



**Public Address System**

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**DSP1501**

**DSP1502**

**Phased-Array Sound Column**

## **Operating Instructions**

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Welcome to use our Public Address System. For better use of this equipment, please read this manual thoroughly before use.

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<http://www.DSPPA.com>

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## Lobe Variable Sound Column Unit:



Infrared remote controller



Sound box mounting suspension x 2



Lotus plug - 6.35mm adaptor



Sound box fixing screws x 4



MIC Plug - male

## 1. Product Description



The phased-array sound column is a new type of public address system. By applying the electronic and digital signal processing (DSP) technologies, it can simulate the directivity from different shapes of sound columns, while the inherent performances of the sound column will not be affected, e.g. rated power, range of effective frequency response and max. sound pressure level.

With DSP technologies, we may operate from the remote controller to change the directivity of speaker system at some extent. This is suitable for loud speaking in a hall where the building acoustics is poor (especially long reverberation time). This product is most suitable for the hardware (sound box, DSP processor) of the loudspeaker system in sports venues (where the volume is large, the building acoustics is poor, the reverberation time is long and the sound is muddy), so that it can be combined with special software to make the controllable sound cover useful area (auditoria, etc) correctly and prevent it from diffusion to useless area (e.g. ceiling, door or window). In this case, it can reduce the investment in acoustic decorations in venues and decrease the energy loss caused by loudspeaker system. This leads to reduced investment in both the acoustic decorations and sound system in the sports venue.

## 2. Functions

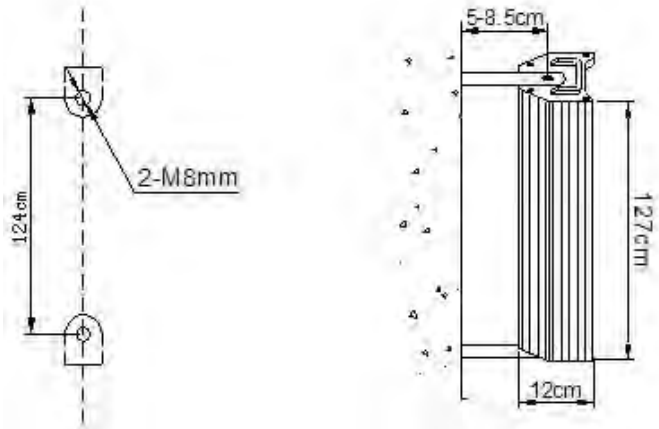
- Acoustically simulate the sound columns of different shapes, e.g. inclined, concave, convex and more complicates shapes.
- Active sound column with inbuilt digital signal processor and digital power amplifier, so that it is no need for external power amplifier.
- Compatible with line signal input (300mV), line signal output (200mV) and broadcasting power signal input with fixed voltage (70V or 100V).
- Volume, tone and other parameters of the sound column adjustable.
- The LED array screen on the right lower of the sound column can display different parameters and messages.
- Operate from infrared remote controller.
- Compact size, easy installation and high electro acoustic sensitivity.

