

AURORA CRAFT SERIES



GUITAR PLUGIN USER'S GUIDE Aurora DSP





Welcome

Congratulations on purchasing Mr. HECTOR plugin and joining the Aurora DSP family of users. We hope that you will find the use of our latest software as inspiring as the story of the amplifier itself.

This plugin is based on one of the most iconic amplifiers in the history of heavy music in Poland. To understand the phenomenon of Laboga amplifiers, we have to go back to the 1980s - Wroclaw, Poland - where Adam Laboga - Polish constructor and electronics engineer officially started his own audio equipment and hand-made amplifier business. During the reign of the communist regime and the unprecedented censorship of any art form in Poland, the Polish rock and metal music scene grew in spite of the system. For many citizens, it was a form of united rebellion against the communist regime, hidden under a layer of guitar music and ambiguous political lyrics that maneuvered on the verge of being censored. During this period, access to the musical equipment from famous Western brands was practically impossible. Government controlled import was successfully blocking all the goods originating from the capitalist countries. It was during this unfavorable times that Adam Laboga decided to make his own amplifiers, calling his company Labsound, which after few years later evolved into Laboga as we know it today. His work has been appreciated by many demanding musicians from the domestic scene and thus consolidated its position on the music equipment market turning into a full-scale custom amplifiers company exporting its products all over the world.

Laboga Mr. Hector amplifier belongs to the world's top tube hi-gain constructions. It is designed with over 35-years of experience in creating top quality equipment for the most sophisticated musicians. If you listen to rock and metal music, you certainly have an album in your collection which was recorded using an amplifier designed by Adam. Musicians such as Behemoth, Vader and Decapitated used Mr. Hector amplifiers on many of their iconic albums.

This plugin is a tribute and commemoration of the Adam Laboga work - a pioneer of hi-gain amplifiers, brilliant audio designer and visionary from Poland who passed away in 2018. Together with the Eryk Laboga, we decided to take advantage of the possibility of translating the analog world into digital format and capture Adam's work in our VST plugin. We believe that thanks to this, his legacy will live forever and will reach a wider audience, contributing to the creation of many great-sounding albums.

Aurora DSP: Mr. Hector plugin is 1:1 recreation of a two-channel 100W hi-gain beast of a Laboga Mr. Hector amplifier. The main design assumption was to create an amp that leaves the user satisfied with enough amount of gain delivered by the amp itself. The original head is based on the solution known from the most recognizable hi-gain constructions: four 6L6WGC / 5881 tubes, four 12AX7 tubes on the preamp and two 5C3S tubes on the power supply. This configuration allows for an extraordinary distortion saturation and will suit both rock music and the most extreme types of metal requiring selective and responsive types of sound. All the features are precisely described in the appropriate chapters of this manual.

Getting started

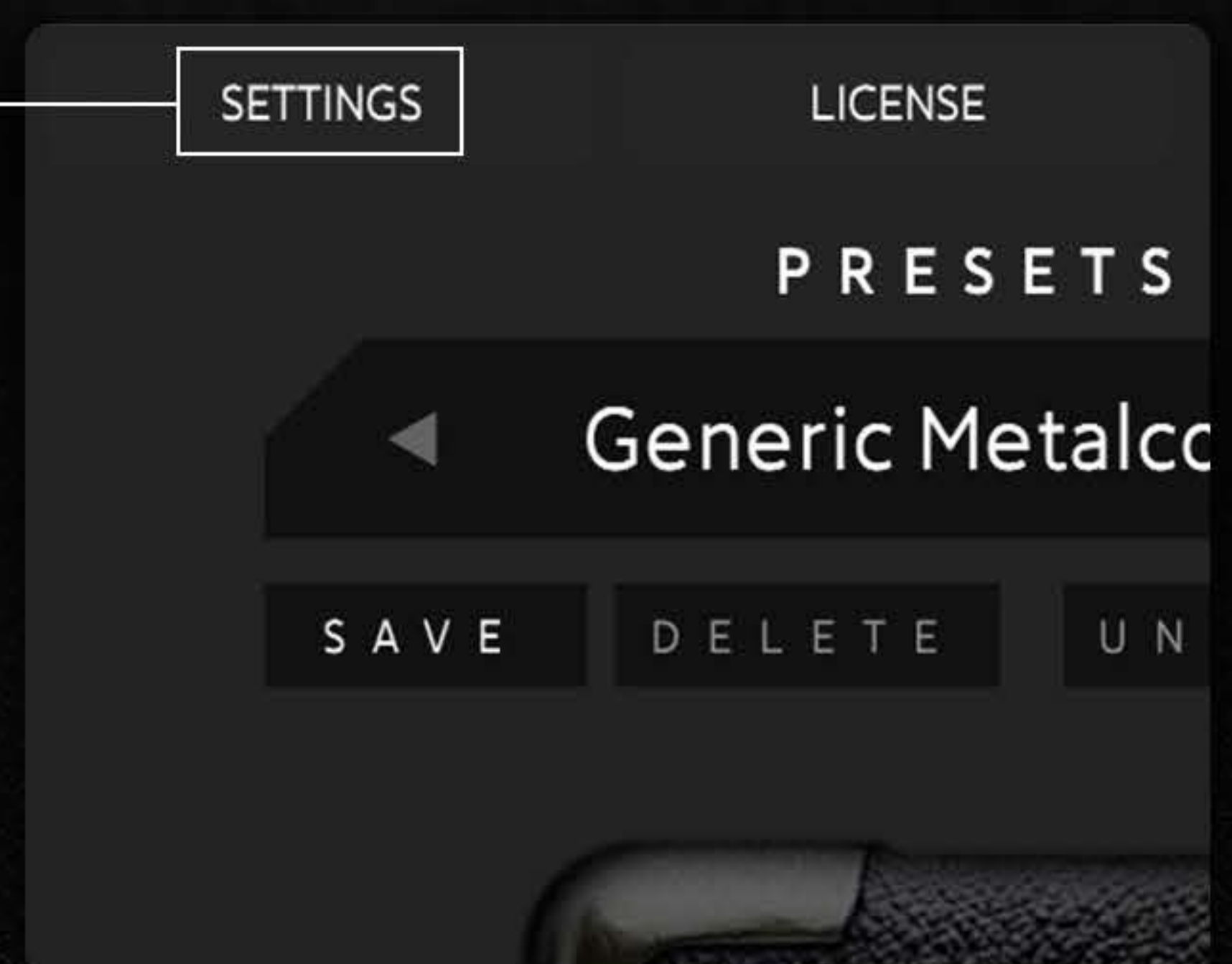
In this chapter, we will cover the basics of the user interface of the Mr. Hector plugin. The main assumption of our software was to deliver the real-amp-like experience to the users of our plugin. We want you to treat it like a real amplifier, real pedals, microphones and cabinets which are directly right in front of you, so you can use it in the same intuitive way.

