



# Orpheo TourGuide

## Settings & User Manual

Reserved for Operations Personnel



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## SUMMARY

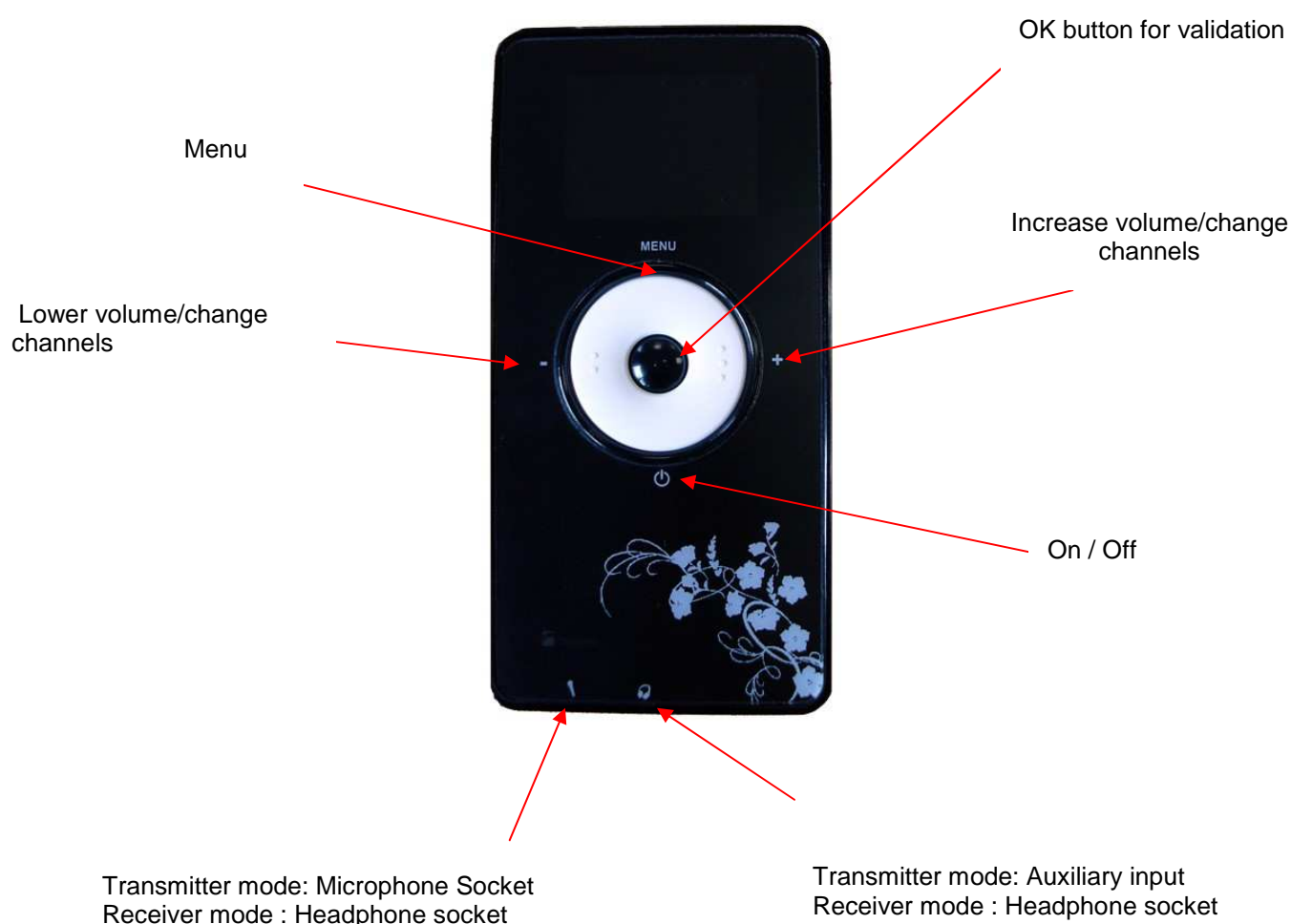
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## PREFACE

This manual describes the basic functions of the ORPHEO TourGuide System (otherwise known as OTG).

### QUICK REFERENCE GUIDE – ORPHEO TourGuide



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## I. INTRODUCTION

The *Orpheo TourGuide* is an easy-to-use portable wireless device. It transmits sound between a transmitter and one or more receivers. It has an operating range of **100 meters** in an open field with an unlimited number of users.

