

SOP

DBIC Standard Operating Procedures for Optoacoustics FOMRI-III Microphone for fMRI

For training on how to use the Optoacoustics FOMRI-III Microphone and for technical support, contact Terry Sackett.

Terry Sackett terry.j.sackett@dartmouth.edu Scan room: 6-0155, Office: 6-0178



INTRODUCTION

The Optoacoustics FOMRI-III Microphone is an MR-compatible noise cancelling microphone for recording verbal responses from a subject during fMRI scanning. It is plug-and-play operational with a USB connection that works like a standard USB microphone with your computer. As with most MRI-peripheral equipment, the microphone relies on fiber optic cables. These are always very delicate and very expensive.

QUICK START

Setting up the microphone. The microphone attaches directly to the head coil and is secured with velcro. The microphone gets attached after your subject is situated on the MRI bed and the anterior portion of the head coil is in place. First, attach a new sterile pop screen to the microphone. These are located in the supply cabinet inside the scanner room. The pop screen is a small screen that attaches to the business end of the microphone to attenuate sudden bursts of noise made by plosive speech sounds, and it protects the microphone from getting spit on it. To attach the pop screen, just slide it into the slot on the end of the microphone. Once, you have prepared the microphone, your subject is ready to go, and the anterior portion of the head coil in place, attach the microphone to the velcro pad on the right side of the head coil. Bend the microphone arm to bring the end of the microphone as close as possible to the subject's mouth. The pop screen should be about one centimeter in front of the subject's lips.

CAUTION: The microphone's fiberoptic cable is delicate and expensive. Please take caution to ensure that the cable does not get pinched on the side of the scanner bed as you slide your patient into the bore. **Never** step on any cables!

Attach the microphone controller to you computer. The controller for the microphone is stored under the counter. Place it on top of the counter and turn it on. Use the USB to connect it to your experiment computer. Previous users have determined optimal settings of the volume and noise cancellation levels. These are marked in black sharpie. Start with these levels set to the defaults, and adjust if necessary. Your computer should recognize the new USB microphone as any other plug-and-play USB microphone.

RESOURCES

For more information, visit the optoacoustics website:

<https://www.optoacoustics.com/medical/fomri-iii/features>