

EB-200

BLUETOOTH BASE STATION
E-200 SERIES INTERCOM SYSTEM

OWNERS MANUAL

Issue 19X10



AUDIO ELECTRONICS DESIGN

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1. INTRODUCTION

Congratulations on your purchase of the **ALTAIR E-200 SERIES** intercom system, bluetooth base station **EB-200**.

There are many characteristics that makes of the **ALTAIR EB-200** one of the most highlighted in the audio professional market, some are enumerated here:

- The unit incorporates a Class 1 bluetooth connection, which gives a theoretical maximum coverage of 100 meters.
- It is possible to connect it to the wired system ALTAIR E-200 ALTAIR, or to the wireless system ALTAIR WB-200.
- The radio link is performed on a compatible headset bluetooth, bluetooth hands free system or a mobile phone with bluetooth connectivity.
- You can make a radio link between two bluetooth extensions ALTAIR E-200, to interconnect two intercom systems separated 100 meters.
- Each bluetooth base station have one radio link.
- Pairing is easily set-up by just the pushing of a button.

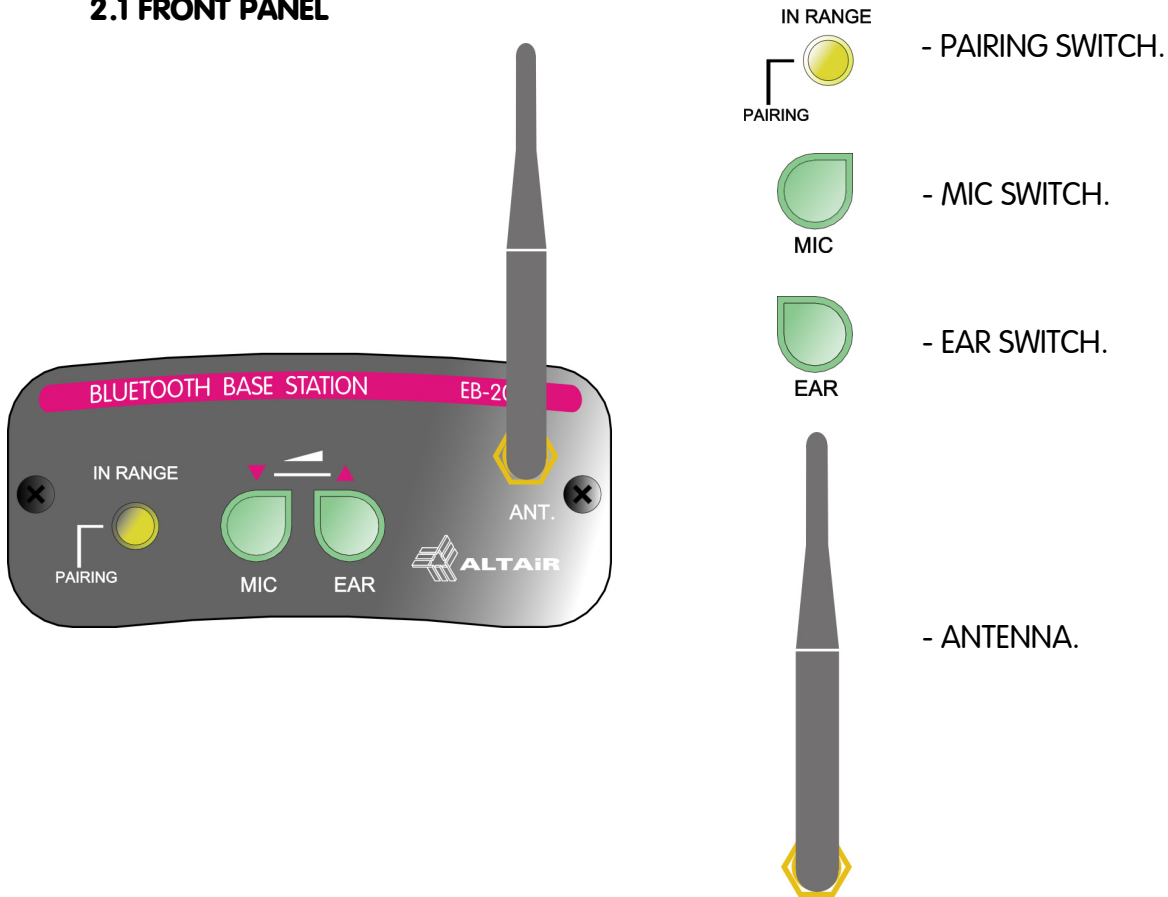
Before beginning it is important to read this manual. This manual will help you to install and use your new intercom master station. It is very important to read it carefully, mainly the paragraphs marked as NOTE, PRECAUTION and DANGER, for your security.

