Pickup Fun

by **zentropa** » 11 Sep 2012, 06:16

Pickups have got to be some of the most frustrating tone tweaks you can do. While finding just the right combination can be super fun, exciting, and rewarding, the number of near misses, solder-one-strum-and-desolder failures, "this would be great... in my other guitar that already has pickups I like" experiences, and the like... it can be a very expensive uphill battle if you are being very particular about what sounds you are wanting to make. I know a lot of people tend to play it safe with pickups, vying for the very popular models that have been tried and true in instruments they are familiar with, but sadly, I'm not one of those people.

After a little bit of pickup talk in some recent threads I thought I would share some useful (or useless) information I've gathered after blowing close to $2k on pickups over the past 15 years.

I'll start with brands and then work my way to individual pickups.

Seymour Duncan. Overall their pickups are very toneful and there's a good variety of sounds. If they have a gap, it's in the space between the JB and Distortion (the Custom is sort of there, but not quite). I've spent a lot of time with Duncan pickups and it wasn't until I switched from vintage Fender and Musicman amps to Marshall amps that I noticed something rather odd about their pickups as a whole. There is a hard-cap on the frequencies on the high end. If you take a 60's or 70's fender (or music man) tube amp, they usually have very little frequency output over 5-5.5Khz or so, and Duncans will sound fine. If you take a much brighter amp with speakers that have a lot more "fizz" potential (for lack of a better term), Duncans can often leave "dead air" coming through the amp in those frequencies. This is a lot more noticeable with darker guitars (e.g. mahogany body) and is less noticeable with brighter woods (e.g. maple). A solution I found was to 0 the treble knob on the amp and use the midrange tone control as the treble. I haven't owned any, but the antiquity idea is a solid one trying to get aged magnet tone out of a new pickup as most who have heard them will agree that a new JB vs. an 80's JB just don't sound all that smilar. Their single coils usually sound excellent... their noiseless singlecoils... not so much unless you want one of their rail models that sound like buckers instead of single coils.

Dimarzio. I'm fairly new to Dimarzio buckers (the past 5-6 years). They tend to flavor more varieties of hotter tones but I think they get overlooked for that same reason. If they have a gap in their line I would say it's in the medium-low output stuff. e.g. the space between an overwound PAF and a hot alnico V. Their biggest weakness I have found are with the hex poles present on many of their buckers... they're much smaller in surface area which makes them much less likely to line up with your strings. To make it even more frustrating, you pretty much have to go F-spaced for anything except 80's and early 90's MIJ tele's, strats, and early 80's ibanez roadstar/blazers, or 1977 and earlier gibson guitars or the poles won't line up on the E's at all. If you have anything in production in the past 15 years, it most likely needs F-spaced no matter who made it or what kind of bridge it has. Dimarzios don't suffer from the same high frequency cap that Duncans do and roughly 10-15% of their line falls in Duncan's gap... and roughly 30% of Duncan's line falls in Dimarzio's gap. Dimarzio's single coils are decent. On standard singles I tend to favor Duncans. Their noiseless singles are excellent though, some of the best you can get for under $100 per pickup.

Lace. I only have experience with their covered singles. Good if you want to sound like a recorded guitar. Not good if you want the actual playing dynamics to come through. Don't mesh well with 250k pots or .047uf tone caps... the tone knob roll off is downright awful if you run a standard strat pot setup. The blue and reds sound pretty awful imo. they get the tone of buckers but are quite lifeless. The silver and gold aren't awful, but see what I wrote earlier. At least they don't buzz.

Kinman. Quite simply, the best noiseless single coils available if you play stuff that doesn't require an overly hot pickup. Basically, Texas Special type heat and under they really shine.

Barden. God these are/were expensive. Their blade style single coils were supposed to imitate single coils and they do okay from the 1/3/5 strat positions. 2 and 4 positions sound like humbuckers... and the 3 and 5 positions have hardly any differentiation between the two unless you really mess with the pickup height.

EMG. I really hate their active pickups. So hot that you can't do anything except shred. I know that's a generalization, but out of my experiences with them... that's still how I feel since the tones on their active buckers are generally so hot that I can't picture myself doing anything but that with em. In terms of the cheaper select line... they aren't all that good but they aren't all that awful either. IMO, select single coils sound better and have better dynamic response than lace sensors and they are much cheaper and still noise cancelling. The select humbuckers are bity and hot but not searing. If you are very budget oriented, they aren't awful for $25-30 a pickup new, but with GFS, Dragonfire, and Guitarheads out there I'm not sure I would ever pay that much for them.

