The AXYS® Intellivox ADC Mark II range

Compact loudspeaker arrays for use in 70V / 100V Public Address and Voice Alarm (PA/VA) systems



EN 54-24 Certified for Voice Alarm - Emergency Sound Systems

Shaping the future of sound reinforcement

AXYS® TUNNEL by HARMAN

Analogue Directivity Control (ADC)

The AXYS®Intellivox ADC Mark II range is intended for use in 70V/100V Public Address and Voice Alarm (PA/VA) systems. As with other Intellivox products the ADC range has been designed to maximise listening comfort and provide highly intelligible speech reproduction even within difficult reverberant spaces.

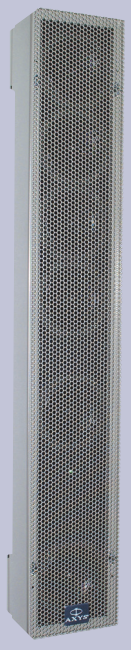
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The revolutionary Digital Directivity Control (DDC) algorithm, pioneered by Duran Audio BV, was used to define a set of passive filters which has been precisely transferred into the analogue domain resulting in the ADC technology.

The Passive filter network provides time alignment for the individual drivers, equalisation of the complete array and creates a constant wavelength line source.

Each array consists of 6 carefully aligned 4" full range loudspeakers housed inside a tough steel enclosure. The specially aligned drivers are highly efficient and have an extended flat frequency response, providing natural and uncoloured reproduction of both spoken word and background music.

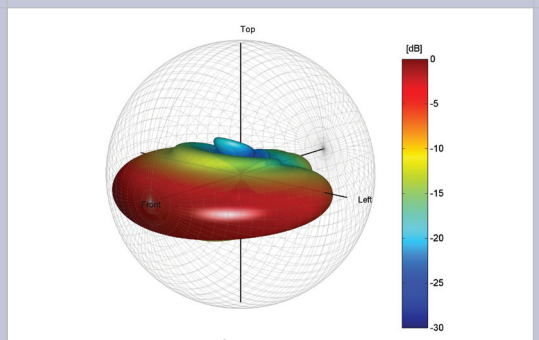
AXYS® Intellivox ADC-V90 Mark II



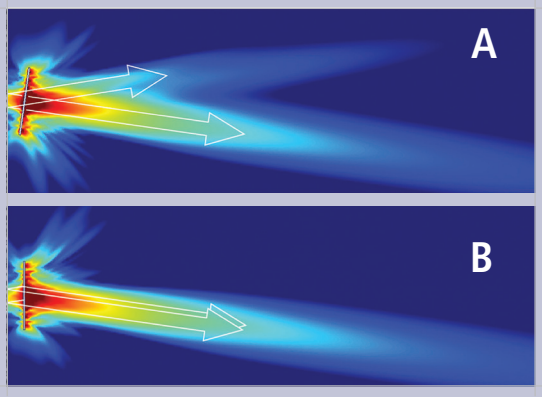
- **Transport Hubs**
- **Places of Worship**
- **Atriums**
- **Shopping Centres**
- **Any reverberant space where high quality speech reproduction is required**

To improve intelligibility, the Model V90, utilises a preset vertical opening angle with a -4º steering angle to accurately cover the listening plane when mounted flat to a vertical surface. This results in a reduction of incoherent reflections from the mounting surface.

An additional advantage of vertical or even recessed mounting is that the Model V90 becomes architecturally unobtrusive.



3D Directivity balloon for the Intellivox ADC-V90 Mark II



Mechanically aimed (A) versus electronically aimed (B) radiation pattern of a loudspeaker array mounted against a vertical surface.

AXYS® Intellivox ADC-H90 Mark II



- **Railway Station Platforms**
- **Long, high ceiling corridors**
- **Terminals**

The AXYS® Intellivox ADC-H90 Mark II is designed for use on platforms and in high ceiling corridors, to minimise spill over a large bandwidth outside the listening area. The precisely defined horizontal dispersion aims the acoustic signal at the listener area, whilst minimising disturbance outside of this locality.

This dramatically improves the listening comfort in surrounding areas of for instance, open platform railway stations.

Quick Design Guide

The Intellivox ADC-V90 Mark II is designed to provide even coverage up to a distance of 10-15 m. It has a fixed horizontal dispersion of 130º and a vertical opening angle of 30º, which is steered downwards 4º from the acoustic centre.

Please Note:

Unlike other Intellivox products, the acoustic center of the Intellivox ADC-V90 Mark II is located at the centre of the highest driver in the array.

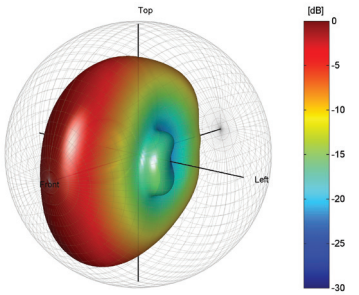
The following table can be used as a guide to correct mounting height*:

Listener Height	Coverage	Acoustic Centre
seated - 1.2 m	< 15 m	2.5 m from floor
seated - 1.2 m	< 20 m	3.0 m from floor
standing - 1.7 m	< 15 m	3.0 m from floor
standing - 1.7 m	< 20 m	3.5 m from floor

*This information is only intended as a guide and should not be used in design, installation or specifications without thorough investigation!