Aurora DSP Mr. Hector is divided into 4 modules representing four different sets of gear which are at your disposal. This reflects the four separate types of guitar equipment that are typically used by guitarists using half-stack setups.

When starting the plugin, the amplifier (AMP) module is loaded by default. At the bottom center screen you may see the docked menu consisted of four buttons responsible for switching between the Mr.Hector modules. As you can see AMP button is being highlighted, meaning that the amplifier module is currently turned on. To move between each of the section, click on the corresponding button to change the screen and see the different loadouts of the plugin.

First start-up / Settings Menu

Before we start and immerse ourselves into the hi-gain superiority we need to adjust some settings first. In order to make the software work flawlessly and with the lowest possible latency, you need to correctly define the sound settings of your audio configuration. In the upper left corner of the Mr. Hector window you will find a **Settings** button. Click it, to open the pop-up window of the audio settings.



Audio device setup

Firstly, choose the proper **audio device type** from the drop down list of the menu. Please be noted that audio device type is not audio device itself. Audio device type corresponds to the driver types which supports your interface. If your interface is using ASIO drivers, choose it as your **audio device type**.

Device

Such selection will load every ASIO operated device installed on your computer in the next sub-menu called **Device** where you will select your hardware. If everything is set up correctly, you should see the name of your interface in the following **Device** window. Choose your interface from the drop down menu.

If for some reason your configuration is not showing up, please make sure that drivers of your interface are installed correctly and are up to date. Aurora DSP strongly suggest using latest and original releases of the drivers originating from the hardware manufacturers.

Note: As hardware audio settings of your computer are not defined during the first start-up, the automatic feedback protection system might mute the signal of your instrument completely. You will have to turn that off from the settings right after you define the correct inputs and outputs of your setup. Use the Feedback Protection button at the top of the settings window to unmute the signal.

Choosing the correct audio **device** will automatically load and display possible output and input channels configuration of your interface.

