

AmpLion 2

Rock Essentials

User Manual

Version 2.1



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Table of contents

Introduction	1
How It Works	1
The technology behind AmpLion 2	1
Software installation	2
Software activation	2
Software uninstallation	2
Opening the plug-in	2
AmpLion 2 overview	3
Signal flow diagram	3
Using AmpLion 2	5
Utility panel	5
Working with presets	6
<i>Saving a preset</i>	6
<i>Loading a preset</i>	6
<i>Deleting a preset</i>	6
<i>Presets backup</i>	6
Page Selector	7
<i>Effect pedals pre</i>	7
<i>Amp page</i>	7
<i>Cabinets page</i>	7
<i>Effect pedals post</i>	7
Common controls panel	8
Effect Pedals-Pre page	10
<i>New in 2.1</i>	11
Amp page	12
<i>Amplifiers available</i>	12
Cabinets page	15
Impulse Loader - new in 2.1	17
Effect Pedals-Post page	18
Technical info	19
Specification	19
Requirements	19
Conclusion	19

Introduction

Thank you for purchasing AUDIFIED AmpLion 2. AmpLion 2 Rock Essentials is a carefully selected collection of guitar amplifiers, effects and speaker cabinet models allowing you to tweak all kinds of rock sounds starting with early rock days back in the late '60s and not ending with rock sounds used nowadays.

How It Works

The technology behind AmpLion 2

The core of the AmpLion 2 simulation is a fully redesigned real-time solver of nonlinear circuit equations. Using this technique, the equations that entirely describe the simulated circuits are solved in real-time. This means that we can get the simulated nonlinear circuit to behave realistically under dynamic conditions. This technique is applied to all the amplifier and distortion circuits present in AmpLion 2.

In addition, we have used an interconnection compensation between several parts of the signal flow, providing you with maximally trustworthy simulation results when connecting effect pedals to preamps, preamps to power amps and power amps to speaker cabinets. Extra attention has been paid to amplifier power circuits models - the power amplifier section uses the loudspeaker impedance model as a load to replicate the interaction between the power amp tubes, the output transformer, the loudspeaker, and the power amp feedback.

The modulation and analog delay effects use the BBD model with the exact number of buckets running at virtual clock rate instead of simple delay, adding a small amount of aliasing to the output sound - this can be heard as a typical ringing sound.

Last but not least, the models of the speaker cabinets and microphones are based on highly precise measurements of real devices and emulated using a parallel bank of filters to get the fastest response with zero latency and minimal group delay. Newly, you may add your impulse responses of your favorite cabinets.

Software installation

Download the recent version of the plug-in:



<http://services.audified.com/download>

- › **Windows:** The downloaded file is packed, unzip it. Run the installer and follow the on-screen instructions. You can select the destination path and the installed plug-in format during the process.
- › **Mac:** Mount the downloaded disk image and run the installer. You can select the installed plug-in format by clicking the Customize button. Plug-ins are installed in the standard locations and the control app appears in the Applications folder.

Software activation

This plug-in is protected by iLok (a software machine license or a USB dongle).

- › It requires iLok License Manager.
- › Please make sure you have activated a valid license in your iLok account.
- › Please refer to this guide: <https://shop.audified.com/pages/how-to-activate-ilok-license>

Software uninstallation

- › **Windows:** Navigate to the AmpLion 2 Rock Essentials program folder in the Start menu and run the uninstaller.
- › **Mac:** Open the provided disk image and run the uninstaller.

