



## GEM Wireless Extender User & Installation Manual

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## Safety Information

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### Warranty

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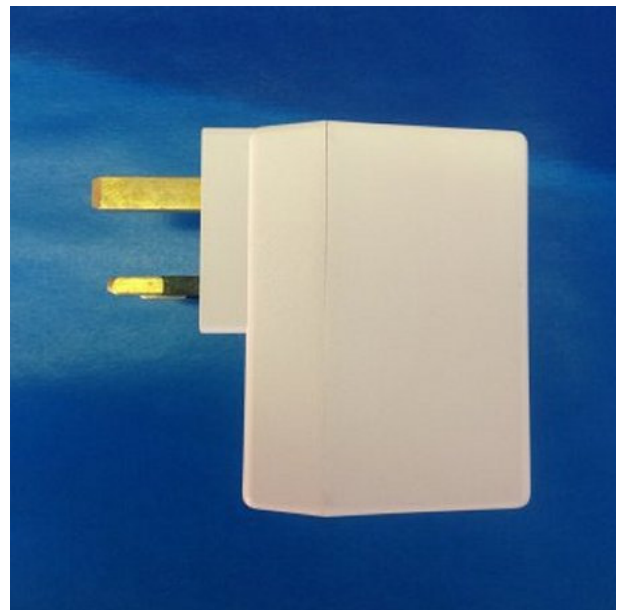
### Important Safety Information

All safety warnings give specific details of the potential danger/warning present and indicate how to reduce risk of injury, damage and electric shock resulting from improper use of the device. Carefully observe the following instructions:

- Do not remove the device cover while the power supply is connected.
- Do not operate the device with the cover removed.
- Do not attempt to repair or replace any part of the device.
- This appliance is not suitable for outdoor use.
- The manufacturer accepts no responsibility for any damage or injury caused by improper use or failure to comply with these instructions.

### Introduction

The GEM wireless extender can be used where it is required to extend the range of the standard GEM wireless system. For most installations the range of the standard wireless GEM system will be adequate. However in situations where a greater distance between the GEM wireless sensor and controller is required or where the installation presents difficult reception conditions for wireless systems such as buildings with solid stone or concrete walls, or where the signal may be required to pass through multiple outside walls, then the GEM range extender may be required to provide adequate signal between the GEM power sensor and controller.



The GEM range extender just plugs into any 13A socket and can double the range of a standard system.

The GEM Wireless Extender



1. Green Receive LED
2. Orange Transmit LED
3. Recessed pairing button

LED Functions			
RX LED	TX LED	Description	Mode
★ ↔ ★		RX-TX Quick Flashing Alternately	Pairing mode scanning for Transmitter
★		RX Flashing Slowly	Waiting for Transmitter Signal
★ → ★		RX Flash followed by TX Flash	Normal operation, receiving and sending

## Positioning

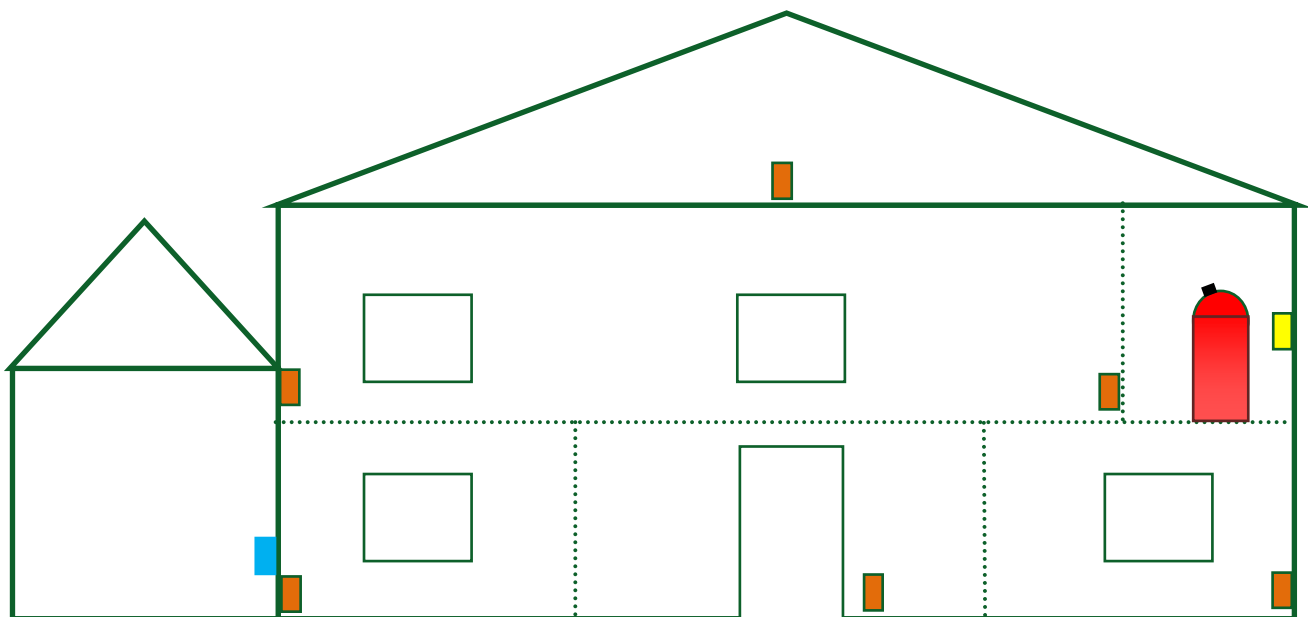
The GEM wireless extender is typically placed mid way between the GEM sensor transmitter and the GEM controller and is simply plugged into a convenient spare 13A socket outlet in the desired area.