Active Output Channels

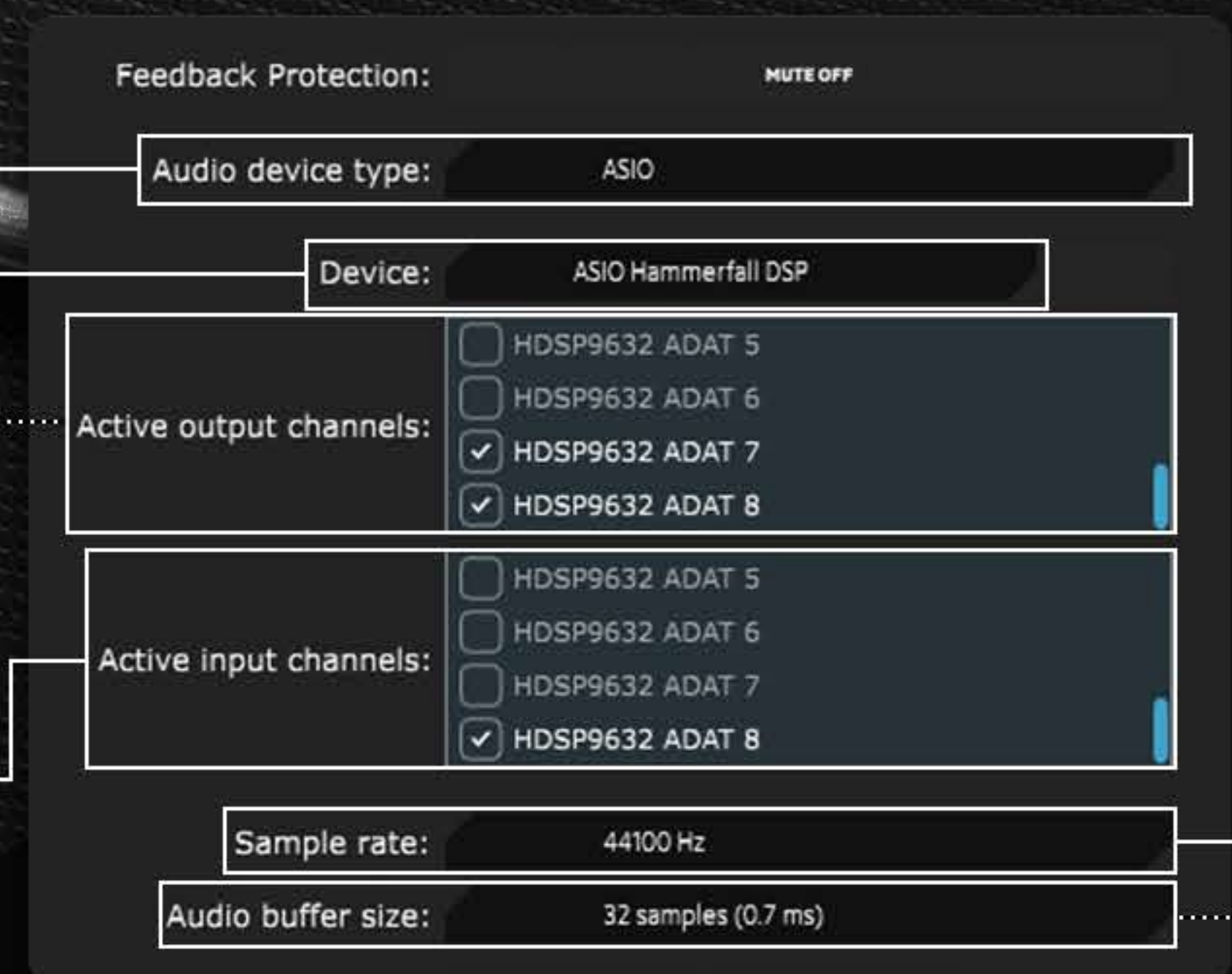
Choosing the correct audio device will automatically load and display possible output and input channels configuration of your interface.

Active Output Channels are all the outputs that's coming out of your interface to the other devices - i.e. studio monitors, speakers etc.

Active Output Channels

Active Input Channels defines everything which goes into the interface - i.e. instruments, microphones etc. In this case, it might happen that you will use only one input for your instrument. You can leave all the other unused inputs unchecked since they will not be used and processed by the plugin.

Note: Each of the audio interface works in a slightly different way which we are unable to cover perfectly from the level of this manual, however, the general principle of operation is the same for all the audio devices.



Sample Rate

Sample Rate is the amount of samples per second. In the digital audio terminology it defines the quantity of audio informations which are translated into binary information data. Analog waves are divided by computer within the certain rate to reconstruct it into the digital form. The audio standard is equal to 44,1 kHz. Imagine a waveform which was divided into 44100 pieces every second.

Audio buffer size

Audio buffer size is the number of samples processed by your computer. Lower **buffer size** will reduce the latency but will increase the usage of your computer resources. Higher buffer size will do exactly the opposite. For recording and playing purposes you want to keep your latency level as low as possible meaning setting the **buffer size** to the lowest possible value which is tolerated by your computer. Mr. Hector plugin displays the predicted latency in ms (milisecond) values right next to the buffer size which you can choose.

Note: latency values, **audio buffer size** and sample rate is strictly dependent on your interface and computing power of your setup.

Settings

Menu corresponding to all audio settings related to your hardware configuration. From this sub-menu, you can select the device that you will use to play and record your instrument, appropriate audio drivers or see the list of available inputs and outputs operated by your audio interface. You can change the sample rate and buffer size to manipulate the latency or to balance the amount of computing memory used on your PC in case you are experiencing unpleasant sound artifacts (caused by decreasing the latency to much and reaching your computer limits).

License

In this menu you can activate, deactivate or order your license code for the Aurora DSP Mr. Hector plugin. If you are using a 14-day trial version of our software you can activate your full version copy by typing in and activating the code received from the Aurora DSP. By clicking "Get the code" you will be re-directed to our webstore where you can purchase the license straight away. Note: using codes from sources other than Aurora DSP webstore will not guarantee correct operation of the plugin and is not covered by our official support.

