

A founding father of fuzz, Gary Hurst was among the very first UK technicians to experiment with the seismic square wave. Let's go Beck to the future of rock guitar  
**Words Gary Cooper**

# BEND IT LIKE BECK CAN

**G**ary Hurst is an unlikely figure, both modest and yet defensive of his position in the fuzz box's history. Even the mighty Wikipedia's user-generated history of the fuzz box (at least at the time of writing) borders on the offensive in its US-centrism. Here, then, is the story, as told by the man himself who, thanks to the coaxing of JMI's Rick and Justin Harrison, has returned to reissue the original Tone Bender.

The Tone Bender story starts with another unlikely figure, Vic Flick, doyen of the 1960s London session scene and the man who, in 1962, created the James Bond guitar theme. It was Flick who fatefully handed Hurst a Maestro Fuzz-Tone one day and asked him to come up with something better.

How Hurst had wound-up as a guitar and sound effects guru working out of the back of Larry Macari's music shop in Denmark Street is, in itself, a true tale of those formative times.

"I'd always been interested in music apparatus and used to build them at

home," he says. "I was into crystal sets and radios at first, which my father had also been interested in. In fact if there's anybody reading this who has ever kicked a fuzz box across the stage in anger, they should know that it's really all down to my dad!"

## **JMI beckons**

After grammar school, Hurst found himself studying electronics at a technical college in High Wycombe, while undergoing his apprenticeship. When he wasn't studying, he was building hi-fi amplifiers and had also begun to make amplifiers for musical users as well, including an early multi-channel echo-mixer unit.

"Then, in The Times, of all places, I found an ad saying that Jennings Musical Instrument Industries were looking for a salesman for its famous Vox shop at 100 Charing Cross Road," he recalls. "I wrote

## **Gary Hurst**

Hurst was a repairman and Vox engineer who worked out of London's Denmark Street in the early 1960s. He famously modified a Maestro Fuzz-Tone to become the Sola Sound Tone Bender, which quickly found favour among the hip players of the day, not least Messrs Beck and Page. He's just released a reissue of that classic box of mayhem, and it's reviewed on page 121.

to Tom Jennings, got an application form, went down to the factory and did a long interview with him, at the end of which he said, I couldn't use you there, because what I'm looking for is a salesman, but I'd love to have you down here in our laboratories."

With Vox based in Dartford and Hurst in Princes Risborough it was a tough call, but he was so keen to take the gig, he made the arduous journey on a daily basis.

"I was there for about seven or eight months in 1962 or '63, during which time I did a lot of work on the AC30 Top Boost with Dick Denney – and there are a lot of stories that remain

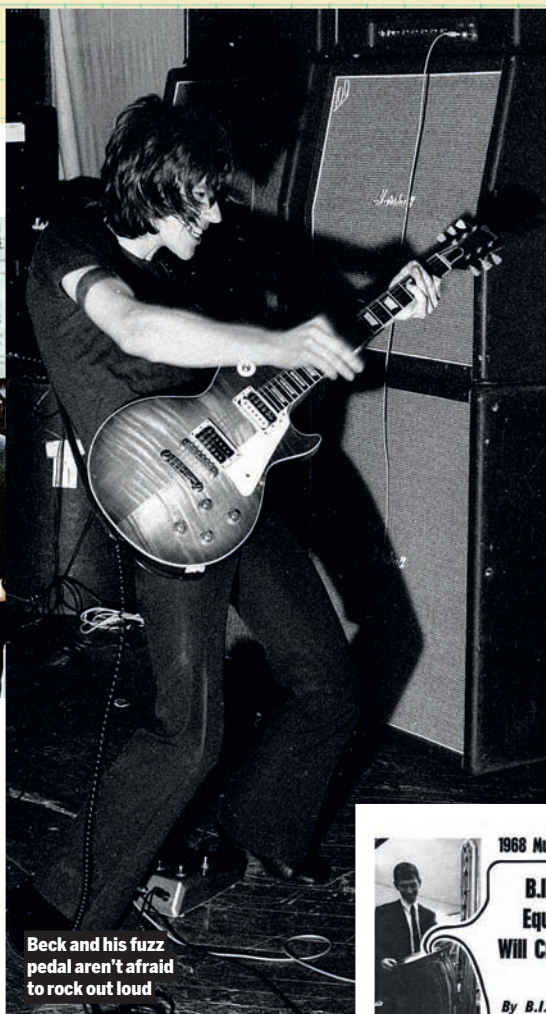
to be told about that particular circuit, I have to say. Dick also had me adjusting the echo head spacings on the prototype Echo units, as he used to say I had the 'Shadows sound' in my head.

