

TAL-U-NO-LX

USER MANUAL



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Introduction

The TAL-U-NO-LX is a Virtual Analog software synthesizer plugin that supports all common sample rates higher or equal 44100Hz.

The synth was designed to emulate analog hardware as accurate as possible and brings the synth sound of the 80's back into your DAW. This synth does not use any samples.

It's tested and works within the most common audio hosts as Ableton Live, Cubase, Logic Pro, Garage Band, Reaper and DSP-Quattro. No standalone version available. Try the unregistered demo version to be sure that the plugin works in your environment.

Please use at your own risk. We take no responsibility for any damage caused by our VST and AU (Audio Unit) plug-ins.

Installation

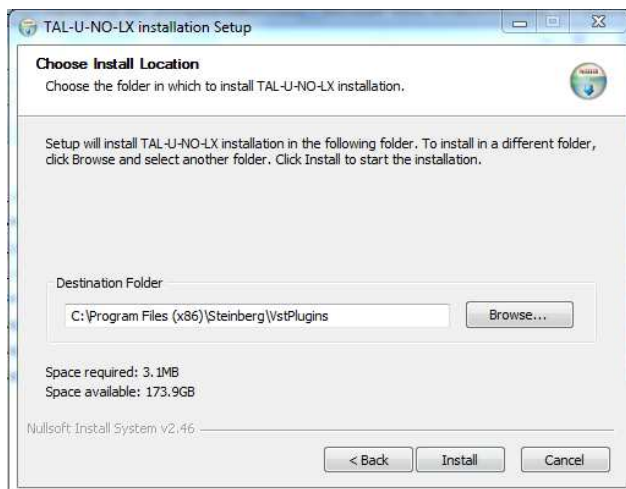
Windows

Requirements:

- SSE compatible processor (Pentium II or higher is required or an AMD equivalent)
- Windows XP or higher.
- A VST 2.4 compatible host.

Installation:

- Download the file *install_TAL-U-NO-LX.zip* and unzip it.
- Execute *install_vst_32.exe* if you want to install the 32bit version of the plugin or *install_vst_64.exe* if you have a 64bit host (sequencer). Please read the manual of your sequencer to find out whether it needs 32 or 64bit plugins. It's also possible to install both versions of the plugin.
- Step through the wizard and choose the path where you want to install the plugin. Please read the manual of your host to get more information where this directory is.



In hosts like Cubase, the plugin will show up after a restart. Some hosts need a plugin rescan. If you use Ableton Live and the plugin does not show up after a VST plugin rescan, try to disable and re-enable VST plugin support.

Uninstall:

Just delete the plugin to uninstall it.

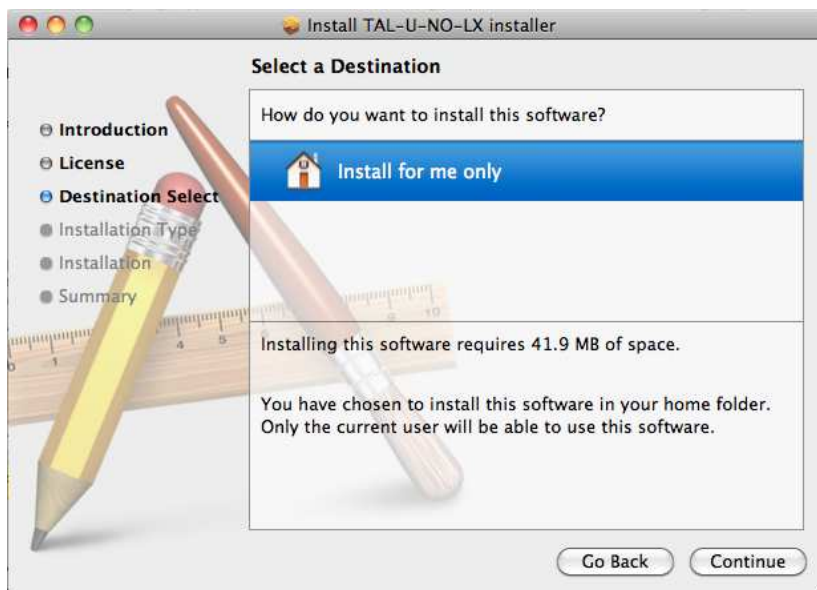
OS X

Requirements:

- OSX 10.5 or higher.
- Intel Processor.
- A host that supports AU (Audio Unit) or VST 2.4 plugins.

Installation:

- Download the *TAL-U-NO-LX.pkg.zip*, unpack it and run the installer. The installer copies the plugin to the right directory. It installs all available versions for OSX (VST 32/64bit, AU 32/64bit).