Input mode

This button is responsible for switching your input mode between mono and stereo. One of the practical examples might be double tracking your guitars in the DAW. You can use single instance of Mr.Hector plugin on the bus track to pan two separate tracks in stereo and control them both. This is an extremely powerful tool considering the possibility of balancing the microphones in the cab section of the plugin.



Input

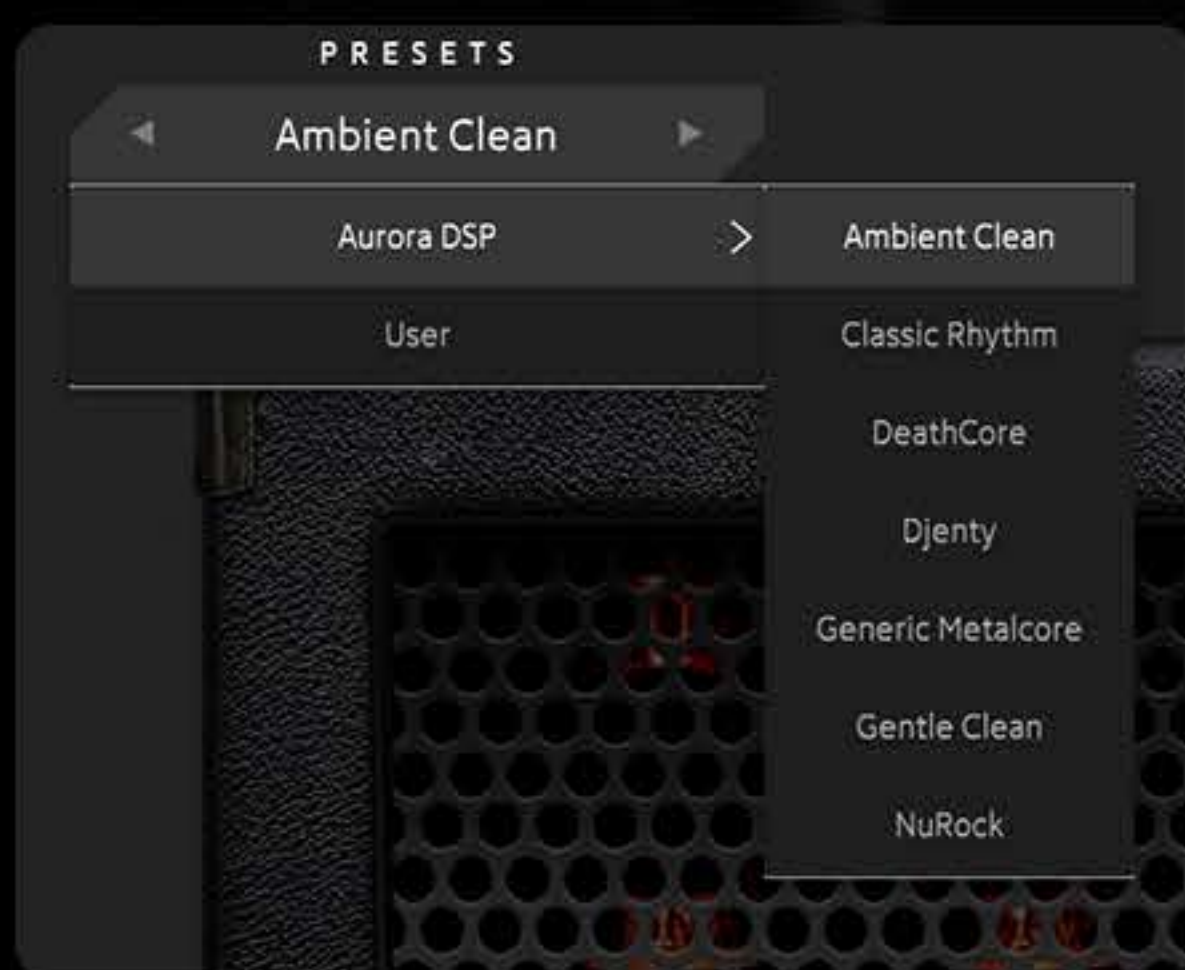
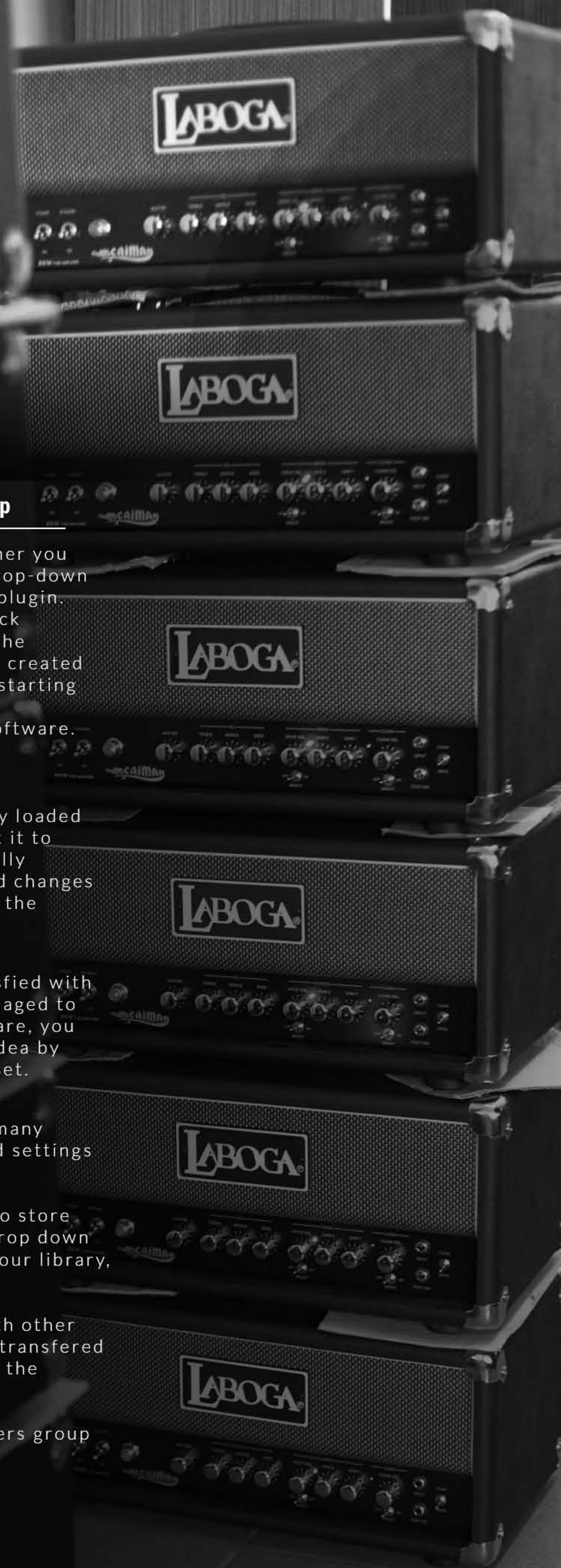
Input knob allows you to adjust the input signal of your guitar. Each instrument is characterised by their specific signal level mainly due to the use of different pickups. Keeping the knob centered at 0.0db do not affect your tone. The idea behind the input knob is to keep the signal unclipped and undistorted to reach the clarity of your tone.

