

The AXYS® Intellivox ADC range

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



Shaping the future of sound reinforcement



AXYS®

Analogue Directivity Control (ADC)

The AXYS® Intellivox ADC 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.

Duran Audio's revolutionary Digital Directivity Control (DDC) algorithm 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.

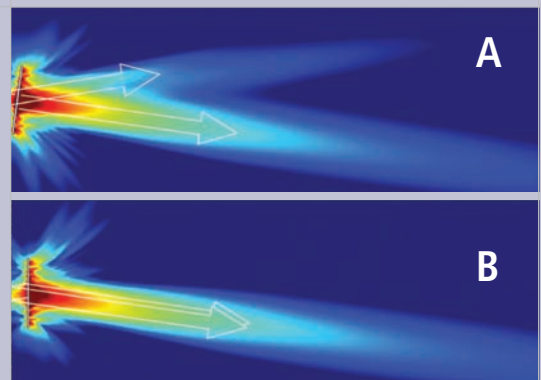
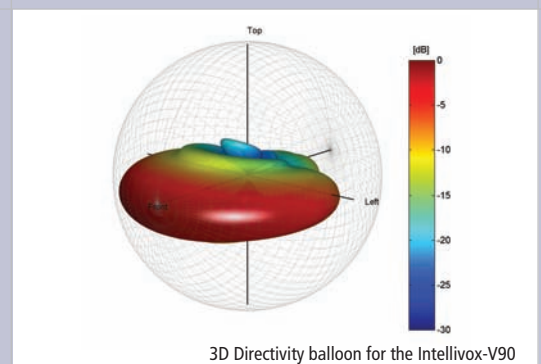
AXYS® Intellivox-V90



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

To improve intelligibility, the lx-V90, utilises a preset vertical opening angle with a -4° 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 lx-V90 becomes architecturally unobtrusive.



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

AXYS® Intellivox-H90



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

The AXYS® Intellivox-H90 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-V90 is designed to provide even coverage up to a distance of 10-15 m. It has a fixed horizontal dispersion of 130° and a vertical opening angle of 30°, which is steered downwards 4° from the acoustic centre.

Please Note:

Unlike other Intellivox products, the Intellivox-V90's acoustic centre is located at the centre of the highest driver in the array.

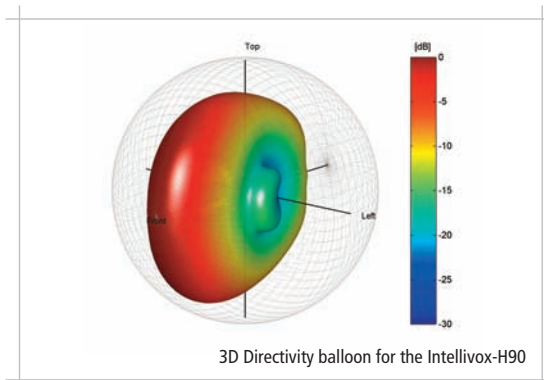
The following table can be used as a guide to correct mounting height*:

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



Installation and Safety Features*

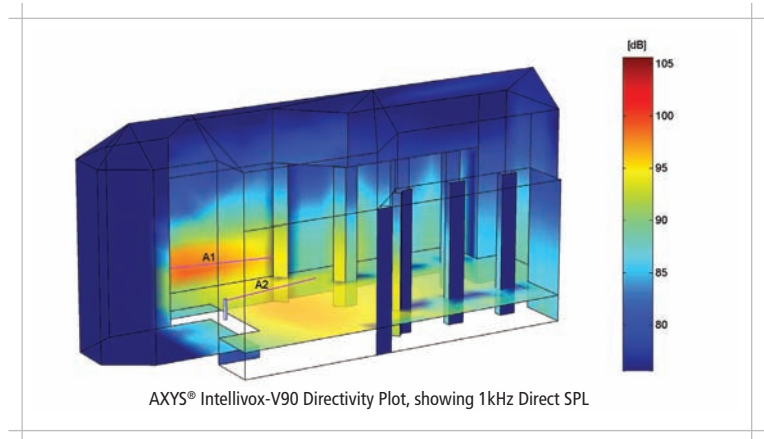
- Cable entry on these loudspeakers is via a recessed PG13.5 gland on the rear of the unit. Once the cable has been passed through the gland the connections and tap selector can be accessed from the front of the unit, making them easy to connect and configure whilst in position.
- A ceramic connector 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 lvx-V90 and lvx-H90.

Predicting the Performance

Duran Audio's Digital Directivity Analysis (DDA) software can be used to predict the performance of both the Ix-V90 and Ix-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® or EASE®.

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



Short Form Specifications

	Intellivox-V90	Intellivox-H90
Acoustical		
Frequency Range	200 - 5k Hz (+/-3 dB) 150 - 12k Hz (-10 dB)	200 - 5k Hz (+/-3dB) 150 - 12k Hz (-10 dB)
Maximum SPL* - Continuous - Peak	80 dB _{SPL} (100 W _{rms} , A-weighted at 30 m) 83 dB _{SPL} (100 W _{rms} , A-weighted at 30 m)	80 dB _{SPL} (100 W _{rms} , A-weighted at 30 m) 83 dB _{SPL} (100 W _{rms} , A-weighted at 30 m)
Coverage - Horizontal - Vertical - Steering Angle - Typical Throw	130° (-6 dB) 30° (-6 dB) Vertical -4° 15 m	30° (-6 dB) 130° (-6 dB) Horizontal 0° 15 m
Electrical		
Input - Nominal Input Power	100 W / 50 W / 25 W @ 100 V 50 W / 25 W / 12.5 W @ 70 V	100 W / 50 W / 25 W @ 100 V 50 W / 25 W / 12.5 W @ 70 V
Input Impedance	100 Ω @ 100 W tap 200 Ω @ 50 W tap 400 Ω @ 25 W tap	100 Ω @ 100 W tap 200 Ω @ 50 W tap 400 Ω @ 25 W tap
Internal Correction EQ	Jumper Enabled	Jumper Enabled
Frequency Pilot Tone Detection	19k - 25k Hz	19k - 25k Hz
Threshold Pilot Tone Detection	5 V _{rms} (100 W tap)	5 V _{rms} (100 W tap)
Suggested Amplifiers	AXYS® 100 V Industry Amp series	AXYS® 100 V Industry Amp 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" x 5.3" x 3.6")	134 x 865 x 92 mm (5.3" x 34" x 3.6")
Standard Colours** - Enclosure and grill - Speaker baffle	RAL 9007 (grey) RAL 9011 (black)	RAL 9007 (grey) RAL 9011 (black)
Weight	13 kg (29 lbs)	13 kg (29 lbs)

* Levels are valid for pink noise (100 to 20k Hz bandwidth) with a crest factor of 3 dB.
Device is tapped at 100 W. 'Continuous' is the RMS level, 'Peak' is the absolute peak level.
** Optional custom colour matching service available



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