

**REDSEVEN**  
AMPLIFICATION

# AMP CENTRAL

Reactive load – I.R. Loader



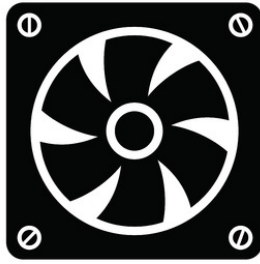
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**!!! ATTENTION !!!**

IMPROPER USEAGE OF AMP CENTRAL  
CAN CAUSE PERMANENT  
DAMAGES TO YOUR AMPLIFIER.

READ CAREFULLY THIS DOCUMENT  
BEFORE TURN THE DEVICE ON





## How to **NOT** use AMP CENTRAL

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

Since NO volume is perceived you should have the tentation of turning master volume of your amplifier to a very high, almost ears-killer and dangerous level, which is insanely wrong under many points.

By doing this, life of your power tubes will be incredibly reduced, and we all know they are expensive nowadays.

Second thought, you're overheating Amp Central, for no benefit. A fan, inside the amp is placed to protect the load from overheat and it will automatically start as soon it will feel the need.

Last but not least, most of modern amplifiers are fine-tuned thanks to preamp. 99.9% of the time gain comes from there, there's no practical, sound-wise or "I have the biggest dick ever" reason to fully open master volume on your 100W. It's simply a wrong habit.

While Amp Central is safely rated up to 100W, we do recommend you to use your amplifier with the same volume as you should use with a regular cabinet, or just a bit more.

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

## INTRODUCTION

### *What is AMP CENTRAL?*

Amp Central is our answer to modern guitarist who still love to enjoy the best of their tube based amplifiers, in every situation, even where low volumes are not allowed.

Amp Central, as the name suggested is a hub to connecting your amplifier to the outside world, without the need of a real cabinet and any volume.

## THE CONCEPT

Since few years, digital systems became very popular in the guitar amplifiers market, replacing a real amp in most of the "inconvenient" gig where a proper stage volume was not possible or for example, during exercise session at late night.

What is missing here is what we call the "total experience" of a real amp-speaker interaction, and we do think this combo is still unsurpassed in term of feeling under player's finger, but at the same time we realize that needs are constantly moving and the music is always changing. What could we do to improve the experience of a "fake" or profiled amplifier, played with headphones, with most of the case, very bad results?

Well, we thought a solution and we call into the game couple different technologies, one very old and one not so that 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 have a cabinet wired to output jack when used, or at least a proper load, penalty the life of its output transformer.

With this in our minds we built the very first stage of Amp Central, by creating a proper Dummy Load, or better, a Reactive/Resistive Load, to mimic at the best of existing possibilities a real cabinet. We gone fully analog with best components available in the real world, something that audiophile experts will appreciate. No digital processing or equalization applied there, since we do believe your amplifier needs a proper analog load to sounds and feel at its best.

Where from now? The amp is now safe and running, while no sound will come out of it. Well, only at this point we decided to embrace digital world, with Impulse Response\*.

Basically, with Amp Central we wanted to offer the best of both worlds, offering you the possibility to play your favorites amplifiers and not their simulations, with some Impulse Response of your favorite cabinets.

This will be YOUR and not someone else sound. Your amp and possibly your own cab's I.R.

\*An Impulse Response is in some very basic words an equalization, or a "photo" of your favorite mic'd cabinet, to be applied to the raw sound coming out of your loaded amplifier, act to return the complete sound (amp + cabinet + mic) as you should hear from your studio monitors, or headphones.

## FIRST USAGE

It's better to start slow and understand what's going on.

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

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

**USE THE 8 ohm tap OUTPUT OF YOUR  
AMPLIFIER TO CONNECT IT TO AMP  
CENTRAL.**

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

!!!! Do not attempt to connect your amplifier to Amp Central in other fancy way, your amp's life is important, do not fake expertise here, we are not responsible of any improper usage !!!!



