

Percussionizer acoustic impulse response analysis tool

The Percussionizer system for quantitative percussion tuning

The Percussionizer is the first professional acoustic analyser and tuning aid for percussion instruments, allowing users to maximise and customise performances to any chosen benchmarks, through a unique interactive tuning process assistant.

Using the Percussionizer, users can access tuning features that allow higher accuracy, repeatability, and benchmarking to specific percussion sounds. In particular the Percussionizer allows users to:

- tune percussion instruments to a specific musical pitch
- achieve a uniform frequency response across and around the perimeter of the drum head
- manipulate attack and decay times of percussive sounds

Tuning is based solely on the measured audible acoustics of the instrument, using scientific methods embedded within the tuning tool. Users can select a benchmark and utilise the unique and interactive tuning assistant to achieve the desired tuning.

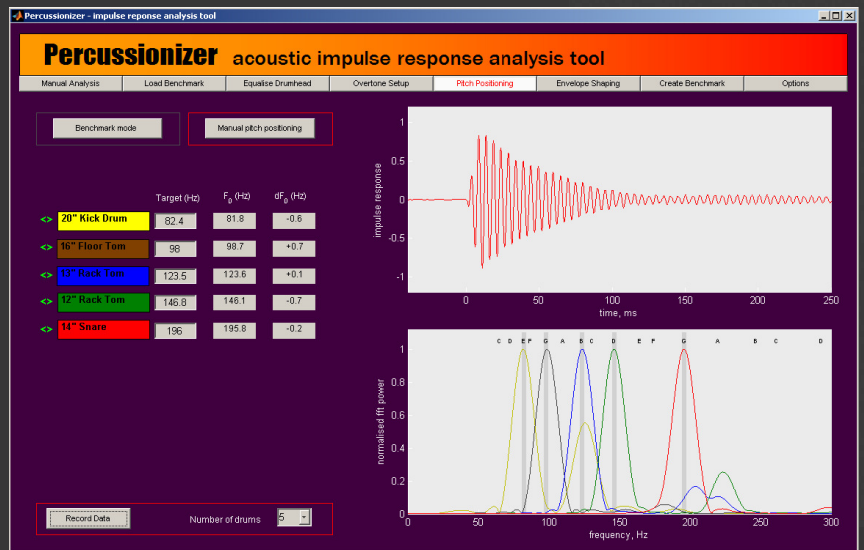


Figure 1. Percussionizer display showing a drum kit tuned to musical pitches.

Market potential

The Percussionizer technology has benefits for a number of commercial markets which hold an interest in accurate and repeatable drum tuning and drum setups. These include:

- Recording studios and record producers
- Classical orchestras, jazz groups, samba bands etc
- Professional session musicians
- Music schools and departments
- Percussion instrument shops and technicians

Furthermore, the Percussionizer technology can feasibly be packaged in a studio rack mount system, as a hand held portable device, or as a software only option. The present prototype is in the form of a studio rack mount system which can give immediate benefits to music producers looking to enhance their control over drum setups in studio recording projects.

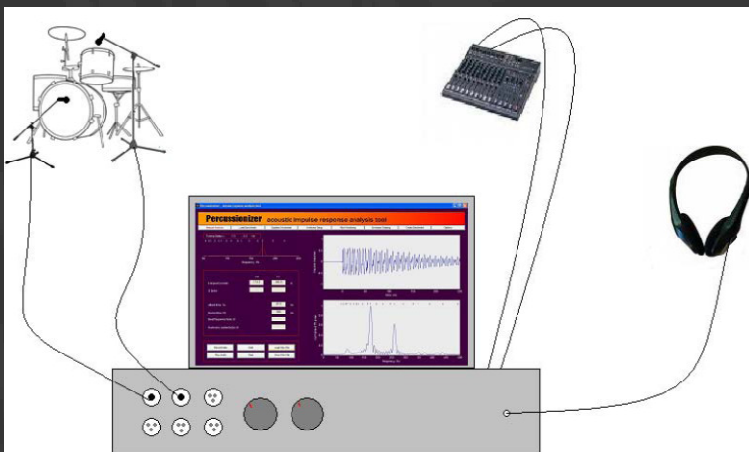


Figure 2. Example hardware setup for the Percussionizer.

production, as well as a successful industry collaborator on a number of Knowledge Transfer Partnerships for Anglia Ruskin University. Dr Toulson is also a member of the Board of Directors for the Pleasurize Music Foundation whose aim is to enhance the awareness of dynamic range and over production in modern record production practice.

Intellectual property

The intellectual property for the Percussionizer is owned by Anglia Ruskin University, who are exploring a number of options for commercialisation. These include direct licensing, partner collaboration and consulting services. The PCT patent (PCT/GB2009/002017) provides international intellectual property protection in all of the major industrialised countries.

The Percussionizer inventor is Dr Rob Toulson of Anglia Ruskin University. Dr Toulson is a Senior Lecturer in Electronics and Audio and Music Technology and holds a PhD in the field of digital vibration analysis. Dr Toulson has a number of years experience in acoustic and vibration analysis research and software development for digital signal processing systems. He is also an active record producer and researcher in the field of record