

# SequencAir

## Step Sequencer/Synthesizer

Version 1.1

© 2019 by Ben Martin and Björn Arlt @ Full Bucket Music  
<https://www.fullbucket.de/music>



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## Introduction

*SequencAir* is a software step sequencer/synthesizer standalone application and VST plug-in for Microsoft Windows and Apple macOS. It is written in native C++ code for high performance and low CPU consumption. The main features are:

- 16 chainable banks
- 16 sequencer steps per bank
- Individual controls for Note, Octave, Velocity, Gate, Skip, Mute plus two MIDI CCs or synth parameters per step
- Sync-to-host and Swing functions
- Optional Start/Stop/Transpose by MIDI Note command
- Additional built-in monophonic synthesizer
- Straightforward user interface
- MIDI Learn – all parameters can be controlled by MIDI CC
- Plug-in supports Windows and macOS (32 bit and 64 bit)

## Background

One day before Christmas Eve 2018, I (Björn) got a mail from Ben Martin from Portugal. Ben proposed the idea of an enhanced step sequencer VST plugin, much in the style of classic analog gear but with more knobs ☺. What Ben did not know was that some years ago I already had created a prototype of such a machine but somehow dropped the idea. While my approach added a very simple synthesizer to it, Ben's sequencer part was more elaborated than my original idea.

After some mails back and forth, the basic concept was settled and I started development. Ben suggested a "matrix-style" sequencer, and it took just a few iterations until *SequencAir* was literally ready for production. During this process, Ben tested the plugin and proposed some great ideas that directly went into the design. He also created the preset programs 16 to 27.

Now *SequencAir* surely is not a plugin for the masses, and I think you should be a fan of old-school analog sequencers to fully appreciate its concept. The full power becomes apparent when you start playing with it in real time and replace the crappy built-in synth with the software or hardware instrument of your choice.

Enjoy and have fun!

## What's New With Version 1.1?

Besides the new *AUTO SELECT BANK* mode (see section *Bank Selection Mode*) I fixed maaaaany bugs. Furthermore, it is now possible to MIDI-learn *every* control of *SequencAir* – including the *PLAY/STOP*, *RESET* and *RECORDING* buttons.

Last not least I removed the *SYNC* and *SCALE* controls from the standalone application (since it is not possible to synchronize *SequencAir* to an external MIDI clock; please do me a favor and use the VST plug-in).






## Sequencer






Per program, *SequencAir* features 16 banks of 16 steps where each step provides individual controls for Pitch, Octave, Velocity, Gate Time, Mute and two MIDI CC and/or synthesizer parameter controls. Furthermore, each step can be skipped which allows the programming of non-standard signatures.

Using the *BANK* switches, the current sequencer bank will be selected for editing. When clicking the *CHAIN* buttons, the checked banks (yellow-lit *CHAIN* button) themselves will be played in sequence.

## Sequencer Playback

Apart from *Tempo* (which can be synchronized to the host's tempo), *DIV* (clock division i.e. note length per sequencer step) and *Swing* (amount of "shifting" even-numbered steps with respect to odd-numbered steps), *SequencAir* offers various play modes and options.

Mode	Symbol	Description
<i>Forward</i>		Plays forward from step 1 to step 16
<i>Reverse</i>		Plays backwards from step 16 to 1
<i>Forward-Reverse</i>		Plays forward and then again backwards
<i>Reverse-Forward</i>		Plays backwards and then again forward
<i>Random</i>		Plays random steps

Option	Symbol	Description
<i>Reset/Play</i>		Resets to first step before starting to play
<i>Loop</i>		Loops the playback
<i>Start on Note On</i>		Starts playback on MIDI Note On
<i>Stop on Note Off</i>		Stops playback on MIDI Note Off
<i>Transpose Note</i>		Transposes the current note on MIDI Note On
<i>Pivot Key</i>	-	Base key for the sequencer steps
<i>MIDI Channel</i>	-	MIDI channel for sending MIDI events

## Sequencer Steps

As stated above, each step has a control for Pitch, Octave, Velocity, Gate time, Mute and two assignable controls for MIDI CC or synthesizer parameters.

- You can entirely skip a step by clicking on its number display at the top (the display shows two bars instead of the step number).
- A gate time value of 1.00 will be interpreted as a tie and allows for legato playback.
- A red LED right underneath the step number display indicates the currently active note. A blue LED indicates that the active step belongs to a *different bank* than the selected bank.

