TiNRS Wobbler Manual

Introduction

TiNRS Wobbler is an advanced LFO with two outputs. It is a modulation source that can add controlled chaos to your sound. The Wobbler has five shapes, two of which are based on physical modelling. It also gives you direct visual feedback on your CV outputs. You can see it wobble!

Installing the module

1) Power down your system.
2) The red stripe on the power cable and the “red stripe“ on the module indicate the minus 12 volt.
3) Connect the included power cable between the back of the module and your power strip.
4) Screw the module into place.
5) Power up your system.
6) Enjoy!

Getting started

1) Connect a SIGNAL output (6) to your favourite modulation target.
2) Turn up its LEVEL (5) all the way to the right for maximum effect.
3) Wobble!

1. SHAPE parameter

With the SHAPE parameter you select between five shapes. All shapes are calculated real-time. Wobbler is constantly calculating or simulating these five shapes in the background, ready for you to crossfade between shapes without losing step.

Regular

This shape is a simple LFO that can crossfade between the four standard waveforms. On the road to chaos this shape forms the baseline of the Wobbler. You can use MOD to crossfade between sine, triangle, saw and pulse LFO:

Turning SHAPE beyond the ∿ fades Wobbler into slow-motion mode and the ∿ LED will start blinking. Fully turning SHAPE to the left divides the frequency by 64.

Self-Phasing

This shape is a combination of the Regular LFO with a copy of itself. The second waveform is shifted in and out of phase with the original one. The resulting shape is straightforward with sine waveforms and gets more complicated very fast with triangle, saw and pulse waveforms. PHASE controls the relative speed of the second waveform. MOD works the same as in Regular shape mode.

Twang

The Twang shape uses a physical model of a resonating stick with dampening. We follow the movement of the stick and use this to generate control voltages. Please note that you -must- use the TRIGGER button or input to kick this shape into action. MOD changes attack and decay time. Fully turning MOD to the right enables undamped mode:

Double Pendulum

This shape uses a physical model of a double pendulum. We follow the angles between both segments of the pendulum and the ground, and use these to generate control voltages. Use the TRIGGER to give the pendulum a swing. PHASE controls the amount of initial chaos. Due to the chaotic nature of this model, the FREQUENCY knob only roughly determines the actual speed of the pendulum. MOD works the same as with Twang mode.

Sample-and-Hold

An internal white noise source gets sampled several times per cycle, adjustable with FREQUENCY. With PHASE you can delay the noise samples for the phased SIGNAL output (6b) up to one LFO cycle. Turning SHAPE beyond the ⎍ fades Wobbler into quantize-and-hold mode and the ⎍ LED will start blinking. Fully turning SHAPE to the right will quantize the noise into 8 values before sampling. Use MOD to apply a smoothing filter to the outputs:

2. FREQUENCY parameter

The FREQUENCY parameter changes how fast your Wobbler wobbles. When you send pulses in to the SYNC input Wobbler will change its timing to match the incoming pulse frequency. With the FREQUENCY knob in the middle, the frequency of the Wobbler will match the frequency of the incoming pulses. Turning FREQUENCY to the left subdivides the incoming frequency, and to the right it multiplies.

3. PHASE parameter

The PHASE knob controls the phase difference between the two SIGNAL outputs.

4. MOD parameter

The MOD parameter controls the modulation amount for the selected SHAPE. The effect is different for each SHAPE. Please refer to the SHAPE section.

5a & 5b. LEVEL knobs

The amplitude of each output can be adjusted using the LEVEL knobs:

6a & 6b. SIGNAL outputs

Every SHAPE generates one primary OUTPUT(6a), and one secondary, PHASED(6b). Two LED arrays display the control voltages of these outputs.

7a & 7b. TRIGGER outputs

Each SIGNAL output has an associated TRIGGER output. This output will send a short pulse at the beginning of every LFO cycle. The cycle is always determined by the Regular SHAPE.

8. SYNC input

The SYNC input can be used to put Wobbler in tempo-synced mode. Please refer to the FREQUENCY section.

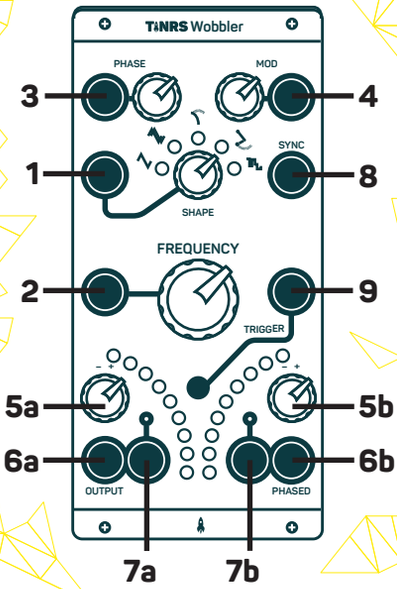
9. TRIGGER input & button

The TRIGGER input and button restart the current SHAPE.

