

DUO XD

FACT SHEET

XD-Innovation in the DUO format



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ACOUSTIC



Avantgarde Acoustic DUO XD (from August 2015)

The DUO XD is a much advanced version of the DUO GROSSO, a speaker model which since 2006 forms the back bone of Avantgarde's product portfolio and thus became a globally renowned "ambassador" of the brand's unique horn speakers. The solid and robust mechanical construction, formed by steel and aluminium cast elements, was completely adopted from the preceding version and the subwoofer cabinet was only slightly adapted to the new technical interior parts. Thus the DUO XD seamlessly continues the proven and well established concept of the Avantgarde Acoustic horn speaker design.

Like with the predecessor, the subwoofer section of the DUO XD features 2 powerful 12" high-precision drivers, accurately controlled by the newly developed XD power amplifier module. Due to its optimized Class-D circuitry, the XD amplifier delivers double the power, 1000 watts in total, than previous models, thus ensuring that the membranes are moving exactly according to the original signal.

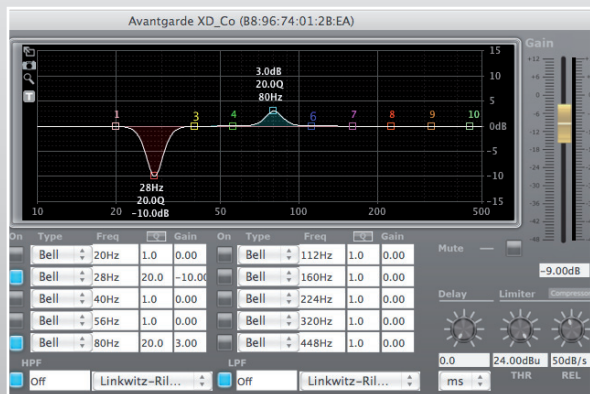
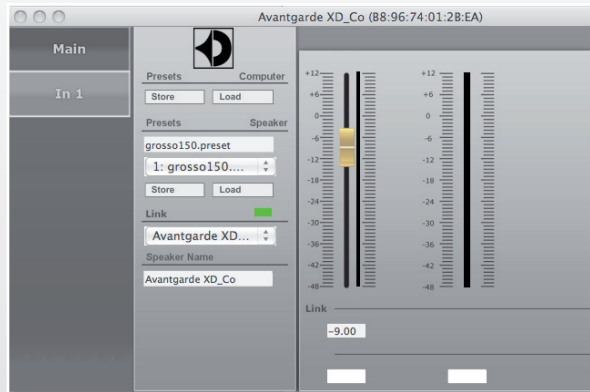
Previous models used a Motional Feedback control loop to assess the actual acceleration of the membrane and eventually generated according correction signals "on the fly". The new XD power amplifiers now have enough power reserves for linearizing the dynamic behavior of the drivers by precisely determined and pre-programmed correction curves, so that even the slightest latency of a target-performance comparison loop is eliminated. This results in improved control and a superbly contoured bass response even with the lowest notes.

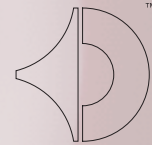
Furthermore the active crossover board at the subwoofer's input now offers more control features. Previously, only attenuators for volume and crossover frequency (towards the midrange) were available as "tailoring" features, plus a subsonic filter. With the XD models, a DSP controller receives the signals and offers a multitude of sound relevant adjustments, including a programmable 10-band equalizer. Still operating the subwoofer by a single SELECT/ENTER control knob is a simple exercise.

You prefer to use a PC or Mac computer system with a clearly laid out interface? The XD version offers that as well! No matter if you just want to set an individual subsonic filter, or a complex curve with room acoustic adjustments in the bass range: the XD SERIES CONTROL software gives you access in the most convenient way. A measuring software that is optimized for the XD equalizer, and which will take room acoustic measurements (by a calibrated microphone) into account, is already planned for the first quarter of 2016.

New to the DUO XD is also a re-developed State-of-the-Art midrange driver, featuring an optimized suspension system, a symmetrical magnet arrangement (by an additional magnet behind the membrane), and a completely new "Soft Mesh Compound" fiber-grid dome. Especially this dome considerably improves the openness and resolution, while at the same time providing a superb and natural richness that enhances the speech intelligibility of singers and speakers as much as the "there-ness" of instruments and of the recording environment, be it an intimate studio or a large concert hall.

Last-but-not-least, the tweeter range as well benefits from innovative engineering. The new crossover boards feature a new layout for our proven CPC (Capacitor Polarisation Circuit) circuitry, effectively preventing the negative influence of the "Dielectric Memory Effekt". Another "tessera" on the path to a pure and life-like presentation of recorded music.





Technical Specifications Avantgarde Acoustic DUO XD

SYSTEM DATA

Frequency range	System	170 – 20.000 Hz
	Subwoofer	18 – 500 Hz
Power handling		100 Watt
Efficiency (1 Watt / 1 m)		> 107 dB
Crossover frequencies		170 / 2.000 Hz
Nominal impedance		18 Ohm
Recomm. amplifier power		> 10 Watt
Recomm. room size		> 20 qm
CDC (Controlled Dispersion Characteristic)		yes
CPC crossover circuit (Patent pend.)		yes

HORN

Horn type		Spherical horn
Horn material		ABS, pressure molded
Horn finish		polished and lacquered
Horn dispersion angle		180 degrees

Horn area	low/mid range	n/a
	mid range	0,353 sqm
	tweeter range	0,025 sqm

Horn diameter	low/mid range	n/a
	mid range	670 mm
	tweeter range	180 mm

Horn length	low/mid range	n/a
	mid range	370 mm
	tweeter range	85 mm

HORN DRIVERS

Membrane diameter	low/mid range	n/a
	mid range	170 mm
	tweeter range	25 mm

Magnet material	low/mid range	n/a
	mid range	Alnico
	tweeter range	Ferrite

SUBWOOFER

Amplifier power (RMS)		1000 (2 x 500) Watt, Class-D
Active crossover		programmable by built-in DSP
Subsonic filter		programmable by built-in DSP
12V trigger input		yes
Limiter		yes
Programmable via LAN/USB		yes/yes
Inputs, switchable		1 x speaker-level and 1 x XLR (f)
Loop-through output		1 x XLR (m)

Driver diameter		300 mm/12"
Drivers per subwoofer		2

DIMENSIONS/WEIGHT

Dimensions	width	670 mm/26"
	depth	600 mm/24"
	height (+/- 15 mm)	1.695 mm/67"
Weight		95 kg/210 lbs