## Sequencer Recording

After pressing the red *Record* button you can "record" the 16 steps of the currently selected bank. Note that only the note pitch and velocity of the MIDI data sent to *SequencAir* will be recorded.

## Helpers

Clicking on a button to the left of the step rows (*Pitch, Octave, etc.*) will open a context menu that provides some helper functions to set the values of the corresponding step controller rows. Note that in case of the two assignable controllers you have to do a right-click to open the context menu.

## Bank Selection Mode

In the standard *MANUAL SELECT BANK* mode, the *currently visible* sequencer bank has to be selected manually. When you change to *AUTO SELECT BANK* mode (just click on the text to do so), the *currently playing* sequencer bank will be selected automatically.

## Bank Chaining

Using the *CHAIN* buttons you can select banks to be chained during playback. The LED right underneath the *CHAIN* buttons indicate which bank is playing. A blue LED indicates that a different bank than the selected bank is currently active.

## Synthesizer

The Synthesizer section features a very primitive synth with one oscillator, one filter and a simple envelope. It is just there so that you do not need to add a subsequent MIDI or VST instrument when you want to setup a funky sequence...

Note that you have to switch the synth *ON* if you want to hear it!

## Performance Controls

### Program Menu

If you know my other plug-ins then there will be no surprises: To select one of the 64 patches just click on the program number, and edit its name by clicking in the text field.

### Context Menu

When clicking on the *Menu* button, a context menu opens with the following options:

<b>Copy Program</b>	Copy current program to internal clipboard
<b>Paste Program</b>	Paste internal clipboard to current program
<b>Load Program</b>	Load a program file containing a patch to the current program
<b>Save Program</b>	Save the current program to a program file
<b>Load Bank</b>	Load a bank file containing 64 patches into <i>SequencAir</i>
<b>Save Bank</b>	Save the 64 patches to a bank file
<b>Init Program</b>	Initialize the current program
<b>Reload Configuration</b>	Reload the configuration file (see section <i>MIDI Learn</i> )
<b>Save Configuration</b>	Saves the configuration file (see section <i>MIDI Learn</i> )
<b>Check Online for Update</b>	When connected to the Internet, this function will check if a newer version of <i>SequencAir</i> is available at fullbucket.de
<b>Visit fullbucket.de</b>	Open fullbucket.de in your standard browser
<b>Audio / MIDI Setup</b> (standalone app only)	Configure Audio / MIDI interface (deactivated if <i>SequencAir</i> is running or recording; see section <i>Audio / MIDI Setup (Standalone App Only)</i> )

## MIDI Learn

Every (yes!) parameter of *SequencAir* can be controlled by one MIDI controller. This is also true for the *BANK* and *CHAIN* buttons and allows for cool performances using your favorite MIDI controller.

If you want to change the assignment of MIDI controller (*CC*; *MIDI Control Change*) to *SequencAir* parameter the *MIDI Learn* function comes in quite handy: Just click the *LEARN* button on *SequencAir*'s control panel (button turns yellow) and wiggle both the MIDI controller and the parameter you want to assign (you can abort *LEARN* by clicking the button again). To save the controller assignments use "Save Configuration" in the *Menu* context menu (see previous section); they are stored in the `sequencair.ini` configuration file. The exact location of this file depends on your operating system and will be displayed when you click on "Reload" or "Save Configuration".

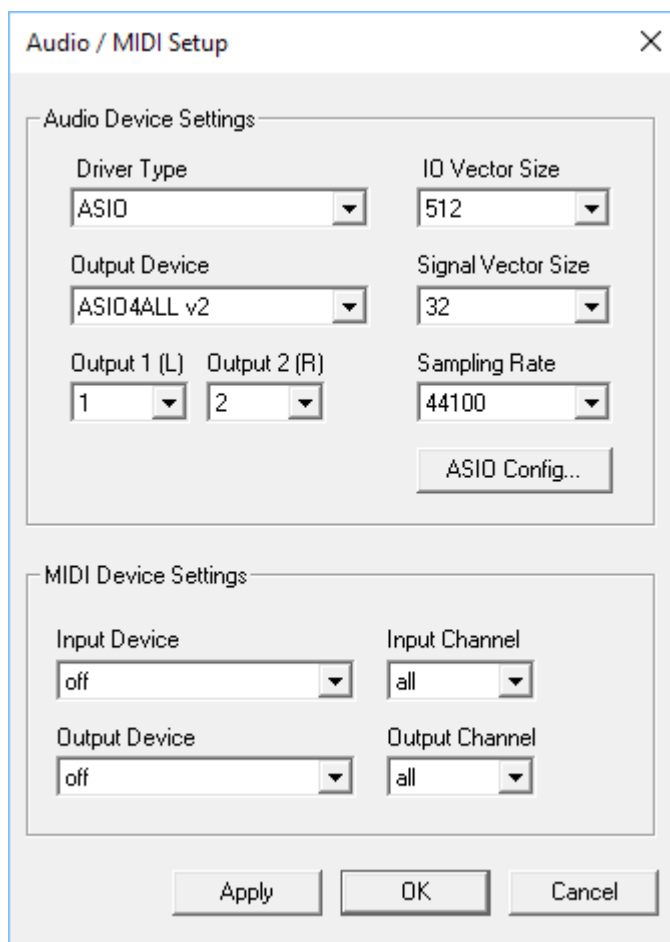
If you want to unlearn the assignment, right-click the *LEARN* button (the label now reads "UNLEARN"). Now wiggle the MIDI controller or the parameter that you want to unlearn.