CV inputs

PHASE, MOD, SHAPE and FREQUENCY have CV inputs. You can use these to alter the parameter values by external means. The incoming CV is always added to the position of the knob.

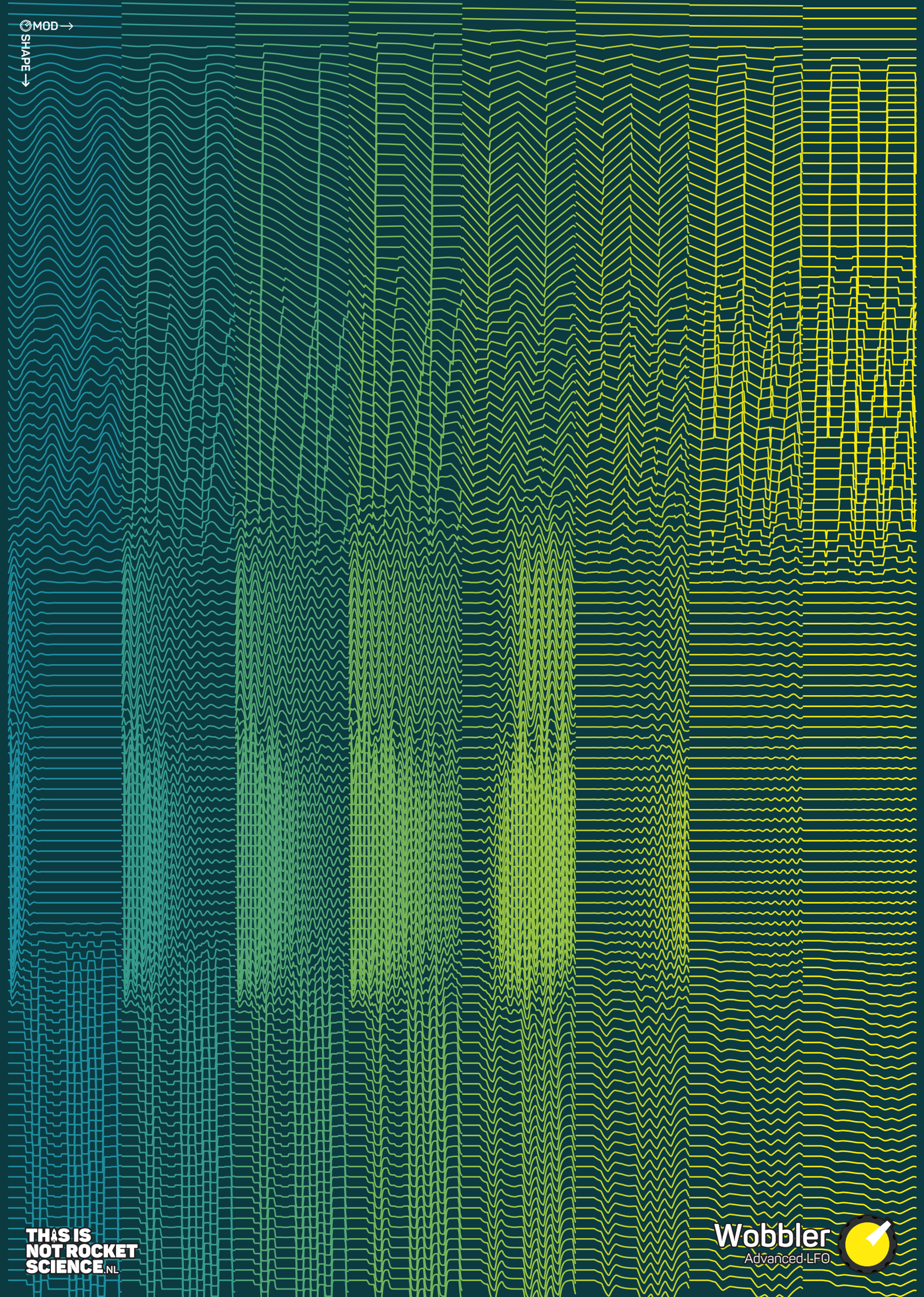
Have fun!



manual v1.0

THIS IS NOT ROCKET SCIENCE.NL

Wobbler
Advanced LFO


MOD →
SHAPE →
THIS IS NOT ROCKET SCIENCE.NL
Wobbler
Advanced LFO