When it comes to tracking technology change and engineering innovation in the professional audio space, it’s often the case that something not-very-musical such as digital signal processing takes the limelight. We might hear about sweeping improvements in sound reinforcement, automated mixing console design or the latest mastering protocol. Yet we don’t often hear much about musical instrument design, particularly bass guitars.

There’s a reason for this. The blueprint for the traditional electric four-string, lower-register boiler-house bass has hardly changed since 1950, when the legendary Leo Fender put a pick-up on a prototype, long solid-bodied wooden construction and called it the Precision. Over the years, designers might have tinkered with the format by adding an extra string here or there, using additional circuitry or putting fine-tuners at the wrong end. Yet they’re still pretty much how they came off the original production line. Utilitarian and just a bit dull.

However, back in spring 2016 at the London Bass Guitar Show, visitors witnessed the debut outing of the Contour range, 10 years in the making from Gillett Guitars. While revolutions in instrument design tend to be very small, the guitar’s designer and director of the company, Michael Gillett, seemed to have a winner on his hands. It didn’t look like an acoustic or an electric bass, was shorter in scale (thus easier to play) and produced colourful, nuanced sound. It seemed as though the Contour was the new kid on the block.

Somerset-based British engineer Gillett has been a bass player since the age of 18, meaning he has more than five decades experience of the instrument. Only five years older than the Fender Precision he grew up with, Gillett has played in bands all his life, as well as teaching bass guitar. “I was teaching 10-year-olds to play bass on long-scale, cheap Fender copy instruments. “I thought this was ridiculous. There was no ergonomic thought to these things. They’re just exactly the same as they were 40 years ago. It’s just a plank of wood with a neck and some pick-ups.” Nobody at this time, says Gillett, had gone back to the drawing board to “specifically redesign these things from scratch as a bass instrument. I thought I’d look into it.”

There must be countless bass players who dreamed of designing their own guitar, but as a former Royal Navy aerospace engineer, Gillett believed he had the skills to actually go ahead and do it. At the age of 16, Gillett entered the Navy to serve an apprenticeship as an aircraft artificer (or “tiffy”) working on helicopter maintenance. “Engineering in the services in those days was much more artisan-style, where it was all about skill of hand, repairing airframes for example – an aircraft goes up, hits a flock of swans and leaves you with a big hole in it. We were initially trained to make the panels for repairs like that. The skills training was wonderful, and during the five-year apprenticeship we also studied the technical aspects of aeronautical engineering such as structures, mechanics, physics and maths.”

This is where, Gillett says, he got all the background knowledge that took him down the path of instrument design. Yet it wasn’t until he started teaching children to play bass that it dawned on Gillett to put his musical and technology skills together.

Basics of bass design

The problem with traditional bass guitars is that they’re too big. The standard scale-length (always measured in inches, from
‘I tried to create a guitar that emulated the sound of a double bass. I wanted to reproduce that lovely woody, clunky sound, but in an actual guitar. That was one of my design intentions right from the beginning.’
After the interior construction Beautifully crafted mistake the Contour for anything other than to the bass guitar frequencies. and tone control terms optimise the response compatibility without overloading. Filters amplification is used to maximise signal-to-designed by Gillett. A moderated level of Schatten bridge transducer, with mixing Bare Knuckle are blended with a Canadian terms of the electronics, neck pickups by horrible buzzes on my instruments.” In you turn to face the speaker. You don’t get that you don’t get any horrible buzzes when brass plate that is also an earthing device, so right to the end, where they are anchored in a up the back end to allow the strings to go then that’s exactly what we’ve got here. “Having done that, we then strengthened up the back end to allow the strings to go right to the end, where they are anchored in a brass plate that is also an earthing device, so that you don’t get any horrible buzzes when you turn to face the speaker. You don’t get horrible buzzes on my instruments.” In terms of the electronics, neck pickups by Bare Knuckle are blended with a Canadian Schatten bridge transducer, with mixing circuitry and independent volume controls designed by Gillett. A moderated level of amplification is used to maximise signal-to-noise ratio, ensuring standard amplifier compatibility without overloading. Filters and tone control terms optimise the response to the bass guitar frequencies. Beautifully crafted After the interior construction comes general appearance. While no-one could ever mistake the Contour for anything other than a bass guitar, from its headstock to the ergonomic contouring (it has an arm recess at the front and a ‘beer belly’ recess at the back), there is a distinctly organic vocabulary to the design. Beautifully crafted – with lots of maple and rosewood – the attention to detail is superb and there’s none of that ghastly high-pressure laminate you see on cheaper acoustics these days. The components are “partially 3D-routed by an ex-house high quality furniture maker”. The neck, shoulder and headstock are made elsewhere, “but hand-assembled in a number of jigs in our factory at Temple Cloud near Bristol. Their job is assembly and hand finishing. This is because when something comes off a 3D-router, while the general shape is perfect, there is a great deal of cleaning to do in order to produce a product like this. Then the whole thing is glued together over a period of 30 to 40 hours, depending on the model. There’s a lot of hand skill as well as technology going into this.” For the outsider, it would seem only natural that the most creative aspect of guitar design would be the shape of the body and headstock. After all, some of the great guitars are instantly recognisable by their lines in the way that classic cars are. Yet for Gillett, the overall outline – with its contours and cutaway – came about by trial and error; even though the early prototypes looked similar to the product today. He describes how he hand-assembled a sequence of “about 10 prototypes in a workshop at home. The first two or three didn’t look quite like this, but I improved it as I went along.” Gillett says the Contour was the result of a “huge amount of prototyping” spanning a decade (which also involved an appearance on ‘Dragon’s Den’ in an attempt to attract funding), but he “actually started thinking about it in 1998”, meaning the overall time frame is closer to two decades. “So in truth, the project has been around for a very long time. We spent a long time in research and development, from finding funding to producing the environment where we could transfer all of my engineering ideas onto computer-aided design. Then we had to work out how to manufacture them. Now that we’ve got the finished product, the next stage is marketing and sales. From being the designer and the originator, I’ve had to reinvent myself again, this time as a salesman.”

