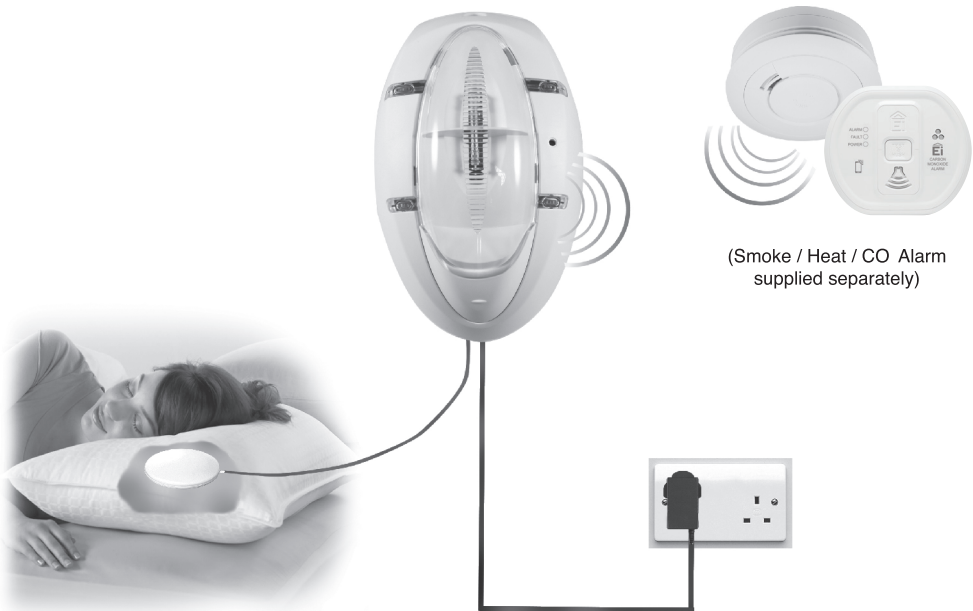# Deaf & Hearing Impaired RadioLINK Alarm System

Strobe Light & Vibration Pad Module

For use with RF Smoke/Heat/CO Alarms

(Smoke / Heat / CO Alarm supplied separately)

Model Ei170RF	RadioLINK Alarm System with Strobe & Vibration Pad
Model Ei171RF	RadioLINK Alarm System with Strobe (Only)

Note: At least one RF Smoke/CO/Heat Alarm is required to make the Ei170RF / Ei171RF Alarm operational. This is not supplied with the Ei170RF / Ei171RF and must be obtained separately.

Important: Read these instructions, together with those from the separate RF Smoke/CO/Heat Alarms and accessories before installation.

All instruction leaflets must be left with the end user after installation.

1. Introduction

This leaflet describes the installation of the Ei170RF / Ei171RF and its integration into a total RF Fire Alarm System, incorporating a choice of RF Smoke/CO/Heat Alarms and Accessories.

Note: It is essential that the Ei170RF / Ei171RF is connected to the mains to preserve its one-week battery standby. Leaving the unit operating without mains connected will completely deplete the battery and possibly damage it. (If the Ei170RF / Ei171RF is not being used for a prolonged period and cannot be left plugged in to the mains, then disconnect the battery).

Location

The Strobe Module should normally be fixed such that the internal strobe light can be seen from the bed, and the vibration pad can be placed under the mattress or pillow. It has to be powered from the mains (100-240VAC/50-60Hz) so a suitable socket must be available to which it can be permanently connected.

The back-up battery in the Strobe Module must not be exposed to excessive heat such as sunshine, heaters or fires.

The associated RF Alarms and Accessories must be located and installed as described in their own instruction leaflets.

Note: If installing the Ei170RF / Ei171RF in a system containing CO Alarms, we recommend installing an Ei450 to determine the source of the alarm.