Up to **50 channels** can be used simultaneously for multiple groups which are composed of one guide and numerous visitors. This system can also be used for multilingual applications or for simultaneous translation.

It can be used in museums, industrial sites, zoos, attraction parks, touristic sites; everywhere tours are organised (indoor or outdoor).

Each OTG device can be set to Transmitter Mode or Receiver Mode.

## II. CHARGING RACK INTRODUCTION

There are 3 charging rack formats for Orpheo TourGuide: suitcase, rack mountable (standard width of 19"), or metallic frame. Each rack is composed of 24 slots, enabling the recharge of the batteries to be made rapidly and easily.



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### III. GETTING STARTED

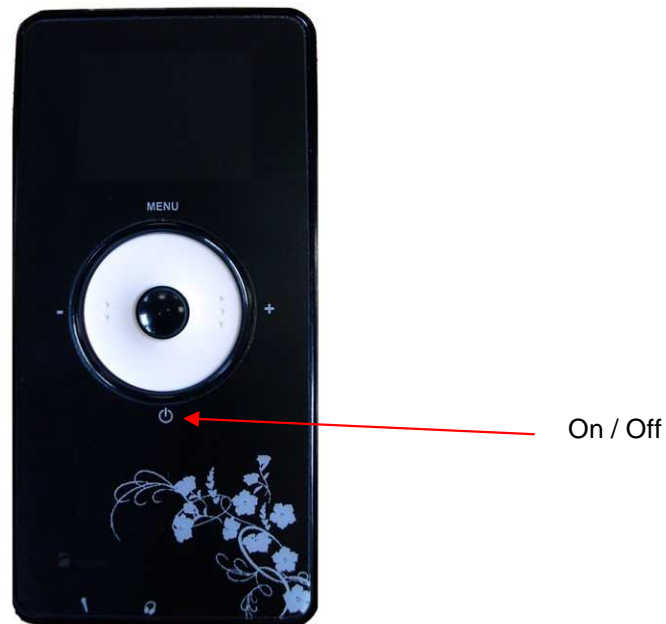
To switch on a device, press & release briefly the [ON/OFF] button.

To switch off a device (whether it is in transmitter mode or in receiver mode), press & hold the [ON/OFF] button for 2 seconds.

After a complete discharge of the battery or after a reset (see chapter IX), the device is switched off but it will keep the previous configuration in memory.

Note:

- Once it is switched on, the device will display its firmware version for 2 seconds.
- The device always keeps its previous configuration whether set to transmitter Mode or receiver Mode; this includes the configuration of audio inputs and outputs, the channel number and the volume level.



### Backlight

The device is equipped with an energy saving backlight on the display and LEDs on the sides of the device.

The backlight starts as soon as the user presses a button, and also when the device is first switched on.

The backlight stops automatically after 5 seconds of inactivity. Nevertheless, a short blinking flash indicates that the device is still powered on.

When the backlight is inactive, no information is visible on the display.

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## IV. USING THE DEVICE

After removal from the charging rack, the devices must be switched on by pressing the [ON/OFF] button.

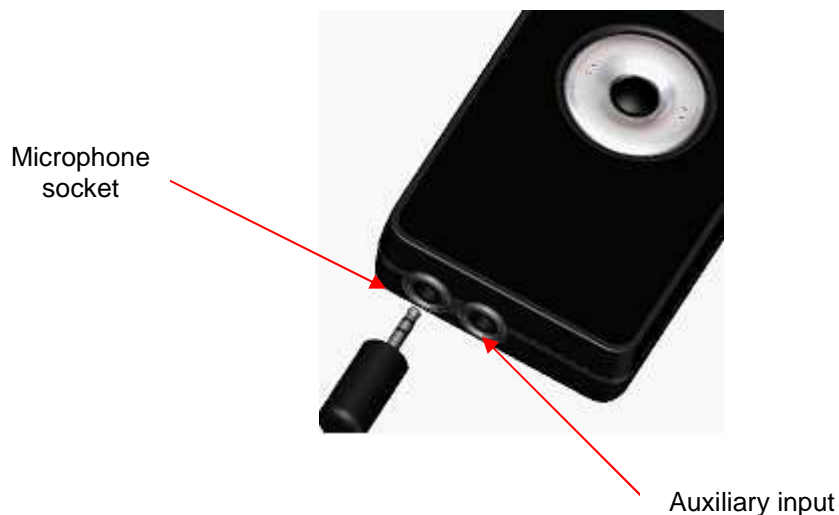
**Each device can be configured as a transmitter or as a receiver.**

As a quick reference, to know which mode a device is set to, look at the top, right corner of the display.

