

TAL-Elek7ro

<http://kunz.corrupt.ch/>
Togu Audio Line © 2009, Patrick Kunz
Tutorial Version 0.1.1
(Remixed by MiSSIONCREEP)



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Introduction

The TAL-Elek7ro is a free Virtual Analog software synthesizer that supports all common sample rates.

It is not allowed to sell this software or make any modifications.

Please use at your own risk. We take no responsibility for any damage caused by our VST-plug-ins.

Installation

Windows

The plug-in is SSE optimized. At least a Pentium II or higher is required or an AMD equivalent. All hosts that are compatible with VST 2.4 plug-ins are supported.

Copy the *TAL-Elek7ro.dll* file into the VST plug-in folder of your host. A rescan of the plug-in directory or a restart of the VST host application may be required.

OS X

The plug-in is a Universal Binary and works for *Intel* and *PPC Computers* and needs a VST 2.4 compatible host.

VST

Copy the *TAL-Elek7ro.vst* file into the VST plug-in folder of your host or into the OS X directory: *"/Library/Audio/Plug-Ins/VST/"*. A rescan of the plug-in directory or a restart of the VST host application may be required.

AU

Copy the *TAL-Elek7ro.component* file into the OS X directory: *"/Library/Audio/Plug-Ins/Components/"*. A rescan of the plug-in directory or a restart of the VST host application may be required.

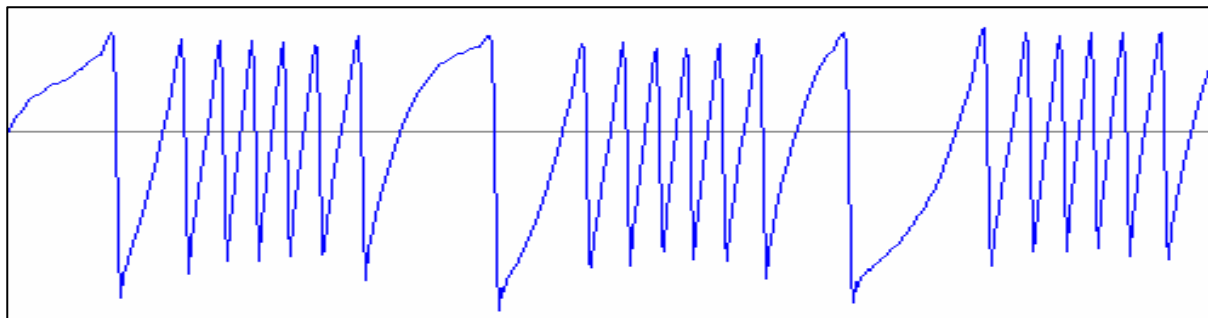
TAL-Elek7ro User Manual



OSCILLATOR 1 and 2

- SEMI: adjusts the frequency of the Oscillator in the range of +/- 12 halftones
- FINE: for fine tuning the frequency (+/- 1 halftone)
- Four different waveforms: SAW, PULSE, TRIANGLE, SINE
- PW: Pulse Width → only for the PULSE waveform)
- FM: Frequency Modulation → all waveforms. Modulation of the frequency up to 20x the Oscillator frequency (see below)
- TRIGGER: triggers the oscillator phase to the "note on event" - the phase of the oscillator will be reset each time a key is pressed.
- HardSYNC option → only for SAW and PULSE (see page 4)

Diagram of a Frequency Modulated Saw:



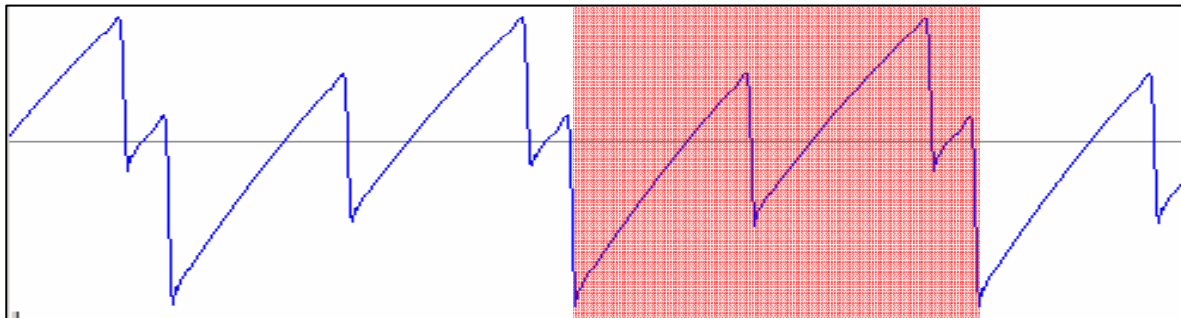
SUB Oscillator

- SEMI: adjusts the frequency of the Oscillator in the range of +/- 12 halftones
- Two different waveforms: SAW (red light on) and SQUARE
- Has an offset of -12 halftones to the other 2 Oscillators
- Is the master Oscillator in SYNC mode

HardSYNC mode

Following image shows the Oscillator in the HardSYNC mode. If this mode is enabled the Oscillator will be synced to the frequency of the SUB Oscillator. The red marked region shows one period of the SUB Oscillator. SYNC is useful, if the Oscillator is detuned to the frequency of the SUB Oscillator. Syncing is possible even if the SUB oscillator volume is zero.

Diagram of OSCILLATOR 1 SYNCed to the SUB Oscillator.



MIXER



The MIXER controls the volumes of all 3 Oscillators and offers an additional NOISE Oscillator.

