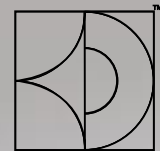


DUO



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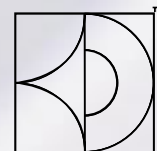
The DUO combines all of Avantgarde Acoustic™'s technological and creative potential, resulting in a most sophisticated two way horn system. With its enlarged 670 mm mid-range horn, a driver system of exclusive quality and precise integration of all components, this system offers unrivaled performance across the sound spectrum.

At this stage, the DUO is a "classic" among the 2-way horn systems of which Avantgarde Acoustic™ is very proud of. Proud of its 104 dB efficiency at high impedance and proud of the homogenous sound quality of this system.

Those who have heard the fortissimo of an orchestral recording, the sound of a human voice, or the natural faithfulness of a solo instrument played on this system, will know what we mean.

The DUO can change your musical experiences – you should not expect less.

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The DUO is a 2-way spherical horn system with integrated active subwoofer SUB225CTRL. Its incredible high sensitivity (104 dB/W/m) and its hybrid concept with self-powered subwoofer makes it easy to drive with any amplifier. Even with low powered tube amps the DUO is able to deliver a powerful, dynamic and three-dimensional sound, because the power-hungry work at low frequencies is managed by the self-amplified SUB225CTRL.

DRIVERS

Our challenge was to design custom-made driver systems, which perfectly integrate with the DUO horns and thus eliminating the need of passive frequency filters in the signal path.

The M2 midrange driver was specially developed for the DUO. The generously dimensioned magnetic structure of the 170 mm (7 in) cone, provides an extended efficiency as well as offering very high power handling at long excursions. This way the M2 has a very low cut-off frequency of 170 Hz which allows for an integration with the subwoofer without any passive crossovers.

The resonance characteristic of the 100 mm (4 in) dome is optimized by a special coating at the backside of the dome. The design of the dome ensures the sound waves entering the midrange horn SH6704 are in phase and cover the required extended bandwidth.

The CDC system features a controlled roll-off at 2,000 Hz and consequently allows the op-

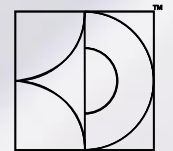
eration of the M2 in full range mode, without any degrading filter components in the signal path.

The H2 tweeter is a reduced sensitivity version of our reference tweeter H3^Ω. The exceptional driver H2 combines the smoothness of an electrostatic driver and the power of a strong 1 inch horn driver. The mere force of the 3 kg (6.5 lb) magnet on the voice coil guarantees 100% detail and precision even at low volume levels, and provides the DUO with compression-free sound reproduction even at extreme sound pressure levels. With the spherical horn SH1801 the H2 offers an ultra wide bandwidth down to 900 Hz. Due to the passive cross-over point being at 2,000 Hz we achieve a wonderful smooth sound with incredible dynamic headroom.

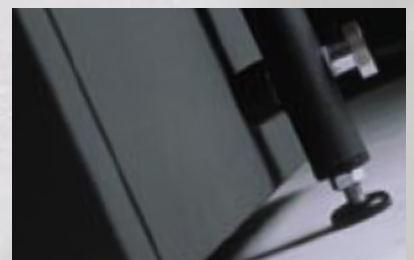
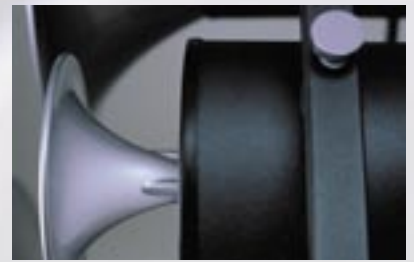
SUBWOOFER

The DUO is supplied with the active subwoofer SUB225CTRL, which is driven by two powerful 25 cm (10 inch) long-excursion drivers. These 10T300s are very unique: the sieved paper membrane combines incredible stiffness and acoustical neutrality with very low mass, the 3 inch voice coil provides a powerful drive with high thermal handling capabilities and its 6,5 kg magnet ensure impressive results - fast and dynamic like our horn speakers, with low frequency extension and precision par excellence.