## FRONT PANEL

(left to right)

1. VIRTUAL CABINETS SELECTOR: chose one of sixteen preloaded I.R.
2. BANK/CAB: for the convenience of memory, the sixteen cabinets are divided in four files with four I.R. in each file. Toggle between them by turning left or right VIRTUAL CABINET ENCODER.
3. INPUT LEVEL: attenuation level of the output of your amplifier. This should be used in conjunction of analog LED METERS and DAC CLIP. The goal is to reach a proper signal without any clipping. Turn it up until 0dB start to blink at higher dynamic of your clean channel and then kick it back just a little.
4. HEADPHONE LEVEL: this pot control the output volumes of your headphones. Eveything coming into Amp Central both from your amplifier or LINE IN will be affected by this control, using the heaphones output.
5. RESISTEVE/REACTIVE: chose between a pure resistive load or a complete reactive one.
6. HEADPHONES OUTPUT: connect your headphones here.
7. AUX INPUT: connect your PC, soundcard or whatever signal line level signal you want to hear thru every output of Amp Central.





## BACK PANEL

(from left to right)

1. LOOP FX: Stereo fx loop placed between I.R. and the final outputs. Connect here your favorite outboard like delays, reverbs, etc.
2. TO SPEAKER: thru jack, if you wanted to use a real cabinet. When TO SPEAKER output is used, the internal load is bypassed, the amplifier will see only real cabinet as load. Be sure to match the impedance of the amplifier with your cabinet
3. LINE OUT: line level signal coming from the reactive load, without I.R. applied.
4. LINE OUT LEVEL: volume control for line out.
5. FROM AMP OUT: this is where you must connect the output of your amplifier.
6. MIDI INPUT/THRU: Midi input and thru ports for midi connection. Switch between I.R. by sending Midi CC to Amp Central.
7. USB: connect your PC/MAC to upload your favorite I.Rs.
8. DC IN: use supplied power supply, or be sure to use one rated at 9 to 12V negative center at least with a current output of 300mA.

## INPUT SECTION and CALIBRATION

The very first operation by using Amp Central is to set the proper input level in order to achieve the higher signal without any clipping.

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

You can follow this few steps:

- Start with INPUT LEVEL of Amp Central at 0;
- Set the output volume of your amplifier at 0 and hit the standby switch;
- Raise the output volume of your amplifier as loud as your normal gig/practice room;
- Increase the INPUT LEVEL of Amp CENTRAL, while heavily strumming your guitar on your clean channel, until LED METER start to blink. There're three LEDs, indicating 0dB, +6dB and CLIP. The goal is to have your maximum dynamic level and only 0dB LED barely blinking. You don't want to hear more volume incoming at this point, since you will experienced some very unpleasant clipping.

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

If you followed point by point this procedure using the cleanest sound at your disposal, without experiencing any clipping, you will have absolutely no problem with your dirty sounds.

What if my output signal from Amp Central is just to low but LEDs are already blinking and I'm experiencing some clipping?

You should need to turn back INPUT knob a bit and raise the gain of your mixer/soundcard or whatever object you're using to amplified Amp Central.

## REACTIVE LOAD SECTION

Inside Amp Central there's a reactive/resistive load, rated 100W RMS, this means you can plug amps up to 100W RMS of total output. We choose the best inductors/capacitors/resistors in the market, hi-fi quality, to ensure unsurpassed audio quality.

You need to connect your amp output into "FROM AMP OUTPUT" jack in order to use the Load part of Amp Central.

If you want to take a line output of your loaded amplifier, without being processed by internal I.R. Loader, you can take it from "LINE OUT" and adjust the level using dedicated pot on the back panel. By adjusting this knob, the main XLR/jacks outputs will be not affected.

TO SPEAKER is where you want to connect your real world cabinet, in case you wanted to use one. When a cabinet is used, the internal Reactive Load will be fully bypassed, and the amplifier will see only the cabinet as load.

