



Phoenix Gold

ZEN

2018

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 **PHOENIX GOLD**



ZEN

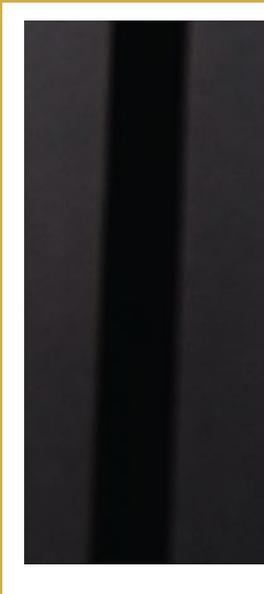
LIMITED EDITION

By 2009, it was time for some monster sound. It was time for The One. With a massive power supply pushing out 12,000 watts of power (yes, you read that right), this was the amp you chose when you wanted the folks in the next town to hear you coming. That is, if you were lucky enough to be one of the 50 owners in the U.S. (and another 50 internationally).

All that power. All that sound. Bringing us to today, when it's time for a little... ZEN.

The ZEN9. The very latest in limited edition amps from Phoenix Gold. Only 100 serialized versions exist in the universe. (And yes, we have some here.)

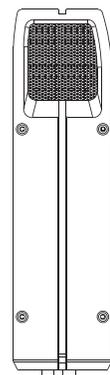
The ZEN9 is a hybrid, 9-channel amp with the highest quality components, which you can marvel at through its Plexiglas cover. It joins the legendary Phoenix Gold history makers, providing true audio reproduction.



ULTIMATE



EVERYTHING YOU WANT IN AN AMP WITH NOTHING YOU DON'T. THE ULTIMATE IN CAR AUDIO.



# 04.

## INTRO

Ah, Phoenix Gold. You know this amazing company for its high-end car audio. The gold standard for car audio, you might say. But do you know where it all started? Come take a walk through the history of Phoenix Gold special edition amps that made their mark and set the standard for the car audio biz — all the way up to today (yes, we're saving the best for last).

It all began in the '90s with the famous Frank-Amp 'N-Stein. Only 100 of these legendary amps were even made — and they actually contained two separate amps, pairing an MQ-430 4-channel amp with an MS-2125 2-channel model. Even the delivery of this amp told you something special was happening — It arrived packed in a wooden crate and burlap bag, and came with "neck bolts" befitting its name.

What could possibly follow that auspicious debut? Well, obviously: The Son of Frank-Amp 'N-Stein. If you were lucky enough to grab one of the 300 or so of these amps that were made in the '90s, you got to enjoy the standout magenta and cyan metallic flakes on the heat sink, and the pink end plate graphics — as well as the same ultra-cool packaging as its "dad."

In the late '90s, Phoenix Gold paid homage to the greatest of road trip highways — Route 66 — with an amp of the same name. This 6-channel beauty paired the M24 and M44 amps, with about 1,200 produced. Perfect for speeding down that long stretch of Western highway with pedal to the metal and volume cranked to the max.

And while we close out the '90s, let's tip our hat to the Octane. With carbon-fiber cool looks and all the accessories (Low pass level adjustment. Base cube remote. You name it.), this baby poured high-octane power and sound into your speakers to produce a sensation we can only describe as bliss.

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The ZEN9 is a hybrid, 9-channel amp with the highest quality components, which you can marvel at through its Plexiglas cover. It joins the legendary Phoenix Gold history makers, providing true audio reproduction. Everything you want in an amp with nothing you don't. The ultimate system amp in car audio.

You want stats?

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## Here are some stats:

