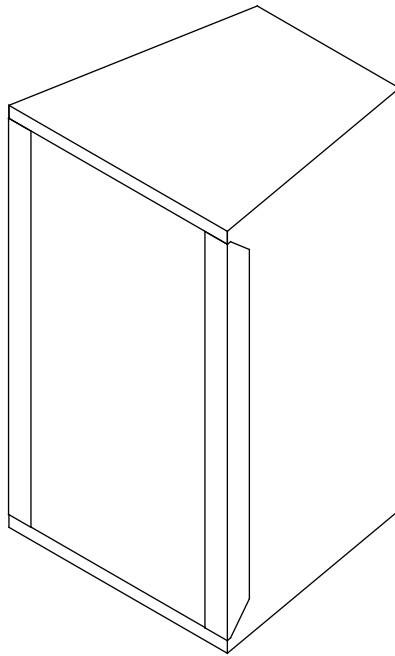




# Operation Manual



**IBZA Series**

**IBZA6**

Compact Multipurpose Loudspeaker

Keep these important operating instructions.  
*Check [www.tecnare.com](http://www.tecnare.com) for updates.*



**General Information**

IBZA6 Operation Manual

Ver.: 2.5\_UK 11/2016

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The information contained in this manual has been carefully checked for accuracy, at the time of going to press, however no guarantee is given with respect to the correctness.

Exel Acoustics SL accepts no responsibility for any errors or inaccuracies that may appear in this manual or the products and software described in it. Technical specifications, dimensions, weights and properties do not represent guaranteed qualities. As manufacturers we reserve the right to make alterations and modifications within the framework of legal provisions, as well as changes aimed at improving quality.

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## IMPORTANT SAFE INSTRUCTIONS

Before using our product, be sure to carefully read the manual and safe instructions. Keep this document with the device all time.

- |   |  |  |
|---|--|--|
| 1 | Read these instructions.   | caution around the enclosure with data storage devices such as phones, computers or hard drivers.  |
| 2 | Keep these instructions.   |  |
| 3 | Heed all warnings.   | 11 Handles are for moving the system only.   |
| 4 | Follow all SAFETY INSTRUCTIONS as well DANGER and OBLIGATION warnings.   | 12 <b>Beware of sound levels.</b> Never stand in the immediate vicinity of loudspeaker driven at high level. Professional loudspeaker systems are capable of causing a sound pressure level (SPL) detrimental to human health. Hearing damage can also occur with prolonged exposure to sound: 8h at 90 dB(A), 30 min at 110 dB(A), less than 4 min at 130 dB(A) <i>Source: European Directive relating to the assessment and management of noise 2002/49/CE</i> |
| 5 | Only use attachments / accessories specified by the manufacturer.  |  |
| 6 | Use only with the cart, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over. |  |
| 7 | If the equipment is used in a manner not specified by the Exel Acoustic, the protection by the equipment may be impaired.  | 13 When setting up the loudspeaker or loudspeaker stand, make sure they are standing on a firm surface. If you place several enclosures on top of one another, use straps to secure them against movement.   |
| 8 | Read the entire Product Information document before exploiting the system.   |  |
| 9 | Read the Rigging Manual before installing the system. Use the rigging accessories described in the rigging manual a follow the associated procedures.  |  |

**CAUTION:** Rigging should only be done by experience professionals.

- |    |   |
|----|---|
| 10 | This speaker enclosure is capable of creating a strong magnetic field. Please use |
|----|---|

## **DECLARACIÓN DE CONFORMIDAD**

### **DECLARATION OF CONFORMITY**

#### **EXEL ACOUSTICS SL**

CL Encinar, 282. Polígono Industrial Monte Boyal. 45950 – Casarrubios del Monte (Toledo), España (Spain).