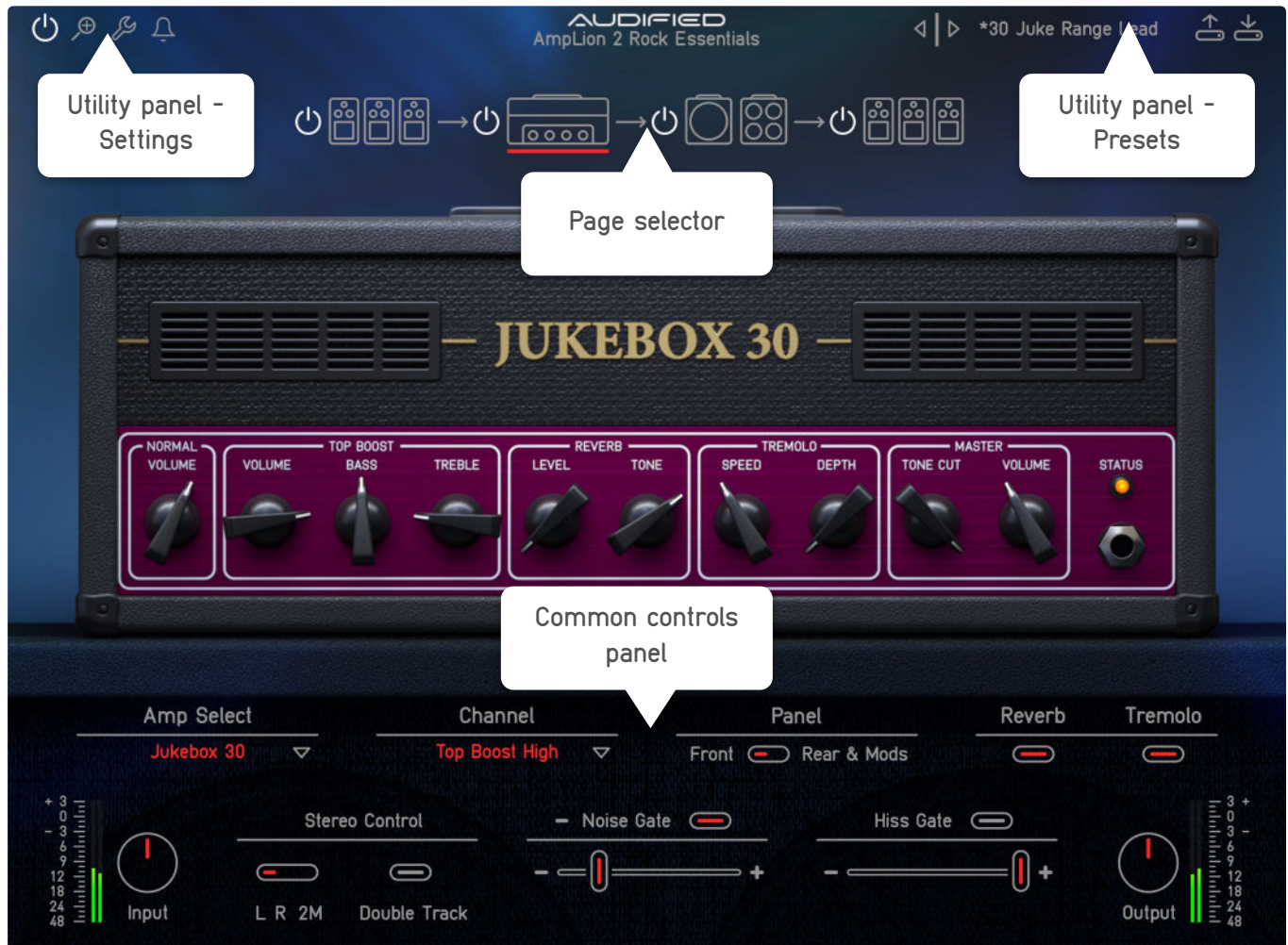
Opening the plug-in

AUDIFIED AmpLion 2 Rock Essentials works in all major digital audio workstations (recording applications) as a plug-in.

To open the plug-in, locate the plug-in selection (usually a hierarchic menu). AmpLion 2 Rock Essentials is listed in the Distortion group or in the AUDIFIED group when the manufacturer sorting is offered.

AmpLion 2 overview

The user interface (UI) consists of four main pages assigned to the buttons in Page selector and all these pages share Common controls panel at the bottom.



Signal flow diagram

For a better understanding of AmpLion 2, take a look at the following diagram. It shows the path of the signal across AmpLion 2 in different configurations of selected inputs and double track option.

