WEDGE FORCE
SYNTHETIC INSTRUMENT COMPANY

HYDRO
DI GUITAR SYNTH

> "… a great musical instrument inspires musicians
> to be creative in ways that were impossible before"

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INTRODUCTION

Thank you!

Welcome to the world of WEDGE FORCE DI synthesizers!

We would like to thank you for purchasing one of our fine musical instruments!

About Us

We are an innovative company with a mission to deliver authentic software sound synthesis.

We enable musicians to create mouse click perfect guitar parts with professional sound quality.

Our software musical instruments are equally well suited for live on-stage performances as well as studio recordings.

REQUIREMENTS

Supported Formats

- Supports **MacOS** and PC **Windows OS**

- Supports 64bit Intel and Apple Silicon Platforms

- Supports **AAX**, **VST3**, **VST2** and **AU** plugin formats

- Supports Pro Tools, Cubase, Logic Pro X, Studio One, Ableton and other compatible DAW containers
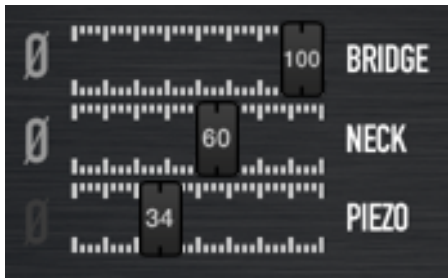
Hardware

Minimum

CPU: 2.5 GHz
RAM: 16 GB
HDD: 16 GB

Recommended

CPU: 3.0 GHz
RAM: 32 GB
HDD: 16 GB

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FEATURES

Pickup MIX

Hydro's mixing console console allows you to mix the level of three different pickups:

- **BRIDGE PICKUP** useful for brighter and cleaner tone.
- **NECK PICKUP** tone is ticker sounding with more low-end.
- **PIEZO PICKUP** tone is captured from seven different piezo pickups in the bridge string saddles. It is great for acoustic clean tones as well as mixed into the heavy tones for more thickness.

From here you can also invert the phase (with Ø buttons) separately for the BRIDGE/NECK pickups to

gain more harmonics. When you do that you will lose the thickness of the base tone (blue + green = purple).
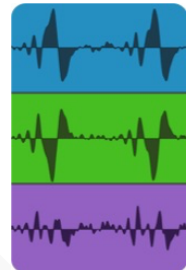

HYDRO has the option to invert the PIEZO pickup phase separately for each different string. This way you can keep the lower string in-phase for a tick base tone and invert the phase of the upper string for additional harmonics. This gives you the best of both worlds!

Piezo Color Preamp

The "Synthetic Force Engine" allows for gradual analogue tone coloration in real time while playing, as if you have the analogue preamp next to you in the studio!

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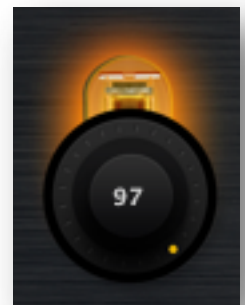
You can gradually adjust the tone coloration from 0% to 100% Preamp coloration affects only the PIZO pickup tone.

Neck Play Position

Identical notes are available on multiple different frets on a guitar neck and they all sound different. This is why we provide you with the option to choose the proper neck mapping for your sound preferences – individually for each of the 7 strings.

Strumming Note Offset

When you play a chord with multiple notes on the MIDI keyboard our sound engine plays the notes slightly offset from each other to mimic the guitar strumming technique.
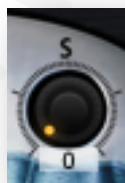
Try experimenting with different offsets from the 'S' knob and with

different note order for up/down strumming.

How are we different?

SYNTHETIC FORCE ENGINE

At the heart of our massive and authentic tone is our proprietary '**Synthetic Force Engine**'.

Sampled sounds on their own would never sound like the real guitar instrument. Harmonic resonances are different for each combination of notes. This is why our 'Synthetic Force Engine' combines pre-sampled waveforms with real-time synthesized sounds.

Guitar Effects

Our mantra is to focus on crafting the best possible DI guitar tone and then let you use the 3rd party effects of your choice.

You can start with the effects from the Plugin Alliance bundle or other 3rd party effects like Neural DSP, TH3 or Guitar Rig. Hardware digital effects like Kepmer and Axe FX sounds great as well.

Fully Customizable

> Customizable pitch bender for BEND or SLIDE the notes over semitone intervals

> Customizable velocity mapping of your keyboard

> Customizable behavior of the sustain pedal

> Play extrapolated notes outside the guitar neck

Under the Hood

Studio Sampled Waveforms
Lossless Hi-Res Audio

It took us an insane amount of crafting to sample the world's most iconic custom-made guitars (the exact customizations are our trade secret) with the best possible (to date) sound equipment.

