



DREAMBOAT



WELCOME TO YOUR NEW MODULE!!!!!!

Installation:

The Snazzy FX Dreamboat requires +/-12V to operate. It is designed for use with the euro format modular synthesizer system (please see)

http://www.doepfer.de/a100_man/a100t_e.htm.

To install in your system, find 8HP of space in your euro-rack synthesizer system, plug the 16pin power cable into the euro-rack style power distribution board, checking the polarity so the Blue stripe on the cable is oriented to the NEGATIVE12 volt supply line. This is USUALLY at the bottom. Please refer to your case manufacturers' specifications for location of the negative supply.

Understanding the Snazzy FX Dreamboat:

Try approaching the Dreamboat like an animal

That lives in your modular.

Visit it sometimes.

Hear what it is up to.

Allow it a chance to play with the neighbors.

Let it run around in the background.

Try approaching the Dreamboat like water.

Leave it running.

Enjoy the sound of it just for the sake of it.

The Dreamboat wants to be met

on its own terms.

Layer it. Delay it. Let its drone fill the room.

Filter it, gate it. Feed it every signal you have. Plug it into every module you own.

The Snazzy FX Dreamboat is our contribution to the growing world of Chaos being used for musical purposes. It's a simple device. A completely analog device that allows you, the owner, to experience and mess around with an (analog) chaotic system. This is not a simulation. It is a real electronic system that can run off and do interesting things.

What, do you ask, is an example of a chaotic system?

The weather.

Turbulence.

If you have ever seen fractals you have been exposed to chaos theory.

For more information about Chaos, please see

http://en.wikipedia.org/wiki/Chaos_theory

or

<http://tuvalu.santafe.edu/~gmk/MFGB/node2.html>

or

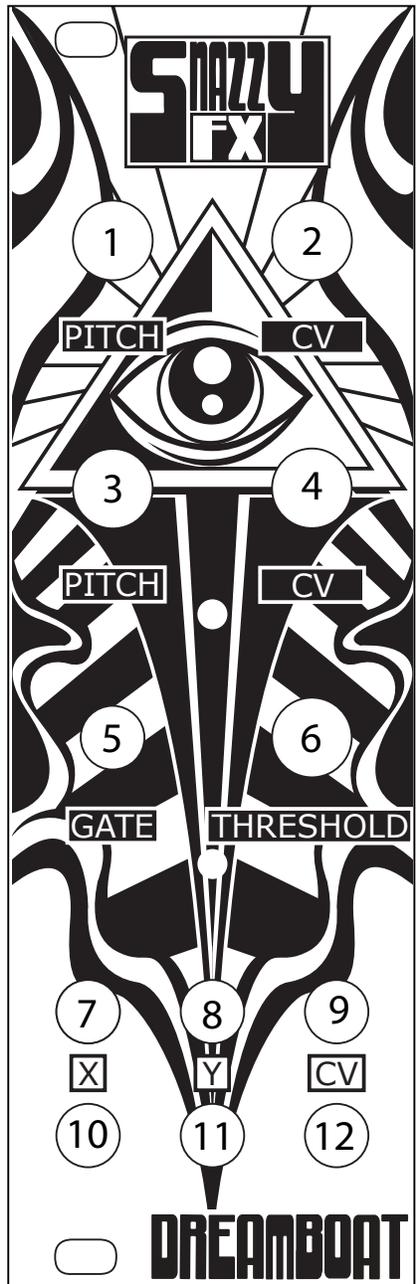
Read CHAOS by James Gleick, an excellent, readable account of the development of chaos theory written in a way anyone can understand.

For something to be chaotic, it has to exhibit properties such as non-linearity and sensitivity to initial conditions.

The Dreamboat, which is based around a circuit called Chua's Circuit, exhibits all the properties of chaos. It will allow you to keep two chaotic systems in an attractive home. Watch them interact on a scope or software scope/phase meter, hear them through a mixer, let them interact through their CV inputs with each other or with other oscillators, filters, envelope generators, etc.