## 3. Description of Remote Controller Keypad

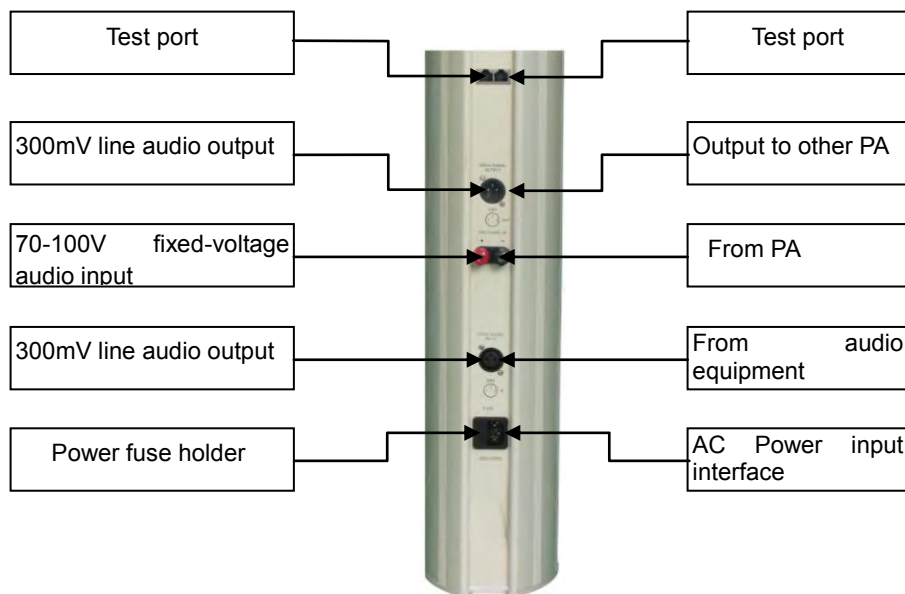
Key	Function	Operation	Remarks
	Power ON/OFF	One touch of this key slightly	It takes approx. 5s for startup.
	Sound ON or OFF	One touch of this key slightly	
<b>EQ</b>	Equilibrium adjustment	One touch slightly to enter into equilibrium interface. See Page 4 for operating methods.	14-section equilibrium; amplitude $\pm 12\text{dB}$
	Increase directivity angle	One touch to increase by $1^\circ$ . Hold down for 3s to increase continuously	Max. angle: $+45^\circ$
<b>AN-</b>	Decrease directivity angle	One touch to decrease by $1^\circ$ . Hold down for 3s to decrease continuously	Min. angle: $-45^\circ$
<b>V+</b>	Increase volume	One touch to increase by 1 level. Hold down for 3s to increase continuously	Max. volume: 32 levels
<b>V-</b>	Decrease volume	One touch to decrease by 1 level. Hold down for 3s to decrease continuously	Min. value: 0
<b>FOCUS+</b>	Focus backward	Every touch to move 1m backward. Hold down for 3s to move continuously	Nearest: -30m
<b>FOCUS-</b>	Focus forward	Every touch to move 1m forward. Hold down for 3s to move continuously	Farthest: +30m
<b>S Key</b>	Select sensitivity	One touch to view sensitivity; hold down to select sensitivity value	0dB, -6dB and -10dB available for selection

### 4. Installation Schematics:

1. Select a proper position on the surface where the sound column is to be installed, and fix two screws  $\varnothing 8\text{mm}$ . As shown on right, mount the bracket and fix the sound column.
2. Connect the wire correctly as described in Section 5. Check if the sound column is secure and confirm that the connection is correct. Then, insert the power cable of sound column into AC electric grid.



### 5. Description of Back Ports



### 6. Description of Remote Controller Keypad


1. Mute key
2. Sensitivity selection key (Sensitivity)
3. Volume / Setting Key (V+, V-) for left and right movement
4. Directivity / Setting Key (AN+, AN-) for up and down movement
5. Setting Confirmation Key (EQ)
6. Focus adjustment key (FOCUS+, -)
7. Treble adjustment key (TREBLE+, -)
8. Bass adjustment key (BASS+, -)
9. On/OFF Key (Note: The ON/OFF key can only switch off the current play status, but it cannot switch off the power of sound column). To switch off the power supply, please remove the power plug on sound column).



Infrared remote controller

## 7. Operating Instructions

The lobe variable sound column is operated from infrared remote controller. The remote controller is effective when it operates within 180° in front of the sound column.

1. Switch on the unit  $\xrightarrow{\text{Startup Interface}}$   (Firstly, the “UDE” will appear before entering this interface).

2. Adjust the volume  
Press “V+” or “V-”  $\xrightarrow{\text{Volume Interface}}$   (Max. volume: 32 levels; Min. volume: 0).

