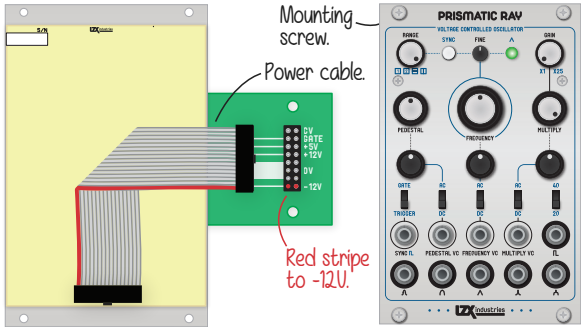
BEFORE YOU BEGIN

Take a moment to familiarize yourself with our website lzxindustries.net. You'll find documentation, instructional videos, links to community forums, and other user resources. Register your product's serial number with us to aid any future technical support requests. Some synthesists will find everything they need to learn this module in this reference card, but don't forget there are videos and patch tips online. If you get stuck, have questions, or need help of any kind -- please write to us.

INSTALLATION

Power down the EuroRack case and unplug it from the wall. Connect the provided EuroRack power cable to your module and then to your EuroRack power bus board as shown. Mount the module in your case using the mounting screws provided by your case's manufacturer.



For automatic connection to video sync signals, Prismatic Ray must be installed on the same power bus as your system's video sync generator module (such as Visual Cortex.) Your sync generator module must also be set to send H/V sync to the EuroRack CV/Gate bus.

PRISMATIC RAY SPECIFICATIONS

FORMAT	3U EuroRack Synth Module
WIDTH	16HP
DEPTH	32mm
MAX POWER DRAW	
+12V	120mA
-12V	90mA
+5V	N/A
OUTPUT LEVELS	0-1V
VC CONTROL RANGE	0-1V
MAX INPUT VOLTAGE	+/-12V
INPUT TERMINATION	100K ohms
OUTPUT RESISTANCE	499 ohms

ONE YEAR LZX industries WARRANTY

MADE IN PORTLAND, OR USA

TIPS & TECHNIQUES

- Use mults to send the same modulation source to multiple VC inputs at once. Use mixer modules (like Passage or Bridge) to mix together many modulation sources.
- Use video images as a modulation or sync source -- all the output waveshapers can process video too!
- Feed different output waveshapes to RGB color channels simultaneously, to create subtle gradients.

YOUR NEXT MODULE?

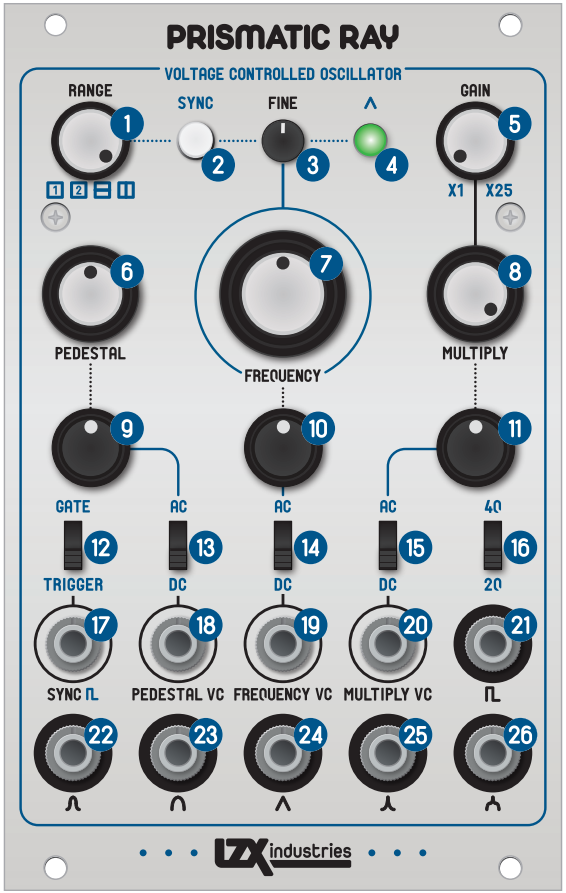
Dedicated horizontal and vertical oscillators are a powerful pairing for pattern synthesis. Adding a second (or third, or fourth...) Prismatic Ray to your video synthesis system will instantly unveil a new layer of cross modulation and geometric density to explore.

