



LINEAR 9

THE SCALABLE LONG THROW LINE



9

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Professional point sound source series with exceptionally high acoustic, mechanical and electronic performance.

LINEAR 9 is the new flagship model in the extensive HK Audio LINEAR family. This new class of speaker was developed with the needs and demands of rental companies, sound technicians, audio engineers and event companies in mind, all of whom require a reliable, versatile, future-proof, economical and, at the same time, acoustically and mechanically superior sound tool suitable for many years of daily use.

These requirements are fulfilled in every detail of the LINEAR 9 models: speaker components selected without compromise, precise sound guides specially developed for the series, PU-coated birch multiplex cabinets, generously dimensioned Class D power amplifiers of the latest generation, professional PowerCon power connections and, last but not least, their development and manufacture in our main factory in St. Wendel (Germany) make the LINEAR 9 speakers exceptionally powerful and valuable alternatives in their class.

The LINEAR 9 family comprises a total of five different models. These include the two compact, multifunctional LINEAR 9 110 XA and 112 XA point sound source models, which flexibly adapt to changing requirements as horizontal stage monitors, on a tripod, flown or as powerful mid/high units in ground-stack systems.

A super-compact high-performance subwoofer in bass-reflex design (LINEAR 9 118 Sub A) and an 18" subwoofer designed as a bandpass (LINEAR 9 118 Sub BA) create an impressive low end in both smaller and larger configurations.

The on-board cardioid filter allows effective directing of low-frequency sound at the touch of a button. This makes cardioid setups quick and easy to create.

The LINEAR 9 210 LTA is a special model, and not only in the LINEAR 9 family. No other speaker in this size category combines such a high maximum sound level and immense throw with such low acoustic distortion.

Whether in stand-alone operation for "spot-on" long throw applications, or as a flown or horizontal cluster in a ground stack system, the LINEAR 9 210 LTA can do many things that previously required a line array, and many things that typical line arrays cannot do.

All five models are fully networkable and can thus be controlled centrally and conveniently.



LINEAR 9 – FEATURES



- Professional point sound source family with powerful 2 x 10" mid/high unit
- Economic growth thanks to scalable technology
- Integrated state-of-the-art network technology
- Road-ready equipment for professional use
- Aimed at professional bands with their own sound technician as well as rental companies and event companies
- Solution for unclear stage situations or venues without fixed stage structures
- "Bread and butter" for rental companies
- Modern stacking mid/high unit for weekend warriors
- Flexible setup options
- Range and efficiency is required
- Demand for fast, high-quality results
- Line array alternative thanks to horizontal array formation

LINEAR 9 – FEATURES

Powerful and wide

Coverage without loss of sound: LINEAR 9 is a great choice for both its mid/high units and its subwoofers, with outstanding low-frequency sound pressure levels. The sound quality that HK Audio is famous for is even impressively maintained right up to the back row of the audience.

Scalable

Both the LINEAR 9 210 LTA, which can be scaled for any conceivable application thanks to the possibility of horizontal clustering, and the two flexible subwoofers, which can reproduce countless subwoofer setups, demonstrate the system's technical as well as economic scalability.

Durable quality – even beyond the depreciation period

The robust birch multiplex enclosures with resistant PU coating protect the individual speakers not only from wind and the elements but also during transport from the storage to the venue and back again. Thanks to state-of-the-art manufacturing in Germany and carefully selected materials, each and every LINEAR 9 speaker will last far longer than its initial investment would suggest.

Smart

The LINEAR 9 family has a high-performance integrated DSP with additional DSP Out. The DSP not only allows users to access the right presets directly on the speakers, but also to set up larger systems on a Mac or PC using an Ethernet connection and even make adjustments mid-event. The DSP Out also makes it possible to integrate a non-networked speaker and process its signal with the DSP CONTROL software.

Professional equipment

All LINEAR 9 speakers have professional connections for safe and smooth operation in the demanding day-to-day rental business. For example, both the mid/high units and the subwoofers have lockable PowerCon and EtherCon connections. All the speaker chassis and drivers used have been specially developed for HK Audio and meet the highest standards.



