

The AXYS® Intellivox range

Digitally steerable, self powered, loudspeaker arrays.



Intellivox
DDS
Intellivox
DDS

Shaping the future of sound reinforcement

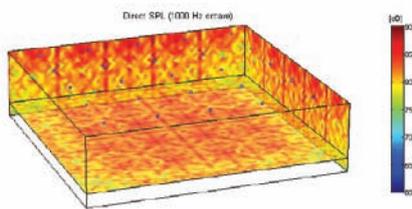


AXYS®

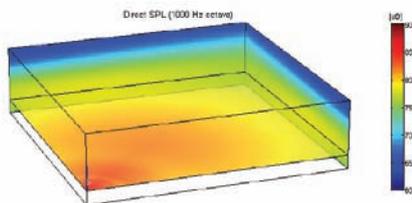
Identifying the problem

The AXYS Intellivox range is the perfect solution to one of the most difficult problems facing modern sound system designers - designing an intelligible sound reinforcement/public address system for a large reverberant space.

Direct SPL plot for traditional ceiling speakers



Direct SPL plot for single AXYS® Intellivox



The modern sound system designer has to choose products that will fit a large range of criteria. The system must:

- Sound good
- Look good
- Be Safe and Reliable
- Be easy to install and maintain

All of these factors contribute to how the success of the installation will be judged.

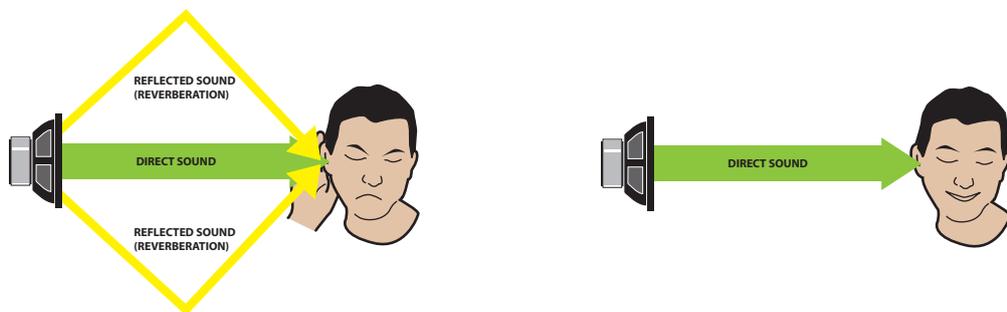
So what happens when, as a designer, you're faced with a highly reverberant space?

The biggest challenge is designing a system which will have a high direct to reverberant sound ratio. In other words, we need to maximise the sound that arrives directly to the listeners ear, whilst at the same time reducing the sound energy that bounces off walls, ceilings and other acoustically reflective surfaces.

The solution seems simple. However, in practice it is difficult to achieve this with conventional loudspeakers.

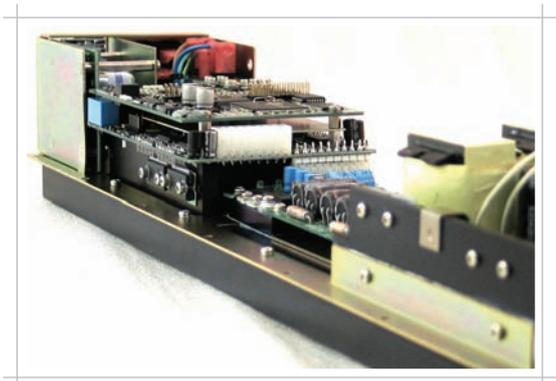
This is why Duran Audio developed the AXYS® Intellivox range.

Intellivox products use Duran Audio's highly advanced Digital Directivity Technologies - Digital Directivity Control (DDC) and Digital Directivity Synthesis (DDS), which allow you to control the vertical directivity pattern of Intellivox products and aim the sound where you want it - At the listener.



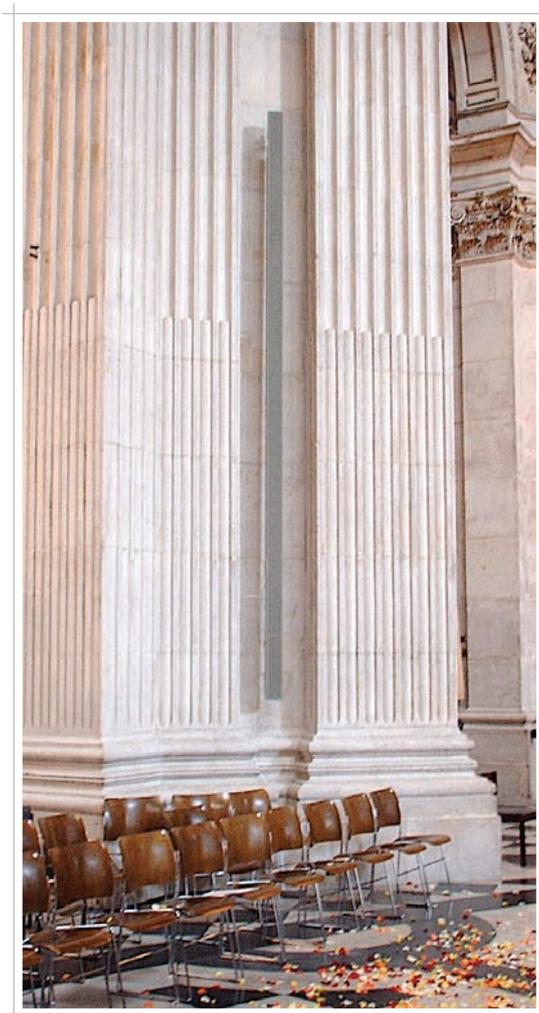
The problems associated with a highly reverberant space can be improved considerably, by aiming the sound at the listener and away from acoustically reflective surfaces

To achieve such accurate directivity control from a loudspeaker array, the Intellivox has an integrated electronics module which combines powerful Digital Signal Processing with multi-channel class D amplifiers.



This electronics module comes network ready and can be controlled from the AXYS® WinControl software, which is used to setup and monitor Intellivox installations.

Also available is AXYS® DDA (Digital Directivity Analysis) which is a dedicated software tool that allows sound system designers to simulate and optimise the directional behaviour of the AXYS products.



An Intellivox-D5500 installed at St Pauls Cathedral, London, UK

What is speech intelligibility and why is it important?

The purpose of an announcement through any public address system is to communicate a message. An email with half of the words missing would not be an acceptable form of communication, so why should you accept a similar effect from a poor public address system? You shouldn't, an unintelligible public address system is unsatisfactory!

If you can't understand it why not just turn the volume up?

Imagine if someone ran up to you in the street and shouted information to your face! Wouldn't it be more comfortable if that person approached you calmly and addressed you in a clear well spoken voice at a more moderate volume?

A loud public address system isn't necessarily an intelligible one, and an intelligible system isn't necessarily a loud one.

With the arrival of digital audio we are all now used to high quality sound at home and on the move. This has set a new benchmark for quality. People now expect the same standard from a PA system without fully appreciating all the problems that exist in large spaces. The science of sound 'acoustics', is not a simple subject, the larger the room/space and the larger the system, the more difficult it becomes to maintain the quality.

Why choose AXYS® Intellivox?

