



Install Sound



IL 8.1

A remarkably compact cabinet for voice and fullrange applications, the IL 8.1 delivers extraordinary phase linearity, highest speech intelligibility, and considerable dynamic range. The IL 8.1 may be deployed as a fullrange or mid-/high-range cabinet in configurations with a subwoofer such as the compact

HK AUDIO® IL 112 Sub or IL 115 Sub. It is ideal for decentralized public address, presentations, near-field sound reinforcement, and so forth. Passive crossover on board.

The IL 8.1 is an exceedingly compact, two-way, fullrange speaker cabinet driven by a built-in passive crossover. It is loaded with a direct-radiating 8" conical loudspeaker in a bass reflex housing, and a 1" high-frequency driver with a 90°x 60° CD horn. This speaker array delivers the low-frequency response it takes to render speech and background music accurately, even without an additional subwoofer. HK AUDIO® IL 112 Sub and IL 115 Sub subwoofers come

highly recommended for applications requiring enhanced low-frequency response.

Next natural-sounding voice reinforcement, the IL 8.1's hallmarks are extraordinary phase linearity and considerable dynamic range. Depending on sound pressure requirements, it is a superb choice for near-field sound reinforcement for short-throw applications, for example in bars, foyers and so forth. Courtesy of its compact dimensions, it integrates

inconspicuously into every room.

The IL 8.1 may be operated without a controller. However, for the greatest operating safety, best performance and most convenient handling, we recommend using the HK AUDIO® Digital Field Controller (DFC).

Architectural specifications

The professional two-way full-range loudspeaker system shall incorporate one 8" bass/ mid-range loudspeaker, and one 1" high-frequency driver coupled to a 90° x 60° constant directivity horn which can be rotated to yield a dispersion pattern of 60° x 90°. These components shall be mounted in a multi-angular bass-reflex housing which shall be constructed of 12-mm-thick MDF and painted with either black or white acrylic enamel. Two M8 threaded bushings to accept mounting accessories shall be flush-mounted in each of four sides of the housing: the top, base, left and right. The face of the housing shall be protected with an impact-resistant steel grille.

The enclosure's internal electronics shall include a passive crossover having a crossover frequency of 1.8 kHz and a slope of 12 dB per octave, as well as phase and frequency response correction.

The frequency response shall extend from 100 Hz to 19 kHz (+/- 3 dB). The axial sensitivity shall measure 101 dB @ 1W/1m under half-space conditions. The maximum sound pressure level shall measure 128 dB at 10% THD under half-space conditions. The cabinet shall have a power-handling capacity of 200 watts RMS and an impedance of 16 ohms.

There shall be two types of input connectors—one Neutrik NL 4 Speakon® connector, and one pair of binding posts—and a second Neutrik NL 4 Speakon® connector for parallel throughput.

The exterior dimensions shall be 23.5 cm wide x 40.5 cm tall x 23.5 cm deep, and the unit shall weigh 8 kg (17.6 lbs).

The following accessories shall be available: 100-volt transformer, wall-mount bracket, M8 eyebolt.

The cabinet shall be the HK AUDIO model **IL 8.1**.

Item number:

- black: G 183043
- white: G 183053

Enclosure design and mechanical appointments

The IL 8.1's housing is made of 12-mm MDF coated with acrylic enamel. It is available in black and white. Covering its front baffle is an impact-resistant steel grille backed with laminated acoustic foam rubber.

The multifunctional enclosure is arrayed in two different angles for more flexible setup options and is available in two symmetrical right and left versions. Both versions are easy to mount on walls and in corners. Several IL 8.1 cabinets can readily be combined to create clusters. The IL 8.1 weighs 8 kg. It is 23.5 cm wide,

40 cm high and 23.5 cm deep. The enclosure's panels are equipped with a total of nine M8 threaded bits. These accept optional fittings enabling the cabinet to be mounted in various ways.

Connectors are located on a countersunk panel on the back of the IL 8.1. It offers two four-polar Speakon® ports wired in four parallel channels. The IL 8.1's pin assignments are pin 1+ / pin 1-.

The IL 8.1 is also equipped with binding posts enabling direct connection of speaker cords lacking plugs.

The red binding post is wired in parallel to the Speakon® connector's 1+ pin; the black binding post to the 1- pin.

Electrical and acoustical data

The IL 8.1 sports an 8" HK AUDIO® Custom conical chassis speaker and a 1" B&C high-frequency driver. The two drivers are configured in a twin axial array and addressed by an internal passive crossover. The crossover frequency is 1.8 kHz at a slope of 12 dB per octave.