Real-Time Synthesized Sounds
Internal 64bit double precision
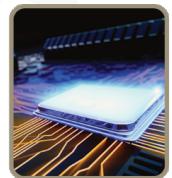
We simulate the string resonance in real-time to synthesize the right harmonics and damping forces to blend them into the main studio sampled tone.

This is our unique way to preserve the authentic guitar timbre.

DEPLOYMENT

Download

We recommend that you download and always use latest 'Hydro' version.

Installation

Make sure that your account has administrative privileges before you launch the installation.

During the installation you can choose to install all different plugin formats or to exclude the ones which are not relevant to your system.

HINT: For best performance we recommend installing 'Hydro' on a SSD drive. Installing it on a slower HDD is alright and will not impact the sound quality but the initial plugin loading time.

Activation

You need to activate your product with **Plugin Alliance** activation workflow.

Telemetry

To improve our product, we might collect telemetry data. It includes product settings, environment configuration and crash reports.

Please help us to make better products.

Updates

'Hydro' will kindly prompt you at startup to download and install new updates when they are released.

SETTINGS

Volume Controls

The 'V' knob works like the guitar volume knob. You can keep it at max level and use the GAIN slider to adjust the output level. You could connect an external MIDI CC volume pedal as well.

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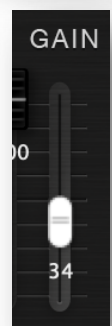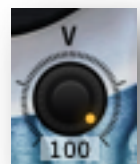
Mute

You can mute the Notes with the sustain pedal.

Sustain Pedal

The behavior of the sustain pedal can be changed.
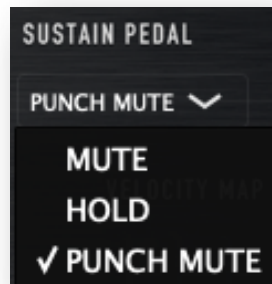
The **HOLD** option makes the sustain pedal hold all pressed notes until you release it (like on a piano).

The HOLD behavior is not always useful for guitar parts so we introduced the **MUTE** option where the notes will sound muted while the sustain pedal is pressed.

Our favorite behavior is the **PUNCH MUTE**. It works like the MUTE behavior but if you press the sustain pedal while a note is currently playing it will silent the note with a muted sound (like on a guitar).

HINT: You could try the PUNCH MUTE option with distortion effects.

HINT: You can invert the sustain pedal behavior by clicking on this icon:

Picking Behavior

Auto AI: Predict the correct picking direction (plucking finger, up or down picking) based on the tempo of playing, neck position and velocity of the previously played notes.

Down/Up: Always down/up picking.

Alternate: Start with down and then keep alternating - up, down, up, etc.

Status Badges
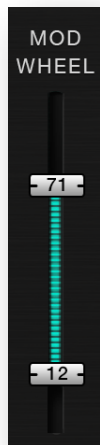
These badges show the current settings you are using.

The default badge color is black. They turn red when you run in sub-optimal settings.

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MOD Wheel

You can add harmonics by using the MOD WHEEL controller of your keyboard.

The upper slider controls (in %) the maximum amount when the MOD WHEEL controller is all the way up. This ensures that you won't go beyond this limit while playing live.

The lower slider controls (in %) the minimum amount when the MOD WHEEL controller is all the way down.

Pitch Bend

This slider adjusts the PITCH BEND interval in semitones.

When in 'BEND' mode, this interval works only for bending up, the down interval is always 12 semitones.

When in 'SLIDE' mode the down interval can be adjusted up to 12 semitones as well.

Neck Position

The neck of the guitar is richer than the piano keyboard in a way that a single note is available on multiple different frets and each of them has unique tone because of the different string lengths and gauges.

The neck mapping position sliders adjusts the starting fret from which the keyboard will be mapped. The current mapping is marked by the dots on the guitar neck. There are separate sliders for each of the strings (1, 2, 3, 4, 5 and 6).

You can experiment with lower frets and open strings for cleaner ringing

tones, while the upper frets will give you warmer and tighter sounds.
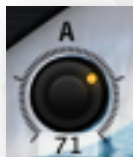
Note Release

You can adjust the RELEASE of your notes from the 'R' knob.

You can experiment with the POLYPHONY set to 1 and high 'R' values.

Note Attack

You can adjust the ATTACK of your notes.

Brighter attacks (close to zero) always use samples with higher articulation which sounds great when all notes are with similar velocities.