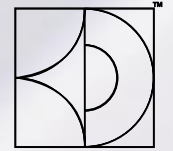
The integrated active electronics consist of a powerful 250 watt amplifier and a elaborate



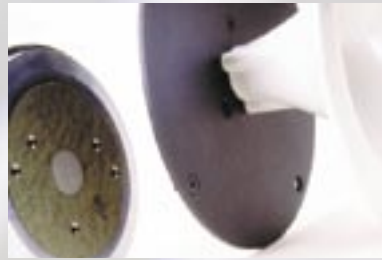
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real-time feedback loop, which not only eliminates deviations of the amp itself, but also the deviations of the drivers. As result the SUB225 CTRL achieves a flat frequency response down to 18 Hz in an astonishingly small, sealed enclosure!

The integrated active crossover allows the adjustment of a number of parameters thus ensuring a very easy and fast installation of the system even in acoustically critical situations. A 3-position subsonic switch, variable settings for the input sensitivity and crossover frequencies make the SUB225 compatible to all Avantgarde Acoustic™ horn systems – and logically as well for speakers from other manufacturers. The SUB225 can be remotely switched ON/OFF using the 12V trigger signal of AV amps.

The SUB225CTRL is usually driven via high power speaker terminals for direct connection to integrated amps, power amplifiers or alternatively for home theater processors via RCA or XLR terminals. The signal take-off is not

only at high impedance, but is also balanced and transformer coupled. This floats the subwoofer ground, avoiding hum loops and eases connection to balanced and bridged amplifier designs. The enclosure of the SUB225CTRL is constructed in axial symmetry with 1.2 in MDF (30 mm). Designed with a centrally located reinforcing stabilizer, the box construction is very rigid, avoiding resonances.

MECHANICAL CONSTRUCTION (Patent pending)

Both, the midrange as well as the tweeter horn are mounted into circular housing cylinders. A three pillar steel-tube frame is used to support the horns with chrome screws on lateral fixtures. As the latter shows various mounting locations, the midrange and the high-frequency-horn can be installed at various heights. This enables optimal positioning of the system to different heights of your listening position.

The subwoofer is freely-suspended above the ground, as the en-

tire loudspeaker system is placed on three self-aligning feet and the subwoofer is connected only via elastic rubber elements to the three pillar steel-tube frame. This free floating design enables an ideal decoupling from the floor boundary. If necessary the subwoofer can be further decoupled with spikes.

FINISHES

The standard version of the DUO is delivered with polished white horns. The circular housing tubes and the three pillar steel tube frame are powder coated in elegant black. The rear covers and the subwoofer are coated in high quality NEXTEL finish.

As an option, various metallic lacquer finishes for the horns are available. Special finishes are available upon request.

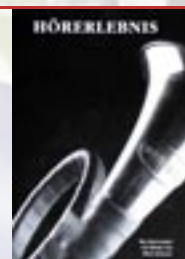


TEST REVIEWS



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"Never before has a loudspeaker system impressed like this. Never before has music touched me with such enchanting powers of authenticity as when played back over the DUO. Its strengths lie undoubtedly in this nearly hypnotic, distinctly addictive mien that doesn't suffer the faintest hint of coloration. Pure music in all its facets! The excitement of live music is this system's core signature. Accordingly: DUO fantastico." (HÖRERLEBNIS, A. Aschenbrunner, Germany)



"The totally balanced combination reveals very fast - very much. The Duo sounds incredibly natural. There are simply no colorations! The competition had no chance when our test program played real dynamic tracks. Some tracks have such an incredible dynamic bandwidth, that most conventional speakers simply smooth-off, or to it say more clearly - compress! Not the Duo's! The best symbiosis of horn and conventional technology I know. (AUDIOPHILE, H. Biermann, Germany)



"The DUOs are far and away the most fascinating and formidable speakers I've yet encountered. If you want the music to grab you by the short 'n' curls, to commune with you most intimately, these DUOs might be your personal hotline to the aural deities. They're for folks who want personal visitations, goose bumps, butterflies in the belly and the occasional heart-stopping scare. In short, they're exactly my kind of breathless fantasy audio device." (SOUNDSTAGE, S. Ebaen, USA)