Save the original packing, you can re-use it to transport the unit. **NEVER SHIP THE ALTAIR EB-200 WITHOUT ITS ORIGINAL PACKING.**

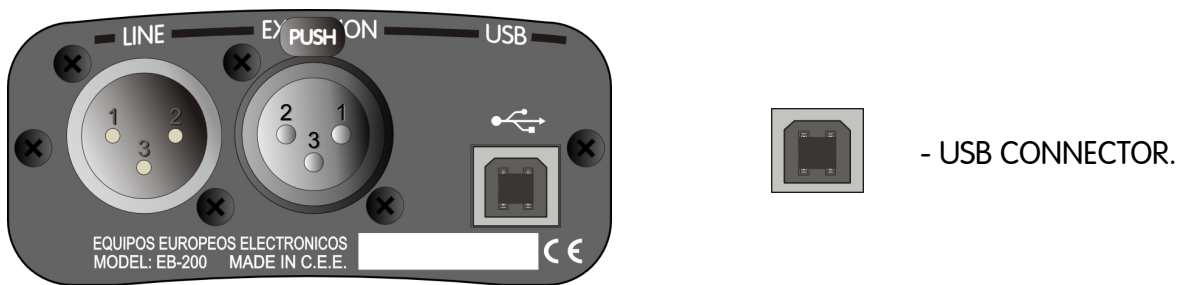
2. SWITCHES, CONTROLS, ADJUSTMENTS AND CONNECTORS

These are the switches, controls, adjustments and connectors that you can find in your ALTAIR bluetooth base station. The description and explanation of each one will be found in the corresponding section.

2.1 FRONT PANEL



2.2 REAR PANEL



3. OPERATION

The new bluetooth base station **ALTAIR EB-200** is compatible with the **ALTAIR E-200** cable based intercom systems.

This new first on the market station allows the operation of bluetooth devices into the intercom lines. Connection and operation are the same as a beltpack, just connect to the line and go.

The unit can connect with bluetooth headphones, bluetooth hands free, bluetooth mobile phones and even with another ALTAIR EB-200 unit.

Mic level and ear level can be independent adjusted to meet a broad range of devices' operation. Pairing is easily set-up by just the pushing of a button.

Applications include wireless replacement of a wired beltpack and headset, telephone interface from mobile phone calls, small wireless intercom systems among others.

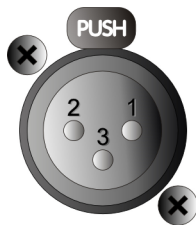
Operating range of the system depends of the headset device used or power class chosen.

In order to obtain the best performance, we recommend the use of class 1 devices, allowing a line of sight operation of 60 to 100 meter. When using standard low cost headsets, class 2 devices, the range will be reduced to 10 meters, but this would be enough for close communication as for example the operating room in technical desk operators.

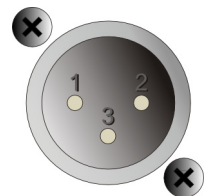
Another benefit of the system is the freedom to receive an external call from your mobile phone in the same headset and the possibility to wear the mixer headphones over the bluetooth headset.

