

**Position:** DSP Engineer  
**Location:** Northampton, UK

Blackstar are recruiting for a guitar playing, audio-specific DSP engineer to join our established R&D team. This is a key role within the department and our software team.

**The company:**

Launched in 2007, Blackstar is an internationally recognised and respected guitar amplification company. We are a team of musicians who are truly passionate about what we do, and who understand the importance of great tone.

Blackstar is based in Northampton, England, with over 100 years' combined experience in guitar amplification design and production. Our team pioneer change in the industry and have a strong commitment to driving transformational innovation in all of our products. Blackstar products are the best in the world for design, technology and performance - we are setting the standard for the industry.

**The role:**

Due to continued business growth and large product roadmap, we are looking to appoint someone looking for a long-term career opportunity, who wants to help our team and business grow. This is an exciting and diverse position, where you will be primarily providing efficient DSP programming & testing in all Blackstar digital products, through full project life cycle - from early research and prototypes, through to mass production.

**The duties and responsibilities will include, but are not limited to**

- DSP algorithm development, implementation and optimisation
- This includes both high-level modelling (MATLAB, C/C++, VST plug-ins) and assembler-level optimisation on the target platforms
- Testing own code, both digitally and sonically on amps and products throughout the process.
- Assisting in project planning, scoping and problem solving in terms of software
- Other duties within skill set but not necessarily role scope as and when (creative design input, attending meetings etc.)

**The ideally sought candidate will possess the following**

- Qualified to degree level or above in a relevant subject
- Guitar player, with first-hand understanding of products in the wider Musical Instrument market
- Several years (minimum 2+) commercial experience as an **Audio-specific DSP Engineer**
- DSP development for embedded hardware
- Practical experience using the **JUCE** framework
- Experience in **assembler-level optimisation** (ARM Cortex M/SHARC) to build and test own work
- Experience in testing audio algorithms and audio processing blocks
- Excellent demonstrable Embedded C programming skills
- Excellent C++ (OOP) programming skills
- Solid understanding of fundamental DSP theory
- Critical listening experience
- Strong understanding of software engineering principles
- Understanding of/experience developing VST plug-ins

**Additionally, sought Experience / Knowledge:**

- Optimisation on out-of-order architectures
- Real-world modelling of audio systems
- Independent and self-reliant, being able to work without close supervision, in addition to having a team mentality
- Working within a KPI (Key Performance Indicator) structure

**The Person fit:**

- Able to work from Blackstar HQ in Northampton, UK, full-time, with the wider Blackstar R&D team
- Excellent verbal and written communication skills
- Excellent numerical and analytical skills
- Looking for a long-term career
- Highly organised
- Independent and self-reliant
- A flexible approach to work.
- Passion for the music industry
- Driven, Passionate and a definite go-getter

**The Environment:**

Blackstar is a unique environment; we are all musicians and the dress code is very relaxed. Our teams are experts in their field and we are incredibly passionate about our products and the industry as a whole. Most of our world-class team have worked in the music industry for a long time, and we are looking for candidates who wish to grow with the company and share in our current and future success. **This role requires working at the Blackstar HQ with the R&D team in Northampton, UK, full-time.**