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# DSM HUMBOLDT SIMPLIFIER MKII MANUAL

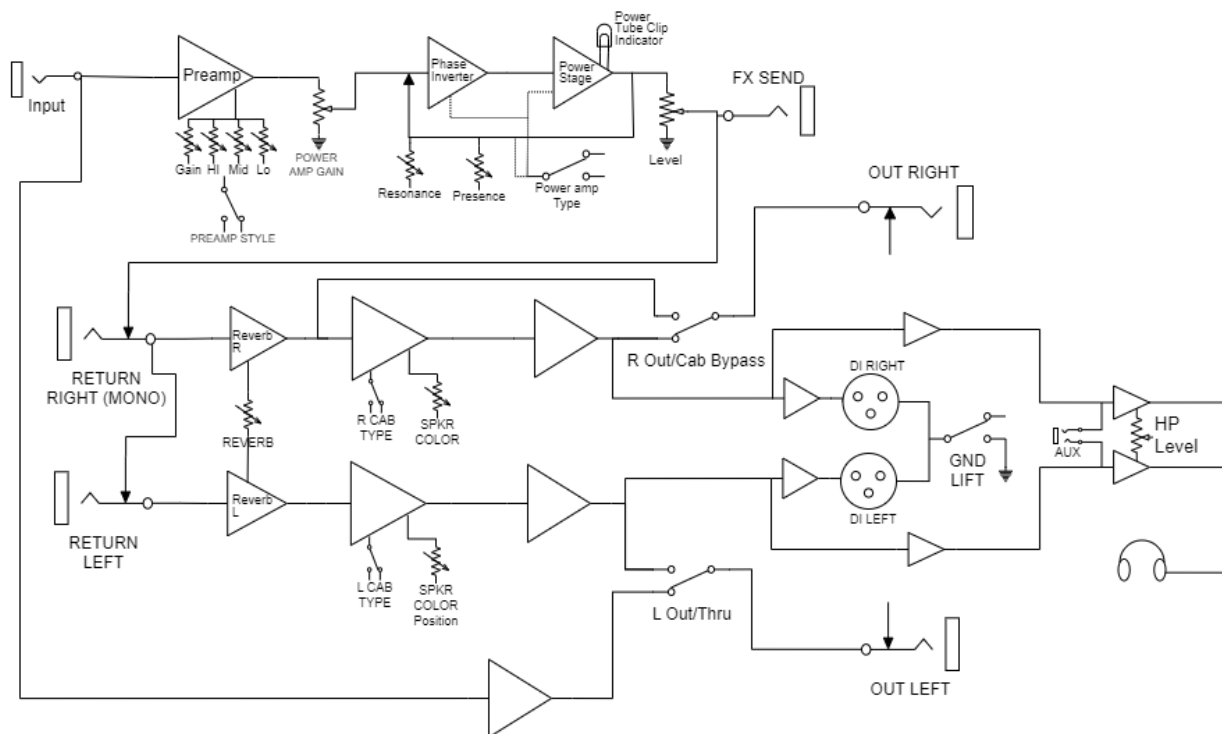
Thank you for acquiring the Simplifier MKII, the most advanced analog amp emulation device.

## Main Features

The Simplifier MKII is an all analog, zero-watt guitar amplifier with stereo reverb, fully packed with routing and tone sculpting options. These features include:

- Preamp with 3 amp types (MS Brit, USA, and AC Brit).
- Stereo FX loop Return.
- Stereo Reverb.
- Power amp simulation with Power amp Type, Power amp Drive, presence and resonance.
- Cabinet simulation with cab type and Speaker color for each channel.
- Two Balanced DI outs with ground lift.
- Powerful headphone amplifier with volume control and aux input.

## Signal Flow Schematic



## Preamp Section

The Simplifier MKII features a state of the art, low noise, and ultra versatile preamp that reproduces the character of 3 of the most iconic classic amplifiers

### Gain Knob

Sets the gain/overdrive of the preamp. It ranges from very clean (below noon), up to mid/high gain at full throttle. Combine this gain with the power amp gain to achieve the desired level of compression and drive.

### PreAmp Type

Selects the following Amp Types:

AC BRIT: Classic AC30 top boost sparkly and three-dimensional sound, bridging the normal and bright channel. A true British heritage since the 60's.