Fender. I have a love/hate relationship with fender pickups. They sound decent but they are almost always

extremely noisy and unless your entire cavity/pickguard is heavily shielded, they will be a nightmare if you have dirty power or are anywhere near a dimmer switch. Their SCN noiseless singles were pretty godawful. really weird on their bite/attack characteristics and lacked warmth. Supposedly their newer noiseless coils are better, but I'm not sure I'd drop the money for them unless they came in a guitar I was picking up.

Gibson. Out of all the companies with pickups, Gibson gets it "most right" out of everything I've owned/played. Granted, they are basically voicing pickups for mahogany body guitars, but they do a damn fine job of it. Aside from the earliest custom shop burst buckers that weren't wax potted, they get an A for consistency. Not a lot of variety though, but I never find one that I hate. Even the 490T... it's not terrible, just weak

A quick note:
I rarely if ever jump more than 1 magnet strength to an adjacent pickup. e.g. if it's a ceramic bridge humbucker, i will go either ceramic or alnico V in the neck. If it's an alnico V in the bridge, I will go alnico V or II in the neck, etc. Going 2 jumps tends to create really weird sounding neutral positions.

Onto the individual pickups...

Gibson 498T (alnico V). Perfect mix of bite, crunch, and tone. It's hot, but not overbearingly hot. They can be a bit muddy compared to PAF voiced pickups, but the 498T is a rock solid Alnico V Crunch pickup. My favorite bridge pickup for any Les Paul or SG styled guitar.

Gibson 490T (alnico II). A bit more open than the 498T with a bit of jangle. It bites decently but doesn't have a lot of presence or really any low end. It's weakest characteristic is that it really doesn't match up well with most neck pickups. You have to go very low output on the neck to get parity volume between the pickups and a decent sounding neutral position. Works okay in mahogany. I have a feeling it would be obnoxiously trebly in a brighter wood.

Gibson 500T (ceramic). Very crunchy and punchy. Works better in mahogany without a maple top (it gets a bit too bright with a carved top). It's super hot but still has some tone, especially if you roll back on the volume. Can get a bit muddy, but will definitely cut in a mix.

Gibson Classic 57 Plus (alnico II). Overwound PAF style bucker... but while it has a hotter "sound" than a standard Classic 57, it really doesn't push an amp any harder than a Classic 57. Works okay in the bridge position of a Les Paul or if you are playing jazz/blues with an arch top, but I'm not a huge fan of this in the bridge of anything that is straight mahogany.

Gibson Dirty Fingers (ceramic). Hot, but in a different kind of heat than a 500T. The 500T is a lot more focused while the Dirty Fingers is a lot more open and scratchy with less low end. These were originally used in they partially synthetic wood Sonex 180's and I have a feeling they were designed to "cover up the tone" a bit. Very solid if you want heat without the chugga chugga.

Gibson 490R (alnico II). People complained for years about this pickup being muddy. It is slightly muddy... but it's also very punchy with tons of mids. My favorite rock neck pickup in anything made of mahogany.

Gibson 496R (ceramic). Hot... but not quite crunchy. These are pretty muddy but are the match for tone/output with a 500T. Gets a bit of a bright ceramic crack on its attack/bite. Cleans up nicely if you roll back on the volume, but I'm not a huge fan of this pickup. The magnet pull on these things is absolutely brutal.

Classic 57 (alnico II). I've used these in both the neck and bridge but it's predominantly a neck pickup. Definite PAF tone but really requires you to crank your amp if you want it to have "character."

Duncan JB (alnico V). Bright, bitey. Delivers similar heat to the 498T but with less low end. It doesn't quite push as hard as a 498T in a solid mahogany body, but will bring a lot more crunch if there's a maple top. Older ones are a lot warmer than newer ones. A staple of the 80's metal sound. Needs a hot amp to really go.

Duncan Screamin Demon (alnico V). Overwound PAF. To call this "screamin" is kind of false advertising as its output is a lot closer to Duncan's Pearly Gates than anything even remotely hot. I can see it being paired with a maple body (George Lynch style) working fairly well. Mahogany... Ash... etc. is going to be dead with no crunch and no bite.

Duncan 59' (alnico V). I have used both the bridge and neck position versions. I prefer this pickup uncovered vs. covered (covers really mute this thing badly). PAF voiced but with an alnico V magnet it has a lot more bite/cut than a classic 57 or 57 plus. In the neck it matches up really well with a hot alnico V bridge pickup both in its volume and tone. My favorite PAF voiced bucker to date. Works well in pretty much anything.