"The DUOs sounded glorious, and far less colored than any other speaker I've heard employing horn-loaded drivers. The sound of massed choral voices was particularly sumptuous, the speaker conjuring an eerie apparition of the original event. A true achievement. Not to be missed." (GROOVENOISE.com, A. Chasin, USA)



"These speakers are simply the best I have ever heard. Nothing else has come so close to recreating the power and finesse of a full organ, or bringing a full orchestra into the living room, and of conveying the emotion of a solo performance. These horn systems are so revealing of the sources that it's hard to imagine using anything else. My favourite reference speaker is now ousted in favour of these music-making devices." (THE LISTENER, C. Beeching, USA)



"The inexhaustible dynamic reserves show the incredible strength of this set of horn satellite and active subwoofer. Drums sound totally unplugged. No peaks or fortissimo really challenge this speaker. Piano concerts are reproduced with original dynamics. No compression effect deteriorate the thrilling experience of a life orchestra." (STEREO, U. Rattai, Germany)



"The Duo breaks down the barriers between performance and reproduction in a way no conventional box loudspeaker can match. And such was the awesome tension and hair-curling realism. The exceptional involvement found me trawling through old favourites with new enthusiasm." (HIFI CHOICE, P. Messenger, UK)



TEST REVIEWS



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The DUO is a musical and beautifully sounding seducement. The DUO comes close to the listener, reaches him in every corner of his mind and floods the room with music – escape is impossible. This is how music reproduction should be: inspire emotions, disperse relaxation and convey energy. (HIFI TEST, V. Frech, Germany)



“So much goes on in the mid-range, and the DUO rewards its owner with excellent linearity, clarity, detail, separation of instrumental lines, immediacy, and natural attack. There’s true sonic value in that majestically broad, dynamic midrange, in the obvious microdynamic delicacy and accuracy, the near-zero distortion, the potential for very high sound levels, the easy amplifier loading. You’ll need to listen to appreciate the quality of the entire creation.” (STEREOPHILE, M. Colloms, USA)



“Going from the UNOs to the DUOs is like going from the Ferrari F40 to the F50. While the F40 is known to be a little twitchy yet excellent, the F50 is easier to drive around the track and adds to the F40’s already impressive track record. For those looking for the speed of electrostatic/panel loudspeakers, yet with the easy drive and dynamics of horns, the DUO should make your must-audition shortlist.” (ULTIMATE AUDIO, S. Rochlin, USA)



“These DUOs are one of the best speaker systems I’ve ever heard. I would have sworn Joan Armatrading was singing in my living room, but then so was Harry Christophers and his Sixteen, and Louis Armstrong, and Pat Metheny...and... and... and the neighbours kept finding excuses to visit...” (AUDIO QUARTERLY, C. Beeching, UK)



“The DUO captivated me with its musicality and unique qualities. In addition to the effortless and seemingly unlimited dynamics, the DUO system had an intimate quality that made it seem as though the musicians were communicating directly with me. It did what high-performance audio systems are supposed to do: involve the listener in the music. It went beyond next level of musical communication.” (THE ABSOLUTE SOUND, R. Harley, USA)



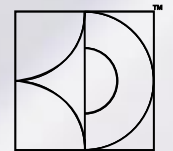
“I want you to know that we really enjoyed the DUO demo. We were swept away with their magic. The combination of clarity, lack of distortion, and stupendous dynamics was most impressive. Easily Best Sound at Show, and I mean anywhere in Las Vegas!” (ENJOY THE MUSIC.com, D. Olsher, USA)



“Pure dynamic, which pulls your fillings. Pitch black bass, precise and with pressure. You clearly see the organ pipes in the depth of the room. Power and authority. The height of the sound imaging reaches from the floor up to the ceiling: Fantastic!” (HÖR-FORUM, M. Schmid, Germany)