Uninstall:

Just delete the plugin. Its located in following directories:

/YOURUSERNAME/Library/Audio/Plug-Ins/VST/

or for Audio Units:

/YOURUSERNAME/Library/Audio/Plug-Ins/Components/

In hosts like Cubase, the plugin will show up after a restart. Some hosts need a plugin rescan. If you use Ableton Live and the plugin does not show up after a VST plugin rescan, try to disable and re-enable VST plugin support.

Registration

In demo mode it's not possible to save or export presets and the plugin does not save its state within your host.

It's possible to use the plugin also when it's not registered. Only preset saving and loading is disabled and you lose the plugin settings if you close and re-open a host arrangement.

After registration, saving and loading presets will be enabled. Click on the preset name and *Register Plugin...* to register the plugin.



This opens the *Register Plugin* dialog. You have to paste the 64 digit serial number into the text field and press *OK*. The plugin is now registered if you entered the serial you received by an email.

Please use the right mouse button to paste the serial into the text field. A context menu should show up. If you haven't a right mouse button, you maybe have to press CTRL and the left mouse button.



Tutorial

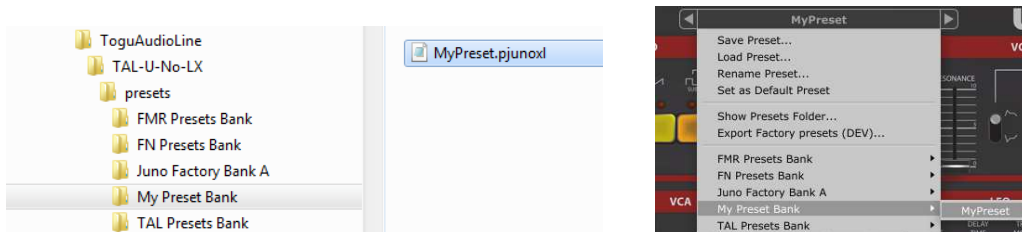
Menu

A click on the current preset name opens the pop up menu. The menu contains important features to manage presets. The left and right arrows allow you to step through them or you can choose a specific preset directly in the menu. The preset system is file based. Windows and OSX presets are compatible.



Save Preset

Saves the current active preset at a specified location. Make sure you save your preset in a sub folder of the main “presets” folder if you want see your presets in the context menu. Following example shows a new saved preset in a new own folder and the result in the menu:



Load Preset

This function opens a file dialog that allows preset loading from every location.

Rename Preset

Renames the current active preset.

Set as Default Preset

Sets the current active preset as default. After that, the synth will automatically load the default preset if you creating a new instance of the synth. The default preset will be saved in the “presets” folder.

Show Preset Folder...

Shows up an Explorer (Windows) or Finder(OSX) window at the plugins preset location. This allows it to create new folders, renaming and moving the presets around. You can also import presets. All you have to do is to copy them in a sub folder of the “presets” folder. **Make sure you that you only edit folders and presets in subdirectories of “presets”**; otherwise the synth will not find the presets anymore.

Restoring Factory Presets

Delete, rename or move the folder with the name “presets”. After creating a new plugin instance the plugin automatically restores the factory presets if this folder is missing.

DCO

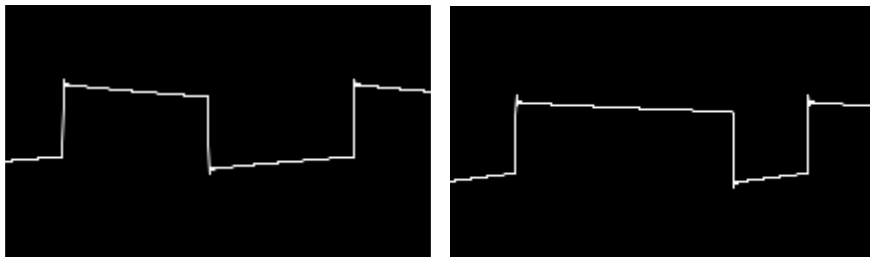
The U-NO-LX has one DCO (Digitally Controlled Oscillator). This means the oscillator is controlled by a digital clock. This makes sure that the oscillators pitch is stable. The DCO includes a pulse, saw and a rectangle sub oscillator. All waveforms are band-limited and alias free.



The enabled waveforms will be mixed together.

Pulse

The pictures below show how the pulse waveform looks like. The left picture shows the pulse waveform without any modulation. The right one shows the same pulse with a modulated pulse width (manual PWM value set to 5).