Be sure to not use this output in any other way rather than to connect a real cabinet with a proper power cable. Do not use instrument cable with this output.

AMP CENTRAL is rated at 8 ohm, so you need to connect a 8 ohm cabinet too, or couple cabinets wired in parallel at 16 ohm each.



## IMPULSE RESPONSE SECTION

Amp Central will only read ".WAV", Mono, 24bit, 48kHz type I.R. Any other attempt to load I.R. with unlike characteristics than this, will be simple not recognized. You can place only one I.R. in each of the sixteen files available when you connect Amp Central on your PC/MAC. On how to do, please read the USB chapter in the next pages.

Amp Central will cut any I.R. loaded at the total length of 20ms, which is the maximum ability of internal DSP to calculate.

By doing some basic math, those 20ms will guarantee you a full frequencies spectrum response, including the super low frequencies even at 40-50hz.

## VIRTUAL CABINETS (I.R.)

You have at your disposal sixteen different Impulse Response to choose from. Impulse Response come pre-loaded with original RedSeven Pro Cab series 4x12 I.Rs, but of course you can upload your best ones, by connecting Amp Central to your PC/MAC thru the back panel USB port. On how to do, please read the USB chapter in the next pages.

## HEADPHONES AND AUX INPUT

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

This is a great feature to improve your skill at late night for example, without connecting Amp Central and amplifier to any soundcard. Just put your phone outputs into Amp Central, and open Youtube to play along your favorite tunes!

Everything coming out from H.P. output will be affect from H.P. LEVEL pot. This is a "master volume" for your headphones.

NOTE: some headphones could require more volume than the one at disposal. Each headphones/IEM are very different from each other and the input impedance of each model can vary a lot. You should be in need of an headphone amplifier then.

NOTE: You could use headphone output at gigs to send a copy of your guitar sound to your personal IEM mix, in order to the total control of your personal volume. Most of the personal IEM system let you to have two inputs: your instrument (that should be carried by Amp Central) and the band, usually carried by FOH or stage mix guy.

## LOOP FX

A loop effects is usually placed between your amp's preamp and power amp, so this mean that only your preamp is the part processed by the effects, while the power amp is there only to amplify this operation. It's something very useful for the modern days.

Some of the old ones had no fx loop, more modern ones, have, but mono.

We decided to place a stereo fx loop to let you insert you favorite external effect or chain of effects. This time, the fx loop is placed between IR LOADER section and the output of Amp Central, so this means you're sending the already processed amp signal with Impulse Response to your fx to be processed. To the most expert guys out there and also according to us, this is the best place where to put your effects, also better than your normal amp's fx loop.

Not having the fx thru your, speakers but after, should let the entire audio spectrum goes thru them, and not having them heavy band-passed by the speaker itself.

NOTE: While also SEND section are stereo, one I.R. can be loaded at time, for both left and right. SENDS will simple make an buffered copy for your right and left effects inputs, to be returned by stereo RETURNS.

So, while is the advantage to send the signal in stereo instead of using only one mono send and then a stereo return?

Well, there's no advantages at all for a mono input device, beside the facts that some effects want to see a stereo input signal to making their algorithms working in a proper way.

If you have only one channel in your soundcard/mixer left, use only one output as one side of the stereo loop, this will work perfectly as you'd mic'd your amp with a single SM57 for esample, while placing a delay into your amp's fx loop.

## USB and HOW TO CONNECT AMP CENTRAL TO PC/MAC

You can connect Amp Central with your PC/MAC with a USB cable, to upload new I.R.s by following next steps:

- Power off Amp Central by unplugging power connector on the back of the unit;
- Connect a USB cable to AMP CENTRAL first and your PC/MAC after.
- Amp Central will be automatically recognized as an external device (like your memory stick or hard drive for example) with the name of AMPCENTRAL;
- Double click on it, and you'll see now for files, name from 0 to 3. By entering in each file, you'll find another four files, each one with an I.R. inside. This means a total of 16 files available, divided in four banks with four cabinets each bank.