Declara que el producto IBZA6 y sus respectivas opciones, cumple con las Directivas:

*Declare under our sole responsibility that devices in the IBZA6 range of products, comply with relating Directives:*

- (1) Directiva de Baja Tensión - 2006/95/CE
- (2) Directiva de Compatibilidad Electromagnética - 2004/108/CE
- (3) Directiva **RoHS** - 2011/65/UE
- (4) Directiva **RAEE** - 2012/19/UE

- (1) *Low Voltage Directive 2006/95/CE*
- (2) *EMC 2004/108/CE*
- (3) *RoHS Directive 2011/65/UE*
- (4) *WEEE Directive 2012/19/UE*

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# 1 Introduction

## 1.1 Welcome to Tecnare

Thank you for choosing the high-quality Tecnare® **IBZA6 System “Made in Spain”** from **EXEL ACOUSTICS SL**.

Please spare a little time to study the contents of this manual, so that you obtain the best possible performance from this unit.

All Tecnare® products are carefully engineered for world-class performance and reliability.

If you would like further information about this or any other Tecnare® product, please contact us. We look forward to helping you in the near future.

**As part of a continuous evolution of techniques and standards, Exel Acoustics SL as manufacturer of Tecnare® products reserve the right to change the specifications of its products and the content of its documents without prior notice.**

Updates and supplementary information are available on the Tecnare® website:

<http://www.tecnare.com>

Tecnare Technical Support is available at:

- (T): +34 918 170 110 - +34 918 171 001
- (e-mail): support@tecnare.com

Thank you again for placing your confidence in Tecnare® products.

## 1.2 IBZA Series

**IBZA Series** is the ultimate reference for rental productions, fixed installations and dance clubs environments. A combination of high-end audio, sound quality, stunning aesthetics, extreme sound pressure level and reliability. IBZA is a family of distinct format of loudspeaker systems, engineered for different short-throw applications, including FOH systems, distributed systems, side-fill monitors, complementary fills and, of course, dance environments, where high-output, low-distortion, and the highest quality sound are required.

The series is formed from:

- **IBZA P204**, Passive ultra-compact loudspeaker, 120° axis-symmetric, 80Hz-20KHz.
- **IBZA6**, passive compact loudspeaker, 80° axis-symmetric, 82Hz-20KHz.
- **IBZA6 Plus**, passive ultra-compact loudspeaker, 70° axis-symmetric, 85Hz-18KHz.
- **IBZA8**, passive compact loudspeaker, 110° axis-symmetric, 65Hz-18KHz
- **IBZA10**, passive compact loudspeaker, 70°x50°, 45-18KHz
- **IBZA12**, passive/active enclosure, (50°x100°)x60°, 56Hz-18KHz
- **IBZA15**, passive/active enclosure, 80°x50°, 48Hz-18KHz

IBZA Series constitutes a broad range of point source, full range loudspeakers that providing high SPL, different directivities patterns and a good sonic performance off-axis.

The IBZA Series is suited to various sound reinforcement applications as a main or complementary system.

IBZA Series enclosures are easy to integrate, combining sonic character with style. Its aesthetic appearance makes it ideal for the most demanding architectural environments.

The **DP Series Processor** and **T-Series** amplified controllers are the heart of the system. Thanks to their dedicated factory presets, they constitute an extremely advanced and precise drive system for the enclosures.

### **Applications:**

---

- Dance Clubs.
- Theatre and corporate events.
- Houses of worship.
- Touring.
- Live music venues.

### **Main Characteristics:**

---

- Built in proprietary hardware for simple, fast and safe rigging.
- Enclosures made with the latest techniques ensuring a perfect and rigid construction.
- Weatherized finish is provided, as the cabinet is coated with rugged Durawound texture finish and protected with specially treated grills.
- 16mm or 18mm birch plywood. Finished in black semi-matt textured Durawood weatherized coating. One recessed carrying handle.
- Powder coated perforated steel grid with acoustically transparent reticulated foam.

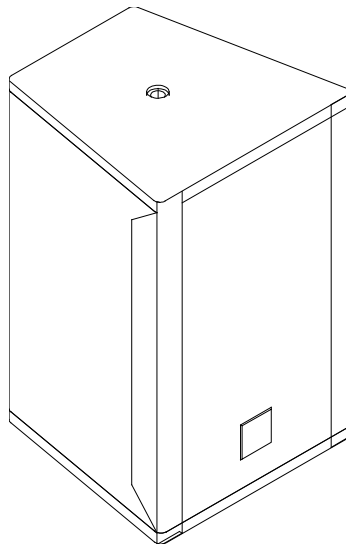


## 1.2 The IBZA6 Compact Loudspeaker

The **IBZA6** is a small trapezoidal compact full-range loudspeaker of studio quality, designed to be used in a wide variety of audio applications requiring a small, inconspicuous cabinet that also delivers high sound pressure levels, low distortion, and uniform directional control.