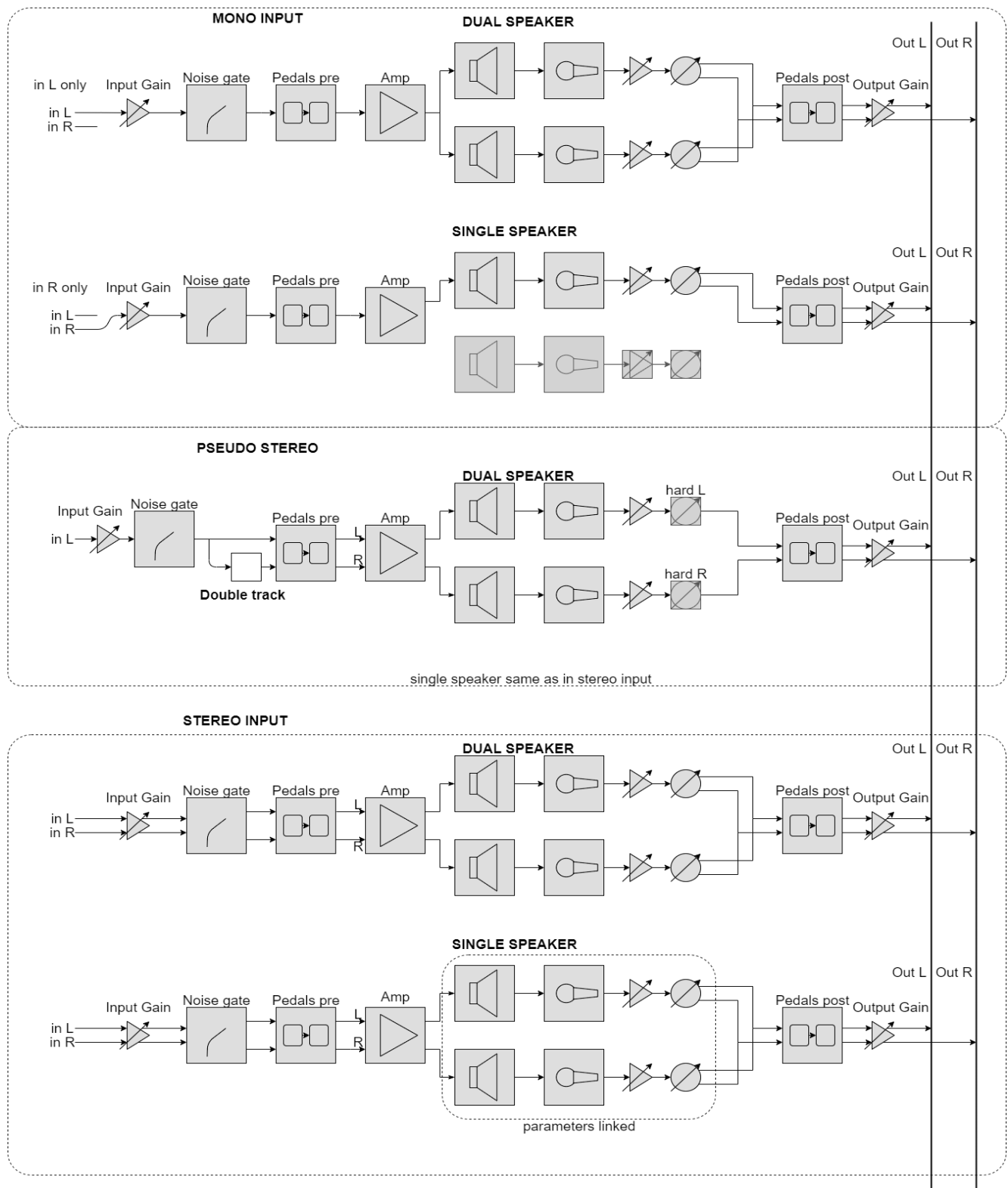
The signal starts with the channel selection and input gain adjustment and continues to the **noise-hiss gate** algorithm. From the noise-hiss gate, the signal can be routed to the **double-track** algorithm which can split the original signal into two independent signals and therefore make the stereo signal. The next block in the signal chain is the **effect pedals pre** section which can host up to four selected guitar pedals - all in mono or stereo configuration depending on the input and double-track settings. The oversampling is applied to the distortion effects to reduce the unwanted aliasing effect.