Class AB and D hybrid audiophile audio design

Overbuilt quad-unregulated power supplies

Hand-wound power supply transformers

Triple Darlington output section with Sanken output devices

PUR Technology direct signal input circuitry

JET fan-cooled chambered heatsink thermal system

Gold-plated 3-oz. circuit board

Dual 1/0 power input terminals

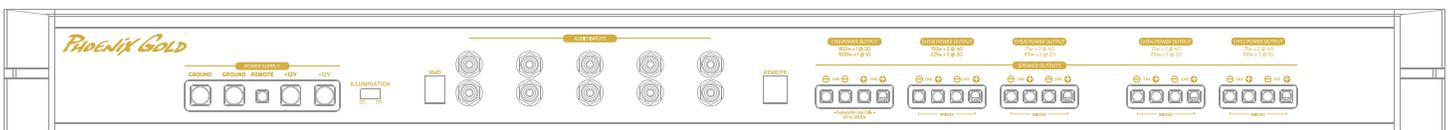
Panel-mounted RCAs

High-temperature Plexiglas cover

Audio precision quality control verification

Hand-signed power output birth certificate

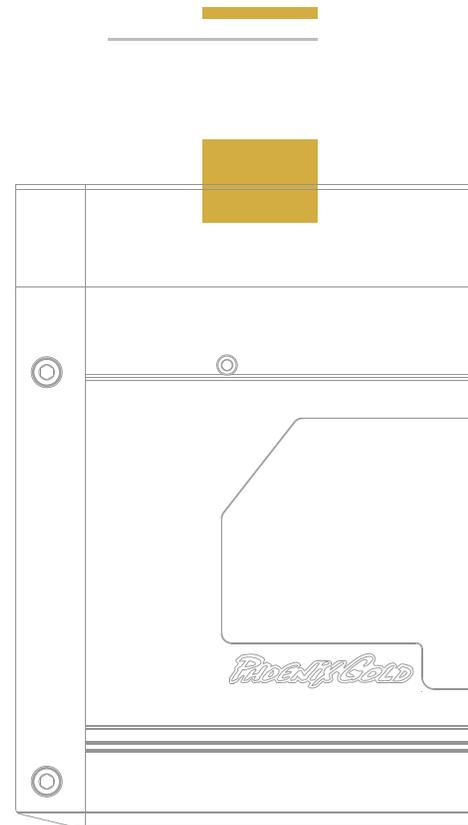
Be a part of history — and a part of the legend. Contact us today about the latest Phoenix Gold 100 piece limited edition amp — the ZEN9.



# 06.

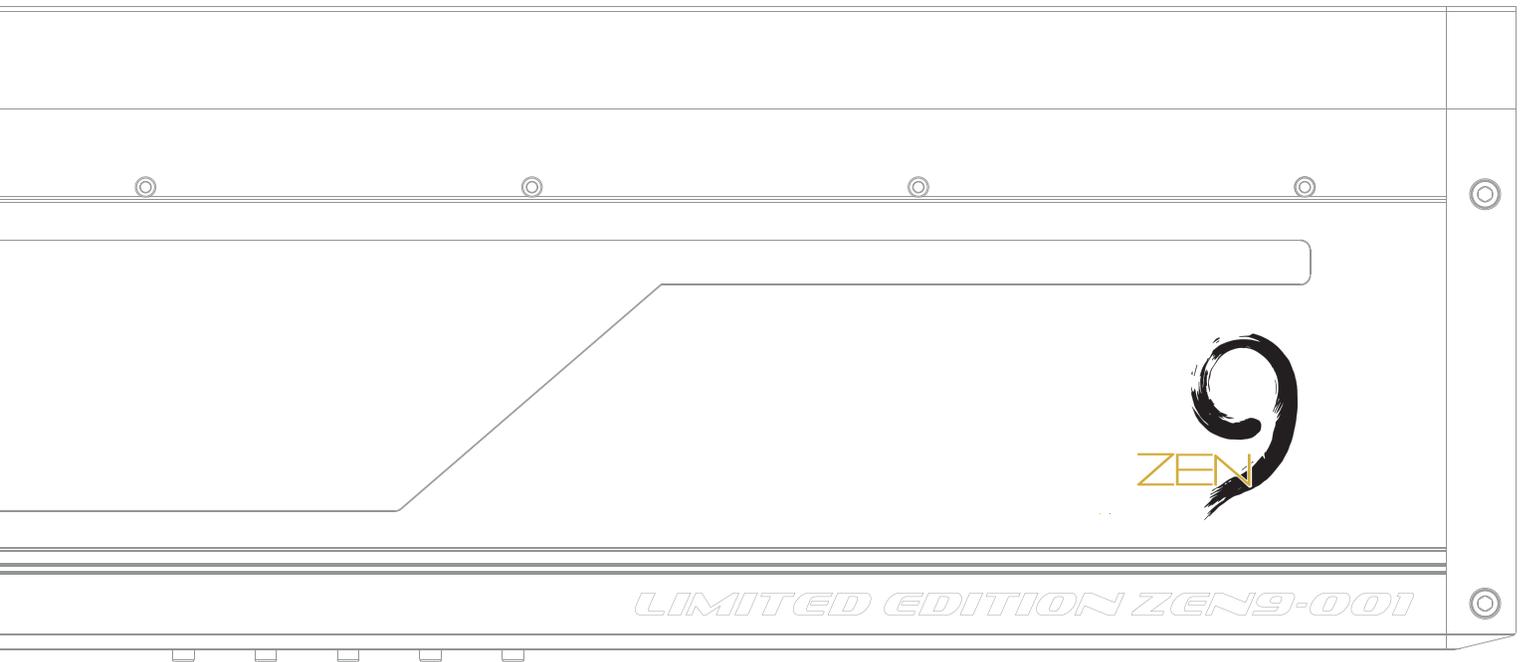
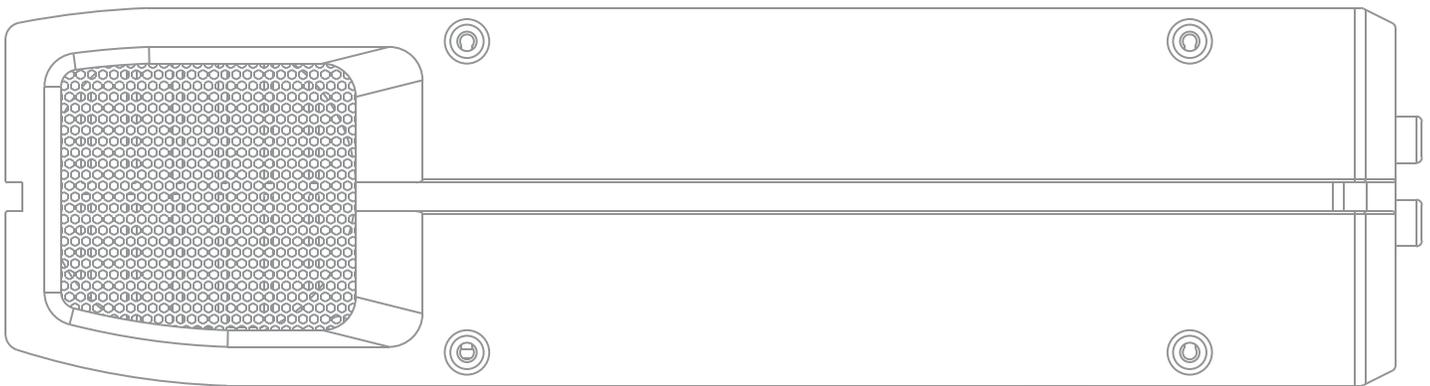
## SPECS

