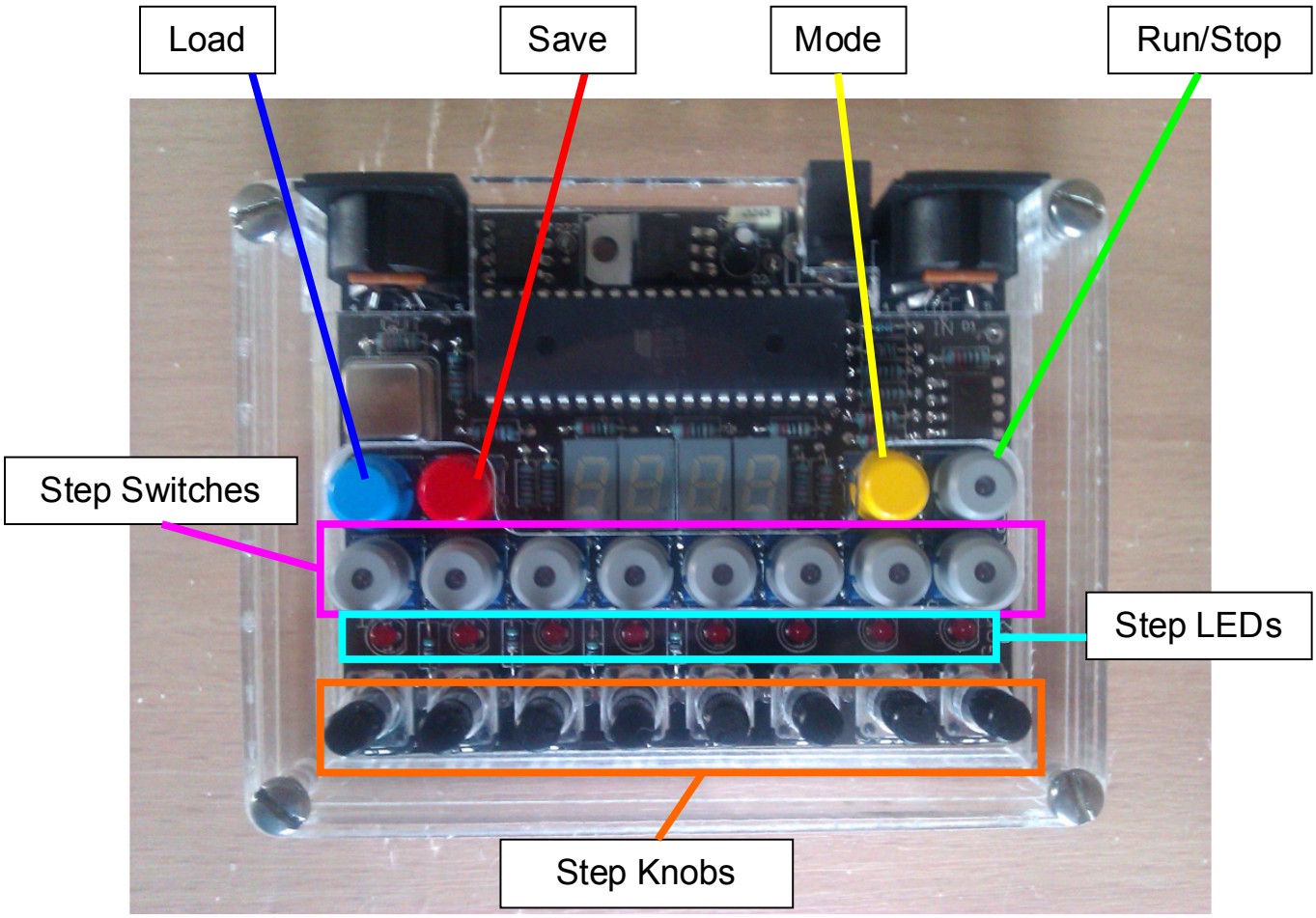
Features

GorF Version 2 has the following features;

