



AMP CENTRAL EVO



V1.0
September 2024



!!! ATTENTION !!!

Improper usage of the AMP CENTRAL
can result in permanent damage to your amplifier.
Read this document carefully before turning on the device.



How **NOT** to use AMP CENTRAL

Amp Central is a load device who takes the output of your tube based amplifier and transforms this energy by dissipating it into heat.

Since NO volume is perceived, you might be tempted to turn your amplifier's master volume to a very high, almost ear-killer and dangerous level, which is not recommended for various reasons.

Pursuing such a behavior, power tubes life will be incredibly reduced, and we all know they aren't 'cheap' nowadays.

Also, you're sending too much signal into Amp Central for no benefit.

Last but not least, most of modern amplifiers are fine-tuned to NOT push power amp stage very hard. 99.9% of the time, gain comes from preamp section, there's no practical, sound-wise or theoretical reason to fully open master volume on your 100W amplifier. It's simply a wrong habit.

While Amp Central is safely rated up to 100W, we do recommend to use your amplifier at the same volume as you would use with a regular cabinet, or just little higher, perhaps.

Keeping care of your gear will result in a better sonic performance and a way longer life.

FIRST USAGE

We think it's better to start slow and to understand the workings of the Amp Central before diving in and trying the unit.

What you need to know to proceed in the safest way, is to consider the Amp Central as a normal guitar cabinet.

**AMP CENTRAL HAS AN INTERNAL LOAD
RATED UP TO 100W @ 8 OHM.**

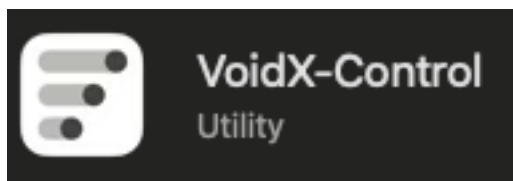
**USE 8 OHM OUTPUT OF YOUR
AMPLIFIER TO CONNECT IT TO AMP
CENTRAL.**

Start with INPUT knob at zero and with PAD switch in OFF position.

Hit standby switch of your amplifier ONLY AFTER PLUGGING A CABLE FROM THE OUTPUT OF YOUR AMPLIFIER TO Amp Central "FROM AMP OUT".

Do not attempt to connect your amplifier to Amp Central in other "fancy" ways, your amp's life is important! We are not responsible for any improper usage that could potentially lead to damage.

HOW TO CONNECT AMP CENTRAL EVO? USING VOIDX APP



Your Mac/PC will not recognize A.C. Evo as an external hard drive, like A.C MK1. This time, to fully explore A.C. Evo possibilities you need to download “VoidX-Control” and it’s available for both mobile (iOS and Android) and desktop (Win and MAC OS) from respective app stores. It’s totally free.

Amp Cental Evo can operate via Bluetooth, USB cable is not mandatory. More of this in dedicate section.

TECHINCAL PARAMETERS

Dimensions: 23x19x10,5cm / 9x7,4x4inches (feet and knobs included)

Weight: 3kg / 6,6lb

Power supply: 24VDC – negative center. Worldwide power supply included.

INTRODUCTION

What is AMP CENTRAL EVO?

Amp Central is our answer for modern guitarist who still love to use any tube based guitar amplifier in live or studio environment where silent stage is required.

Amp Central, as the name suggested is a hub to connect your amplifier to the outside world, without the need of a real cabinet or any volume at all.

THE CONCEPT

Since few years, digital systems became very popular in guitar amplifier market, replacing real amps in most of “inconvenient” gigs where silent stage is mandatory, or for example, during late night practice sessions.

At the same time, guitar players still love to use any given amplifier when possible. Why not to think about an object that can give you the possibility to use a real amplifier, with the exact feeling, but with no volume at all?

What we mean, is, simulations/profiles could work in some situations, in term of pure sound, but how about the feeling under your fingers?

Are they the same sensation as you were playing your amp thru a real cabinet? Of course, no.

What could we do to improve the experience of a “fake” or profiled amplifier, played with headphones, which in most cases yields bad results?

Well, we came up with a solution and we brought a couple of different technologies into the game, one very old and one not so old, respectively called **Dummy Load** (in our case a Reactive Load) and the **Impulse Response** technology.

It’s a known fact your tube based amplifier needs to dissipate its energy thru a cabinet or at least a proper load, the potential penalty could be the reduction of output transformer’s life, or worst, its total fault.