Below is a chart that shows different kinds of systems (ordered, chaotic, and random). Use it to help you understand Chaos .

System	<i>Order</i>	<i>Chaos</i>	<i>Randomness</i>
Paradigmatic Example	Clocks, Planets	Clouds, Weather	Snow on TV Screen
Predictability	Very High	Finite, Short Term	None -> Simple Laws
Effect of Small Errors	Very Small	Explosive	Nothing BUT Errors
Spectrum	Pure	Yes!	Noisy, Broad
Dimension	Finite	Low	Infinite
Control	Easy	Tricky, Very Effective	Poor
Attractor	Point, Cycle, Torus	Strange, Fractal	No!



TOP Oscillator SECTION (section 1)-

CHAOTIC OSCILLATOR SET TO AUDIO RATES

1. TOP CHAOTIC OSCILLATOR PITCH CONTROL-Controls the onset of Chaos.

Start with knob at around 3 o clock.

2. TOP CHAOTIC OSCILLATOR CV DEPTH/SCALE CONTROL

Start with knob at around 3 o clock.

When nothing is connected to the CV input, This knob acts as a SCALE control for the Attractor

BOTTOM Oscillator SECTION (section 2)-

CHAOTIC OSCILLATOR SET FOR LFO RATES

3. BOTTOM CHAOTIC OSCILLATOR PITCH CONTROL-Controls the onset of Chaos. **Start at around 3 o clock.**

4. BOTTOM CHAOTIC OSCILLATOR CV DEPTH/SCALE CONTROL

Start with knob at around 3 o clock.

When nothing is connected to the CV input, this knob acts as a SCALE control for the oscillator.

GATE SECTION

5. Gate Output-use this control for controlling env gens, sequencers, VCO sync inputs, or just about anywhere that can accept gate inputs.

6. Threshold – The threshold control allows adjustment of the pulse train being produced by the Dreamboat. Turn it right for more pulses per minute, left for less. If you want more spaces

between the pulses, try lowering the PITCH of the Bottom Chaotic Oscillator.

USE THE BOTTOM-MOST LED FOR INDICATION OF GATE SPEED

SIGNAL JACKS

(X and Y outputs are not TRUE COPIES..they sound and act differently than each other!)

7. X output (top oscillator)

8. Y output (top oscillator)

9. CV INPUT (top oscillator)

10. X output (bottom oscillator)

11. Y output (bottom oscillator)

12. CV INPUT (bottom oscillator)

QUICK START:

Hey, I'm confused....what do all these knobs and jacks do?

TIP- there really isn't too much to it. It's a simple module.

the top section (CO1) puts out Chaos that you can HEAR

the bottom section (CO2) puts out Chaos that is for modulation (LFO rates)

Start by turning knobs until all three LEDS are firing. Plug the outputs into some other modules and start making sound!

Use the Gate to fire VCA's or ADSR's/AR's

USING YOUR DREAMBOAT!

1. UNDERSTANDING THE RED/GREEN BI-COLOR LEDS

THE TOP OSCILLATOR SECTION AND THE BOTTOM OSCILLATOR SECTION BOTH CONTAIN A SINGLE BI-COLOR LED. THIS LED CAN BE USED TO ROUGHLY DETERMINE IF THE CHAOTIC OSCILLATOR IS BECOMING CHAOTIC.

To get accustomed to the way the LED responds, patch a single output from the TOP OSCILLATOR SECTION into a mixer. Move the PITCH knob clockwise, starting around 12 o'clock. Watch the BI-COLOR LED as the sound changes. When the sound starts to sound like static, or a weird kind of thunder, keep your eye on how rapidly the colors change. This static like howl is a tell-tale sound of Chaotic behavior. It is a very rich, dense sound, which is useful for many applications. Since the lower oscillator does not make "sound" per se, the LED will help you tune in the chaotic regions by looking for the flickering colors.

2. VIEWING THE DREAMBOATS OUTPUT:

Some people may purchase the Dreamboat simply to begin exploring the visually appealing world of chaotic attractors. With X and Y outputs, it is easy to hook up an oscilloscope (or even 2!!!) to the Dreamboat.

