



Installation Line

IL 8.1

Very compact vocal full-range cabinet with exceptional phase linearity, speech intelligibility, and dynamic range. Can be used either as a fullrange enclosure without controller or as a mid/high module in combination with a subwoofer, such as the compact HK Audio IL 112 Sub or IL 115 Sub. Ideal for distributed speech- reinforcement and near- field applications, such as corporate events, panel discussions etc. Built-in passive crossover.



Description

The **IL 8.1** is a very compact 2-way full range enclosure with a passive crossover filter. It is fitted with a direct radiating 8"-conical loudspeaker in a bass reflex housing and a 1"-high frequency driver with CD-horn. This equipment makes a frequency response in the bass range possible which is sufficient for speech transmission and the reproduction of background music even without an additional subwoofer. The subwoofers IL 112 Sub and IL 115 Sub are available for applications requiring an extended frequency response in the bass tonal range.

Apart from natural speech production, the **IL 8.1** stands out due to its unusual phase linearity and a broad dynamic range. It is ideally suited for close-range acoustic applications where distances of up to 10m have to be bridged depending on the sound pressure requirements. Its small dimensions allow it to blend into the environment almost unnoticed.

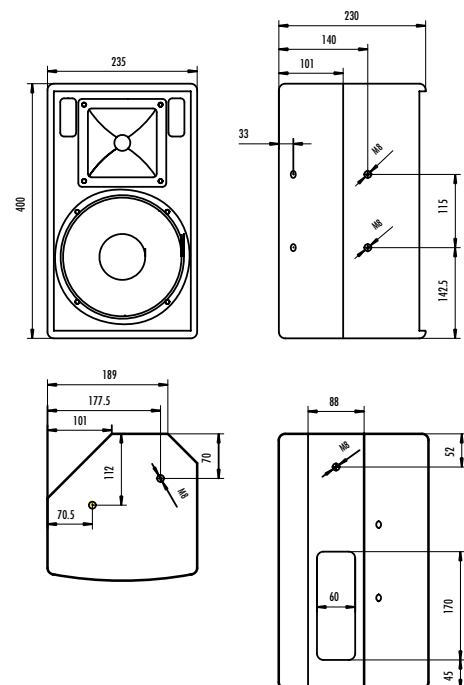
A controller is not required for operating the **IL 8.1**. It is possible, however, to use the Digital Field Controller (DFC).

Structure and mechanics

The housing of the **IL 8.1** is made of 12 mm thick MDF and coated with black or white acryl paint. The baffle cover consists of an impact-resistant protective steel grille.

The **IL 8.1** has a multi-functional shape with two different housing angles and is available in two housing versions symmetrical to one another (right- and left-hand versions). The shape of the housing also allows its use as an inconspicuous floor monitor, inconspicuous wall and corner mounting and the formation of 180° and 360° clusters.

The **IL 8.1** weighs 8 kg. It is 23.5 cm wide, 40.5 cm high and 23.5 cm deep. On the side of the housing are a total of nine countersunk M8 thread bits. These are for fastening the mechanical accessories which allow the installation of the box in different ways.



Connectors

The connections are countersunk on the rear of the **IL 8.1**. There are two four-channel Speakon ports available which are wired four-channelled and parallel. The pin allocation of the **IL 8.1** is pin 1+ / pin 1-.

In addition the **IL 8.1** has a loudspeaker binding post for direct connection without further plug connectors. The red terminal is connected in parallel to pin 1+, the black terminal to pin 1- of the Speakon connections.



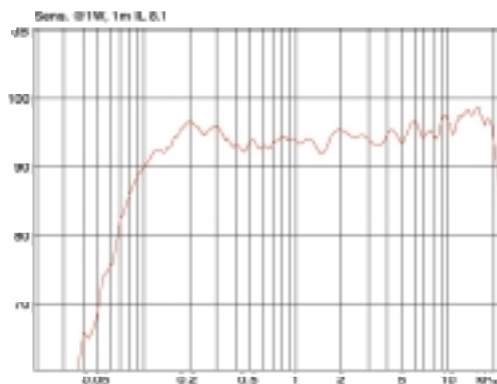
Electrical and acoustic data

An 8"-HK AUDIO Custom conical chassis and a 1"-high frequency driver from B&C are used in the **IL 8.1**. Both drivers are arranged twin-axially and have an internal passive crossover. The crossover frequency is 1.8 kHz with a slope of 12 dB per octave.

