



Command of electric heater by wire pilot ZigBee™ ZPILOT

User Manual



Revision: 1.0

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WARRANTY

The device supplied to the buyer and/or the recipient is guaranteed by CLEODE against any malfunctions originating from a design and/or manufacturing flaw, for a period of twelve (12) months following delivery. The buyer and/or recipient is (are) responsible for proving the existence of the said defects or flaws. This warranty is applicable in accordance with articles 1641 to 1648 of the French Civil Code and in compliance with the French statutory warranty. The warranty covers the replacement free of charge of devices and parts affected by a design and/or manufacturing flaw excluding conspicuous defects in the device that are covered by the buyer and/or the recipient.

In order to invoke the warranty, the buyer must immediately send written notice to CLEODE of the flaws that it attributes to the device. It must enable CLEODE to have access to the device to observe these defects and repair them. The warranty provided by CLEODE is strictly limited to the equipment provided and shall only have for effect the replacement or repair, at CLEODE's expense, on its own premises, of all devices or parts that are not functioning as a result of defects or flaws. CLEODE reserves the right to modify the devices in order to comply with the warranty.

The warranty does not apply to replacement or repairs that may result from normal wear and tear of devices, systems or products, damage or accidents resulting from negligence, failure to supervise or maintain, or incorrect use of the devices, systems and/or products.

The maintenance service is provided by CLEODE with all reasonable care possible and in compliance with the current state of the arts.

The exchange of parts or repairs performed under the warranty cannot result in extending the length of the warranty. In no event can the unavailability of the device due to servicing give rise to compensation for any reason whatsoever. The seller is released from all obligations relating to the warranty if the product or device has been modified without prior written consent, or if original parts have been replaced by parts which it has not manufactured without prior consent. If unforeseen damage is caused by the device, it is expressly agreed that the seller can only be liable for the reimbursement of monies received for the purchase of the device if it has been destroyed. Under no circumstances can the seller be held liable for indirect or contingent damage. The seller is released from any liability and the buyer waives any rights against it if an accident or direct or indirect damage is caused to the buyer following a defect, incorrect usage, incorrect maintenance or normal wear of the device sold.

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TABLE OF REVISIONS

Version	Authors(s)	Version description	Date
0.1	CLEODE	Initial version	27/08/2012
1.0	CLEODE	Validated document	03/09/2012

REFERENCE DOCUMENTS

N°	Document	Description
[1]	ZigBee_Cluster_Library_Public	Spécification de la Zigbee Cluster Library
[2]	ZigBee_Home_Automation_Profile	Spécification du profile Home Automation
[3]	ZigBee_Specification	Spécification de la norme ZigBee

I INTRODUCTION

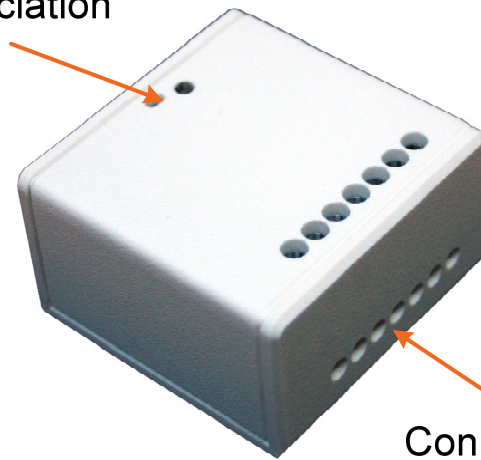
I.1 Command of electric heater by wire pilot ZigBee™ presentation

The system of command of electric heater by wire pilot ZPILOT allows commanding electric heater.

The ZPILOT also integrates the function of router ZigBee™.

The ZPILOT has this form:

Button and light of
association



Connecting



The module ZPILOT works in conjunction with a Zigbee coordinator™ compatible stack pro 2007.

CLEODE also markets Coordinators Zigbee™.

Contact : support@cleode.com ou Web : www.cleode.fr for more information

I.2 Copyright

The CLEODE trademark and the CLEODE logo are properties of CLEODE SA, France. This document also refers to trademarks and other product names that are registered trademarks of their respective owners.

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II ZPILOT DESCRIPTION

II.1 ZigBee presentation

The system of command of electric heater ZigBee™ contains application type *Heating unit* defined in the standard Home Automation (Cf. document [2]).

This node is fully compliant with the ZigBee™ PRO 2007 and Home Automation profile. For more detail on the data exchange between device and network, see documents [1], [2] and [3].