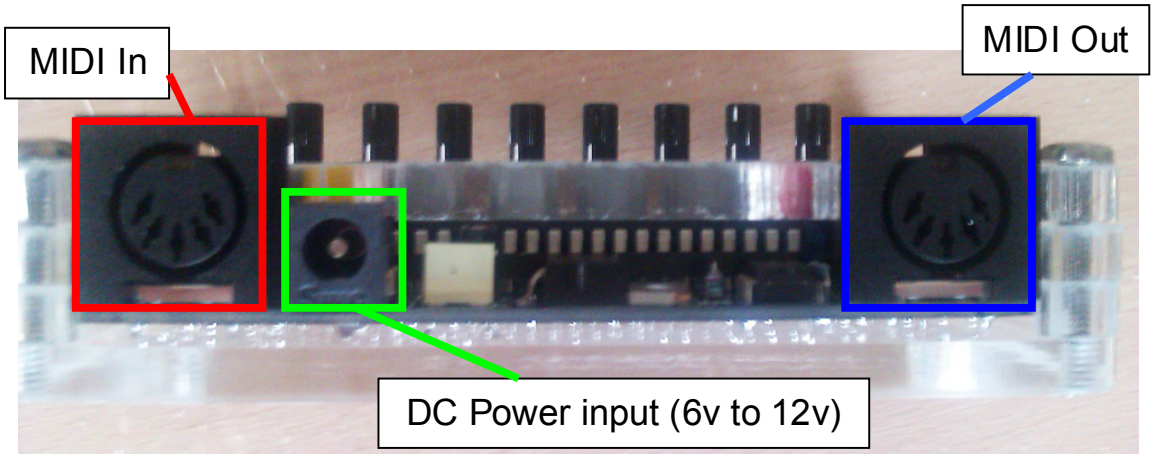
- 8 Steps per sequence
- Each step has a Variable step length
- Each step has velocity
- Ability to “tie” steps together
- Able to send two MIDI CC values per step
- Variable sequence first step (new in V2)
- Variable sequence last step
- Adjustable range for note value
- Randomize sequence (new in V2)
- Rotate Sequence left or right (new in V2)
- Increase pitch up/down a semitone at a time (new in V2)
- Variable MIDI channel
- Ability to record notes for a sequence via MIDI in (new in V2)
- Root note adjustable via knob and MIDI in
- Ability to chain two sequences
- “Bank play” mode allowing complex “jamming” (new in V2)
- Ability to send a single sequence, a bank or complete memory dump via sysex using a “unit ID” (new in V2)
- 64 sequences can be stored/recalled in 8 banks of 8 (improved speed for V2)
- 2.5mm DC power connector (Version 2 hardware only)