A great sounding system

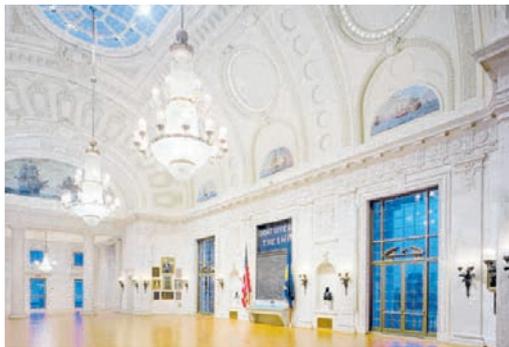
Quality Sound Reproduction – Delivering the ultimate intelligibility.

- Highly Intelligible speech reinforcement
- Natural sound reproduction
- High Direct to Reverberant ratio
- Free from distortion
- Even SPL coverage. (The volume from a properly set up Intellivox unit will be the same, whether the listener is at a distance or close up.)

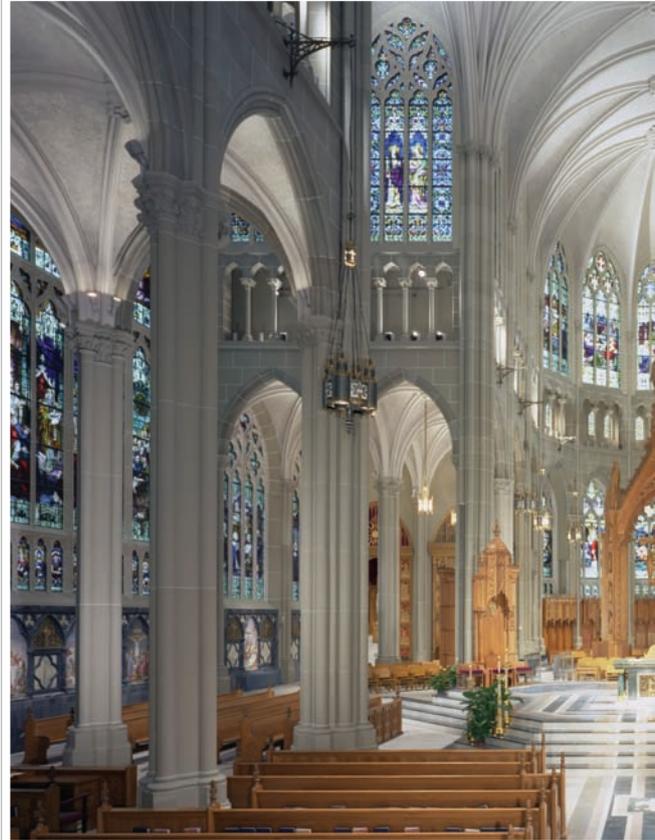
(Digital Directivity Technologies ensure a high ratio of direct sound to reverberant sound which is critical to the intelligibility of any sound system)



Hill 16, Croke Park, Eire



US Naval Academy, USA



A great looking system

Architectural Integration – For systems that look great and sound great

- No need for mechanical aiming, units can be mounted vertically.
- Units can be recessed into surfaces
- Colour matching service available
- Units have a slim and unobtrusive design
- Can be integrated into buildings of all ages and styles



Covington Cathedral, USA

A safe and reliable system

Emergency Sound Systems – AXYS Intellivox products are designed for use in emergency sound systems.

- Designed to provide reliable operation
- In some cases, Intellivox products are the only way of achieving the required levels of speech intelligibility in a large reverberant space.
- All elements of Intellivox products are constantly monitored by the on board RISC processor.
- Faults can be reported via the built in failure relay or via the RS-485 network.
- Using 'WinControl service version' full fault logging of a system can be provided.

An easy to install and maintain system

Installation & Maintenance – Easy to install and maintain

- Fewer installation/maintenance points than conventional distributed systems
- Units can be configured from a single control point via an RS-485 network
- A wide range of mounting and cable entry options
- All parts & connections are accessible from the front as well as the rear of the unit making it possible to service the unit in situ
- Most units can be ordered with the electronics module at the top or bottom of the enclosure, allowing additional architectural flexibility



Brussels Airport, Belgium

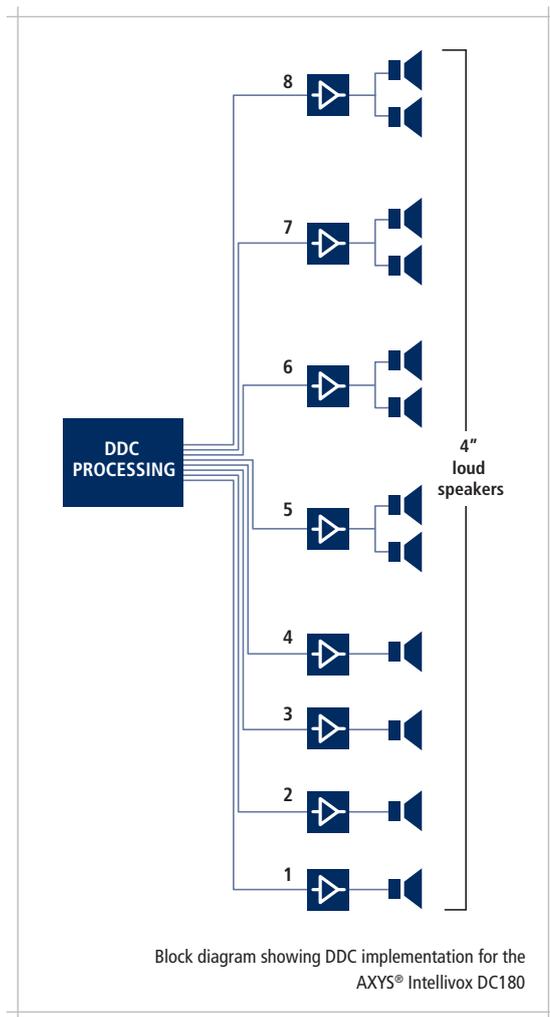


Paddington Station, UK

Intellivox DDC2.0 (Digital Directivity Control)

DDC stands for Digital Directivity Control, the 2.0 represents that this is the second generation of Intellivox DDC products from Duran Audio. DDC is a multi-channel loudspeaker array technology where the single loudspeaker elements are positioned in space according to a patented algorithm.

Each loudspeaker channel has its own dedicated audio path through the DSP and amplification which means that each loudspeaker, or group of loudspeakers, can have their own unique set of filters.



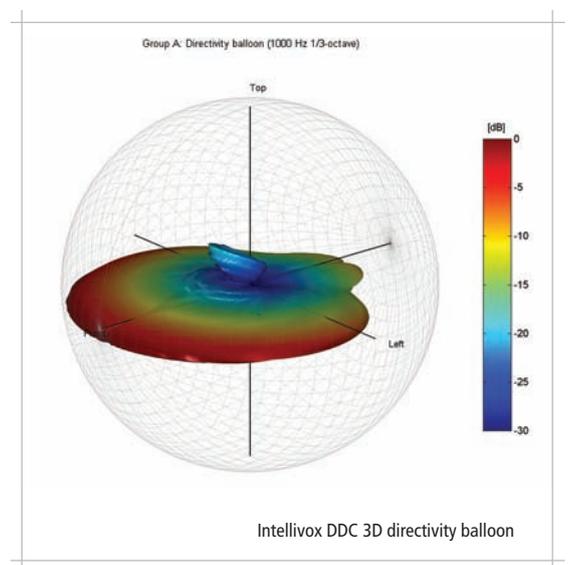
This technology enables users to electronically manipulate the vertical dispersion of an Intellivox array.