The column is designed to be mounted horizontally and can be mechanically aimed according to desired throw.

The Intellivox ADC-H90 Mark II is designed to evenly cover distances up to 10-15 m. It has a fixed vertical dispersion of 130º and a horizontal opening angle of 30º. The focus point for the horizontal beam is at 15 m.



3D Directivity balloon for the Intellivox ADC-H90 Mark II

Installation and Safety Features*

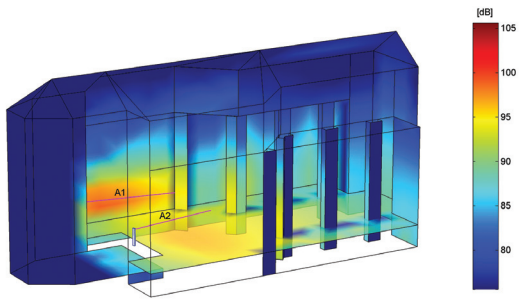
- Cable entry on these loudspeakers is via a recessed PG13.5 gland on the rear of the unit. Once the cable has been passed through the gland the connections and tap selector can be accessed from the front of the unit, making them easy to connect and configure whilst in position.
- A ceramic connector ensures that the terminal will not melt in a fire situation and short out the audio line. To further protect the integrity of the audio line, a thermal fuse is fitted to ensure that the internal wiring is disconnected should the unit be exposed to severe temperatures.
- Threaded bushings allow security screws to be fitted, to prevent the grill from being removed.
- A pilot tone indicator is visible through the front grill of each unit. When a pilot tone is present on the line, the LED will illuminate showing that the connection with the amplifier is intact. This feature has been designed to work with the AXYS® Industry Amp series of 100V line amplifiers. However, it can also be used with 3rd party amplifiers which have the specified pilot tone properties.

* Common to both Models V90 and H90.

Predicting the Performance

Duran Audio's Digital Directivity Analysis (DDA) software can be used to predict the performance of both the Model V90 and H90. DDA allows the user to visualise and predict the direct SPL distribution from the array. For more detailed analysis users can transfer the directivity calculated in DDA to CATT-Acoustic®, ODEON®or EASE®.

More information about AXYS® DDA can be found on our website at www.duran-audio.com



AXYS® Intellivox ADC-V90 Mark II Directivity Plot, showing 1kHz Direct SPL

Short Form Specifications*

		Intellivox ADC-V90 Mark II	Intellivox ADC-H90 Mark II
Acoustical			
Frequency Range		220 - 10k Hz (+/-3 dB) 120 - 12k Hz (-10 dB)	260 - 11k Hz (+/-3dB) 150 - 14k Hz (-10 dB)
Sensitivity (1 W / 4 m)		80 dBSPL	79 dBSPL
Maximum SPL (100 W / 4 m)		100 dBSPL	99 dBSPL
Coverage	- Horizontal - Vertical - Steering Angle - Typical Throw	130° (-6 dB) 30° (-6 dB) Vertical -4° 15 m	40° (-6 dB) 130° (-6 dB) Horizontal 0° 15 m
Electrical			
Rated Impedance	- 100 W tap - 50 W tap - 25 W tap	100 Ω 200 Ω 400 Ω	100 Ω 200 Ω 400 Ω
Rated Noise Power		100 Wrms(100 W tap)	100 Wrms(100 W tap)
Rated Noise Voltage		100 Vrms	100 Vrms
Control switches	- Tap setting - Highpass filter - Correction EQ	100 W / 50 W / 25 W HPF active / Flat EQ active / Flat	100 W / 50 W / 25 W HPF active / Flat EQ active / Flat
Pilot tone detection	- Indicator - Frequency range - Minimum level	Green LED on front 20k - 23k Hz 6 Vrms	Green LED on front 20k - 23k Hz 6 Vrms
Suggested amplifiers		AXYS® 100 V IndustryAmp series	AXYS®100 V IndustryAmp series
Mechanical			
Material		Steel, powder coated	Steel, powder coated
Mounting points		4 x M5 bottom and 4 x M5 top	4 x M5 left and 4 x M5 right
Dimensions (H x W x D)		865 x 134 x 92 mm (34.1" x 5.3" x 3.6"	134 x 865 x 92 mm (5.3" x 34.1" x 3.6")
Standard Colours**	- Enclosure and grill - Speaker baffle	RAL 9007 (grey) or RAL 9010 (white) RAL 9011 (black)	RAL 9007 (grey) or RAL 9010 (white) RAL 9011 (black)
Weight		10 kg (22 lbs)	10 kg (22 lbs)

* Refer to the individual product data sheets for conditions and detailed specifications.
** Optional custom colour matching service available

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AXYS TUNNEL by HARMAN

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New materials and design refinements are continually being introduced to our products. Duran Audio BV reserves the right to make these changes without prior notification. As a logical consequence, present AXYS® systems may differ in some respect from those presented in this brochure, but will always meet or exceed published specifications, unless stated otherwise.