II.2 Heating unit application

The system of command of electric heater allows to emit 6 orders following the heaters electric:

- Comfort
- Comfort – 1 °C
- Comfort – 2°C
- Economic
- Frost protection
- Off

II.2.1 Heating unit application description

- Device ID: On/Off output
- Endpoint number: 1
- Clusters:

Server	Client
Basic (0x0000)	/
Identify (0x0003)	/
Groups (0x0004)	/
Scenes (0x0005)	/
On/Off (0x0006)	/
Pilot Control (0xFC01)	/

II.2.2 Clusters description

This is a terse description of clusters and attributes which are implemented in the ZPILOT. For more detail on these, see document [1].

- Basic cluster :

This cluster is used to determine basic information about the device.

Attribute	Attribute ID
ZCLVersion	0x0000
ApplicationVersion	0x0001
StackVersion	0x0002
HWVersion	0x0003
ManufacturerName	0x0004
ModelIdentifier	0x0005
DateCode	0x0006
PowerSource	0x0007
LocationDescription	0x0010
PhysicalEnvironment	0x0011
DeviceEnabled	0x0012
AlarmMask	0x0013

- Identify cluster :

This cluster is used to put a device into an identification mode. By writing the *IdentifyTime* attribute value, the user asks the device to blink the light, during a number of seconds specified by this value.

Attribute	Attribute ID
IdentifyTime	0x0000

- Cluster Groups:

This cluster allows storing the name of the groups to which the ZPILOT belongs.

Attribute	Attribute ID
NameSupport	0x0000

▪ Cluster Scenes:

This cluster allows managing the scenes of which are a part the ZPILOT.

Attribute	Attribute ID
SceneCount	0x0000
CurrentScene	0x0001
CurrentGroup	0x0002
SceneValid	0x0003
NameSupport	0x0004

▪ On/Off cluster:

This cluster is used to switching the device between ON and OFF states.

Attribute	Attribute ID
On/Off	0x0000

When this attribute value is ON, the last used mode is emitted on the wire pilot. The value OFF emits the mode OFF on the wire pilot.

▪ Pilot Control :

This cluster is used to change the mode on the wire pilot.

Attribute	Attribute ID
Mode	0x0000

The attribute Mode allows to know the order emitted on the wire pilot.

This cluster is a cluster owner to the company CLEODE. To modify this value, the writing must be made by using to manufacture code CLEODE = 0x10B9.

The attribute Mode can take the following values:

Mode	Values
Comfort	0x00
Comfort – 1°C	0x01
Comfort – 2°C	0x02
Economic	0x03
Frost protection	0x04
OFF	0x05

It is possible to modify the value mode by writing or by sending the SET_MODE command corresponding to the value 0x00 followed by the mode in which you wish to place your electric heater.

So that the mode is taken into account by the ZPILOT the value of the cluster ON/OFF must be put to ON.

III INSTALLATION AND NETWORK ASSOCIATION

III.1 Installation

III.1.1 Double-sided tape installation

To mount the ZPILOT with a double-sided tape, follow this:

- 1) Stick a double-sided tape on the ZPILOT bottom
- 2) Dust the wall
- 3) Mount the ZPILOT on the wall