LINEAR 9 – MID/HIGH UNITS

High-resolution sound reproduction with very low distortion for longer listening pleasure

The mid/high units in the LINEAR 9 series deliver high-resolution sound with extremely low distortion thanks to high-performance power amplifiers, efficient speakers, state-of-the-art DSP technology and FIR filtering. Even at high sound pressure levels, a balanced listening experience without signs of fatigue is guaranteed. In addition, all models are equipped with rotating tweeter horns. Due to the steep FIR crossover with very high Q-factor, a narrow band overlapping of mid and high frequencies can be achieved without an increase of the group delay. In addition to the acoustic advantages, this also results in excellent sound dispersion.

LINEAR 9 210 LTA

The LINEAR 9 210 LTA is the ultimate mid/high unit within the LINEAR 9 family due to its enormous throw and power. The 210 LTA is particularly impressive in applications where the sound requirements demand the creation of a horizontal cluster or straightforward flying capabilities. It comes into its own particularly in confined venues that require a long throw.

Exceptional performance in a scalable package

As a pure mid/high unit, equipped with a rotating 60° x 25° horn with a powerful 1.4" driver and two vertically arranged 10" speakers, it achieves outstanding efficiency. The MCT developed by HK Audio converts the point source of the compression driver into a line source which, in addition to razor-sharp dispersion, enables optimum coupling of further LINEAR 9 210 LTA speakers. The multicell MCT achieves significantly better distortion performance compared to conventional horns of the same size. The perfect interplay of these components with the powerful electronics delivers impressive results with clearly defined directivity at a constant frequency.



LINEAR 9 210 LTA

LINEAR 9 – MID/HIGH UNITS

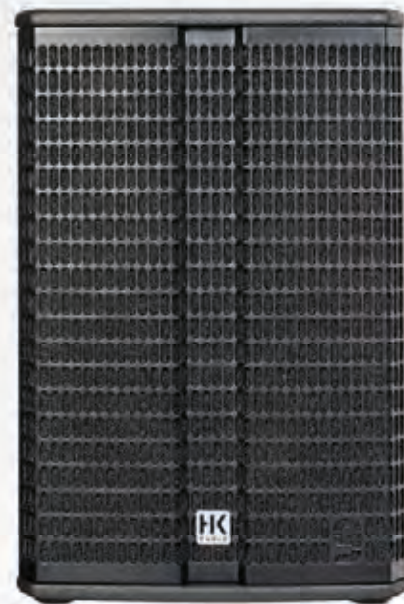
LINEAR 9 110 XA / 112 XA

Optimised horns for perfect dispersion behaviour

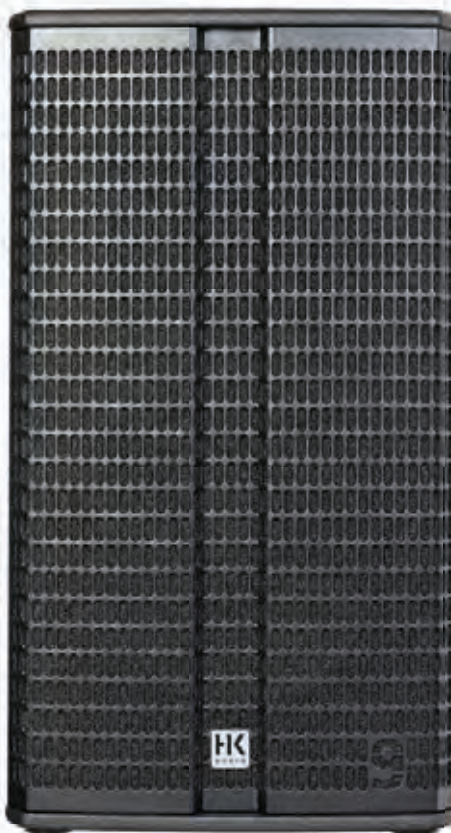
The dispersion angle of each speaker's horn is optimised for its intended use. The 10" LINEAR 9 110 XA speaker is equipped with a wide-angle 80° x 60° horn for homogeneous coverage in the near field, while the horn of the 12" LINEAR 9 112 XA speaker offers coverage angles of 70° x 50° for medium sound coverage depths. Both models can be rigged either via their rigging points (steel cables or chains in combination with the AP-8 attachment point) or with the TB-28N tilt bracket.

Multifunctional cabinet for an even wider range of applications

Thanks to their cabinet shape with integrated 30° slant, the multifunctional speakers are also suitable for use as transverse stage monitors. Both models offer a preset optimised for use as a monitor, which compensates for the overemphasis of the low frequencies caused by ground coupling. The practical functionality is rounded off by the standard rigging points. The combination of a multifunctional cabinet and practical features allows the XA models to be used not only as stage monitors, but also as the ideal front, side or near-fill addition to a larger setup consisting of the LINEAR 9 210 LTA.