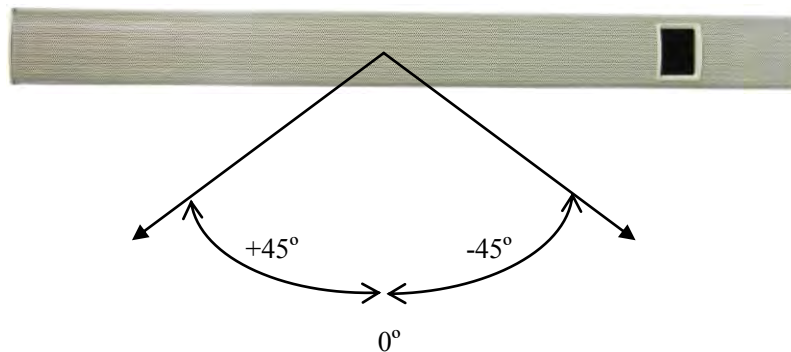
3. Equilibrium Adjustment  
Press “EQ”  $\xrightarrow{\text{EQ Interface}}$   (Range of adjustable frequency: 80Hz-20kHz)

Press “V+ or V-” to move left and right for selection of frequency band (14 bands in total)

Press “AN+ or AN-” to adjust the amplitude of selected band (Adjustable amplitude:  $\pm 12\text{dB}$ ). After finishing the adjustment, press “EQ” to exit.


4. Directivity Adjustment

Press “AN+ or AN-”  $\xrightarrow{\text{Directivity Interface}}$   (Increase or decrease the directivity angle. The range of adjustment is as shown below).

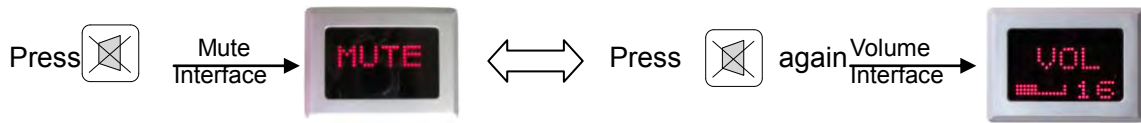


Indication for Adjustable Range of Directivity

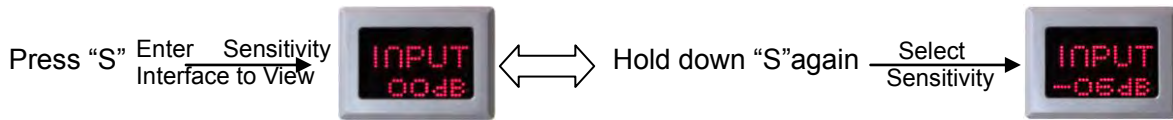
5. Adjust Focus

Press “FOCUS+ or FOCUS-”  $\xrightarrow{\text{Focus Interface}}$   “+” indicates forward movement of focus point. Max. forward movement: 99m;  
“-” indicates backward movement of focus point. Max. backward movement: 99m.

6. Mute

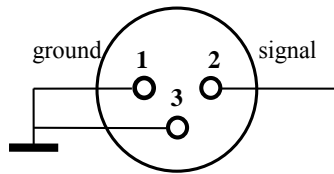


7. Select Input Sensitivity Value



With “S” key held down, the three sensitivity values, i.e. “00dB, -06dB and -10dB” will be displayed alternatively. When the desired sensitivity value appears, please release “S” key, so that this sensitivity value will be effected.

8. 3-pin XLR-type connectors



3-pin XLR-type connectors

## 8. Specifications

Model	DSP1501	DSP1502
Power consumption	100W	150W
Input sensitivity	300mV/70-100V	
Range of directivity angle	±45°	
Size (mm)	(L×W×H) 145.5×132.5×1365	(L×W×H) 155×153×1595
Net Weight	16.5kg	22kg
Greet Weight	20kg	26kg

The functions and parameters are subject to change without prior notice.

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