"Eventually, Tom said he wanted to set up a technical and promotional centre in





Jimmy Page and Jeff Beck in their early Yardbirds days



Beck and his fuzz pedal aren't afraid to rock out loud



Page goes on a fuzz odyssey during the early Led Zep days

London and he suggested I ran it for him, working in New Compton Street. Back then just about everyone used Vox, so everyone used to come into that place."

When Vox decided to close what was, in effect, its A&R centre, Hurst found a place for his laboratory just around the corner: two floors above Larry Macari's Musical Exchange (ex-Vox) shop in Charing Cross Road.

"It was here that the calls came in from Mal Evans (The Beatles' road manager) that give way to many interesting stories, such as the time they were recording Top Gear at the BBC on 14 July, 1964. During Hard Day's Night, George's amp packed up and Mal phoned me. I left for Portland Place with my doctor's bag only to find that the fuse had blown in his AC50. A fuse was just about the only part I hadn't got in my bag. I had to remedy it with some silver cigarette paper!

"Another time I got a call from the office saying that The Beatles needed a couple of fuzzboxes, as they were rehearsing in an old theatre just off Cambridge Circus, literally 100 yards from my place. So off I went to spend a couple of hours with them, just the five of us."

In September 1964, Hurst was called to Italy by the Elka organ company, then in its teething stages, to help with the design of its very first organ, the Capri. Returning to England in April 1965, he continued where he'd left off, developing as a freelance electronics guru, this time in the back of the shop Larry had opened in Denmark Street.

## Enter Flick, Page...

"Vic Flick walked into the shop with his Maestro Fuzz-Tone and said, Listen, I can't do much with this - can you have a look at it for me?" says Hurst. "I've still got it actually - he never took it back! Anyway, I took it to pieces, but I couldn't get any more sound out of it than it was already making, that is until I modified it. And

then I said to him, I could build you a better one.

"I'm not trying to hide anything here, the Tone Bender was based on the Fuzz-Tone, but that's what things were like back then. Everything was based on something else. This is what causes problems today. For example, I read on some forum recently that the Mk II Tone Bender was very similar to the first stage of a Vox T60 amplifier. All I can say is that both the preamp of the T60 and the second two stages of the Tone Bender Mk II follow circuits that involve very basic electronic principles. So when we consider preamps, which is basically what a fuzzbox is, it's inevitable that similarities will be seen. It was that sort of messing around that we used to do in those days."

With that I mind, was it difficult to nail exactly what should go into the new Tone Bender reissue? "People don't understand how we built things back then. With the original Tone Benders in the wooden boxes, I used to make about 10 a day! My brother used to build the cases during the daytime. I'd buy the components in Lisle Street that day, put some together in



1968 Musical Instrument Trade Fair

**B.I. Looks at the Equipment which Will Create the Sounds of 1969**  
By B.I.'s Technical Adviser GARY HURST

**GUITARS**  
Six years I met the British Musical Instrument Trade Fair I am surprised to find the number of new "fuzz" boxes, and fascinated by the additions to the present range of instruments and by the important lines that the British companies have discovered abroad.

With the exception of the Vox T60, which is a very good example of a fuzz box, the majority of the new fuzz boxes are of the "pedal" type. These are very convenient for the guitarist, and the Vox T60 is a very good example of a fuzz box. The Vox T60 is a very good example of a fuzz box. The Vox T60 is a very good example of a fuzz box.