USA: Classic Bassman tones. Sweet and dynamic with a balanced response. By far the most used amp on studio recordings.

MS BRIT: Classic clean-to-crunch vintage plexi style amp with bridged hi/lo inputs. The sound that defined rock music.

### Tone Stack

A key part of a tube amp sound and response is the tone stack behavior. The tone stack on the Simplifier is a genuine configurable three band classic amplifier topology, keeping the same feel, response and interaction of the original amp.

NOTE: On the AC BRIT type preamp, the MID control is disabled (as the original amp does not have a mid control)

## Power Amp Section

The Power amp section models the behavior of a true push-pull all tube amp, including the compression, clipping, bias drift and variable frequency response that makes Tube power amps so special.

The **Power amp type** selector now changes the whole topology of each power amp, changing the tube type, bias and feedback characteristics of each model.

### Power Drive Knob

The **power amp drive** allows you to dial the perfect amount of power amp compression for that sweet-spot that only a tube amp can achieve. A Clip indicator will visually show when the virtual power tubes start clipping, helping you find the perfect balance between pre and power amp gain.

Complement your preamp gain with this Power Drive. Low preamp gain needs high power drive to make up the volume loss and add sweetness to the tone. Mild clipping preamp tones benefit a lot from a compressing power amp, which softens the transients and adds body to the final tone. High preamp gains are also modulated by the power drive. Lower the power drive for tighter, brighter tones, and raise it for singing, creamier tones, and find the sweet spot for your guitar where you get the best of both worlds and can control the distortion with the guitar volume control.

## Power Type Switch

The Power type switch selects between 3 power amp types:

- AC BRIT: Very hot biased class AB amplifier with no feedback, based on the venerable AC30 power amp. Big low end and low headroom with a response that varies from scooped on clean settings, to mid rich when pushed, and this happens dynamically. Very dynamic response.
- USA: Class AB 6L6GC with a lot of feedback. Very flat and balanced, but it screams when overdriven.
- MS Brit: Class AB EL34 with less feedback. Rich low-mids, and responds more consistently to overdrive.

## Presence Knob

The presence knob is implemented just like the real amps. It works by reducing the high end feedback, thus boosting the treble into the power amp. If AC Brit power amp type is selected, the presence acts as the High cut control, like the original amps.

## Resonance Knob

The resonance controls the amount of low end feedback into the power amp. Although this control is not present on the original amps, we added it to allow the user to adjust the low end response to different PA speaker sizes to avoid boominess. Use it at max for the original amp tone.

## Level Knob

The Level Knob controls the final level into the FX loop.

## Effects Loop

The Simplifier MKII features a mono Send/Stereo Return effects loop. If only the RIGHT return is used, the LEFT channel will take the RIGHT signal. If Only the LEFT return is used, the RIGHT signal will not be affected.

## FX Send

The FX send is a mono TS jack. The level is controlled by the Level knob. Adjust this control according to the input level of the effects you put on the loop. If the effects clip, reduce the Level.

## FX Return R

The FX Return R jack is the input for the Right channel Reverb and Cabinet Simulator path. If only the RIGHT return is used, the LEFT channel will take the RIGHT signal.

## FX Return L

The FX Return L jack is the input for the Right channel Reverb and Cabinet Simulator path. Only the LEFT return is used, the RIGHT signal will not be affected.

## Reverb

The Simplifier MKII integrates a lush stereo digital plate reverb with Reverb mix control.

## Reverb Knob

The Reverb knob controls the reverb mix for both channels.

## Cabinet simulation

Tweakable Cabinet simulator that takes the heritage and experience of ©DSM Noisemaker developing the most useful and innovative cabsims of the market. You can easily dial two independent cabinet simulators panned LEFT - RIGHT.

## Cab Type Switch

A three way toggle switch allows you to choose independent cabinet STYLE for each side. 1x12 Combo, 2x12 or big 4x12 cabinet simulations that you can combine with any of the 3 preamps per channel, adding an extra dimension to your sound development. Now you can combine the different Cabinet sizes with different speaker types (Eminence blackface, Celestion Blue Alnico, Celestion Greenbacks, or even the points between them).