- Receiver mode: a headphone symbol is displayed
- Transmitter mode: a microphone symbol or AUX will be displayed

For more detail, please refer to sections VI (Receiver Mode) and VII (Transmitter Mode).

With a device that is set to transmitter mode, connect a microphone to the microphone socket (standard microphone jack 3.5 mm).



For devices in receiver mode, visitors using headphones can connect one or two earphone(s) (or headphone(s) simultaneously to the dedicated headset (standard jack 3.5 mm).

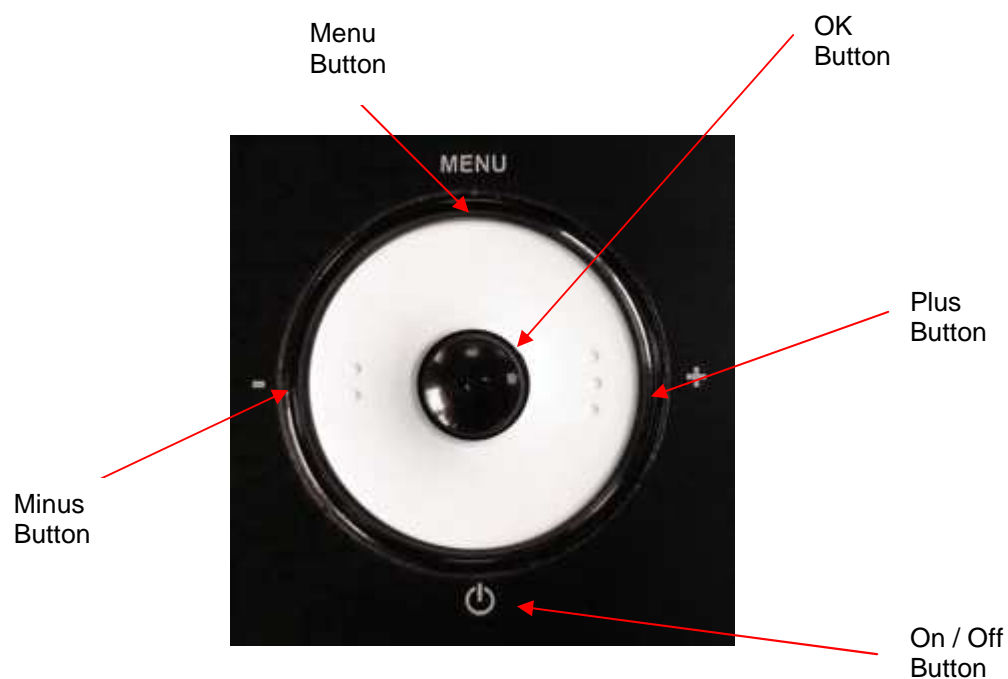


Next, all that is necessary is to start speaking into the microphone of the transmitter device. All of the receiver devices must be set to the same channel as the transmitter device and be at a distance less than 100 meters in open field.

Note: If the guide prefers use an auxiliary input rather than a microphone (for example, to connect an audio guide), the headphone socket/auxiliary input must be used. In this case, please refer to *Section VII Transmitter Mode/Select the source* to see how to configure the input source.

## V. SWITCHING BETWEEN TRANSMITTER MODE & RECEIVER MODE

To switch between transmitter and receiver modes, press the following combination of 7 buttons successively on a device. The *Orpheo TourGuide* will automatically restart in the opposite mode.



Button combination to switch modes:

[+] [-] [+] [MENU] [ON/OFF] [MENU] [OK]



## VI. RECEIVER MODE

### Main Screen

On the main screen of a device in receiver mode, the following information is displayed:

- The selected channel number appears in the middle of the screen. If the number is red, it indicates that the device is not receiving a radio signal. If it is green, the radio signal is being properly received.
- At the top of the screen, there is a line of icons which indicate the following (from left to right):
  - The remaining autonomy of the Orpheo TourGuide in hours is displayed beside the battery icon. This icon indicates the remaining energy. When the battery is low, the icon is displayed in red. The autonomy of the Orpheo TourGuide working in receiver mode is approximately 50 hours.
  - A small icon at the top of the screen symbolizing a headphone indicates that the device is set to receiver mode.
  - The reception level is indicated by an icon symbolizing an antenna and 5 ascending bars which replicate the standard used by cell phones; the stronger the signal, the more bars appear.