LINEAR 9 110 XA



LINEAR 9 112 XA

LINEAR 9 – CONNECTIONS



LINEAR 9 210 LTA
LINEAR 9 110 XA
LINEAR 9 112 XA

LINEAR 9 – SUBWOOFERS

LINEAR 9 118 SUB A

LINEAR 9 118 Sub A – compact and precise

The LINEAR 9 118 Sub A is a true powerhouse. Its bass reflex construction is what allows for the very compact design. Weighing in at just 42 kilograms, it is one of the lightest active basses in this performance class. A powerful punch, precise playback and impressive low frequency performance make this active bass the ideal complement to the mid/high units. What's more, it meets all the requirements for quickly and easily implementing effective cardioid setups, both mechanically and with the available filter sets. Thanks to its stereo preamplifier, it is also ideal for use in 2.1 systems.



LINEAR 9 – SUBWOOFERS

LINEAR 9 118 SUB BA

LINEAR 9 118 Sub BA – powerful and deep

The LINEAR 9 118 Sub BA is a powerful 18" dual vented bandpass subwoofer. The generous size of the cabinet allows for an exceptionally high sound pressure level with a low cut-off frequency at the same time. This makes this subwoofer not only a perfect partner for powerful full-range speakers, but also an ideal sub low extension for the direct-radiating LINEAR 9 118 Sub A.

Thanks to the integrated presets, cardioid setups can be implemented quickly and easily. The LINEAR 9 118 Sub BA is compatible with all LINEAR 9 Mid/High models.



LINEAR 9 – CONNECTIONS

LINEAR 9 118 SUB A LINEAR 9 118 SUB BA

- Professional, lockable EtherCon connectors for connection to a Mac or PC for network-based control of the system
- Two lockable, balanced XLR/jack combo inputs
- Two balanced XLR outputs for analogue looping through to an additional loudspeaker
- DSP Out: Balanced XLR output that transmits a signal independent of the speaker to a non-network-compatible speaker. The audio signal applied here can be extensively modified using the DSP CONTROL software
- Presets: Both subwoofers have four preset memory slots, the first three of which are permanently assigned to the factory presets "Front", "Cardioid 1:1" and "Cardioid 2:1". The fourth preset slot is used as a quick-select preset for remote control via the DSP CONTROL software, even without a PC
- Professional PowerCon connection for a secure power supply to the speakers as well as a PowerCon-Link connection for powering up to four mid/high units or up to three additional subwoofers