The IBZA6 offers exceptional audio performance in a compact package. As a standalone loudspeaker, the IBZA6 can be used for vocal reinforcement, front-fill coverage, and delay coverage for under-balcony applications. Its wide conical directivity pattern gives smooth off-axis response - assuring the best sound where most of the audience is located. The IBZA6 can also be paired with an optional subwoofer to create a full-range system.

Available series in a grey colour or white custom colour, the IBZA6 can be easily integrated into any building style for ultimate discretion, satisfying the most demanding architectural needs. Rigging options include wall mount, ceiling-mount and pole-mount in various orientations for integration into any possible situation.



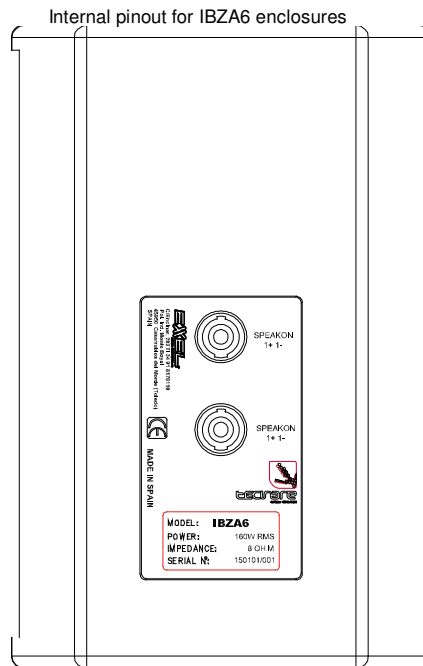
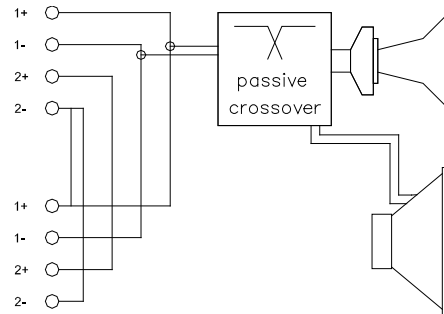
## 1.3 Connections

**IBZA6** loudspeaker utilizes Neutrik® SpeakON® connectors. There are two NLT4 connectors on the rear of each IBZA6. These connectors mate with Neutrik® NL-4 or NL-4 compatible in-line cable connectors. Only two pins (1+/1-) of both connectors are wired in parallel. The following subsections describe the electrical connections. Other configuration should be requested at the purchase time.

The IBZA6 uses the pin assignment 1+/1+.

Using one as the input, the second connector allows for direct connection to a second cabinet in parallel.

IN speakON® point	1+	1-	2+	2-
Connection	LF +	LF -	NC	NC



## 1.4 Processing and Amplification

Only operate TecnaRE loudspeaker with a correctly configured TecnaRE preset. TecnaRE offer a complete solution that guarantees the highest level of performance. A complete range of controllers, amplified and amplified controller with DSP are available to get this objective. Otherwise, there is a risk of damaging the loudspeaker components.

### 1.4.1 Processing

There are two options using our digital controllers. Our **DP2696** or **DP4896**. The options vary depending on the final application. *Refer to DP2696 or DP4896 user manual.*

### 1.4.2 Amplification

To power IBZA Series, TecnaRE recommends amplifiers with the power ratings enough to feed the loudspeakers.

In any case, the TecnaRE processors should be deployed in front of the amp to ensure that the amplifiers to not go into clip.