The Intellivox DDC2.0 range has the same beam steering parameters as its predecessors but with enhanced functionality and audio quality thanks to Duran Audio's new C6x DSP board.

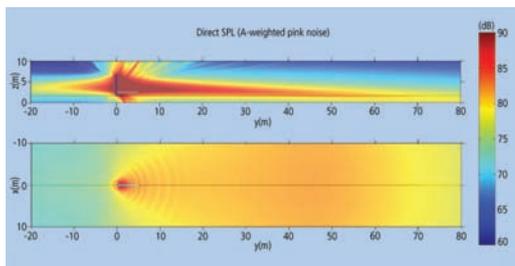
What does DDC2.0 have to offer?

The beam steering capability of the Intellivox means that you can maintain even coverage across the listening plane whilst steering the beam away from surfaces that may cause unwanted reflections.

This results in a very high direct to reverberant sound ratio which is essential for achieving acceptable levels of speech intelligibility within reverberant spaces. One way to visualise the dispersion is to imagine a pancake of sound coming from the array, by adjusting the elevation angle we can aim the pancake up or down from the acoustic centre. This technique also means that, unlike mechanically aimed passive arrays, the back radiated energy is also controlled. This control means that electronically aimed Intellivox arrays add far less energy to the reverberant field compared to conventional systems.



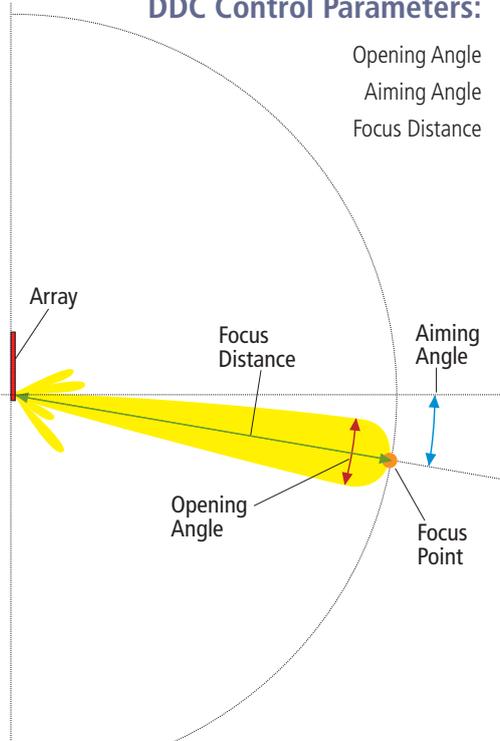
However, this is not the only benefit of the technology. DDC can also offer even SPL distribution over large distances. A well designed DDC installation can offer as little variation as 1 dB across the listening area. Taking an Intellivox DC500 as an example one can measure the SPL at 5 m and then measure again at 50 m and see as little as 1 dB variation.



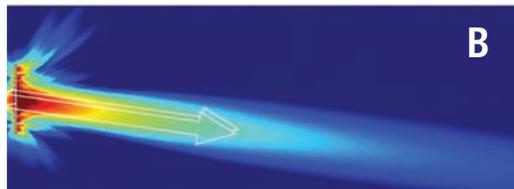
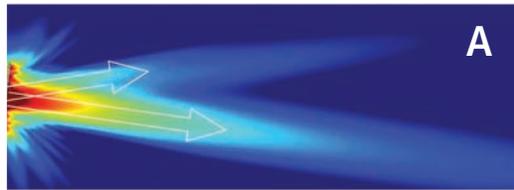
And for outdoor applications DDC technology can also offer solutions to problems associated with environmental noise pollution.

DDC Control Parameters:

Opening Angle
Aiming Angle
Focus Distance



In addition to the main lobe, DDC 2.0 also allows users to generate a second lobe from the array.



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

The Intellivox is a digitally controlled loudspeaker which focuses the sound where you want it, at the listener.

In visual terms it can be thought as a spot light as opposed to a flood light. Intellivox loudspeakers have a very narrow vertical coverage angle and a very wide horizontal coverage angle. In large reverberant spaces this type of loudspeaker has many benefits:

- The sound is digitally aimed at the listener
- There is less sound reflected from walls and ceilings therefore you hear less reflections.
- It is highly efficient at distributing the available power from the loudspeaker
- The SPL of the loudspeaker is approximately the same if you are close or if you are 60 m away

The result is a very natural, clear and direct sound, which is essential for achieving the required levels of speech intelligibility and getting your announcement understood.

Intellivox

Intellivox DDS (Digital Directivity Synthesis)

What if you could stand in a room, imagine your desired system performance and make it possible at the touch of a button.....

The electronic aiming available with DDC products, which can be thought of as aiming and focusing a light, allows users to aim the sound onto the audience area; from the acoustic centre of the array.

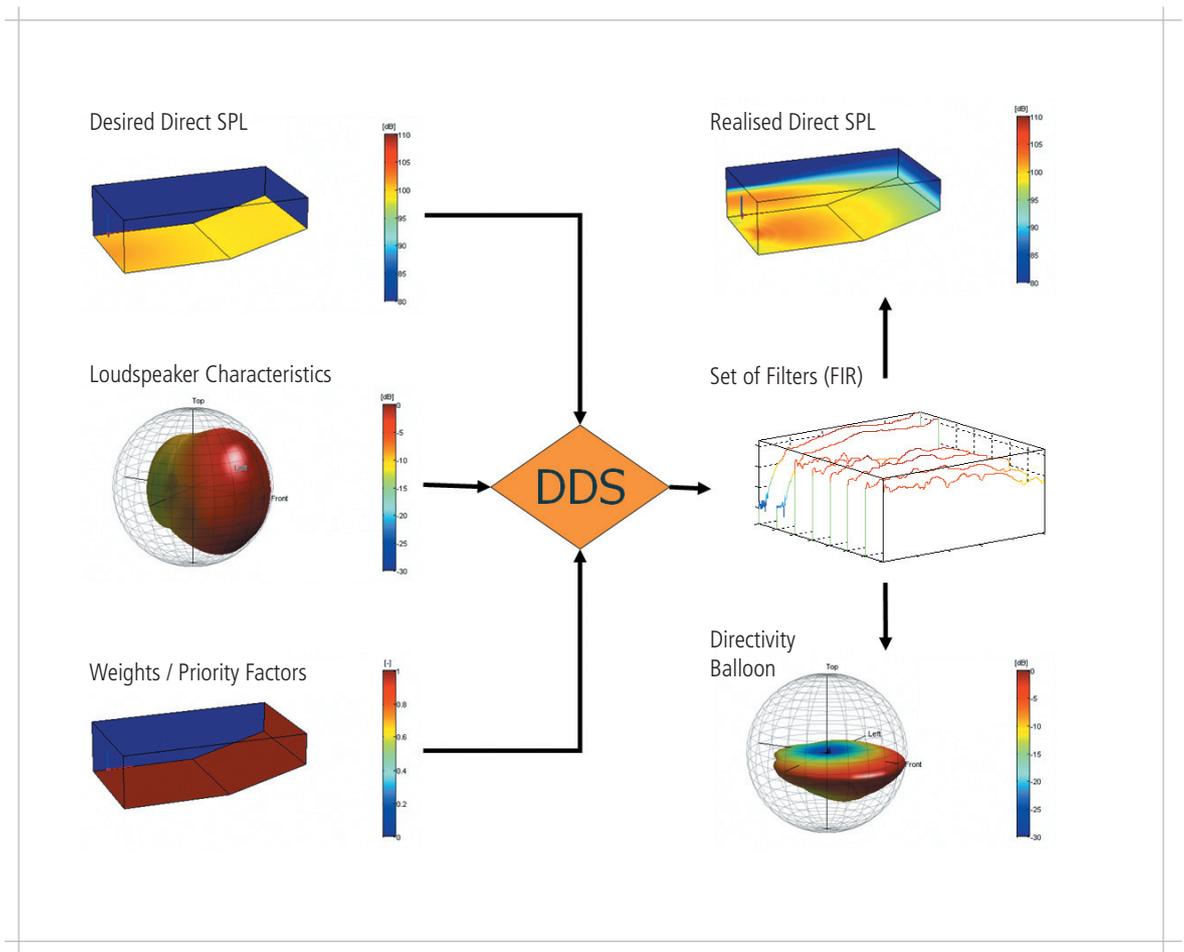
This solution works well when you have flat audience planes. However, what happens if you have an auditorium with raked seating areas?

