

Liber ex Doctrina



Liber version 2.0.0

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## Sanguine Modules Monsters

Thank you for acquiring the Monsters module collection! In the package... wait! What package? These are digital goods! Oh well, if you had a package you'd probably find some thumb screws (screwdrivers are so cumbersome!); several cables with red stripes; a few cards with stern warnings about not connecting the devices backwards (we could use diodes; but we're stingy); some stickers; another card with a link to this manual (that you have to *type*: QR codes are, honestly, unsafe) because we are all way too cheap to provide printed instructions nowadays, and a customer service card because we care and we are old.

If you'd bought these as a kit you'd get everything listed above plus a ton of mysterious items that can turn your weekend into an exciting, fun adventure... or a nightmare of unspeakable horrors and burnt fingers.

We hope these modules inspire and propel all your musical endeavors!

If you are looking for the instructions for a specific module, use the handy provided table of contents. The modules are presented in alphabetical order.



## The Modules

### Monsters Blank

Put a vampire and the Monsters logo on your rack!

Helps your Rack look its prettiest.

This module is a rebel and has no controls.

Bypassing the module turns its lights off.

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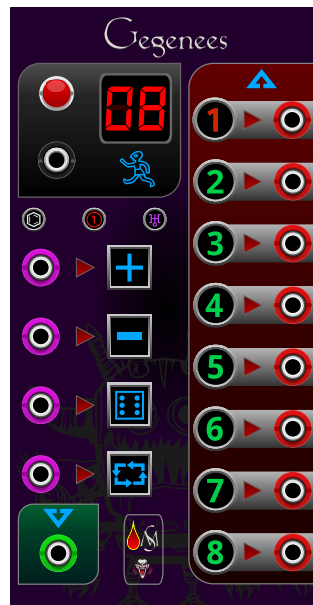


## Monsters Gegenees

A versatile 1 to 8 digital switch/sequencer that takes an input voltage (or a polyphonic cable with a maximum of 16 channels) and puts whatever it absorbed into one of 8 selectable outputs.

- Can run forwards, backwards, at random or any combination of those that you choose.
  - Outputs can be selected directly using the mouse.
  - Can cycle or be “one-shot” until reset.
  - Can reset to the first step or to a “wait for clock” state.
  - Can avoid repeating the same random step consecutively.
  - Triggers can come from the control voltage inputs or mouse clicks in the corresponding buttons; for brevity in these instructions, whenever a trigger is mentioned or called for, you can safely assume it’s either voltage or clicks!
  - The lights and display turn off when bypassed.
  - Tooltips on every input, output, button and knob so you can hit the ground running.
- 

### The Controls





## Knobs and buttons



**The steps section:** spin the red knob around to set the maximum number of steps (1 to 8) the switch will go through before starting over the cycle or stopping (see below).

The black CV input allows a positive voltage to set the number of steps as well.

The glowing red LED display shows the number of set steps, whether using the knob or control voltage.

Control voltage values for maximum steps. <sup>1</sup>	
Voltage (V)	Steps
0	1
1.5	2
2.5	3
3.5	4
4.5	5
5.5	6
6.5	7
7.5	8



**Reset type selector:** the benzene ouroboros in this button selects between the two module reset modes when clicked: **Reset to first step** (the button is lit white, this is the default mode when the module is loaded) or **Reset to zero** (the button is dimmed and gray).

What's the difference?

- **Reset to first step:** when resetting the module to “1” whatever voltage is present in the green voltage input will be present immediately in the “1” red output. This can lead, for example, to unexpected sounds or logic branches in automated patches... It can also provide the needed voltages right from the start. Your choice!
- **Reset to zero:** when resetting to “0” the module is “waiting” for a trigger to happen at the **Next step**, **Previous step** or **Random step** inputs before sending the voltage to an step output (the specific output can vary depending on what is triggered). In this “waiting” state all outputs produce 0 volts. This can lead to out of time actions... or precise synchronization. Your choice!



