



Alex Claber

Alex first picked up a bass when studying engineering at university, spending countless hours rehearsing, recording and gigging in a succession of original alt-rock/funk bands. His quest for sonic perfection led him to apply his engineering skills to loudspeaker design, establishing Barefaced Audio in 2008.

This column is brought to you in association with Barefaced Ltd, who manufacture high-output lightweight speaker cabs for the gigging bassist in their micro-factory in Brighton and export these cutting-edge models globally. An extensive archive of previous articles can be found at www.barefacedbass.com. Barefaced have finally launched their radical '69er 6x10" cab, designed to emulate the awesome tone of the original late-60s fridge cabs, but with better dispersion, greater power handling and much lower weight.

If you have any questions regarding this article or suggestions for future articles, please contact Alex at bgm@barefacedbass.com.

ALEX CLABER

Barefaced Bass

Alex Claber delves into the murky world of cabinets. Warning: here be monsters

A personal source of puzzlement for me is the obsession humanity has with pigeonholing products based on superficial characteristics. It's probably a behavioural pattern that has proven successful for survival, allowing you to form tribes based on visual similarities, and thus live longer and reproduce more than if remaining independent. And just as we naturally err towards tribalism (with all its myriad negative connotations) among ourselves, our consumerist lifestyles cause us to create tribes based upon the products we buy – from Apple fanboys globally (iFans or Maconistas?) to Ford versus Chevy drivers in the US, or Mercedes versus BMW car owners in Germany.

From a marketing perspective, this tendency is an excellent thing. Not only does it tie in neatly with product loyalties, so you can repeatedly sell the same person new products as their previous purchases wear out, become obsolete or prove too dated and unfashionable: you can also drive consumption through industry-wide campaigns pushing new standards. A excellent current example is the mountain biking industry, which tells consumers that bigger wheels will make them ride faster and better and be more attractive to the gender of their choice. Rather than encouraging consumers to stay in manufacturer X's tribe, every mainstream manufacturer is convincing their tribe that a paradigm shift is the only way to stay competitive. TV is the same: "HD – it's the future!" "3D – it's the future!" "Garlic bread – it's the future!" As an engineer who would admittedly like to sell products, I look upon this game with a combination of wry amusement and frustration, as marketers push their new shiny toy with exciting, misinformation-filled buzzwords.

And so we come to loudspeakers. Bigger equals more bass, says the old marketing view. Big speakers look impressive, so they must sound impressive. The curious thing is that we're so used to having our opinion dominated by our eyes, that they sometimes override what our ears are hearing. A good friend of mine was watching a certain classy TV show with the witty catchphrase, "No likey, no lighty", and told me of an incident where a six-foot-something farmer type came out of the "love lift" and addressed the ladies in a fairly high-pitched voice. One of them commented that she liked a big man with a deep voice like him – so eyes see big, tell brain ears will hear deep, ears report back to the contrary, brain ignores ears because eyes are all important.

However, as many bass cabs (not just our Barefaced ones) have shown, speakers don't have to be big to sound big. But if your eyes tell you that a cab is going to sound big because it has big speakers, then your brain's interpretation of your ears will be prejudiced – this is why blind tests can be rather good, but is also why they are rare as they tend to shoot down too many marketing campaigns – thus killing advertising revenue.

So when we think of going bass cab shopping, the most common approach is to decide what configuration of loudspeakers is wanted and then find the most suitable example that fits within those criteria. This is why the interweb being full of 'What 4x10" for me?' or 'What 1x12" for me?' threads. Something rarely seen in bass magazines are group tests, which have been a staple of car magazines since pioneered by CAR in the late 60s – 'hot hatches head to head', 'sports saloon shoot-out', and other appropriate alliterations. But when you think about the public's car-buying habits, does that pigeonholing make sense?

Last year CAR ran a different group test where they put the new Range Rover Evoque (lifestyle faux offroader) up against the Mini Countryman (ditto), the BMW 3 series touring (mid-sized premium estate), the Golf GTI (premium hot hatch), the Audi TT (sports coupé) and the Peugeot RCZ (ditto) – in other words, six fairly practical, fairly fast, fairly decent-handling and fairly stylish cars that are far from inexpensive. Each of them solves a similar problem, but in a different way – and, as most high-value car purchases are want- rather than need-driven, aesthetics tend to override practicalities.