- > Channels 1 & 2 – 75w X 2 @4Ω  
100w x 2 @2Ω
- > Channels 3 & 4 – 75w X 2 @4Ω  
100w x 2 @2Ω
- > Channels 5 & 6 – 75w X 2 @4Ω  
100w x 2 @2Ω
- > Channels 7 & 8 – 150w X 2 @4Ω  
225w x 2 @2Ω
- > Channel 9 – 800w X 1 @2Ω  
1000w x 1 @1Ω Subwoofer Use Only 20 to 200Hz
- > Average Current Draw @ 14.4v Music: 125A at 4Ω Stereo Channels & 2Ω Mono Channel
- > Power Terminal: 4 Gauge (Dual)
- > Speaker Terminal: 10 Gauge
- > Topology Class: Hybrid AB/D
- > Heatsink Type: Extruded Aluminum
- > Cooling Type: Push Pull Fan
- > Operating Voltage: 11.0V to 16.1V



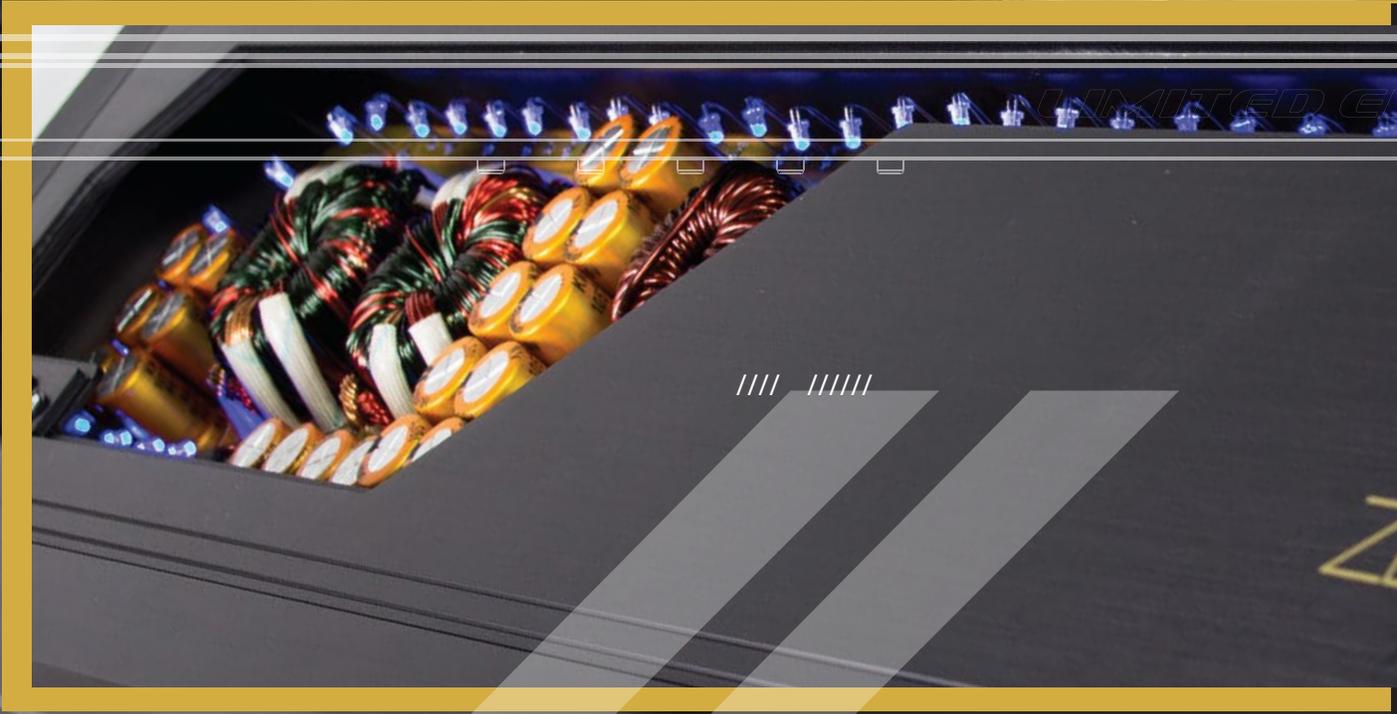
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Recommended External Fuse Rating – 250A





08.



## > ZEN9

### **RMD**

RMD port is for connecting an optional Remote Monitoring Display (RMD). The RMD allows real-time viewing of system voltage.

### **REMOTE BASS LEVEL CONTROL (RBCF)**

This port is for connecting the remote subwoofer level control. This allows up to 20dB of volume adjustment for the subwoofer channel. This is not a bass boost, it controls the level of the low pass signal.

### **ILLUMINATION SELECTION**

Selectable on/off illumination provides an LED illumination of the internal portion of the ZEN9 – Push/Pull On-Board Fans - ZEN9 features push/fans that provide cooling to the unit's heatsink. Under heavy load the fans reduce heat by up to 30%

### **PEAK OUTPUT LED INDICATOR**

Each channel pairing of ZEN9 features a Peak output light indicator located under the top mount cover. Adjust LEVEL so the PEAK LED flashes when driving amplifier hard, but not so much that the LED stays on continuously. Light will illuminate when rated output voltage is achieved.

### **+12V**

This must be connected to the fused positive terminal (+12V) of the car's battery. The fuse must be located within 18 inches of the battery(s). Proper gauge and power support system is needed for proper operation, current demand is very high when driving this amplifier at full output and low impedances (250A+). This amplifier will expose a poorly designed electrical system. Don't short change the performance of your system. An upgraded alternator, multiple batteries and upgraded ground system is highly recommended for peak performance and listening enjoyment. With great power comes great responsibility, and you are responsible for making sure you can supply this amplifier with enough power to do its job!

### **REMOTE**

This must be connected to switched +12V, usually a trigger wire coming from the head unit or ignition.

### **GROUND**

This must be connected to the negative terminal of the car's battery or bolted to a clean, unpainted part of the chassis of the vehicle. A proper ground is imperative for peak performance and the high current demands this amplifier is capable of requiring.