Using visual feedback will help you dial in areas of Chaos much more easily than the Bi-Color LEDS. An oscilloscope will also allow you to enjoy hours of exploration with a real chaotic system! Digital scopes look different than Analog scopes. See if you can try both.

-Using An Oscilloscope:

- 1. Choose which section you want to view, TOP or BOTTOM.**
- 2. Connect that sections X/Y outputs to your scopes X/Y inputs.**
- 3. Set the levels for each channel on your scope.**
- 4. Switch to X/Y mode.**

When viewing the outputs from the Bottom Oscillator Section, please engage PERSIST in your oscilloscopes display settings so that you can view the attractor over time in X/Y mode. This is not necessary with the Top Oscillator Section, as it runs at audio rates.

-Using a Computer

- 1. Connect the X/Y output pair of your choice to a set of STEREO INPUTS on your soundcard. THIS MAY NOT WORK WITH THE BOTTOM OSCILLATOR SECTION depending on your soundcard due to a blocking capacitor. However, the top section should work with just about any soundcard.**
- 2. Turn the input gain on your soundcard low enough to handle the high output of the module.**
- 3. Open up a dual channel oscilloscope program, scope plugin, OR a PHASE METER. Both Pro-TOOLS and LOGIC have stereo phase meters (usually under METERS or LEVEL METER). Phase Meters are exactly like the X/Y mode on a scope without any adjustments.**

3. PATCHING!!!

To make things easier, from this section on we will refer to the TOP OSCILLATOR SECTION as C01. (short for Chaotic Oscillator 1). We will refer to the Bottom Oscillator Section as C02 (short for Chaotic Oscillator 2)

A chaotic oscillator (CO) is quite a bit different than a regular LFO or VCO so it is best not to assume that the Dreamboat will be the module of choice for playing bass lines. There are 2 sections in the Dreamboat, one that puts out audio rate chaos and another that puts out LFO rate (sub-audio) chaos.

Since each section has its own CV in, you can patch C02 into C01 and C01 into C02.

Just think of this as a feedback loop, where each section receives a signal and sends a signal.

This will set up a cross-coupled patch, allowing endless variations, all useful for modulation.

The idea of CROSS-COUPLING is crucial to many of the Dreamboat's best tricks. Keep in mind that since the X and Y outputs of each CO have different levels and phase, you will get different results if you listen to the X output and use the X output for CV then if you use the opposite!

-keep in mind that with Chaos, a tiny bit of knob turning often makes a big difference.

You can simply LISTEN to Chaos, by connecting the top CO to a mixer. The X and Y outputs each have a distinct tone and lend themselves well to stereo separation.

The Dreamboat really shines in conjunction with external modulation sources, whether from another CO or from a VCO, LFO, or CV source of any kind. The audio section sounds great with reverb, phaser, flanger, whatever.

With so many outputs, you can apply CV or gate to up to 5 locations from one module!

-Not all knob movements make a big difference right away. Make a little change and then WAIT to see what it does to the

pattern!

BASIC DREAMBOAT PATCH:

hook the GATE output to the input of an ADSR or AR.

Patch the output of the ADSR Into your favorite VCA.

Patch CO2's Y output into the CV input of C01. Plug CO2's X output into the CV in of a VCO. Then plug C01's Y output into C02's CV input.. Plug C01's X output into a mixer. Plug the VCO into the mixer. Plug the mixer into your VCA input.

Begin adjusting the Rate and CV knobs on the Dreamboat, making sure that the Gate is firing via adjustment of the threshold control. The ADSR/AR should be firing in time with CO2 and if you have C01 and CO2 feeding back into each other, there should be many areas of chaotic interaction.