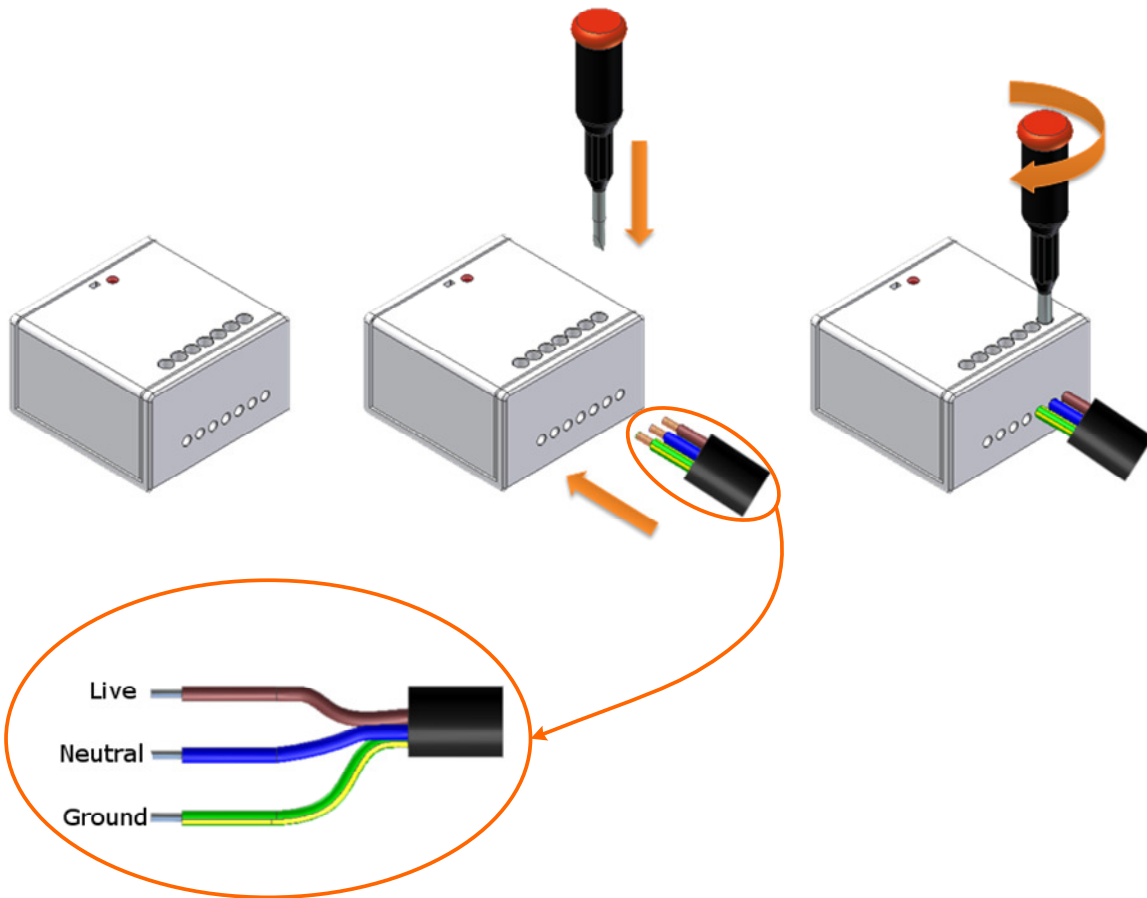
III.1.2 Connecting

To connect the ZPILOT, follow the procedure this below.

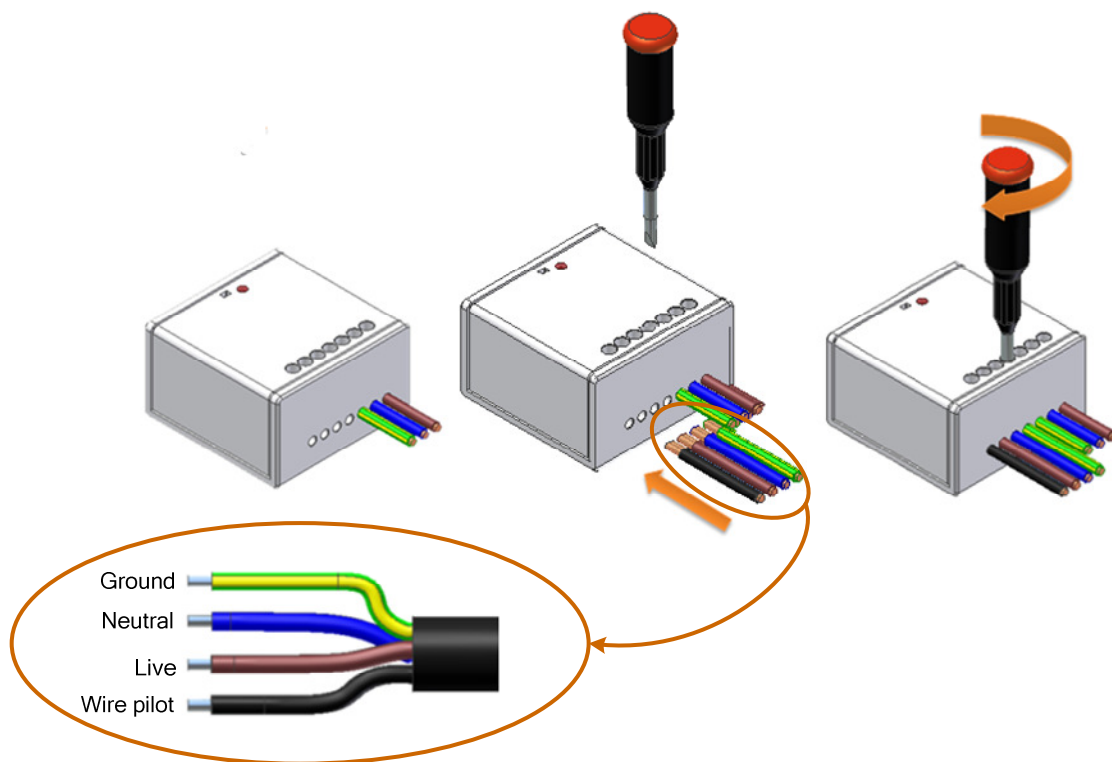
Connect the supply of the ZPILOT as indicated below.



Attention: Shut down the power supply before any intervention and it till the end the manipulations.

