

DSP1500

Digitally Steerable Phased Array Column Speaker



Description

DSP1500, with excellent directivity, can adjust three directions simultaneously, so that listeners in the direction can get excellent listening experience. Eight customized 4-inch speakers are driven by a 8-channel amplifier powered with a sophisticated switch, all of which combine to ensure years of reliable operation. For conventional column speakers, its directivity is to be done with different shapes such as convex, concave, and bevel through processing, and cannot be adjusted. Unlike the conventional one, the DSP1500 phased array column speaker provides flexible adjustment of column directivity (vertical radiation angle) on a web-based operation page; The built-in digital equalizer can improve sound quality effectively. With good sound quality, high performance, easy to use, easy to install and other characteristics, it is widely used in a variety of sound reinforcement occasions, effectively reducing sound energy loss while improving language clarity.

Features

- With several full-band speaker units, with a wide reduction frequency.
- With built-in high-performance DSP patented algorithm sidelobe suppression.
- With innovative design, it can project the acoustic center of the array to up to three audience areas.
- With adjustable vertical sound directivity, which can evenly emit sound down to the specified direction

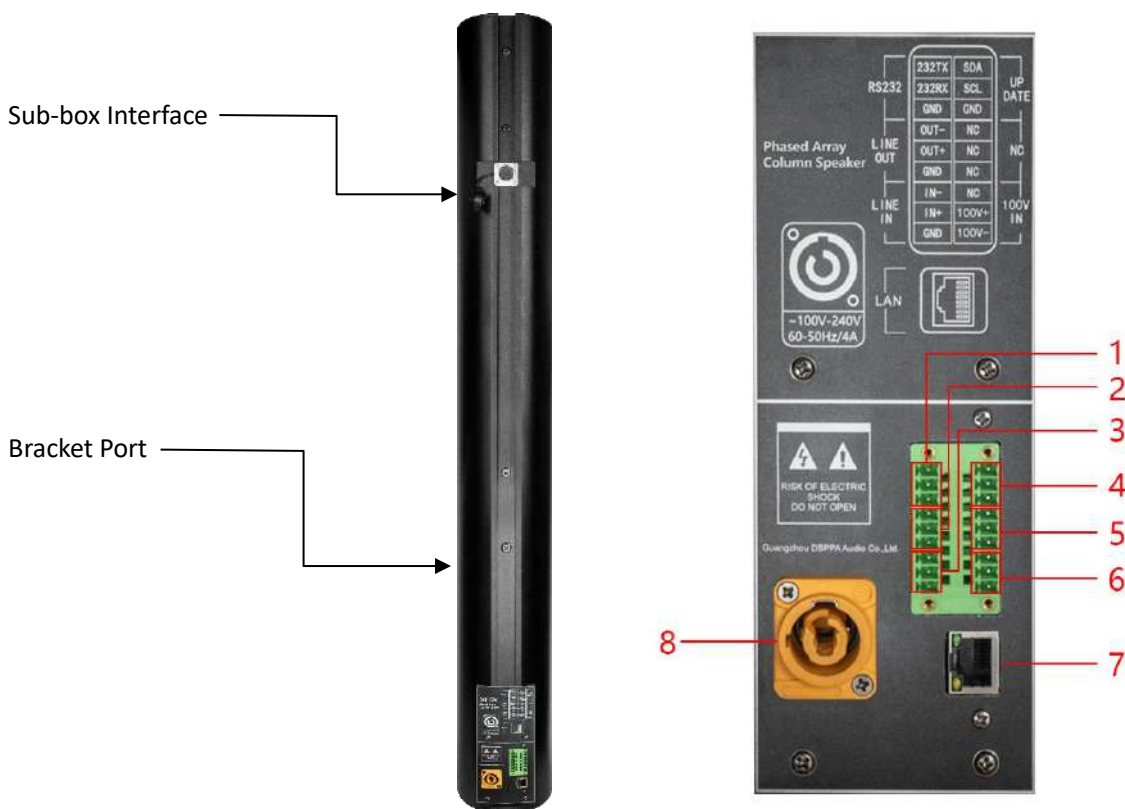
and greatly reduce the upward emission of sound, and attenuate the acoustic reflection of the ceiling.

- The digital speaker with an anti-reverberation system, which can increase the speech intelligibility in a reverberation environment.
- Display and edit the 3D emission model synthesized by the speaker array on the user interface.
- With built-in multi-band FIR+IIR equalizer.
- Connect a dedicated passive speaker and a dedicated subwoofer for applications in different scenarios.
- With built-in ultra-high sensitivity input signal detection function, for flexible start and noise reduction.
- The column speaker shell is made of aluminum, small in size and light in weight, for easy transport and installation.
- With beautiful appearance, suitable for speech and background music playback in various conference halls, museums, and concert halls.

