

# 3M™ E-A-Rfit™ Dual-Ear Validation System Specifications

## 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 x 3.75" width x 6" depth; 2.54cm long x 9.5cm width x 15.24cm depth
Speaker Weight	3.1 lbs; 1406.1 grams
Speaker Status Indicators	<ul style="list-style-type: none"><li>• LED Red blinking Indicator Light – signifies USB is not connected. It will disappear when connected successfully.</li><li>• LED Green Indicator Light – signifies power is on.</li></ul>

## 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 X 768 pixels (minimum)
Operating System	<ul style="list-style-type: none"><li>• Microsoft Windows 7 Professional, 32-bit and 64-bit</li><li>• Microsoft Windows 8, 32-bit and 64-bit</li><li>• Microsoft Windows 10, 32-bit and 64-bit</li><li>• Microsoft .NET Framework: Net4Full 4.0.30319.1, Net4Client</li></ul>
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 Patent 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.



### Personal Safety Division

3M Center - Building 235 - 2W-70

St. Paul, MN 55144-1000

Technical Assistance: 1-800-243-4630

Customer Service: 1-800-245-0779

EARfit.3M.com

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