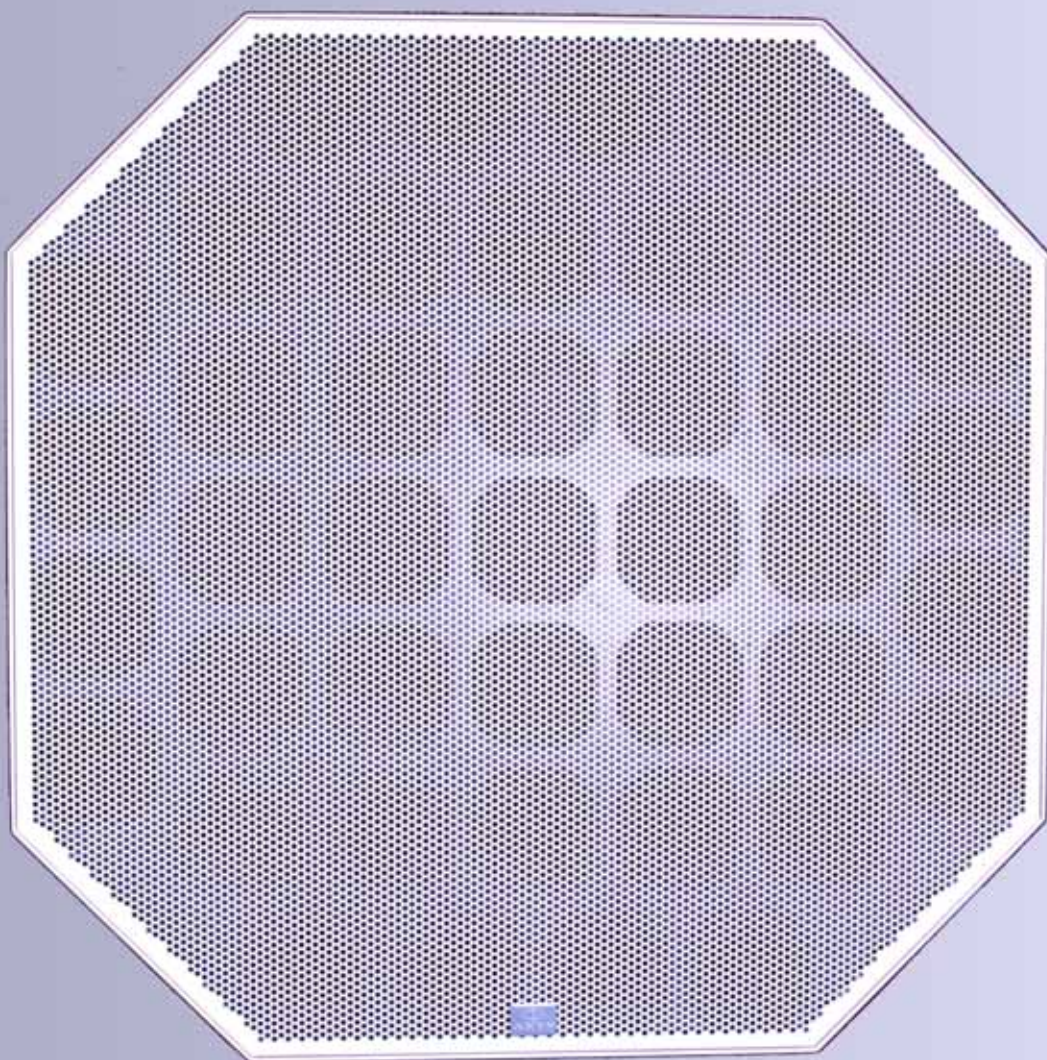


IntelliDisc

Model
DS-90

Shaping the Future of Sound Reinforcement™



Featuring the revolutionary

DDS

Digital Directivity Synthesis
Technology



Features:

- 2-Dimensional Beam and Steering Control
- Superb Speech Intelligibility
- High SPL
- Long Throw Capabilities
- High Direct to Reverberant Ratio
- Self Powered with Integrated 32 bit floating point DSP power
- Network Ready
- Electronic Aiming
- Accurate Simulation and Optimization via DDA – no guesswork involved
- Integrated Surveillance Capabilities


AXYS®
TOTAL TRANSPARENCY

AXYS® IntelliDisc-DS90

The **AXYS® IntelliDisc-DS90** is the world's first fully integrated digitally controlled two dimensional loudspeaker array.

The **IntelliDisc-DS90** makes use of Duran Audio's revolutionary DDS technology to allow users to manipulate the directivity of the array in two dimensions.

DDS stands for Digital Directivity Synthesis. Digital Directivity Synthesis is a highly advanced array control optimization concept.

DDS is based on a unique, specially adapted 'constrained weighted least-squares' optimization algorithm. Starting from a desired direct SPL distribution in a hall or space, the optimum output filter for each array channel is calculated. In other words, the desired 'illumination' of the hall or space is 'mapped' back to the array, instead of mapping the array response to the hall, as would be done with a conventional loudspeaker array.