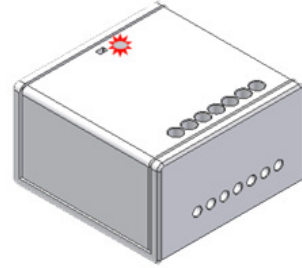


Connect the wire pilot on the ZPILOT.

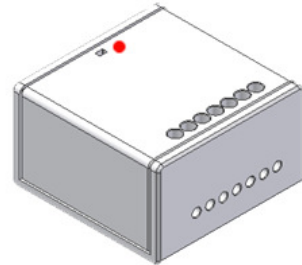


III.2 Starting up ZPILOT

In the switched on of the object, it tries to join during about seconds and flashes twice.



If a coordinator is present and what it authorizes the ZPILOT to join the network, the light of the ZPILOT flashing during 2 seconds then turn off.

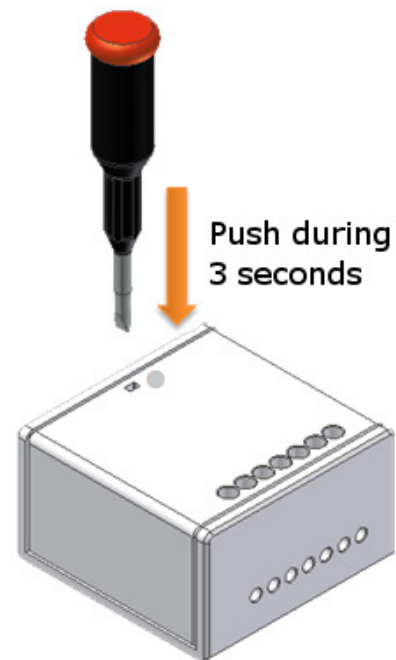


In the cases where the association is not possible, the object is going to put itself in sleep and to try automatically to join at the end of 15 minutes. This time will increase twofold in every new failure of the association.

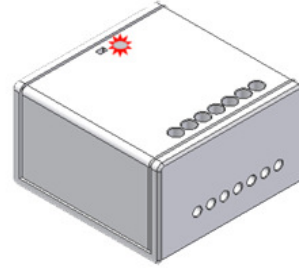
III.3 Restart of the association phase

If the ZPILOT is not associated, the user can ask him at any time to join a network.

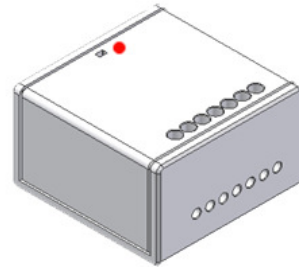
For this, the user has to press during 3 seconds on the button.



If the ZPILOT was not associated it begins flashing quickly during 20 seconds. The ZPILOT looks for a coordinator during this blinking.



If the association is success, the light of the ZPILOT flashing during 2 seconds and turn off.

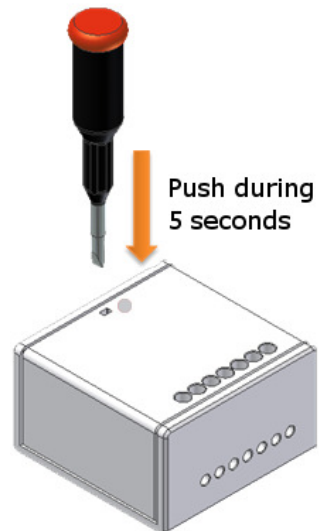


If the light of the ZPILOT does not flash after to have press on the button during 3 seconds, this means that he is already associated in a network.

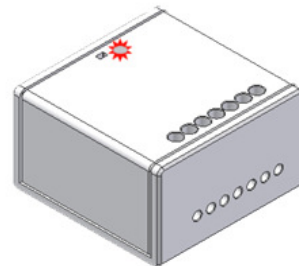
III.4 Reset

If need, the user can reset of the ZPILOT.

For this, he has to press on the button during 5 seconds.



When the ZPILOT reset, the LED flashes twice and turn off.



TECHNICAL FEATURES

Weight	100 g
Power supply	220V
Measurement	54 x 52 x 32 mm
Transmission range	100 m outdoor 30 m indoor
Managed channels (frequency)	16 ZigBee™ channels (2.405 to 2.480 GHz)

REPAIR AND MAINTENANCE

Defective equipments shall be first reported to the CLEODE support team in order to be assigned an RMA number. Be prepared to state your name, company and the serial number of the defective item to the support personnel.

The item shall then be returned to CLEODE with the following documents:

- The RMA number
- A copy of the delivery slip
- A detailed description of the default and the test context

The maintenance period is typically four (4) weeks starting from the date of reception of the equipment at the CLEODE headquarters.



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