ZEN9  
: The Ultimate System Amp



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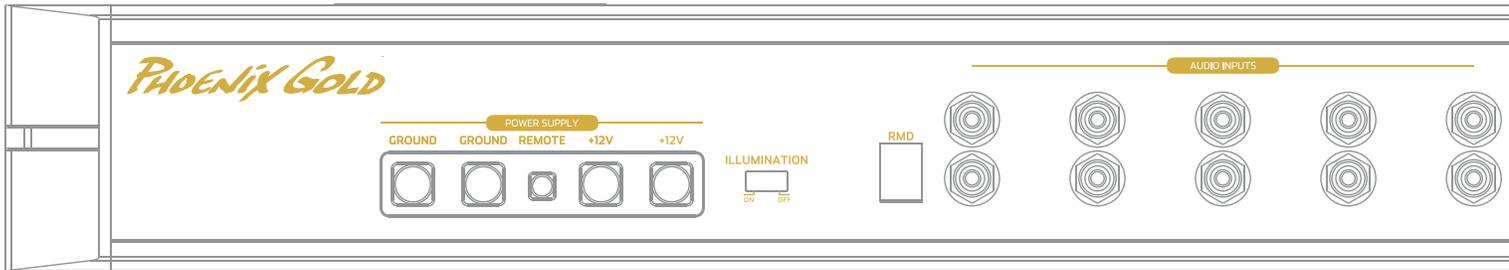


# 10.

## PARTS

### > Sanken Transistors

By adapting the Sanken unique wafer-thinner technique, these PNP power transistors achieve power-up by decreasing thermal resistance, and provide higher voltage avalanche breakdown rating. The high power-handling capacity of the TO-3P package allows a smaller footprint on the circuit board design. This series of transistors is very well suited to not only multichannel applications for AV (audio-visual) amplifiers and receivers, but also parallel connection applications for PA (professional audio system) amplifiers.



### > Schottky diode

(Named after the German physicist Walter H. Schottky), also known as Schottky barrier diode or hot-carrier diode – a semiconductor diode formed by the junction of a semiconductor with a metal. It has a low forward voltage drop and a very fast switching action. The cat's-whisker detectors used in the early days of wireless and metal rectifiers used in early power applications can be considered primitive Schottky diodes.

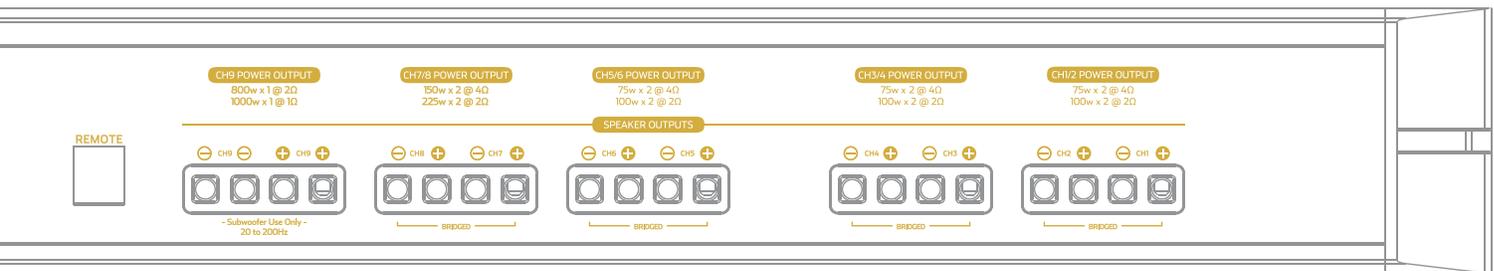
When sufficient forward voltage is applied, a current flows in the forward direction. A silicon diode has a typical forward voltage of 600–700 mV, while the Schottky's forward voltage is 150–450 mV. This lower forward voltage requirement allows higher switching speeds and better system efficiency.

### > SAMYOUNG Industrial Capacitors

Samyoung capacitors are one of the world's leading high-quality capacitor manufacturers. Samyoung has been designated as a first class manufacturer by Industrial Advancement Administration. They have also been selected as one of the Top 100 Quality Management Companies by the Industrial Advancement Administration Cited for 100PPM product quality assurance (SMS, SM Series) Awarded parts and materials reliability modeling certification. These high quality components allow for strict tolerances and high reliability for enhanced sound quality, dynamic range and transient response.

## > Tiffany RCA Connectors

The vast majority of RCAs have a difficult method of attaching the ground. Soldering the wire to some large metal part, and it either is difficult to fit the one sided lump back under the outer shell. With NO solder the ground is uniformly around the RCA cases, instead of struggling with dressing it from a tubular sleeve into a one sided clump to solder in a standard RCA. The best possible signal starts with the connections. We want the strongest connection possible to transfer the signal cleanly and efficiently. Tiffany RCA connectors allow this to happen.