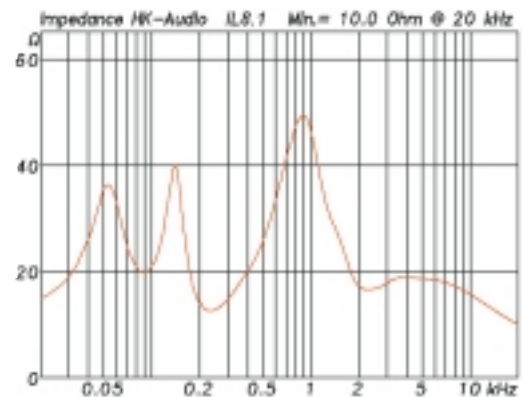
The electrical power handling of the **IL 8.1** is 200 Watt RMS at an impedance of 16 ohms. The axial sensitivity is 101 dB (1W/1m) measured under half-space conditions. The maximum SPL which can be achieved at a distance of 1m under the same conditions is 128 dB at a THD-value of 10%.

The high frequency dispersion of the **IL 8.1** is 90 degrees horizontally and 60 degrees vertically. As it is square it can be fitted in the box turned through 90°, changing the dispersion angle to 60 degrees horizontally and 90 degrees vertically. The directivity of the **IL 8.1** is 5.77 dB, the Q-factor 5.25 (averaged from 100 Hz to 10 kHz). The frequency response ranges from 100 Hz to 19 kHz (± 3 dB). This means that the **IL 8.1** can be used for speech acoustics and music reproduction without extended bass (background acoustics) being necessary.