The **DP4896** processors also include:

- Thermal protection from power surges or overload
- Excursion displacement protection

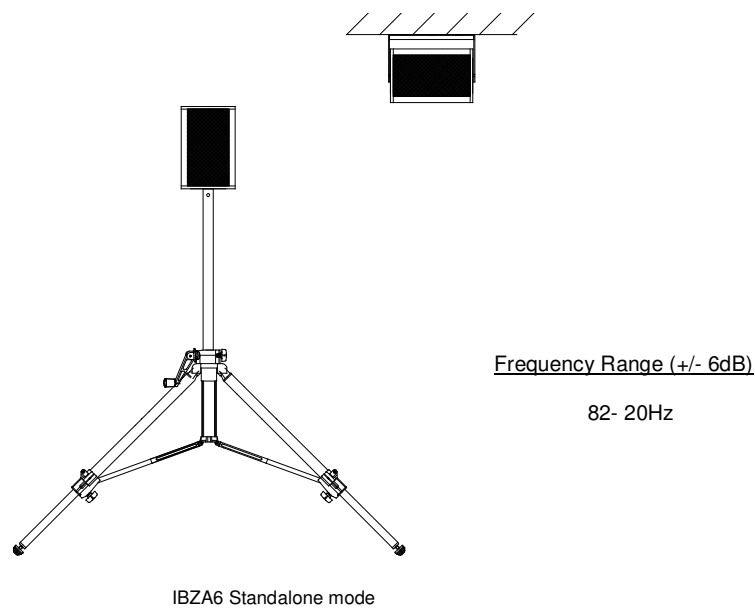
The **T10-44/T6-44** and **T-48 Series** amplifier is the ideal companions for maximum performance of the IBZA Series loudspeakers. This amplifier controller with DSP offer a complete both preset and protection solution for any application.

## 2 Loudspeaker Configuration

### 2.1 Point Source

In this configuration the system operates over the nominal frequency range of the enclosure.

IBZA6 enclosure is driven by the PA4.450, PA900 amplifier with the DP Series Processor or T-44/T-48 Series amplifier controller both with factory preset.

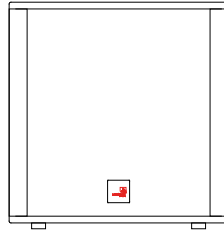


### 2.2 Point Source with low-frequency element

In this configuration, the frequency response of the IBZA6 is extended in the low end.

IBZA6 enclosure is driven by the PA4.450, PA900 amplifier with the DP Series Processor or T-44/T-48 Series amplifier controller both with same factory preset as in point source configuration. The subwoofer will be operating with its corresponding factory preset. The upper frequency limit must be 110 Hz for an optimal acoustic coupling with the enclosure.

If your IBZA6 loudspeakers and subwoofers are separated by a greater distance - or delay must be used between them - a measurement system such as *SMAART* should be used to determine the correct delay and polarity.



IBZA6 + SW-118M

Frequency Range (+/- 6dB)

40- 20Hz

Recommended ratio

1xSW-118M: 4xIBZA6

## 3 Configuration

Tecna<sup>®</sup> Sound Systems recommended operating the **IBZA6** loudspeaker together Tecna loudspeaker controllers.

Tecna<sup>®</sup> only recommends using preset/amplifier developed *by Tecna*; otherwise there is a risk of damaging the loudspeaker components. *DP Series Loudspeaker Controller*, *PA Series amplifier* and *T-Series amplifier* are ideal for this purpose.

Ensure that the right preset was selected before connecting the loudspeaker with the amplifier.

Operating with an incorrect preset can damage part of the loudspeaker.

Ensure that the amplifier is properly size according to requirements. Under-power or oversized power amplifier without the supervision of an expert may damage the loudspeaker.