With this in mind, we built the very first stage of Amp Central, by creating a proper dummy load to mimic the best approximation of a real guitar speaker. We've gone it fully analog with best available components, something audiophile experts will appreciate. Audiophile capacitors, custom made inductors, superior ceramic resistor, just to name a few. No digital processing or equalization is applied up there, we do believe your amplifier needs a proper analog load to sound and feel at its best.

Where do we go from there? Amp is now safe and running, while no sound will come out of it. At this point we decided to embrace digital world, with *Impulse Responses** technology.

With Amp Central we wanted to offer the best of both worlds, by offering the possibility of playing your favorite amplifiers and not a simulation/profile, with some Impulse Response of your favorite cabinets. This will be YOUR and not someone else's sound. Your own amp(s) and possibly your own cab’s I.R.

*An Impulse Response is in layman's terms an equalization, or a “snapshot” of your favorite mic’ed cabinet, to be applied to the raw sound coming out of your loaded amplifier. Return act as the complete sound (amp + cabinet + mic) as you should hear from your studio monitors, or headphones.

7



WHAT'S NEW IN AMP CENTRAL EVO?

1. Fully redesign and improved IR section. New generation AD/DA, more powerful processing (up to two separates I.R. for real stereo operation) and power amp simulation at same time.
2. New desktop and mobile application. Download it and easily modify/store presets.
3. Attenuator: Amp Central EVO is now able to attenuate roughly by half outgoing signal to your cabinet. This was a very request features we decided to include. Carefully read whole manual to understand it better.
4. Digital – full embedded – noise gate circuit. Can be programmed for global or preset use.
5. On screen operation. With “EDIT” encoder now you can navigate thru an easy to understand but packed menu for multiple options.
6. PAD switch: to help you prevent Amp Central with no master volume amp. This will add another attenuation stage.
7. Front panel USB C connection.
8. LINE IN and power amp simulations: Amp Central EVO can now be used as “silent” power amplifier with eight of our power amplifier simulations, including some rare ones.



FRONT PANEL

(left to right)

- SCREEN: Every information will be pictured here.
- EDIT encoder: This is your navigation encoder thru A.C. menu. Click it to enter, turn left/right to scroll.
- THRESHOLD encoder: set the detection point for noise gate. Click it to turn it on/off.
- HEADPHONE LEVEL: this pot controls the output volume of your headphones. Everything coming into the Amp Central both from your amplifier and Aux In will be affected by this control, using headphones output.
- INPUT LEVEL: main input control. This potentiometer will set signal coming from the output of your amplifier
- PAD switch: turn on/off input pad.
- AUX INPUT: connect to your PC, soundcard or whatever line level signal you want to hear through every output of the Amp Central.
- HEADPHONE INPUT: connect your headphone here. Both amps (and what you have in loop fx) and aux in will be hear.
- USB C: connect your PC/MAC to upload IRs.

- INPUT LEDS: leds to show your incoming signal.
- LINE OUT LEVEL: the volume control of the line out.
- POWER SWITCH: turn A.C. on or off



BACK PANEL

(from left to right)

- HALF/FULL POWER: activate A.C. attenuator for full or half power.
- LOOP FX: Stereo fx loop placed between the I.R. and the final outputs. Connect your favorite outboard effects like delays, reverbs, etc. here.
- TO SPEAKER: this is the "through" jack for if you want to use a real cabinet. When the TO SPEAKER output is used, the internal load is bypassed, the amplifier will see only the real connected cabinet as the load. Be sure to match the impedance of the amplifier with your cabinet
- LINE OUT: the line level signal coming from the reactive load, without the I.R. processing applied.
- LINE IN: insert point for your guitar preamplifier or guitar pedals.
- FROM AMP OUT: this is where you must connect the output of your amplifier.
- MIDI INPUT/THRU: Midi input and thru ports for midi connection. Switch between the I.R. by sending Midi CC's to the Amp Central.
- MAIN OUTPUT (XLR and jacks output): main output from Amp Central. Both set of outputs are fully balanced and the only difference between the two are format.

A balanced signal is a stronger and less prone to noise signal, but if you want to

use a standard mono instrument cable, you just need to plug into jack outs, A.C. will work in unbalanced mode too.

- DC IN: 24V negative center and at least with a current output of 300mA.

INPUT SECTION and CALIBRATION

(VERY IMPORTANT – READ THIS AT LEAST COUPLE TIMES)

The very first thing we recommend to do when you start using Amp Central is to set the proper input level in order to achieve the best possible signal to noise ratio avoiding any clipping.