### Tuning and Configuration from the Main Screen

#### Adjust the sound volume

To adjust the sound volume, press the [+] and [-] buttons. Once the sound volume is chosen, the device will automatically return to the main screen.



#### Select the channel

To change the channel number, press the [MENU] button and select the channel by pressing the [+] and [-] buttons. Then, validate your choice by pressing the [Ok] button.



Note:

When a new channel is selected, the device will indicate with a color code whether or not a signal is being transmitted on the channel:

- If the channel number is blue, the device is scanning the channel.

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- If the channel number is green, this indicates that the device has found a valid signal, i.e. that the channel is available for transmission.
- If the channel number is red, it indicates that transmission is not occurring; this could be caused if the device is set to the wrong channel or if it is too far away from the transmitter.

## VII. TRANSMITTER MODE

### Main Screen

On the main screen of a device in receiver mode, the following information is displayed:

- The channel number is displayed in the middle of the screen.
- At the top of the screen, there is a line of icons which indicate the following (from left to right):
  - The remaining autonomy of the Orpheo TourGuide in hours is displayed beside the battery icon. This icon indicates the remaining energy. When the battery is low, the icon is displayed in red. The autonomy of the Orpheo TourGuide working in transmitter mode is approximately 20 hours
  - A small icon at the top of the screen symbolizing a microphone indicates that the Orpheo TourGuide is presently in transmitter mode.
  - If the selected input is auxiliary AUX will appear in place of the microphone symbol.



### Tuning and Configuration from the Main Screen

#### Adjust the input gain

To adjust the input gain of the microphone or of the auxiliary input, press the [+] and [-] buttons. Once the level is chosen, the device will return automatically to the main screen.



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### Select the channel

To change the channel number, press the [MENU] button and select the channel by pressing the [+] and [-] buttons. Then, validate your choice by pressing the [Ok] button.

Note: when selecting a new channel, the device will indicate if that channel is free or occupied. This information is provided by color code:

- If the channel number is blue, the device is scanning the channel.
- If the channel number is green, it indicates that the channel is available and can be selected.
- If the channel number is red, it indicates that this channel is being used by another group or that this channel has interference from another transmitter.



### Select the source

To configure the input source (auxiliary or microphone), from the main screen, press the [MENU] button 3 times. Select the input type by pressing the [+] and [-] buttons. Validate your choice by pressing the [Ok] button.



### Using the microphone/auxiliary sources simultaneously

When the selected input source is set to microphone, holding down the OK button will allow you to send pre-recorded commentary via an Orpheo audio guide. When using OTG with an Orpheo audio guide, the volume level of the audio guide should be set to 10%.

On the contrary, when the selected input source is set to auxiliary mode, holding down the OK button continuously will allow you to speak through the microphone.

### Send the configuration via the charging rack

It is possible:

- To switch all the devices into receiver mode
- to transfer the channel number of one device to the other devices via the charging rack.



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To switch the device into “configuration transfer mode”:

- take a device already in transmitter mode
- press the [MENU] button twice. When this mode is selected, a yellow arrow will be displayed on the screen inviting the user to insert the device in the master slot of the charging rack (top right of the charging rack).



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## VIII. CHARGING RACK

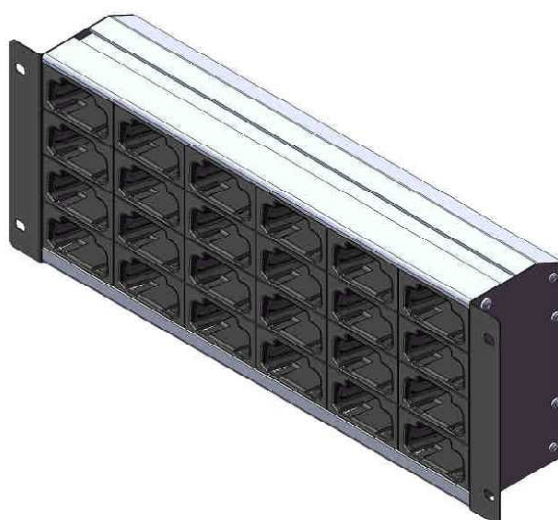
### Charging Rack Configurations

The charging rack can be delivered in 3 different configurations.