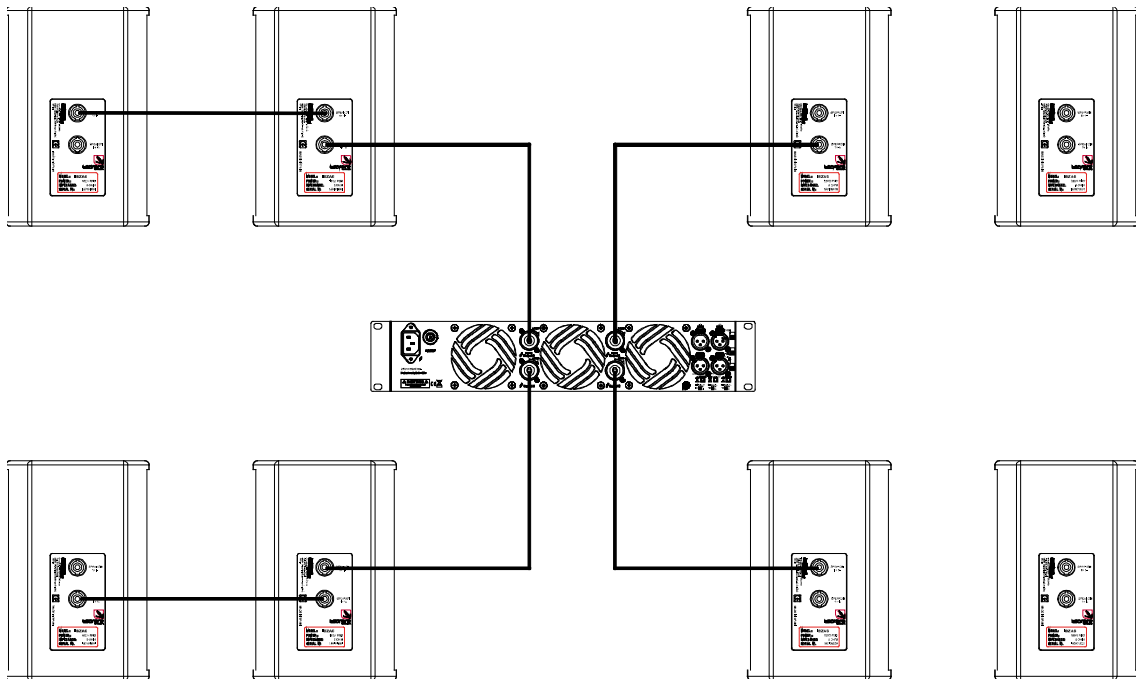
Please note the technical specification section.

### 3.1 Connection to PA4.450

#### MAXIMUM OF 4 ENCLOSURES PER PA4.450

2 x IBZA6 can be connected to each output channel on the PA4.450. Therefore, a single PA4.450 amplifier controller can drive up to 8 enclosures.

**Impedance load:** 8Ω for 1 enclosure, 4Ω for 2 enclosures.

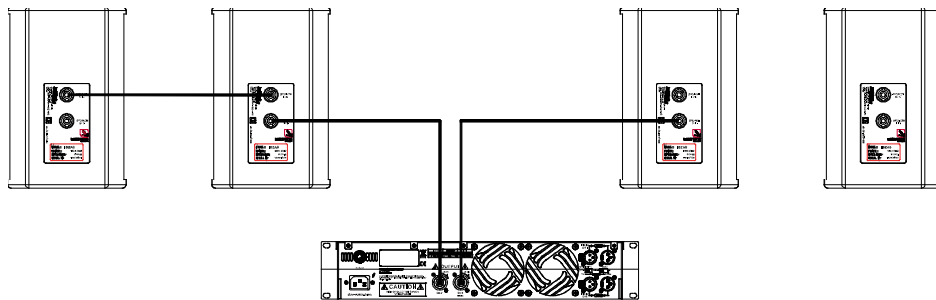


### 3.2 Connection to PA900

#### MAXIMUM OF 4 ENCLOSURES PER PA900

2 x IBZA6 can be connected to each output channel on the PA900. Therefore, a single PA900 amplifier controller can drive up to 4 enclosures.