The output signal is then fed into the **amplifier** model, again in mono or stereo configuration. The oversampling is applied to the amplifier emulation to reduce the unwanted aliasing effect. If the amplifier contains a reverb or a tremolo, these effects are routed internally inside of the model.

The next stage is the speaker **cabinet** emulation. This stage is designed to process mono->stereo or stereo->stereo configuration. For the former one, it takes the mono signal from the amplifier and feeds two speaker cabinets/microphones that can be placed anywhere in stereo space using a Pan knob. As for the stereo signal from the amplifier, the left and right stereo signals are fed each to its own speaker cabinet and microphone but again, they can be placed anywhere in stereo space using a Pan knob.

The stereo signal from the speaker cabinet stage is routed to the **effect pedals post** section that can host up to four selected guitar pedals and works always in the stereo configuration.

Finally, the out signal is adjusted by the output gain.



Using AmpLion 2

Utility panel



The utility panel is located in the heading and provides access to the master bypass, preset control and settings menu.

Additionally to the preset management, the utility panel enables the following features.



The **Power button** enables you to turn the whole processing on and off using the global power/bypass button located in the left corner.



The **Zoom button** sets the desired size of the plug-in in several steps.



The **Services button** opens the Services menu that allows you to change/edit/set

- › Oversampling - choose the level of the oversampling applied to the processing
- › Help - see this User manual
- › Product updates
- › Audified web site
- › Support area on the Audified web
- › Feedback form on the Audified web
- › Product version and other info
- › Set user impulse response folder



The **Notification bell** shows Audified news and special offers such as updates or new presets.

Working with presets

When you have set your sound according to your needs, you can save AmpLion 2's state to a preset (not to be confused with a program). All information will be stored, i.e. amps, speakers, microphones and the effects.

Saving a preset



Open the menu using the Store button and select either "Save" for saving the current preset or "Save As" for saving the settings to a new preset.



In the second case, "New Preset" will appear on the display. To enter the requested preset name, click this label. When finished, click the button.

Save

Save As...

Delete >

Save

Save As...

Delete >

Loading a preset



Click the Load button and select the requested preset. The AmpLion 2 parameters will be loaded accordingly.

AmpLion 2 RE Default

Factory - Essential >

Factory - Advanced >

Factory - Extreme >

Artist - Henning Pauly >

Old Lead 2



Note: The presets are grouped in several categories.

Deleting a preset



Click the Store button and select the preset to delete in the "Delete" list.

Save

Save As...

Delete >

Presets backup

To backup your user presets, save the preset files to a safe place.

Windows:

- Depending on your user settings made during the installation you will find the preset files in your private or shared documents folder.

[Documents]\Audified\Plugin Presets\AmpLion 2 Rock Essentials\

Mac:

[home]/Music/Audified/Presets/AmpLion 2 Rock Essentials /

Page Selector



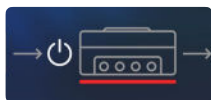
The page selector is used to select the page that is visible for editing. Just click on the symbol to select the page you would like to edit. The current page is indicated with the red line below the page symbol. The arrow between the symbols shows the signal flow. Use the power symbol to turn on or bypass complete processing on the given page.

Effect pedals pre



The effect pedals pre is the first of four pages accessible by the top buttons. It contains 4 slots for stomp-box guitar effects. It can be bypassed completely by the power button in the page selector.

Amp page



The amp page offers full amplifier control. Amp can be bypassed by the power button in the page selector.

Cabinets page



The cabinets page brings speaker cabinet and microphone modeling. Two speakers with independent microphones can be used at the time. It can be bypassed completely by the power button in the page selector.