Digital Directivity Synthesis (DDS) offers the solution!

DDS gives users the power to synthesize any desired 3D radiation pattern from a loudspeaker array (within the physical constraints of a pre-defined array e.g. transducer distance, array length etc.) to meet the specific needs of the venue.

DDS is based on a unique, specially adapted “constrained weighted least-squares” optimisation algorithm.

Starting from a desired direct SPL distribution in a hall or more complicated room geometry, the optimum output filter for each array channel is calculated. In other words, the desired “acoustic illumination” of the hall or space is “mapped back” to the array, instead of mapping the array response to the hall.



DDS facilitates the best possible coverage with the maximum direct to reverberant ratio for any given situation. DDS not only enables the user to define what area to cover but also to define areas that should be avoided, resulting in the best possible suppression of unwanted reflections. This is invaluable in controlling attributes such as stage-feedback or suppressing rear wall reflections. The powerful DDS technology provides the user unrestricted electro-acoustical system control.

Using Duran Audios DDA (Digital Directivity Analysis) software the user can define the array position and the audience area and allow the DDS algorithm to produce the best possible fit. The result is a complex dispersion pattern that "fits" the audience area.

DDC technology makes it possible to achieve even SPL coverage and high direct to reverberant ratio in an environment where you have a flat audience area.

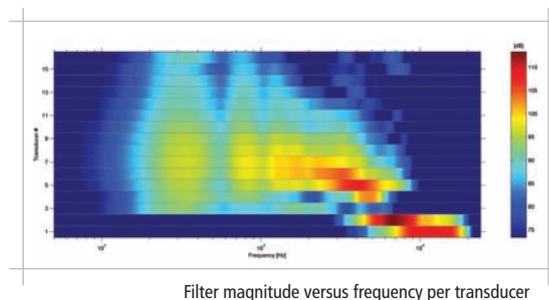
DDS technology makes it possible to produce the same outstanding results in the most complex of spaces.

Benefits of the DDS concept include:

- Flexible array set-up
- Pre-defined direct SPL distribution over (complex-shaped) audience planes while minimum energy projection at hall boundaries
- Constant spectral balance for all listening positions
- Optimum direct-to-reverberant energy ratio
- Both far field and near field control

The AXYS® Intellivox DSX range

Boasting the addition of 1" horn loaded dome tweeters and an extended frequency range of 130 - 18k Hz, The AXYS® Intellivox DSX range has been introduced for applications that require improved music clarity as well as speech intelligibility.



Intellivox

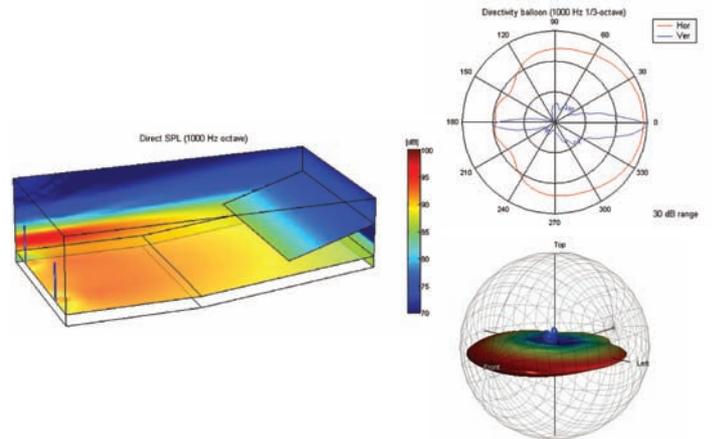
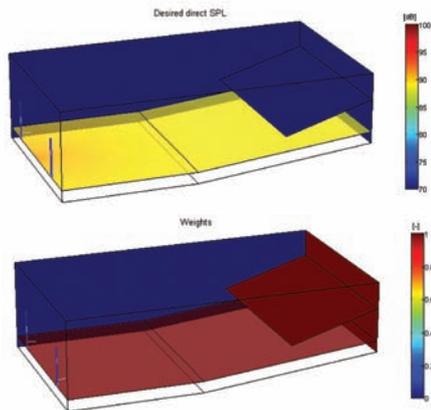
Intellivox DDS examples

Data entered into DDA

Results from DDA

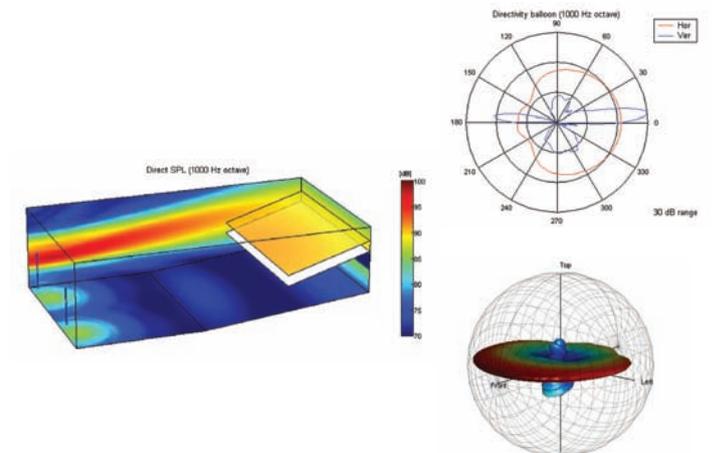
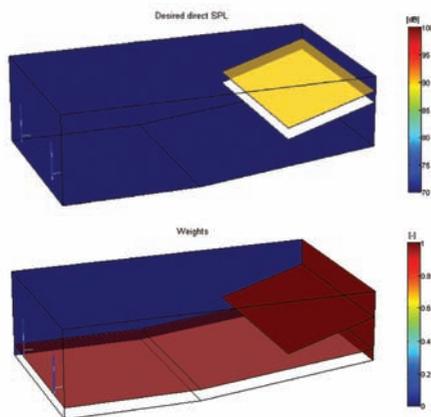
Floor Only - DDS settings

