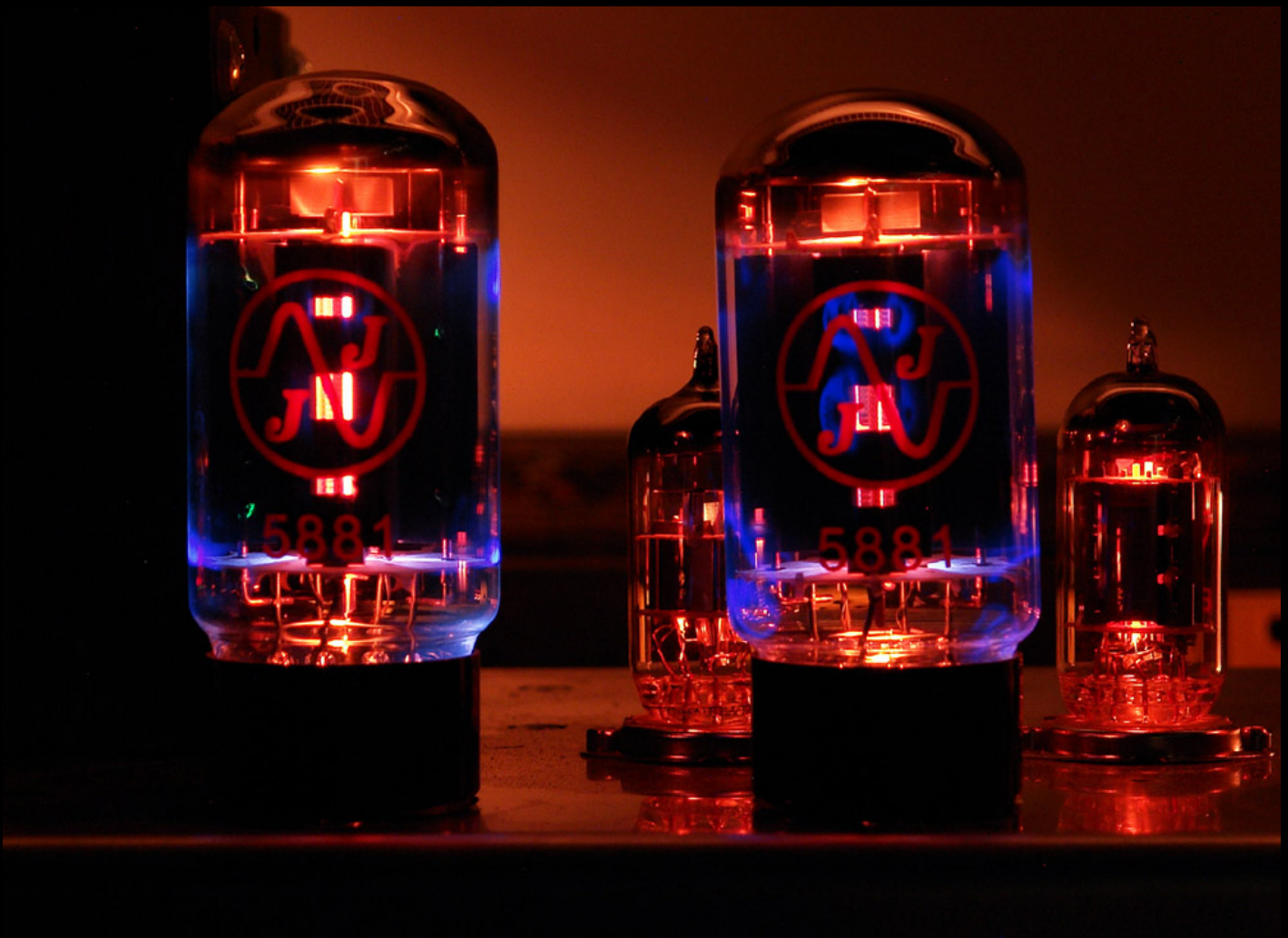


# 11 Key Boutique Amp Secrets

Insider Secrets Mass-produced Amplifier Companies Don't Talk About



**45RPM**

## Boutique Guitar Amplifiers

***Boutique guitar amplifier*** - a guitar amplifier that is typically hand-built with the intention of being a significantly better product than the low cost mass-produced variety offered by large companies.

There are so many good boutique amplifiers examples these days. It is refreshing to see the growth and variety of such fine products. It is also rewarding to see the reemergence of more vacuum tube manufacturers and other companies that are part of the growth and interest in handcrafted guitar amplification.

Ultimately it is the players who reap the most benefits of these fine products. Hand-built quality guitar amplifiers provide a superior playing experience, harmonically rich tone and durable long-lasting value.

It is a great time to pick up your favorite guitar and plug into an expressive, fun to play boutique amp.

## Secret #1

# Many Mass-produced Amplifiers are built for Bean Counters not Musicians

Some large and well known mass-produced amp companies started out building quality guitar amplifiers that were laboriously hand-built, with point-to-point construction, much like today's boutique amplifiers.

As these companies were increasingly successful, they inevitably went to mass-production and started focusing increasingly on product construction costs. In some cases, a larger company came in and purchased the initial company, aggressively monetizing its engineering strategy in the process.

Today, many companies decide to take this path from the start, as part of their initial business plan. In this approach to construction, bean counters can rule the roost and decisions are made with specific financial goals in mind.



One, two, three, four...

Often the first goal is to lower the cost of construction. Sometimes this means moving the entire production to another country with lower labor costs. Generally, time-consuming hand wiring and expensive premium grade parts are not part of this business plan.

