



Our goal - pure listening pleasure!

Perfect sound can only result from the finely tuned coordination of many elements. This is why the HK Audio® development team comprises a host of experts working closely together. Engineers specializing in acoustics, in analog and digital electronics and in mechanics work hand in hand, collaborating with a musicologist who adapts the sound of every HK Audio® product to suit human auditory physiology.

A world-class ultra-modern anechoic chamber/ acoustical testing lab serves as the perfect proving

ground for these developers. It enables our engineers to document and analyze the audio properties and dynamics of a speaker system in exhaustive detail to ultimately advance the state of the art.

Every day is spent with a singular goal in mind—to create extraordinarily accurate instruments of sound reinforcement! What does this entail?

- Your voice (and every other audio signal) is rendered accurately and authentically.

- Greater utilizable sound pressure.
- Frequency response is remarkably smooth and dynamics are consistent, obviating any need for corrections with graphical EQs.
- Listening fatigue never sets in: Disharmonic distortion and resonance are minimised so the sound remains pleasant to your audience's ears even after long listening sessions.
- Plug in, power up and enjoy great sound right out of the box: HK Audio® systems take you there that much faster.



Why DDO™?

Because it sounds so much better! Here's why: Anyone aiming to develop a speaker system faces the formidable challenge of making it accurately replicate the sound of the original instruments – keyboard, guitar, bass, drums, even and especially the human voice.

Every component in a sound reinforcement systems has its trademark dynamic response and tone, so the trick is to adapt these components so that they resonate with the natural dynamics and the authentic sound of the signal source. That's precisely what DDO™ is designed to do!

As a result, audio reinforcement systems no longer sound like speakers!

- Natural sound
- Detailed clarity at all volume levels
- No listening fatigue
- Punchier, more assertive sound at low levels

What's more, DDO™ features presets that quickly adapt the rig to different applications.

- Swifter setup
- Optimum adaptation
- Selection of 5 presets:
 - Mute
 - Speech
 - Live 1
 - Live 2
 - DJ 1
 - DJ 2



Innovative DDO™ Controlling

Every speaker has a specific tonal character. Like an instrument, a speaker's timbre is not static – it varies as volume levels vary. A speaker can also generate distortion, partial oscillations and resonances. In a nutshell, its response is constantly changing. And in a system comprising several speakers, these undesirable effects can be multiplied.

This is where the new L.U.C.A.S MAX's patent-applied-for DDO™ (Digital Dynamics Optimization) technology comes into play. Leveraging many years of experience with the legendary HK AUDIO Digital Field Controller (DFC), our engineers developed an extremely powerful controller that for the first time compensates for these forms of dynamic distortion. The resulting sound is strikingly clear and natural. Furthermore, it is stable and easily controlled from a whisper to a roar. To adapt the rig more easily to different applications and configurations, the DDO™ Controller offers five presets for the most commonly used applications.

Technical Specifications.

L.U.C.A.S MAX Subwoofer

Inputs/outputs:
Line In: XLR female (pin 1= Ground; 2= +, 3= -)
Input: Electronically balanced & floating
Input impedance: 47 k ohms
Sensitivity: 0 dBV (=1V)
Max. input level: + 20 dBu
Parallel out: XLR male (pin 1= ground; 2=+, 3= -)
Speaker outputs: Speakon® NL 4 (pin 1+= +, 1=- -)

Digital controller:
Sampling frequency: 24 bits/ 48 kHz
Internal signal processing: 56 bits
Presets: 5

Amplifiers:
Subwoofer output: 1x 1200 W RMS / Class D power amp
Satellites output: 2x 400 W RMS / Class D power amp
Protective circuitry: DDO™ controlled multi-band limiter

Speakers:
Woofers: 1x 15"
Subwoofer frequency response: 40 Hz – 130 Hz, ± 3 dB
32 Hz – 130 Hz, - 10 dB
SPL 1W / 1m: 101 dB (half space)
Max. SPL / 1m: 130 dB @ 10% THD (half space)

Weights and measures:
Weight: 39 kg / 86 lbs.
Dimensions without casters : 48.5 cm x 49.5 cm x 58.5 cm
(WxHxD) 19" x 19-1/2" x 23"

L.U.C.A.S MAX Satellite

Inputs:
Speaker input: Speakon® NL 4 (pin 1+= +, 1=- -)
Speakers: 1x 10" neodymium
1x 1" neodymium
Driver: 60° x 40° CD Horn
Directivity: 8 ohms
Overall nominal impedance: 104 dB (half space)
SPL 1W / 1m: 126 dB @ 10% THD (half space)
Max. SPL / 1m: 130 Hz – 19 kHz, +/- 3 dB
Frequency response: (via DDO™ Controller)
Crossover frequency (passive): 2.2 kHz, 12 dB / octave
Driver protection: Dynamic protective circuit
Pole mount: HK Audio DuoTilt™ 36 mm, -7.5° and -15°