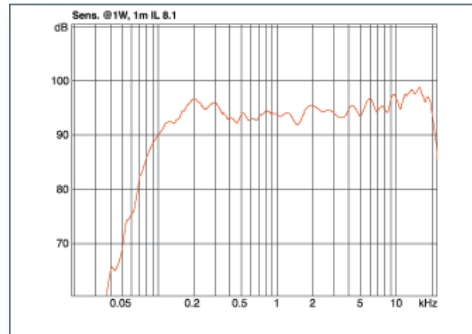
The IL 8.1's nominal power handling capacity is 200 watts RMS at 16 ohms impedance. It delivers 101 dB (1 W/1m) SPL, measured under

half-space conditions. Maximum SPL measured under the same conditions at a distance of one meter is 128 dB at 10% THD.

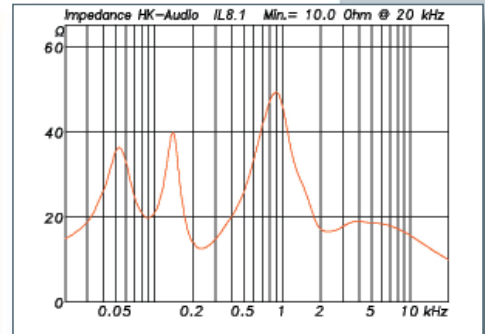
The IL 8.1's high-frequency horn's horizontal radiation angle is 60°; its vertical radiation angle is 40°. Courtesy of the housings' foursquare design, the horn may be rotated 90°, which changes the horizontal radiation angle to 60° and the vertical radiation angle to 90°.

The IL 8.1's directivity is 5.77 dB; the Q factor is 5.25 (averaged from 100 Hz to 10 kHz). Frequency response ranges from 75 Hz to 21 kHz. Consequently, the IL 8.1 is able to provide audio reinforcement for speech and music without requiring a subwoofer for enhanced low-end response (background sound reinforcement).