With lower production costs driving the amp construction, it becomes more difficult to produce a high performing product. In addition, ease of repair can be compromised, and long-term value can drop.

This doesn't imply that all volume production manufacturers build this way. There are companies that are quite focused on making a quality product and use some volume production technologies. They specify higher quality components and maintain strict production controls. Their retail price usually reflects their focus on higher quality construction and consequently their amps are more expensive. They make fine products and shouldn't be categorized with companies whose primary focus is on rapid mass-construction and low costs.

Boutique amplifier companies have a fundamentally different philosophy than the low cost driven mass-produced amp companies. For the boutique amplifier company, just as for a quality chef running a restaurant, certain standards are met regardless of cost. If those standards are ignored, their reputation suffers.

This isn't to say that boutique builders don't work hard to keep costs under control. It means that their end product is often highly valued, their market has high standards, their margins smaller, and that the value of their product is reflected in its price, and that value can increase over time. This approach to high quality and construction not only makes a better-built product that lasts longer, but can perform significantly better. Many great hand-wired boutique amps end up lasting a long time, just like the quality vintage amps that were built by hand before mass-production techniques.

## Secret #2

# Mass-produced Guitar Amps Can't Be Custom Ordered

Along with the efforts of reducing costs, low cost mass-produced guitar amp manufacturers also are often intent on providing products that are focused on a quantity versus quality approach. The more amps they can build, the more amps they can sell, and the more money they can make.

Basically, this means building in the most cost effective manner to make the easiest to build amp that will appeal to the widest group of players, in the largest possible market.

That doesn't mean that mass-produced amps can't sound good. Many do, but it does limit what effort these companies are willing to go through for their customers. Some manufacturers attempt to make a variety of models in the hopes that one of them will appeal to just about every customer. This leaves it up to the customer to search out what may be available to them that hopefully comes close to what they are personally looking for.

All of these efforts to engineer at the lowest possible cost limit their ability to produce some types of quality amplifiers. There are sophisticated tones and playing characteristics that are not easily or inexpensively mass-produced. Another key factor is that mass-produced amplifier manufacturers are generally removed from direct contact with individual players unless they are "name" artists that they cultivate for advertising and endorsements. Custom ordered product built specifically to the needs of a specific customer is not part of their business model.

Boutique amplifier builders are focused on building the best sounding amps that they can build. In many instances, they have a builder-to-player personal relationship, and/or the company owners are themselves avid players.

Boutique builders may have a style of amplifier that they hang their hat on, but they generally have a wider availability of tones, higher quality and unique features. Many even will make some modifications to their amplifier circuits or product cosmetics to address the particular characteristics that their customers are searching for.



Trim tab inside a boutique amplifier to tune the circuit to a custom level.

Generally there is a much more personal relationship between the boutique builder and their customers when compared to mass-produced amp manufacturers, and that relationship results in a much wider selection of finish and feature options. One famous boutique builder built all of his amps electronically tuned specifically to a particular player who wanted the builder to provide him an amp.

Given the large selection of boutique builders there is an unusually diverse collection of amplifier types to choose from. Want an amp made from an ammo container? Want an amp with a higher gain structure? No problem. The point is that players have different ideas about what they are looking for in an amp, whether it is performance, aesthetics or capabilities.

Boutique amplifier builders provide that level of personalized product.



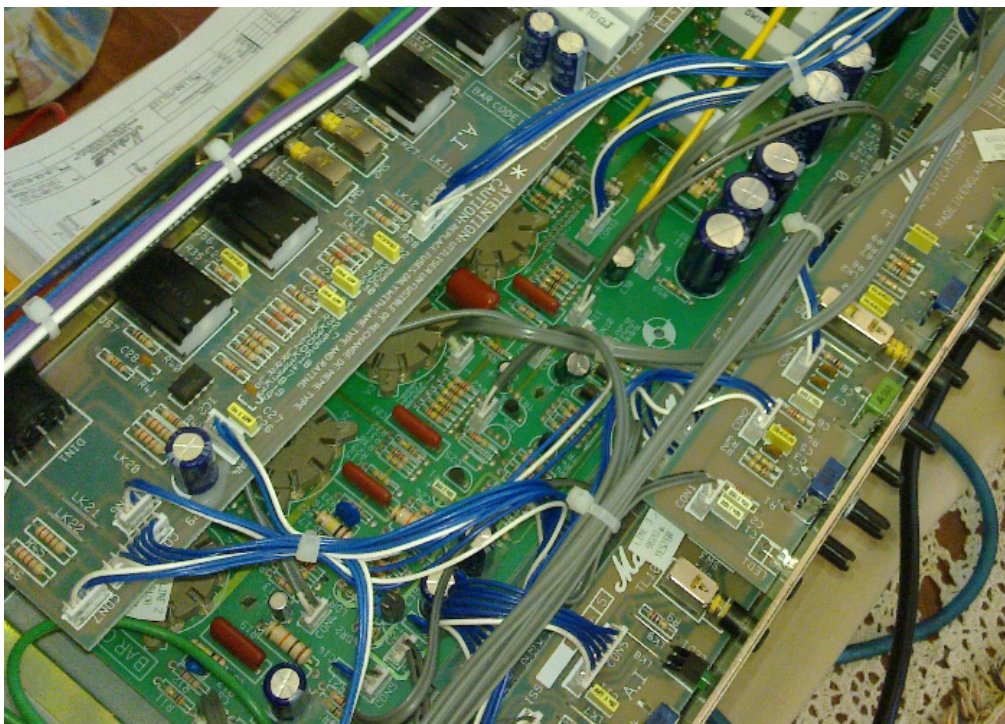
## Secret #3

### Mass-produced Amplifiers Can Be Difficult to Repair

In the drive to reduce the cost of manufacturing guitar amplifiers, mass-produced manufacturers abandon labor-intensive hand wiring and instead utilize printed circuit boards, commonly known as "PCBs". PCBs are a glass epoxy sheet covered with a thin layer of copper foil. Circuitry interconnections are etched into the copper layers where the parts are placed. All of these PCB boards and parts come in various grades and quality.