Gate

Gate Module is a simple noise gate that goes from 0 to -80dB. Setting the knob at -80dB will keep the noise gate off. By increasing the threshold dB value you will hear the engagement of the noise gate and reduction of the any unwanted sounds generated by your instruments.

Tuner & Output

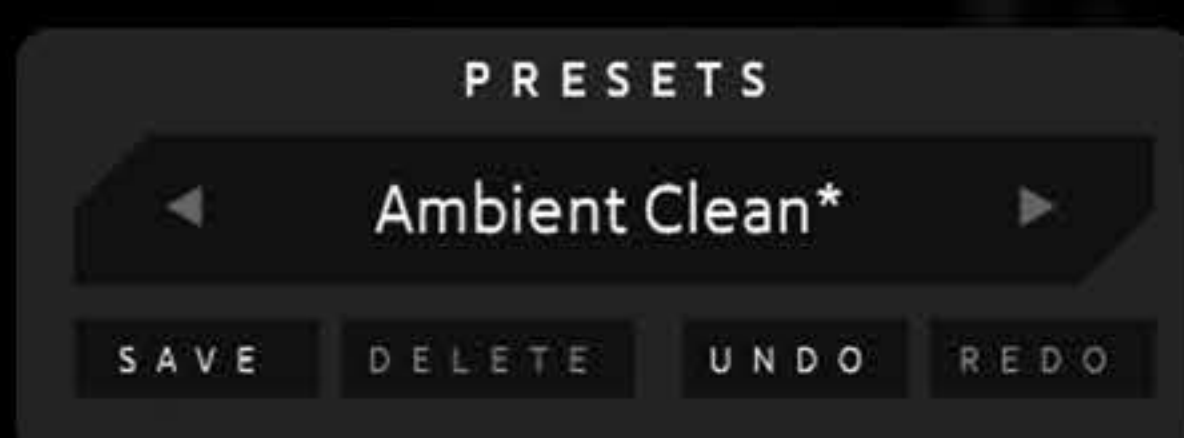
Tuner is the built-in module allowing you to quickly tune up your guitar. You can change the default frequency of 440Hz or tune silently by pressing the MUTE button. Output knob is where Mr.Hector helps you finalize what you send into the mix. With this knob, you can control the output volume of the entire plugin to match your song needs.



Audio device setup

At the upper left corner you may see the preset drop-down menu for Mr. Hector plugin. There are several stock presets prepared by the Aurora DSP team. We created them to give you the starting point by showing the possibilities of our software.

Choosing one of the presets will change all of the currently loaded settings of the amplifier, cabinet, microphones etc. and set it to predefined configuration stored under a preset. accidentally change something or you want to compare the implemented changes quickly (i.e. during DI playback in your DAW while shaping the sound of your guitar).



