



The new IRIS Mini – cutting edge acoustic measurement tools made compact, fast and cost-effective.

IRIS is an intuitive, graphically-based 3D room impulse response (3DRIR) measurement package that provides acoustic analysis. It has been used in some of the world's most impressive spaces and high-end projects. By using readily available consumer-level components, the new IRIS Mini solution brings that powerful tool within reach, opening up new possibilities for smaller projects and applications.

How It Works

To make the IRIS tool more cost-effective, portable, time-saving and easy to use, Marshall Day Acoustics has tested the ground-breaking software with consumer-grade equipment, and is able to recommend the best products for the job.

That means you can simply purchase these products from online retailers, purchase the IRIS software and plug the supplied software dongle into your computer. Then set up the recommended products in minutes, via easy-to-follow instructions, to begin making use of an impressive range of IRIS 3DRIR capturing and analysis capabilities.

The kit uses wireless connectivity, without the need for mains power or other cabling, making the measurement process much faster compared to standard full-size systems. The kit is perfect for small- to medium-sized spaces such as classrooms, meeting rooms, small auditoria, studios and practice rooms. (Larger spaces can also be measured, but in some cases may require a more powerful loudspeaker than the one featured in the standard IRIS Mini equipment list.)



Measuring 3DRIR in these kinds of spaces provides significantly more information about a room than traditional omnidirectional reverberation time measurements, making the IRIS Mini set-up invaluable for diagnosing issues that would not otherwise be seen.

An example would be a classroom with significant ceiling absorption but minimal wall treatment. A 3D measurement

of the space will show that sound reflecting between the walls is creating a '2D field', which results in a much longer reverberation time than would be expected based only on a less detailed assessment of the overall absorption.

Recommended Kit

The consumer or semi-professional technology now available integrates a range of features that make these products suitable for accurate measurement applications. The following relatively low-cost units have been tested and are recommended by Marshall Day Acoustics for use with the IRIS software.

Microphone and audio interface: Zoom H3-VR

A semi-professional-grade unit that includes both a tetrahedral microphone array and a USB interface, with built-in A-format to B-format ambisonic audio conversion for a simplified user experience. The Zoom H3-VR is primarily designed to capture ambisonic audio in conjunction with a 360° camera for such things as Virtual Reality projects, but those features also make it ideal for a 3DRIR set-up.

Loudspeaker: Bose Revolve+ II

A high-quality consumer-grade Bluetooth speaker, with a single full-range driver that faces down and dual passive radiators. The driver and radiator arrangement, and the perforated sides of the unit, enable the sound to radiate in all directions. This design creates a very uniform distribution of sound in the horizontal plane, while the small size of the unit (18.4 cm H × 10.5 cm W × 10.5 cm D) also enables relatively uniform distribution in the vertical plane.

Wireless system: Rode Wireless Go

This dual unit enables fast wireless transmission from the microphone to the speaker, using the 2.4 GHz band to transmit broadcast grade audio with a range of up to 70 m (according to the manufacturer's specifications).

Tripod: MeFOTO RoadTrip Air

In addition to this sturdy but lightweight alloy tripod, the Ulanzi PT-3S Triple Cold Shoe Mount is recommended to enable easy mounting of the H3-VR and the Rode transmitter. This also enables easy mounting of an optional 360° camera.

Computer:

Any up-to-date laptop with Intel multi-core processing power. For enhanced portability, a Microsoft Surface Pro can



Recommended IRIS Mini kit: (1) Zoom H3-VR microphone, (2) Bose Revolve+ II speaker, (3) Rode Wireless Go wireless system, (4) optional 360° camera, (5) IRIS dongle, (6) charging cables, (7) tripod attachment, (8) MeFOTO RoadTrip Air tripod.

be used, taking up less space alongside other equipment in the case.

Case: Pelican iM2300 or similar

A sturdy case with a cut foam inner is recommended. This enables safe and easy portability of all equipment. A custom foam insert and case are available from Livesound NZ. Email ben@livesound.co.nz with the reference 'IRISmini'.

Performance

As the equipment is manufactured and supplied by others, Marshall Day Acoustics does not provide hardware support, and the IRIS Mini system has not yet been tested for compliance with ISO standards. However, field tests and commissioning indicate that the system provides excellent results, comparable to high-end ISO-compliant systems.

The IRIS Mini kit has been used successfully on many projects and has now become Marshall Day's tool of choice for measurements in small to medium rooms.

For more information (including a set-up guide) visit www.iris.co.nz