**Impedance load:** 8Ω for 1 enclosure, 4Ω for 2 enclosures.

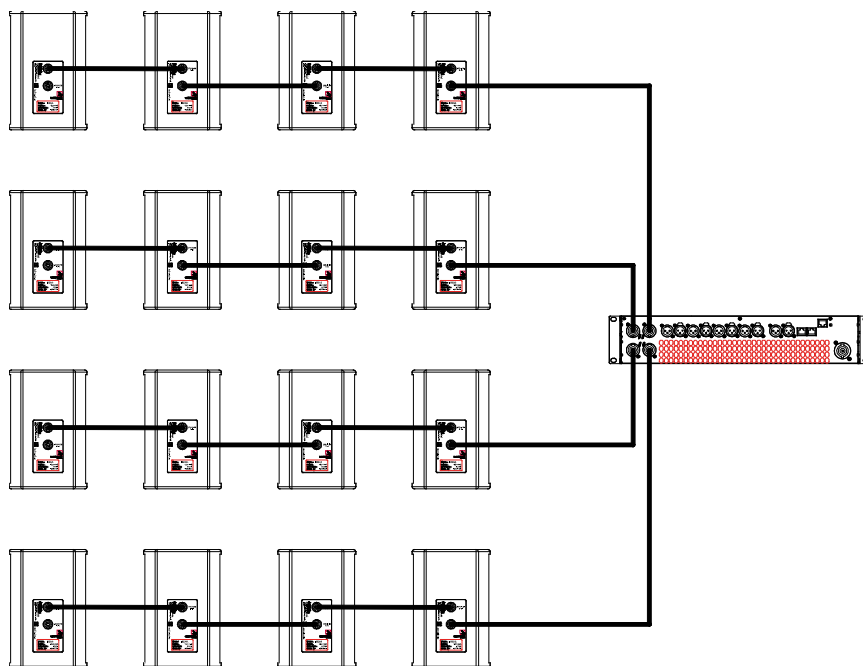


### 3.3 Connection to T-44 Series

#### MAXIMUM OF 16 ENCLOSURES PER T-44.

4 x IBZA6 can be connected to each output channel on the T-44/T-48 Series amplifier. Therefore, a single T-44 amplifier controller can drive up to **16** enclosures. A single T-48 amplifier controller can driven **32** enclosures

**Impedance load:** 8Ω for 1 enclosure, 4Ω for 2 enclosures, 2Ω for 4 enclosures.



T-44 Series Amplifier

---

## 4 Integrating IBZA6 Using Subwoofers

### 4.1 Integrating IBZA6 Loudspeakers Systems with TecnaRE Subwoofers

An **IBZA6** loudspeaker system can be deployed in combination with TecnaRE's subwoofers like a **SW-12**, **SW115**, **SW118M**. These subwoofers can achieve very low frequency response extending system response appreciably and increasing the overall acoustic power of a system in the lowest frequencies.

The ideal ratio of IBZA6 loudspeakers to subwoofers depends on the configuration of the system, the application, and the frequency content of the signal being reproduced.

For most application, a ratio of two IBZA6 for each SW-12 subwoofer and four IBZA6 for each SW115 or SW-118M subwoofer yield good results in frequency response and headroom.

### 4.2 Signal Delay

If IBZAs loudspeaker and subwoofers are used in their full-range configuration together DP-Series Loudspeaker controlled or T-Series Amplifier, use the factory preset setting if they are co-planar or near to each other.

For other configuration or if they are separated by a great distance it will usually be necessary to determine the signal delay and polarity setting with a measurement system such as SMAART audio analyzer.