Specifications

| Model | | DSP1500 |
|---|--------------------------|--|
| Amplifier Frequency ($\pm 3\text{dB}$) | Range | 100 – 20kHz |
| Acoustic Frequency | Range | 140 – 12kHz |
| Maximum SPL | dB | 115dB |
| Coverage | Horizontal (Fixed) | 130° |
| | Vertical (Adjustable) | $\pm 45^\circ$ |
| | Focus Offset | 5 – 50m |
| Dynamic Range | | >100dB |
| Audio Input | Rated Level | - 12dBV (line) |
| | Type (line) | Balanced/Single (1,3GND; 2 Signal) |
| | Type (70V) | (2 positive, 3 negative) |
| | Impedance (balanced) | 10K Ω |
| Power Amplifier | Type | PWM (Class D) |
| | Peak Power (4 Ω) | 8 \times 35Wrms |
| Voltage | | AC 100V–240V 47- 63Hz |
| Power Consumption | In Idle | 12VA (PFC \geq 0.92) |
| | Fully Loaded | 400VA (PFC \geq 0.95) |
| Ambient temperature | | 0 $^\circ\text{C}$ ~ 50 $^\circ\text{C}$ |
| Speaker | | 8 \times 4" |
| Package Size (mm) (L \times W \times H) | | 270 \times 260 \times 1156 |
| Dimensions (mm) (L \times W \times H) | | 124.7 \times 139 \times 1024 |
| Gross Weight | | 15kg |
| Net Weight | | 12kg |

Rear Panel



1. RS232 Interface: Connect to the serial port of the computer; The speaker can be controlled by the computer with specific commands.
2. Line Out: Output port of the audio signal (Balanced). It only output the audio signal that is input from the line input port (the size of the output signal has nothing to do with the volume on web control interface).
3. Line Input: Input port of the audio signal (Balanced).
4. System Upgrade Port: For system software upgrade (It is for professional engineers, not for non-professionals).
5. Reserved for Use (no function).
6. 100V Signal Input Port: When using the fixed voltage input, the speaker still needs to be powered as an active one. At this time, the power absorbed from the fixed-voltage input port is less than 0.1W.
7. Ethernet Port: Connect to a computer, logging into Google Chrome to control the column speaker (Please refer to the Section 6 "Operating Instructions" for details)
8. Power Input Port: AC100V - 240V/60Hz-50Hz

Directivity Diagram

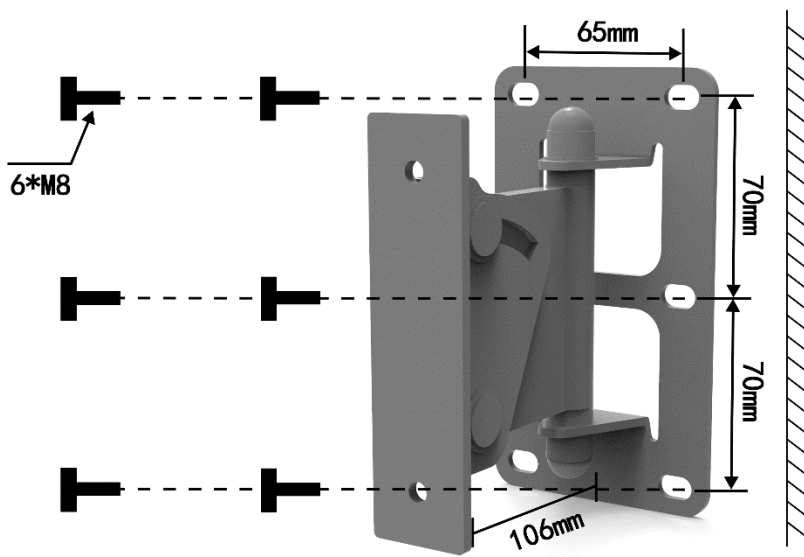
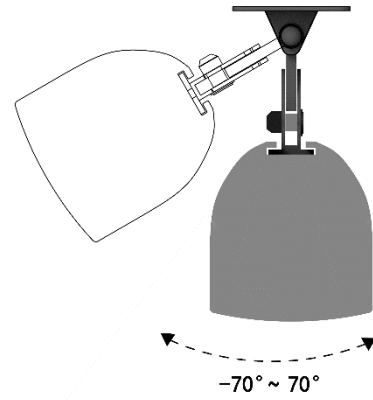
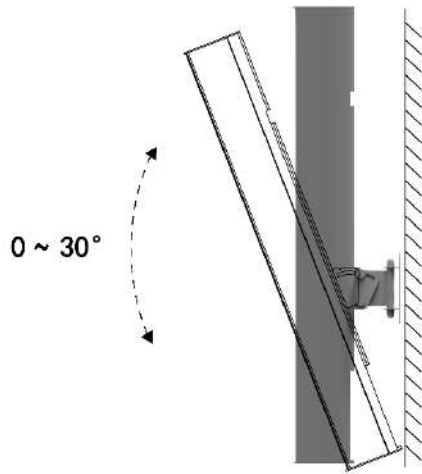
(1) 30m flat venue, with downward focus length as 6m, 15m, 26.5m and wall mount height 5.5m (Figure 1-1).



Figure 1-1: SPL Distribution Chart of 3 Preset Positions

Product Dimensions and Mounting Diagram





DSP1500 Supporting Bracket Mounting Diagram & Dimensions