Hardware Overview

Top



Rear

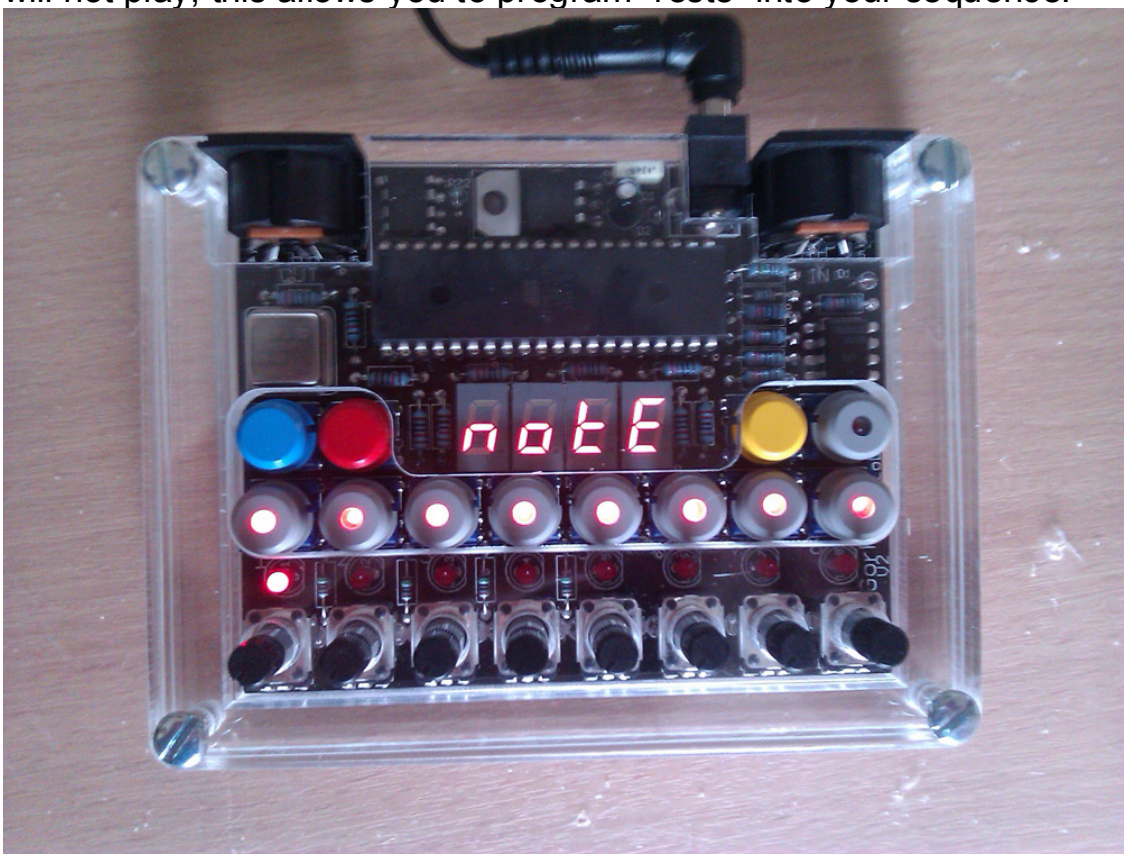


Modes of Operation

GorF V2 has 10 modes of operation, access the first 8 of these is achieved by pressing and holding the “mode” button and pushing one of the eight Step Switches. The final two modes, Load and Save are accessed directly. To access the Load mode, just press the Load button. Similarly pressing the Save button will take you into the save mode.

Note mode

In this mode you can adjust the note being played for each step using the step knobs. To turn on or off a step press the respective Step Switch, if the LED is lit, the note will play, if the LED is not lit the note will not play, this allows you to program “rests” into your sequence.



Press and hold Mode and Step Switch 1 to reach this mode.

Velocity Mode

In this mode you're able to adjust the velocity of each note that is played, just turn the knob for the step you wish to adjust and adjust the value from 1 (soft) to 127 (hard).
As with the 'note mode' the Step Switches turn on/off the step to be played.