**One shot toggle:** click this button to select between two module operation modes: **one-shot** (the button is lit bright red) and **cycle** (the button is dim red, this is the default mode when the module is loaded).

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<sup>1</sup> Voltages are clamped: you can safely input negative volts to get 1 step or 8+ to get 8.



What's the difference?

- **One-shot** mode takes as many steps as selected in the **Steps section** and stops until the module receives a **Reset** trigger. Take heed! The module counts steps taken, it doesn't care if they're forwards, backwards or random! If you set 5, 5 you will get before stopping. If, for example, we set "One-shot" mode; start at step "1"; set the module to a maximum of 3 steps, and trigger **Next step** three times, our last step will be "1" (since we started at the first step, no trigger was counted). To avoid this, we can set the **Reset type** to **Reset to zero**, trigger the **Reset** input and start clocking the module, that way steps 1-2-3 will play; the module will stop, and start waiting for a **Reset** trigger.
- **Cycle** mode just chugs along happily selecting a step whenever **Next step**, **Previous step** or **Random** are triggered. If only **Next step** is triggered ("forward mode") the module goes back to step 1 after receiving a trigger while it's on step 8; conversely, if **Previous step** ("backward mode") is triggered when step 1 is selected the module Möbius strips to step 8 while smiling and continuing along.



**No random consecutive repeats toggle:** click on Uranus to toggle between the random modes **Regular** (the button is dim purple, this is the default mode when the module is loaded) and **No consecutive repeats** (the button is lit bright purple).

What's the difference?

- **Regular random** mode is just what you expect: a step is selected by the digital brain pretending to be an  $n$ -sided die ( $n$  being the maximum number of steps selected in the **Steps section**). Repeats can and will occur... often: statistically sound random number algorithms strive for flat distribution curves (unlike the pretty bell curves you get when rolling, say, 6 sided dice in the company of other sentient creatures). Monsters uses a random number generation algorithm that's pretty, pretty good, hence, pretty, pretty flat.
- **No random consecutive repeats** mode is what you have sometimes wished for (or manufactured with a complicated collection of modules) [I know I did]: a random mode that avoids repeating the same step twice in a row. For example, we set a maximum count of 5 steps and we trigger **Random step** five times using **Regular random** mode, one possible set of results is "1,3,4,4,2"... we're happy; but we'd be gleeful if we had "1,3,4,5,2". We enable **No random consecutive repeats** and we're all set: no more occurrences of "4,4" until we disable it. Needless to say this makes the desired flat distribution curve bumpy. So... be aware, if you're keeping track and graphing.



## Inputs and outputs



Every trigger jack is indicated by a purple nut and a red arrow pointing to its corresponding button.



**Next step jack and button:** a trigger here advances the output step by one: from 1 to 2, to 3... When the steps reach the maximum allowed steps set in the **Steps section** they roll back to 1. Every trigger received counts as one step for **One-Shot** mode.



**Previous step jack and button:** a trigger here makes the output steps go backward: from 8 to 7, to 6... When the steps reach 1 they roll forward to the maximum allowed step as set in the **Steps section**. Every trigger received here counts as one step for **One-shot** mode.



**Random step jack and button:** a trigger here rolls a virtual die and selects an step based on the roll result. The behavior of this input is influenced by the “**No random consecutive repeats**” mode. Every trigger received here counts as one step for **One-shot** mode.



**Reset jack and button:** a trigger here:

- Sets the steps back to 1 or “waiting for clock”, depending on the **Reset type** setting.
- Sets the step counter to 0 and enables **One-shot** mode to run again.



**Input jack:** the green polyphonic input receives the signal that will be distributed to one of the 8 polyphonic output steps. It is indicated by a pointy, glowing blue arrow aiming downwards.