Whenever you are satisfied with the sound that you managed to tweak inside the software, you may easily store your idea by saving it as a User Preset.

There are no quantitative restrictions - you can create as many presets as you like. To save your current loadout and sound settings as your own preset, click on the "save" button.

Type in your preset name and click the green Save button to store your configuration. Your preset will be visible in the drop down menu under the User category. To delete the preset from your library, load it in and click the Delete button.

Note: Remember that you can easily share your presets with other users. Presets are stored as an .xml file format and can be transferred between the instances of the software. Files are located in the Documents -> AuroraDSP -> MrHector.

We highly encourage you to join our official AuroraDSP users group on facebook where all users are sharing their ideas.

Stomp module

In this section you will find three guitar pedals simulating the most commonly used stomp boxes configuration which are located before an amplifier. It gives an opportunity to pre-shape the guitar signal dynamics, boost it or distort the sound at very early stage.



Overdrive pedal

Overdrive pedal is the simulation of the well-known tube screamer type of boost. Level knob adjust the overall output level of the pedal, Tone knob adjust the high/low frequency contour. Drive knob adjust the amount of gain and overall saturation.



Tone Shaper

Tone Shaper is the single-knob Transient Shaper basing on the Aurora DSP original algorithm. It sharpens the strings attack and brightens the sound of your guitar. Increasing the **Tone Shaper** knob value will brighten up the muddy frequencies and bring out the most important overtones of your guitar sound.



Unified Pre-Amplifier

Unified Pre-Amplifier is an original Aurora DSP signal boosting pre-amp pedal. Such solution is a response to the growing demand for an early stage dynamic shaping devices forced and used on the latest metal music releases. It allows you to shape the sound of your guitar by adjusting the high and low frequencies before it reach the Mr. Hector amplifier. Volume knob adjust the overall output level of the pedal,

Clean gain

Clean gain knob adjust the amount of gain for the clean channel. Turning that knob up will boost your signal and saturate the sound to the point when it becomes crunchy.

Bright switch

Each of the channel got the separate **Bright switch**. Turn that on to boost high frequencies.

High/Low input switch

At the far right of the Laboga head you may see the Input switch.

Low Input mode is the setting recommended for the high output passive and active pickups (usually with the preamplifiers). If you are having trouble obtaining the clean, non-distorted sound on the clean channel of the amplifier, try to engage the low input mode to balance the input signal.

High input mode is the setting balancing the sound of the guitars with the low output passive pickups and without any additional preamplifiers built-in.



Power button

Power button acts as quick mute function. It allows you to turn on and off the Mr.Hector.

Diode/Tube button

Diode/Tube button is the swappable supply voltage simulation between vacuum tube rectifier based on two 5C3S tubes – “Tube” and solid state supply - “Diode”. Tube setting rectification gives a more compressed, vintage-like, low sound while Diode position rectification gives you more headroom, more dynamics and a faster response. You will definitely hear the difference.

Channel sel. switch

Channel Sel. switch is responsible for switching between two of the

Master knob

Master knob controls the overall output of the Mr.Hector power-amp.

Mid switch

Various EQ settings with the simultaneous activation of the Mid SW switch, results in a frequency shift of the Middle filter tone regulation. You can get a completely different results in sound and dynamics by adjusting the eq knobs with the Mid SW switch engaged.

Lead volume

Lead Volume knob adjust the proportions between the clean and distorted channel of the amplifier thus saturating the overdriven sound.

Lead gain

Lead gain knob adjust the amount of gain for the distorted channel of Mr.Hector.

EQ section

EQ section consist of three well-known potentiometers for tone adjusting: Treble, Middle and Bass frequencies.

Cab module

Cab module of the Mr.Hector plugin is your virtual playground composed of two original cabinets designed by Adam Laboga. In this section you will shape your sound by changing speakers, cabinets and microphone settings to achieve the desired sound. We know that adjusting those components give guitarists the strongest headaches so our goal was to make it as simple as possible. A slight microphone adjustment may drastically change the character of your final sound. Fortunately, all the tedious steps you would have to do to check the possibilities of the speakers, microphones and cabinets are already done for you. We spend tons of hours in studio controlled environment to capture every sound detail in a hi-res 192KhZ. Effect of our work is within the reach of your mouse cursor.

