

DATASHEET

PAN 2-LINE PB 15-P2L

COMPACT, ACTIVE, DIGITALLY STEERABLE LINE ARRAY WITH BEAM STEERING AND PAN 2-LINE TECHNOLOGY



Illustration in colour option, see mechanical properties

EQUIPMENT / OPTIONS



See last page for explanation of the symbols.

APPLICATIONS

Churches, mosques, museums, heritage sites, train stations, airports, sports facilities, legislative buildings, conference rooms, lecture halls, shopping centres, A/V presentation rooms, structured cabling

The **PB 15-P2L** is a compact, active, digitally steerable line array with beam steering and Pan 2-Line technology in an attractive design that has been developed for high-quality speech transmissions.

The **PB 15-P2L** uses the Pan Audio DSP and Pan 2-Line technology. This technology permits to use two-wire cables such as loudspeaker cables or cables of an existing 100 V installation for the transmission of audio and control data and the power supply. A Central Control Unit (CCU) is required for the signal and voltage feed.

The loudspeaker is operated via user-friendly Windows software. The integrated Pan Net interface of the CCU permits to connect the PB 15-P2L and other P2L devices to a computer. Digital signal processing from the Pan Audio DSP can be used to enter and control the beam steering, the sound and the delay times in real time.

The **PB 15-P2L** can generate one highly directed sound beams which can be modified using various optimisers (max. SPL, SPL + min. sidelobes, min. sidelobes). Digital signal processing can be used to precisely adjust the vertical radiation angle and the tilt angle to the area to be covered.

The **PB 15-P2L** is equipped with 15 specially manufactured 2.1" HQ drivers, a DSP module and eight digital amplifiers with a rated power of up to 20 watts each. A single PB 15-P2L module can cover a listening area of up to 20 meters, with speech intelligibility and sound pressure remaining virtually constant over the entire distance.

In order to increase the lower cut-off frequency, the sound pressure and the reach, the Pan 2-Line PB 15-P2L module can be cascaded to a Pan 2-Line PB 30-P2L.

FEATURES:

High efficiency, integrated protection circuits, high speech intelligibility and music reproduction even in acoustically demanding environments, sleek and unobtrusive design, remote monitoring, two audio inputs.

INTEGRATED DSP CONTROL FOR:

Adjustment of vertical radiation (coverage/tilt angle), 5-band parametric equaliser, volume control, internal delay up to 370 ms, connection to media controller possible, two independent line inputs with automatic priority switching

MOUNTING ACCESSORIES

For the **Pan 2-Line** series, a wide range of mounting accessories is available for fixed installation and mobile use.

All **Pan 2-Line** loudspeakers are designed, developed and manufactured in Germany by Pan Acoustics from high quality materials and according to strict criteria.



TECHNICAL DATA PB 15-P2L

ACOUSTIC PROPERTIES

Configuration:	Digitally steerable line array
Frequency range:	110 Hz - 18 kHz
Equipment:	15 x 2.1" HQ drivers
Horizontal radiation pattern:	130° (3 kHz), 70° (10 kHz)
Vertical radiation pattern:	3° - 40°, digitally steerable
Number of beams:	1
Acoustic focus adjustable according to room length	
Tilt:	-70° - +70° (digitally steerable)
Focus distance:	1 m up to 40 m
Typical distance:	20 m
Maximum SPL:	112 dB SPL* @ 1 m (calc.) 89 dB SPL @ 15 m
Dynamic range:	>92 dB