- Volume control for each Oscillator
- NOISE volume adjustment
- TUNE knob for fine tuning
- SLIDE knob for portamento speed (only in Mono mode with Portamento mode AUTO or ON enabled → option menu on the left bottom corner of the Synth)
- POLY or Mono mode switch (maximum 6 voices in POLY mode)
- Main VOLUME knob

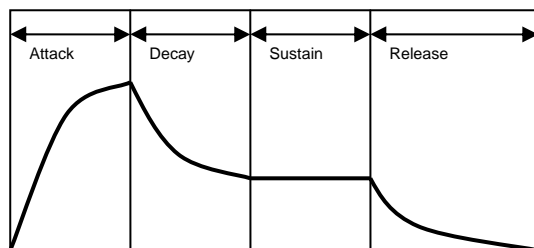
FILTER



The FILTER module is switchable between 4 types of Low Pass filter:

- Elek7ro 12dB
 - Elek7ro 18dB
 - TAL BassLine's 18 dB
 - TAL U-No-62's 24 dB
- CUTOFF frequency of the filter
 - RESONance: turning fully to the right allows filter self oscillation - the filter oscillates without any input signal.
 - KEY: the cutoff changes as you press different keys. Higher keys means higher cutoff.
 - CONTOUR controls how much of the filter envelope will be added to the filter cutoff. (Only a difference if the cutoff isnt already at the maximum value)
 - Envelope with ATTACK, DECAY, SUSTAIN and RELEASE parameters

The envelope looks like this:

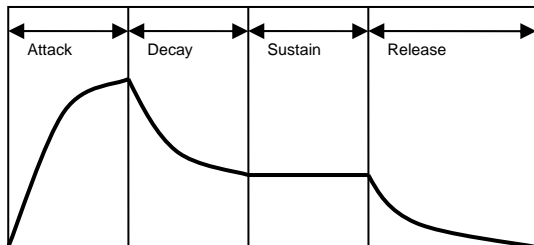


ENVELOPES

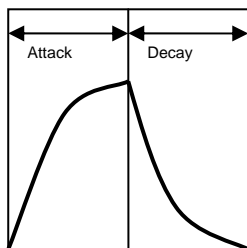


The Envelope module includes the Amplitude Envelope and an Assignable Envelope.

The Amplitude Envelope is of the same type as the Filter Envelope and controls the amplitude of the signal over time.



The Assignable Envelope has only ATTACK and DECAY parameters. INTENSITY controls the modulation width.



The following parameters can be controlled with this envelope:

- OSC 1
- OSC 2
- OSC 1 + OSC 2
- PW 1
- PW 2
- FM 1
- FM 2

LFOs



TAL-Elek7ro has two identical LFOs with six different waveforms:

- Sine
- Triangle
- Saw
- Square
- S & H (random with rate depending hold)
- Noise: real noise as modulation source → no rate adjustment possible

TempoSYNC mode with 18 different rates that are synced to the host tempo. In this mode, the LFO is synced with the note-on-event too.

There are 8 different modulation destinations:

- CUTOFF
- OSC 1
- OSC 2
- OSC 1 + 2
- PW 1
- PW 2
- FM 1
- FM 2
- PAN
- VOLUME

INTENSITY controls the modulation depth of the LFO (frequency range from 0.1Hz to 400Hz)

TRIG: triggers the oscillator phase to the "note on event" - the phase of the oscillator will be reset each time a key is pressed.

Portamento Mode



Portamento mode is only possible in Mono mode (see MIXER). There are 3 options:

- Off → portamento is disabled
- Auto → only if two notes are played the same time
- On → always portamento

Octave Shift



This option gives the ability to shift up 1, 2 or 3 octaves.

MIDI Learn



First make sure that the host sequencer is stopped and TAL-Elek7ro is receiving no Midi events. Then click the Midi Learn (MIDIL) button in the bottom left corner and do following:

1. Change a pot or slider value with the mouse
2. Move an external hardware pot (the SW-controller should move now)
3. Disable Midi Learn or make the next mapping

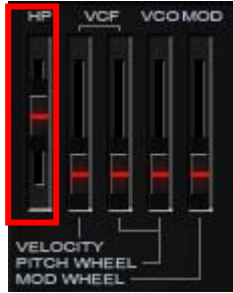
Midi learn applies the changes to the whole program bank of TAL-Elek7ro

PANIC

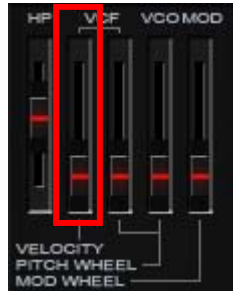


Use the PANIC button to kill hanging notes.

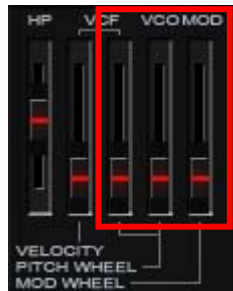
HP – controls the frequency of a 1-pole High Pass filter



VCF Velocity – controls how much the velocity affects the filter contour



Pitch Wheel and Modulation Wheel



Three sliders adjust the influence of the pitch and modulation wheels.

- Pitch Wheel to cutoff frequency
- Pitch Wheel to pitch
- Modulation Wheel to pitch - uses the modulation frequency of LFO 1

Tip: Press shift while moving controls for more precise adjustment



The keyboard can be useful for checking the current sound if no external keyboard is available, or for trouble shooting.