## Speaker Color Knob

The speaker color knob sweeps between the characteristic high-mid response of the different speaker type. This control is crucial to get the desired texture out from the cabinet. Black is based on vintage Eminence high power speakers, typical of fender combos. These are smooth and balanced, great to compensate for the shrill from single coils and fender preamps. Blue is based on alnico blue speakers, midrangey and defined, but not harsh. And Green is based on greenbacks, great for those marshall jangly tones, or extra definition is required.

## Outputs

- Right and Left Balanced DI outputs:

Low Impedance (150 Ohms) XLR outputs for left and right signals, with Ground Lift. These outputs carry the final output with cabsim always ON.

*NOTE: The DI outs can withstand phantom power voltage without damage, but it will affect the quality of the sound, mainly causing low-end distortion and/or lack of bass frequencies. Make sure to have Phantom Power Off before using the unit.*

- **Right ¼” Unbalanced out:**

Unbalanced TS output for right signal. You can Bypass the cabinet simulation for the Right side with the “Cabsim Bypass” switch. If Cabsim is Bypassed, the signal will include Preamp + FX loop + Reverb stages.

- **Left ¼” Unbalanced:**

Unbalanced TS output for Left signal. You can Bypass the whole device with the “Through” switch. If “Through” is selected, the signal will be taken from the input and buffered.

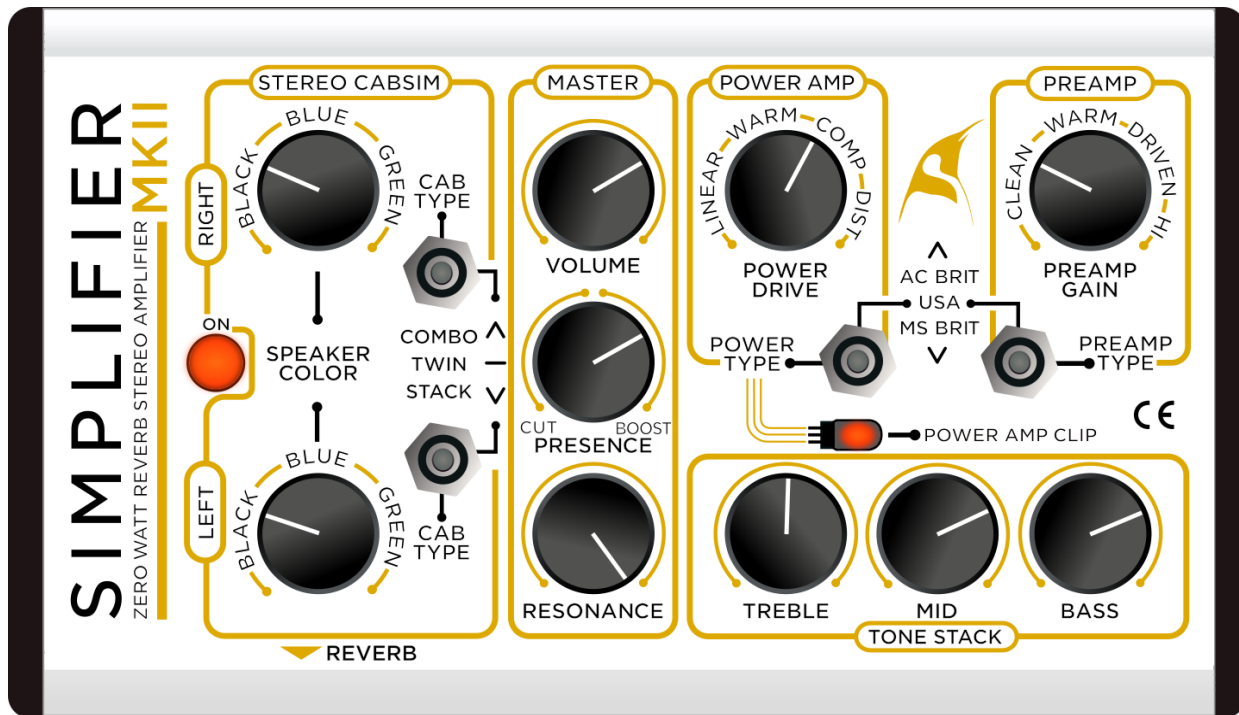
- **Headphone amp**

The unit includes a powerful 135mW stereo headphone amplifier with stereo AUX input, for those silent late night practice sessions, or even in-ear monitoring.