3.1 INTERCOM LINE CONNECTION

The intercom line connection takes place by means of shielded two-conductor microphone cable type and XLR-3-31/XLR-3-32 connectors. The beltpack has a XLR-3-31 and a XLR-3-32 connectors wired internally in parallel. The next chart shows the distribution of the signals in the XLR connectors



XLR-3-31/XLR-3-32 – INTERCOM LINE	
PIN 1	0 V
PIN 2	+VCC
PIN 3	SIGNAL



In the power consumption calculation, must be taken into account that the bluetooth base station consume twice that the conventional EM-201 beltpack.

In the installation and connection of the intercom network it is necessary to keep in mind important rules in order to avoid earth loops, minimize the power loss and the effect of electromagnetic fields as much as possible:

- Pin 1 should not be connected to the shell of the XLR connector.
- Don't close the intercom line connection. Each intercom line leaves from the main station toward the remote stations, but it doesn't return to the main station.
- Use high quality cables and minimize its longitude. The DC resistance of a low quality cable or with a great longitude affects to the power consumption, the channels crosstalk and the system frequency response.

3.2 PAIRING SWITCH

The pairing button has two main functions, allows bluetooth units to pair and in the start up, erase the bluetooth pairing, which will be explained in detail in the correspondent section.

The associated LED blinks when the paired headset is under range. A continuous led blink shows an out of range situation, headset off or not paired device.



3.3 MIC SWITCH

The MIC switch allows to ON/OFF the headset microphone, so that we are able to speak with other units connected to the same intercom channel.

If the microphone is activated, its associated LED will light up, and on the other hand, if it is disabled, its associated LED will turn off.

The unit provides a MIC-KILL (turns off the MIC) system, so that when the mic is enabled it is possible to muted it by the MIC-KILL function of the master station ALTAIR EF-200 or ALTAIR WB-200/WB-202. This MIC-KILL system is compatible with other intercom systems of the market.

The microphone can always turn on the unit (if it is off), pressing the volume switch (VOLUME + / VOLUME -) of the bluetooth headset/hands free. Microphone status (ON / OFF) is not saved in the unit, when the unit is turned on, the MIC remains on.



NOTE: In most headsets, you can make a MIC mute by pressing and holding both VOLUME + and VOLUME - buttons at the same time. Consult the headset manual.

3.4 EAR SWITCH

The EAR switch allows to ON/OFF the headset listen, so that we are able to ear other units connected to the same intercom channel.

If the EAR is activated, its associated LED will light up, and on the other hand, if it is disabled, its associated LED will turn off.



3.5 ANTENNA

The bluetooth base station has an antenna connector ANT., to mount the antenna supplied with the equipment.

It is important to place the unit in upper area, to avoid interference and the antenna can radiate in open space.

3.6 PAIRING THE BLUETOOTH BASE STATION

In the pairing process between two bluetooth units, this units should not be connected with another bluetooth device at that moment, so unplug all connections bluetooth devices, prior to their pairing.

ALTAIR Unit EB-200 remains visible to other bluetooth units while not connected to another bluetooth device, in which case it will remain invisible.

The most common pairing is with a bluetooth headphones or a bluetooth hands free unit, in which case we set the unit you want to match the bluetooth base station in pairing mode, follow the instructions manual of the bluetooth headset/hands free unit to configure it this mode (in most headset and hands free bluetooth, pairing mode is set by press and hold the power button until it flashes between red and blue).

Once the bluetooth headset or hands free is in pairing mode, we will press and hold the pairing button until the LED associated with the switch flashes quickly. If the process has worked,





and the devices are paired, both devices will stop blinking, and after a few moments be connected, starting with flashing LED pairing bluetooth extension. If the routine fails, go back to complete the whole process again.

If we want to pair with another bluetooth base station ALTAIR EB-200, simply press and hold the pairing button on one unit, and follow the instructions above.

To pair with a mobile phone, you should make the entire operation from the mobile phone, looking for the bluetooth base station (ALTAIR EB-200), and pairing with it, and selecting automatic connection with the bluetooth device (follow the instructions of your mobile phone for pairing.)