**AMPLIFIERS**  
The new Vox T60 is a very good example of a fuzz box. The Vox T60 is a very good example of a fuzz box. The Vox T60 is a very good example of a fuzz box. The Vox T60 is a very good example of a fuzz box.

Denmark Street, take them home, have a bite to eat and then start putting them together, finally testing them at two in the morning, using headphones. But there was no fixed formula, there were always small differences here and there."

Even at a not inconsiderable 14 guineas each, Hurst had a queue of customers outside his door, not least among whom were

a couple of young hopefuls by the names of Geoffrey Beck and James Page.

"Jeff Beck was one of the first," remembers Hurst. "Actually, I gave him one, because I knew he was one of the tops, being with The Yardbirds. One of the other early users was Mick Gee, Tom Jones' guitarist, who wanted a guitar sound with a longer sustain that would sound like a saxophone section."

And Jimmy Page? "Yeah, Jimmy Page was an early user, too, he was using a little Fender amp with a Tone Bender. He bought one and used it, but I never used to see so much of him. Of the two, it was Beck I was closer to."

## ...and Beck!

"I remember getting a call from Jeff one day," Hurst tells us, "He needed a Tone Bender urgently that night, because his first one had been run over by a truck, or

"Vic Flick walked into the shop with his Maestro Fuzz-Tone and said, Listen, I can't do much with this - can you have a look at it for me?" **Gary Hurst** >





The reissued Tone Bender bears the Hurst signature

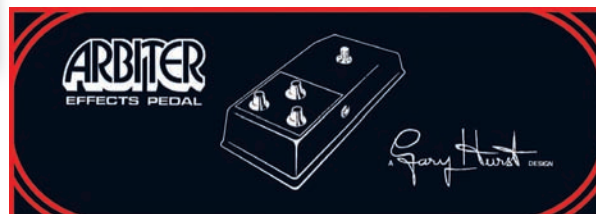


Hurst and JMI's Justin Harrison, with a wood-case Tone Bender

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something. It turned out he was playing at High Wycombe Town Hall, which was handy as it was on my way home. I took it down there, everything was okay at the rehearsals and yet halfway through Heartful Of Soul, he put his big hooligan boots down on it and nothing came out: silence! Well, you know what he's like, he kicked this thing right across the stage. The road manager retrieved it, plugged it back in and it was fine. After the gig, Jeff came up, put his arm around me and said, Sorry mate, it was the lead, wasn't it? It wasn't anything to do with the Tone Bender at all!

"Actually, for the record, that night in High Wycombe was one of the very first gigs with both Jeff Beck and Jimmy Page playing together in The Yardbirds."

It would probably be easier to list the British Beat bands of the mid-1960s who didn't use the Tone Bender, but the names trip off his tongue as he recalls those early customers: Steve Winwood (Spencer Davis Group), Pete Townshend, Manfred Mann, The Troggs, The Pretty Things, Dave Dee, Beaky Dymond, Mick Wilson, Mick Ronson and The Beatles.

"It soon got pretty hectic. With the first wooden ones I must have made about 10 a day for about 10 days – I probably didn't even make 100 and I didn't think of keeping count. It started to get too big, though, so we began building metal-boxed

versions and then, later still, we moved on to actual sand castings.

"As I said, when I was building the first ones, they changed from box to box. I could only put in them what I could find on the day that I was buying the components. I changed the circuit when we went to the cast housings, because it had been a bit unstable before then and every box had had to be tuned-up to get it right."

The fuzzbox had become so popular that Gary's Tone Bender circuit in both the two- and three-transistor form was being produced with various titles for several brand names, such as Dallas, Barnes & Mullins, Rotosound, John Hornby Skewes, Park and none other than Marshall itself as the underrated Supafuzz, the shape of which was derived from an Olivetti calculator, and was in fact none other than the Professional Mk II with the very smallest of mods. It was at about this stage that, one gets the sense, the business side of the Tone Bender began to slip away from Gary. Seeing the success that was coming out of his repair shop,

Larry Macari had taken a slice of the action and was paying Hurst on a per-unit basis. Tone Benders suddenly became Sola Sound Tone Benders – a venture that would later (post-Hurst) develop into the Colorsound brand.