## > Fuse Replacement & Service

Always have a clean, static-free environment if you need to service the ZEN9. Never disassemble the ZEN9 in a vehicle or while connected to any type of power source. Doing so can cause harm to the ZEN9 and will void any stated warranty. Always replace fuses with the same amperage as listed below, any variation of this can damage the amplifier or cause it not to perform as rated.

ZEN9 features 3 separate fusing systems which are located on the main board.

Ch 1-4 and LED lights are served via (2) 30-amp fuses located @ J5 & J7

Ch 5-8 are served via (3) 40-amp fuses located @ J8, J9 & J10

Ch 9 are served via (3) 40-amp fuses located @ J2, J3 & J4

Illustrated steps to access internal fuses on page 12 - 13.

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## Step 1



Remove the (5) 3mm hex head screws from the top of the amplifier

## Step 2



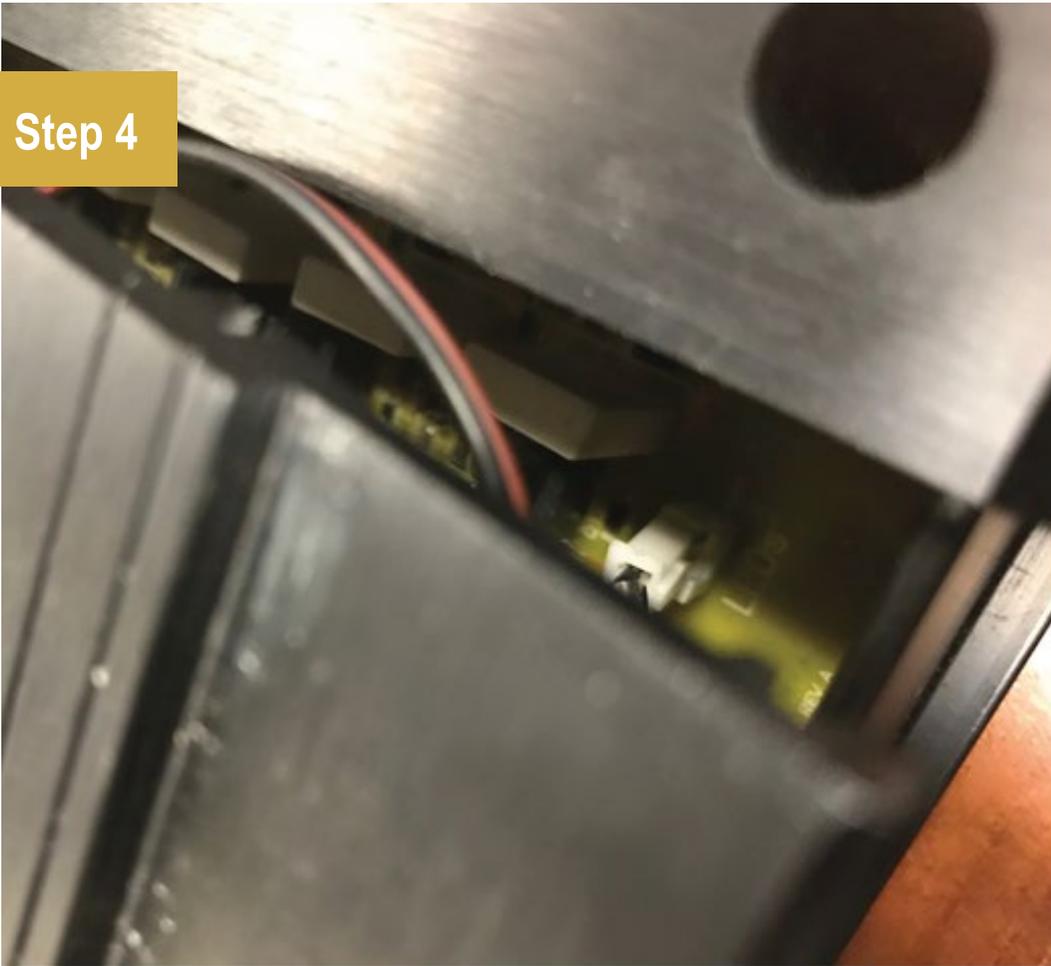
Remove the 2 top 2.5mm hex head from the end caps (ONLY REMOVE THE TOP SCREWS)

## Step 3



Slide the top back towards the terminal side of the amplifier

## Step 4



Lift the top cover until it binds, allowing access to remove the LED harness located the right side of the amplifier

## Step 5



Lift in a pendulum motion from the front up to swing the top cover off of the amplifier





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