The two standard groupings I've seen in purchasers' minds are the "I want a cab from manufacturer Z because I want that characteristic brand Z sound" or the "I want a cab with AxB" speakers because I think B" diameter speakers have more punch than C" diameter speakers, but more bottom than D" diameter speakers". It usually seems to be a decision which the consumer thinks is based on tone, but is not: if a manufacturer makes more than one loudspeaker cab it almost guarantees that there is no characteristic sound.

The classic example is the Ampeg sound. What is it, really? I've heard lots of Ampeg cabs, and the only one that sounds like an Ampeg 8x10" is the sealed 8x10" – they've done ported 8x10"s with tweeters in the past which sound absolutely nothing like an Ampeg 8x10" despite being an actual Ampeg 8x10". Their 410HLF is about as far removed tonally as a 10" bass guitar cab can be from another 10" bass guitar cab, albeit not in a bad way: it's a great cab but it's way more bottom-heavy and mid-shy than a sealed 8x10". Yes, there are often similarities





en can decide
geogor's R&D
g chg. children's
win with a pair
one one whipped

the Evoque too, but massively compromised in terms of packaging.
The BMW X1 is good value and has a brilliant diesel engine. But it looks dreadful, neither cool nor handsome when the Evoque is both. We'd have it over the Mini too, which needs a little bit more polish to its cabin and ride comfort to compete with a car of the Evoque's calibre, and a big extra dollop of power to carry off the Evoque's extra

engine and the option of a brilliant dual-clutch transmission. It does everything the Evoque does for £12k less.
Except look like the Evoque and wear a Range Rover badge. Because when it comes to the gravel drive crunch, that is what this car, this test is all about. Yes, it's gratifying to discover that the Evoque is so much better to drive than any Range Rover that

within model ranges and there may be common philosophies, but consistent tonal signatures are vanishingly rare.

The second and dominant group is the "I want to buy a 4x10 (or other configuration of your choice)" concept. Again, this is based on assumptions from hearing other cabs with equal or different-sized speakers and assuming that equal diameter speakers will have consistent tone, or that bigger speakers will sound deeper and fatter and that smaller speakers will sound punchier and brighter. But it doesn't work like that: the cone diameter is a very small part of the puzzle.

So here's some practical advice. Choose your cabs based on two criteria: tone and loudness. Obviously there are practical considerations such as moving them and fitting them in your car, house and life, but you can probably work those out for yourself. How do you decide what will get you the tone you need? Hear them at gigs, try them at jam sessions, read magazine reviews, browse and post on forums, try them in shops, ask reputable online retailers for advice, and so on, while always bearing in mind that so much of your tone comes from how you play, then the bass you play, and then the amp you're powering the cab with: it's an interactive puzzle.

How do you know which cab will be loud enough? Well the only spec that will reliably tell you how loud a bass cab will play is the volume displacement, which is its ability to move air – the thermal power handling spec tends to be useless, as almost all bass cabs start distorting before you reach the thermal limits – and unless you're from the Lemmy school of tone, that kind of bass sound won't do for all your gigs.

The loudness you'll get out of a bass cab obviously depends on how powerful your amp is – the larger the cab, the smaller the amp you'll need to get it to a given loudness. I can't say this enough times: the bigger a cab, the easier it is to drive and the fewer watts you need. Anyone who tells you that their amp is so powerful it can drive even a big cab like an 8x10" (rated

at 1200W thermally) with ease doesn't know what they're talking about. The greater the volume displacement of a cab (rated in cubic centimetres), the more power the cab can handle, so the bigger an amp you can use.

Going back to our group test idea, you'll see in the photo that the cars are marked up as different bass cab configurations. They're obviously different physically and visually, but they get you to the same

place – they can achieve similar sounds and they can produce those sounds loud enough. The smaller ones will need more power than the larger ones to reach that loudness, but if they can handle the power

"Choose your cabs based on two criteria: tone and loudness."

then that's all good. The ones with bigger speakers or bigger enclosures may have more bottom with your EQ flat, or they may not – it will vary on a case-by-case basis. Bear in mind that in the 70s, the standard configuration for a practical family car was a four-door 'three box' saloon such as a Ford Cortina, but over the next 40 years that configuration changed to a five-door 'two box' hatchback such as a Ford Sierra and then to a five-door 'one box aka monospace' MPV like a Citroen Picasso).

So why should we still be using standard configurations? They still work fine, but technology has moved on and others may work better – you might as well see if you're missing out.