- The suitcase model convenient for traveling:



- The rackable format for integration into a standard 19 inch bay. The charging rack has a height of 4U and can be mounted with M6 screws.



- A free-standing format to set on a counter or mount to a wall. To mount the charging rack to a wall, it is necessary to fix 2 clips to the wall (provided by us) which the charging rack can be attached to.



Whichever chosen configuration, the charging rack is composed of 24 slots for recharging and configuring multiple devices. The power supply is connected to the charging rack via the JACK DC plug and to the electrical network via an IEC cable. Once the cable is properly connected, the charging rack is ready to use.

#### Important remarks:

- The power supply is compatible with all international electrical networks (110V-230V 50Hz/60HZ).
- The power supply and the charging rack must be ventilated to avoid any overheating. It is forbidden to charge the devices with the cover closed (suitcase model).
- The charging rack is foreseen to work in a temperature range of 5°C – 40°C.
- The charging rack can be used both horizontally and vertically.

## Charging the Batteries

To recharge the battery of an *Orpheo TourGuide* device, insert it into an available slot in the charging rack. If it is properly connected and the charging rack is supplied to a power source, then the LED of the *Orpheo TourGuide* will switch on.

When the red LED on a device is solid, this means that the Orpheo Tour Guide is well connected to the power supply and the battery is in the process of analysis. This phase can have a duration of 45min if the battery was completely discharged.

When the red LED is blinking, it means that the battery is currently charging.

When the green LED is blinking, it means that the battery is charged at 80% or above. This step is usually reached after 5 hours.

When the green LED of a device is solid, this means that the battery is fully charged. The complete charge takes about 6 hours.

If the red LED and green LED are blinking simultaneously, this means the charge is not possible due to the temperature of the device being outside the limits (less than 0°C or more than 45°C).



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## Group Channel Programming

It is possible to configure a group of receivers via the charging rack (the charging rack must be connected to a power supply).

Connect the devices in receiver mode (from 1 to 23) in the charging rack. Reserve the Master Slot to insert a device in transmitter mode (see schema below).

If, among these 23 devices, some are in transmitter mode, they will be switched automatically to receiver mode.

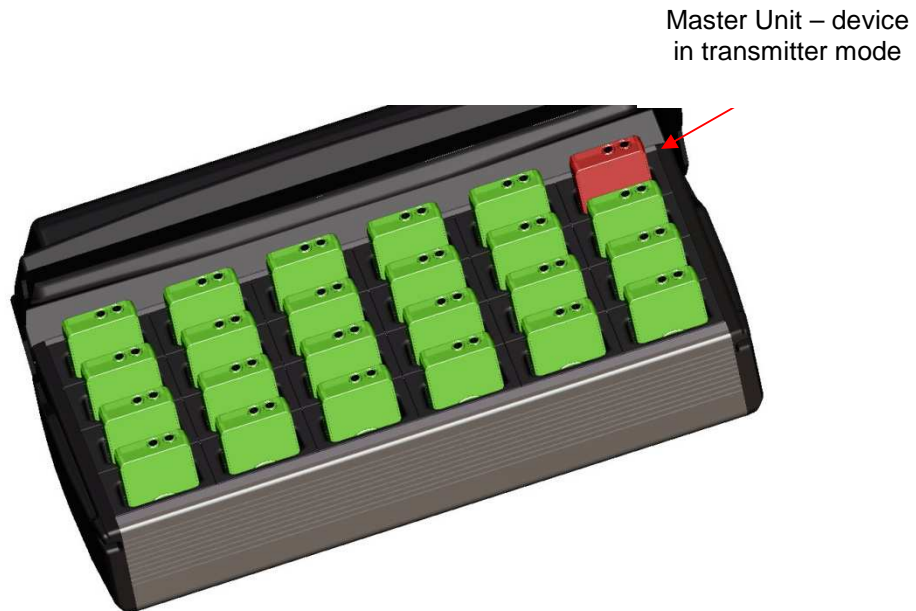


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Next, start a device in transmitter mode. Choose the desired channel and press the [MENU] button twice from the main screen. The yellow arrow will be displayed on the screen. Insert the device (in transmitter mode) into the charging rack in the dedicated slot (see schema below).



