GIAX

Design Column Speaker

AUDAC

PROFESSIONAL AUDIO EQUIPMENT

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User Manual & Installation Guide

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Introduction

This introduction briefly describes the possibilities of the GIAX design column speaker..

The GIAX was designed to meet professional demands en proves its worth in auditoria, conference rooms, meeting rooms, churches,… any place that requires a great flexibility in positioning and tuning, ass well as state-of-the-art audio quality and design.

Key features:

- High-quality 2 inch speakers, especially designed by AUDAC, make the GIAX suitable for music and speech.
- Ultra lightweight design and strong aluminum housing.
- Especially designed metal wall brackets included. (Two different incline angles).

Chapter

1

Warning

- Only use the correct amplifier output voltage and impedance, exceeding these limits could cause damage, fire or other failures.
- Only install the speaker on surfaces that can accommodate the weight of the speaker and the mounting bracket.
- Don’t use any other mounting method than specified.
- Attach a safety wire to the speaker when it’s mounted high up. This ensures that the speaker can’t fall down in any case.
- Avoid mounting the speaker in locations exposed to constant vibrations. The mounting bracket can be damaged by excessive vibration, potentially causing the speaker to fall down.

Caution

- Avoid electric shocks: turn off the amplifier when connecting the speaker.
- Don’t operate the speaker for an extended period of time at distorted sound. This can cause irreparable damage to the speaker.
- Don’t stand or sit on it, nor hang down from the speaker as this may cause it to fall down or drop.

Chapter

2

Installation

To achieve the best possible intelligibility and sound quality with a column speaker, there has to be paid extra attention to the proper mounting of the speaker.

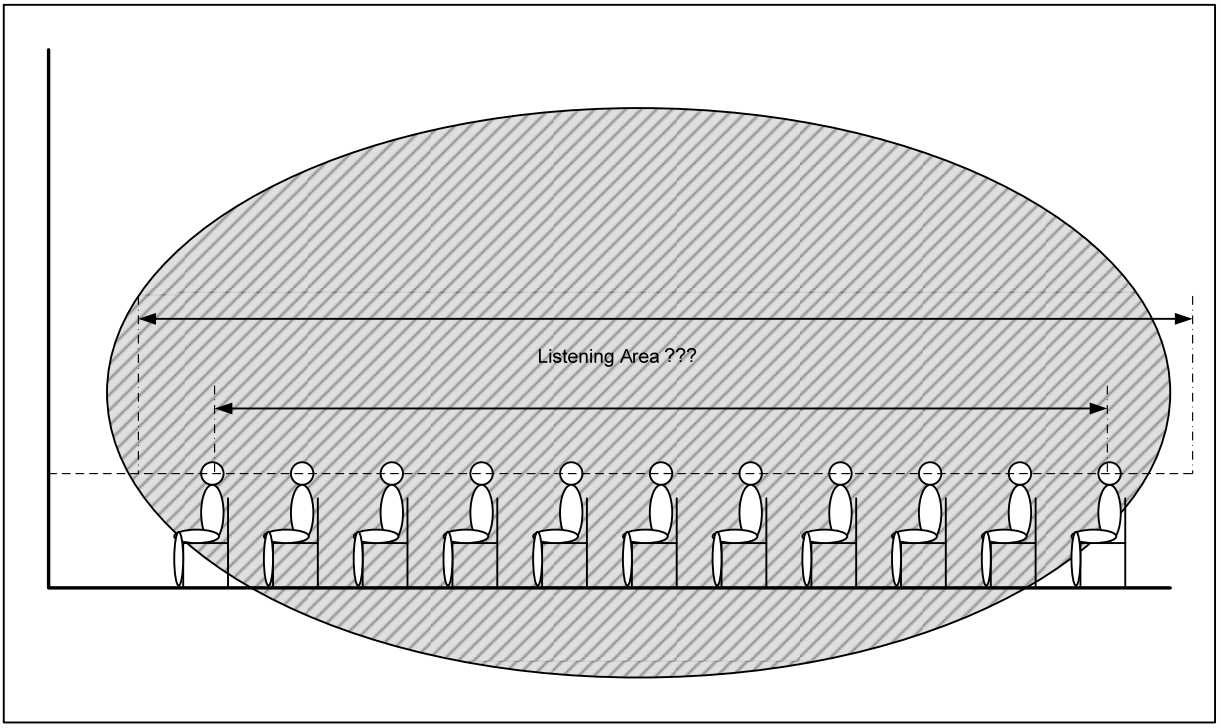
The dimensions of the desired listening area has to be determined where out the correct mounting height and angle can be derived.