DSP CONTROL SOFTWARE

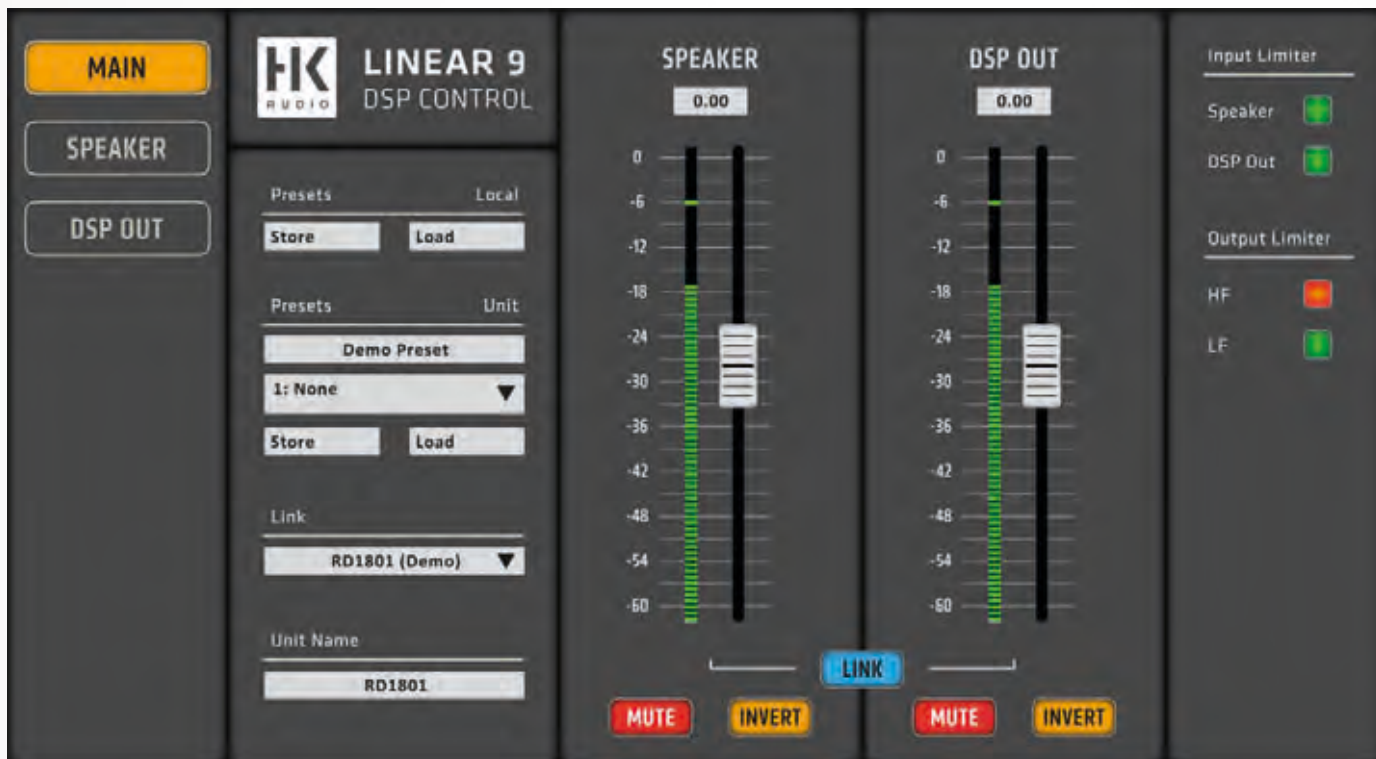
Remote Control – The next level

All LINEAR 9 series speakers can be conveniently remote controlled from the FoH position using the free HK Audio DSP CONTROL software. Available free of charge for Mac and PC, the software includes the following features for speaker customisation:

- Fully parametric 10-band EQ
- Tuneable high and low pass filters
- Delay
- Limiter
- Mute
- Invert
- Volume
- Preset management

Grouping and project planning

In addition to the existing features, the latest version of HK Audio DSP CONTROL offers the possibility to create groups, providing additional functions such as group EQ, group mute and group volume. What's more, Virtual Units can be used to plan projects in advance without an attached system and to assign them to the actual speakers later.



DSP CONTROL SOFTWARE

Simple connection

The LINEAR 9 family of speakers can be connected easily and effectively to a computer on which DSP CONTROL has been installed using daisy-chain cabling. This connection uses professional EtherCon connectors, which allow a safe connection throughout operation.

DSP Out

The XLR signal output labelled DSP Out provides a network interface for integrating an additional active speaker that is not originally network-compatible. This can be independently controlled in its volume, filtering, limiting, polarity and delay. For example, LINEAR 9 mid/high units can be operated with LINEAR SUB basses, or LINEAR 5 LTS A with LINEAR 9 subwoofers on the same network.

- An additional, non-network-compatible active speaker can be integrated into the network via DSP Out
- This can be individually remote controlled
- This ensures that existing infrastructure retains its value as well as its future viability
- Unique and only available with LINEAR 7 and LINEAR 9



LINEAR 9 – APPLICATIONS



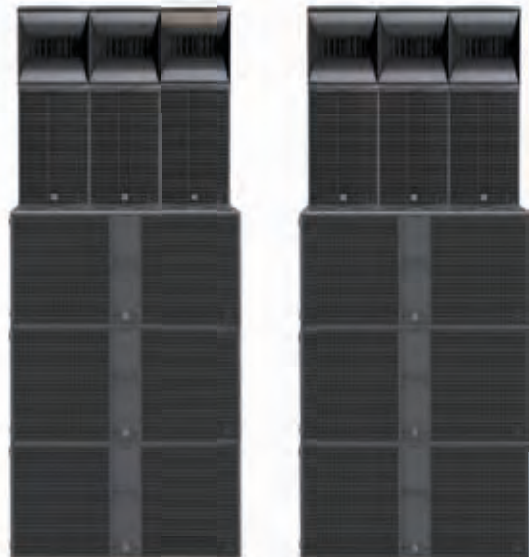
Setup 1:
2x **LINEAR 9** 210 LTA
4x **LINEAR 9** 118 SUB BA