(Colors modified for illustration only)

As soon as it is inserted, the device in transmitter mode transfers its channel number to the devices in receiver mode. A lighted indication (backlight) on each device indicates that the configuration process has been transferred successfully. The devices which remain switched off have not received the channel configuration; they must be reconfigured again after checking first that they are properly connected. The other devices can be disconnected and used normally. After configuration transfer, the device in transmitters mode can be used directly as it is after it has been removed from the charging rack.

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## IX. RESETTING THE ORPHEO TOUR GUIDE

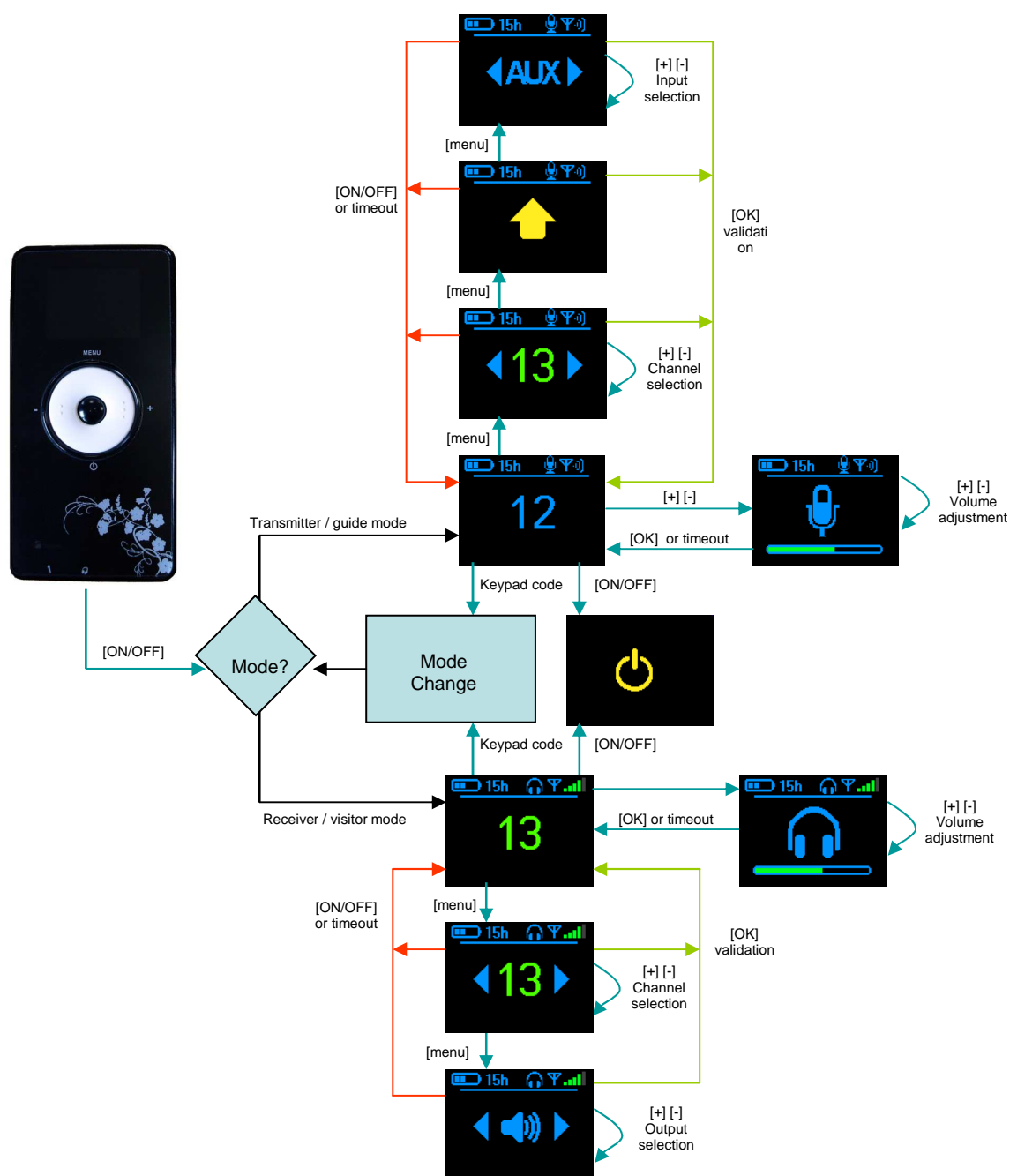
If the *Orpheo TourGuide* does not work properly, it is possible to reset by setting the ends of a paper clip on the 2 points on the back of the device as shown below.