There are no hard and fast rules regarding placement of the unit and some trial and error may be required to find the best location.

For instance good wireless reception may be impaired by a stone wall or partition with foil backed insulation only a meter or two from the controller and therefore placing the extender unit only a couple of meters from the controller but on the other side of the wall may well do the trick.

The same approach may also work at the sensor transmitter end of the link where the transmitter might be on the other side of a solid outside wall. Again placing the extender only a couple of meters away from the sensor transmitter but on the inside of the wall may also work.

Other options include locating the extender on a different floor in a room above or below the transmitter or controller, helping the signal to hop over a solid ground floor wall.



- Sensor Transmitter
- Controller
- Possible Wireless Extender Locations

Possible options for placing the GEM wireless repeater.

In this example the transmitter is located in a garage on an outside wall

### Commissioning

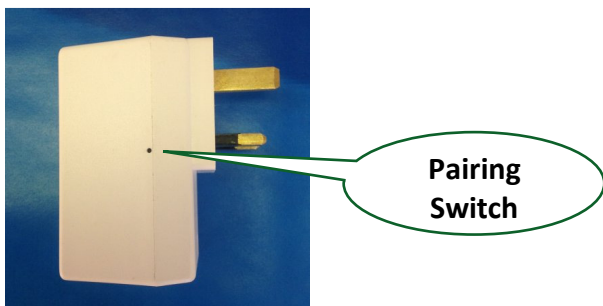
Commissioning essentially comprises two operations:

1. Pairing the extender with the GEM transmitter
2. Pairing the GEM Controller with the extender.

#### Pairing with the GEM Transmitter

When the unit is first powered up the factory default will cause it to be in pairing mode. This is indicated by both LEDs quick flashing alternately.

If the LEDs are not indicating that the unit is in pairing mode then pairing mode must be initiated by using a paperclip to depress the pairing switch located behind a small hole on the right hand side of the case as shown.



Insert the end of the paperclip into the hole and hold the button depressed for 1 or 2 seconds until the LEDs begin to flash alternately. The unit is now in pairing mode.

Now power off and then re power the GEM sensor transmitter.

This causes the transmitter to send the “find me” pairing signal for 5 minutes.

The wireless extender should lock to the transmitter and begin normal operations in 2-20 seconds.

Normal operation is indicated by a single flash of the RX LED, rapidly followed by a single flash of the TX LED every second.

If pairing is not completed in less than one minute then the extender is most likely out of range of the transmitter. Try again with the extender unit closer to the transmitter.

### Pairing with the GEM Controller

When the extender unit has been paired with the sensor transmitter it must then be paired with the GEM controller.

**Note: This operation must not be carried out for a least 5 minutes after the extender has been paired with the GEM transmitter.**

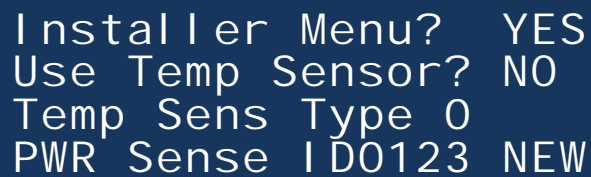
This is because the GEM transmitter will be transmitting the “find me” signal for 5 minutes after power up. If the controller is put into sensor pairing mode before the “find me” signal has been turned off the controller may inadvertently pair with the original transmitter thereby missing out the extender!

Once 5 minutes have elapsed from pairing the extender with the transmitter the GEM controller can now be put into pairing mode.

On the GEM controller enter set-up mode and go to set-up screen 5 (installer menu) and change the “PWR Sense ID” parameter from “OK” to “NEW”

After 30 seconds set-up mode will exit and the pairing process will begin.

Set-up Screen 5  
(Installer Menu Page 1)



```
Installer Menu? YES
Use Temp Sensor? NO
Temp Sens Type 0
PWR Sense ID0123 NEW
```

The GEM controller should now display [Finding New Sensor] on the bottom line of the display.

Now turn off the GEM wireless extender and turn it back on again.

The wireless extender will now transmit its “find me” signal for 5 minutes.

The GEM controller should lock to the transmitter in the extender unit and begin normal operations in 2-20 seconds.

If pairing is not completed in less than one minute then the extender is most likely out of range of the controller receiver. Try again with the extender unit closer to the GEM controller.