LZX-PR-URC
Written & Illustrated by Lars Larsen
First Printing, Feb 2017

PRISMATIC RAY

USER REFERENCE CARD

LZX industries



CONTROLS & CONNECTIONS

	FREQUENCY	
1	Range	1 2 ⊟ ⊞
7	Coarse tune	100%
3	Fine tune	+/-10%
19	VC input	0-1V FS
14	VC coupling	AC DC
10	VC level	+/- 19

	MULTIPLY	
8	Multiply	0X-1X
5	Gain	1X-25X
16	Mode	2QUAD 4QUAD
20	VC input	0-1V FS
15	VC coupling	AC DC
11	VC level	+/- 20

	SYNC	
2	Sync enable	ON OFF
12	Mode	GATE TRIGGER
17	Sync input	⊓ 0.5V

	PEDESTAL	
6	Pedestal	+/-1V
18	VC input	0-1V FS
13	VC coupling	AC DC
9	VC level	+/- 18

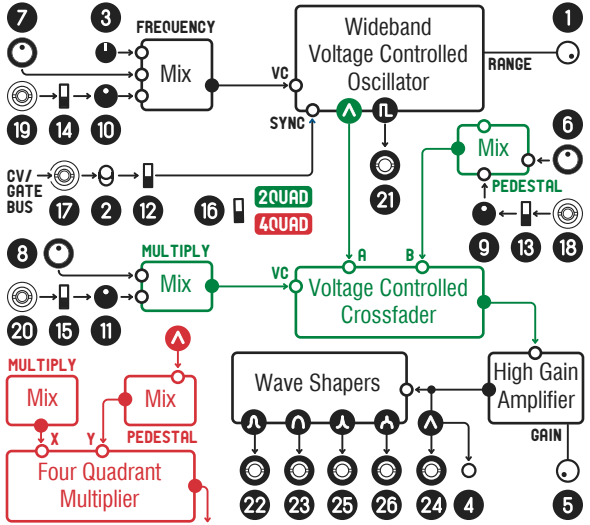
	OUTPUTS	
21	Square	1V DC
22	Sine	1V DC
23	Parabola	1V DC
24	Triangle	1V DC
4	Triangle indicator	
25	Exponential	1V DC
26	Anti Sine	1V DC

FREQUENCY RANGES & VIDEO SYNC

	GENERATES	FREQUENCY RANGE	SYNC SOURCE
1	Animation	7 secs/cycle - 10Hz	None
2	Strobing	2Hz - 150Hz	None
⊟	Horizontal bars	90Hz - 6.25KHz	V⊓
⊞	Vertical bars	22.5KHz - 1MHz	H⊓

Prismatic Ray receives H and V sync signals automatically through its power cable. These signals are sent by your system's video sync generator module (such as Visual Cortex) but can also be patched directly. See installation notes for more details.

SIGNAL PATH BLOCK DIAGRAM



FIRST STEPS

- Set all controls and switches to the default settings shown on the frontpanel illustration to the left.
- Patch one of the waveshape outputs to your video display module or video output module (such as Visual Cortex).
- Play with the frequency range and tuning controls first. Select each range and view the output while adjusting coarse tune. Push the sync enable on/off pushbutton at each range as well.
- Explore the other controls, one by one. Then work through the signal path diagram above to learn how they all connect.
- Modulate Prismatic Ray with audio or CV. Experiment with all VC inputs, multiply modes, and different frequency ranges.