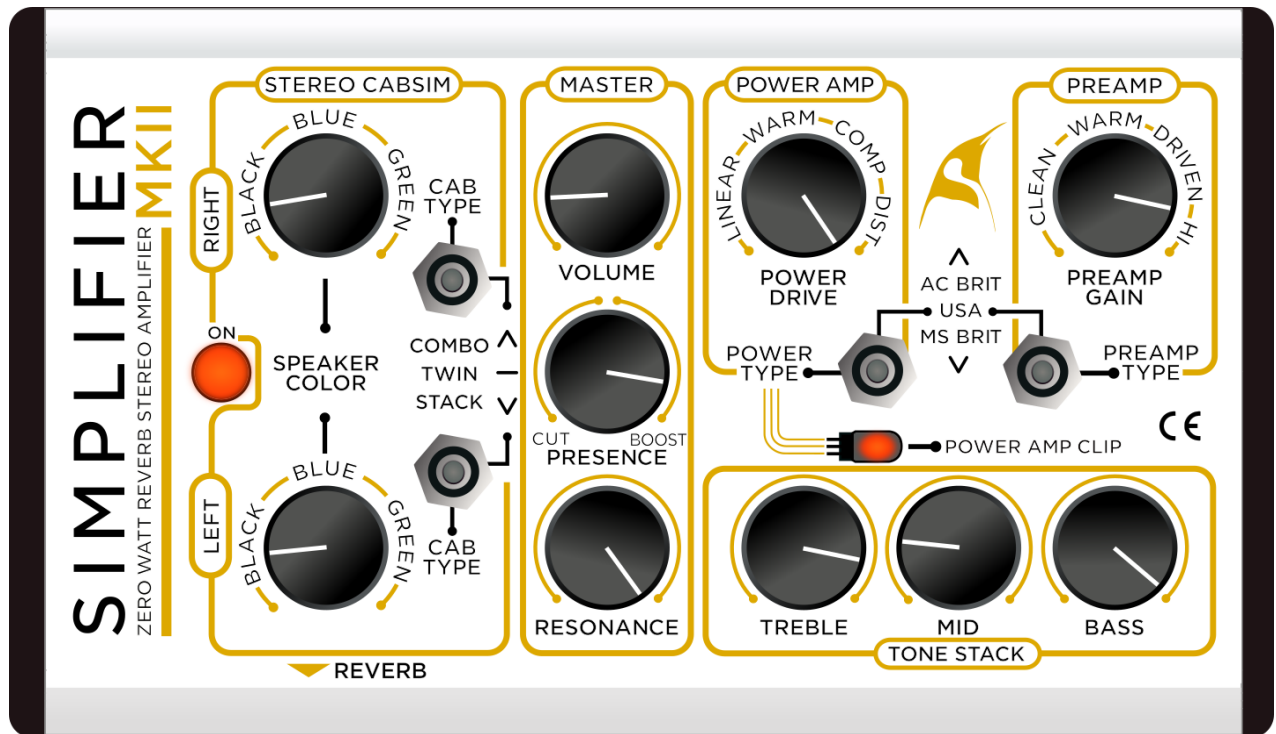
The Amplifier works best with Headphones between 32 and 96 Ohms

NOTE: Ground noise issues may occur if the power supply used is not referenced directly to ground when using only headphones. Since the device will not have a reference to earth potential, unwanted noise may occur. Please use a ground referenced supply, a battery pack, or simply connect any output to a device that is connected to earth (like an amp or mixer input, even if powered off).