Floor Only - DDS optimisation results



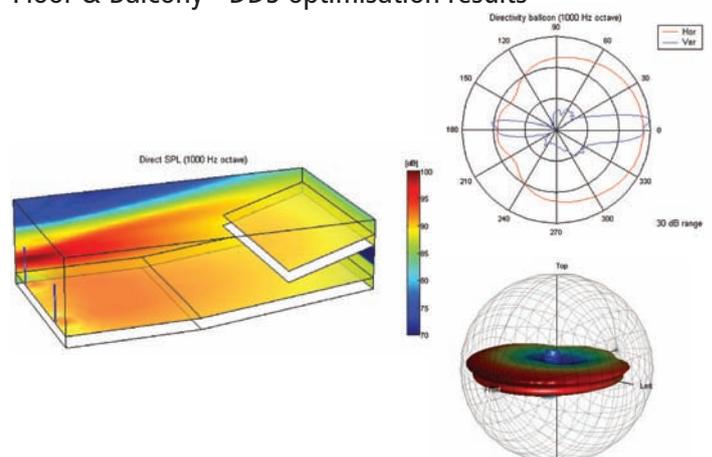
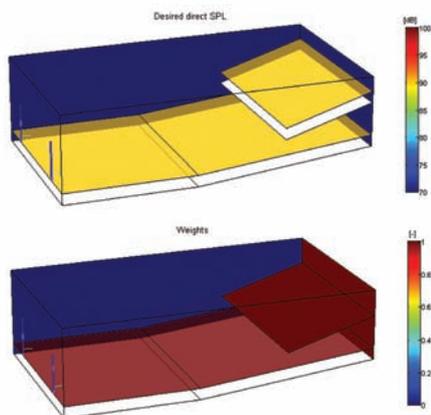
Balcony Only - DDS settings

Balcony Only - DDS optimisation results



Floor & Balcony - DDS settings

Floor & Balcony - DDS optimisation results



Examples showing how the same physical array configuration can be adapted to different situations using DDS.

AXYS® DDA

DDA (Digital Directivity Analysis) is a dedicated software tool that allows sound system designers to simulate and optimise the directional behaviour of AXYS® products.

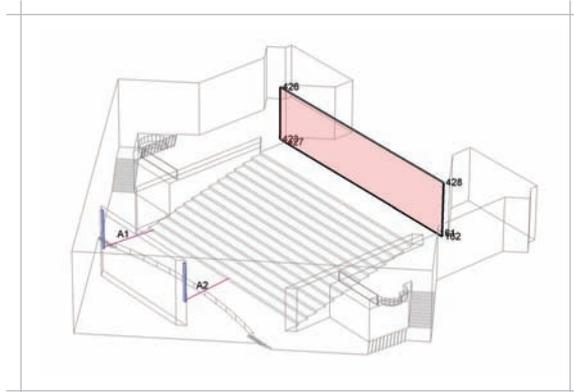
It is a 32 bit Windows-compatible program that integrates geometric modelling, direct sound prediction, statistical room acoustic prediction, graphic visualisation, radiation pattern optimisation and generation of output filter files for uploading to the DSP-units using the WinControl software.

Models can be imported into DDA from both CATT Acoustic® and EASE® acoustic modelling software packages. Third party plug-ins are also available to import Google SketchUp® drawings into DDA.

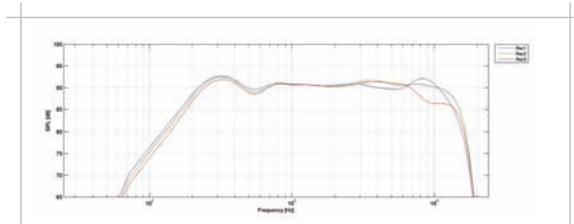
DDA allows you to predict:

- Direct SPL
- Polar Responses
- Direct to Reverberant Ratio*
- Speech Intelligibility Index*
- System Headroom
- Direct Sound Frequency Response

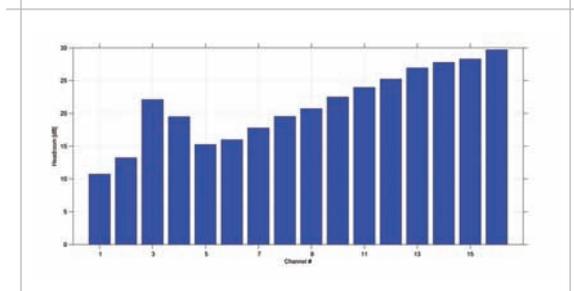
* calculated statistically



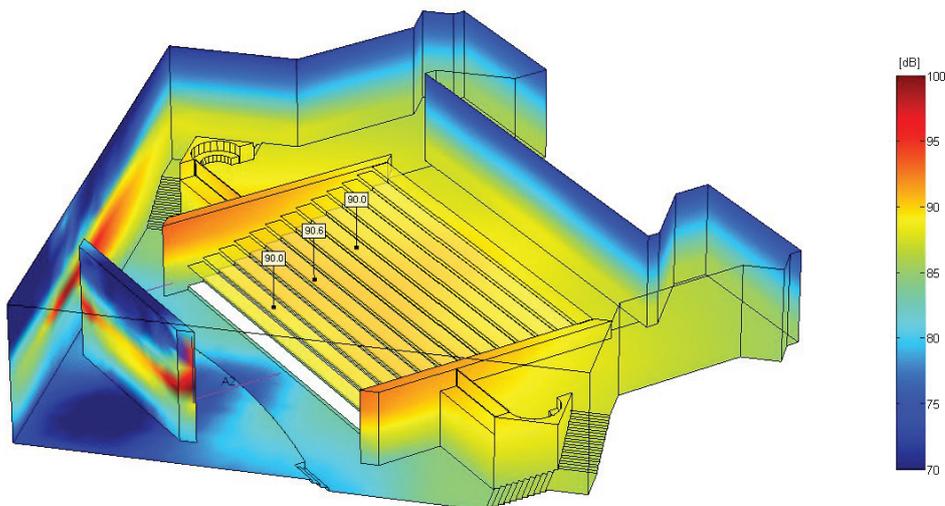
Plane Properties



Direct Sound Frequency Response



System Headroom



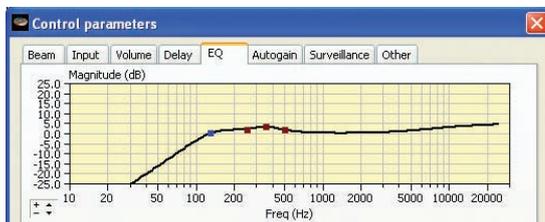
Direct SPL

WinControl

Intellivox products are configured using our proprietary WinControl software, communication between the PC running WinControl and the Intellivox is via a RS-485 network. WinControl allows users to manipulate the critical digital directivity parameters that define the vertical dispersion of the array.

Further control is offered to the user, through functions which include:

- Volume control
- Eight band parametric EQ
- Delay, up to 20 seconds
- AVC functions
- Surveillance related parameters



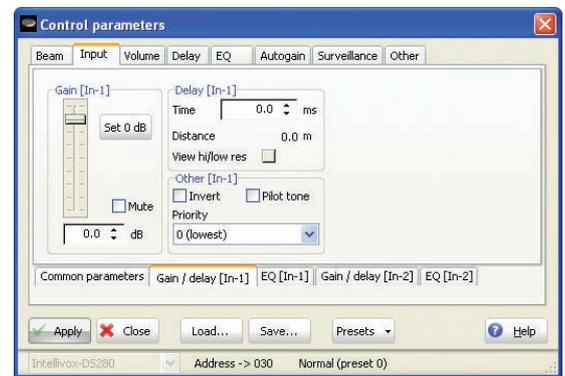
Intelligibility and the law

Public address installations are quite often used as voice alarm systems, which form part of a buildings fire alarm/life safety setup. In these circumstances they are subject to regulations and minimum standards which not only dictate how they are installed and monitored but also set minimum standards for intelligibility. For this type of safety critical system the most important factor is the Intelligibility. The quicker people understand the instructions being given to them then the quicker they can act upon them!

