



Universal Talent

Compact active loudspeaker/-monitor Outline Micra II

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In many sound reinforcement situations, e.g. TV broadcasts, theatre and comparable applications a compact, well sounding loudspeaker is a tool really useful as a sound reinforcement system or as a monitor loudspeaker. Also, there is a gap between the usual mini-monitors - mostly equipped with a 3"-6" cone speaker and a tweeter - and the bigger (and often already too big) monitor loudspeakers using a 10"/1" or 12"/1"-configuration. Now, the Italian loudspeaker manufacturer Outline fills this gap with the new Micra II system. There are Micra II loudspeakers in both a passive and an active version with switching power supply and 250W PWM power amplifier. We had both versions at hand for this review.

The Micra II is very handy with dimensions of 38.6 cm x 23.4 cm x 26 cm and a weight of only 8.7 kg (for the active system, the passive system weighs 6.5 kg). As a small monitor loudspeaker it can be installed without problems even under cramped space conditions. In TV transmissions it hides well from the eyes of the viewers and the audience as well as from the cameras. The case itself is made from multi-layer plywood

and has - as often seen at such multi-purpose-monitors - a trapezoid-shaped footprint with side-walls bent at different angles. These allow to use the box as a floor monitor with two different angles of attack - here 25° and 45° - or to fit it into corners or under the ceiling. The baffle is not made of wood, the Micra II rather has a laminated fiberglass front insert moulded as a waveguide with an integrated HF-horn.

Acoustically, the box is designed as a bass reflex construction. The reflex ports are placed at the side of the waveguide. The box is equipped with two 5"-bass/midrange-speakers with neodymium magnets and a 1"-compression driver. The bass/midrange-speakers are mounted around the horn in a d'Appolito array. The mounting distance of the two 5"-chassis and the crossover frequency of the internal crossover a symmetrical and smooth radiation pattern is achieved. This way the Micra II has a nominal angle of radiation of 120° horizontally and 90° vertically.

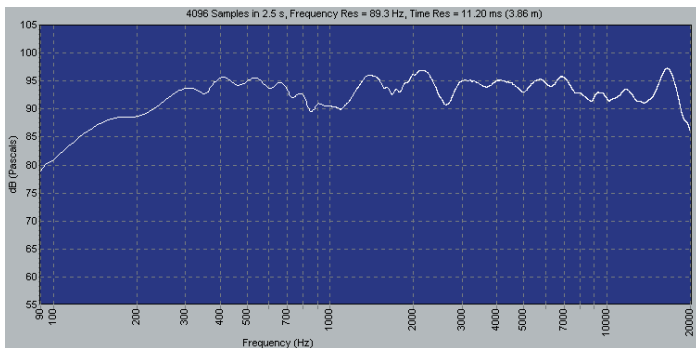
The active version of the Micra II has a built-in amplifier with a switched power supply and a PWM power amplifier. The relatively high power output of 250W into 2.7 ohms is sufficient to connect two additional passive Micra II loudspeakers. In addition, the active version has an output jack for external loudspeakers, the passive versions have two Speakon jacks for forwarding the signal.

The amplifier assembly of the active version is recess-mounted into the back of the box so that the potentiometer buttons are protected. The active loudspeaker has an input section with XLR/Phone-Combi-Jacks. The input sensitivity is adjustable within a wide range using a gain pot, so that signal sources with professional (0dB) and consumer line levels (-20dB) can be connected as well as microphones which need no phantom power supply.

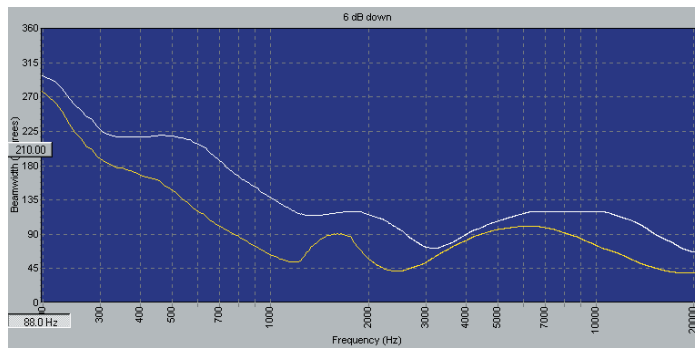
At it's output the electronics module offers a line output (0dB) equipped with an XLR-connector for forwarding the NF-signal as well as a Speakon jack on which the output signal of the internal power amplifier is available for the connection of additional passive systems.