**Step buttons and jacks output section:** the voltages from the **Input jack** will be output in one of these polyphonic jacks. The currently selected step is lit red; the other steps are lit green. Every step is, also, a button: you can manually send the input voltage to whatever output you need, whenever you need. When you click a step button the lights will adjust to reflect your choice. The output section is indicated by a sharp, glowing blue arrow aiming upwards at the top of the cluster.

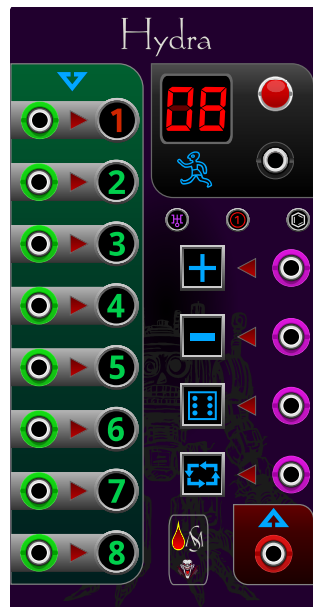




## Monsters Hydra

An adaptable 8 to 1 digital switch/sequencer that takes 8 input voltages (or polyphonic cables with a maximum of 16 channels) and puts whatever one of them carries into one polyphonic output.

- Can run forwards, backwards, at random or any combination of those that you choose.
- Inputs can be selected directly using the mouse.
- Can cycle or be “one-shot” until reset.
- Can reset to the first step or to a “wait for clock” state.
- Can avoid repeating the same random step consecutively.
- Triggers can come from the control voltage inputs or mouse clicks in the corresponding buttons, just as with Gegenees.
- The lights and display turn off when bypassed.
- Tooltips on every input, output, button and knob so you can avoid reading this manual and get to making some great music.





## The Controls

### ***Knobs and buttons***

The knobs and buttons in Hydra mirror those of Gegenees in form and function, please refer to the [appropriate section](#) in the instructions for that module.

### ***Inputs and outputs***

Hydra offers 8 steps with their respective input jacks and buttons in a green cluster indicated by a keen, downwards pointing arrow and one red output jack marked by an acute, upwards pointing arrow. Both arrows glow blue. Trigger and step button behavior is the same as those for Gegenees (as explained in the [appropriate section](#)), the only difference is that, while Gegenees deals with 1 input and a maximum of 8 possible outputs, Hydra offers up to 8 possible different inputs to choose from and send to a single output.



## Acknowledgments & thanks

VCV Rack, MindMeld, Venom and Sapphire modules and their authors whose sources inspired the solutions for some of the graphical effects present in the Sanguine Modules plugins.

Every author whose code I looked at if I got stumped (I really, really wish the API had better documentation).

Borland's Turbo Vision for teaching me how to deal with similar APIs (in form, function and lax docs).

Everyone in the VCV Rack forum who got excited with my first "Funes" release.

Christy Marx for making me laugh, to this day, whenever I look at the Conquests of Camelot manual cover (and, in turn, inspiring the cover for this one).

You! For reading all the way down here!



## Contact

Found a bug? Have a suggestion? A fix?

Please use the “Issues” section at

<https://github.com/Bloodbat/SanguineMonsters>

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If, for some reason, you still insist on trying to claim anything, please contact our central office at 5719 Via Styx, Malebolge.

Slight discrepancies between the images on the package, this manual and the final product plugin are possible and should not affect functionality in any way.

## Notice of compliance

These modules does not comply or care to do so with any requirement from the FCC, the ABC, the GFD, the GDI (it prefers Nod) or the FUC-KS (none are given or taken), nor have they been known to have flags on the play for running interference. They do comply, however, with the GCC because otherwise they would not compile.

They comply, to best of their ability, with the VCV ethics guidelines.

They are not known to produce unwanted radio waves (yet) but, hopefully, they help produce some wonderful noise.

Keep on bringing those monster tunes!

This is the really fucking big print that gets every one on every damn contract every bloody time.

Matgd rhn yhk nlbgz fr fhwnexl!



## Licenses & Copyrights

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