A step by step installation procedure describes the method to determine the mounting height and angle for the GIAX.

DETERMINING LISTENING AREA AND MOUNTING HEIGHT

STEP 1:

Determine the dimensions of the desired *Listening Area*. This is a horizontal plane at the level of the listeners ears. Refer to the dashed line in following figure.



STEP 2:

After the listening area is determined, the mounting height and the incline angle of the column speaker have to be determined.

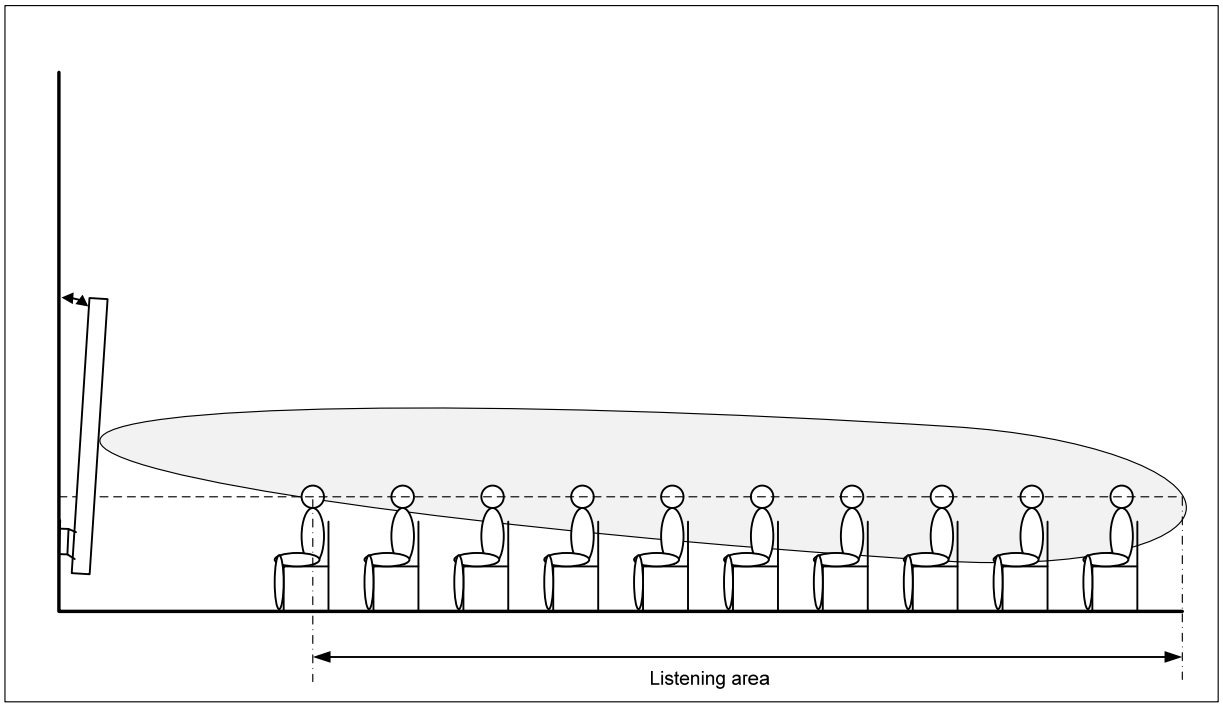
For the best speech intelligibility, you have to keep the following fact always in mind:

A column speaker produces, through constructive interference between the different drivers, a focused sound beam in the acoustical centre of the speaker.

The acoustical centre of the GIAX is precisely located in the middle of the loudspeaker.

So, to achieve the best speech intelligibility in all situations, this sound beam needs to cover the listening area over the largest surface at the listeners ear height.

This can be done by mounting the acoustical centre of the speaker, just above the listeners ear height, and mounting the speaker with a small incline angle ranging from 0 to 5°.