ELECTRONIC PROPERTIES

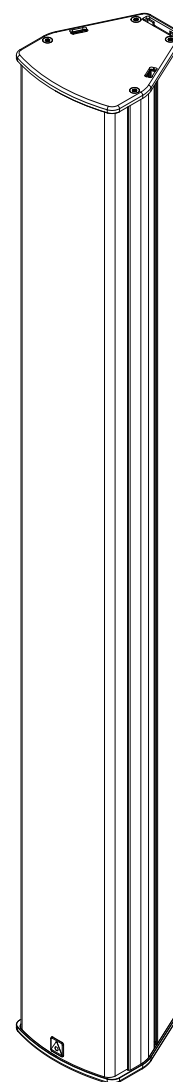
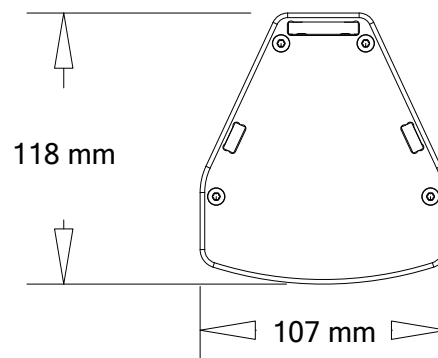
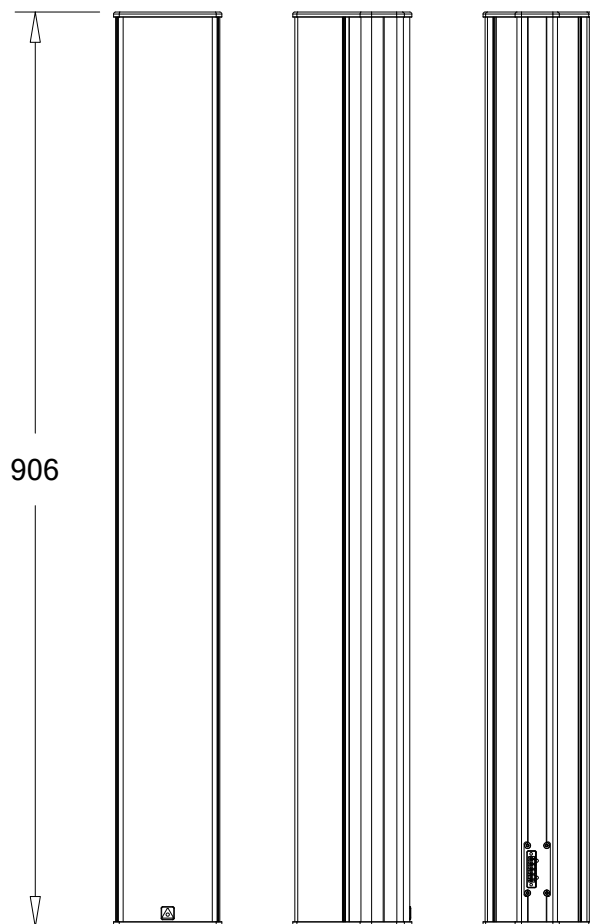
Amplifier output/type:	up to 8 x 20 watts max (4 ohms) / digital PWM
DSP:	24 bit / 96 kHz sample rate
Pan 2-Line I/O:	Phoenix, 5-pin (in/out)
Audio input:	Pan 2-Line
Nominal power consumption:	8 W (normal), 40 W (peak)
Temperature range:	0 °C to 40 °C ambient temperature (optionally -30 °C to +50 °C)
Power supply:	DC via Pan 2-Line technology

MECHANICAL PROPERTIES

Enclosure:	Aluminium profile
Grille:	Powder-coated perforated metal sheet
Standard colours (with silver lids): (optional: lid in enclosure colour)	RAL 9006 (aluminium), anodised RAL 9010 (white), silk matt RAL 9005 (black), silk matt
Dimensions (H x W x D):	906 x 107 x 118 [mm]
Weight:	5.5 kg (incl. electronics)
Mounting accessories:	Extensive range of mounting accessories available

*under anechoic half-space conditions with DSP settings
Frequency range: -10 dB under anechoic half-space conditions

TECHNICAL DRAWING PB 15-P2L





EQUIPMENT / OPTIONS AT A GLANCE - PAN 2-LINE SERIES



Customised painting/colouring

within the RAL colour range. Other colour ranges such as RAL design, Pantone, etc. are available on request.



Accessories such as wall, tripod and ceiling mounts, different interfaces, connection cables, weather protection hoods and connection sets are available.



Looks good, sounds good.

Pan Acoustics' products are defined by natural sound and attractive design.



Made-to-measure enclosure of the loudspeaker is possible. The enclosure dimensions of the Pan Beam series can be customised.



Pan Net (2-Line)

Pan Acoustics' proprietary control and monitoring protocol.



Ball impact resistance

Some equipment features cannot be combined. For information about which features can be combined with each other, please send an e-mail to sales@pan-acoustics.de.

Our quality promise

Pan Acoustics stands by its products and gives up to **10 years warranty** on its loudspeakers for any material or manufacturing defects. New products manufactured in accordance with protection classes IP54 and IP65 as well as digital audio interfaces (Dante®) from Audinate Pty Ltd and rechargeable batteries are excluded from the 10-year warranty. A warranty period of 3 years is granted for loudspeakers in accordance with protection classes IP54 and IP65.