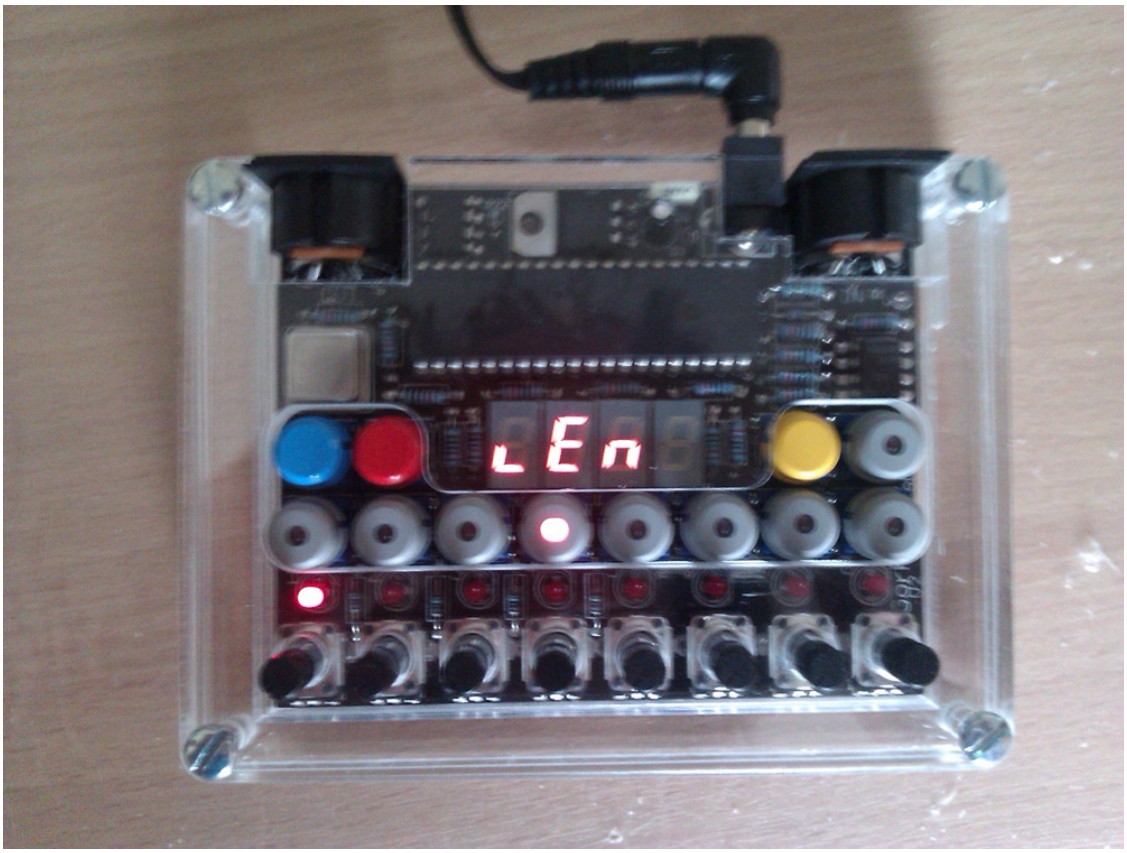
To reach this mode press and hold the mode switch and press Step Switch 2

Length Mode

In this mode you're able to adjust the length of each step. The value is the number of MIDI clock pulses and is based on the standard of 24PPQN. Hence a value of 96 is four beats long (assuming 4/4 timing), 24 is one beat, 12 is half a beat (semi quaver) and so on down to 3.

The gate length is fixed to half the step length, so a step length of 24 will result in the gate being held open, before a note off is sent for 12 MIDI clock pulses.

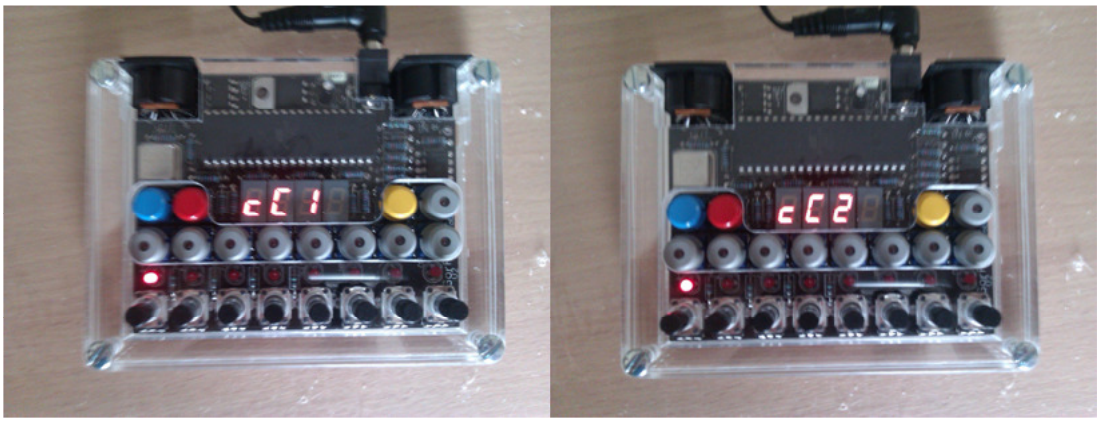
Additionally the Step Switches now enable a "legato" mode, such that if you wish to make Step 4 play for the full length and be released after step 5 has played, you simply press the step 4 switch and the LED will light (as shown in below).