Duncan Seth Lover (Alnico II). I have used this in both bridge and neck versions. This pickup sounds better covered imo, as it tames some of the harsh upper end. This is the one Duncan pickup that seems to have a full treble response. It's a very bitey PAF sounding pickup. It's greatest weakness is that it isn't wax potted and if you want a pair of nickel covered ones be prepared to wait a very long long long time. I think this is better suited as a neck pickup with a medium to mild heat bridge pickup.

Duncan Distortion (ceramic). Crunchier than a 500T... and arguably a touch hotter. Very biased towards treble and upper mids, these will crunch anything but don't retain a lot of the wood's natural tone unless you start rolling back on the volume. They can be a bit harsh/abrasive through a brighter amp and I believe there's better sounding pickups that have similar crunch performance.

Duncan Invader (ceramic). These are fairly over the top hot. Great if you want to chug but really struggles to get usable clean tones... basically, when you're clean it's muddy as hell and almost toneless.

Duncan Pearly Gates (Alnico II). Overwound PAF tone. Bitey and bluesy but they match up better with single coils than other buckers as there really isn't a good match for it in the neck position. It's probably a better neck bucker than bridge bucker but my experience was only with the bridge version.

Dimarzio Super Distortion (Ceramic). Wound just hot enough and voiced to make anything crunch. Lots of low end and mids. It retains a lot of the natural wood characteristics but it's tone is distinctly ceramic in nature. I tend to prefer this is in super strat type guitars made of alder, poplar, basswood, maple, etc. as darker woods makes you sound fairly unavoidably like Ace Frehley on 70's Kiss albums.

Dimarzio Evolution Bridge (Ceramic). This pickup really isn't as hot as most people seem to think. It's actually extremely clean with fairly even response across all frequencies but a slight upper midrange bias. It sounds more like an Alnico V even though it isn't. What makes it unique is that it has extremely crazy harmonic response... like... you might find yourself accidentally doing pinch harmonics now and then. It sings with a lot of clarity but can crunch chords with enough volume and a dirty amp. IMO, this pickup works much better in a fixed bridge guitar than anything with a trem, since it loses a ton of its crunchability with a trem. Its downside is that it's super sensitive... like... it picks up every sound you make, whether you want it to or not.

Dimarzio FRED (Alnico V). This pickup is tough to describe. It's not as hot as most hot alnicos, e.g. 498T, JB, etc. but it's got a ton more nuttage than most vintage alnicos (way more mid kick than an overwound PAF). Punchy, articulate, and toneful but requires a ton of amp gain to push it over the top.

Dimarzio Air Norton (alnico V). This is an odd pickup. It's tone is that of a hot/overwound pickup, but it's output is fairly tame/weak. It sounds punchy, but its dynamics are sort of lifeless. Requires tons of amp gain but gets a bit muddy and is really thin on the low end if you roll back on the volume. I hated this pickup. It was sort of a worse version of the 490T.

Dimarzio PAF Pro (alnico V). Pretty run of the mill PAF neck pickup. I only had one for a short while and it never really stood out nor did I hate it. Good clean tones. Less articulate than the 59 but a little bit more open sounding than the Classic 57.

Dimarzio Evolution Bridge (Ceramic). I really like this pickup. It's not muddy but still has some oomph to it and does really well with high gain. Very smooth with lots of articulation. Requires precision playing a lot like the Evo bridge. It is quickly becoming my second favorite neck humbucker.

EMG Select humbucker (ceramic). Not really good but not awful. It's hot but doesn't have a ton of output. I can't really see it being used beyond rock/metal tones. Reminds me tonally of a 490T but with a touch more low end.

I have a Dimarzio Crunch lab on the way that will be going in a PRS SE custom 24 styled guitar.

I will try to do a write up on single coils soon... this took longer than i thought it would and i just sort of ran out of steam near the end.

zentropa

Re: Pickup Fun

by **Pepe** » 11 Sep 2012, 07:41

Holy crap! That's a *lot* of information. And though I'm working in a music shop (not specialized on guitars only) I'm not familiar with some of these brands (didn't hear of Lace, Kinman and Barden before) or some of the terms (e.g. "F-spaced") in your post. Seems like having *not* spent my freetime reading guitar magazines is the reason for it. I always found it annoying - and still do. I don't like to just look at guitars or read about it. I want to play them!

Do you have any experience with the Duncan Hot Stack pickups? Do they really sound like humbuckers and when splitted like single coils? On paper they sound nice, but I didn't have the chance to try one.

