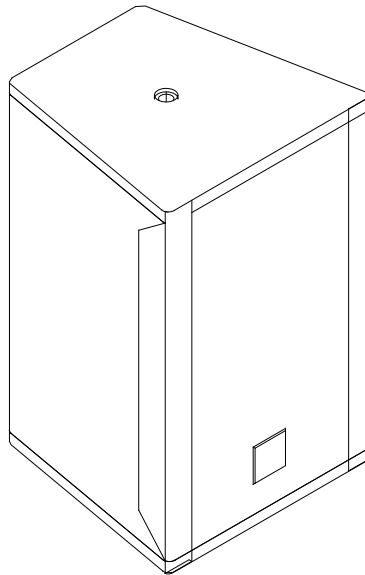




# Operation Manual



**IBZA Series**

**IBZA6Plus**

Ultra-Compact Multipurpose Loudspeaker

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



**General Information**

IBZA6Plus Operation Manual

Ver.: 1.0\_UK 07/2017

©EXEL ACOUSTICS SL; all right reserved

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.

EXEL ACOUSTICS SL

CL Encinar, 282 – Pol. Ind. Monte Boyal

45950 Casarrubios del Monte (Toledo) Spain

Phone: (+34) 918 170 110 Fax:

e-mail: [support@tecnare.com](mailto:support@tecnare.com) [www.tecnare.com](http://www.tecnare.com)

## 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 **IBZA6Plus** y sus respectivas opciones, cumple con las Directivas:

*Declare under our sole responsibility that devices in the **IBZA6Plus** 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*

---

# Table of Contents

IMPORTANT SAFE INSTRUCTIONS.....	3
DECLARACIÓN DE CONFORMIDAD .....	4
1 Introduction .....	6
1.1 Welcome to Tecnore .....	6
1.2 IBZA Series.....	7
1.2 The IBZA6Plus Ultra-Compact Loudspeaker.....	8
1.3 Connections .....	9
1.4 Processing and Amplification.....	9
2 Loudspeaker Configuration.....	11
2.1 Point Source .....	11
2.2 Point Source with low-frequency element .....	11
3 Configuration .....	13
3.1 Connection to PA4.450.....	13
3.2 Connection to PA900.....	14
3.3 Connection to T-44 Series.....	14
4 Integrating IBZA6Plus Using Subwoofers.....	15
4.1 Integrating IBZA6Plus Loudspeakers Systems with Tecnore Subwoofers .....	15
4.2 Signal Delay.....	15
5 Technical specifications.....	16

# 1 Introduction

## 1.1 Welcome to Tecnare

Thank you for choosing the high-quality Tecnare® **IBZA6Plus 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, corporate and live events.
- House 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.
- Powder coated perforated steel grid with acoustically transparent reticulated foam.
- Max SPL: Up to 133dB Continuous.



## 1.2 The IBZA6Plus Ultra-Compact Loudspeaker

The **IBZA6Plus** is a trapezoidal ultra-compact two-way full-range loudspeaker. The LF/MF section comprises a 6½-inch loudspeaker loaded in a vented-bass cabinet and a 1-inch compression driver attached to a horn, coaxially mounted that provide extremely coherent coverage through 70° conical field.

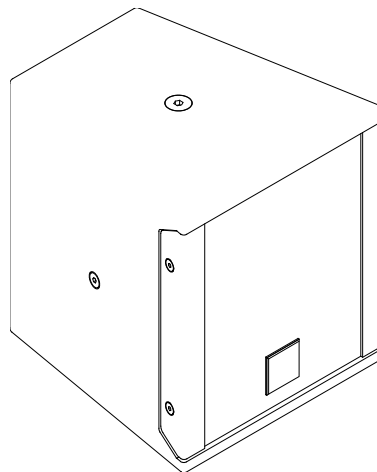
**IBZA6Plus** has an exceptional power/size ratio, great clarity in sound reproduction and a highly aesthetics. The wooden enclosure features a recessed Neutrik Speakon connectors and threaded inserts, allowing the use of a 3mm steel bracket for flying or wall/ceiling-mount purposes (optional *TUB-I6P*). Dedicated preset for [DP Series](#) processors or [T-Series](#) amplifiers are available to operate the **IBZA6Plus** in full-range mode or combined with Tecna® subwoofers.

The ultra-compact IBZA6Plus offers total versatility between all types of near-field listening applications: stage monitoring; distributed systems; in-fill/near-fill/delay etc; PA with or without subwoofers.