Using DDS technology any desired two dimensional radiation pattern can be synthesized from the **IntelliDisc-DS90**. This allows users to 'mould' both the vertical and horizontal dispersion of the array to perfectly fit the audience area; whilst at the same time avoiding unwanted reflections. The result is an array which can offer a high ratio of direct sound to reverberant sound, which is critical for achieving high levels of speech intelligibility, in the most difficult of acoustic environments.

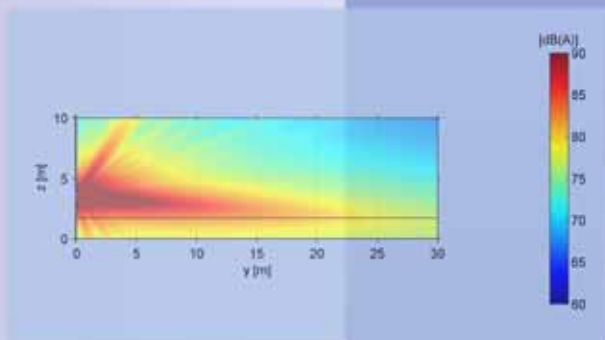
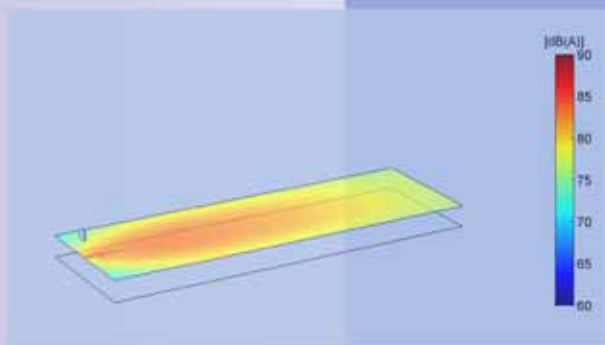
It has proven to be a versatile and effective solution for vocal reinforcement within reverberant venues, offering excellent speech intelligibility even in demanding acoustic conditions. The **IntelliDisc-DS90** is capable of providing a constant sound pressure level over a distance of up to 30 meters, although a substantial extension of this range can be achieved in less demanding acoustical conditions.

In order to achieve such outstanding performance the **IntelliDisc-DS90** is equipped with two 32-bit floating point DSPs (Digital Signal Processor) which handles the demanding mathematical calculations that are necessary to achieve highly accurate two dimensional directivity control. In addition to this the DSPs offers a wealth of useful audio processing features including: volume control, parametric EQ and delay. The 41 custom designed, 4" loudspeakers are driven by an 32 channel class-D amplifier, power for which is provided by two sophisticated switched mode power supplies, all of which combine to ensure years of reliable operation. An extensive set of surveillance functions have also been implemented to meet the stringent demands of typical VA applications.

The unit can be controlled using our proprietary WinControl software which offers user friendly control of the beam steering parameters, audio processing and surveillance features.

Typical applications include:

- Transport Hubs
- Crowd Control
- Terminals
- Platforms



SHORT FORM SPECIFICATIONS

Acoustical:

Freq range		: 130 - 12k Hz (+/-3 dB)
Max SPL	- Continuous	: 97 dB(A) @ 10 m
	- Peak	: 101 dB(A) @ 10 m
Coverage	- Horizontal (DDS)	: geometry dependent
	- Vertical (DDS)	: geometry dependent
Dynamic range		: >100 dB

Electrical:

Input	- Nominal level	: 0 dBV (line input)
	- Type	: dual line input, transformer balanced
	- Impedance (balanced)	: 6K8 Ohm
DSP module(2x)	- Type	: floating point 900 MFLOPS 32 bits
	- Memory	: 64Mb SDRAM + 3Mb non volatile
	- AD - DA conversion	: 24 bits sigma-delta 128 x oversampling
Power amps	- Type	: PWM (Class D)
	- Power	: 32 x 40 Wrms (4 Ohm)
Mains	- Voltage (+5%/-10%)	: 230 or 115V
	- Power consumption	: 168 VA (idle) / 1450 VA (full load)

General:

Temperature range (ambient)		: 0 to 40°C
Transducers		: 41 x 4" full range
Dimensions (H x W x D)		: 850 x 850 x 195 mm (33.5"x 33.5"x 7.7")
Default color	- Enclosure and grill	: RAL 9010 (white)
	- Speaker baffle	: RAL 9011 (black)
Weight		: 56.5 kg (125 lbs)

YOUR LOCAL AXYS® DEALER



Koxkampseweg 10, 5301KK Zaltbommel, the Netherlands.
tel. +31 418 515583 fax. +31 418 518077
<http://www.duran-audio.com>
info@duran-audio.com