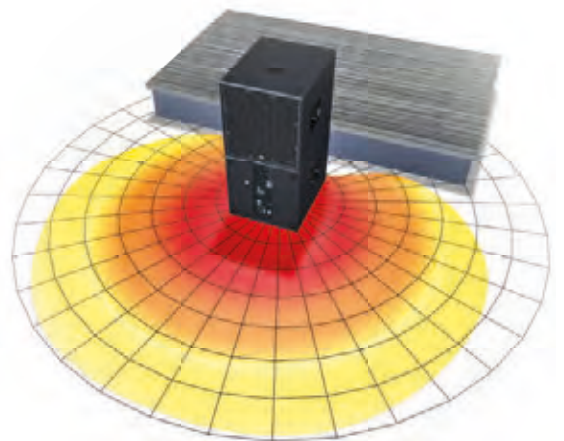
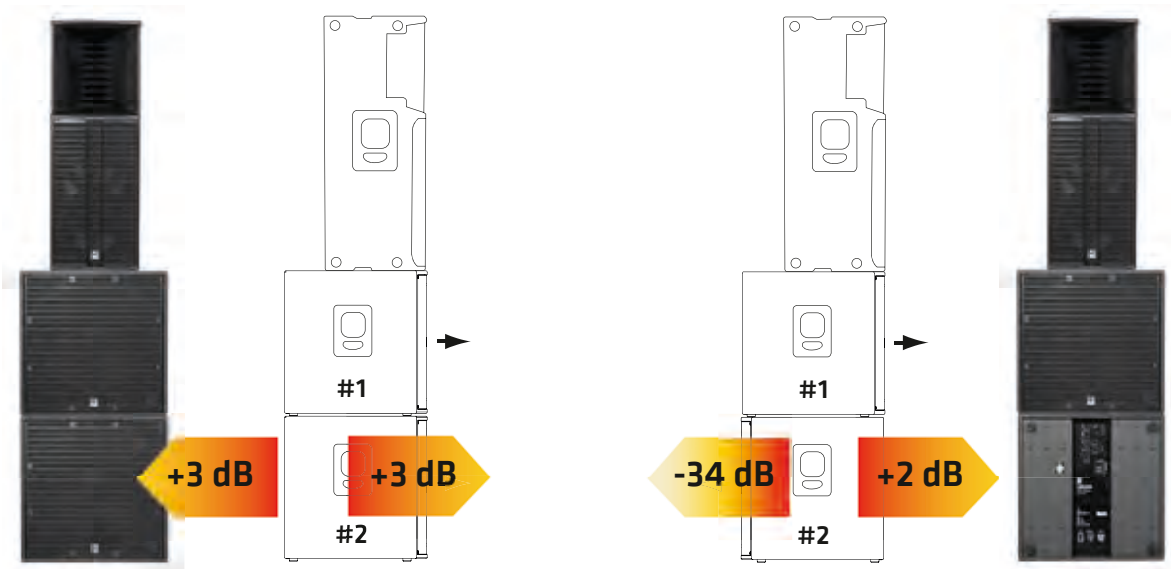
Setup 2:
2x **LINEAR 9** 210 LTA
2x **LINEAR 9** 118 SUB A
2x **LINEAR 9** 118 SUB BA



Setup 3:
4x **LINEAR 9** 210 LTA
4x **LINEAR 9** 118 SUB A
2x **LINEAR 9** 118 SUB BA



Setup 4:
6x **LINEAR 9** 210 LTA
6x **LINEAR 9** 118 SUB BA



LINEAR 9 – ACCESSORIES



Protection Cover LINEAR 9 110 XA
The COVER LINEAR 9 110 XA is a padded transport protection cover. Thanks to the convenient handle recesses, the protective cover can remain on the box permanently during installation and dismantling.



Protection Cover LINEAR 9 112 XA
The COVER LINEAR 9 112 XA is a padded transport protection cover. Thanks to the convenient handle recesses, the protective cover can remain on the box permanently during installation and dismantling.



Protection Cover LINEAR 9 210 LTA
The COVER LINEAR 9 210 LTA is a padded transport protection cover. Thanks to the convenient handle recesses, the protective cover can remain on the box permanently during installation and dismantling.