The safest system is a system where the announcement is understood the first time it is made.

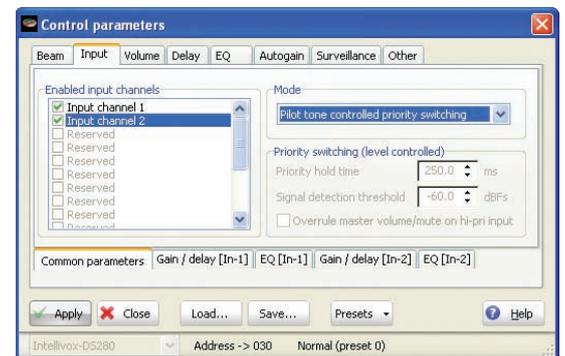
In addition to this the new Intellivox DDC 2.0 and DDS products are fitted with dual line level inputs; each input has independent:

- Level Control
- Delay, up to 10 seconds
- Four band parametric EQ
- Pilot tone detection



The inputs can be configured to work in one of three ways:

- Inputs can be summed
- Level controlled priority switching
- Pilot tone controlled priority switching



Once the units have been configured, the PC can be removed from the network as the settings are stored in non volatile memory.



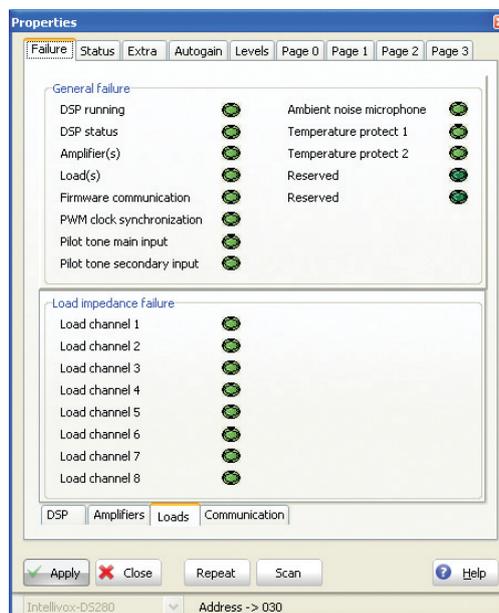
Safety Features

Apart from the DSP, Intellivox products are equipped with a RISC processor that takes care of all the surveillance routines, which are performed every 1/20 second. In addition to this the RISC is monitored by a watchdog, which in the event of a failure will reset the RISC.

Surveillance functions include, but are not limited to:

- Pilot tone detection
- Amplifier load surveillance
- Ambient microphone surveillance
- Amplifier surveillance
- Temperature surveillance
- DSP functionality

All relevant status parameters and temperatures can be monitored via the RS-485 network. Failures can be reported by the on board failure relay or via one of the many features offered by WinControl.



Choosing your Intellivox Product

Which technology is best for your installation?

Well there are some simple rules of thumb:

DDC Technology - Intellivox DC products are best suited to flat audience planes where the acoustic centre of the array can be located between 0.5 m and 0.75 m above the audience plane.

DDS Technology - Intellivox DS and DSX products are best suited to complex audience planes (theatres, concert halls, stadia, lecture theatres) or to applications where the Intellivox is forced to be mounted with the acoustic centre located more than 0.75 m above the audience place.

Which array length is best for your installation?

As a rule of thumb the following table can be used.

<i>Intellivox</i> Type	Length*	Typical throw
DC/DS 115	1.15 m	15 m
DC/DS/DSX 180	1.80 m	25 m
DC/DS/DSX 280	2.80 m	35 m
DC/DS/DSX 430	4.30 m	50 m
DC/DS/DSX 500	5.00 m	70 m

*Lengths are approximate

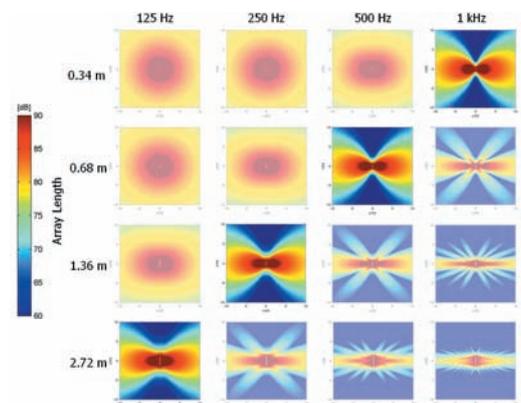
For applications where high SPL levels are required or for full range sound reinforcement then the Intellivox '08 series can be used

<i>Intellivox</i> Type	Length*	Typical throw
DC/DS 808	1.30 m	25 m
DC/DS 1608	3.80 m	50 m

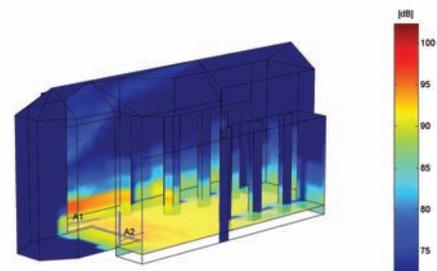
*Lengths are approximate

Size is important!

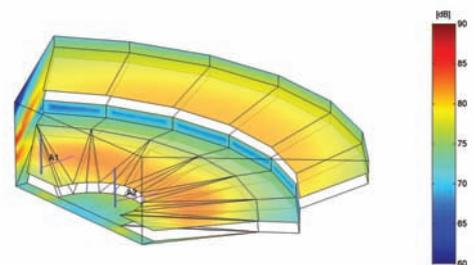
The directivity control at the lower frequencies is dependent upon the array length (you need a long array to control the long wavelengths) so in spaces where the reverberation times are very high it may be desirable to use a DS500, for example, to cover a 50 m area as it would allow you to achieve a higher ratio of direct sound to reverberant sound and therefore a higher level of speech intelligibility.