Once a board is filled with parts, it is run through a wave solder machine that, in one pass, solders the parts to the PCB. Sometimes, in a cost saving effort, less expensive, lower quality parts are used, increasing the possibility of premature failure. These smaller parts can be placed tighter together to further reduce cost and cheaper PCBs can have thin copper traces that are very tightly spaced. This can increase the possibility of audio cross talk and low-level capacitance where parts interfere with the performance of other adjacent parts. Thinner traces can also be prone to delamination and cheaper PCB board material is also thinner and can be prone to warping from the heat produced in the amplifier's day-to-day operation.

This doesn't mean that all PCB guitar amp construction is built this way. There are fine companies that go to great length to have quality thru plated PCBs with robust traces laid out for performance and quality construction in mind. All of these improvements come with an associated increase in cost. The end result is products from these quality companies that use high-grade PCB construction can even cost as much as a hand wired product.



Nicely built but still can be a pain to repair. Tiny parts and tight traces can be a headache. Better have some special tools and a hefty magnifying glass.

## Mass-produced Amplifiers Can Be Difficult to Repair

Many guitar amplifiers, unlike cell phones and other typical consumer electronics, use vacuum tube technologies. The grids and heaters of these electronic glass bottles, especially the power versions, create a significant amount of heat.

When you look at how guitar amps are used and the amount of heat and vibration that is routinely produced, it's easy to understand how that environment can be taxing on parts and components. When problems do arise in low cost mass-produced amplifiers, the tight placement, sheer number of parts, and closeness and thinness of the copper traces can create difficult and expensive repairs.

Boutique amplifier builders use a completely different approach to circuit board construction. First, boards are drilled, and then either eyelets or turrets are pressed into the holes. These constitute the connection points for the wiring of the amp and the installation of parts. Each of these connections and parts are individually soldered. Boards are robust, thick and are not susceptible to warping.

Because the boards are laid out for hand construction, parts are usually larger and are spaced much less tightly than PCB construction. As boutique amplifiers are built with quality performance as the primary motivation, careful consideration of where parts are placed, proper spacing, minimized part crosstalk and accurately soldered connections are the construction standard.

All parts are soldered from the top of the board and are easily replaced. All of this careful attention to detail makes a product that is much less prone to failure and, even if there is a part problem, it's significantly easier to troubleshoot and repair.



Boutique amp board - connections and premium parts are individually soldered from the top. Larger and much easier to service.

## Secret #4

### Modern Mass-produced Amps Depreciate Significantly In Value Over Time

OK, so you are in the market for a new amplifier. It's exciting. You've got your hard-earned cash in hand, and you're ready to plunk it down for a quality piece of gear. You want an amplifier that sounds the way you want it to, at the best possible price for whatever model that suits your needs.

One thing you might not have considered is that a typical modern low cost mass-produced guitar amplifier depreciates in value much more quickly than vintage and boutique amplifiers. Like a new car, once you drive it off the lot, it immediately drops in value.

Much of this comes from the perception of the general construction methods that are used to create mass-produced amps, with their cheaper parts and PCBs that are not designed and manufactured to be as long lasting or robust as hand built boutique amps.



The proverbial flushing money down the drain.

On the other hand, boutique amplifiers generally are worth more of their original cost in the used marketplace than mass-produced amplifiers. This is because there is a much higher comfort factor with a used amp when the amp was initially built to higher quality standards than low cost mass-produced brands.

It is safe to say that often in the thrill of the chase for a new amp, long-term value isn't the number one thing on a player's mind. But when taking into account in the rapid onslaught of depreciation and the higher potential of long-term expensive repairs, some of the value of "bargain priced" mass-produced amplifiers quickly evaporates.



## Modern Mass-produced Amps Depreciate Significantly in Value over Time

After long-term costs and depreciation are factored in, the initial expense of a higher quality amplifier seems much more reasonable. If you look closely, that higher quality amp really isn't that much more money over the long term.



Used Dumble amplifier for sale.  
Asking price: \$120,000.

Let's think about this. One of the reasons vintage amplifiers are so popular and hold their value so well is the fact that originally they were built like today's boutique amplifiers. In the early vintage amp days, robust long-lasting construction and hand building with quality components were the norm.

When you look at the original cost of those vintage amplifiers, you can quickly see that, in today's dollars, hand-built boutique amplifiers are a bargain. In 1964, a Fender Blackface Twin had a retail price of just under \$500. Factoring in inflation, that same amp would be \$3835 in today's dollars. For that much money, you can find an amazingly nice, hand-built, long lasting, great sounding boutique amplifier.

With the brunt of our consumer goods primarily coming from overseas, the general perception is that most of these low cost mass-produced products are of a lesser quality, not built with quality construction and indicative of a high turn around, short lived, disposable approach to manufacturing.

Many mass-produced low cost guitar amplifiers are just more imported consumer goods. It is clear they are not built to last with no consideration for appreciating long-term value.

This is in stark contrast to hand built American boutique amplifiers. Not only do boutique amplifiers hold more of their initial value over time, some of them actually increase in value over time, and are worth significantly more money than when they were originally sold.