"A lot of people get it wrong and call it a Vox Tone Bender, but it wasn't – at least not at first. What actually happened was that Larry was very friendly with the Vox people and they wanted one, so we built them a Vox version. The very first ones were the same as ours."

So was Hurst actually building them for Vox? Was he on a royalty? "Oh... well... that's a very long story. I don't think that I ever made anything out of it at all, to be honest, though Larry probably did," he reflects ruefully.

"Vox then linked up with an Italian company, copied the casting, but changed the insides – it went back to the two-transistor design and they really were

## Sparringly – Stevie

To face or not to face is the question facing Stevie Nicks. Richard produced that toothy grin, only to find out that they have associated music stores for some time. He gave them a



Steve Winwood used "Just as Your Soul" and the rest of a classic rock song up on all the

Time benders originated in America about eight years ago, and American who have been used in Britain among students for some time. They were based on early records by F. J.

Electronic, musical Gary Hurst was the first to design a Tone Bender which was named London. Hurst managed director Larry Macari told the

With "The Tone Bender" the world's most famous guitar effect. I mean the distinction

Steve, Steve Winwood: "I should be said something, it's a good commercial sound. But you've got to look after them. If you have the buttons down, and push it away the battery cover

and the next time you want to use it, the battery's the worst. Points very much the same, in

honor at the whole concept of distortion distortion, but it's to remember that in the early days of jazz, blues

played when sometimes "die to the rhythm, the city" was the story.

"When I worked we heard and an American unit for record decided to build our own, with a better circuit, and a (reading in a better model. This happened about 1960 and we started about 1961 to 1962 a

modelling.

"It has sold hundreds, and reports by groups like the Yardbirds and The Beatles have helped enormously. There have been records by Spencer

Perry, The Who, The Yardbirds, and Dave Dee, the who have been

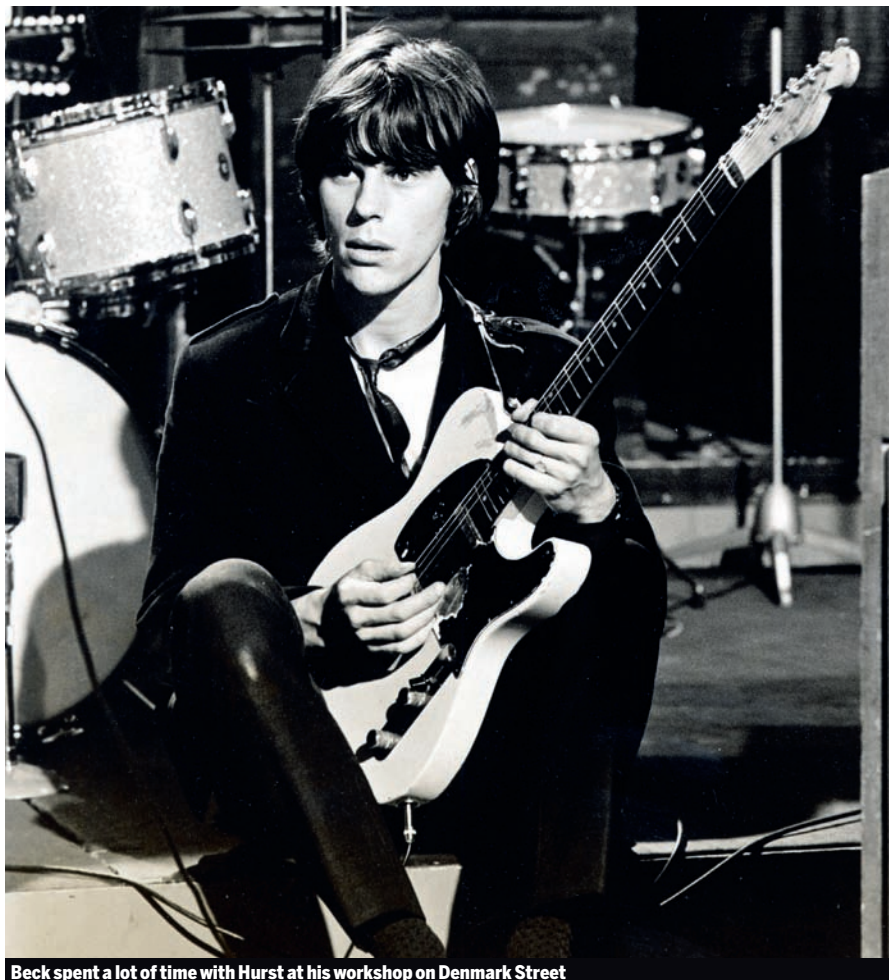
to the 1960s.