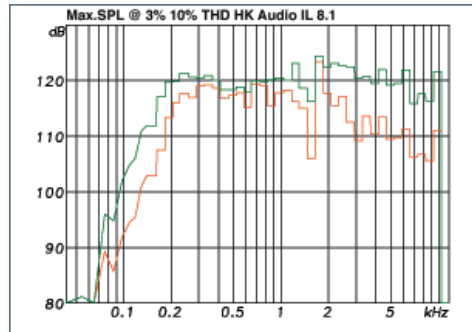
Measurement charts



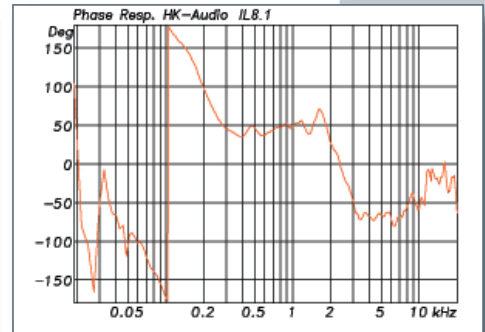
Frequency Response



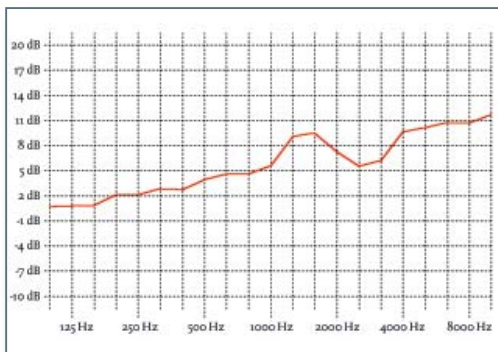
Impedance



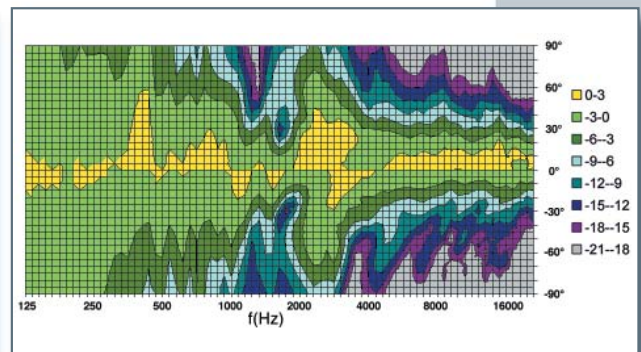
Max. SPL



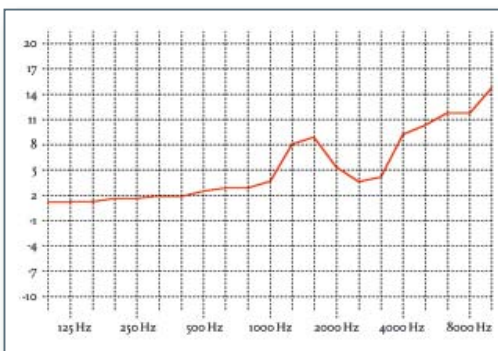
Phase Response



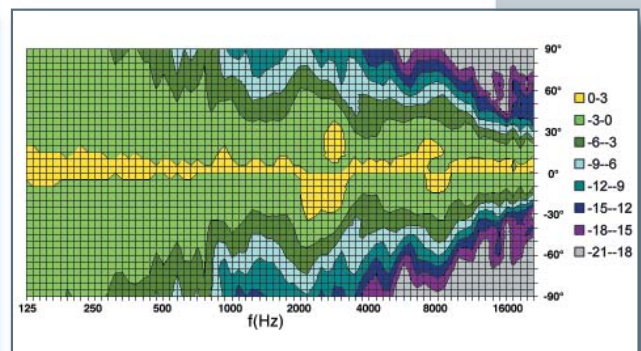
Directivity



Directivity vertical 2D

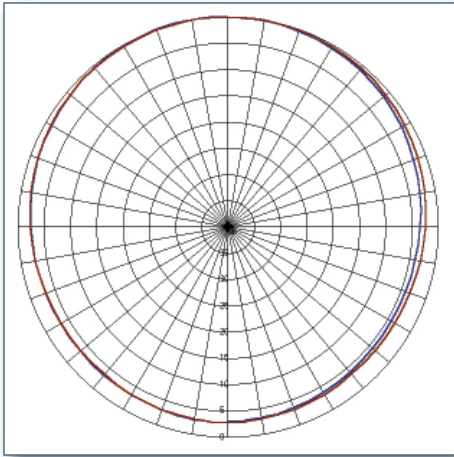


Q-Factor

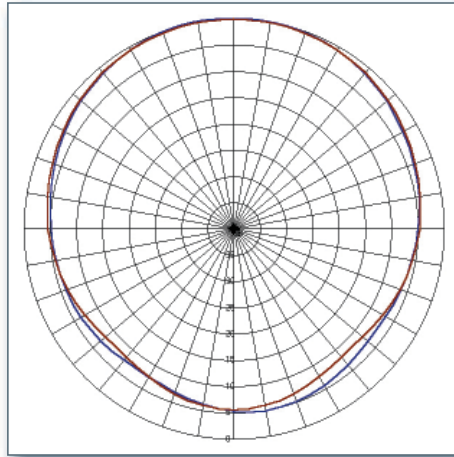


Directivity horizontal 2D

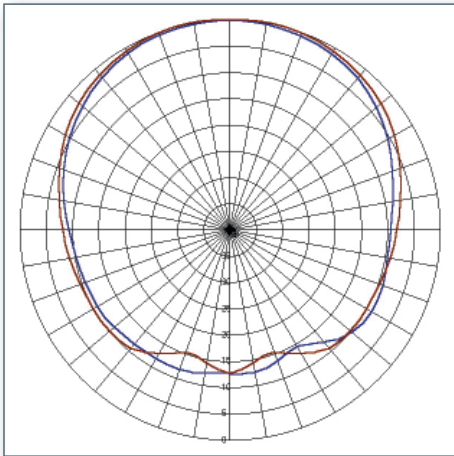
Polar diagrams



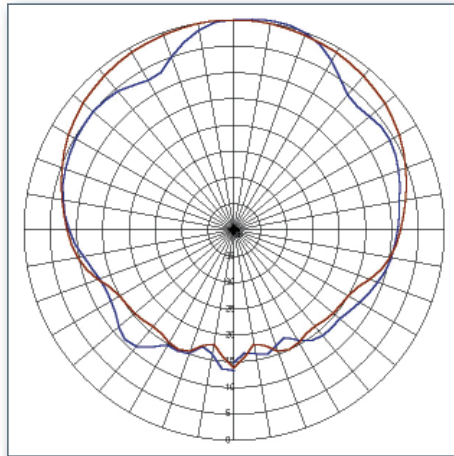
250 Hz



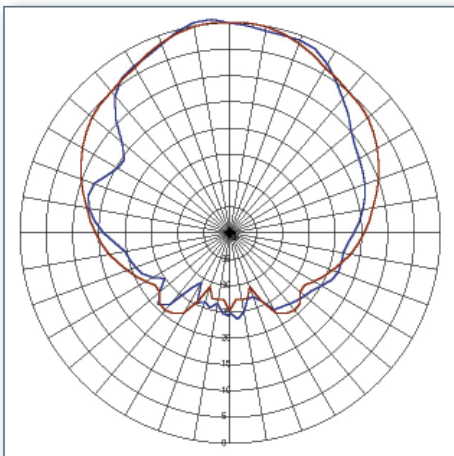
500 Hz



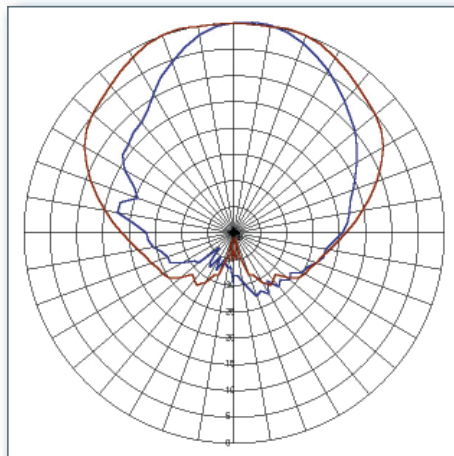
1000 Hz



2000 Hz

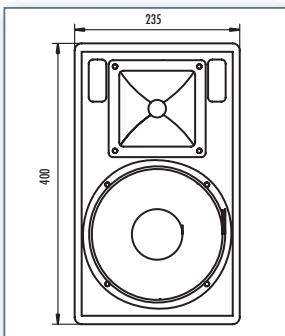
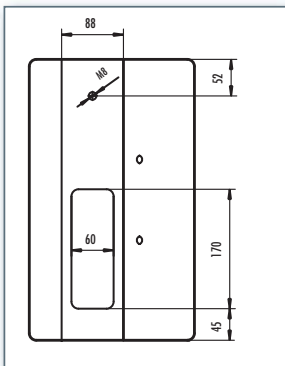
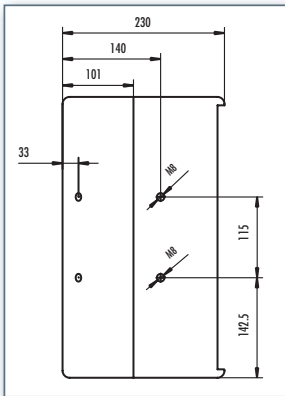
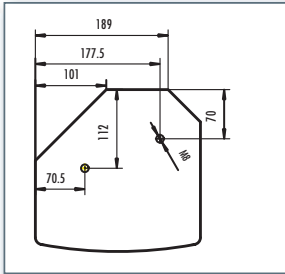


4000 Hz



8000 Hz

— = horizontal
— = vertical



Technical specifications

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 - 19 kHz
