



BOLDfonic

Calibrated audio for 3T & 7T fMRI

BOLDfonic delivers high-fidelity acoustic stimuli for fMRI while also attenuating scanner noise.

Our electro-dynamic driver technology uses the magnetic field of the MRI scanner to drive the headphone membranes. This results in powerful speakers with an excellent frequency response across a wide dynamic range. A novel USB sound processor with automated synchronous triggering capabilities and a fully-loaded amplifier system provide all the controls you need for rigorous multimodal EEG/fMRI studies.

BOLDfonic integrates perfectly with our LCD monitor system, eye tracker and the other *Made for fMRI* devices from our range.



www.crsLtd.com/boldfonic

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BOLDfonic

→ Hear the difference

You wouldn't listen to your iPhone with a stethoscope....

Yet, most MRI compatible headphones offer just that; audio piped to the patient down long, acoustic tubes. The result? Awful sound quality with restricted frequency response, which is of restricted utility in research.

Our unique electro-dynamic driver uses the magnetic field of the MRI scanner to drive the headphone membrane. This results in powerful speakers with an excellent frequency response across a wide dynamic range. An additional piezoelectric driver can be fitted to some designs, which enables those headphones to be used outside the bore too.

A circumaural, closed-back headphone design offers superior gradient noise dampening. Where space permits, soft memory foam cushions can also be inserted between the head and contact points of the coil to provide even better isolation, reduce bone conduction and improve participant comfort.

→ Fits any headcoil

Headphones are available in a number of sizes and cable routing arrangements to suit different headcoil designs.

When there is insufficient space for headphones, an earbud option is also available. This simple and effective solution places the headphone driver unit just outside the coil, and delivers the audio to the ear via a short airtube and passive earbud, maintaining the best possible sound quality.

→ Bi-directional communication

A compact operator microphone is sited in the console room. If bi-directional communication is required, an optional noise-cancelling microphone can be mounted on the headcoil; thus providing clear, simultaneous, two-way communication.

→ Amplify your options

Bespoke stereo amplifiers are perfectly matched to the filter set and headphones; all designs have digital optical inputs to connect the signal source. They are easy to operate for routine use, yet still offer sufficient flexibility and control of auditory stimuli for fMRI.

The amplifier's comprehensive design can drive two headphones, external speakers, and supports the optional headcoil-mounted noise-cancelling microphone. It has a digital I/O interface to support direct integration with the MRI scanner.

→ Synchronous auditory stimuli

Combining local solid-state storage of audio samples with an intelligent USB interface, BOLDfonic makes it simple to synchronously and precisely mark the onset of an audio stream, with all the control you need for rigorous multimodal EEG/fMRI studies.



→ Integrates with our fMRI range

- BOLDscreen LCD displays
- LiveTrack AV eye tracker
- fORP response devices

For expert advice on equipment selection, integration and installation, talk to our team at scientists@crsltd.com

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