Longer arrays = better directivity control

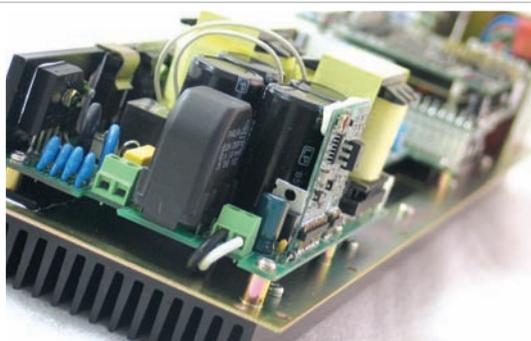
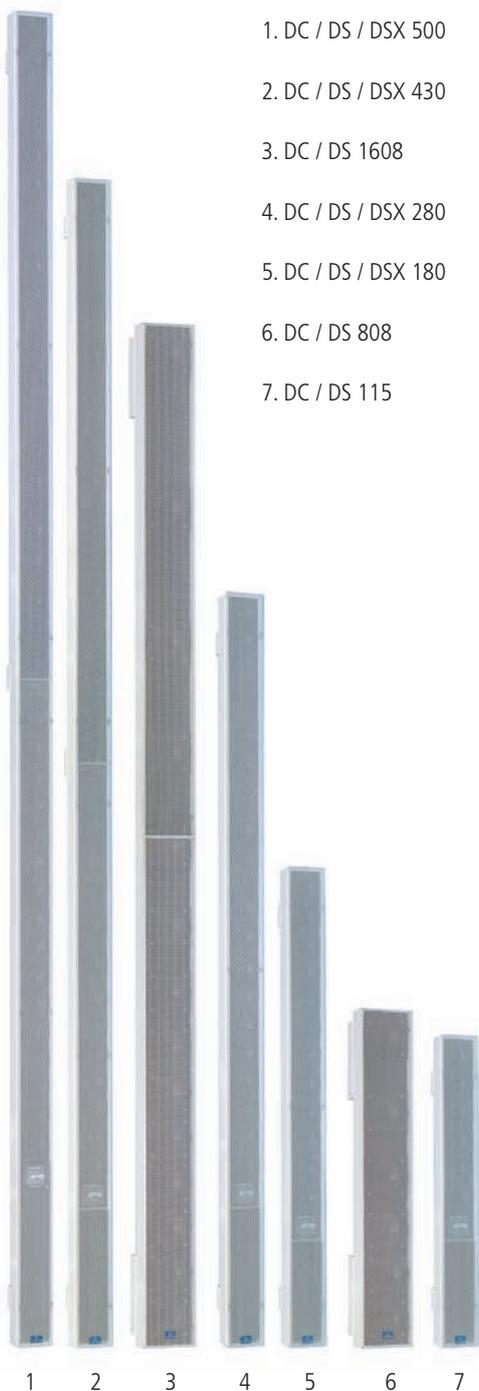


Example DDC application

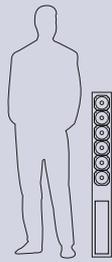
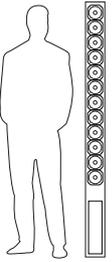
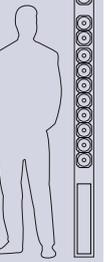
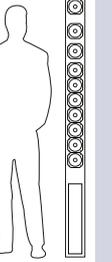
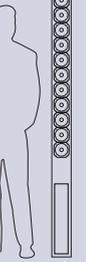
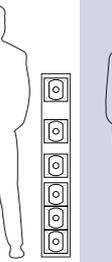
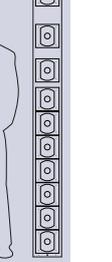


Example DDS application

The AXYS® Intellivox family



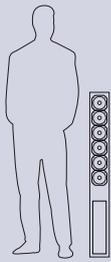
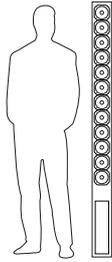
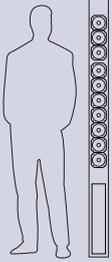
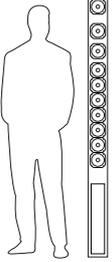
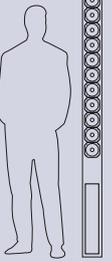
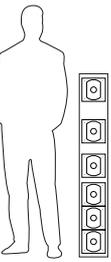
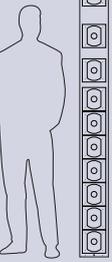
The AXYS® Intellivox DC family (DC Technology)

	Ivx-DC115	Ivx-DC180	Ivx-DC280	Ivx-DC430	Ivx-DC500	Ivx-DC808*	Ivx-DC1608*
Frequency range (+/-3 dB)	130 - 20k Hz	130 - 10k Hz	130 - 10k Hz	130 - 10k Hz	130 - 10k Hz	130 - 18k Hz	130 - 18k Hz
Max SPL (A-weighted at 30 m) - Continuous - Peak	85 dB _{SPL} 88 dB _{SPL}	90 dB _{SPL} 93 dB _{SPL}	92 dB _{SPL} 95 dB _{SPL}	92 dB _{SPL} 95 dB _{SPL}	97 dB _{SPL} 100 dB _{SPL}	95 dB _{SPL} 105 dB _{SPL}	98 dB _{SPL} 108 dB _{SPL}
Coverage - Horizontal (fixed) - Vertical (adjustable) - Opening angle - Aiming angle - Focus distance - Typical Throw	130° 15° to 40° -16° to 16° 2 m to 40 m 15 m	130° 8° to 20° -16° to 16° 5 m to 100 m 25 m	130° 6° to 14° -16° to 16° 5 m to 100 m 35 m	130° 6° to 14° -16° to 16° 5 m to 100 m 50 m	130° 4° to 10° -16° to 16° 5 m to 100 m 70 m	110° 8° to 20° -20° to 20° 5 m to 100 m 25 m	110° 6° to 14° -20° to 20° 5 m to 100 m 50 m
Dynamic Range	>100 dB	>100 dB	>100 dB	>100 dB	>100 dB	>100 dB	>100 dB
Audio Inputs - Nominal level - Type (balanced) - Impedance (balanced)	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω			
Power amps - Type - Power (4 Ω)	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}	Class AB* 8 x 100 W _{rms} †	Class AB* 16 x 100 W _{rms} †
Mains Voltage Power Consumption -Idle -Full load	230 or 115 V 58 VA 325 VA	230 or 115 V 58 VA 408 VA	230 or 115 V 58 VA 450 VA	230 or 115 V 84 VA 750 VA	230 or 115 V 84 VA 920 VA	90 to 270 V 95 VA 760 VA	90 to 270 V 135 VA 1600 VA
Temperature range (ambient)	0 to 40 °C	0 to 40 °C	0 to 40 °C	0 to 40 °C			
Transducers	6 x 4" 2 x tweeter	12 x 4" -	16 x 4" -	17 x 4" -	32 x 4" -	6 x 6.5" 2 x Compression Drivers (1")	14 x 6.5" 2 x Compression Drivers (1")
Dimensions - Height - Width - Depth	1149 mm 134 mm 92 mm	1780 mm 134 mm 92 mm	2800 mm 134 mm 92 mm	4350 mm 134 mm 92 mm	4930 mm 134 mm 92 mm	1278 mm 198 mm 156 mm	3738 mm 198 mm 156 mm
Default Colour	RAL 9010	RAL 9010	RAL 9010	RAL 9010	RAL 9010	RAL 9010	RAL 9010
Weight	13 kg	19 kg	25 kg	37 kg	44 kg	37 kg	78 kg
							
	Ivx-DC115	Ivx-DC180	Ivx-DC280	Ivx-DC430	Ivx-DC500	Ivx-DC808*	Ivx-DC1608*

* The Ivx-DC808 and Ivx-DC1608 come with the electronics separated in a 3RU enclosure.