Let's see this chart to visualize it in a very simple way:

	BANK 1
CABINET 1	
CABINET 2	
CABINET 3	
CABINET 4	

	BANK 2
CABINET 1	
CABINET 2	
CABINET 3	
CABINET 4	

	BANK 3
CABINET 1	
CABINET 2	
CABINET 3	
CABINET 4	

	BANK 4
CABINET 1	
CABINET 2	
CABINET 3	
CABINET 4	

To substitute an I.R., you simply can delete the existing one, and drag and drop or copy/paste the new one.

Remember: only one I.R. can be place in a cabinet file. You cannot place two or more, penalty Amp Central will not processed the incoming signal.

Once you uploaded your selection of I.R., you need to eject the mounted AMPCENTRAL devices into your PC/MAC as you normally do with any another external devices, by simply clicking the EJECT button.

FILE TIPES

AMP CENTRAL can read only 48Khz, 24bit, MONO I.R.

Any other attempt to upload any other I.R. file will produce no sound. We highly suggest to make a copy of AMPCENTRAL device before copy/past or substitute I.R.s.

## OUTPUTS

On the back of Amp Central there're two couple of outputs. Once is unbalanced (jack connectors), the other one is fully balanced. They are the same outputs in different format, XLR can be very convenient to quickly wire Amp Central with FOH mixers or soundcards.

There's no global output volume since the INPUT knob will act as one and only volume for the entire system.

If you're experiencing any clipping or a too low output volume, please check "INPUT SECTION" in order to fully understand how to achieve a proper clip free and high level signal.

## MIDI

Amp Central has MIDI IN and MIDI THRU port, to change I.R. according to needed sound.

First operation, is to choose the midi channel on which Amp Central will receive midi signal, and in this case, can be from channel 1 to 16. A.C. is shipped with default midi channel #1.

To change it you need to

- press "Virtual Cabinet" knob for three seconds until BANK/CABINET blink and immediately release it;
- select your desired midi channel, by following instructions and by moving "Virtual Cabinet" knob on left or right;
- press "Virtual Cabinet" again to save desired midi channel.

### MIDI CHANNEL LIST:

MIDI CHANNEL	BANK	CABINET
1	0	0
2	0	1
3	0	2
4	0	3
5	1	0
6	1	1
7	1	2
8	1	3
9	2	0
10	2	1
11	2	2
12	2	3
13	3	0
14	3	1
15	3	2
16	3	3

This is the Control Change list, one for each I.R.

Please remember, to select an I.R. on desired CC, you need to send a value equal or greater than 64 on that desired Control Change:

Control Change	BANK	CABINET
100	0	0
101	0	1
102	0	2
103	0	3
104	1	0
105	1	1
106	1	2
107	1	3
108	2	0
109	2	1
110	2	2
111	2	3
112	3	0
113	3	1
114	3	2
115	3	3

## TROUBLESHOOTING

- Amp Central IS NOT TURNING ON  
Check the power supply first; sometimes it will be loose and cannot make good contact with power socket. Check the voltage AND polarity. Try to replace it.
- Amp Central IS TURNING ON BUT WITH NO 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 the output signal with a led meter from a daw/mixer.

For any problem and in any moment you can contact a qualified tech at: [info@redeven-amplification.com](mailto:info@redeven-amplification.com)

We will reply to you as soon as possible.

## WARRANTY DISCLAIMER

Please, do not try to open the device in any case. For any problem contact your seller or write to us. Any inexpert person should not even think of do anything inside this unit. RedSeven Amplification offer a standard two year fully warranty for any component (except to wear subjects).

By removing the top or by making any modification to the original state will violate standard warranty and RedSeven Amplification will not responsible for any damage to people, things or animals.

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