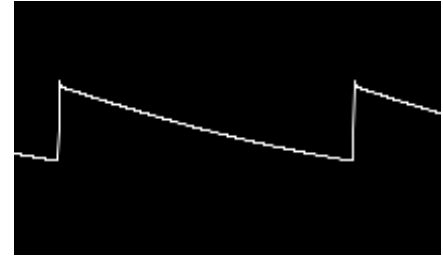


There are three ways to modulate the PW:

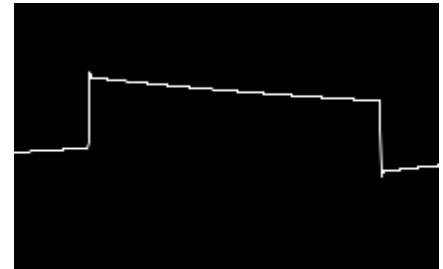
- LFO
Modulates the PW with the current LFO rate without any LFO delay. The PWM slider controls the modulation depth.
- MAN
The PWN slider controls the PWM without automated modulation. At 0 the PW is 50%-50% (left picture above). At 5 the PW is 25%-75% (right picture).
- ENV
The PW will be modulated with the current envelope settings. The PWM slider controls the PWM depth.

SAW

It's possible to enable and disable the saw.

**SUB OSC**

This oscillator has half the pitch as the others (one octave deeper). It's possible to enable and disable it. The sub oscillator also has its own volume slider.

**NOISE**

The noise slider controls the noise volume.

LFO

The LFO slider controls the pitch modulation intensity up to a half octave at the value 10.

VCF / HPF



The U-NO-LX has two different filters. A low pass VCF (Voltage Controlled Filter) and a one pole high pass filter.

HPF

The HPF (High Pass Filter) slider controls the intensity of the filter. This control is useful for removing unwanted low frequencies.

VCF

The VCF filter is the heart of the U-NO-LX. It's a resonance 24dB low pass filter that has the possibility for self-oscillation at maximal resonance and can also be used as an oscillator. The filter section has following controls:

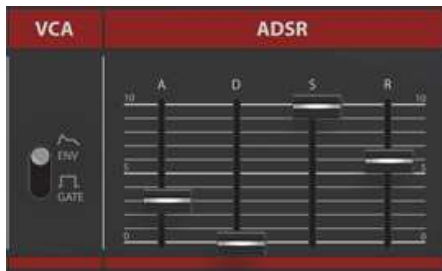
- FILTER
Controls the actual filter cut-off frequency. The filter range goes from 8Hz to ~40'000Hz if KEYB is set to zero. It depends on the sample rate if you can use the whole cut-off range.
- RESONANCE
Control's the resonance intensity from zero up to ten (self-oscillation).
- ENVELOP MODE SWITCH
This switch allows it to toggle between normal and inverted envelope mode.
- ENV
Controls the intensity the envelope (ADSR) affects the filter cut-off.
- MOD
Controls the intensity the LFO affects the filter cut-off.
- KEYB
Keyboard control controls the intensity the filter follows the current key. This makes it also possible to play harmonic melodies at full resonance without any oscillator enabled.

An accurate zero feedback delay filter and 4x oversampling makes it possible to sweep the filter up to the maximal possible frequency (half sample rate) without any artefacts. The filter-cut-off frequency has a range up to ~40'000Hz. The sampling rate determines whether you can use the whole range.

The filter cut-off has some inaccuracies like on a real analogue synth and is spread around the main peak. The two harmonic distortion peaks are also part of the juno-60 filter.

Press shift while moving controls for more precise adjustment.

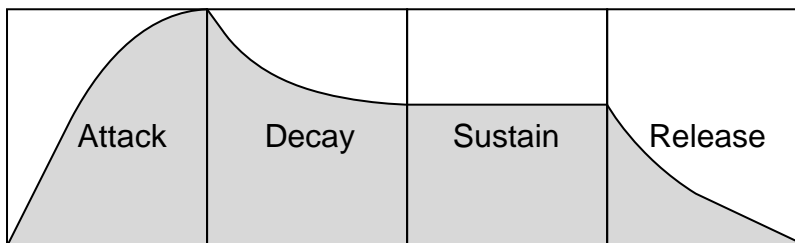
VCA / ADSR



The ADSR envelope controls the shape of the sound. It's especially optimized for very short decays for example used on organ or snappy bass sounds.

Following two components control the synths envelope:

- VCA
The VCA control switch makes it possible to switch between volume ENV and GATE mode. The volume will not be shaped when GATE is enabled. The ADSR directly affects the volume when ENV is switched on.
- ADSR
Controls the volume envelope when VCA ENV mode is enabled and controls the filter envelope. The filter modulation intensity depends on the VCF ENV value.
The ADSR has following specification:
Attack time (1ms - 3 sec), Decay Time (2ms - 12 sec), Sustain level (0 - 100%), Release time (2ms - 12 sec).



LFO



The U-NO-LX LFO (Low Frequency Oscillator) can have a rate from 0.001Hz up to 20Hz and support different waveforms and trigger modes.

It's possible to modulate the VCO pitch, PW and filter.

