



AMBIT-16

COMMERCIAL LOUDSPEAKERS
Surface Mount Loudspeakers



USER MANUAL

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1. PRECAUTIONS

1.1 Important Notice



WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



The flashing light with an arrowhead symbol inside an equilateral triangle on it is intended to alert the user of the presence of non-insulated “dangerous voltage” within the enclosure, which might be of sufficient magnitude to pose a risk of electric shock to users.



The exclamation mark within an equilateral triangle is intended to alert the user of the requirement for important operating and maintenance (servicing), for which instructions may be found in the literature accompanying the appliance.

WARNING (If applicable): Terminals marked with symbol “⚡” may be of sufficient magnitude to pose a risk of electric shock. The external wiring connected to terminals requires installation by a technician, or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or humidity.

WARNING: A device with Class I manufacturing ought to be connected to a mains socket outlet with a protective earthing connection.



WARNING: Ecler products have a long lifetime of more than 10 years. This product must never be discarded as unsorted urban waste, but must be taken to the nearest electrical and electronic waste treatment centre.

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1.2 Key Safety Directions

1. Read the following directions.
2. Keep the following directions.
3. Heed all warnings.
4. Follow all directions.
5. Do not use this device in proximity to water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that may release heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, being one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, contact a qualified electrician for a replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at the plugs, convenience receptacles, and at the point of exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the device during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug damage, liquid spillage or objects onto the device, the device has been exposed to rain or humidity, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket, therefore, it should always remain easily accessible
15. Equipment is connected to a socket-outlet with an earthing connection by means of a power cord.
16. The marking information is located at the rear/bottom of the unit.
17. The device shall not be exposed to dripping or splashing liquids, and no liquid-filled objects, such as a filled up glass, shall be placed on top of the device.

1.3 Cleaning Directions



Clean the unit with a soft, dry clean cloth or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

NEEC AUDIO BARCELONA, S.L. accepts no liability for any damage that may be caused to people, animal, or objects due to failure to comply with the warnings above.



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2. WARRANTY & ENVIRONMENT

**Thank you for choosing our Ecler AMBIT-16!
We greatly value your trust.**

It is **VERY IMPORTANT** to carefully read this manual and to fully understand its **contents before any connecting takes place** in order to make the best use of this equipment, as well as to get the best performance from it.

To ensure optimal operation of this device, **we strongly recommend that its maintenance be carried out by our authorised Technical Services.**

All ECLER products are covered by warranty, please refer to www.ecler.com or the warranty card included with this product for the period of validity and conditions.



Ecler is truly committed with the environment and planet sustainability, energy saving and CO₂ emission reduction. Recycling materials and using non-contaminant components are also top priorities in our green crusade.

Ecler has deeply evaluated and analyzed the environmental impacts of all the processes involved in the production of this product, including packaging, and has alleviated, reduced and/or compensated for them.

3. PACKAGE CONTENTS

- 2 x AMBIT-16
- Includes on-wall hardware, safety sling, screws and wrench for fast installation.
- Waterproof rubber cover for connectors.
- First Steps Guide.
- Warranty card.



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4. DESCRIPTION & FEATURES

AMBIT-16 is a compact 2-way coaxial loudspeaker cabinet with neutral and discreet design. It mounts a 6.5" woofer and a 1" tweeter and it is suitable for low and high impedance lines. AMBIT-16 is ready for indoor and outdoor applications, thanks to its aluminium grill and UV protection treatment (IP54-rated). Wall mount accessories and safety sling are included for an easy and secure installation.

The AMBIT range is more than just a line of acoustic cabinets for sound reproduction. AMBIT is the outcome of a study on the present and immediate future needs with respect to background music and announcements. Stores, large mall centres, schools, conference halls, hotels, industries, offices, museums, meeting rooms, hospitals, games areas... are just some of the most obvious places in which the AMBIT line can be directly applied. However, the Ecler design group has decided to go even further and, fully aware of the great variety of areas and situations in which acoustic cabinets can be used, has finally managed to fulfill the desires of the increasingly demanding installers and decorators:

- **A series of discreet cabinets that will go unnoticed**, blending into their surroundings. In this sense, the special shape of the AMBIT Series, with their rear parts in the shape of a cut off pyramid, enables the box to be installed flush with the wall in corner assemblies. Also, the box looks a lot smaller from the front than it actually is, as the back part is hidden from view.
- **A unique product. No other similar box exists.** The design is an exclusive Ecler design that is out of the ordinary, distinctive and, what is even more important, extremely adaptable to all kinds of situations. A two-way system with a treble loudspeaker that is concentric with the medium bass loudspeaker. The result is a square box that can be mounted in the most suitable position in terms of operation and aesthetics.
- **Configurable.** The AMBIT Series models have a switch that enables the cabinet to be configured depending on the purpose for which it is to be used. All the cabinets operate at high or low impedance and in this case, at different powers. Simple, fast and versatile.
- **The AMBIT packaging contains everything you need to anchor the boxes in the required position.** Each cabinet has two built-in guides on each of its 4 back sides, which, in combination with the U-bracket included, enables it to be placed in any position and direction. Allen wrenches, safety sling, safety screw; you will find everything included in each pair of AMBIT boxes to make them easy and quick to install.
- **The versatility of these cabinets together with a large program of mechanical accessories make it possible to install systems by grouping together** from two to as many boxes as are necessary to deal with virtually every need related to the reproduction of ambient music and announcement broadcasting.