Pepe

Re: Pickup Fun

by **zentropa** » 11 Sep 2012, 09:16

Hehe. I quit reading guitar magazines long before I ever got into pickup swaps.

Lace = Lace Sensors that were in the 80's/90's strat plus guitars, 90's strat deluxe plus/ultras, Clapton sig strat, etc. Eventually they released exposed pole single coils but I haven't really bought any of those.

Barden = Joe Barden = a boutique level pickup manufacturer that got big in the mid-late 90's for creating a blade style single coil humbucker that used a dummy coil to sound like a single coil. Stores that would stock Fralins, Rio Grandes, etc. would often have Bardens. They were the stock pickups in the first year G&L Legacy Special guitars but on the retail market the pickups were $150 each... heh... yeah, $450 a set.

Bare Knuckle is the current flavor of the year for upper end pickups.

Kinman has flown under the radar for years, and even moreso now that he's located in Australia and no longer wholesales his pickups. It's a shame because they are easily the best noiseless single coil on the market. Thankfully, they haven't gone up in price much over the past 10 years... in 2001 a set of strat singles was $225. Now they're $254. The Tele pickups have gotten really expensive though and are currently $123 per pickup. Back when he did wholesale, there was only one shop in the state that was getting them. It's funny though, that store was selling Kinman pickups and Callaham trem blocks before those got popular as well and they used to put a trem block and the kinman pickups into a MIM strat to demo what they did... and people kept buying the demo mim strat for $750. I think they sold like 6 demo guitars in 2 years.

F-spaced = Fender Spacing = wider pole spacing for guitars with tremolos. 70's and earlier Gibsons (and some MIJ gibson copies) had a narrower string spacing than Strats. Current Gibsons, PRS, Epiphone, etc. all have wider string spacing and are suited for F-spaced pickups, so in reality, non-F spaced bridge pickups really only line up with vintage instruments and some of the 80's MIJ and early MIK fender stuff. As for neck pickups, standard spacing works for 42-43mm nuts but you want an F-spaced neck pickup if the nut is wider than 43mm to get the strings to line up over the pole pieces.

I have two eras that really got me doing tons of pickup experimenting...
At one point I had 4 GIbson Les Pauls and 7 Gibson SG's. I wanted them in matched pairs that sounded different from the other pairs.
After my left hand healed up from a major/brutal index finger cut (took 2 years for the nerves to calm down) I picked up a couple of MIJ shred guitars with Floyd Rose trems to learn to play again and they had crappy stock pickups.

The thing with pickups is that good pickups never make a guitar, but bad pickups can really hold a guitar back. Most upper end guitars have pretty solid pickups in them, but the middling and lower end guitars usually have junk. Duncan Designed, PRS SE, GFS pickups, etc. aren't awful by any means but if you A/B them against a nicer

pickup the difference is really startling as to how much livelier the nicer pickups sound. Most stock pickups in anything Asian made are usually garbage though. I have a crazy ears on me though... so I get super picky about getting exactly what I want out of a guitar's specific tone. Each of my guitars fills a specific sound/role and it either succeeds in doing so or it fails... in which case I keep swapping out pickups until it does what I want it to.

I don't have any experience with hot stacks... but my experience with Duncan stacked singles is that Dimarzio's stacked singles are usually about 10 years ahead of Duncan's in terms of tone quality (by the time Duncan catches up, Dimarzio comes out with a new line that is even better). I prefer Duncan's traditional single coils to Dimarzio's, but when it comes to noiseless ones I go Dimarzio ahead of duncan.

zentropa

Re: Pickup Fun

by **sclitheroe** » 12 Sep 2012, 00:46

> *zentropa wrote:*
> *Duncan Designed, PRS SE, GFS pickups, etc. aren't awful by any means but if you A/B them against a nicer pickup the difference is really startling as to how much livelier the nicer pickups sound.*

This was my exact experience with Duncan Designed (and pickup upgrades in general, which I've done once now) - my guitars sounded decent, but when I upgraded to some Stew Mac Parsons Street pickups (vintage style unpotted Alnico II humbuckers), my wife came downstairs to comment on how they sounded - a very rare event in my house.

It's easy for us to hear differences, but when a casual listener discerns the difference, I know something has dramatically improved.

-Scott

sclitheroe

Re: Pickup Fun

by **zentropa** » 12 Sep 2012, 01:58

Ey really can do that, Scott.