IBZA6Plus is designed for small to medium size venues or as a distributed system for coverage of large spaces. Its compactness and sonic performance make IBZA6Plus the perfect loudspeaker for applications where unobtrusiveness and high quality sound reproduction are at a premium.

In full-range mode with or without processor the IBZA6Plus is perfect for speech and vocal applications such as conferencing. With a processor, it offers highly accurate music reproduction. Combined with Tecna® subwoofers, IBZA6Plus is capable of high level performance in mid-sized venues.

Available series in a grey colour or white custom colour, the IBZA6Plus 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.

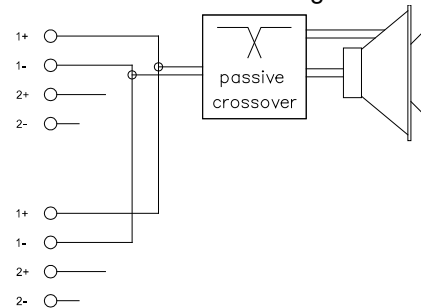


## 1.3 Connections

**IBZA6Plus** loudspeaker utilizes Neutrik® SpeakON® connectors. There are two NLT4 connectors on the rear of each IBZA6Plus. 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.

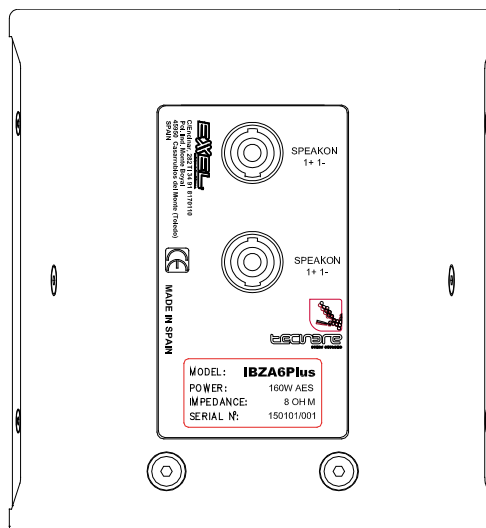
The IBZA6Plus uses the pin assignment 1+/1+.

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



Internal pinout for IBZA6Plus enclosures

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



## 1.4 Processing and Amplification

Only operate Tecna® loudspeaker with a correctly configured Tecna preset. Tecna 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 our **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 do not go into clip.

The **DP4896** processors also include:

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

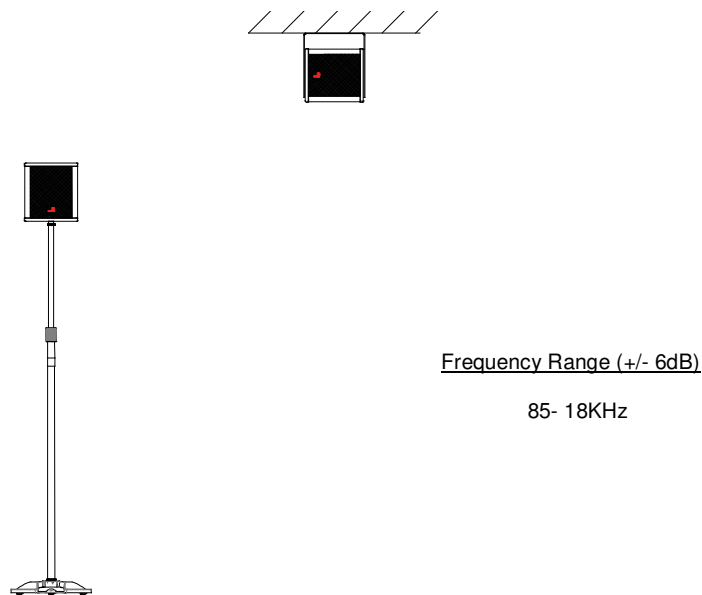
The **T10-44/T6-44** and **T-48 Series** amplifier is the ideal companions for maximum performance of the IBZA Series loudspeakers. This amplifier controller with DSP offer a complete both preset and protection solution for any application.

## 2 Loudspeaker Configuration

### 2.1 Point Source

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

IBZA6Plus 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.



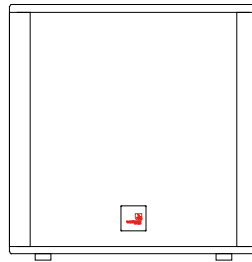
IBZA6Plus Standalone mode

### 2.2 Point Source with low-frequency element

In this configuration, the frequency response of the IBZA6Plus is extended in the low end.