We find another control on the back panel, which is a potentiometer labelled "Clarity". Indeed, this control





The frequency response of the Micra II is downright linear, tolerances should be well within +/- 2,5dB.



Thanks to the d'Appolito layout, the Micra II exhibits a good vertical directivity (about 90° from 700Hz on) for such a small Box.

provides for a change of the equalization in the presence frequency range which especially leads to an improved speech intelligibility at longer distances or in noisy environments.

According to the manufacturer, typical areas of application for the Micra II system are sound reinforcement in theatres and TV studios, near-field-monitoring as well as reinforcement applications in conference spaces. In addition, the system is also developed to be a professional and more powerful substitute for the HiFi-speakers often used for catering areas and music bars. So, the Micra II is not so much a small club PA for live-gigs in small clubs, but rather a well sounding universal loudspeaker for sound reinforcement or a compact monitor loudspeaker. Hence, there is also no special Subwoofer for the Micra II

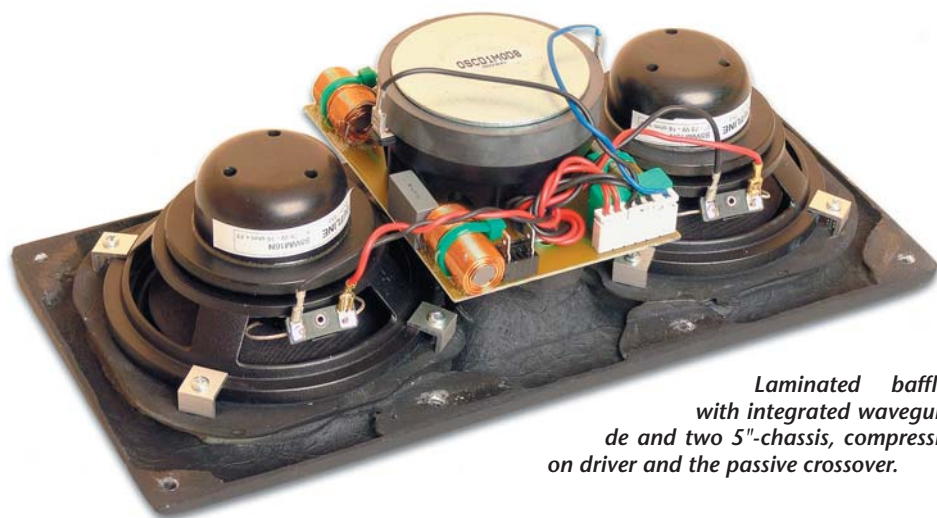
system. If sub-bass support is needed, the new "Global Sub" subwoofer can be used. It is equipped with a 15"-chassis and constructed with a tightly closing lid, so that two Micra II loudspeakers (or the brand-new H.A.R.D. 45 compact monitor or the new Globe Source Radiator) can be stowed within the woofer enclosure for transport. This concept is already known from Outline's Kanguru loudspeaker system (see review in PRO-SOUND).

Sound

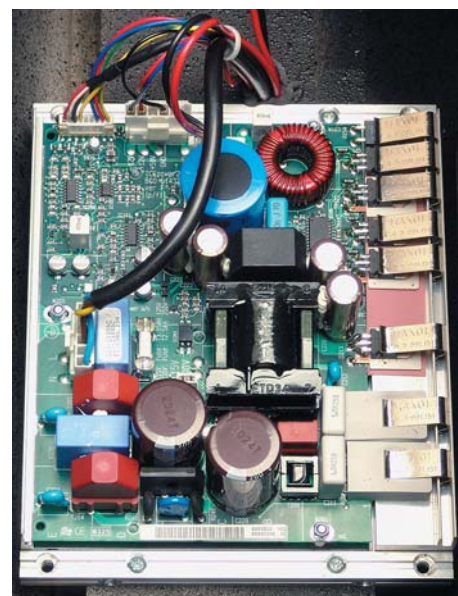
The listening tests are oriented towards the profile of utilisation the developer of the speaker had in mind. Here, the focus lies in speech reinforcement applications (e.g., presentations) as well as the reproduction of different sound sources as it is needed for sound feeds for presentations or nearfiled-monitoring. With