A text field shows the current speed in Hz (Herz) or the current sync time, when SYNC is enabled.

- **RATE**
Controls the LFO rate (0.001-20Hz).
- **DELAY TIME**
Controls the delay time until the LFO fades in. This affects the VCO pitch and the filter modulation.
- **TRIG MODE**
Set's the actual trigger mode.
KEY: Triggers the LFO to the note on event.
FREE: The LFO is free running and not triggered.
SYNC: The LFO is synced to the host BPM (1/16, 1/8, 1/4, 1/2, 1/1, 2/1, 1/16T, 1/8T, 1/4T, 1/2T, 1/16., 1/8., 1/4., 1/2.)
- **SHAPE**
It's possible to change the LFO waveform. Available waveforms are: TRI (Triangle), REC (Rectangle), SAW, RND (Random)
- **MAN**
If enabled, the LFO will be triggered by the LFO TRIG button and DELAY TIME controls the fade-in speed.
The VCO and VCF LFO modulation have to be triggered manually by the LFO TRG button if this feature is enabled.

MASTER



The master section controls the synth level, tuning and an octave switch.

- LEVEL

Controls the synth main volume.

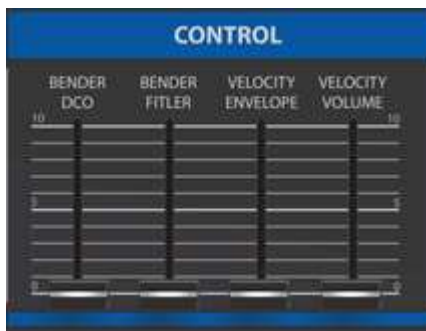
- TUNING

Goes from +1 to -1 and has a range of one semitone to each direction.

- OCTAVE TRANSPOSE

Transposes the current octave. One octave in each direction.

CONTROL



Controls the parameters that are affected by the pitch wheel and velocity intensity.

- BENDER DCO

Controls the intensity how the pitch wheel affects the VCO pitch.

- BENDER FILTER

Controls the intensity how the pitch wheel affects the VCF cutoff frequency.

- VELOCITY ENVELOPE

Controls how much the velocity affects the filter envelope intensity.

- VELOCITY VOLUME

Controls how much the velocity affects the note volume.

PORTAMENTO

Controls the portamento-mode.

- MODE
Portamento is disabled when set to OFF. Mode 1 enables portamento when notes are overlapped. Mode 2 enables portamento for every played note.
- TEMPO
Controls the portamento tempo (0 = fast, 10 = slow).



The synth is in mono mode when portamento is enabled.

CHORUS



Enables chorus 1 or chorus 2. It's also possible to enable both chorus effects at the same time. This chorus has a warm characteristic and produces a wide stereo sound.

CONTROL

This section contains important features and additional settings.

- KEY TRANSPOSE
Allows it to transpose the keyboard (-24 to +24 semitones). Default setting is zero.
- MAX POLY
Controls the number of voices (1 to 12 voices simultaneously). Limiting the number of voices allows it to save CPU especially in envelope mode with long release times.
- MIDI LEARN
Assign a midi controller to every control of the synth. Do following steps to make a successful assignment:
1. Enable MIDI LEARN



2. Move a U-NO-LX slider or push the button you want to control.
 3. Move your hardware controller
 4. Disable MIDI LEARN or do some more assignments.
- PANIC
Remove hanging notes. The cause for hanging notes is mostly a missing note off event from the host or midi device.
 - LFO TRIG
Trigger the LFO manually if MAN in the LFO section is enabled. This is especially useful when this button is assigned to a midi controller.



ARPEGGIATOR

The U-NO-LX includes a classic arpeggiator that support different playing and wide range of sync modes.

- ON / OFF
Enables or disables the arpeggiator.
- SYNC
Enables or disables the arpeggiator sync.
- MODE
Different arpeggiator modes (UP, UP & DOWN, DOWN).
- RANGE
The arpeggiators octave range (1, 2 or 3 octaves).
- TEMPO
The arpeggiator tempo. When synth is disabled the arpeggiator tempo has range from 1 up to 25Hz. In sync mode the tempo is synced to a source and can have following tempos: 1/8, 1/16, 1/32, 1/64. A label shows the current active tempo. An exception is EXT 16.
- KEEP
Keeps the arpeggiator settings while changing the presets.
- HOLD
Holds the current playing arpeggiator pattern.

- EXT 16
Only active when sync is enabled. It allows syncing the arpeggiator with note-on events played on MIDI CHANNEL 16.

- MIDI CLK
Only active when sync is enabled. Sync's the arpeggiator to an incoming MIDI CLOCK.

- HOST
Only active when sync is enabled. Sync's the arpeggiator to the host internal time.