# Sample Settings



## Clean USA



## Melting USA



## Bluesy USA

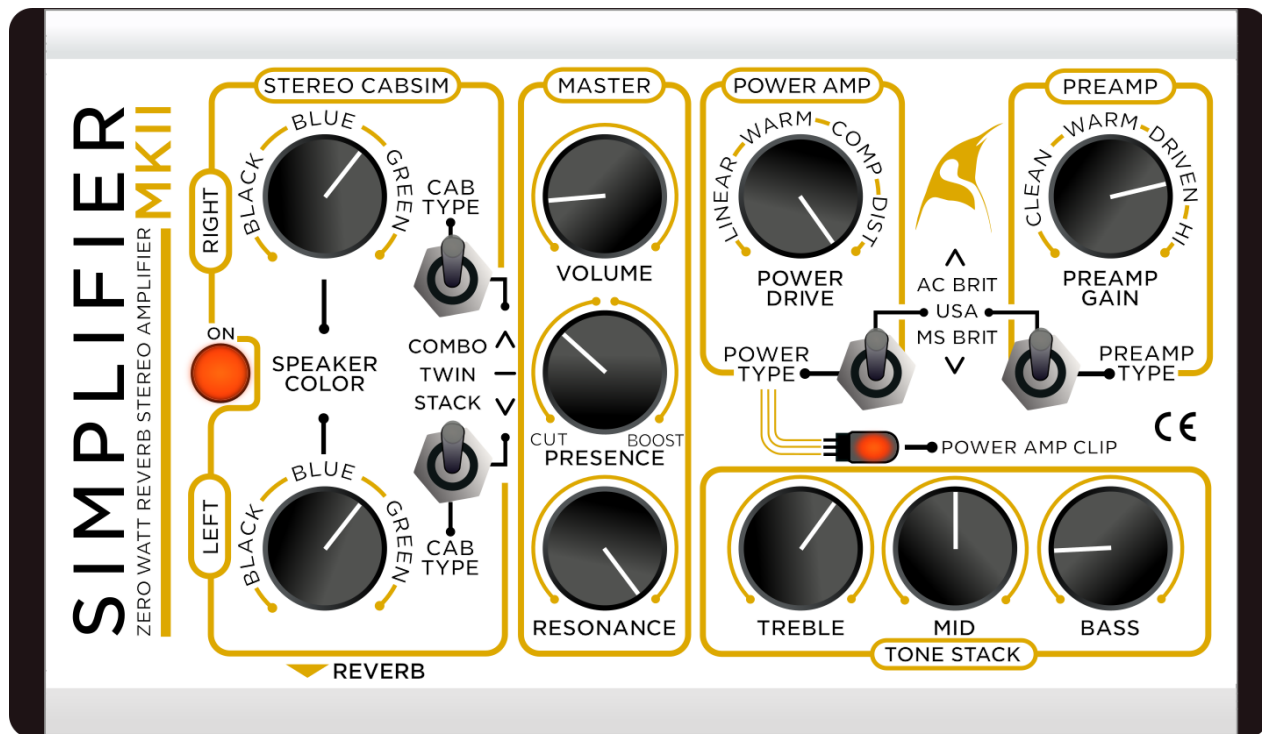




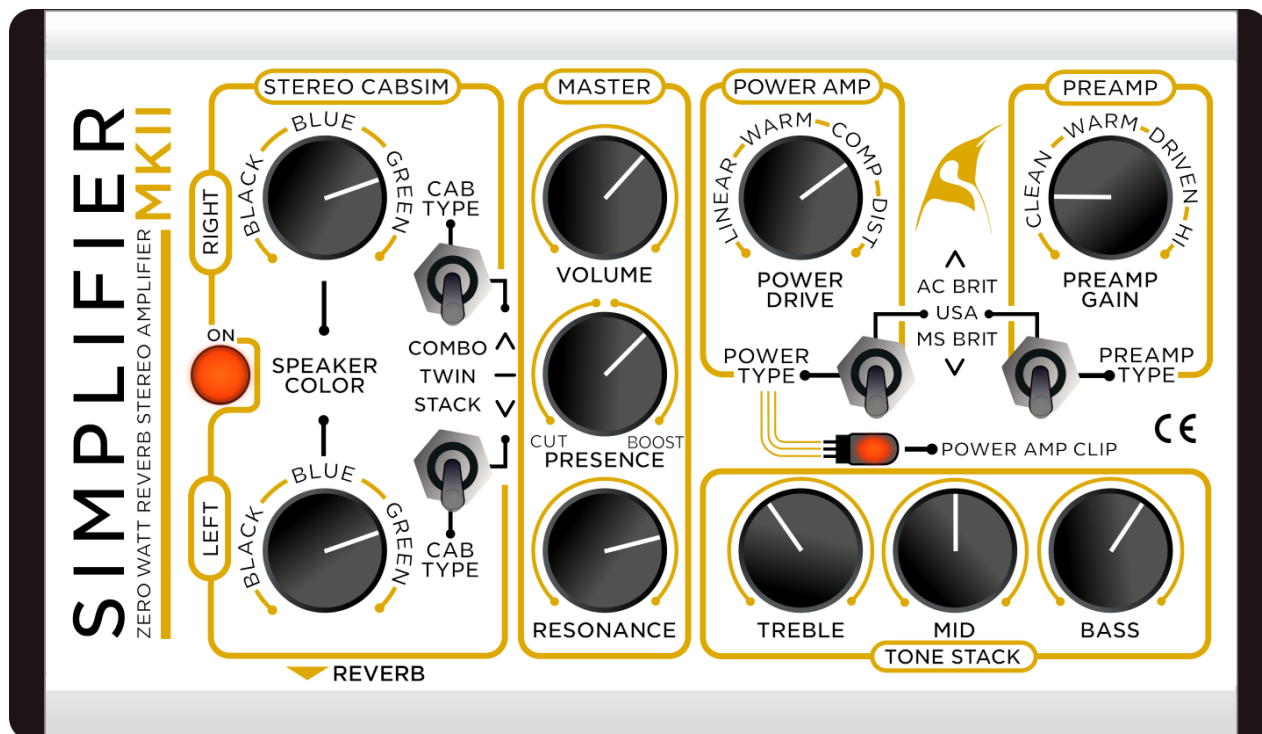
## Crispy AC



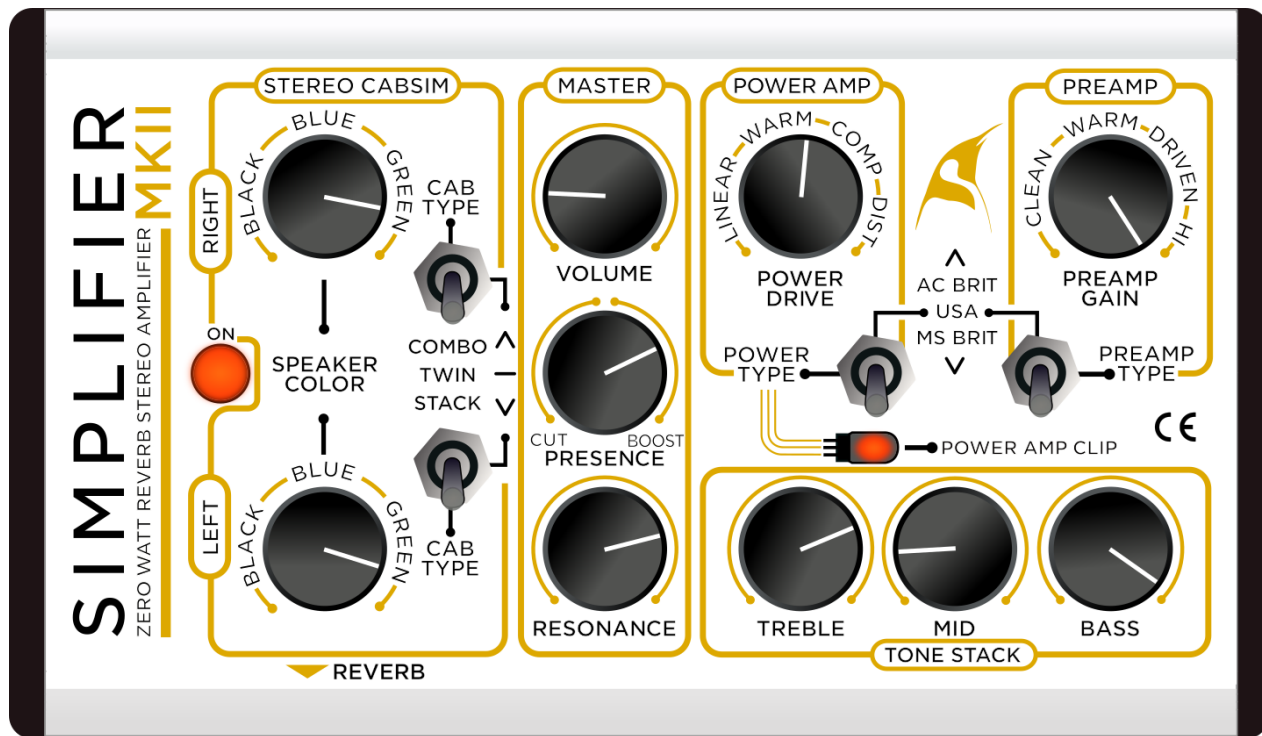
## Elevation AC



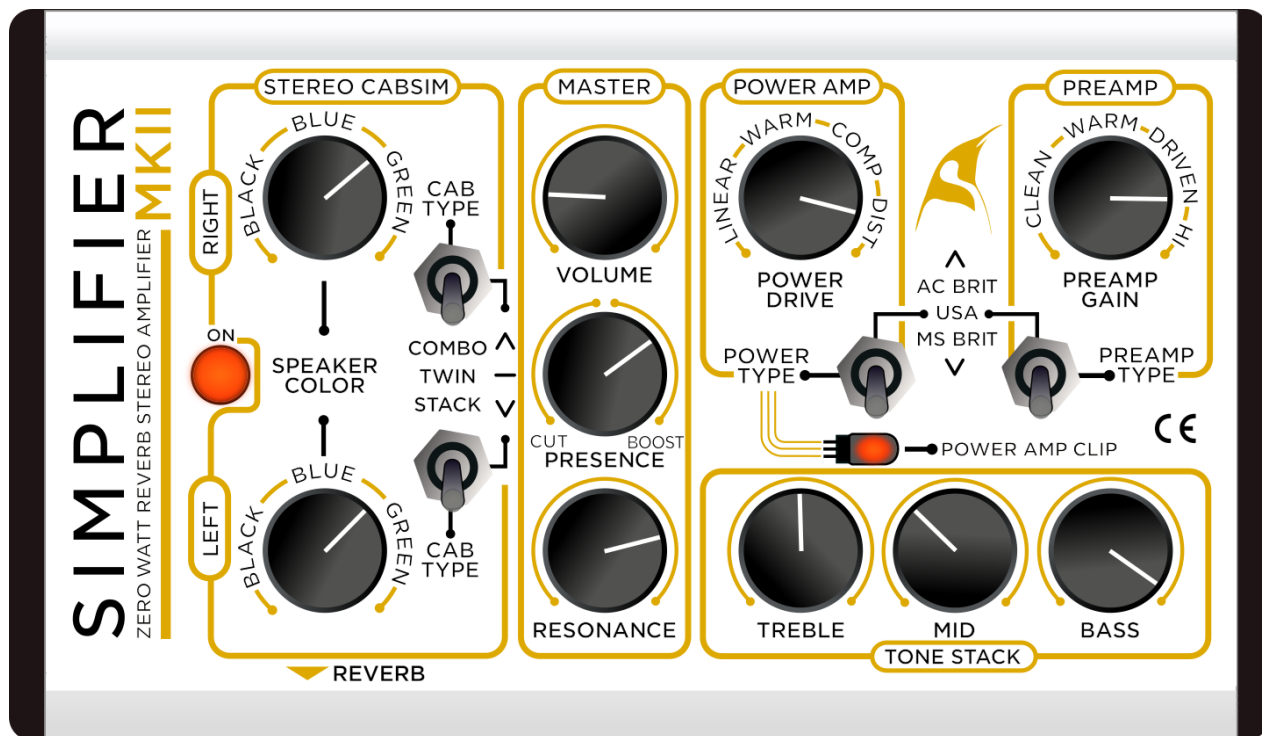
## Queen AC



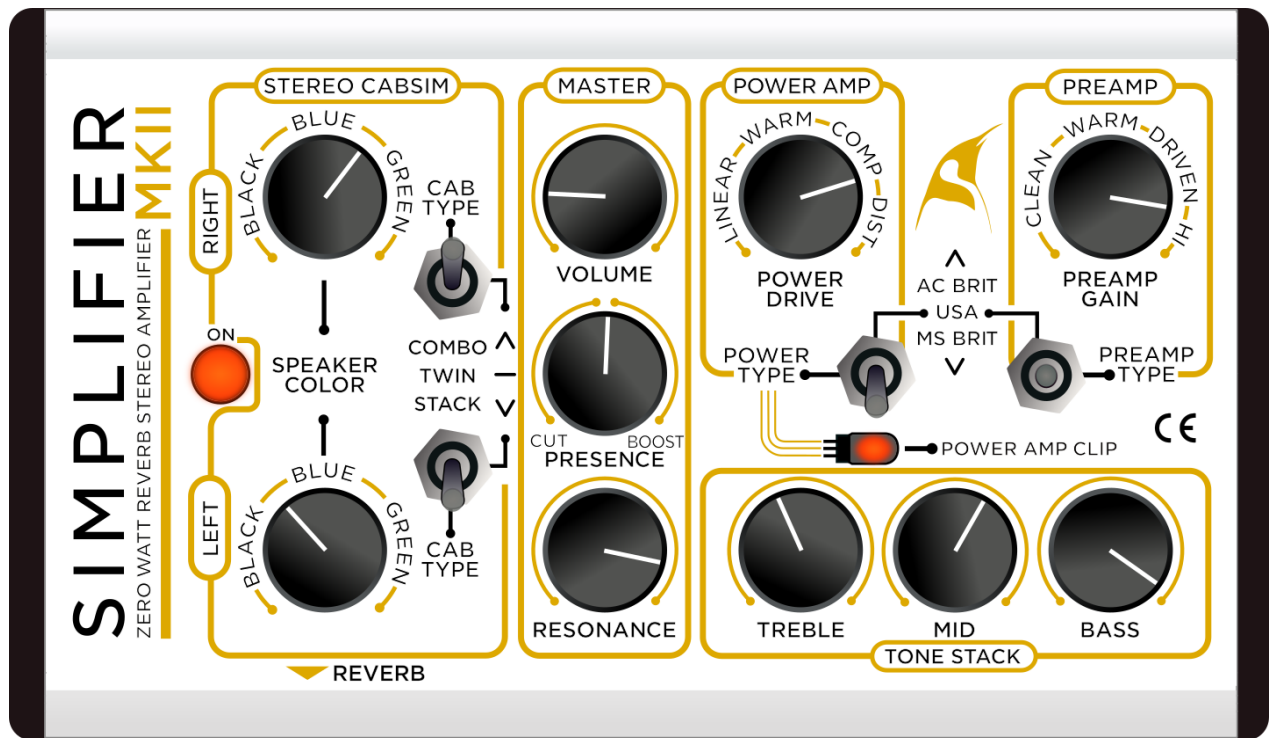
## Clean MS



## Hair MS



## 70's MS



## Big Smooth Custom



## Purple mix

## ● Tech Specs

- Weight: 360 grs (0,8 lb)
- Dimensions: 120 x 70 x 45 mm (4,7 x 2,7 x 1,8 inches)