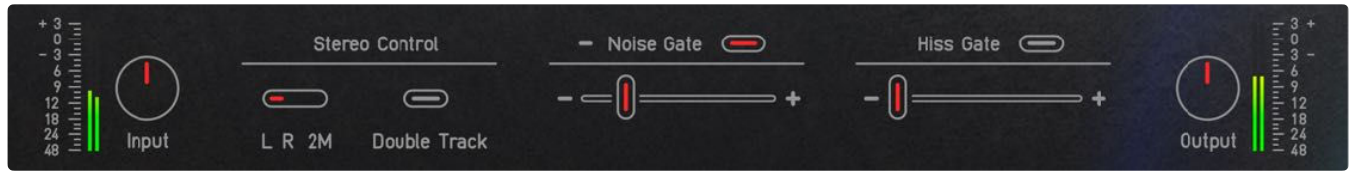
Effect pedals post



The effect pedals post is the second effect pedal board in the guitar signal chain. It contains 4 slots for stomp-box guitar effects. It can be bypassed completely by the power button in the page selector.

Common controls panel

This part of AmpLion 2's UI contains controls whose functionality relates to the whole plug-in, in other words, that are not related to any of the four panels.



The common controls panel occupies the bottom part of the screen. Using its controls you can select the correct input channel, set the input/output levels, control the noise gate and the double-tracking option.

Input gain shall be used to compensate the soundcard gain. This parameter must be properly set in order to achieve the expected amount of distortion from the overdrive/distortion pedals and amplifiers. This parameter offers a wide range of settings going from $-\infty$ dB (the input is muted) to +12 dB. Use this knob to adjust the signal level in such a way that the input meters on the left will remain green most of the time and sometimes hit orange color for the passive pickups and remain orange most of the time and sometimes hit red color for the active pickups.

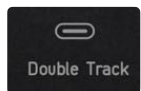


L R 2M is the input selector. As AmpLion 2 is designed as a stereo plugin, there are several ways to set the input-output relation. When loaded in a mono track, use the default L setting. The entire processing will be mono. When loaded in a stereo track, use L or R according to the signal in the track. If there is a signal in the left channel and no signal in the right channel, select the L input and R in the opposite case. If the signal in both channels is identical, either L or R can be used. In case left and right channels of the stereo track have different signals - double-tracked guitars for instance, toggle the selector to the 2M (dual mono) position. AmpLion will be reconfigured internally for dual mono processing with the independent instances of amplifiers sharing the same settings.



Note, this setting increases the CPU requirements to double.

Double Track button enables the double-tracking algorithm. This double-tracking is a proprietary algorithm that simulates the same player playing the same track two times. As no player is able to play the same part exactly the same, we introduced several random variations in the second track in delay, attack, pitch, and signal level. The algorithm gives the best results when used in a stereo configuration, therefore the Pan settings of the speaker cabinets are disabled and panned hard left and right. However, we tuned the algorithm to be a mono mix compatible with acceptable phasing issues.



Note, this setting increases the CPU requirements to double.

Noise & Hiss gate module is an envelope tracked noise gate with variable release time - in other words, it has a very short release time when playing palm muting style and a longer release time for solo parts. Together with the



gate, there is a low pass filter with a variable cutoff frequency set again automatically from the signal content. The noise gate module can be controlled via these four parameters:

- › **Noise gate button** - activates the signal gate,
- › **Hiss gate button** - activates the low pass filter,
- › **Noise gate slider** - sets the noise gate threshold, it is shared both for noise and hiss gate,
- › **Hiss gate slider** - sets the sensitivity of the variable low pass filter.

The Close LED left of the Noise Gate label shows whether the gate is closed or not. Set the noise gate slider according to this LED to find the gate threshold sweet spot.

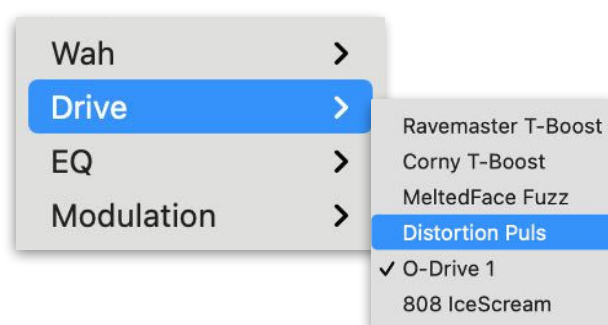
Output gain shall be used to compensate the signal coming out of AmpLion 2. Try to set the gain in such a way that the output meters located on the right never go to the red area, otherwise, you risk your signal can be limited somewhere in the output signal chain and you would lose the natural distortion and dynamics provided by the AmpLion 2 processing.