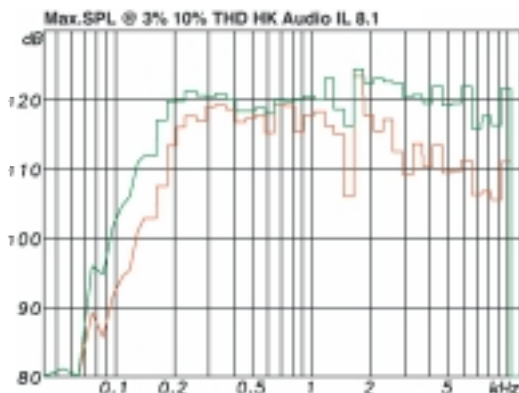
Measuring results



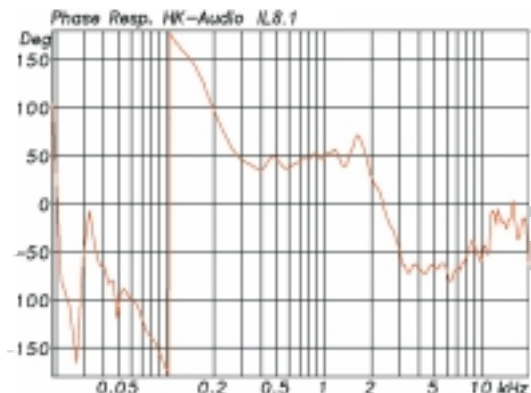
Frequency Response



Impedance

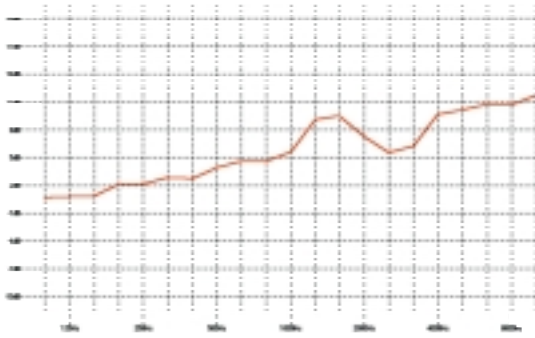


Max. SPL

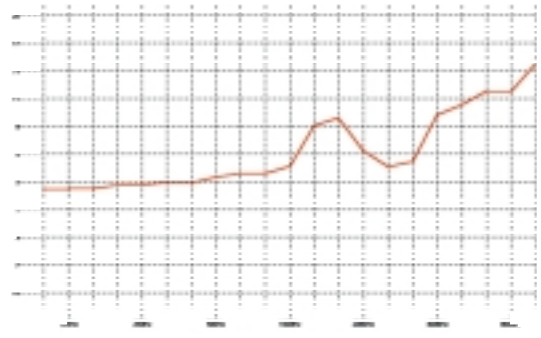


Phase Response

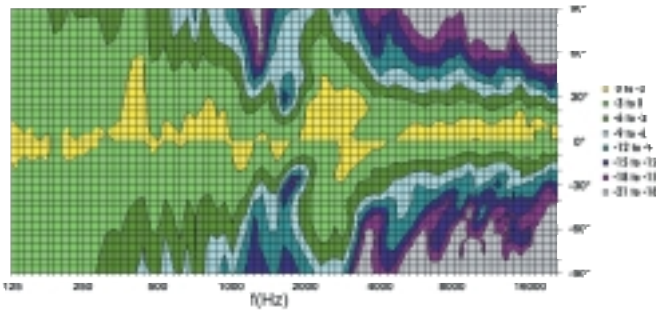
Measuring results



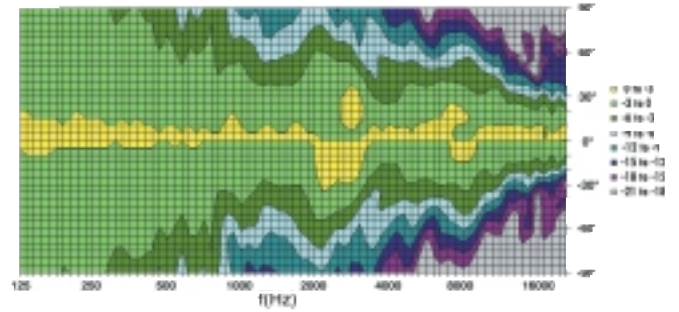
Directivity



Q-Factor

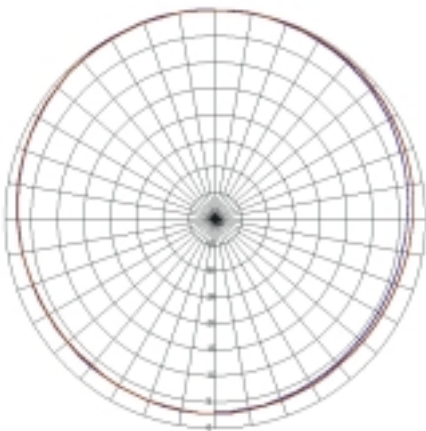


Directivity vertical 2D

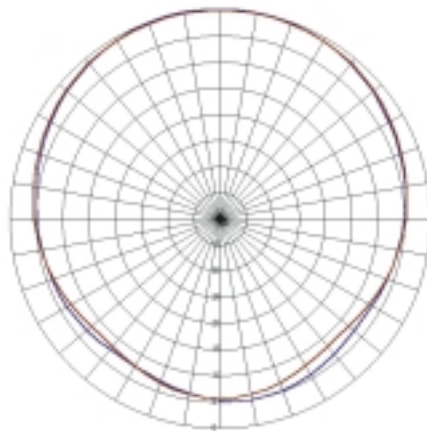


Directivity horizontal 2D

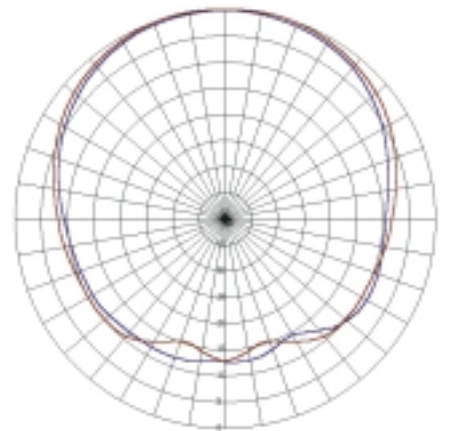
Polar data



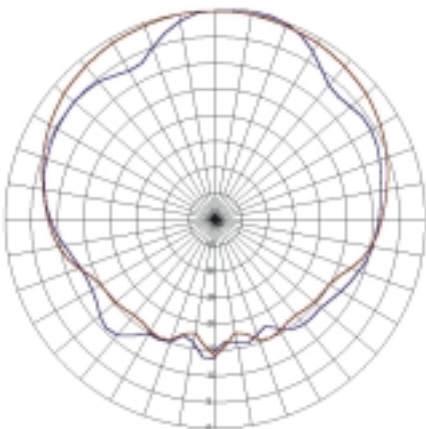
250 Hz



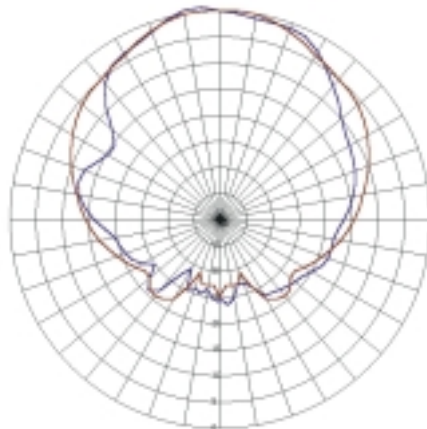
500 Hz



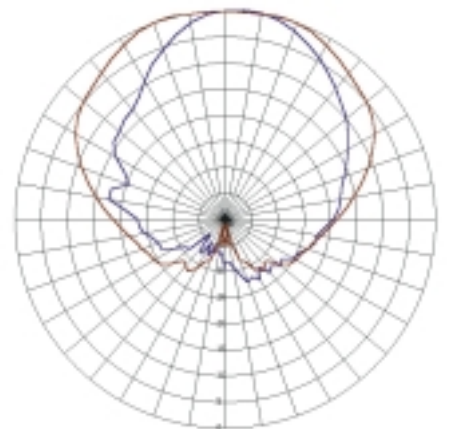
1000 Hz



2000 Hz



4000 Hz



8000 Hz

— horizontal
— vertical

Technical data

Loudspeakers

Power handling nominal (RMS):	200 W
Power handling (program):	300 W
Power handling (peak, 10 ms):	600 W
Impedance:	16 ohms
Frequency response (± 3 dB):	100 Hz to 19 kHz
Frequency response (-10 dB):	75 Hz to 21 kHz
Axial sensitivity (1W/1m, half-space):	101 dB
Maximum SPL (3 % THD, half-space):	121 dB
Maximum SPL (10% THD, half-space):	128 dB
Maximum SPL (Calculated peak):	129 dB
Bass/mid-range driver:	8" HK AUDIO Custom
High frequency driver:	1" B&C
Crossover frequency:	1.8 kHz / 12 dB / octave
Horizontal dispersion: (-6 dB):	90°
Vertical dispersion: (-6 dB):	60°
Directivity:	5.77 dB
Q-factor:	5.25

Connectors

Ports:	2 Speakon NL4, 1 binding post
Pin allocation:	Speakon: 1+ / 1-

Housing

Material:	12 mm MDF
Coating:	acrylic paint in black or white
Front cover:	impact-resistant protective steel grille
Fastening possibilities:	in total 9 threaded bits M8 for attaching the mechanical accessories