IBZA6Plus 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 125 Hz for an optimal acoustic coupling with the enclosure.

If your IBZA6Plus 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.



IBZA6Plus + SW-118M

Frequency Range (+/- 6dB)

40- 20KHz

Recommended ratio

1xSW-118M: 4xIBZA6Plus

## 3 Configuration

Tecna® Sound Systems recommended operating the **IBZA6Plus** loudspeaker together Tecna loudspeaker controllers.

Tecna® 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 oversize power amplifier without the supervision of an expert may damage the loudspeaker.

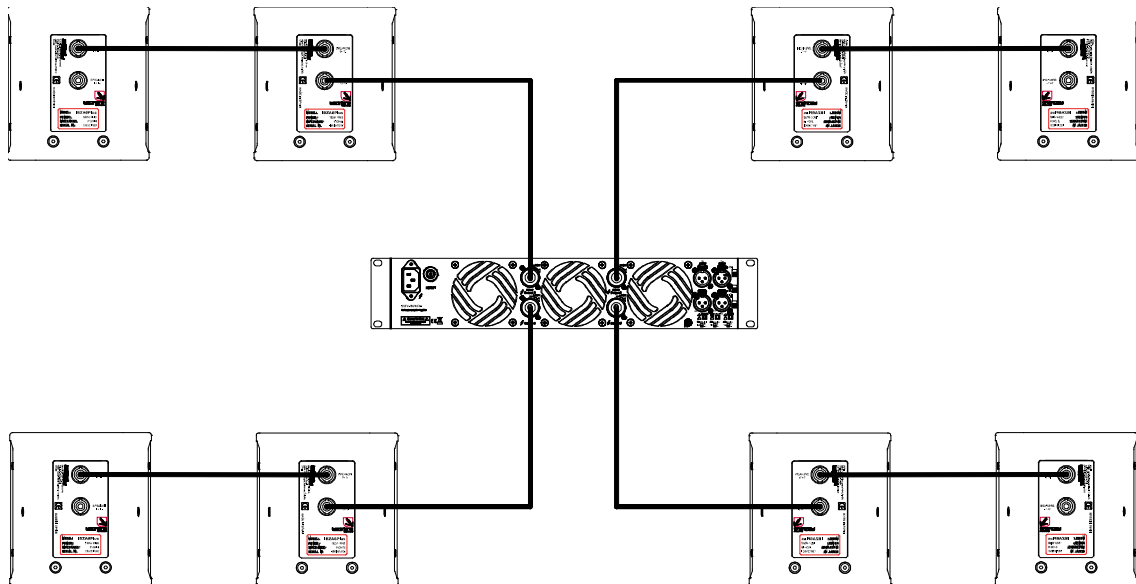
Please note the technical specification section.

### 3.1 Connection to PA4.450

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

2 x IBZA6Plus 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.

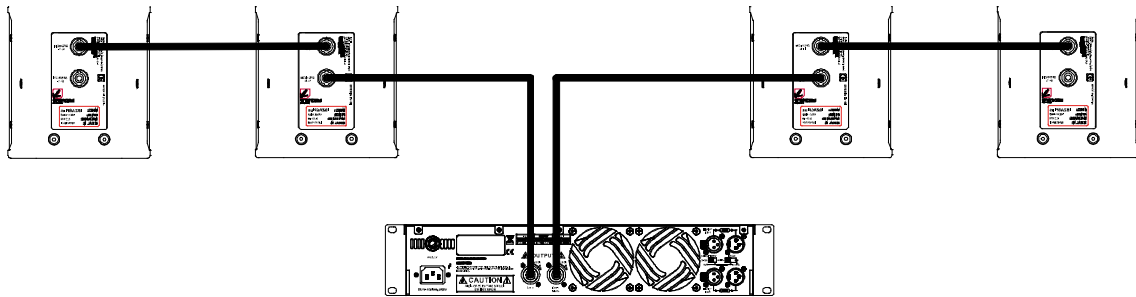


### 3.2 Connection to PA900

#### MAXIMUM OF 4 ENCLOSURES PER PA3000

2 x IBZA6Plus 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.