Weather Protection Cover LINEAR 9 110 XA
The LINEAR 9 110 XA Weather Protective Cover is a padded rain cover for protection during transport and operation with a rollable, splash-proof and sound-permeable gauze. Thanks to the practical handle recesses, the rain cover can remain permanently on the multifunctional speaker and at the same time all connection and control panels remain accessible.



Weather Protection Cover LINEAR 9 112 XA
The LINEAR 9 112 XA Weather Protective Cover is a padded rain cover for protection during transport and operation with a rollable, splash-proof and sound-permeable gauze. Thanks to the practical handle recesses, the rain cover can remain permanently on the multifunctional speaker and at the same time all connection and control panels remain accessible.



Transport case LINEAR 9 2 x 210LTA
Optional flight case for two LINEAR 9 210 LTA speakers and the tilt bracket set.



Protection Cover LINEAR 9 118 SUB A
The COVER LINEAR 9 118 SUB A is a padded transport protection cover. Thanks to the convenient handle recesses, the protective cover can remain on the box permanently during installation and dismantling.



Protection Cover LINEAR 9 118 SUB BA
The COVER LINEAR 9 118 SUB BA is a padded transport protection cover. Thanks to the convenient handle recesses, the protective cover can remain on the box permanently during installation and dismantling.

LINEAR 9 – TECHNICAL DATA MID/HIGH UNITS

*preliminary data

LINEAR 9 – TECHNICAL DATA SUBWOOFER

| | LINEAR 9 118 SUB A | LINEAR 9 118 SUB BA |
|-----------------------------|--|--|
| Max. SPL @ 10 % THD | 129 dB half space (42 Hz - 100 Hz averaged) | 134 dB half space (40 Hz - 110 Hz averaged) |
| Max. SPL peak @ 10% THD | 131 dB half space | 136 dB half space |
| Frequency response +/- 3 dB | 42 Hz - X-over | 38 Hz - X-over |
| Frequency response -10 dB | 38 Hz - X-over | 31 Hz - X-over |
| Power amp output (RMS) | 1100 W | 1100 W |
| Amplifier type | Class D | Class D |
| Woofer | 1 x 18", 4" voice coil | 1 x 18", 4" voice coil |
| Max. input level | +20 dBu | +20 dBu |
| Analog inputs | 2 x XLR combo balanced | 2 x XLR combo balanced |
| Analog Thru | 2 x XLR balanced | 2 x XLR balanced |
| DSP Out | 1 x XLR balanced | 1 x XLR balanced |
| Network port | EtherCON RJ45, 1 x In, 1 x Thru | EtherCON RJ45, 1 x In, 1 x Thru |
| Filter presets | Front, Cardioid 1:1, Cardioid 2:1, Remote | Front, Cardioid 1:1, Cardioid 2:1, Remote |
| Remote software | DSP CONTROL (Windows, macOS) | DSP CONTROL (Windows, macOS) |
| DSP functions | Fully parametric 10-band EQ with variable filter characteristics, High-Pass Filter, Low-Pass Filter, Polarity, Level, Delay, Limiter, Mute | Fully parametric 10-band EQ with variable filter characteristics, High-Pass Filter, Low-Pass Filter, Polarity, Level, Delay, Limiter, Mute |
| Sample rate | 96 kHz | 96 kHz |
| System latency | Less than 2.6 ms | Less than 2.6 ms |
| Mains connection | 1 x PowerCon NAC3 In, 1 x PowerCon NAC3 Thru, 100-240 V | 1 x PowerCon NAC3 In, 1 x PowerCon NAC3 Thru, 100-240 V |
| Power consumption | 1.9 A / 100-240 V nominal according to EN 62368-1 | 1.9 A / 100-240 V nominal according to EN 62368-1 |
| Pole mount | 1 x M20 | 2 x M20 |
| Carrying handles | 2 x MultiGrip | 8 x MultiGrip |
| Housing | Birch multiplex | Birch multiplex |
| Surface | PU coating black | PU coating black |
| Front grille | 2 mm metal grille backed with black acoustic foam | 2 mm metal grille backed with black acoustic foam |
| Dimensions (WxHxD) | 55 x 56 x 69 cm 21-21/32 x 22-3/64 x 27-11/64" | 111 x 56 x 69 cm 43-9/32 x 22-3/64 x 27-11/64" |
| Weight | 41.5 kg / 91.5 lbs | 63.5 kg / 139.9 lbs |





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