

Matthew C Applegate

Chip tune musician, Pixelh8

Matthew C. Applegate certainly knows his way around a circuit board. Otherwise known as chip tune musician Pixelh8, he makes a living reprogramming vintage computer systems and old electronic toys so he can make music from them – think 80s and 90s technology like ZX Spectrums, Commodore 64s and Game Boys and you get the picture.

Now internationally renowned, his blend of electronica has taken him all over the world to perform. Considering his success though, Matthew wasn't born into a musical family and didn't study the theory at school. He always had his eye on being a musician, but his route into the industry was through science lessons and computers, as well as a fascination with programming.

"I used to live in America when I was young," he says. "They only had cartridge games over there, so when I arrived in England I swapped my consoles for the computers my new friends had. Of course, they were pleased to have something they couldn't get in the UK... and I got to work on their old machines."

When he started at his new school, the music classes were full. Matthew decided to work a paper round to fund private lessons. "I was into bands like REM who used a lot of orchestration in their songs. I wanted to compose more than play really, so I learned the piano, cello and violin. I had to learn proper music, study hard and take on a lot of theory, but I'm glad I did it. I now perform in the same nightclubs my friends were going to when we were at school."

Pixelh8's music has a wide fan base now, with listeners who range from four to forty. They include people in their 30s that go for a bit of retro nostalgia; younger ones who enjoy the music; and academics who have an interest in the technology. Matthew is also keen to make the technology as accessible as possible, so he allows budding chip tune musicians to download software he's developed from the Pixelh8 website (www.pixelh8.co.uk). The downloads have drawn interest from school pupils, but also musicians like Damon Albarn for his Gorillaz sideline.

Talking about his own musical ventures, Matthew says one highlight was meeting Bond film soundtrack composer David Arnold at the BAFTAs. Another was a recent project called Obsolete? when he had the opportunity to compose live music with some of the oldest and rarest computers in the world. They included World War II code-breaking machine Colossus Mark 2 Rebuild and the 1960's Elliott 803, used

mostly for mathematics. Matthew composed 12 pieces of music with accompanying visuals for two performances at the prestigious Bletchley Park Mansions.

“Some of the machines are worth millions,” he says, “so my career was on the line really.” The performances sold out and the project inspired media coverage across pop culture and traditional science titles – with articles in magazines as diverse as Dazed & Confused and the New Scientist.

Nowadays, Matthew says his work couldn’t be more varied. Whether he’s programming, composing, planning performances or working with young musicians, it all seems like part of a bigger adventure. He’s also in no doubt about the importance of his science background. “Science and technology is inseparable from music nowadays,” he comments. “You could be in a punk rock band and you’d still have to use a computer to record the music and market it. People think engineering is just factual, never creative. It is. There’s so much creativity in overcoming engineering and mathematical challenges.”

And Matthew’s advice to budding musicians?

“Just do it,” he says. “It’s great to try things out, make mistakes and then learn from them – especially when you’re young.”

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STEM Ambassador

Matthew says he was drawn to the STEM Ambassador's scheme because it fitted with his ethos of making computing, technology and music as accessible as possible for young people.

"The thing is, most musical instruments are quite alien to young people," he says. "I guarantee no one in my neighbourhood has a piano at home, but most have games consoles. By using these machines, we make music and technology more immediate. Kids are confident with games and they can use their game-playing skills – their hand-eye coordination – to make music."

Going into schools as established chip tune musician Pixelh8 seems to be an advantage when it comes to grabbing pupils' attention. In his latest activity as STEM Ambassador, he visited the school at the end of his road to lead two workshops. Recycling computers and electronic games with a bit of circuit bending, the workshops delivered on music, ICT and science levels. Science, maths and engineering come into play in these sessions, he says.

"I have faced some opposition from teachers who don't like electronic music; others that think the machines we are using aren't proper instruments. The way I look at it is that a violin wasn't an instrument until it was used to make music. A Game Boy can be all instruments in one; and it's a real-time instrument too because it relies on human interaction. When kids see the instruments we have made, their response is often 'wow, it's a new keyboard that costs just a pound'. You have to study, but you can make these instruments for yourself."

Matthew tries to get involved in STEMNET activities whenever he can, and often organises his work schedule around school events. On an extra-curricular outing, he once even took a student to his Radio One live session at the BBC Maida Vale studios in West London. Acting as his roadie for the day, the student got to experience a setting where some of his favourite bands had played in the past. The next day, Matthew says, this student was back at college to start recording.

It's this type of inspiration that inspires Matthew in turn. Following another of his lectures – this time in York – participants scoured local second hand shops to buy up all the computers and game equipment they could find. They then set up their own weekly circuit bending group.

Just looking at the testimonials on the Pixelh8 website, www.pixelh8.com.uk, gives an indication of how pupils and teachers benefit from the workshops. 'It's not often you see a class visibly prick up their ears, sit forward on their chairs and literally ask for more!' says one online comment.

"The best thing is to inspire people to do their own work," Matthew comments. "I talk about music because it's important. Students who I meet in schools, music technology centres and access colleges are in the same boat I was in. Kids are often passionate about music, but not necessarily confident about their skills. Once they have heard their sounds through a large PA though, their confidence is boosted."

"Even if I just inspire one other person, he adds, "that's great." From what we can see, Matthew has already achieved way beyond this as an ambassador.