



3M™ E-A-Rfit™ Dual-Ear Validation System Specification

Measurements computed

Octave band data computed in:	125 Hz, 250 Hz, 500 Hz, 1000 Hz, 2000 Hz, 4000 Hz, 8000 Hz
PAR	Personal attenuation rating
Frequency weighting	A

Mechanical specifications

Speaker housing	Aluminum, black material
Speaker size	6.5" long × 3.75" width × 6" depth; 2.54cm long × 9.5cm width × 15.24cm depth
Speaker weight	3.1 lbs; 1406.1 grams
Speaker status indicators	<ul style="list-style-type: none">▶ LED Red blinking Indicator Light – signifies USB is not connected. It will disappear when connected successfully.▶ LED Green Indicator Light – signifies power is on.

Power supply and operating conditions

Voltage	120 to 240VAC
Frequency	50–60 Hertz
Current	250 mA

Environmental operating conditions

Altitude	3000 (maximum) meters
Operating temperature	5 °C to 40 °C (41 °F to 140 °F)
Relative humidity	80% for temperatures up to 31°C (87.8 °F) ; decreasing linearity to 50% at 40°C (140 °F)
Voltage range	12 Volts DC
Transient overvoltage	Impulse withstand (overvoltage) category II. Rated pollution degree 2.

User interface requirements: ports and connectors

AC/DC output (power)	
2 LED indicators	
USB connector	
Power connector	

Software requirements

Screen resolution	1024 × 768 pixels (minimum)
Operating system	<ul style="list-style-type: none">▶ Microsoft Windows 7 Professional, 32-bit and 64-bit▶ Microsoft Windows 8, 32-bit and 64-bit▶ Microsoft Windows 10, 32-bit and 64-bit▶ Microsoft .NET Framework: Net4Full 4.0.30319.1, Net4Client
USB port	1 USB port available
Pointing device	If the screen is not a touch screen, a pointing device, such as a mouse is required.
Internet connection	Internet is required for some features (such as Software Updates and How-To Videos).

Standards / directives / references

- ▶ IEC 61010-1 (2010 Revision/Edition 3.0). "Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements". International Electrotechnical Commission.
- ▶ EN 61326-1 (2013 Revision/Edition 2.0). "Electrical equipment for measurement control and laboratory use – EM requirements- Part 1: General Requirements." International Electrotechnical Commission.
- ▶ Code of Federal Regulations (CFR): Title 47, Part 15 Subpart B. (2012 Revision.). "Radio Frequency Devices, Unintentional Radiators."
- ▶ Federal Communications Commission.
- ▶ ROHS/ Directive 2011/65/EU (June 8, 2011). "The Restriction and Use of Certain Hazardous Substances in Electrical and Electronic Equipment." European Parliament and the Council of the European Union.
- ▶ WEEE/Council Directive 2002/96/EC. "Waste Electrical and Electronic Equipment." European Parliament and the Council of the European Union.

- ▶ Safety/Council Directive 2006/95/EC. "Low Voltage Equipment Safety." European Parliament and the Council of the European Union.
- ▶ EMC/ Council Directive 2004/108/EC. "Electromagnetic Compatibility." European Parliament and the Council of the European Union.
- ▶ CE mark. European Conformity. (Conformité Européenne.)

US patents granted

- ▶ US7688983 B2. Method and apparatus for objective assessment of in-ear device acoustical performance.
- ▶ US8254586 B2. Method and apparatus for objective assessment of in-ear device acoustical performance.
- ▶ US8254587 B2. Method and apparatus for objective assessment of in-ear device acoustical performance.

US patents application

- ▶ US Patent Application Number: US62/052713. Acoustically proved over-the-ear hearing assessment devices and methods.

Ordering information

3M ID	3M™ E-A-R™ Dual-Ear Validation System Kit Components
70-0716-7411-6	3M™ E-A-Rfit™ Dual-Ear, Enclosure Speaker Assembly; Dual-Ear Microphone/Cable Assembly; Dual-Ear ¼"-20 to 5/8"-27 Speaker Stand Adaptor; Test plug kit; 3M™ SecureFit™ Protective Eyewear; Microphone stand ;USB cable; Power cord/supply; 3M™Roll Model; 3M™Eargauge; Tweezers; USB flash drive with software install and user manual; antistatic ziplock bag; Removable microphone clip (2); Carrying case assembly.

Limitation of Liability: 3M takes no responsibility and shall bear no liability for use or misuse of individual or personally identifiable data. All responsibility for such data resides with the purchaser and/or employer. Please refer to the user manual for complete details on Warranty and Responsibility for Data Privacy and Security information.