The base station stores up to 5 bluetooth pairing with bluetooth devices. The unit connects to the first bluetooth device it finds (with which it is paired).

NOTE: The pairing password match of the ALTAIR EB-200 unit by default, is: 0000, suitable for most bluetooth devices. If you want to change, there is a software to do it through the USB connection of the unit.

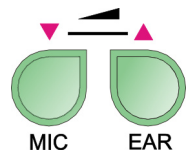
3.7 UNPAIR ALL UNITS

With the power unit (intercom base ALTAIR EF-200, WBS-200, etc.) turned off, press and hold the PAIRING button, and turn the unit on, until the PAIRING LED blinks one time. With a distant intercom powered unit, switching on or off the unit is made by disconnecting the XLR intercom line.



3.8 CHANGING THE HEADSET MIC GAIN

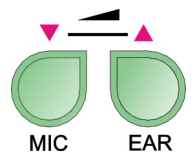
Press and hold the MIC button, and when the MIC LED, the EAR LED or both are blinking, press the MIC button to decrease the MIC gain (when the LED associated with the MIC switch stops flashing, we will have reached the minimum gain), or press the EAR button to increase the MIC gain (when the LED associated with the EAR switch stops flashing, we will have reached the maximum gain).



This function adapts the headset type to the intercom levels.

3.9 CHANGING THE HEADSET EAR GAIN

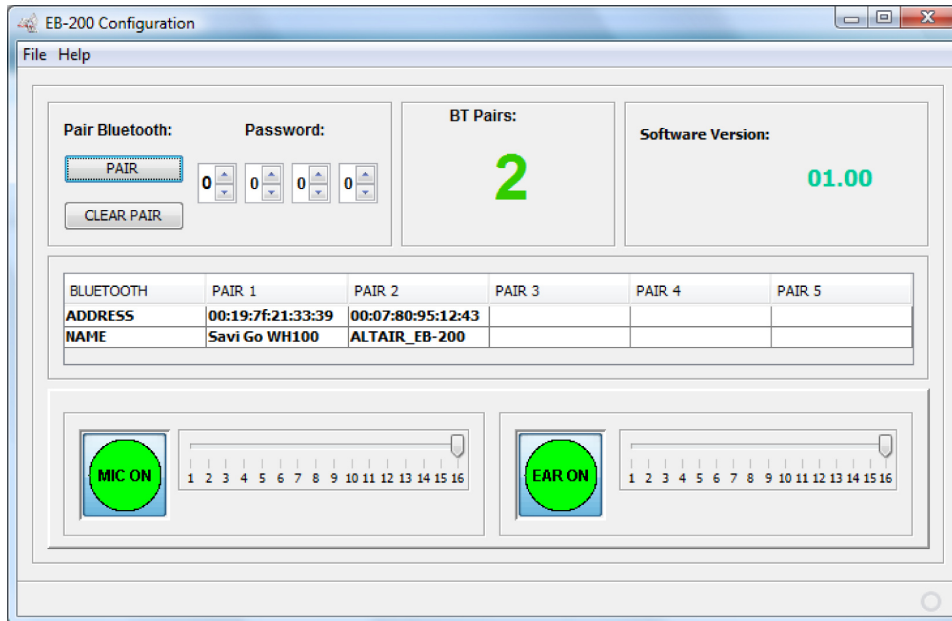
Press and hold the EAR button, and when the MIC LED, the EAR LED or both are blinking, press the MIC button to decrease the EAR gain (when the LED associated with the MIC switch stops flashing, we will have reached the minimum gain), or press the EAR button to increase the EAR gain (when the LED associated with the EAR switch stops flashing, we will have reached the maximum gain).



This function adapts the headset type to the intercom levels.

3.10 USB CONNECTOR

The USB connector is used for firmware upgrade and to control the unit by a PC, and change the pairing password, see the pairing units and control the mic and ear gains:



4. SPECIAL OPERATIONS

In order to set-up some of the single channel beltpack, the unit must be opened, removing the two external screws of its rear panel.