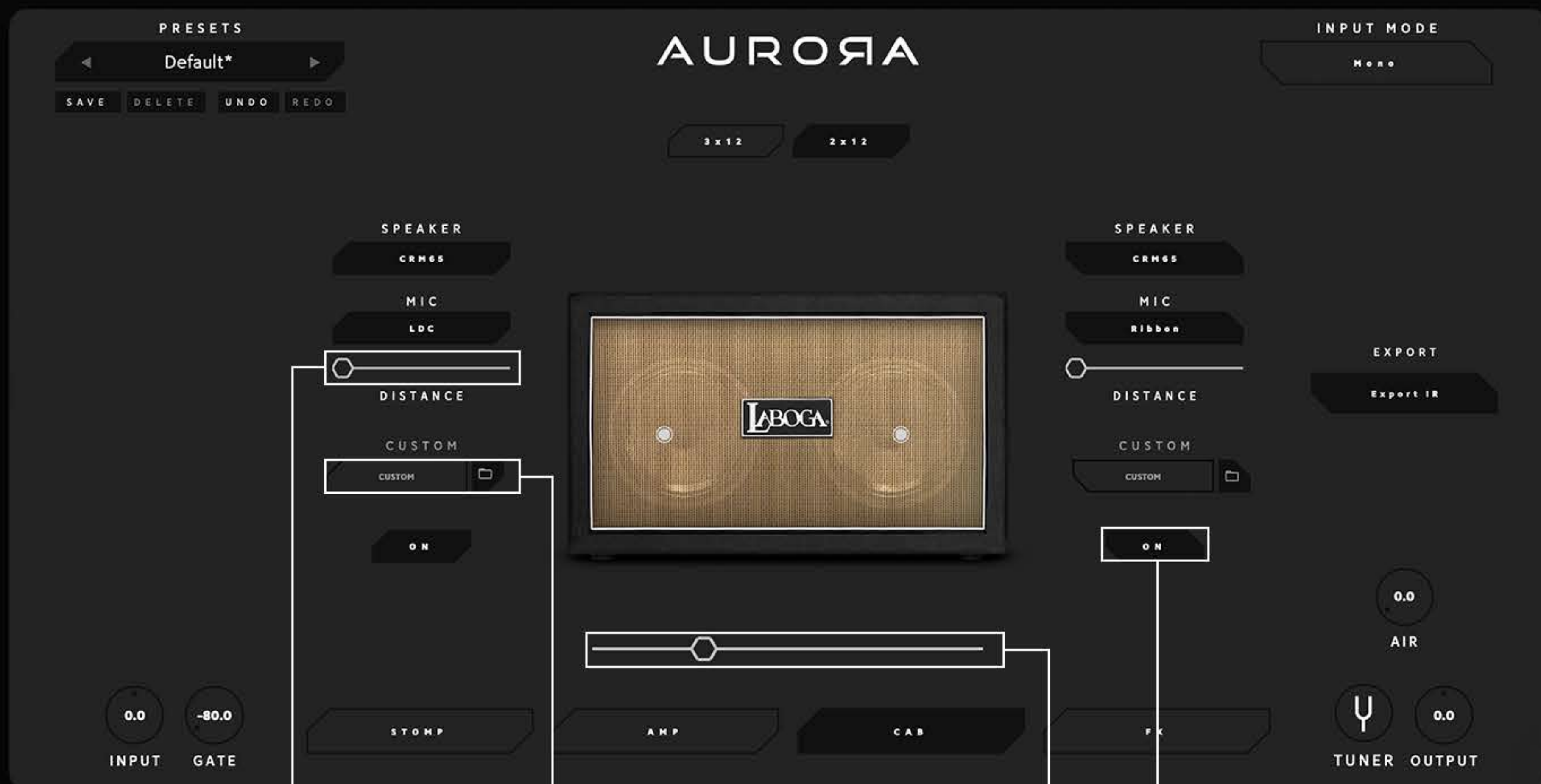
Cabinet Selection

Cabinet Selection - at the top of the module loadout you may see two cabinets to choose from. You can switch between two original Laboga cabinets by clicking on 3x12 and 2x12 button respectively. Size difference of these cabinets translates into the exposure of different frequencies and overall sound characteristic.

Speakers & Microphones

Aurora DSP Mr.Hector plugin gives you an opportunity to choose 2 independent microphones and speakers simultaneously, over the same cabinet. You can create your sound by blending two various **microphones** and **speakers** configurations or use a single **microphone/speaker** setup. On the left and right side of the cabinet you may see the same options relating to those settings. **SPEAKER** drop down menu allows you to choose one of the five available speakers in the plugin. They are based on the most famous studio quality constructions used in hi-gain guitar columns. 3x12 cabinet **speakers**: BIG12L ; RIP55 ; OLD30 ; VET30 2x12 cabinet **speakers**: CRM65 ; OLD30 ; VET30 MIC menu allows you to switch between one of the four highest quality studio standard **microphones**. You can choose between: DYNAMIC ; SDC ; RIBBON ; LDC.





Distance slider

DISTANCE slider adjust the position of the speaker against the cabinet. Moving the slider to the right increase the distance, while moving the slider to the left moves the microphone closer to the cabinet. If you hover your mouse cursor over the microphone indicating circle you can change the distance with scrolling your mouse wheel and change the microphone position against the speakers cone center.

Blending slider

Slider at the bottom center is made for a microphone **blending** purpose. At the center position, both of the engaged microphone/speaker configurations are **blend** together in the 1:1 ratio. Remember that blending does not mean that the volume share is at the same levels. Various speakers and microphones are characterized by a different output level. By moving the slider to the left and right you can adjust which of the configuration will dominate in your final sound. Remember that both IR's needs to be turned on. You can reset the slider by double-clicking - it will automatically move the slider to the center position.