- Power supply requirements:
  - Voltage: 9 to 18V DC regulated
  - Connector: 2.1mm DC jack, Center negative
  - Current consumption: 120mA
  - Recommended supply current: 200mA and up
- Input Impedance:
  - Input: 1Meg Ohm
  - L & R return: 1Meg Ohm
- Output impedance:
  - Send: 1K Ohm
  - Unbalanced Outputs: 4.7K Ohms
  - Balanced Outputs: 100 Ohms
- Headphone amp specs:
  - Power: 135mW into 32 Ohms.
- Use with 16, 32, 64 and 96 Ohm Headphones. Loss of power can occur with higher impedance headphones.

## Powering up

Before powering up the unit, turn down the receiving device (PA, interface, headphones, etc) in order to avoid power up “pop”.

The best way to power up a Simplifier, is to use a 9V REGULATED DC adapter, make sure you are using a clean voltage source and you are not daisy chaining the power supply with high current digital units.

## Recommended Power supply:

The Power supply specs should be:

- 9V to 12V DC voltage
- Regulated (designed for low noise, musical instruments use)
- 150 mA minimum current rating. You can use higher current rating supplies.
- Center negative.

Do not use cheap wall wart adapters not intended for pedal use. These are not filtered or regulated and will introduce hum and other unwanted noises.

**\* DO NOT USE CENTER POSITIVE SUPPLIES, IT MAY DAMAGE THE UNIT AND IT WILL NOT BE COVERED BY WARRANTY. PLEASE MAKE SURE THE POLARITY IS CORRECT BEFORE POWERING UP.**