## Secret #5

# Low Cost Mass-produced Amplifiers aren't built with Tone and Playability as the Primary Goal

Ultimately when it comes to guitar amps the one key feature that boutique builders hang their hat on is TONE. It is easily the most important aspect of a boutique amp. It is safe to say that if a boutique amp doesn't have great tone it doesn't matter what other features it may have because it won't be in the market very long.

All of the attention to detail in construction and choice of superior components not only create a more reliable and long lasting product but also have a profound effect on the caliber of tone a boutique amp is capable of producing.

The fact is many boutique guitar amps simply sound better than their low cost mass-produced competitors.

Also, some boutique amplifiers are able to produce a much wider palate of great tones due to the sophisticated nature of the circuits and quality of the parts used. But, in the long run having a product that simply sounds much better, lasts longer and doesn't depreciate like mass-produced product is enough of an enticement for a discerning player to make the investment. The ultimate trade off for your hard earned cash is having a great sounding product to use day after day. That speaks volumes to the serious player.



Boutique amp tone stacks.

While there is significant conversation about the superior tone available from boutique guitar amps, one subject doesn't always get the attention it deserves: how the amp plays.

Great amps have feel.

In reality, how an amp feels is as important as how it sounds. There are so many characteristics of great playing amps, including note bloom, natural compression, sustain, pick attack, attack time, and many others.

An amp that is sensitive to playing dynamics and is extremely responsive to pick attack is a joy to play. It brings out all the subtleties of your performance. This brings a whole new level of pleasure to your playing.

Some characteristics, like the amplifier attack time, completely change the way an amp plays and impacts how a player interacts with the amp. A classic example is how the difference between a "fast attack" amp and a "slow attack" is very immediate. Consequently, it can take some time to acclimate to a "fast attack" amplifier as an amp with slower attack is much more forgiving. If your playing isn't tight, it is very hard to hide the mistakes with a fast attack amplifier. However, in exchange you get an amp that reproduces all the nuances of your playing and articulates them exactly. This makes the amp very expressive.

## Low Cost Mass-produced Amplifiers Aren't Built With Tone and Playability As The Primary Goal

### **Nicely built boutique amp characteristics:**

**Clean Headroom** - Even if you dig in it won't break up.

**Spacious Tone** – Airy, in the sense that the sound is not closed in.

**Overdrive Note Clarity** – Clarity of sound even when heavily overdriven. Each note in a chord is articulated.

**Note Bloom** - Harmonic content that occurs that is more than just the main note harmonic.

**Tight Pick Attack** – Very accurate tracking of the subtleties of picking, from the lightest to the heaviest.

**Harmonically Rich** – Produces a full rich sound with lots of harmonic content. Not one dimensional.

**Musical** – Not sterile, lively with a rich, full tone.

**Fun to play** - Brings out the best in a player's performance. Sounds great, accurate tracking, fun to play.

**Signature Sound** – Flexible in the features and tone set to allow a player to find a "Signature Sound".

Hardly any of these boutique amp characteristics are available in mass-produced amplifiers.

Here is a very interesting quote from a player while demoing a nice boutique amp...

"Sometimes, I don't know how to describe it, but when you were turning the knobs I could feel it in my fingers..."



## Secret #6

# Low Cost Mass-produced Amp Companies Can Have Poor Customer Support

One thing has become pretty darn clear: most imported consumer goods are built cheaply as possible, are not built to last, and correspondingly often have poor customer service. As most products are sold through a retailer, the manufacturer seems to take the attitude that the retailer is responsible for handling any manufacturing issues. Many products simply can't even be repaired anymore.

This becomes a particularly difficult issue when it comes to mass-produced guitar amps. Guitar amps are supposed to be built for the particularly rough conditions experienced on the road. On the move, going to gigs, recording studios and rehearsals, lugged in and out, not like your toaster sitting on the counter top.

Hot, cold, rough handling, road vibration, road crew mood swings. If an amp isn't built up to snuff, it will quickly show up in these kind of difficult environments. If issues do show up, at the store, home, rehearsal or, most importantly at the gig, word gets out quickly in today's highly connected world. There are countless outlets for direct feedback from a diverse collection of players.



Great customer service – a dying art?

For example, a quick Google search about a mass-produced amp company that makes a reasonably full-featured amp that sounds pretty good returns all kinds of comments that undermine whatever good things the company has going on. This can get you in hot water in today's online world, as any issues quickly show up on forums and in web discussions.

It is pretty easy and quick to find comments about this particular company like: *"I owned a [XXXX] head for less than a month. New out of the box and it stopped working."*

*No sound -- swapped out the tubes and didn't make a difference. Returned it and got another one new in the box. Random static while playing. Swapped the tubes, again, and the static didn't go away. Returned it for a full refund. The sales guy at [XXXX] Music said they'd had all kinds of product issues with different models from [XXXX] Amplifiers."*

*"It does seem that are some common issues that [XXXX] MUST be aware of (tubes and fuse), yet when I approached them for their input, they basically told me to \*!\$% off! I openly admit that I'm pissed off with them, and my experience of the company's customer service (USA head office) leaves me reluctant to recommend their products to anyone."*

Even though the amp may have been relatively decent sounding and affordable, people discussing your amp's weaknesses online can often be the kiss of death. This kind of chatter can expose less robust construction, negative perceived value, inexpensive PCB board construction, low prices in online auction sites, negative word of mouth, in-store initial problems out of the box, and it highlights these problems in online blogs and articles detailing quality issues. After a while, it becomes less and less important that that amp actually sounds good and is inexpensive; those points become lost in the wash of negative press and conversation.