OTHER POINTS TO PAY ATTENTION TO:

While mounting a column speaker, there are still some other points where has to be paid attention to.

- Make sure that the loudspeaker array is always visible for everyone in the listening area, to ensure a good audibility of the high tones. High tones can be compared with light. When something is between the observer and the light source, the observer can't see the light source at it's full power, this is what we call shadow.
For high tones, this is the same issue. When someone is standing between the listener and the loudspeaker, the listener is located in the sound shadow. The sound shadow will be experienced as a reduction of high tones.

- When the loudspeaker is installed at a very small angle, a large listening area can be reached. Depending on the amount of reverberation in the room and the sound shadow, the speech intelligibility on a far position may be low. In this situation, it is recommended to use more loudspeaker arrays to split the listening area.

- When you move further than the maximum position of the listening area, only the sound pressure level will decrease. There will be almost no tone height variation. The decreasing factor of the sound pressure level depends strongly on the reverberation of the room.

- When you are located too close to the loudspeaker array (closer than the minimum distance, approximately 5 times the length of the speaker) a decline of the high tones will occur very soon.

- Because the loudspeakers are designed to beam the sound just above the listeners ears, it's better to mount the speakers not to high above the listening area.

- When you want to determine where exactly the edges of the listening area are located in your situation, you have to do a practical test at this location. This is a job for an experienced listener with well-trained ears. Put pink noise through the loudspeaker array, and reduce the lower tones for this test because they do not contribute to speech intelligibility. Walk around in the listening area and pay attention to the high tones. The places where the high tones decrease rapidly are the edges of the listening area.

Chapter

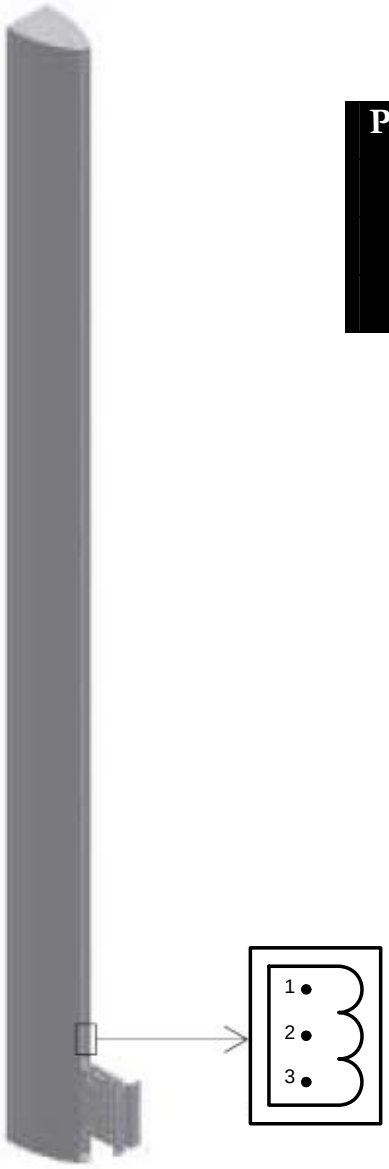
3

Connecting the GIAX

CONNECTIONS:

At the back of the GIAX is a 3 pole euro terminal block connector provided to connect the amplifier with the GIAX column speaker.

⚠**Warning:** Notice the polarity markings when wiring the loudspeaker cables.



PIN	4 Ω
1	-
2	+
3	N.C.

Chapter

4

Additional information GIAX

TECHNICAL SPECIFICATIONS

RMS Power	240 W
Max Power	480 W
Impedance	4 Ohm
Sensitivity 1W / 1m	102 dB
Sound pressure MAX / 1 m	118 dB
Frequency response (-3 dB)	100 Hz – 17 kHz
Horizontal coverage	170 °
Construction	Aluminium
Front finish	Aluminium grille
Drivers	24 x 2 inch
Dimensions (W x H x D)	70 x 2005 x 105 mm
Weight	6,50 Kg
Accessories included	Wall bracket With two different incline angles 0° – 7.5° & 7.5° – 15°
Colors	White RAL 9010 Black RAL 9005

Personal notes