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- **Reliability and Quality above all, AMBIT cabinets have a surprisingly good quality in terms of sound considering their dimensions.** This is possible thanks to their special shape, which enables a higher volume to be achieved than what could be imagined. A power capacity of 50W RMS and 91dB SPL at 1W 1m is difficult to equal in enclosures with the same features and price.

4.1 Main Features

- ABS 2-way architectural loudspeaker.
- 6.5" woofer / 1 " tweeter.
- Built-in audio transformer for 100V applications.
- 8Ω and 70/100V operation selector.
- Available in black (RAL9005) and white (RAL9016) colours.
- Spring loaded input terminals.
- IP54 rated.
- Anti UV cabinet avoids colour degradation in case of direct sunlight exposition.
- Waterproof rubber cover for connectors included
- [EASE files available](#)



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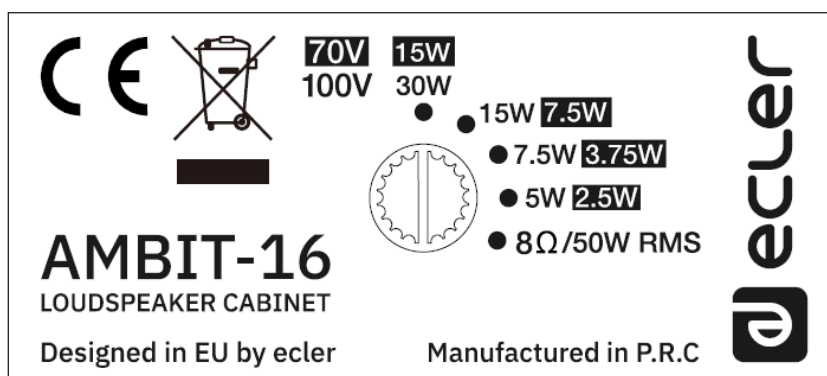
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5. CONNECTIONS

AMBIT-16 admits operation as high or low impedance. A 5-position switch is located at the back of the speaker and allows the selection of the operating mode.

The first 4 switch positions are to be used in conjunction with a 100V line. Using a 100V speaker distribution system has various advantages regarding installation flexibility. First, different types of loudspeakers (different power handling or impedance) can be used simultaneously as required in different zones. On the other hand, the 100V line system minimizes power loss due to cable resistance, as usually long cable runs are required in large installations.



AMBIT-16, has 4 power handling levels for the 70/100V lines. Depending on the intended use, the speaker output can be attenuated more or less. **In the zones where sound intensity should be low, place the switch in the 2.5W or 3.75W position. If sound intensity should be high, place the switch at 7.5W/15W.**

The 8Ω position corresponds to low impedance operation with a maximum power capacity of 50W RMS. When operating at low impedance you should always consider the limitations of the power amp when connecting several low-impedance speakers together. Impedances lower than 4Ω should be avoided. At low impedance operation and with long cable runs, the cables between the amplifier and the speakers should be as short as possible and have good quality.



All connections are on spring-loaded terminals.



Always respect polarity.



AMBIT-16 is shipped from factory with the switch in 100V/30W position. If it is connected to a low-impedance amplifier, the speaker will not be damaged but will perform way below its full potential. **If the speaker is accidentally connected to a 100V line in the 8Ω/50W position, it will be severely damaged.**



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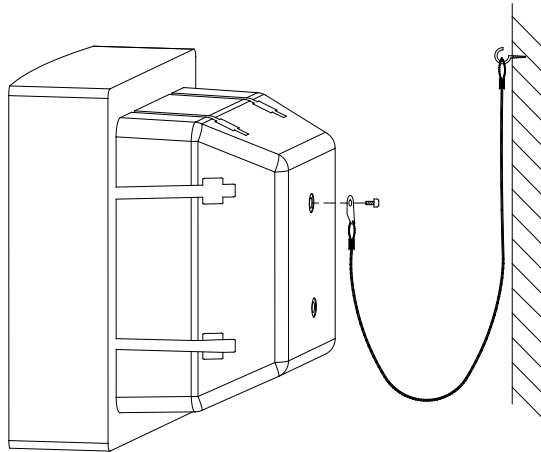
6. RECOMMENDED AMPLIFIER

The output power of the **recommended amplifier for AMBIT-16 is 100W RMS.**

7. PLACEMENT

! Consider following general rules:

- Place the acoustic enclosures on solid and firm surfaces.
- Always install the supplied security system (safety sling and screw) as shown in the diagram.