## Low Cost Mass-produced Amp Companies Can Have Poor Customer Support

Calling mass-produced amp manufacturers' service departments can turn into a nightmare. Instead of manning up and addressing the problems, sometimes the exact opposite happens. It can become crazy difficult to try and get any service or support at all.

**Sometimes service calls to mass-produced amp companies feel like they go nowhere.  
Or maybe it's that they just go somewhere like this...**





## Low Cost Mass-produced Amp Companies Can Have Poor Customer Support

Obviously not all companies that use some volume production techniques have bad customer support. There are fine companies who utilize these building methodologies that maintain high quality customer service just as they work diligently to produce a high quality product. Generally their extra effort to build a quality product and provide good customer support comes with a higher price tag.

Many boutique builders make customer service an important part of their business operation. As a smaller specialized builder, reputation is everything. Your reputation is always on the line. If a customer is having a problem with one of your amplifiers, a boutique builder's primary focus is customer service, often dropping everything to keep the customer happy.

Fortunately, because boutique products are overbuilt, with higher quality parts, there generally are not the quality control issues, part failures and other problems that can often plague low cost mass-produced product. If something does go wrong, the boutique building process dictates a swift and comprehensive repair of the problem.

If you can, buy quality. Invest your hard earned cash in things that last, because it's ultimately a better investment. \$300 hiking boots that last 10 years cost \$30 a year. This comes to about eight cents a day.



Just like the vintage days of electronic repair (before the “it’s not worth fixing” era) the boutique builder is focused on a “hands on” quick turnaround if there is ever a repair issue.

## Secret #7

# Where is Your Mass-produced Guitar Amp Actually Built and What Does It Actually Cost?

Unfortunately when you are buying low cost mass-produced guitar amplifiers it is very likely the entire amplifier has been cheaply built offshore. Ultimately, when lowering costs of production is the primary principle, it seems that the first tactic is to take manufacturing offshore where labor costs are lower and regulations and worker's rights are lax. Currently there are major mass-produced guitar amp manufacturers having product built in Korea, China and Mexico.

As trade agreements were created that benefited corporations, more and more American companies began to "farm out" their construction to other countries. Globalization, technology and hunt for more profit, via lower costs, made it possible to manufacture and assemble parts in an overseas location and sell them around the world. This can be a very profitable approach for companies with the money to implement it.

Critics of this approach to construction point out there are a number of important aspects that are not beneficial to anyone else but the corporations implementing it. This hides the true cost of the product.

Many of these countries where manufacturing is outsourced not only have significantly lower labor costs but also have lower sets of standards to health, safety and environmental regulation. Many of these standards are favorable to the corporations, but come at the expense of the foreign and American workforce. Other than low wages, the benefits of manufacturing don't go back to the local manufacturing economy to raise the local standard of living. If the money was invested back into their economy, the laborers' wages would rise, and the companies would not utilize outsourced manufacturing. At the same time, all of this is impacting the former healthy finances of the average middle class Americans.

You may be asking yourself, who cares as long as I can get the product cheaper? What difference does it make to my family, my standard of living and me?



Hey, my amp was partially assembled by Number 13, Row 31.. or was it Row 32?

## Where is Your Mass-produced Guitar Amp Actually Built and What Does It Actually Cost?

Well, when you look at how the middle class of this country is evaporating in front of our eyes, you begin to understand that these kinds of business practices are undermining the foundation of our personal financial well being, while manufacturing corporations continue to make profits. Look at retail store closings, reduced consumer spending and the number of people on food stamps or any other indicators of the health of the American economy. Soon, if things don't change, there will be no one left to sell to.

Don't get me wrong; the reality is that even if you are building a superior product in the USA, components can often be coming from all over the world. You might be building an amplifier with a speaker that has a frame and magnet made in this country, but a cone manufactured in England. It's the same with many electronic parts, like resistors and tubes. However, there are some positive exceptions. Great transformers are once again being built in the USA.

The key point is that even if every single component in a boutique amplifier is not manufactured in the USA, their design, construction, and assembly is centered in America, and the money from sales of the product cycle around in the local economy, bringing growth and economic prosperity.

After all, if you get a great boutique amp, it will last you for decades. Some vintage amps built over 50 years ago are still rocking out.



Judging by the look of it this vintage Deluxe, it probably still sounds and plays just great.

## Secret #8

# Low Cost Mass-produced Guitar Amps Are Not Built to Last

The simplest definition of a guitar amplifier is: an electronic product that makes the signal from an electric guitar pickup louder.

This simplistic definition of a guitar amp sets the bar pretty low for accomplishing what it takes to be a guitar amplifier. Some companies go to great lengths to build their product as if striving for the lowest level is the absolute best choice.

Low cost mass-produced amps are built with one primary purpose in mind: build a successful selling product that has minimal cost, can be quickly and easily built, and is profitable.

Much like many of the other mass-produced appliances available in the stores today, not much consideration is placed on longevity.

Often the choice of components is solely based on their bottom line cost, not their quality or durability. The product is usually constructed in another country where labor costs are substantially lower and built with as much automation as possible. Generally the electronics are mounted on one large printed circuit board and are soldered in place with one pass of a wave solder machine.

It is not unusual to find that the cabinets are made from particleboard and merely stapled and glued. Particleboard is impossible to repair, heavy and prone to being dented or damaged. It's chosen for its low cost, not longevity.

In each case individual components are sourced to be as inexpensive as possible.



Speakers are generally manufactured with a stamped frame and the smallest magnet that allows the creation of sound. Usually each component, like speakers, is built in mass-production facilities specializing in producing product at the lowest possible cost. All of these sub assemblies are designed to benefit from the economics of scale.