Dynamic attacks (close to 100) use mellow samples when you play at low velocity and bright samples when you play harder.
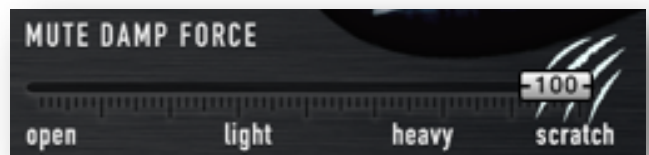
Note Detune

Guitar players can hardly play in perfect tune all their notes. This leads to slight detune into their guitar parts which sounds realistic.

The **DETUNE** setting helps keyboardists to do the same.

HINT: Effects (like FLANGER) can add additional detune which could become too much.

Gradual String Damping

This parameter controls the amount of force applied to strings when

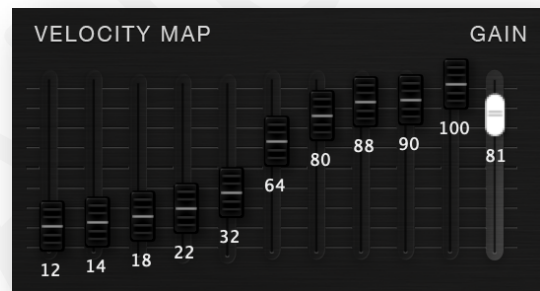muting them. From 0% (open) to 100% for fully muted strings.

It affects only the muted notes while the sustain pedal is pressed down.

HINT: Values from 0% to 50% lightly presses down on the strings while values above 50% result in greater damping and muting.

HINT: Values above 90% will include a scratching pick sound for greater mute articulation with distortion effects.

Polyphony

POLYPHONY

64 ⌄

You can adjust your **POLYPHONY** from this setting.

HINT: If you need to play cleaner parts where only one note is audible at a time try setting the polyphony to 1 on solo parts with high effects.

Another reason to lower the polyphony setting would be to limit the CPU load by ensuring that no more than a certain number of voices will be playing at the same time.
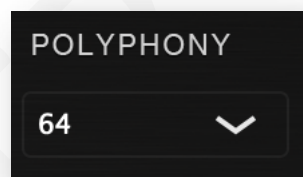
Velocity Mapping

VELOCITY MAP   GAIN

12 14 18 22 32 64 80 88 90 100 81

These controls allow you to adjust the velocity mappings depending on your playing style and your keyboard sensitivity.

HINT: The slider knobs will light (when a note is playing) to indicate where the currently played note is mapped. This will help you to further adjust the mappings.

Velocity Presets

[VELOCITY] PROGRESSIVE ⌄

Use the default velocity presets to quickly select a mapping which matches your playing style.

We encourage you to start from a preset and then adjust the individual velocity map sliders and gain level (if needed).

Presets

[00] HEAVY WATER ⌄ < >

We provide you with default presets. You can explore them to hear how the sound changes. For example, each preset comes with its own demo song.

LIVE AUDITION

Once you get familiar with the settings you can start customizing them to find your unique sound.

Keyboard

The on-screen keyboard contains the typical notes which are present on the guitar neck.
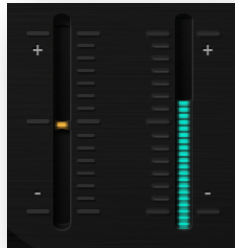
Our 'Synthetic Force Engine' is capable of synthesizing notes outside the guitar neck range.

HINT: When lower notes are used the guitar tone starts to sound deeper and quite cool if you are after a unique sound. Hydro's unique sound engine sounds great even outside the guitar range so don't be afraid to experiment with it.

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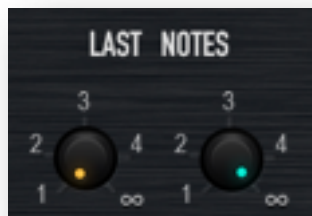SYNTHETIC INSTRUMENT COMPANY

PB and MOD Indicators

These indicators show the current position of PITCH BEND and MOD WHEEL controllers.

Bent Notes

Guitar players often hold a note on one string while bending a note on a different string.

By default, the PITCH BEND and MOD WHEEL controllers affect all currently pressed notes. To achieve the same technique, you need to adjust the 'BENT NOTES' settings.

For example, if you set it to '1' then only the last played note will be bent, leaving all other notes playing in the background without bending them. If you set it to '2' the last two notes will be bent.

HINT: With MOD LAST NOTES set to 1 you can experiment with playing the same chord but with playing the lower or the higher note first. You will get a completely different harmonic tone out of the same chord.

Fine Tune

Our samples are in A = 440 Hz tune but sometimes you may need to tune your synth to match another instrument or to match a different tuner.

MIDI Control Channels

You can map most of the settings described so far to the hardware knobs of your MIDI keyboard. Different keyboards use different MIDI CC values. You can customize yours from here:

HINT: The easiest way to find out the MIDI CC values of your keyboard is by using the **LEARN** button.

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