Effect Pedals-Pre page



Up to four effect pedals can be inserted into the signal path before the amp:

To insert an effect to the desired slot, click the down arrow button and select the effect from the list:



You can select any of these effect pedals in each FX slot:

Jukebox Wah 84 - based on the Vox Wah 847. Classic wah pedal with a less aggressive sound. On top of the classic functionality, the LFO circuit has been added for auto-wah mode.

Ravemaster T-Boost - based on the Dallas Rangemaster, a classic treble booster effect with germanium transistor OC44. This effect works the best with the Martial 59 normal channel or the Jukebox 30 normal channels as it was originally designed to remove the muddiness of these amps. When used with a modern amp channel, the sound might be too harsh and without body.

Corny T-Boost - based on the Pete Cornish booster pedal designed for Brian May, it has an upper mid-range boost +33dB @ 3KHz to emphasize the trebles but filter some of the RF noise. Again this effect works the best with the Martial 59 normal channel or the Jukebox 30 normal channels

MeltedFace Fuzz - based on the FuzzFace pedal with silicon transistor BC108 similar to Jimi Hendrix FuzzFace biased to 4.5V on the second transistor collector.

Distortion Puls - based on the MXR Distortion+ pedal. It uses the 1N34A germanium diodes clipping at 300mV providing smooth vintage distortion and the LM741 operational amplifier limiting the frequency response at higher distortion settings creating a mid-range boost and operational amplifier clipping.

O-Drive 1 - based on the Boss OD1 overdrive running the JRC4558D operational amplifier and silicon diodes 1S2473 in an asymmetric configuration providing more even harmonics. It has a fixed low-pass

tone stage filter.

808 IceScream - based on the Ibanez TS808 overdrive pedal. The limited open gain amplification of the JRC4558D operational amplifier creates the typical nasal sound at higher overdrive settings limited with a pair of silicon diodes.

GraphEQ - six-band graphic eq.

ParaEQ - three-band parametric eq. The lower and upper bands can be set as either shelving or low pass resp. high pass filter. The mid-band is a peak filter with 0.5, 1 or 2 octaves bandwidth.

Mrs. Flanger - based on the EHX Electric Mistress Deluxe flanger running the SAD1024 BBD analog delay line emulation.

Stoner Phaser - based on the Nano SmallStone phaser pedal. It uses the OTA chip to create the phasing effect, like the original when turned to higher rates with color min, it creates a kind of ring modulation sound. Compared to the original, this circuit offers a full range of color settings and not just on and off settings.

Cloned Chorus - based on the EHX SmallClone chorus pedal. Likewise the original, the BBD delay line emulation is not surrounded by a compander circuit, this effect is typical with the higher amount of noise supporting the analog feel type of sound.

Memorized Delay - based on the EHX Memory Man. BBD noise, aliasing distortion for higher delay settings and typical auto oscillation for higher feedback settings - all is there.

New in 2.1

Black Label Ensemble 2 - based on black label Boss CE-2 chorus made in Japan. Additionally to the original parameters it has the Effect level parameter that allows you to control the wet signal level and stereo mode switch when used in stereo configuration.

D-Comp - based on MXR Dyna Comp compression pedal. It offers up to 36dB gain with the Sensitivity parameter set to max and release time 1.5 second. The model uses 2N3904 transistors.

Amp page

The amp page consists of the amplifier model with all knobs and switches that belong to the amplifier front panel and additional controls bellow the model:

Amp Select - selects the amplifier model,

Channel - selects the channel of the selected amplifier model

Panel - toggles between the front panel and an additional panel with other parameters located typically on the rear panel or custom modes for the amplifier circuit

Two additional buttons - typically footswitch control of tremolo and reverb circuits or the most used custom modes. These buttons can be unique for each amplifier model.