To enter this mode press and hold the Mode switch and then press Step Switch 3.

CC1 and CC2 Modes

In these mode you are able to select when to send a MIDI CC value and the value you wish to send (from 0 to 127).
The Step Switches enable a MIDI CC value to be sent for the given step and the Step Knob allow you to set the value to be sent.



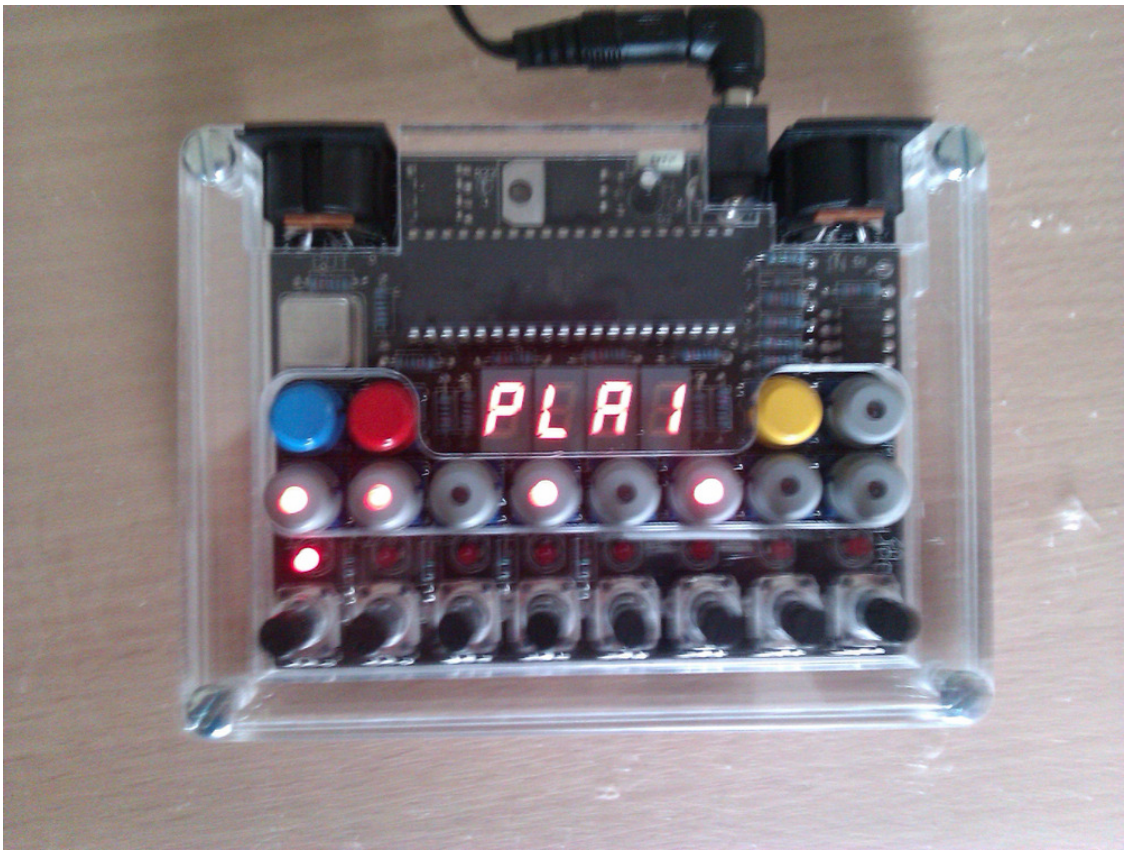
To enter CC1 mode, press and hold the Mode switch the press Step Switch 4.
Similarly to enter CC2 mode, press and hold the Mode switch and then press Step Switch 5.