To make this happen, we highly suggest to use the most dynamic sound at your disposal, which usually happens to be your clean channel, or at least the most clean-ish.

The very first big suggestion is to keep your amp's volume **COMPARABLE** as you were using a real cabinet. Do not try to push both preamp and master volume higher, just because you don't hear any sound or just little volume from your monitors. That's a step we will cover later.

If you don't remember how much loud you're in the real world (with real cabinets), please, wire a cab very quick and make a test. Then don't move preamp/master volumes.

Start with your clean-ish sound, you can follow these few steps:

- Connect your amp's output to Amp Central and hit standby switch;
- Start with A.C's INPUT LEVEL at 0 and pad switch to right position (OFF);
- Increase Amp Central's INPUT LEVEL, while heavily strumming your guitar on your clean channel, until LED METER starts to blink. There's three LEDs, indicating 0dB, +6dB and CLIP. The goal is to achieve maximum dynamic level by having 0dB led steady and +6db led blinking. You don't want to hear more volume incoming at this point, since you will likely experience some very unpleasant AD clipping.

What to do with crunch or distorted sounds? By nature, a distorted sound is WAY more compressed, so audio peaks are already smaller than a much cleaner sound, at the same SPL.

If you follow this procedure step by step using the cleanest sound at your disposal, without experiencing any clipping, you will have absolutely no problem with your dirty sounds. You still hear clipping when you hit strings very hard? Turn INPUT volume on A.C. a little back again.

What to do if I have all my sounds set without any clipping but I don't have enough volume out of my speakers?

Amp Central is a substitute for your *guitar cabinet and microphone*. You still need a microphone preamplifier (that knob with "GAIN" written on your audio interface).

Raise it up. You also still have your “MONITOR VOLUME”, always on your audio interface or “VOLUME” knob on your amplifier/active speakers. Raise it up. Those are all the places where you need to look for more output volumes if you feel you need more. Even from your DAW’s channel/master volumes.

Do not look for output volume on A.C., while you have only control on input volume.

REACTIVE LOAD SECTION

Amp Central EVO is equipped by our well know **100W RMS / 8 ohm** reactive load, derived from MK I version. This means you can plug amps rated up to 100W RMS of total output. We choose the best inductors/capacitors/resistors in the market (audiophile quality), to ensure unsurpassed audio quality.

You need to connect your amp’s output into “FROM AMP OUTPUT” jack in order to use Load section of Amp Central.

CABINET AND ATTENUATOR

A guitar cabinet can be hooked up to A.C. EVO using “TO SPEAKER” output and it can also benefit of onboard attenuator.

Cabinet’s impedance must match amp impedance.

Once a jack is insert to “TO SPEAKER” JACK, A.C. EVO internal load is totally bypassed.

To have a reference of actual amp volume, start with attenuator switch in “FULL” position. Switch to “HALF” to roughly cut by half cabinet volume.

Pay attention: attenuator switch will lead you to turn up amp’s master volume way more compared to when it’s off. Keep in mind you’re pushing your amp harder, reducing power amp tubes life and possibly adding noise. Use it with moderation.

IMPULSE RESPONSE SECTION

Amp Central is able to only read “.WAV”, **MONO, 24bit, 48kHz** type I.R.'s.

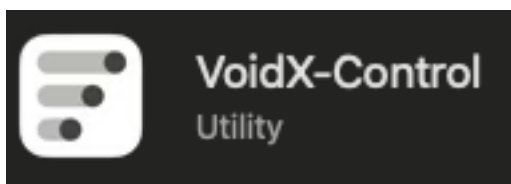
Please, before writing us or ask about the matter, be sure to check your IR 100% respect specified requests.

Any other attempt to load I.R.'s with different features than this, will simply not be recognized and sound will not be processed.

New DSP's generation is able to read up to 500ms IR and cut them at proper length, automatically.

To enjoy the full experience and to upload your own I.R., we highly recommend to download "VoidX" app. It's available for MAC/WIN and iOS and Android.

VOIDX APP



To upload new I.R., is mandatory to download this app called "VoidX-Control" and it's available for both mobile (iOS and Android) and desktop (Win and MACOS) from respective app stores.

Any other features, including preset storing, routing options, noise gate operation, etc can be done by front screen.

The app will make your life easier, though.

