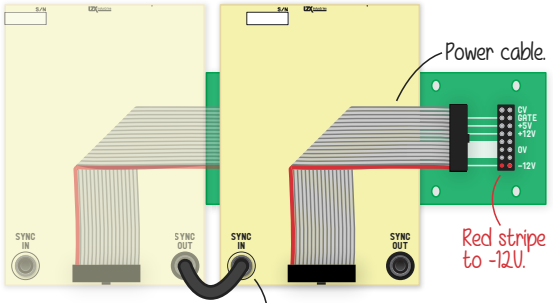
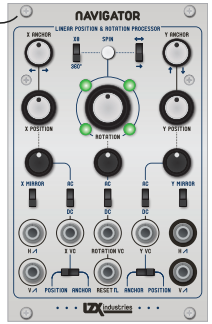
INSTALLATION

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. Use an RCA cable to connect video sync from your system's video synchronization source to the sync input jack as shown.*



RCA cable connects sync output from system's video sync generator (or daisy chained module) to sync input on rear of module.

Mounting screw.



Mount the module in your case using the mounting screws provided by your case's manufacturer.

Navigator uses its connection to video sync to ensure the update of the rotation angle occurs only at the beginning of each video frame. Navigator will function without this connection, in the case that the user is not using this module for video synthesis.

NAVIGATOR SPECIFICATIONS

FORMAT	3U EuroRack Synth Module
WIDTH	16HP
DEPTH	45mm
MAX POWER DRAW	
+12V	130mA
-12V	100mA
+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

- You aren't limited to Horizontal and Vertical ramps! Feed any two related or unrelated signals to the Horizontal and Vertical inputs, like 2 camera feeds pointed at the same object or 2 different waveforms from the same oscillator.
- Navigator makes a great modulation source for more traditional oscillator based pattern synthesis patches.
- Try VC position based feedback!

YOUR NEXT MODULE?

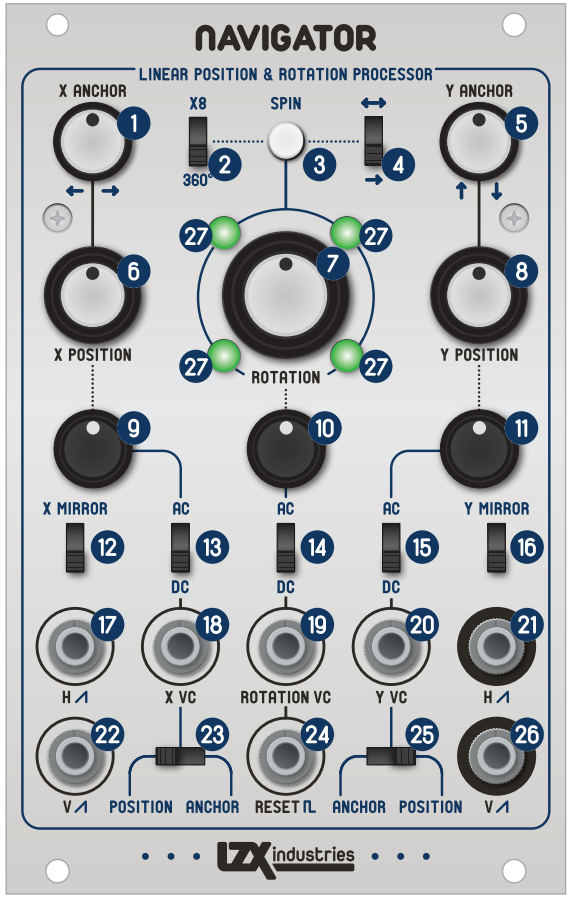
Since our early days of development, we've put a lot of thought into what a voice, in the monophonic and polyphonic sense, would look like, designed for a video synthesizer. Navigator and Shapechanger together form our vision of this design goal.

LZX-NV-URC
Written by Lars Larsen
Illustrated by Dave Larsen
First Printing, Aug 2017

NAVIGATOR

USER REFERENCE CARD

LZX industries



CONTROLS & CONNECTIONS

	ROTATION	
2	Degrees	360° X8
3	Spin	ON OFF
4	Direction	CW CW+CCW
7	Angle/Speed	0–360°
10	VC level	+/– 19
14	VC coupling	AC DC
19	VC input	0–1V FS
24	Reset	⊓ 0.5V
27	Angle indicators	

	INPUTS	
17	Horizontal	0–1V FS
22	Vertical	0–1V FS

	OUTPUTS	
21	Horizontal	1V DC
26	Vertical	1V DC

	X POSITION	
1	X Anchor	+/–1V
6	X Position	+/–1V
9	VC level	+/– 18
13	VC coupling	AC DC
18	VC input	0–1V FS
23	Mode	POSITION ANCHOR
12	X Mirror	ON OFF

	Y POSITION	
5	Y Anchor	+/–1V
8	Y Position	+/–1V
11	VC level	+/– 20
15	VC coupling	AC DC
20	VC input	0–1V FS
25	Mode	POSITION ANCHOR
16	Y Mirror	ON OFF

FIRST STEPS

- Set all controls and switches to the default settings shown on the frontpanel illustration to the left.
- Set Ramp mode switches on Visual Cortex to their center positions. Patch the Horizontal and Vertical ramp outputs from Visual Cortex into the Horizontal and Vertical inputs on Navigator.
- View the Horizontal output using your video output module.
- Play with the X Position, Y Position, and Rotation controls to view what they do to the output signal.
- Play with the X and Y Mirror and Rotation mode switches.
- If you have the Shapechanger module, continue this exercise with the First Steps in the Shapechanger User Reference Card.

SIGNAL PATH BLOCK DIAGRAM