



LITEMIC™ 3140 (FOMRI-II)

Highly Directional Noise Cancelling Optical Microphone System for MRI

Dual channel system for high quality speech during magnetic resonance imaging (MRI) procedures, with integrated orthogonal and matched pressure gradient fiber optic microphones. The system features advanced adaptive noise-cancelling capabilities which are implemented in software or DSP.

FEATURES

- ▶ Highest quality communications during MRI scans
- ▶ Eliminates EPI acoustic noise
- ▶ State-of-the-art adaptive noise-cancelling algorithm
- ▶ Completely passive sensor, absolute EMI/RFI immunity
- ▶ Patented MEMS microphone technology
- ▶ Quick mounting kit with ultra flexible boom
- ▶ Optional DSP unit
- ▶ Standard analog output
- ▶ High reliability and environmental stability
- ▶ Plug-and-play system
- ▶ Complete, cost-effective solution

TECHNICAL SPECIFICATIONS

Frequency Response	50-20,000 Hz
Noise Reduction	15 - 40 dB
Sensitivity	50 mV/Pa \pm 10% at 1 kHz
Maximum Acoustic Pressure	130 dB SPL
Total Harmonic Distortion	<1% at 84 dB SPL
Microphone Output Type	Digital USB
Audio Format	16 bit WAV
Latency - Software	96 msec
Latency - DSP (optional)	16 msec
Supply Voltage	8-15 V DC
Current Drain (max.)	200 mA
Operating Temperature	-10 to +60 °C (14 to +140 °F)
Storage Temperature	-10 to +60 °C (14 to +140 °F)
Humidity - 1000 hours	Up to 95% RH at 40 °C
MTBF	>100,000 hours
Microphone Head Material	Polycarbonate
Base Mount Dimensions L/W/H	60/25/25 mm
Weight	160 g
Gooseneck Boom Length	300 mm
Optical Cable Length	10 m

APPLICATIONS

- ▶ Interactive patient communications during fMRI scan procedures
- ▶ Speech studies in fMRI
- ▶ Communications in auditory fMRI
- ▶ Physician and radiologist communications in interventional MRI environments

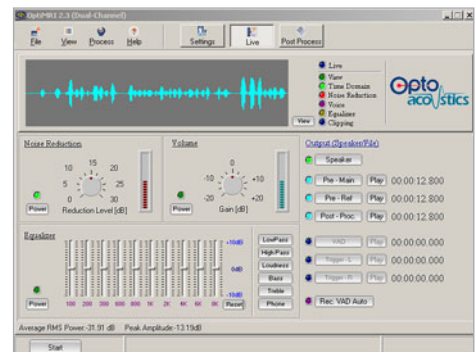


LITEMIC™ 3140 Dual Channel System Kit

Complete, ultimate, noise-cancelling solution

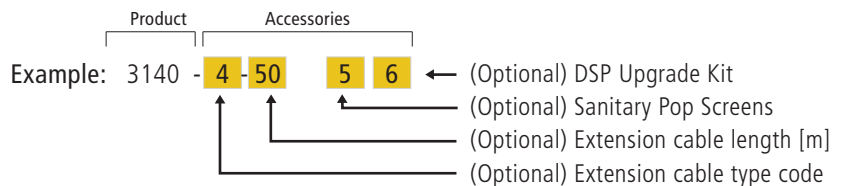
Optoacoustics' LITEMIC 3140 system is comprised of our advanced dual channel fiber optic microphone, electro-optic control unit with USB interface, quick mounting kit with ultra flexible gooseneck boom, DC power supply, disposable pop screens and a protective storage case.

LITEMIC 3140 is bundled with our advanced OptiMRI dual channel noise reduction software, which provides real-time control over FOMRI system output as well as complete post-processing capabilities. Features include: noise reduction, graphic equalizer, preset filters, built-in recording and playback utilities.



PRODUCT ORDERING GUIDE

Use the matrix below to select accessories for your order.



Accessories	Extension Cable	Sanitary Pop Screens	DSP Upgrade Kit
Item	Indoor Zip Cord (From 10 to 50 m) Ø 3.0 x 2 mm	Clip-On, Disposable 100 Pack	Add-On Kit Dual Channel
Code	4	5	7
			



SOUND SOLUTIONS FROM LIGHT TECHNOLOGY

Optoacoustics is a leading manufacturer of high performance, optical fiber-based sound and vibration sensors. Each of our products combines the natural intelligence of optics and acoustics to meet technical performance demands which cannot be addressed by conventional sensing solutions. Optoacoustics' pioneering technology is protected by over 20 international patents.

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