Frequency response (-10 dB):	75 Hz - 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 at peak):	129 dB
Low/mid frequency driver:	8" HK AUDIO® Custom
high-frequency driver:	1" B&C
Corner frequency, passive crossover:	1.8 kHz / 12 dB per octave
Horizontal dispersion (-6 dB):	90 degrees
Vertical dispersion (-6 dB):	60 degrees
Directivity:	5.77 dB
Q factor:	5.25

Connectors

Ports:	2 Speakon® NL4s, 1 pair of binding posts
Pin assignments:	Speakon®: 1+ / 1-

Housing

Material:	12 mm MDF
Coating:	black or white acrylic enamel
Front cover:	impact-resistant protective steel grille
Fittings:	a total of 9 M8 threaded bits for attaching mounting accessories
Weight:	8 kg / 17.6 lbs.
Dimensions (W x H x D):	23.5 cm x 40.5 cm x 23.5 cm 9 1/4" x 16" x 9 1/4"
Housing angle:	45 degrees

Accessories

- HK AUDIO® TR 50: 100 V Transformer with 3 power taps: 50 W, 25 W, 12.5 W
- HK AUDIO® Wall-Mount
- HK AUDIO® Speaker Stand. Mounting Bracket
- HK AUDIO® M8 Ringbolt
- HK AUDIO® 60° x 40° Horn Conversion Kit

Service items

- 8" speaker
- 1" HF driver
- 1" diaphragm



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