Amplifiers available

Bartender DeLux 65 - based on the Fender Deluxe Reverb 65 combo. This model includes all the combo features. It has four channels available in total:

- › **Normal Low** - cable connected to low sensitivity jack of the normal channel
- › **Normal High** - cable connected to high sensitivity jack of the normal channel
- › **Vibrato Low** - cable connected to low sensitivity jack of the vibrato channel
- › **Vibrato High** - cable connected to high sensitivity jack of the vibrato channel



Additionally to the standard combo knobs, there are two “footswitch” control buttons located below the amplifier model to turn on and off the tremolo and spring reverb. These effects however work only on vibrato channel, exactly as on the original. The additional modes are available when the front panel is switched to Rear & Mods panel:

Pushed - this activates the mod of the vibrato channel making this channel more distorted by

decreasing the passive attenuation between the preamp and reverb mixer, in reality, the simple resistor attenuator is replaced with a passive high shelving filter making the channel more pushed and bright.

Martial 59 - based on the Marshall 1959 head. This model includes all the head features. It has five channels available in total:

- › **Bright Low** - cable connected to low sensitivity jack of the bright channel
- › **Bright High** - cable connected to high sensitivity jack of the bright channel
- › **Normal Low** - cable connected to low sensitivity jack of the normal channel
- › **Normal High** - cable connected to high sensitivity jack of the normal channel
- › **Parallel** - normal high and bright high jumpered together



Additionally to standard knobs, there are extra control buttons located below the amplifier model to turn on and off

Master - to enable the master volume mod by adding an extra volume potentiometer

Pushed - to enable the mod inspired by the famous Jose Arredondo

and further, there are additional modes available when the front panel is switched to the Rear & Mods panel:

Voicing - to select the model Plexi model either Handwired HW edition or Standard SLP

Brown - to activate the brown sound feature - power supply voltage reduced with a variac the same way Eddie did it.

Impedance - to select a load of the power amplifier, this mode works only for the HW model where the 16Ohm load provides more power amp feedback damping resulting in more tight sound.

Jukebox 30 - based on the Vox AC30C2 combo. This model includes all the combo features. It has five channels available in total:

- › **Normal Low** - cable connected to low sensitivity jack of the normal channel
- › **Normal High** - cable connected to high sensitivity jack of the normal channel
- › **Top Boost Low** - cable connected to low sensitivity jack of the top boost channel
- › **Top Boost High** - cable connected to high sensitivity jack of the top boost channel
- › **Input Link** - normal high and top boost high jumpered together



Additionally, to the standard combo knobs, there are two “footswitch” control buttons located below the amplifier model to turn on and off the tremolo and spring reverb and further, there are additional modes available when the front panel is switched to the Rear & Mods panel:

Norm. Bright - bright switch to enable the bright capacitor across the normal channel volume potentiometer making the normal channel more bright at lower volume settings.

EQ Type - to select the top boost tone stack EQ type, it could be either standard routing or routing used on custom combos series.

Voicing - to select the modern voicing of the AC30C2 where the normal and top boost channels are mixed/passing the operational amplifiers with an extra gain or vintage voicing typical for original circuits without any operational amplifiers - this mode has less distortion.

Cabinets page

The cabinets page consists of two speaker cabinets A and B, each paired with its microphone. The position of the mic can be controlled both from the knobs and the left or right edge of the window or via the microphone itself.



Note, only the position on the horizontal axes from the center of the speaker to the edge of the speaker and the distance from the speaker can be controlled in this version. Additionally, the microphones can be rotated using a knob or mouse wheel.

Finally, the level and panorama in the stereo image can be adjusted for each microphone.



Note, when the double track mode is activated, the pan control is disabled.

The signal flow from the amplifier to the speaker might change, depending on the mono/stereo routing combination. In the case of the mono input configuration and double track disabled, the signal from the amplifiers is split and processed by two speakers. In the opposite case, each amplifier instance has its own speaker cabinet - the left channel amplifier feeds the CAB A and the right instance amplifier feeds the CAB B.