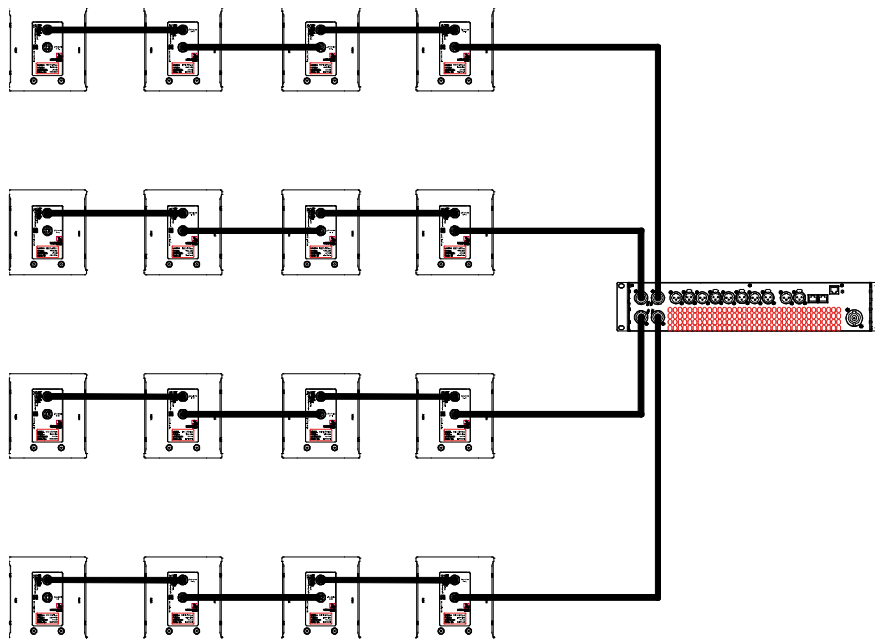


### 3.3 Connection to T-44 Series

#### MAXIMUM OF 16 ENCLOSURES PER T20-44

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 IBZA6Plus Using Subwoofers

### 4.1 Integrating IBZA6Plus Loudspeakers Systems with TecnaRE Subwoofers

An **IBZA6Plus** loudspeaker system can be deployed in combination with TecnaRE's subwoofers like a **SW-12, SW115, and 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 IBZA6Plus 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 IBZA6Plus for each SW-12 subwoofer and four IBZA6Plus 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.

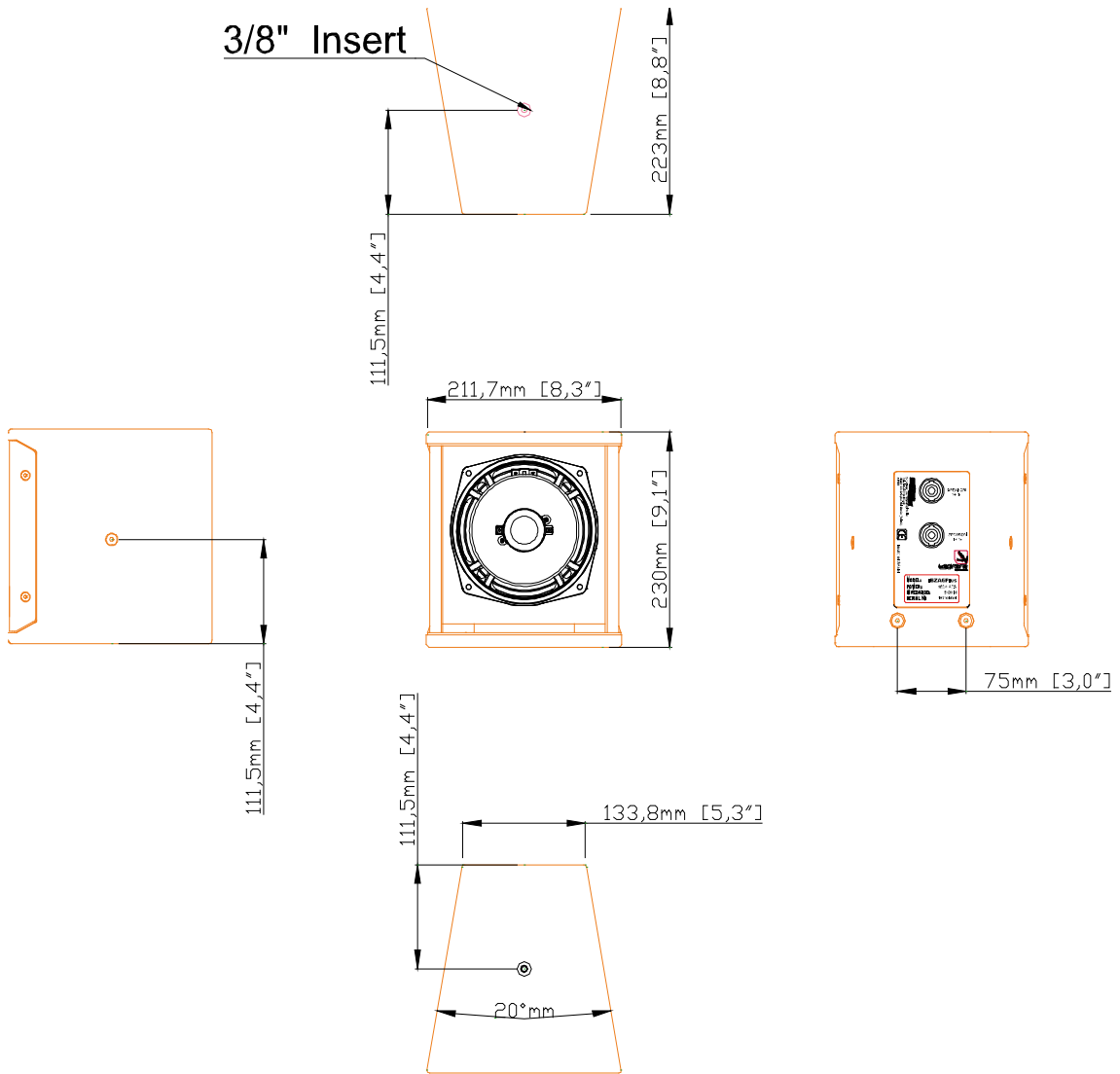
NOTE: If the subwoofer's amplifier/DSP Limit LED begins to light before reaching the required SPL, consider adding more subwoofers to meet the SPL requirements without exposing the drivers to excessive heat and excursion.
---