Bank Play Mode

This is one of the most exciting new features for GorF and was implemented by Peter Kvitek after a lot of discussion.

In Bank Play mode you're able to choose which patterns from a bank are played and how many times each pattern is repeated before it moves onto the next.

The Step Switches select whether a sequence is played or skipped, the Step Knobs select the number of times a sequence is repeated.



In the picture above, Sequence one, Step 1 is being played. You will see the number "1" in the right hand of the 4 displays. If sequence 4 was playing you would see a "4". In addition Step LED 1 is held dim, again if pattern 4 was being played, Step LED 4 would be remain lit dimly.

In the example picture above, sequences 1, 2, 4 and 6 will be played. You might have sequence 1 repeat 3 times, pattern 2 once, sequence 4 repeat twice and sequence 6 twice. Once this round is complete it will return to the left most pattern to be played, in this case sequence 1.
If sequence 1 was turned off whilst GorF was playing sequence 2, 4 or 6 then once the round had finished it would return to sequence 2.

What you do in this mode, adjusting repeats and which sequences are played, is automatically saved per bank. This allows you to have up to 8 “performances” stored and ready to go.

To enter this mode press and hold the Mode switch and then press Step Switch 6.

Control Mode 1

In this mode you're able to control the behaviour of the sequencer.

This mode has many features and it's worth taking some time to understand them and the implications of each.



Let's start with the switches.

- Step Switch 1 enables the external clock, i.e. this means GorF will react to MIDI clock arriving at the MIDI in.
- Step Switch 2 enables a "snap" mode, in this mode when you adjust a knob nothing will change until you're "almost" at the value currently stored. Once you're there the knob will "snap" and you'll begin adjusting the value.
- Step Switch 3 enables a "record" mode. With this enabled you're able to play notes from a MIDI keyboard, into GorF and it will record the notes into the steps. This makes for a quick way

of entering the notes for a sequence. Whilst in this mode all 8 step LEDs will dimly lit to ensure you are aware you're in this mode.
- Step Switch 5, 6 and 7 send MIDI sysex sequence dumps for the current sequence, the current bank and complete memory dump respectively.

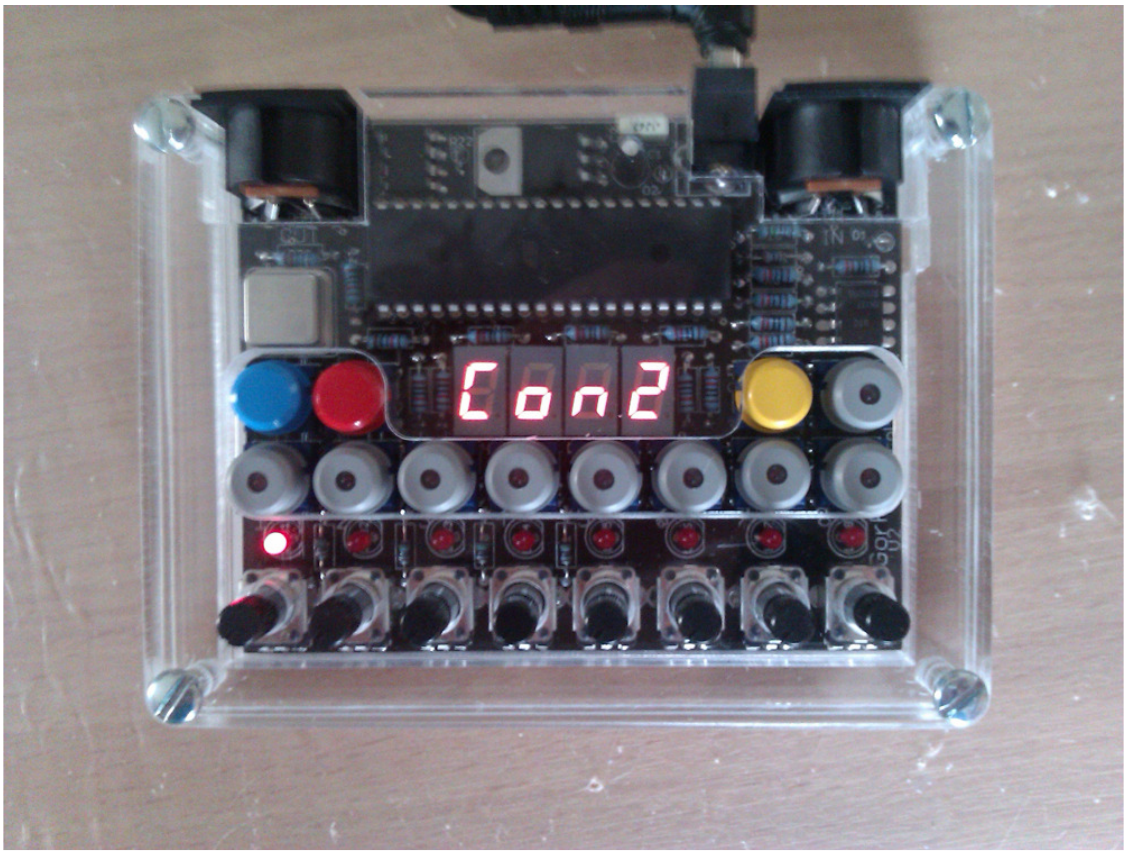
Next we have the Step Knobs and their functions.