However, if a company is bringing in a product that is built in this manner, then they are forced to buy boatloads. And, because the product has to be priced so aggressively, the pressure is on the production facility to get as many units built each day, as fast as possible, to justify the low wholesale selling price.

It is a vicious circle. Speed means difficulty maintaining quality control. Rapidly produced parts can each have their own quality control issues. That is why with some finished product it is possible to have failures right out of the box or have the same model of amplifier sound differently than the one sitting next to it in the store

All of these approaches to manufacturing create a product that is not designed or built to last. Not unlike a commodity kitchen appliance.



## Low Cost Mass-produced Guitar Amps Are Not Built to Last

On the other hand, unlike mass-produced amps, today's boutique amplifiers share many of the characteristics of coveted vintage amplifiers. Many of these classic amplifiers, that were built by hand when some famous companies first started, are still being played everyday. Some are well over 50 years old. These classic amplifiers are the closest comparison to today's boutique amplifiers.

Boutique amplifiers like the vintage amps of old, are built to last. Generally the hand-built caliber of construction of boutique amplifiers can be characterized as "overbuilt".

Physically, boutiques are built with very robust construction using heavy gauge bent and welded chassis and premium grade Baltic Birch plywood. The addition of high quality fasteners, quality handles and oversized feet all contribute to a road worthy package good for many years of service.

Generally with boutiques the speakers have stronger speaker frames and come with larger magnets. Some are even built with hand formed custom cones for improved sonic performance.

Much of this might go unnoticed by the average player, but those in the know can see and hear the difference.

The end result is a hard working machine that will give you years of playing pleasure while holding up under the stress of travel, road gigs and challenging conditions.

Some things are worth the money.



OK, maybe boutique amps won't last as long as these megalithic block walls in Peru, but with care they will last decades.

## Secret #9

# Many Mass-produced Modeling Guitar Amps Don't Sound Like the Real Thing

In the mass-produced amplifier world one of the most commonly produced products are digital modeling amplifiers. These are amplifiers that use a process of digitally emulating a physical guitar amplifier. There are other versions of this type of digital product designed as software for recording directly into a computer, but for the sake of this discussion, we'll address guitar amplifiers that are based on digital modeling technologies.

Few topics garner as much opinionated conversation as modeling amps versus real analog amplifiers. There is a huge ongoing debate about how realistically a digital model can recreate the sound of an actual physical amplifier.

Amp modeling amplifiers often seek to recreate the sound of one or more specific models of vintage or classic vacuum tube amplifiers.

These products work electronically by taking the input signal, converting it to digital information and, with a dedicated microprocessor, attempting to duplicate the characteristics of a more expensive analog amplifier or amplifiers using digital code. Often these amplifiers also have a variety of effects to augment the amplifier emulations.



Ultimate modeling goal?

The attraction of this product is that it has been touted as a great value. It's portrayed as being an amplifier that would sound exactly like a variety of expensive tube amplifiers, and effects, for much less money than the cost of any one of the analog versions.

The problem with this concept is that these amps don't actually accomplish what they say they are trying to do.

There is an analogy to the adamant belief of vinyl record enthusiasts in the superior audio quality of analog compared to the pervasive MP3 sound of music. As analog fans you wouldn't get much argument in this conversation from anyone here but there is a distinct difference between interacting with a product to produce sound as opposed to passively listening to pre-recorded music. The production of sound is much more critical and the physical side of how a product performs is much more demanding.

Perhaps the marketing hype of "being able to get the sound of your favorite vintage amp" is where this entire process breaks down. The reality is that digital models of vintage amps don't really capture the nuances of what a tube amp really sounds and importantly, plays like. In addition, they have a particularly difficult time getting subtle qualities of a fine tube amplifier.

No matter how you look at it, modeling amps might be able to do some stylized versions of what some engineer thinks an amp is supposed to sound like, but creating a convincing substitute and a real alternative choice of a great sounding analog guitar amp is still beyond the limits of what they are able to pull off. Some of the more sophisticated/expensive modeling guitar amplifiers do an admirable enough job and are useful in many applications but still aren't the real thing.

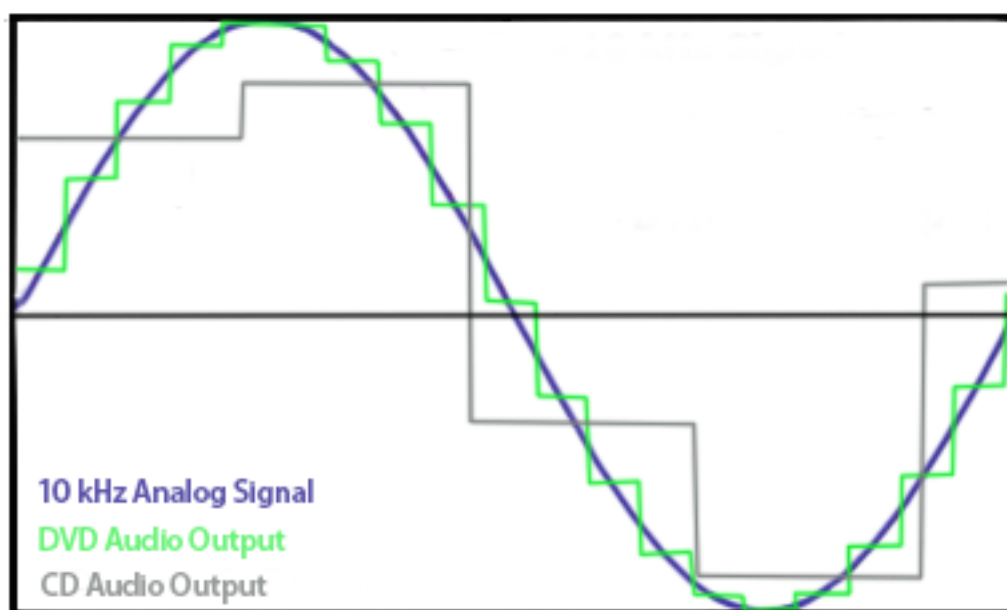
## Many Mass-produced Modeling Guitar Amps Don't Sound Like the Real Thing