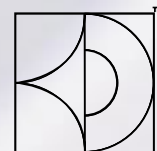
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| SYSTEM DATA | | |
|---|----------------------|---|
| Frequency response | satellite | 170 - 20.000 Hz |
| Frequency response | subwoofer | 18 - 220 Hz |
| Power capacity | | 100 Watts |
| Sensitivity (1W/1m) | | > 104 dB |
| Crossover frequencies | | 170/3.500 Hz |
| Nominal impedance | | 8 Ohm |
| Recommended amplification | | > 10 Watts |
| Recommended room size | | > 20 m ² / 200 ft ² |
| CDC (Contr. Dispersion Characteristics) | | yes |
| HORN | | |
| Horn-type | | spherical horn |
| Horn material | | ABS injection molding |
| Horn finish | front- and backside | polished |
| Dispersion type | | 180° |
| Horn mouth area | low mid range | 0.353 m ² |
| | mid range | n / a |
| | high range | 0.025 m ² |
| Horn mouth diameter | low mid range | 670 mm / 26.4 in |
| | mid range | n / a |
| | high range | 180 mm / 7.1 in |
| Horn length | low mid range | 370 mm / 14.6 in |
| | mid range | n / a |
| | high range | 85 mm / 3.3 in |
| DRIVERS | | |
| Diameter | low mid range | 170 mm / 6.5 in |
| | mid range | n / a |
| | high range | 25.4 mm / 1.0 in |
| SUBWOOFER | | |
| Integrated | | yes |
| Number of drivers per subwoofer | | 2 x 10 in |
| Amplifier | | PA 103 |
| Active power output | | 250 Watts |
| Adjustable crossover frequency | | yes |
| Adjustable volume | | yes |
| DIMENSIONS - WEIGHT | | |
| Dimensions | width (p/Satellite) | 670 mm / 26.4 in |
| | depth (p/Satellite) | 680 mm / 26.8 in |
| | height (p/Satellite) | 1.550 mm / 61.0 in |
| Weight | Satellite (p/piece) | 70 kg / 155 lbs |

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| TWEETER DRIVER | |
|---------------------------|---------------------|
| Throat diameter | 25 mm |
| Voice coil diameter | 44.4 mm |
| Nominal impedance | 16 Ohms |
| Power capacity | 50 Watts |
| Frequency range | 800 – 20.000 Hz |
| Sensitivity | 104 dB |
| Magnetic assembly weight | 3.2 kg |
| BL factor | 9.8 N/A |
| Magnet | Ferrite |
| Diaphragm | Aluminium |
| Overall diameter | 144 mm |
| Depth | 67 mm |
| Net weight | 3.30 kg |
| MIDRANGE DRIVER | |
| Nominal diameter | 165 mm |
| Voice coil diameter | 37 mm |
| Nominal impedance | 6.5 Ohms |
| Power capacity | 100 Watts |
| Sensitivity | 104 dB |
| Magnetic assembly weight | 3.0 kg |
| Magnet diameter | 135 mm |
| Moving mass | 10.9 g |
| Magnet | Ferrite |
| Diaphragm | Crosskevlar – Paper |
| Overall diameter | 165 mm |
| Depth | 71 mm |
| Net weight | 2.7 kg |
| SUB225 BASS DRIVER | |
| Nominal diameter | 250 mm |
| Voice coil diameter | 77 mm |
| Nominal Impedance | 8 Ohms |
| Power capacity | 250 Watts |
| Sensitivity | 96 dB |
| Magnetic assembly weight | 6.5 kg |
| Magnet diameter | 192 mm |
| Moving mass | 59 g |
| Max. excursion | +/- 9 mm |
| BL factor | 20.2 N/A |
| Magnet | Ferrite |
| Diaphragm | Paper |
| Overall diameter | 270 mm |
| Depth | 116 mm |
| Net weight | 7.4 kg |

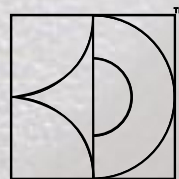
SOLO

UNO

DUO

TRIO

Milano
Design Award



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