Note: it is advisable to do this when the devices are travelling and/or if they won't be used for a week or so at a time.



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## X. MAP OF AVAILABLE USEAGE MODES



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## XI. TECHNICAL SPECIFICATIONS

### Orpheo Tour Guide

#### General:

- Each device can be configured as a transmitter or as a receiver
- Display : OLED screen color 128 x 96
- Dimensions (l x L x H) : 9,5 x 5 x 1,6 cm
- Weight : 114g
- Keypad 5 buttons with Pico

#### Energy:

- Battery : 2100mAh lithium polymere 3.7V
- Autonomy: Receiver: 50 hours / Transmitter: 20 hours
- Indication in hours for remaining autonomy.
- Full charge cycle: 6 hours (80% after 2 hours)
- Temperature range for operation: -10°C ~ 40°C
- Temperature range for battery recharging: +5°C ~ 35°C

#### Radiofrequency:

- Frequency range: ISM/SRD 2400 – 2480MHz
- Adjustable frequency management up to 50 groups at the same time
- Integrated antenna
- Operating range: 100m (open field)
- Power : 3dBm
- Sensibility: -103dBm
- Adjacent channel rejection: 23dB
- Indication of reception quality
- Automatic detection of a channel availability

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#### Audio:

- Audio quality: digital flow 8KHz 16bits PCM mono.
- Audio input: microphone and auxiliary  
Signal noise ratio: 95dB / Distorsion : -80dB
- Audio output: integrated louspeaker, 2 headphone plugs  
Signal noise ratio: 98dB / Distorsion : -84dB
- Compatible with induction loop (accessibility ear-impaired)

#### Charging rack

##### 3 possible Configurations:

- Suitcase
- Compatible with 19 inches bay (4U)
- Freestanding or mounted on a wall

24 slots

Power supply: 100V – 240V AC 50Hz / 60Hz 70W

Thermal Protection

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## IMPORTANT NOTE:

"NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and

used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user

is encouraged to try to correct interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If any changes or modifications not expressly approved by Ophrys Systèmes could void the user's authority to operate the equipment

This device complies with FCC RF radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC ID : VWEORPOTG

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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**OPHRYS Systèmes**

6 rue Valérien Perrin  
38170 Seyssinet-Pariset  
France  
Tel: +33 (0)4 38 12 40 60  
Fax: +33 (0)4 76 96 22 34  
Email: [support@ophrys.net](mailto:support@ophrys.net)  
[www.orpheogroup.com](http://www.orpheogroup.com)

**ORPHEO – USA Corp.**

315 Madison Ave, Suite 2601  
New York, NY 10017  
Tel: 212-464-8255  
Fax: 212-918-9159  
[info@orpheo-usa.com](mailto:info@orpheo-usa.com)  
[www.orpheogroup.com](http://www.orpheogroup.com)

**ORPHEO – France**

17, rue de Montreuil  
75011 Paris  
Tel : +33 (0)1 40 09 53 39  
Fax : +33 (0)9 54 67 47 76  
[info@orpheo.fr](mailto:info@orpheo.fr)  
[www.orpheogroup.com](http://www.orpheogroup.com)

**ORPHEO – Deutschland GmbH**

Postfach 60 12 53  
14412 Potsdam  
Tel : +49 (0)331- 5852 553  
Fax : +49 (0)3212- 95 19 959  
[info@orpheo-deutschland.de](mailto:info@orpheo-deutschland.de)  
[www.orpheogroup.com](http://www.orpheogroup.com)

**ORPHEO – Italia S.R.L**

Corso Vittorio Emanuele II 18  
00186 Roma  
Tel : +39 (0)66- 921 499  
Fax : + 39 (0)69 16 57 74  
[carla@orpheogroup.com](mailto:carla@orpheogroup.com)  
[www.orpheogroup.com](http://www.orpheogroup.com)

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Orpheo electronic equipment conforms to DEEE

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