

# SBC84 DSP

## 8 x 4" DSP Beam Column Speaker

### Features

The weaknesses of the traditional phased array column speaker on the market are as follows:

1. For better sound directivity, the diameter of the speaker is supposed to be smaller (usually 4"), but at this time the sound quality will be poor. Therefore, we should strike a balance among the diameter, sound directivity, and sound quality.
2. There are too many accessories for the operation control, debugging and installation of the traditional phased array column speaker, which is quite cumbersome for those operations.
3. The traditional phased array column speaker has the problems of high engineering cost, poor sound diffusion, and audio delay.

In response to the weaknesses as mentioned above, LUCAS designs and develops a phase array column speaker SBC84DSP, which can solve the related problems completely. It has the following advantages:

1. SBC84DSP phased array column speaker adopts 8X4" HiFi drive units and combines with a unique patented algorithm for sidelobe suppression to design music mode (regular music playback) and hall mode (sound directivity) for a better balance among the diameter, sound directivity and sound quality.
2. The parameter settings and debugging of SBC84DSP phased array column speaker can be done with only one network cable connected to a PC, and the sound beam directivity and decibel can be adjusted on the web interface on the PC, with clear operation process and various parameters, easy to use and more user-friendly.
3. SBC84DSP adopts an innovative box design with one main and one sub speaker to solve the delay problem of the traditional active column speaker. With such design of SBC84DSP phase array column speaker, various parameters of the main speaker can be calculated by the system and mirrored to the sub speaker synchronously, so that the sound quality of the sub speaker is the same as that of the main speaker. In addition, the design of the sub speaker makes the budget cost of customers greatly reduce and makes a better sound diffusion.

The general column speakers or other speakers are insufficient in low frequency. In order to make up for their shortcomings, we have developed SBC84DSP low-frequency speaker, which can be compatible with other column speakers to effectively compensate for the low-frequency components of the sound and improve the sound quality.



## Technical Specifications

<b>Amplifier Frequency</b>	100 - 17 kHz
<b>Acoustic Frequency</b>	140 - 13 kHz
<b>Maximum SPL</b>	123 dB
<b>Coverage</b>	Horizontal (Fixed): 130° Vertical (Adjustable): ±45° Focus Offset: 5 - 60 m
<b>Dynamic Range</b>	1 dB
<b>Audio Input</b>	Rated Level: -12dBV (line) Type (line): Balanced/single (1,3gnd; 2 Signal) Type (70V): 2 positive, 3 negative Impedance (balanced):10K
<b>Power Amplifier</b>	Type: PWM (Class D) Peak Power (4 ohm): 8x 100W PP - 800W PP
<b>Voltage</b>	AC 100V - 240V 47- 63Hz
<b>Power Consumption</b>	12VA (PFC 0.92) - 400VA(PFC 0.95) -
<b>Ambient Temperature</b>	0°C - 50°C
<b>Speaker</b>	8x4"
<b>Package Size</b>	270x260x1156
<b>Dimensions</b>	124.7x139x1024
<b>Gross Weight</b>	15 kg
<b>Net Weight</b>	12 kg