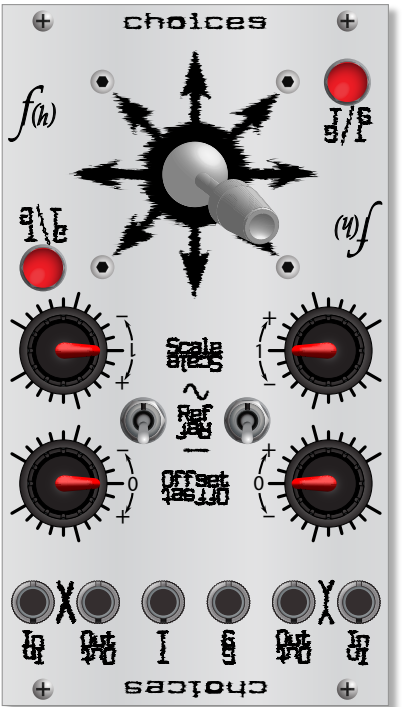
flight of harmony

Eurorack Joystick Module
~v2.0~



Specifications

Supply Voltage (min –> max)	±9V –> ±15V
Input Voltage	$-V_{supply}$ —> $+V_{supply}$
Input & Ouput (I/O) coupling	Direct
Output Impedance	1kΩ
Scaling	0% –> 200% / V_{supply}
Gate output	Off: $-V_{supply}$ On: $+V_{supply}$
Trigger Output	Off: $-V_{supply}$ On: $+V_{supply}$
Trigger duration	1.5ms
	±12V
Supply Current (max draw)	+12V: 14mA, –12V: 14mA
Max Output Voltage	±12V
Offset range	±5V

Components

1	Assembled Choices module
1	DC power cable – 9" Ribbon cable w/10-&16-pin 0.1" connectors
4	M3x0.5x5 Mounting screw
4	Nylon washer for mounting screw

Overview

A basic joystick is used to provide an easily-varied control voltage (CV) to other modules, often allowing the input of a DC CV that is then either amplified or attenuated by the joystick before being sent out to other modules. Choices allows control of DC and/or AC signals at the flip of a switch.

A brief rundown of the features:

- Choices can be oriented with joystick at the top or the bottom to best suit its location in your system.
- Separate Gate and Trigger outputs.
- Two trigger buttons for ease of ambidextrous access, regardless of orientation.
- Toggle switches to select optimal reference level for either AC or DC inputs.

Usage Details

Supply: This design has been tested from ±9V up to ±15V and works well in this range, although performance specifics will vary with supply voltage. All measurements, unless stated otherwise, assume V_{supply} = ±12V. All units have a polarized or shrouded power header to ensure proper connection. Supply polarity symbols are also silkscreened on the PCB in case of non-standard cables or supply bus.

Orientation: Choices is configured to operate with the joystick at the top by default. If you wish to rotate the unit, the output will be reversed in respect to the operation of the joystick - up will decrease, down increase, left increase, right decrease. Simply change the position of the switch on the back of the module to correct this.

Controls, I/O

X: Horizontal axis, left or right motion output

Y: Vertical axis, up or down motion output.

Scale: Controls the scaling/gain of the signal. Middle position is unity gain/1:1 scaling, counter-clockwise attenuates, clockwise amplifies.

Offset: Controls the offset or bias of the signal. Used to shift the output up or down.

Ref: Reference level for input. Put switch lever in direction of the wavy line if using an AC input signal, or toward the flat line for a DC signal.

In: Input signal goes here. When a plug is inserted, the unit automatically switched from internal DC source to the input signal.

Out: It's the output, where the new signal comes out.

T: Trigger output.

G: Gate output.

T/G: Pushbutton to initiate Trigger and Gate signals.

Stuff

There is a lot of discussion about new and upcoming f(h) modules on the Muffwiggler forums, come check it out! People have posted some excellent demos on there. I haunt the forums as well, and new things are posted there long before they hit the f(h) website:

http://www.muffwiggler.com/forum/index.php

Send samples to: samples@flightofharmony.com

Comments, suggestions, complaints to: flight@flightofharmony.com

http://www.flightofharmony.com