† For 8 Ω load

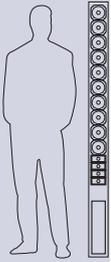
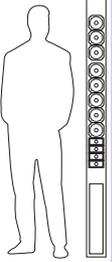
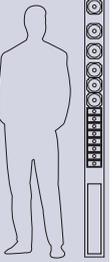
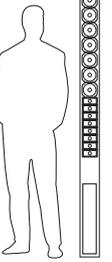
The AXYS® Intellivox DS family (DDS Technology)

	lvx-DS115	lvx-DS180	lvx-DS280	lvx-DS430	lvx-DS500	lvx-DS808*	lvx-DS1608*
Frequency range (+/-3 dB)	130 - 20k Hz	130 - 10k Hz	130 - 18k Hz	130 - 18k Hz			
Max SPL (A-weighted at 30 m) - Continuous - Peak	85 dB _{SPL} 88 dB _{SPL}	90 dB _{SPL} 93 dB _{SPL}	92 dB _{SPL} 95 dB _{SPL}	92 dB _{SPL} 95 dB _{SPL}	97 dB _{SPL} 100 dB _{SPL}	95 dB _{SPL} 105 dB _{SPL}	98 dB _{SPL} 108 dB _{SPL}
Coverage - Horizontal (fixed) - Vertical (adjustable) - Typical Throw	130° Defined by DDS Algorithm 15 m	130° Defined by DDS Algorithm 25 m	130° Defined by DDS Algorithm 35 m	130° Defined by DDS Algorithm 50 m	130° Defined by DDS Algorithm 70 m	110° Defined by DDS Algorithm 25 m	110° Defined by DDS Algorithm 50 m
Dynamic Range	>100 dB	>100 dB	>100 dB				
Audio Inputs - Nominal level - Type (balanced) - Impedance (balanced)	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω				
Power amps - Type - Power (4 Ω)	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}	Class AB* 8 x 100 W _{rms} †	Class AB* 16 x 100 W _{rms} †
Mains Voltage Power Consumption -Idle -Full load	230 or 115 V 58 VA 325 VA	230 or 115 V 58 VA 408 VA	230 or 115 V 58 VA 450 VA	230 or 115 V 84 VA 750 VA	230 or 115 V 84 VA 920 VA	90 to 270 V 95 VA 760 VA	90 to 270 V 135 VA 1600 VA
Temperature range (ambient)	0 to 40 °C	0 to 40 °C	0 to 40 °C				
Transducers	6 x 4" 2 x tweeter	12 x 4" -	16 x 4" -	17 x 4" -	32 x 4" -	6 x 6.5" 2 x Compression Drivers (1")	14 x 6.5" 2 x Compression Drivers (1")
Dimensions - Height - Width - Depth	1149 mm 134 mm 92 mm	1780 mm 134 mm 92 mm	2800 mm 134 mm 92 mm	4350 mm 134 mm 92 mm	4930 mm 134 mm 92 mm	1278 mm 198 mm 156 mm	3738 mm 198 mm 156 mm
Default Colour	RAL 9010	RAL 9010	RAL 9010				
Weight	13 kg	19 kg	25 kg	37 kg	44 kg	37 kg	78 kg
							
	lvx-DS115	lvx-DS180	lvx-DS280	lvx-DS430	lvx-DS500	lvx-DS808*	lvx-DS1608*

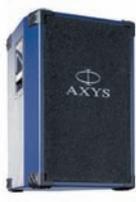
* The lvx-DS808 and lvx-DS1608 come with the electronics separated in a 3RU enclosure.

† For 8 Ω load

The AXYS® Intellivox DSX family (DDS Technology)

	Ivx-DSX180	Ivx-DSX280	Ivx-DSX430	Ivx-DSX500
Frequency range (+/-3 dB)	130 - 18k Hz	130 - 18k Hz	130 - 18k Hz	130 - 18k Hz
Max SPL (A-weighted at 30 m) - Continuous - Peak	89 dB _{SPL} 92 dB _{SPL}	91 dB _{SPL} 94 dB _{SPL}	91 dB _{SPL} 94 dB _{SPL}	96 dB _{SPL} 99 dB _{SPL}
Coverage - Horizontal (fixed) - Vertical (adjustable) - Typical Throw	130° Defined by DDS Algorithm 25 m	130° Defined by DDS Algorithm 35 m	130° Defined by DDS Algorithm 50 m	130° Defined by DDS Algorithm 70 m
Dynamic Range	>100 dB	>100 dB	>100 dB	>100 dB
Audio Inputs - Nominal level - Type (balanced) - Impedance (balanced)	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω	0 dBV (line) transformer 6k8 Ω
Power amps - Type - Power (4 Ω)	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 8 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}	PWM (class D) 16 x 40 W _{rms}
Mains Voltage	230 or 115 V	230 or 115 V	230 or 115 V	230 or 115 V
Power Consumption - Idle - Full load	58 VA 408 VA	58 VA 450 VA	84 VA 750 VA	84 VA 920 VA
Temperature range (ambient)	0 to 40 °C	0 to 40 °C	0 to 40 °C	0 to 40 °C
Transducers	10 x 4" 4 x Tweeter	14 x 4" 4 x Tweeter	13 x 4" 8 x Tweeter	28 x 4" 8 x Tweeter
Dimensions - Height - Width - Depth	1780 mm 134 mm 92 mm	2800 mm 134 mm 92 mm	4350 mm 134 mm 92 mm	4930 mm 134 mm 92 mm
Default Colour	RAL 9010	RAL 9010	RAL 9010	RAL 9010
Weight	19 kg	25 kg	37 kg	44 kg
				
	Ivx-DSX180	Ivx-DSX280	Ivx-DSX430	Ivx-DSX500

Other AXYS® products

<p>AXYS® IntelliDisc-DS90</p>  <p>The world's first fully integrated digitally controlled two dimensional loudspeaker array. Offering horizontal and vertical beam steering for superb speech intelligibility.</p>	<p>AXYS® Intellivox ADC range</p>  <p>Compact loudspeaker arrays with a pre-defined fixed dispersion. Designed for use in 70V / 100V Public Address and Voice Alarm (PA/VA) systems.</p>	<p>AXYS® ABF-260</p>  <p>A high powered, low distortion horn loudspeaker specially developed for PA/VA systems in areas with high noise levels, such as road tunnels.</p>
<p>AXYS® Target System</p>  <p>A fully scalable, front of house system which Incorporates the AXYS® DDS technology. High SPL, even coverage plus directivity control what more do you need?</p>	<p>AXYS® Arena Range</p>  <p>A touring system which is remarkably small considering it's with enormous SPL capabilities. The ultimate choice for any large venue and perfect for anything from Classical to Rock.</p>	<p>AXYS® Scope System</p>  <p>The modest dimensions of the Scope self powered system, means it can be used unobtrusively as a stand-alone system with or without a subwoofer.</p>
<p>AXYS® Source System</p>  <p>A traditional style, front of house system with a difference. Each unit is equipped with dedicated amplifiers and control electronics, allowing quick and easy installation and connection.</p>	<p>AXYS® Flex Range</p>  <p>A range of portable, self powered loudspeakers and monitors, the flex range provides a solution for many applications from conferences and playback to theatre and live music.</p>	<p>AXYS® IndustryAmp</p>  <p>Multi channel power amplifiers for use in distributed 70V/100V professional audio installations. The PB-800 has eight separate power amplifiers and a 2-in, 8-out digital signal processor unit.</p>

AXYS® Intellivox installations can now be found all over the world in a variety of applications including transport hubs, places of worship, parliaments, theatres, conference facilities, atriums and museums.

As well as offering maximum intelligibility through digital directivity technologies, Intellivox speakers are often more sensitive to the architecture of the space than conventional systems. When the architect, electro-acoustic consultant and installer work closely together the ultimate intelligibility and stunning visuals can be achieved simultaneously. In more innovative designs Intellivox units have been recessed into walls, placed inside custom built enclosures, housed within customer information displays, incorporated into theatrical scenery and in some cases have been hand painted by a scenic designer to perfectly match the surface on which they are being mounted. The Intellivox can be ordered in any colour and can even be coloured matched to a paint sample.



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