There're two ways to connect your Amp Central EVO to VoidX-Control:

- **Bluetooth:** you just need to turn on BT on your device. By opening the app, on left column after few seconds a new device will be found under the name "Amp Central", and all you can need is to click on it.
- **USB C:** you just need to wire provided usb cable to your PC/MAC and open the app. On left column after few seconds a new device will be found under the name "Amp Central", and all you can need is to click on it.

PAY ATTENTION: your Amp Central Evo can be connected to only one device per time. If you were using your Ipad via Bluetooth with VoidX app, and you're trying to connect it via USB to a PC or linking via BT to another phone, it will be not recognized.

You need to exit the app in your first device and turn Bluetooth link off between the two. Now you can use it with another device.

If your device isn't able to find Amp Central Evo, please make sure to:

- Inside VoidX app, on lower right side, there's a "refresh" button to start a new search, press it and wait 5 seconds.
- Check if Bluetooth it's active on the device you want to use;
- Close and reopen the app and wait up to 5 seconds;
- Make sure you have close VoidX app in other devices surrounding you.

FIRMWARE UPDATES

In our website, at Amp Central Evo page, you can find a dedicated download section for firmware updates.

A.C. Evo can now benefit from FW for future new features/bug fixing.

Make sure to download correct flasher (Win/Mac os) and to download latest firmware version. Full instructions on how to do it will be included in downloaded files.

USING AMP CENTRAL EVO

PRESET SECTION

The biggest news in Amp Central Evo is now it can support two distinct impulse responses (I.R.) simultaneously, arbitrary called LEFT IR and RIGHT IR.

Two I.Rs. create a **PRESET** and you can store up to 16 Presets.

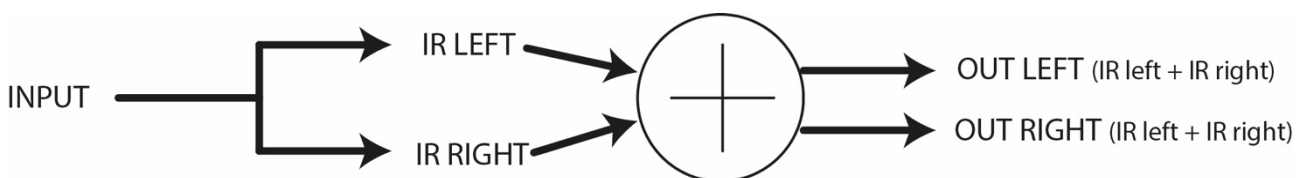
By entering the section (pressing EDIT knob) or with the app, you can also name each preset.

ROUTING MODES

Amp Central Evo can operate in two different modes, called *SUM* and *STEREO*.

Summed mode (SUM)

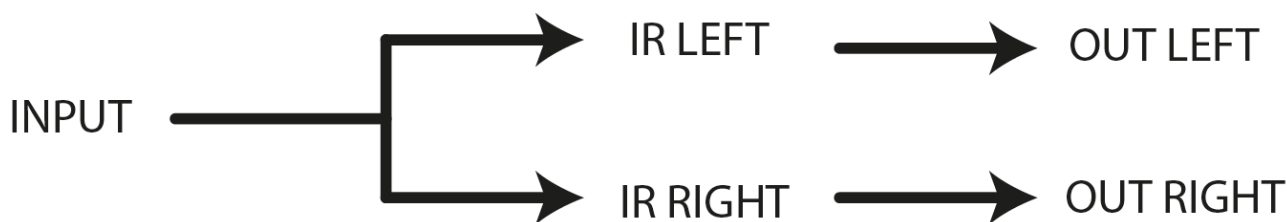
This mode is thought for mono operation. Each output will process both LEFT and RIGHT IR at same time.



Stereo mode (STEREO)

This mode will process LEFT IR only into LEFT output, same as for RIGHT IR into RIGHT output.

If you're planning to use stereo effects and to keep your stereo image intact, this is the mode you're looking for.



POWER AMP SIMULATION AND LINE IN

Amp Central Evo is able to offer eight superb power amp simulations.

Power amp simulations are thought for people who might want to use a particular preamplifier (as our D100PRE tube preamp) or stompbox, and go direct to the board or audio interface.

While doing as such was technically possible without any power amp simulation, part of the tone and overall sound spectrum were missing. A tonal loss was present and perceived.

We deeply studied the matter and understand a way to implement that missing puzzle piece.