THE DREAMBOAT works really well with the MAKENOISE MATHS

(Slewing the chaotic CV or changing its gain, inverting it, etc)

BRIEF IDEAS:

Use it as a

CLOCK SOURCE (gate out)

ADSR/AR trigger (gate out)

A weird noise source

**An instability source for otherwise traditional patches
A drama machine**

try feeding the gate into the RESET Input of a sequencer

try feeding the CO1's output into the SYNC in of a VCO

plug the audio from the Dreamboat into a pulse divider

into an octave shifter

with a sequencer...set CO1 right below chaos. Plug a melodic sequence into the CV input. Use the gate out from the Dreamboat to chop up the audio going into your VCA.

Feed the audio out into reverb!

Mix its audio input with a sine wave for a good drum tone

Feed its audio into the FM in of a VCO for interesting modulation like nothing else

PLUG WHITE NOISE Into the CV INS

Feed a drum loop into CO1's CV Input.

For some great loops, plug a gate sequence or a rhythmic pulse into the CV Input of a CO. Adjust the CV and Pitch until it is gating the signal.

The CV inputs can be used to change the pitch or they can act like a reset. Try using a square wave to "SYNC" the Dreamboat

*****feedback filter patch*****

plug the Co1 X output into a mixer

plug the CO1 Y output into a VCO
plug the VCO into a filter(try the saw, now try a triangle, try a square...see how it changes) into the CV in of CO1.
Plug the filter into a mixer.
Plug CO2 X output into the filters CV in
Take an out from the Filter, plug it into CO2 CV in.
Plug Section 2's Y output into any other CV in your system (PWM IN on your vco?)

the Dreamboat is as easy as turning knobs
Plug into other stuff. mess with sound.

-leave the audio section of a few dreamboats patched into a mixer/speaker and leave it on while you work...just let the strange chaotic system BREATHE

MULTIPLE DREAMBOAT PATCH: (requires two or more Dreamboats)

Since each Chaotic Oscillator (CO for short) has a CV in and 2 outputs, we can easily chain the CO's together and cross-couple them.

STACKCABLES are really, really, helpful as well.

So you might start by taking the First Dreamboat C) you want to connect, and you pick either its X or Y output. The X and y Outputs behave somewhat differently. (they are not exact copies of each other...one has more harmonics, the phase is different, etc)

So you take that output and you plug it into the CV in of the NEXT CO...from that CO you take an X or a Y and you plug it into the CV of the next CO...you repeat this process of taking an OUTPUT and plugging it into CO as many times as you have CO's!

Once every CO but the first has a plug in its CV jack, take an output from the last CO and plug it into the first CO's CV input.

it should be a big LOOOOOOOP.

messing with the CV Knobs and the pitch knobs on all 4 sections, you can get some CRAZY Stuff going on....once again, move slowly or you will miss some of the best patterns.

One thing you can do is use VCAS to modulate the amount each CO feeds into the other.....and then maybe even use the remaining outputs of a different CO as the CV input for that VCA!!!

Depending on whether or not you have been using STACKCABLES, you have at least ONE output left over per section left to stick into another VCO, FILTER, SLEW, sync in, etc

HOWEVER, Stackcables allow you to end up with two outputs per section....

or they let you take an X and a Y from one of the sections and stick it into an XY ready Oscilloscope AND use them for signals

Limited WARRANTY:

Snazzy FX warrants this product to be free of defects in materials or construction for a period of one Year from the date of purchase. Malfunction resulting from incorrect power supply voltages, improper power cable connection, improper use or abuse of the product, or any other causes determined by Snazzy FX to be the fault of the user, are not covered by this warranty, and service rates will be determined at such time.

During the warranty period, any defective products will be repaired or replaced by Snazzy FX if the product is shipped to Snazzy FX at the customer's expense. If any issue with your Snazzy FX product does arise, please contact Snazzy FX or your Snazzy FX dealer.

SNAZZY FX accepts no responsibility for harm to person or apparatus caused through operation of this product. Please take proper precautions to protect your speakers, as the Dreamboat is capable of large jumps in volume and or sounds exhibiting extreme bass.

CONTACT:

Please contact help@snazzyfx.com for help with any questions, technical issues, product comments, patches/ patch tips, or to shower us with gifts of vintage synthesizer equipment.



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