- Step Knob 1 adjusts the tempo of the sequence.
- Step Knob 2 adjusts the range of the knobs when in note mode, adjustable from just over an octave to the full 128 MIDI notes.
- Step Knob 3 adjusts the root note of the sequence.
- Step Knob 4 is the "last step" for the sequence currently playing.
- Step Knob 5 Is the MIDI channel.
- Step Knob 6 is the "ID" used in MIDI sysex sequence dumps.
- Step Knob 7 sets the MIDI CC number for sending in MIDI CC1 mode.
- Step Knob 8 stes the MIDI CC number for sending in MIDI CC2 mode.

To enter this mode press and hold the Mode switch and then press Step Switch 7.

Control Mode 2 (sequence control)

In this mode you can adjust the behaviour of the sequence currently loaded/playing.



Again, as with Control Mode 1, there are a few things to remember. We'll start with the switches.

- Step Switch 1 rotates the current sequence left, so Step 2 becomes step 1, Step 1 becomes step 8 and so on.
- Step Switch 2 rotates the current sequencer right. This means Step 1 becomes Step 2, Step 2 becomes Step 3 and so on.
- Step Switch 3 transposes the sequence up a semitone.
- Step Switch 4 transposes the sequence down a semitone.
- Step Switch 5 "randomizes" the current sequence.

In this mode the knobs also do different things.

- Step Knob 1 changes the “first step” for the current sequence
- Step Knob 2 changes the “last step” for the current sequence

To enter this mode Press and hold the Mode Switch and then press Step Switch 8.

Load Mode

In this mode you're able to load sequences, and chain sequences. To enter this mode press the Load Switch, to load a sequence simply press one of the eight Step Switches. You'll see "sngl" on the display showing you're playing a single sequence

To "chain" to patterns together simply hold down two of the Step Switches and you'll see "Chn" showing you're now chaining two patterns.

To change bank, press the load switch a second time and you'll see the display show "Bank", to change back press one of the eight step switches.

To exit this mode, press the Mode Switch and you'll return to the mode you were in before you pressed Load.

Save Mode

This mode let's you save your sequences. To enter this mode simply press the Save Switch, to save a sequence press one of the step switches and the display will show "done" briefly.

To change bank, press the save switch a second time and you'll see the display show "Bank", to change back press one of the eight step switches.

If you change bank, the sequence will not be saved in the new bank until you press the save switch again and then press one of the 8 step switches.

To exit this mode, press the Mode Switch and you'll return to the mode you were in before you pressed Save.