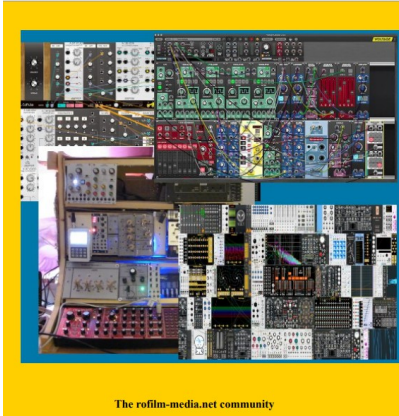


# A Systematic Introduction To Making Generative Music With Modular Synths

by Rolf Kasten

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To Making Generative Music  
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Welcome to this first part of a really long series of articles, articles which will enable you to produce not only “just some kind of” generative music, but truly great generative music by following a strategic and efficient but also joyful approach.

There are going to be more than 200 pages (well, in my book there are that many), divided into 4 main chapters, and there are going to be embedded videos to illustrate what each chapter – sometimes even each paragraph of the chapter - is about.

Today I’m going to give you an overview of what you can be looking forward to, and after showing you the content – or shall I say the journey through modular

synthesis? - you find a kind of short introduction, which I’ve called “Chapter 0”.

You’ll find a new article each week here on this website, and if there are questions, well, I’m prepared to answer them. You’ll find more about me, my work and my books on my website <https://dev.rofilm-media.net>. Let me send a big “thank you” to the great people of Uryan Modular for allowing me to mention this here.

And here is the content of this, well, of this course:

- Chapter 0:** About This Course And Some Words About What Generative Music Is
- Chapter 1:** Real Randomness vs. Complex Cycles (and the combination of both)
  - Chapter 1.1:** LFOs
  - Chapter 1.2:** Other Devices Generating Regular Cycles
    - Chapter 1.2.1:** Looping Envelopes
    - Chapter 1.2.2:** Sequencers
    - Chapter 1.2.3:** Shift Registers With Feedback
    - Chapter 1.2.4:** Sequential Switches
    - Chapter 1.2.5:** The Turing Machine – Part 1
    - Chapter 1.2.6:** Samples and Recordings
  - Chapter 1.3:** Randomness, Probability and Stochastic
    - Chapter 1.3.1:** Some Basic Definitions
    - Chapter 1.3.2:** Sample & Hold
    - Chapter 1.3.3:** A Short Glimpse at the Turing Machine And At Shift Registers Again

- Chapter 1.3.4:** Perfect Pseudo Randomness: Gray Code Modules
- Chapter 1.3.5:** Imperfect Pseudo Randomness: Euclidean Sequencers
- Chapter 1.3.6:** Random Trigger (Percussion) Sequencers With Different Amounts of Randomness
- Chapter 1.3.7:** Stochastic Sequencers
- Chapter 1.3.8:** Probability Gates (Random Clocked Gates)
- Chapter 1.3.9:** Bernoulli Gates

## **Chapter 2: What to Modulate And to Trigger**

- Chapter 2.1:** Pitch
- Chapter 2.2:** Timbre
  - Chapter 2.2.1:** Filter
  - Chapter 2.2.2:** Shapers
  - Chapter 2.2.3:** Partials (additive)
  - Chapter 2.2.4:** FM/PM
- Chapter 2.3:** Voices
- Chapter 2.4:** Rhythm
- Chapter 2.5:** Effects
- Chapter 2.6:** Envelopes
- Chapter 2.7:** Quantizers
- Chapter 2.8:** Grains
- Chapter 2.9:** Sample (Player)
- Chapter 2.10:** Slew Limiter
- Chapter 2.11:** Comparators
- Chapter 2.12:** Pitch Shifter

## **Chapter 3: Compositional Aspects of Generative Music**

- Chapter 3.1:** General Thoughts, Strategies And Basic Compositional Decisions
- Chapter 3.2:** Basic Compositional Techniques
  - Chapter 3.2.1:** Contrasting
  - Chapter 3.2.2:** Repeating, Modifying And Inverting Relations
  - Chapter 3.2.3:** Basic But Exclusively Generative Techniques
- Chapter 3.3:** Specific Compositional Techniques
  - Chapter 3.3.1:** Pitch Dependency
  - Chapter 3.3.2:** Rhythm
  - Chapter 3.3.3:** Tension and Layers
- Chapter 3.4:** Certain Patch Techniques And Examples
  - Chapter 3.4.1:** Switching Voices And Larger Parts Of the Patch
  - Chapter 3.4.2:** Sculpture Randomness And Setting Borders
  - Chapter 3.4.3:** Jumping Between Certain BPM And Inverting Pitch Lines
  - Chapter 3.4.4:** Mixing Stable And Random Elements

## **Chapter 4: Some Building Blocks of Generative Patching**

- Chapter 4.1:** The Instrumentation of Envelopes
- Chapter 4.2:** 5 Faces of Randomness
- Chapter 4.3:** Random Harmonies

# Chapter 0

## About This Course And Some Words About What Generative Is

Do you know this?

You see and hear somebody doing something interesting, something beautiful, something you would like to do too.

You try.

It's not what you had expected it to be, it's not how you had expected it to be.

So you fiddle with your equipment.

You come upon something nice sometimes.

You come upon something – accidentally.

But you feel:

there's still something missing.

OK – it's fun most of the times, but it could be more than that.

It should be more than that.



You want to get better.

But how? How to start getting better?

Where to start?

Do you know this?

You need a system.

The matter you have been working on needs a systematic approach.

You need it.

We all need it.

Here it is:

**A systematic introduction to making generative music with modular synthesisers.**

The term “Generative Music” is a quite new one, and the musician, composer and sound designer Brian Eno is said to have alerted a broader audience to this term.

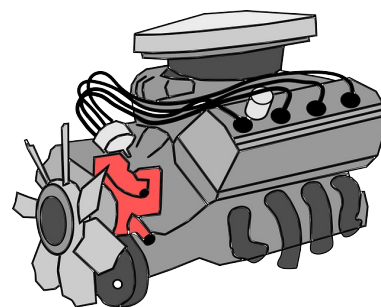
Generative music is that kind of music, which is created – normally played

- by any kind of analogue or digital machinery, **while permanently changing** in rhythm or pitch or timbre or number of voices etc.

The producing – playing – machine may be a computer, a modular synthesiser or any other kind of gear, which is able to produce audible events and able to accept and follow certain rules or algorithms.

In modular synthesis these “rules” are our patches, and these patches are what this book is about.

“Permanently changing” is movement, and every moving system needs a motor, an engine that drives it, that keeps the system going on moving. In the following chapter 1 I’m going to talk about the different kinds of engines, which keep our modular generative music system going.



And don’t worry: You’ll be able to reproduce everything, that is described in this series of articles. You’ll be able to reproduce every single example and every single sonic experiment, which you’re going to meet on these pages.

**You can do so using hardware, and the people at Uryan Modular will surely be prepared to help you with this.**

Or you can use software to begin with. You can even use the freeware “VCV Rack” to follow me here in a very practical way. All my examples are made with VCV rack to make it not only easy, but also inexpensive to follow this course.

But I’ve always tried not to get too specific into VCV, so that you’ll be able to find corresponding modules in other software systems, and – of course – in hardware, which is not only more enjoyable, but also more “direct”. Turning knobs and moving sliders is on another level of experience than only wielding the mouse – but: it’s completely on you to decide.

Let’s go for it then.

... to be continued next week