- No obstacles should stand between the enclosures and the audience.
- Although the speakers can be used outdoors, they should not be directly exposed to sunlight or rain.
- Always adjust the output sound pressure levels to the reproduction requirements. Despite their small size, they can produce significantly higher-pressure levels than home speakers.

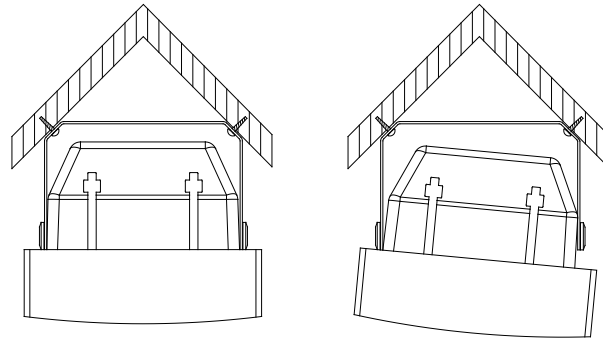
The two rails found on each of the four back sides of the AMBIT Series allow several installation positions. Speaker cables can be hidden from view by choosing an adequate mounting orientation.

💡 Although the inconspicuous AMBIT logo suggests mounting the unit with the input connectors on the upside and the selector switch on the downside, the enclosure can be mounted in any orientation because the high frequency driver is concentric, and the adhesive logo can be positioned anywhere.

Following diagrams show the most common installation procedures:

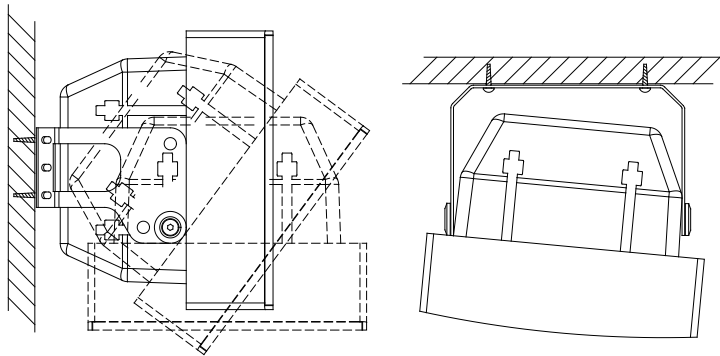
7.1 Edge / Corner

The U-bracket is mounted horizontally between two walls. In this case a 90° vertical tilt can be achieved, and by shifting the screws that are attached to the enclosure, up to 7.5° horizontal adjustment range is available.



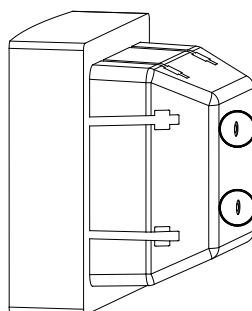
7.2 Wall / Ceiling

The U-bracket is mounted either horizontally or vertically, depending on the required tilt angle. The tilt amount is 90° in the perpendicular direction to the U-bracket, and 7.5° by shifting the enclosure attachment screws as in the previous example.



7.3 Other installation possibilities

AMBIT-16 has two embedded nuts on their back side at a normalized distance of 60mm, which not only serve as safety point for the steel sling, but also allow attachment to standard wall mounting supports.



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8.1 Technical Specifications

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System	
Effective frequency range ¹	97Hz-20kHz (-10dB)
Coverage angle ²	143°x140° (HxV)
Power handling	50 W RMS / 200 W Peak
Sensitivity ³	91 dB (1W/1m)
Maximum SPL ⁴	108 dB continuous / 114 dB peak
Power options	100V: 5W / 7.5W / 15W / 30W 70V: 2.5W / 3.75 W / 7.5W / 15W
Recommended amplifier power	100 W RMS
Transducers	
Ways	2-ways full range
Low frequency driver	6,5" woofer
High frequency driver	1" tweeter
Nominal impedance	8Ω
Physical	
Connection type	Spring loaded input terminals
Installation options	Surface, ceiling, corner (wall mount)
Environmental	IP54 rated
Enclosure material	ABS plastic
Grille material	aluminium
Operating temperature	Min: -10°C ; 14°F Max: 50°C ; 122°F
Operating humidity	<85% HR
Storage temperature	Min: -10°C ; 14°F Max: 50°C ; 122°F
Storage humidity	<90% HR
Included accessories	Includes on-wall hardware, safety sling, screws and wrench for fast installation, and waterproof rubber cover for connectors.
Finished colour	White (RAL 9016) or black (RAL 9005)
Dimensions (WxHxD)	210 x 210 x 160 mm / 8.27 x 8.27 x 6.30 in
Weight	2.75 kg / 6.06 lb
Pieces per box	2
Shipping dimensions (WxHxD)	420 x 272 x 465 mm / 16.54 x 10.71 x 18.31 in.
Shipping weight	6.10 kg / 13.45 lb

¹ below the sound pressure level at specified sensitivity.