From your preamplifier output jack you can wire a cable into A.C. "LINE INPUT" jack (found on rear panel) and use it as a full "missing link" from your rack or pedal preamp to the board/audio interface.

Overall tone now will result way more balanced, harmonically richer and deeper.

After power amp simulation, two standard guitar cabinet I.R.s are applied to complete signal chain (acting as cab + mic combo).

Eight P.A. simulations are present in Amp Central Evo and they made after real RedSeven Amplification amplifier models, including some rarities.

To access this feature, in *MAIN MENU* you need to turn on "PA SIMULATION" option and choose one of the eight pre-loaded PA sims.

NOTE: USING LINE INPUT JACK ON REAR PANEL WILL BYPASS "FROM AMP INPUT" JACK. BE AWARE YOU CAN NOT USE A FULL AMPLIFIER AND A PREAMPLIFIER AT THE SAME TIME.

Following list will help you to understand each model:

MODEL NAME	BASED ON	TUBES
D100	RedSeven Duality100	EL34
D100RS	RedSeven Duality100RS	6L6
LEVIATHAN	RedSeven Leviathan	KT88
2-CENTO	RedSeven 4U rack power amp	KT88
KALI'	RedSeven Kalì	EL84
HYBRID100	RedSeven Leviathan	KT88
PLEXI 50	Marshall 1968 Super Lead 50W	EL34
PLEXI 100	Marshall 1968 Super Lead 100W	EL34

NOISE GATE

A digital noise gate is present inside Amp Central Evo.

Threshold control with push to on/off capability is present on front panel for quick adjustment.

We added this feature to keep you covered from different environments you could find along your way. A noisy sound stage along with some unwanted flickering of an old lamp entering the house power system for example.

It's a very simple but functional add on. It can be programmed as "GLOBAL", it will affect every preset or as "PRESET", where it on/off state and multiple parameters can be saved per preset.

To access GLOBAL/PRESET choice, along with in depth parameters, such as Attack, Release and Hysteris, you need to access "MAIN MENU" from edit knob and scroll down until "NOISE GATE" voice.

Integrated noise gate parameters are:

- ON / BYPASS status: turn on or off the gate circuit;
- Threshold: level (dB) above that audio is allow to pass thru, below is muted.
- Attack: time (ms) between the first portion of the audio signal and gate effect.
- Release: decay time (ms) of gate effect.
- Hysteris: (dB) or better know as knee, in more specific terms how hard the gate circuit is closing.

LINE OUTPUT

Line output is a reduced in amplitude signal from amp's speaker output. Line out level knob on front panel allow you to set line out volume, and it's total independent from INPUT knob. Line out is also fully isolated thru an isolation transformer, in order to avoid ground loops of any kind, by using main outs (filtered by I.R.) and line out at same time.

You can use LINE OUTPUT even without 24v power supply plugged in, A.C.'s reactive load section is fully analog and passive.

HEADPHONES AND AUX INPUT

To maximize the experience with Amp Central Evo, we add a comprehensive input/output section for monitoring. AUX IN is intended for your backing tracks/click track or whatever line level source you want to hear through headphones output, along with the sound of your amplifier.

This is a great feature to improve your skills at late night for example, without connecting Amp Central and your amplifier to an audio interface. Just put your phone output into Amp Central, and open YouTube to play along with your favorite tunes! Everything coming out from H.P. output will be affect by H.P. LEVEL pot. This is a "master volume" for your headphones.

If you have something plugged into FX LOOP, you will appreciate those effects thru headphones too.

LOOP FX

An effects loop is usually placed between your amp's preamp and power amp and it's the place where you want to insert your time-based effects. Older amps (like vintage Fender or Marshall for example) don't have one. We took care of this.

We decided to place a stereo FX LOOP inside Amp Central Evo to allow you to insert your favorite effects even with amps doesn't have one. Fx loop is placed between IR LOADER section and Amp Central Evo main outputs.

To the most experts out there and according to us also, this is the best place to insert your effects, especially time based one. Why?

If you think to any given guitar amplifier with a standard fx loop between pre and power amp and a standard guitar cabinet, your time based effects are heavily band passed and equalized by guitar speakers themselves, who are notorious to be way far from flat, in terms of frequencies spectrum.

By placing those time based effects AFTER speakers (in this case after I.R.), they will processed a full 48Khz audio signal, which is qualitatively way superior from a normal guitar speaker frequencies response. Results are a more natural sound to your ear, an overall more 3D sounding environment, especially if listened in stereo. It's something comparable to adding a post fader delay while mixing a track in a professional studio.