Weights and measures:
Weight: 11 kg / 24.3 lbs.
Dimensions (WxHxD): 31.5 cm x 49 cm x 32 cm
12-3/8" x 19-3/8" x 12-5/8"

Specifications subject to change without notice
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Portable
Sound

english



L.U.C.A.S.
Max

Maximum Sound
and Power



L.U.C.A.S
Max



Maximum Sound and Power

In 1998 we achieved a milestone in our quest to put a new kind of system into the hands of users that would deliver more power, sound better and be amazingly easy to handle: We invented the L.U.C.A.S format. The first of a new breed of products, L.U.C.A.S became so popular so fast that several other manufacturers were soon inspired to bring flatteringly similar systems to market. While they were doing that, we continued on our quest for the ultimate in sound reinforcement, and our R&D engineers have come up with a number of new technologies en route.

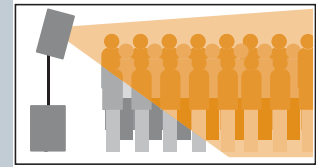
Some of these sophisticated technologies feature prominently in the new L.U.C.A.S MAX, for instance, PWM digital power amps and DDO™ technology. All these advances add up to a powerhouse PA that packs awesome response and performance into a stunning package with a very small footprint.



L.U.C.A.S MAX system with optional speaker stands



Ergonomic grips for fast and easy toting



HK AUDIO DuoTilt™: Making the most of sonic energy to deliver clear, punchy sound to everyone in the audience



Optional protective cover set for L.U.C.A.S MAX



The complete accessory kit for L.U.C.A.S MAX consisting of two aluminum speaker stands, one gig bag, and two speaker cords



Facts & Features

- HK Audio DDO™ System Controller with 5 presets
- 1200 W RMS digital power amp for the 15" Neodym subwoofer
- 2x 400 W RMS digital power amps for the satellites
- Two satellites with 10" Neodymium speakers and a 1" CD horn
- 15" subwoofer in an enclosure factory-equipped with casters
- HK Audio DuoTilt™ for optimum sound-to-audience alignment
- Total weight of the system: 61 kg / 134.5 lbs.





Control Features

1 Limiter LEDs. These LEDs indicate the active system's operating status. Green = signal present; Yellow = limit; Red = protect.

2 Gain. This knob adjusts input levels (volume control).

3 Balance. Twist the Balance knob to the left or right to adjust the relative balance of volume levels between the left and right channels.

4 Display. The numeric display indicates the currently selected system configuration (preset).

0 MUTE System is muted.
No signal is rendered.

1 SPEECH Voice/speech setup (announcements)
This option is tuned specifically for speech applications. The subwoofer's level is reduced in order to minimize stage rumble, microphone handling noise, and the popping of plosive speech sounds.

2 LIVE 1 For live applications
The Live 1 setup delivers punchy, dynamic bass with fast transient response. Speech and vocals are very prominent in the overall sound.

3 LIVE 2 For live applications
The Live 2 setup delivers deeper bass at a slightly lower level. Speech and vocals are not quite as prominent as with Live setup 1.

4 DJ 1 For playing music on CDs
The DJ1 setup is tuned specifically for playback, with strong deep bass, moderate mids, and plenty of high-end presence.

5 DJ 2 For playing music from CDs or MP3s
Like DJ1, the DJ2 preset can also be used for playing CDs, but is optimised for MP3-encoded sources to revitalize the sound with more dynamic bass, smoother highs.

5 Up/Down. These buttons switch between the five different system configurations.

6 Subwoofer Level. Twist the Subwoofer Level knob to the left to cut the subwoofer's level by as much as -12 dB and to the right to boost it by up to 6 dB.

7 Ground. Ground lift button for separating the signal and chassis ground in the event of hum.

8 Input Left / Input Right. (combination XLR and 1/4" jacks). L.U.C.A.S MAX is equipped with separate left and right channel inputs that connect to a stereo mixer.

9 Through Left, Through Right. Parallel output for routing the line signal (left or right line signal) to other systems, outboard components, monitor power amps, etc., via XLR cables.

10 To Satellite Left and Right. Connect these Speakon® outputs to the left and right L.U.C.A.S MAX satellite speakers using speaker cables equipped with Speakon® connectors.

11 Power Switch. On/off switch for the active system.

12 Mains Input. Use the factory-included Powercon® mains cord to connect this socket to a wall outlet.

13 Fans. These fans (see picture on the left) keep the power amp modules cool.