I actually rather like DDs for low end cheap pickups (they are better than most stock pickups on low to mid guitars) but once you pop in a pickup that isn't budget/value oriented you realize how much more dynamic they sound.

I'm kind of bummed out again because for the second time i purchased a push/pull pot to set up coil tapping but the f'n holes are too small in the guitar to fit the shaft. I already soldered to it so i doubt i can return it my own fault for not checking the hole size before going at it with the iron.

zentropa

Re: Pickup Fun

by **zentropa** » 21 Sep 2012, 15:39

My crunch lab finally arrived yesterday via dimarzio's 30-day exchange program. If you aren't familiar with that, if you buy a pickup and don't like how it sounds (or if it's different from what you expected) you can call them up and talk to a tech. If you explain what guitar and amp set up you have, what the pickup is doing, and what you want it to do, they will recommend something and create an rma number. If you mail the pickup back with a copy of the receipt and a note explaining what you are exchanging it for and in some cases you need to include a check if you

are exchanging for a more expensive pickup, they will ship you a brand new pickup. I mailed mine out via 1st class mail on sept 5th and received it on the 20th, so it takes approx 7 bus days + shipping transit.

So... I only got to play it for about 15 min at very low vol but my initial read on the crunch labe is interesting as it doesnt really behave like most other pickups i have played.

Early ovservations:
It is a very well balanced pickup. No booming bass or gouging treble. No punch in the face mids either. It's just... Fairly flat on the eq.
It is extremely loud. Dimarzio tries to separate volume from heat and i don't think that is a bad thing. The CL is possibly the highest volume output pickup i have ever owned while its dc resistance is in the 11k range.

When overdriven, it's very "bitey" on single string notes but when you play 2 or more strings simultaneously they crunch and blend together smoothly. This is where it behaved differently. If you sweep pick something like an open g chord with most pickups, especially hot ones, you tend to hear the string first couple of strings ring but by the time you get to the g-string or so it tends to get lost in just a mound of sound (this is especially apparent with a lot of gain). Smilarly, the strings get sort of "ringy" as as they decay at different speeds. With the crunch lab, you will hear every note stand out as you pick the chord but as they start to decay they blend together very smoothly. THis tends to happen almost immediately after attack which leads me to believe the one coil with a bladed magnet must have a tremendous amount of pull on the strings causing them to decay more uniformly. I think it sounds very smooth and cool when playing with a lot of gain but i would guess someone used to pafs may dislike that. I am a rhythm guitarist though, so it suits my needs wonderfully.

Heatwise it's moderately hot. Voicing reminds me a lot of a duncan screamin demon but it will push an amp much harder and is crunchier. It is definitely less hot than most ceramic pickups (super d, duncan d, etc.) But hotter than most Hot alnico v's (jb, 498t, tone zone, etc).

zentropa

Re: Pickup Fun

by **zentropa** » 28 Sep 2012, 16:27

I learned something new last night. Dimarzio neck pickups are oriented in reverse of most other neck pickups. That is, the "screw coil" on the neck pickup is supposed to face the bridge and the slug coil towards the neck. Often they are hex bolts so there's no visual cue as to which is which.

This is significant in two ways.

1- if you match a dimarzio neck pickup up with a different brand bridge pickup you may have some phase issues with standard wiring.
2- if you want to do a hum cancelling coil split with dimarzios it is an inner coils (or outter coils) split. With every other brand it is 1 inner and 1 outer (e.g. Both towards the bridge or both towards the neck).

I tend to prefer inner or outer coil splits since an inner split sounds more like a 2/4 on a strat and outer sounds like the 2 on a tele.

zentropa

Re: Pickup Fun

by **zentropa** » 04 Oct 2012, 15:29

Got my satriani set in and popped em in my santana last night (mo joe bridge, paf joe neck) and i was pleasantly surprised, the mo joe sounds hotter than it's rated. A 9.7k alnico bridge pickup isn't usually very hot. Its voicing is very similar to a gibson 498t but its output is a bit lower. More nuts than a 490t though. Very percussive sounding but articulate.

The paf joe is pretty sounding but has character. When you single string cleans it's very focused. It doesn't overdrive all that well as the low e/a/d strings get a nit muddy when playing below the 7th fret with lots of gain but at

the 12th fret and above it really sings. It is closer to a gibson classic 57 plus in tone but a bit punchier through the mids.

The one thing of note, these pickups are VERY bright. I can't imagine them in a wood brighter than mahogany or ash. Part of that is probably due to my set up though, i have the action set very low to accommodate my hand/wrist issues/injuries.

zentropa