Many modeling amplifiers seem to be satisfied to create a stylized version of someone's idea of how a classic amp might sound. Perhaps the future of modeling might be more appropriate trying to just sound like some sort of good amp or focusing on some stylized tones rather than desperately trying to duplicate a specific real analog amplifier.

As it is, you have quite a number of players using models of supposedly specific amplifiers that sound nothing like the real thing.

### ANALOG VS DIGITAL

*The following is a short description of the differences between analog and digital audio in the recorded world. These same principles apply to digital and analog guitar amps.*



A visual comparison of an analog audio signal and CD audio and DVD audio output.

In the graph above the blue sine wave shape represents the original analog 10 kHz signal. Digital recordings take “snapshots” (samples) of the analog signal at a specific rate (sample rate) and capture that digital “picture” with a specific degree of accuracy. The green and grey lines represent those outputs. Obviously the higher the sampling rate and accuracy the closer you get to the original analog sound but a digital recording is never capturing the complete sound wave.

It is approximating it with a series of steps.

## Secret #10

# Low Cost Mass-produced Guitar Amplifiers Are Overpriced No Matter How Much They Cost

Ask most guitar players and they will tell you that one of the primary reasons they buy a mass-produced guitar amplifier is they are so much cheaper than their domestic counterparts. Unfortunately this concept is only partially true.

When you look closely you will find that the hidden and not so hidden costs of mass-produced amplifiers are there. In every step you will find unpleasant surprises that increase the true cost.

Let's take an imported mass-produced guitar cabinet fabricated out of some wood product as an example.

To get raw logs to country "x" and then to get a "cheap" guitar cabinet to the USA this is the chain of events that unfold.

Loggers cut down trees based on the demands from company "x" for raw materials, often from illegal operations in countries where regulations are lax. Trucks drive hundreds of miles to deliver the logs to boats. Boats sail thousands of miles to get the logs to country "x". Trucks drive hundreds of miles to deliver the logs to a sawmill. Trucks drive hundreds of miles to deliver the lumber to a distributor. Trucks drive hundreds of miles to deliver the lumber to a manufacturer. Trucks drive hundreds of miles to deliver the finished cabinets to boats.

Boats sail thousands of miles to deliver the cabinets to the USA. Trucks drive hundreds of miles to deliver the cabinets to the "company". Trucks drive hundreds of miles to deliver the cabinets to local retailers or to on-line fulfillment locations. Trucks drive hundreds of miles to deliver the cabinets to you from the fulfillment location.

The only things that allow this to be "efficient" "cheap" and "profitable" are the extremely low wages of the people building the product, cheap parts, mediocre components and automated manufacturing processes.



Oh boy, here come some more amps.

If an American company is bringing in a product that is built in this manner, then they are forced to buy entire container loads. And, because the product has to be priced so aggressively to fill the containers and to pay the associated shipping costs, the pressure is on the production facility to get as many units built each and every day, as fast as possible, to justify the extremely low wholesale selling price that drives this whole merry-go-round.



## Low Cost Mass-produced Guitar Amplifiers Are Overpriced No Matter How Much They Cost

Produced quickly and cheaply, mass-produced amplifiers are often more prone to premature failure and expensive construction-style related repairs, adding significant costs to the initial purchase price. This focus on high volume, and the cheapest manufacturing costs on the planet is certainly profitable, for a small group of people, but it can never match the quality, longevity and value of individually made boutique amplifiers. Often with mass-produced amplifiers you are spending your hard-earned cash for fancy marketing, overseas shipping and expensive repairs rather than long-lasting, high-quality components.

As significant as these points are, the most troubling hidden cost imbedded in mass-produced amplifiers is the one key thing that allows them to be even built: cheap, non-USA labor.

The huge numbers of manufacturing jobs that have left and are leaving the USA for low-paid foreign workers and, unchecked, will ultimately undermine the ability for us to buy even the cheapest mass-produced goods.

Mass-produced amplifiers add little to the economics of the workers in the country of fabrication and also add little to the economics of workers in the United States.

On the other hand, a very interesting musical instrument company, Zildjian, is an outstanding example of how to be extremely successful building superior products in the USA without having to outsource production. The Zildjian Cymbal Company began in Europe in the 1600s with the development of a particular alloy that had unique, powerful sound qualities with pure sonic clarity and durability that could be produced very thinly.

Early in the 20<sup>th</sup> century, Avedis Zildjian lived in America and was the heir to the Zildjian Company. When he was asked to take over control of the company he decided to move the business to America, which was then the largest consumer of musical instruments in the world. In 1929, Avedis set up the first Zildjian Cymbal factory outside of Boston. It was a difficult time to start a new business, as a few months later was the beginning of the Great Depression. The economy was bad and the demand for cymbals was low.



Beautiful Zildjian cymbals.