## 5 Technical specifications

### IBZA6Plus FULL-RANGE ULTRA-COMPACT LOUDSPEAKER SPECIFICATIONS

ACOUSTICAL	
<b>Operating Frequency Range</b>	85Hz -18 kHz±4dB, measured on axis. 125Hz-18kHz Recommended operating frequency range. Response depends on loading conditions and room acoustics
<b>Axial Sensitivity</b>	98 dB (1w/1m)
<b>Calculated SPL</b>	120 dB continuous/126 Peak
<b>Nominal Dispersion</b>	70° Axis-symmetric
<b>Power Handling</b>	160 W AES / 320 Continuous
COMPONENTS	
<b>Low Frequency</b>	1 x 6½-inch cone driver ferrite magnets, direct radiation, bass-reflex Nominal impedance: 8Ω Voice coil size: 2-inch Power Handling Capability: 150 W AES / 300 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 Neodymium. tweeter on coaxial-symmetric horn Nominal impedance: 8Ω Voice coil size: 1-inch Power Handling Capability: 10 W AES / 20 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+/- : NC
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-6Plus U-Bracket, Wall Bracket and Horizontal Array Frame
<b>Dimensions (HxWxD)</b>	230mm x 211,7mm x 223mm (9.05" x 8.31" x 8.78")
<b>Weight</b>	5,3 Kg. (11.68 lbs)
<b>Custom finish</b>	White code available on request Without charge. RAL code on special order.



IBZA6Plus Dimensions



*Reinventing The Rules*



©2017

*Tecnare Sound Systems. All rights reserved.*  
**IBZA6Plus** Operation manual

The contents of this manual are furnished for informational purposes only, are subject to change without notice, and should not be construed as a commitment by Exel Acoustics SL. Exel Acoustics assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual. Except as permitted by applicable copyright law, no part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording or otherwise, without prior written permission from Exel Acoustics. Tecnare and PCC-Net are trademarks of Exel Acoustics SL. Podware, System Engineer, BvNet, Smaart and all third-party trademarks mentioned herein are the property of their respective trademark holders.

Printed in Spain.

**EXEL ACOUSTICS SL**

CL Encinar, 282 - Pol. Ind. Monte Boyal  
45950 Casarrubios del Monte (To)  
Spain  
[support@tecnare.com](mailto:support@tecnare.com)

[www.tecnare.com](http://www.tecnare.com) - [www.facebook.com/tecnare](http://www.facebook.com/tecnare)  
(T): +34 918 170 110 - +34 918 171 001  
(F): +34 918 183 053

