

Job Description

Department: Research and Development
Job Title: DSP Engineer
Reporting to: Senior Software Engineer
Overall purpose of the job: Efficient DSP programming in all Blackstar digital products
Main Activities / Tasks: 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.
Other Duties: <ul style="list-style-type: none">• 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 Person

Person Specification	Desirable	Essential
Education Qualifications		<ul style="list-style-type: none"> Qualified to degree level or above in a relevant subject.
Training Technical Skills	<ul style="list-style-type: none"> Several years (minimum 3) commercial experience as an audio DSP Engineer. SHARC DSP experience. Experience using JUCE or similar for creating software GUIs. Proficient using MATLAB. Experience in assembler-level optimisation (preferably on ARM Cortex M/Cortex A). Experience in testing audio algorithms and audio processing blocks. 	<ul style="list-style-type: none"> Excellent demonstrable Embedded C programming skills. C++ (OOP) programming skills. Solid understanding of fundamental DSP theory. Strong understanding of software engineering principles. Experience in audio signal processing. Understanding of/experience developing VST plugins.
Experience (Knowledge)	<ul style="list-style-type: none"> Optimisation on out-of-order architectures. Real-world modelling of audio systems. Audio analysis of real-world systems. 	<ul style="list-style-type: none"> DSP development for embedded hardware. Independent and self-reliant, being able to work without close supervision. Working within a KPI (Key Performance Indicator) structure. A musical background, guitar playing or otherwise, would be considered a strong advantage.
Personality Characteristics	<ul style="list-style-type: none"> Passion for the music industry. 	<ul style="list-style-type: none"> Excellent interpersonal skills, able to build professional relationships with people at all levels. Ability to manage working time effectively and prioritise assignments appropriately. Enthusiastic, methodical, committed and dependable.
Specific Requirements of the Role		<ul style="list-style-type: none"> Full time, 08:00 – 17:00, Monday – Friday in Northampton, UK. Willing to work extra hours as and when required.