IR Loader

Load **IR** button gives you the endless sound shaping possibilities by allowing you to choose any of your favourite impulse responses. Click the button and choose location of your **IR** file to load it up in the Mr.Hector plugin.

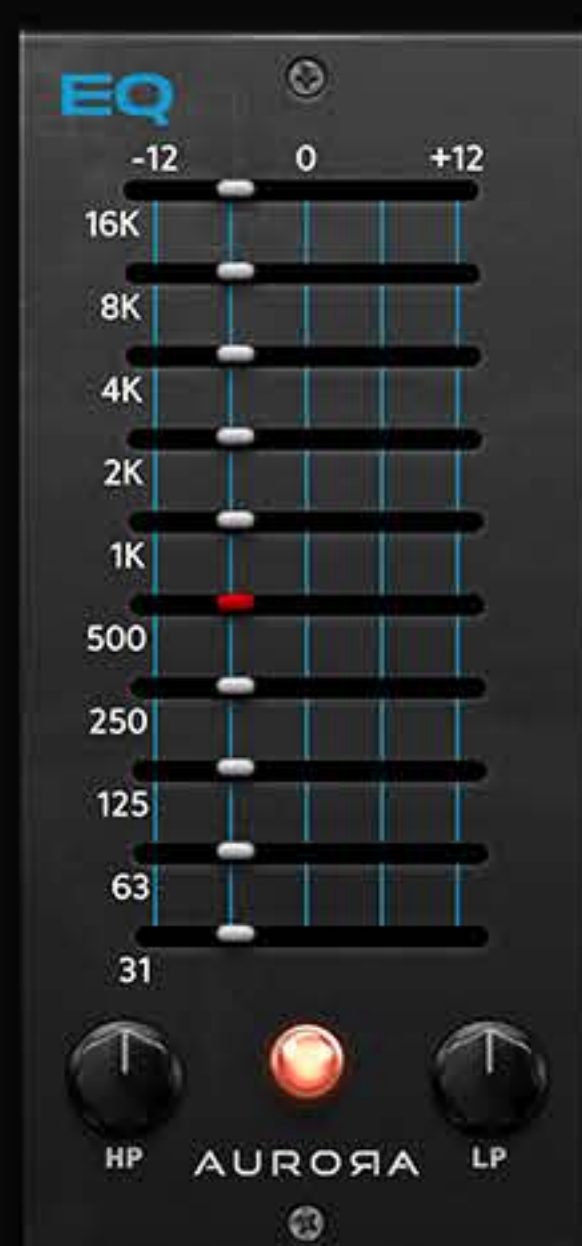
Note: please be advised that loading your own **IR** file will block the other functions of microphone and speakers in the CAB section of the software.

ON button

ON button engage and disengage use of the given microphone/speaker combination.

FX module

FX module section consists of four additional effects basing on the original Aurora DSP algorithms that gives your sound a final color. Each of the effect might be turned on and off by clicking on the red LED light over the given component.



10-band equalizer

10-band equalizer adjust the share of the given frequencies in the range of -12 / +12 dB. To cut or boost the given frequency, move the corresponding slider to the left or right. Double-clicking the slider will reset its value to 0dB. **HP** and **LP** stands for High Pass and Low Pass filter and may be adjusted by turning the potentiometer knob respectively.



Limiter

Limiter is simplest compression tool to determine the maximum signal level. **Input knob** determines the amount of signal going through the limiter. **Ceiling knob** sets the highest dB point of the limiter to be triggered. This is the maximum value above which the limiter will starts to compress your sound. **Low end control knob** adjust the limiter action within the 100-250Hz range.



Ping pong delay

Ping Pong delay is exactly what you think it is - stereo feedback delay moving the repetitive sounds between left and right channel. **Mix knob** increases the volume of the repeated sounds.

Feedback knob adjust the delay amount returned to the input. This is the amount of sounds repeated by the delay fx before fading out totally.

Time knob sets the tempo of the delay - it determines how much time you have to wait to hear the first repetition.

BPM SYNC switch. Turning it on will automatically adjust the time settings according to the values given in your DAW project. When **BPM SYNC** is turned on, Time knob act as a threshold time selector - you can choose the time in notes value.

HP and **LP** stands for high pass and low pass filters to correct the mudiness or harshness of the repeated sounds.



Reverb

Reverb is probably the most world famous audio effect in existence. It seems to us that there is no need to explain what it does.

SIZE knob adjust and simulates the magnitude of the space. Moving the knob will give you the feeling of playing in a tiny room or a great ambient chamber. You are limited only by your imagination.

PRE-DELAY knob determines the amount of time needed for reverb to kick in.

MIX knob increases the volume of the reverberated sounds. Maximizing the value will completely cover the natural sound of your guitar in favour of reverberation. A method adored in an ambient oriented music.

WIDTH adjust the stereo split amount of reverberated sound. If the SIZE knob was the length of your chamber, imagine it as an additional enlargement of the room width dimensions.

HP and **LP** stands for high pass and low pass filters to correct the mudiness or harshness of the reverberated sounds.