Weight:	8 kg
Dimensions (W x H x D):	23.5 cm x 40.5 cm x 23.5 cm 9.25" x 13.9" x 9.2"
Housing angle:	45 degrees

Accessory articles

- 100 V Transformer with 3 power taps: 50 W, 25 W, 12.5 W
- Wall-mount bracket
- Ringbolt M8

Service articles

- | | |
|-------------------------|---------|
| • 8"-speaker | E994109 |
| • High frequency driver | E994108 |
| • Diaphragm | E994112 |



Architectural specifications

Professional 2-way full range loudspeaker system with 8" -bass/mid-range loudspeaker and 1"-high frequency driver with unusual phase linearity and natural speech reproduction. Bass/mid-range loudspeaker mounted in an ideally matched bass reflex housing and high frequency driver coupled to a rotary 90° x 60° or 60° x 90° constant directivity horn.

Multi-functional housing with different housing angles made of 12 mm MDF with acrylic paint in black or white. Two countersunk threads for fastening mounting accessories on the lid, base, left and right side of the housing. Impact-resistant protective steel grille.

Internal passive crossover with a crossover frequency of 1.8 kHz (12 dB / octave) as well as phase and frequency response correction. Transmission range of 100 Hz to 19 kHz (+/- 3 dB). Sensitivity of 101 dB in the main direction of radiation @ 1W/1m in half-space, maximum SPL 128 dB in half-space at 10% THD. Power handling of 200 Watt RMS. Impedance of 16 ohms. Connectors: 2x Neutrik NL 4 Speakon and 1x binding post.

Dimensions (W x H x D): 23.5 x 40.5 x 23.5 cm

Weight: 8 kg

Accessories: 100 V Transformer, Wall-mount bracket, M8 Ringbolt

Type: HK AUDIO IL 8.1



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