sound reinforcement applications and as a monitor speaker also the loudspeaker's tolerance against feedback is a matter to be considered. This is a point which the manufacturer explicitly mentions as a positive feature in his product literature.

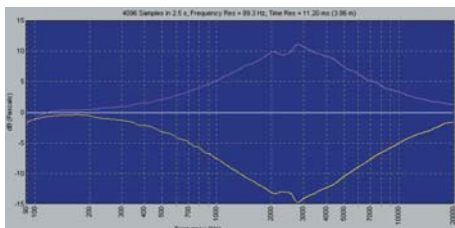
Here, the Micra II does not exhibit any problems. Microphone in hand, one can move rather freely in front of the box without having to fear immediate feedback. The rather smooth radiation characteristics apparently prevents from unexpectedly bumping into a side lobe which in turn would cause feedback. Music recordings are likewise unproblematic and it's possible to support the Micra II with a sub bass system if neces-



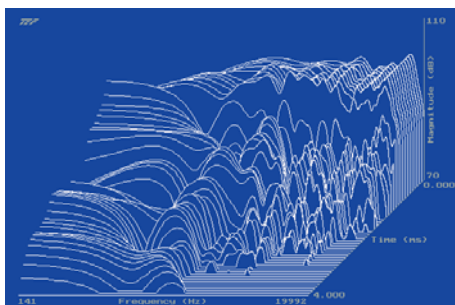
Laminated baffle with integrated waveguide and two 5"-chassis, compression driver and the passive crossover.



Inner appearance of the active Micra II. Interestingly enough, a PWM power-amp module by Bang&Olufsen can be found here - meanwhile with an on-board power-supply.



Effect of the "Clarity"-control



The spectral decay of the Micra II is expectedly good because the small cone chassis and the waveguide don't cause severe acoustic problems.

sary depending on the music style. Here, the human voice has - audibly - always its position in the mix and is never pushed into the background - a characteristic which additionally is user-adjustable by means of the "Clarity"-control.

Summary

The new Micra II is a very interesting new development of the Italian manufacturer Outline. It exhibits a clear emphasis on precise speech reproduction and can be used as a monitor as well as for music playback in different applications. The system is stuffed with interesting details, ranging from the PWM power amplifier, the Neodymium loudspeaker chassis to the laminated Waveguide. The price Outline charges for the loudspeaker system is by no means too high for this interesting piece of equipment.

Prices (excl. VAT):

Micra II SP: EUR 1.290,-

Micra II (passive): EUR 750,-

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MICRA II SP

Technical Data

Frequency Response

(-10 dB) 59Hz ÷ 20.500kHz
(±3 dB) 75Hz ÷ 19.000kHz

Average Dispersion

500Hz ÷ 10kHz 120° x 90° (HxV)
>5 kHz 110° x 85° (HxV)
500Hz ÷ 4kHz 140° x 95° (HxV)

Impedance (ohms)

nominal 8 ohms (passive version)
minimum 6.6 ohms @ 350 Hz (passive version)

max. Sensitivity (dB SPL@1W,1m)

95 (passive version)

Built-in PWM amp power (WRMS)

250W @ 2.7 ohms; 125 @ 4 ohms

Power handling - Watts AES (loudspeakers)

LF: 150 W
HF: 20 W

max. dB SPL (peak @ 1m)

124 dB (126 dB passive version)

Loudspeakers and Loading

LF 2x5" Twin NdFeB magnet, Hi-pass vented box
HF 1x1" Exit horn loaded, 1 compression driver