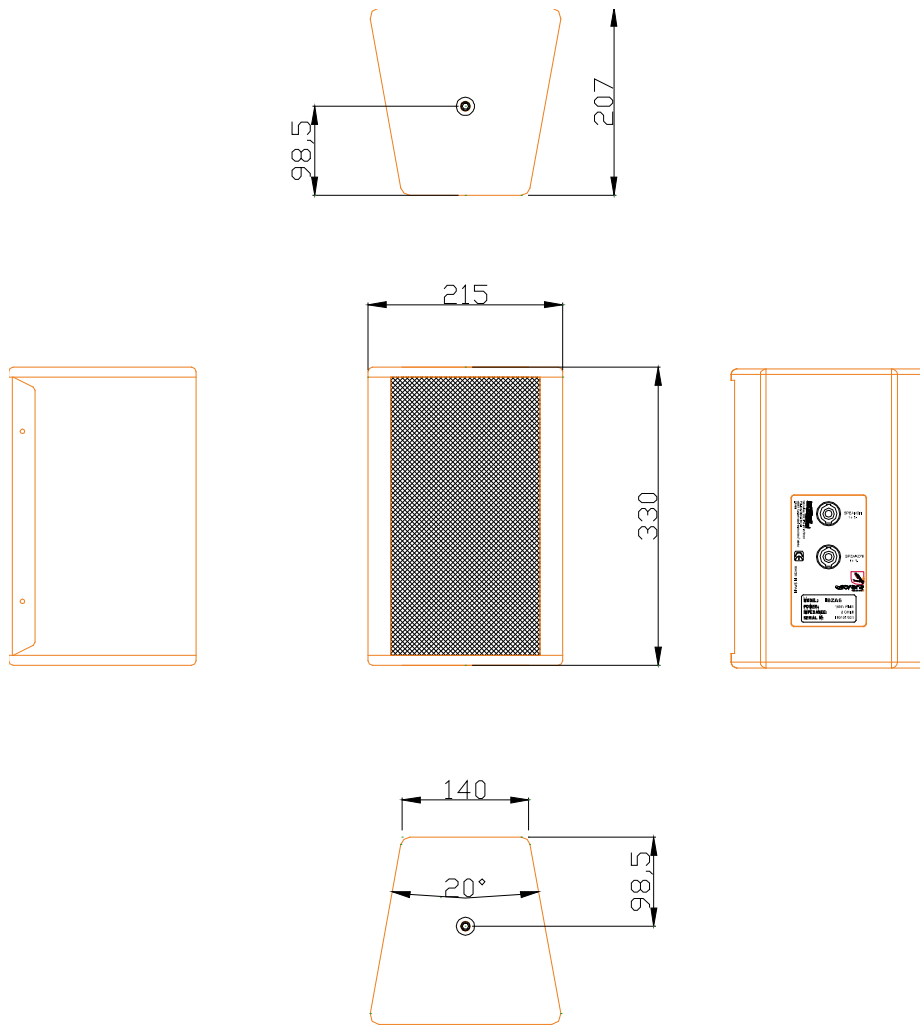
NOTE: If the subwoofer's amplifier/DSP Limit LED begins to light before reaching the required SPL, consider adding more subwoofers to meet the SPL requirements without exposing the drivers to excessive heat and excursion.



## 5 Technical specifications

### IBZA6 FULL-RANGE COMPACT LOUDSPEAKER SPECIFICATIONS

ACOUSTICAL	
<b>Operating Frequency Range</b>	82Hz -20 kHz±4dB, measured on axis. 95Hz-18kHz Recommended operating frequency range. Response depends on loading conditions and room acoustics
<b>Axial Sensitivity</b>	93 dB (1w/1m)
<b>Calculated SPL</b>	116 dB continuous/122 Peak
<b>Nominal Dispersion</b>	80° Axis-symmetric
<b>Power Handling</b>	200 W AES / 400 Continuous
COMPONENTS	
<b>Low Frequency</b>	1 x 6-inch cone driver ferrite magnets, direct radiation, bass-reflex Nominal impedance: 8Ω Voice coil size: 1.46-inch Power Handling Capability: 170 W AES / 340 W continuous <i>Note:</i> Power Handling measured using AES Standards= 2 hours test made with continuous pink noise signal (6 db crest factor).
<b>High Frequency</b>	1 x 1-inch dome tweeter on symmetric horn Nominal impedance: 8Ω Voice coil size: 1-inch Power Handling Capability: 30 W AES / 60 W continuous <i>Note:</i> Power Handling measured using AES Standards= 2 hours test made with continuous pink noise signal (6 db crest factor).
AUDIO INPUT	
<b>Connectors</b>	IN: 1 x NL4 SpeakON®      LINK: 1 x NL4 SpeakON®
<b>Wiring</b>	Pin 1+/-: Input Signal ; Pin 2+/- : Parallel
PHYSICAL	
<b>Enclosure</b>	16mm birch plywood. Finished in Polyurea surface.
<b>Protective Grille</b>	Powder-coated perforated steel with acoustically transparent reticulated foam
<b>Rigging</b>	2 x M6 insert for TUB-6 U-Bracket
<b>Dimensions (HxWxD)</b>	330mm x 215mm x 207mm (13.07" x 8.46" x 8.11")
<b>Weight</b>	4,5 Kg. (14.10 lbs)
<b>Custom finish</b>	White code available on request Without charge. RAL code on special order.



IBZA6 Dimensions



*Reinventing The Rules*



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**IBZA6** Operation manual

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