NOTE: This type of operations takes place with the unit open, for what it should be carried out by a qualified technician.

DANGER: Before opening the unit, disconnect it from the intercom channel and from the headset.

CAUTION: Protect the single channel beltpack from the rain and moisture, mostly if it is opened. If liquid is spilled into the unit, disconnect it from the intercom channel and consult a qualified service technician.

4.1 SIDETONE CONTROL

The sidetone control, placed inside the unit (P1, sidetone), adjusts the level of your own voice as you hear it in your headphones. It is designed to make approximately in the potentiometer halfway travelling the maximum cancellation of your own voice (that is to say that you won't hear your voice through the headphones), totally to the right or to the left giving the maximum level of voice, going by all the intermediates positions of level.

**5. TECHNICAL SPECIFICATIONS**

RADIO		
FREQUENCY:	• (2400 ... 2483,5) MHz.	
MODULATION:	• GFSK (1 Mbps). • P/4 DQPSK (2Mbps).	
TRANSMIT POWER:	Minimum	• -11 ... -9 dBm.
	Maximum	• +14 ... +18 dBm.
RECEIVE SENSITIVITY:	• -82 dBm typically	
INTERCOM LINE:		
• IMPEDANCE:	• 220Ω AC / 4700Ω DC.	
• NOMINAL LEVEL:	• -10 dBu.	
• MAXIMUM LEVEL:	• 3 dBu.	
• REMOTE MIC KILL:	• Power Interruption: 100 msg.	
SIDE-TONE CANCELLATION	• Adjustable: -12 – 30 dB @ 1 KHz	
POWER SUPPLY:	• 12 – 30 VDC. 24 VDC nominal.	
DC CURRENT:	• 60 mA	
DIMENSIONS:	• 120x80x25 mm.	
WEIGHT:	• 175 gr.	

NOTE: Technical specifications are subject to variation without previous notice.



9. WARRANTY

This unit is warranted by Equipos Europeos Electrónicos to the original user, against flaws in the manufacturing and in the materials, for a period of one year, starting from the date of sale.

Flaws due to wrong use of the unit, internal modifications or accidents, are not covered by this warranty.

There is no other warranty expressed or implicit.

Any faulty unit must be sent to the dealer or the manufacturer. The serial number of the unit must be included for any request to the technical service.

Equipos Europeos Electrónicos reserves the right to modify the prices or the technical specifications without further notice.

Nº de SERIE

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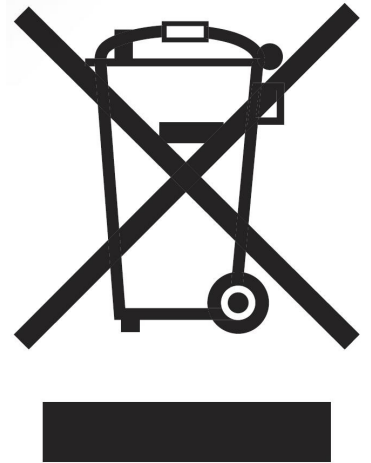
European Union Waste Electronics Information Unión Europea Información sobre residuos electrónicos

Waste from Electrical and Electronic Equipment (WEEE) directive

The WEEE logo signifies specific recycling programs and procedures for electronic products in countries of the European Union. We encourage the recycling of our products. If you have further questions about recycling, contact your local sales office.

Directiva sobre Residuos de Aparatos Eléctricos y Electrónicos (RAEE)

El logotipo de la Directiva RAEE se refiere a los programas y procedimientos específicos de reciclaje para aparatos electrónicos de países de la Unión Europea. Recomendamos el reciclaje de nuestros productos. Si tiene alguna consulta, póngase en contacto con su Distribuidor.



Information based on European Union WEEE Directive 2002/96/EC

Información basada en la Directiva de la unión europea RAEE 2002/96/EC y el Real Decreto 208/2005

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