² 6dB below the sound pressure level than that at the direction of maximum level, Max. angle between 1 kHz and 4 kHz.

³ Measured on-axis, far field and referenced to 1 meter by inverse square law. Average from 100 Hz to 10 kHz.

⁴ Calculated from sensitivity and power handling specifications, exclusive of power compression.



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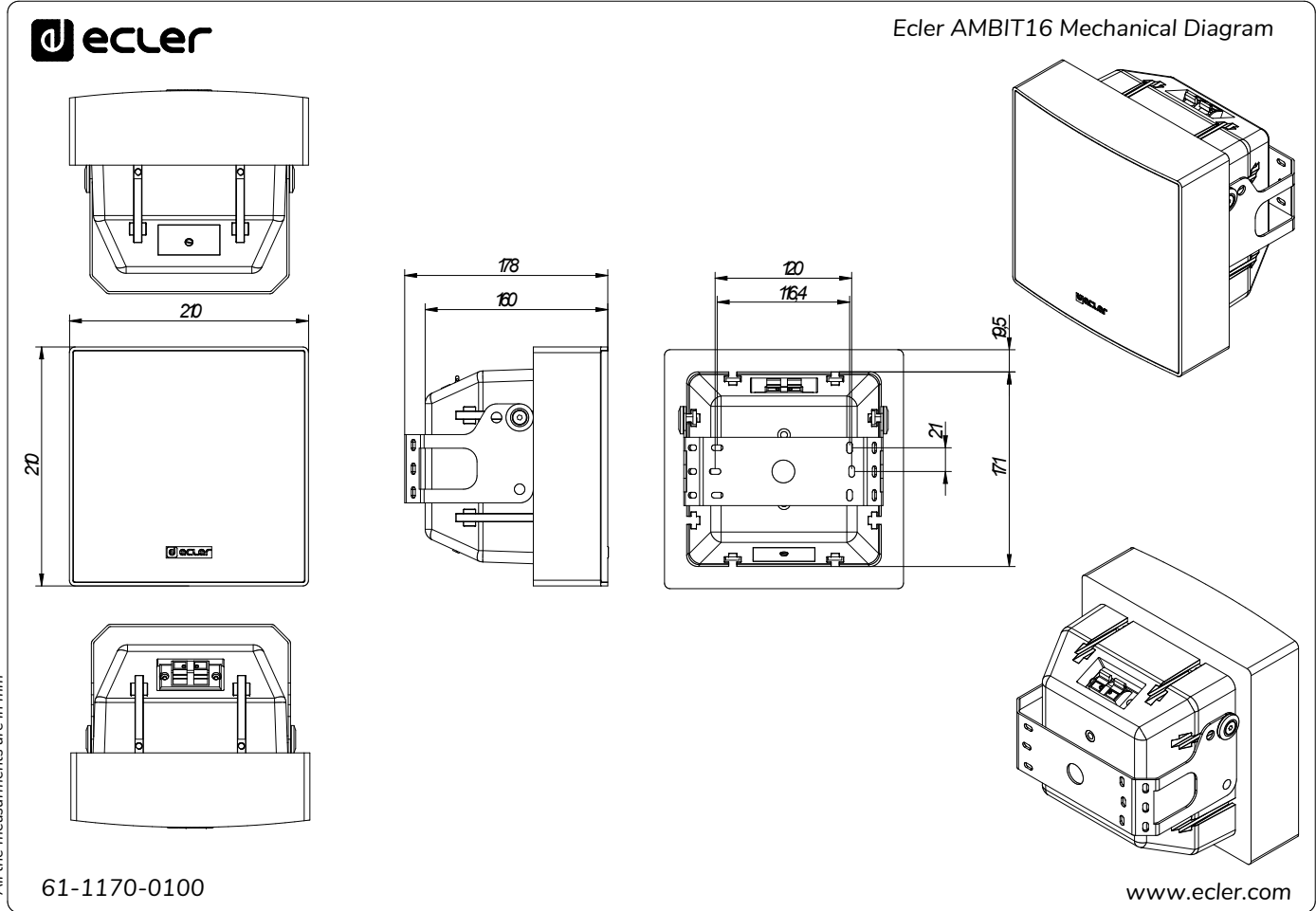
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8.2 Mechanical Diagram

All measurements are in mm.



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All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical queries contact your supplier, distributor or complete the contact form on our website, in [Support / Technical requests](#).

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