## Audio / MIDI Setup (Standalone App Only)

If you are using the standalone application of *SequencAir* you have to configure the Audio / MIDI settings first (i.e. which audio / MIDI driver you are using, the sample rate etc.). This configuration is also saved in the `sequencair.ini` file (see above).

Note that this dialog will be available only if *SequencAir* is not running or recording!

For the VST version of *SequencAir* all this stuff is handled by your DAW host and can be omitted.



## A Word About Using *SequencAir*

By Ben Martin

As stated above, the *SequencAir's* internal synth is only there for rough and immediate dirty programming of your ideas. Probably you'd better use external VST instruments to bring your ideas to life.

Many of the included preset examples should be routed to external VST instruments and (if needed) audio effects to bring the sequences to another level and closer to the originals. For instance, the sequence "On the Run" by Pink Floyd uses the built-in synth only for hit-hats. The filter modulation and the melody line is also present, so to fully enjoy this sequence you need to route *SequencAir* to an external VST synthesizer and mix it with *SequencAir's* internal synth hit-hats. If preferred you can also route this sequence to two different external VST instruments, one to play the melody and the one to play the hit-hats while disabling *SequencAir's* internal synth completely.

The two last rows of the sequencer panel (normally assigned to PAN and the Modulation wheel) represent MIDI Control Changes pre-programmed to a specific MIDI-CC. Instead, you can route these rows to any parameter of your favorite external VST instrument, but this is not a requirement since you can always program the parameters in the VST using your own personal preferences (manually, by DAW automation etc.).

Live and flexible performances are possible with *SequencAir* when taking advantage of the *MIDI Learn* function. This feature allows you to navigate in realtime through the 16 pre-programmed sequence banks with a simple touch of a hardware MIDI controller button.



## Frequently Asked Questions

### **How do I install SequencAir (Windows VST 32/64 bit version)?**

Just copy the file `sequencair.dll` (32 bit) or `sequencair64.dll` (64 bit) from the ZIP archive you have downloaded to your system's or favorite DAW's VST plug-in folder. Your DAW should automatically register the *SequencAir* VST plug-in the next time you start it.

### **How do I install SequencAir (Windows App 32/64 bit version)?**

Just copy the file `sequencair.exe` (32 bit) or `sequencair64.exe` (64 bit) from the ZIP archive you have downloaded to any folder and start it.

### **How do I install SequencAir (Mac VST/App universal 32/64 bit)?**

Locate the downloaded PKG package file `sequencair_1_0_6_mac.pkg` in Finder (!) and do a right- or control-click on it. In the context menu, click on "Open". You will be asked if you really want to install the package because it comes from an "unidentified developer" (me 😊). Click "OK" and follow the installation instructions.

### **What is the plug-in ID of SequencAir?**

The ID is `fbSQ`.

### **Can I save the MIDI controller/parameter assignments?**

Yes, by using "Save Configuration" in the *Menu* context menu (see section *Context Menu*).

### **How do I know if a new version of SequencAir is available?**

When connected to the Internet, open the Options menu (see section *Context Menu*) by clicking the disk icon and select the entry "Check Online for Updates". If a new version of *SequencAir* is available on [fullbucket.de](http://fullbucket.de) the respective information will be shown in a message box.

### **Why is there no Mac Audio Unit (AU) version of SequencAir?**

This is because of the missing MIDI send capabilities of AU prior to version 3. 😞

### **I cannot sync the standalone application to MIDI clock...?**

I strongly recommend to use the VST plug-in inside the DAW of your choice instead!