

THE CULTURE OF SOUND



KARLOTTA



LYRAVOX
HAMBURG

AUDIOPHILE REFERENCE TECHNOLOGY

Lyravox' Karlotta is the result of a radical approach to improve, if not re-invent, the loudspeaker. Leaving aside many dogmas, but based on many decades of experience with loudspeaker behaviour, Lyravox found the path to acoustic progress in several key approaches: 1) Use the very best mechanics, as their quality cannot be substituted. 2) Drive each driver unit directly and individually. 3) Control and shape the signal strictly in the digital domain. 4) Exploit the acoustic potential of the cabinet, materials, and geometry. 5) Design the whole chain of components as one synergetic system. 6) Make that system adaptive to the listening room. The necessary outcome was a digital-active, wholistic loudspeaker system in which all electronics are servants of the superior mechanics and acoustics. As a side effect of the new approach, the multiple award winning system also keeps winning the hearts of interior aware music lovers.



SMART CABINetry

What may look like a style is indeed the result of a sophisticated acoustic concept: Apart from the fact that the sound performance benefits from each driver working undisturbed by others in its own enclosure, the multi-segment cabinet of Karlotta adds considerable stability to the speaker. However, the main purpose of the distanced segments is the passing of sound through the gaps, allowing for a more balanced dispersion of sound from and around the speaker. By that the gaps also compensate for the wide body of Karlotta, which is a conscious counter-approach to the majority of today's speakers - and an acoustic necessity to foster musical dynamics, liveliness and listener excitement.

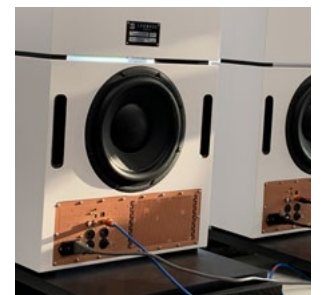


WORLD CLASS ELECTROMECHANICS



Any search for the mechanically best performing speaker drivers of today ends with the latest designs of Accuton, the German ceramic/diamond diaphragm pioneer. These drivers are capable to reproduce more musical information in a more controlled fashion than any conventional driver. The ultra-hard membranes do not flex in operation, and their drives are the least lossy designs. However, the acoustic potential of these drivers can only be exploited in a directly driven active speaker design with total electric control. Karlotta is covering the sensitive part of the frequency spectrum uniformly with Accuton

ceramics. The subwoofer section is covered by the world class Scan Speak 10" long throw aluminum cone driver, working as a rear firing unit, providing impulse compensation for the twin front midbass units.



DRIVE AND SIGNAL FEED WITHOUT LOSSES

Karlotta is a fully active loudspeaker system with DSP signal processing and chassis control. All driver sections are each driven directly by their own respective power amplifier, totalling 6 individual signal & amplification channels. A conventional physical crossover, which is detrimental to sound quality, is completely avoided. Via the high-resolution DSP (Digital Signal Processor), frequency response, phase, time alignment and tonal

GY COMES IN A NEW SHAPE



equalization are controlled without loss, and also more precisely than via physical crossovers. Karlotta has 4th generation NCore® power amplifiers with 250W for bass units and 100W for tweeters, providing authoritative control.

DIFFUSE FIELD EXPANSION

An additional AMT super tweeter in the top of the housing is used to generate an extended treble diffuse field (indirect sound in the room). As a result, the music reproduction comes closer to the real life music experience, in which the sound is distributed around the instruments throughout the room and not directionally (as is the case with conventional speakers). At the same time, the diffuse field tweeter expands the dispersion limits of the main tweeter, so that the sweet spot of the listening zone is enlarged and a harmonious sound is also achieved besides and behind the speaker.



INTEGRATED PRE-STAGE

Karlotta can either be fed by a traditional preamp, but she also allows the direct connection of up to five source devices. The integrated pre-stage has 3 digital (AES / SPDIF / Toslink optical) and 2 analog (XLR, RCA) inputs. It is controlled via a remote control, including source selection, volume and sound profile selection. A particularly low-loss overall system can be implemented by directly connecting the signal sources to the loudspeaker.

TAILOR MADE SOUND

Since the surrounding listening room has a significant influence on the acoustic result, it is necessary to adapt the loudspeaker to the room in order to achieve the best possible sound. This applies in particular if room acoustics measures - such as those common in recording studios - cannot be used or can only be applied to a limited extent. Lyravox offers this professional room adjustment to private and professional customers as an additional expert service.



HANDMADE IN HAMBURG

Karlotta is individually handcrafted in the Hamburg manufactory, each pair by one dedicated assembler. After the installation of the loudspeaker drivers (always selected in pairs/quads) and the electronic modules, a comprehensive functional test is carried out, followed by a 48-hour burn-in process of the overall system, exclusively with actual music programs.

“A hell of a good loudspeaker”

Jürgen Schröder, Lowbeats.de

“...had the reviewers jaw-dropped...” “...put the listener into a genuine intoxication...”

Malte Ruhnke, Stereoplay

“...the musicians are simply present in the listening room...”

Ralph Werner, fairaudio

TECHNICAL INFORMATION

Concept:

Dynamic, 3-way plus ambience tweeter, ported bass (rear sub-woofer), triple fully active class D amplification with DSP signal processing. Master-slave configuration with integrated pre-stage.

Recommended room size:

25-120 m². (for normal room height)

Recommended listening distance:

3 - 8 m

Recommended distance to the wall:

0.6-2 m (with room correction applied from 0.3 m)

Frequency response:

24-42,000 Hz

Design:

Multi-segment cabinet (one segment per each driver), extra high density wood composite walls. Internal K-Material (solid Stone) Lyravox H-Bracing in all midwoofer and subwoofer enclosures. Multi-material internal damping. K-Material base plate (bare black, semi-polished) with invisible optional adaptive spikes. Nano-finished multi-layer paint coating, ultrasmooth matte. Custom

paintwork available in all RAL or NCS colour codes.

Dimensions:

45 cm x 109 cm x 19 cm (W x H x D), baseplate 38 cm deep

Weight:

ca. 55 kg

Components:

Tweeter Accuton® Cell® Ceramic 30 mm
 2 x Midbass Accuton® C173 7"
 Subwoofer ScanSpeak® 30W Aluminium 10"
 Diffuse field tweeter AMT L50
 6 Power Amps CLASS D 4th Gen., 600W Total Power per Speaker

Input Interfaces:

AES Digital XLR (symmetrical)
 SPDIF Digital RCA (Coax)
 Toslink (optical)
 XLR balanced analog and RCA analog

Manufacturer's guarantee: 3 years on electronics, 5 years on mechanics (loudspeaker drivers), 10 years minimum spare part availability.

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