The **CAB select** menu enables you to select:

- › **Bypass/DI** - cabinet processing bypassed, signal passing through
- › **None** - the signal (mono or stereo) passing via the second cabinet only
- › **Bartender 112 J** - based on Fender Deluxe Reverb 65
- › **Jukebox 212 GB** - based on Vox AC30C2 combo
- › **Martial 412 GB** - based on Marshall Greenback
- › **Martial 412 G12A** - based on Marshall 1960 G12M

The **MIC select** menu enables you to select:

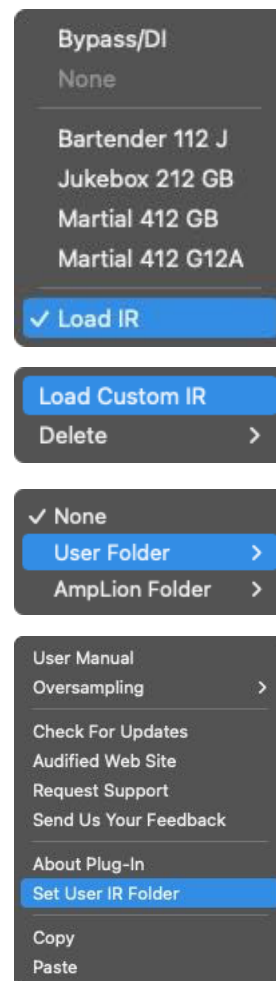
- › **Flat** - based on measuring microphone with a flat response
- › **57 Legend** - based on Shure SM57
- › **906 S-Cube** - based on Sennheiser e906
- › **421 Sensei** - based on Sennheiser MD 421
- › **7B Podcaster** - based Shure SM7B
- › **121 Rodger** - based on Royer R-121
- › **414 OMG** - based on AKG C414 comb
- › **87 Oldman** - based on Neumann U87
- › **451 Pencil** - based on AKG C451B
- › **5i Audition** - based on Audix i5

Impulse Loader - *new in 2.1*

AmpLion 2 offers built-in Impulse Response Loader in the cabinet section. To open it, just choose Load IR from the Cab Select menu.

You can import any .wav or .aiff file by clicking Load Custom IR in the load menu. The selected impulse response will be stored in a special AmpLion folder and will then always be accessible, until you decide to get rid of it.

Second option is to load your favourite impulse response from the folder, where you like to keep your impulse responses collection. You can do that by clicking the Set User IR Folder option from the Services menu. The contents of the selected folder will be loaded into the User Folder menu



Effect Pedals-Post page

Up to four effect pedals in stereo configuration can be inserted into the signal path after the speaker



cabinet stage. It has exactly the same control as the Effect Pedals Pre page but different effects are available:

GraphEQ - six-band graphic eq

ParaEQ - three-band parametric eq. The lower and upper bands can be set as either shelving or low pass resp. high pass filter. The mid-band is a peak filter with 0.5, 1 or 2 octaves bandwidth.

Mrs. Flanger - based on the EHX Electric Mistress Deluxe flanger running the SAD1024 BBD analog delay line emulation.

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Memorized Delay - based on the EHX Memory Man. BBD noise, aliasing distortion for higher delay settings and typical auto oscillation for higher feedback settings - all is there.

DigiDelay - digital stereo delay with four modes available: Mono, Stereo, LR and Double. It has a Sync feature as well to attach the BPM from the host and set the delay time automatically.

DigiVerb - digital stereo reverb with three modes Small Room, Large Room and Hall.

New in 2.1:

Black Label Ensemble 2 - based on black label Boss CE-2 chorus made in Japan. Additionally to the original parameters it has the Effect level parameter that allows you to control the wet signal level and stereo mode switch when used in stereo configuration.

Technical info

Specification

- › AAX, AU, VST3, VST2
- › macOS, Windows plug-ins

Requirements

- › macOS 10.11 and newer (64bit format delivered)
- › Windows 7 and newer (32 bit and 64bit format delivered)
- › 350 MB of disk space required

Conclusion

We are confident that you can now work with AmpLion 2 Rock Essentials. However, if anything seems unclear or you need assistance, feel free to contact us at



<http://services.audified.com/support>

Thank you for using AUDIFIED products.