"The back of the Yardbirds was one with a beautiful and

and a sound like a violin – really

interesting. It's about the best we





Beck spent a lot of time with Hurst at his workshop on Denmark Street

"When I was building the first ones, they changed from box to box. I could only put in them what I could find on the day that I was buying the components" **Gary Hurst**

terrible. The ones people talk about when they interview artists are the English ones, which are the same as our Mk II Tone Benders, not the Italian-built ones, which were horrible."

### In and out of love

In 1967 Hurst suffered a seriously broken leg while he was playing football and took a few months to convalesce, during which time the Tone Bender concept seemed to slip from his grasp. "I know it sounds strange, but I was neither kicked out of the door, nor did I walk out of it. I just found myself outside."

So in 1968, he left for Italy again where he lives to this day, still involved in electronics. He hadn't quite finished with the fuzz box, however, later partnering with Macari again on the Eurotec project in Italy in the seventies, building CBS/Arbiter pedals, some of which are very collectable today.

Hurst admits he lost interest in effects pedals for a while, after those early days. "I had, it's true – firstly because I was amazed by the number of pedals around and couldn't see a space for me and, secondly, I didn't realise the importance of my Tone Bender in the effects field and I felt that way up until about five years ago. I'm not in this re-issue programme for the photographs and the glory, as some people have said, it's far too hectic for just that, it's that I've had my interest in pedals revived. It is all down to Rick Harrison [of retailer Music Ground and JMI], who's responsible for the reissues, he'd been on to me for about four years!"

So, who does he think got the best out of them? "Oh, Jeff and Jimmy," he says without hesitation. "They were the first and they did so much with them."

And so it remained, that was, until 1967 when a Jimi of an entirely different kind came along to rip up the rule book... **G**



**FUZZ**  
SPECIAL FEATURE

## Fuzz Jargon Buster

Terms of the dirty trade

### Diode

An electronic component commonly used as a rectifier to convert current from AC to DC. The classic fuzz configuration is to use them in addition to transistors to severely clip the signal.

### Germanium

Chemical element (atomic number 32, symbol Ge) used as a semiconductor to make transistors. Many people regard them as the holy fuzz grail. They're expensive and wildly varied.

### Feedback loop

A part of the circuit in a pedal. Some designs used a pair of diodes in the feedback loop to clip the signal severely.

### Fuzz-Face

Classic Dallas-Arbiter pedal, first with Germanium transistors, later with Silicon – so called because they're fuzzy, and look a bit like a face...

### Fuzz-Tone

Seminal pedal from Maestro that started all this fuzz-fuss. It was first introduced in 1963.

### Octavia

Roger Mayer's fuzz-plus-octave-divider pedal – used by Hendrix on the Fire and Purple Haze solos.

### Op-amp

(Operational amplifier) A small electronic component used in all kinds of things, such as an amplifier. Not in early fuzz pedals, but used in loads of overdrives and distortions today.

### Silicon

Chemical element (atomic number 14, symbol Si) widely used in semiconductors and, more importantly, transistors for fuzz pedals.

### Square Wave

Waveform shape that results from boosting a signal in such a way that it clips so heavily it looks square – the sound of fuzz as far as the oscilloscope is concerned.

### Tone Bender

Gary Hurst's seminal pedal, adapted from the Maestro Fuzz-Tone.

### Transistor

Small, low-powered electronic device consisting of a semiconductor and electrodes used as an amplifier. Either Germanium or Silicon when it comes to fuzz pedals.