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Avedis persevered and diligently developed relationships with some of the most famous drummers of the time, including Gene Krupa, who contributed innovative ideas for new uses for cymbals. Avedis Zildjian used these ideas to develop and name many of the cymbals that are the standard in modern drumming, like the splash, ride, crash, hi-hat and sizzle models. With these innovations Avedis turned Zildjian into a very successful, famous American musical brand. Zildjian is also one of the oldest family-owned businesses in America.

By building his factory in the USA, Zildjian workers spend their hard earned cash in the local economy. Restaurants, flower shops, grocery stores and on and on, all benefit from the success of the quality domestic manufacturing and the wages earned by the local workers.

Smart guy that Avedis Zildjian.

**When you look closer, those “cheap” mass-produced guitar amplifiers are significantly more expensive than they appear.**



The hidden costs of mass-produced amps can add up.

## Secret #11

# Low Cost Mass-produced Guitar Amplifiers Have Little To Do With Craftsmanship

Craftsmanship - the beautiful or impressive quality of something that has been made using a lot of skill.

This really cuts to the chase about the differences between low cost mass-produced guitar amplifiers and boutique amps. One thing can be stated very clearly: most low cost mass-produced amps have very little to do with craftsmanship.

Today, if you live in Germany or Sweden, you can buy some wonderfully crafted dishwashers and clothes washers. They are made in their respective countries and they clean fantastically. They use very little water, are energy efficient and have virtually silent operation.

We sell American dishwashers too, except most aren't made here. They don't work nearly as well as their European counterparts, as they suffer from lack of quality craftsmanship. They are built with a business model based on low costs and immediate gains with little regard for long-term consequences.

One of these German manufacturers has now opened a plant in the USA. Of course they use volume-manufacturing techniques but they understand what American appliance manufacturers seem to be unable to grasp: the market for craftsmanship.

On the brighter side, some American companies are beginning to figure it out. Even some new companies are coming to market specifically with the goal to promote quality domestic manufacturing. In fact, often they tout where and how they build quality product in the USA as a major part of their promotions.

It would be great to cite an example of this happening with a new company in the music industry, but outside of the boutique amp, effects and guitar markets, examples are hard to find. These days, even the most well known musical brands are outsourcing their production.





# Low Cost Mass-produced Guitar Amplifiers Have Little To Do with Craftsmanship

Boutique guitar amplifiers *epitomize* the meaning of craftsmanship.

**Hand Made** - Speaks for itself.

**Long Lasting Robust Construction** - Careful choice of products for longevity.

**Finest Components** - Carefully positioned quality components for performance.

**Stylish, Detailed Construction** - Aesthetically pleasing appearance.

**Attention To Detail** - Nothing glossed over or ignored

**Great Tone** - Great tone.

**Wonderful Playing Characteristics** - Dynamic, accurate and fun to play.

**Durable** - Built like a tank

It is not just the amp builder that drives this. All of the companies that contribute to the building of boutique amplifiers are craftsmen in their own right. They have specific talents and skill sets and are creating quality products. It is interesting to note that these companies are generally doing well based on the growth of boutique musical products.

The bottom line is, craftsmen create boutique guitar amps. They are a finely crafted product proudly assembled in the USA.





## And in the End...

This is a great time to be an electric guitar player. The amazing variety of cool boutique amplifiers available is extraordinary.

Maybe you've been searching for that favorite vintage amplifier that is just about impossible to get. Well, there is a boutique builder somewhere that is building a version of your coveted vintage amp and most likely it is going to be as good, if not better, than the old one you can't find.

Without it being beat to smithereens too.

Today you can also score amps with sophisticated tones and playing characteristics that in the past only the most famous players ever got to use. Some of these vintage originals are way out of the price range of your "normal" player but with the growth of the boutique amp community you can get a new amp that will capture the essence of those very rare custom amps at a price that doesn't break the bank.

Even more exciting is the emergence of custom boutique hybrids that do much more than the expensive vintage amps do but without the "collectable" price tag.

Boutiques are a bargain. In today's dollars you can buy a great boutique guitar amplifier that doesn't cost any more than a classic vintage amp would have set you back in the 60s.

Boutiques can last for decades, as they are way overbuilt with premium parts. Boutiques hold their value better than conventional mass-produced amps and in some instances will inflate in value over time.

Today's great boutique amps are tomorrow's collectables.

This is worth repeating... it is a great time to pick up your favorite guitar and plug into an expressive, fun to play boutique amp.

Buy one and take it home for years of playing pleasure.

45RPM

## About the Author

Wane Fuday, CEO and Designer for 45 RPM Music Technologies, has been an industry professional since 1978 and a guitarist since he was thirteen. In a previous life, Wane worked with some of the finest music and audio companies including the original Alesis Corporation, PRS, Celestion and Line 6. He left the mainstream music industry to found his own company for hand-building boutique amps.

Wane also states that he has even been paid professionally for playing music, although never enough.

Having played and owned many of the great vintage amps Wane has had a goal of bringing together some of the best features of the finest classic amps with significantly enhanced performance characteristics into a line of innovative and fun to play guitar amplifiers.

## Quick note from Wane

“When I lived in Sonoma County I had the good fortune to have seen Robben Ford play a number times. I was always amazed with not only his playing but also the great sound he was getting out of his amp. Getting that caliber of tone and playability to any player, to dial in a signature sound, has been the fundamental motivation in creating 45 RPM Amplifiers.”

“Give me a call or send an email if you’re looking for a high-quality boutique amp, or even if you just want to talk about gear and tone. We regularly consult with professional players about product. If you end up choosing one of our amps we will offer you a valuable incentive if you mention that you read this eBook. Thanks for reading.”

Wane

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