This is the next step in listening your effects. Stereo is the way to go.

NOTE: FX LOOP is full stereo. Please be sure to take advantage of full stereo operation if you're using a stereo fx and "STEREO" routing option(check ROUTING MODES at pg.15).

NOTE: if you're using a mono fx (example: a mono delay), you can arbitrarily use just left send and return and consequently left output. Make also sure to select "SUM" routing option(check ROUTING MODES at pg.15) if you want to hear both IR on a single output.

OUTPUT SECTION AND GLOBAL VOLUME

On Amp Central Evo rear panel there are two sets of fully balanced outputs: XLR and 6.3mm jacks. They can be used at your convenience.

Overall volume can be saved per preset in MENU/PRESET section, when saving one. Scale is 1 to 100, with maximum is 100 (default level is 50).

Amp Central Evo is a substitute for your guitar cabinet and mics and as in real life with real cabinets and microphones you still need microphone preamplifiers or any kind of gain stage after it.

It's possible to use main outputs (XLR or jacks) as monitor purpose and Line Out to record amp "raw" signal at same time on same device (audio interface), without any ground loop issue. An isolation transformer guarantee you galvanic isolation between two sets of outputs.

MIDI

Amp Central has a MIDI IN and MIDI THRU port, to remotely select any of 16 available presets.

Into “MENU”, you can find “MIDI” menu. By entering MIDI menu, you can choose any midi channel from 1 thru 16.

Presets, are fixed with Program Change numbers from 1 to 16.

Preset 1 = Program Change 1, Preset 2 = Program Change 2, and so on.

LEVELS

- **Lineout:** lineout level is source and “line out level” knob dependent. There’s no standard about it, but we highly suggest to consider it as a LINE LEVEL signal. Using with any mic pre would possibly make the preamp little useless with bad sonic results. Also, make sure to use proper audio interface with the ability to support line level input.
- **Main outs (both XLR and jack):** they both are source and preset volume dependent: this time, we suggest to consider these outputs like instrument level signal which needs to be paired with a microphone preamplifier.
- **FX sends:** they both are source and preset volume dependent. You need to be very careful using regular guitar pedals with fx loop. Some of them could totally have enough headroom to process this signal, other could not. If some unpleasant distortion is perceived, we suggest to lower presets volume up to the point where you cannot experience that distortion anymore. Of course you need to compensate it with your mic preamp gain after Amp Central Evo outputs.

F.A.Q.

WHAT IMPEDANCE DO I NEED TO SET MY AMPLIFIER IF I USE A CABINET ALONG WITH A.C.?

In this case A.C. Evo internal load will be bypassed. You need to match your cabinet's impedance with your amp's impedance.

HOW DO I CONNECT MY AMP CENTRAL MKII TO MY PC/MAC TO UPLOAD IR?

You need to download "VoidX-Control" app from your app store of choice (either MAC OS or WIN).

It's your choice to run the app via BT or USB, you can find a dedicated chapter in this manual.

WHY AMP CENTRAL MK II IS NOT TURNING ON?

Be sure to power it with supplied power supply (24VDC – negative center only) or a fully compatible substitute. Make sure to have main power switch (located on front panel) into "1" (ON) position.

WHY AMP CENTRAL MK II IS MAKING ANY SOUND?

Check if your amp's standby is off. Make sure your guitar's volume is on 10. Be sure to have correctly plugged in every single cable. Turn off mute from your mixer/soundcard/recording device. Check incoming signal from A.C. led meter first, then check output signal with a led meter from your daw/mixer.

WHY I DON'T HAVE ENOUGH VOLUME OUT OF MY AMP CENTRAL MK II?

Read carefully **INPUT SECTION** and **CALIBRATION**, and do it step by step. If this procedure is correctly made and volume is still not enough for you, increase your audio interface/mixer/desk gain or/and your monitor master volume knob.

For any problem you can contact our support at: info@redseven-amplification.com
We will reply to you as soon as possible.

WARRANTY DISCLAIMER

Please, do not try to open this device, in any case. For any problem contact your seller or write to us. Any inexpert person should not even think of doing anything inside of this unit. RedSeven Amplification offer a standard two year not transferable warranty for any component (except to wear subjects). By removing top piece or by making any modification to original state, you will violate the standard warranty and RedSeven Amplification will not be responsible for any damage to people, things or animals.

Revision 1.0
Sept 2024