**Festival of sound**

Gillett and I are talking at his exhibition booth at the world-famous Cambridge Folk Festival in the ornamental gardens at Cherry Hinton Hall, where he’s busy talking to distributors and some of the on-stage musicians. It’s early morning and he is telling me about the ups and downs of life as a salesman. With a price point in the order of £2,000 per unit, his instruments are clearly not for the entry-level enthusiast. However, given that a decent USA-made Fender Precision can set you back about £2,200, Gillett is looking at (and beyond) markets where the higher-end, mass-produced workhorses are traditionally dominant. “People who play workhorse Music Man or Fender basses – what I call ‘plank players’ – love the Contour guitar, particularly the slim-line range. However, a lot of players looking for something more than a plank are going for the standard version too, because of the bridge transducer and the variety of tone that comes with that.”
The problem with selling bass guitars is that the biggest market sector is virtually irrelevant to Gillett. There are lots of semi-professional players who “typically gig in the local pub on a Saturday night for £50, and can’t justify the price tag of hand-made guitar”. The bass market is also much harder to sell into than the six-string market, as most bands will have one bass player with a single instrument, while there may be several guitarists. Bass players will habitually own fewer instruments than their six-string counterparts, who are notorious serial purchasers.

Given that Gillett’s more natural market is the “purest professional bass player, and that market in the UK is very small indeed”, he’s competing for every sale he can make. That’s why he regards the world as his territory and has patents filed in North America as well as the UK. “What we’re really going for is the young bass player coming out of America, using our guitars as a standard instrument because they are much better than anything else out there. It’s a completely new idea. I also thought that guys who played upright double bass would be attracted to our instruments, because what I tried to do was create a guitar that emulated that sound, but without any bells and whistles. I wanted to reproduce that lovely woody, clunky sound, but in an actual guitar. That was one of my design intentions right from the beginning.”

Gillett cheerfully admits that he’s played a few bass guitars in his time, despite not thinking very much of the popular models (in fairness, he’s equally ambivalent about plenty of brands other than Fender). He accepts that while many of us become frustrated with the design of everyday technology, hardly any of us will do anything about it. Yet, realising he had the engineering skills portfolio as well as the musicianship to see his dream through to reality, Gillett embarked on the long journey to make his own range of guitars.

Now the dream has been achieved, does the product live up to his expectations? Does it solve the ergonomics issues and the playability problems, while giving the designer the tone he wanted?

“I’m actually thrilled with it, particularly my five-string fretless standard model, which is a wonderful instrument. The professional players who pick it up just can’t believe how good it is. Now all we need is a game-changer; somebody big and international, like the guy from Mumford & Sons, to have a look at these instruments and recommend them. Now if he wanted to be my endorsee, he could have one in five minutes.”

www.gillettguitars.co.uk