2. Installation

Strobe Module Ei170RF / Ei171RF

The battery must first be installed in the Strobe Module. Open the rear compartment by squeezing together the two latches as shown in Figure 1b, and lifting the cover off.
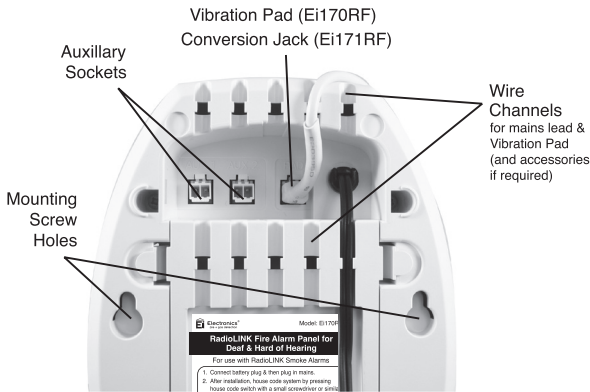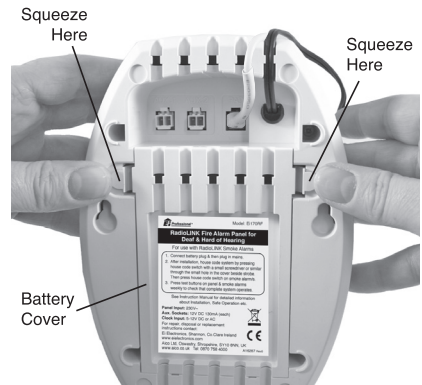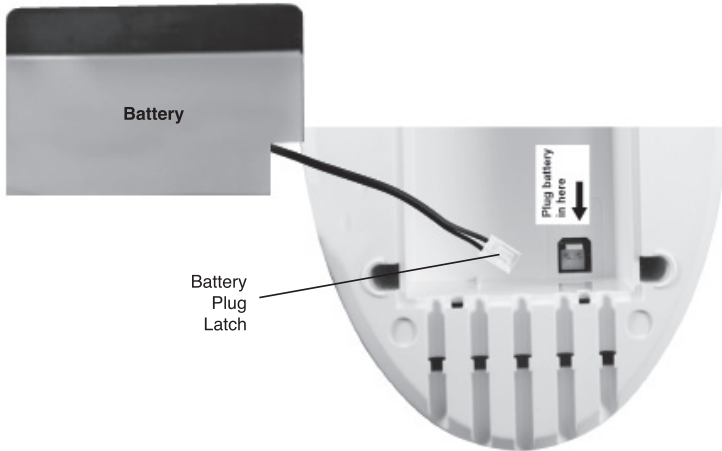

Figure 1a

Vibration Pad (Ei170RF)
Conversion Jack (Ei171RF)

Auxillary Sockets

Wire Channels
for mains lead &
Vibration Pad
(and accessories
if required)

Mounting Screw Holes

Figure 1b
Squeeze as shown to open
battery compartment

Squeeze Here

Squeeze Here

Battery Cover

Plug the battery into the socket at the rear of the battery compartment as shown in Figure 2 (while holding the small latch on the battery plug, open). Place the battery in the compartment ensuring the notch in the battery is used to leave clearance for the plug and sockets (see Figure 3).

The Strobe Module can be left on a table or permanently fixed to the wall using the screws and plastic plugs enclosed. Use the drilling template (Figure 5).

Battery

Battery
Plug
Latch

Plug battery
in here ↓

Figure 2

Battery
Clearance
Notch
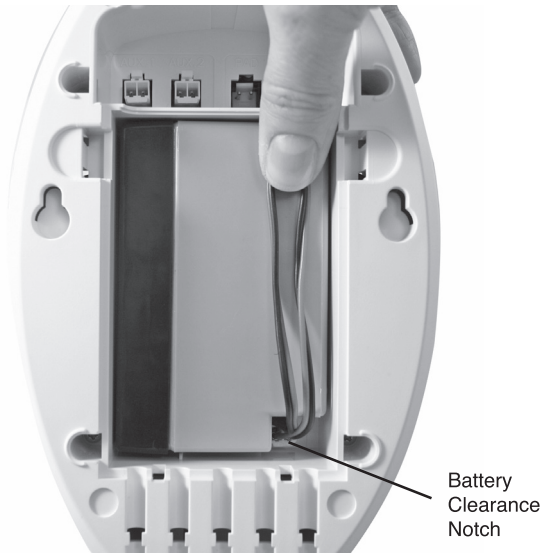
Figure 3
Shows battery orientation - Dress the battery leads as shown, replace the battery
cover and push firmly down on the two latches

If fixing to a wall, the screws should be spaced 95mm (3.7 inches) horizontally apart. The top screws will be 70mm (2.7 inches) below the top surface of the Strobe Module when installed. The template at the end of this leaflet can be used to locate the screws accurately. The screws (large heads) should be screwed into the wall leaving a gap of approximately 4mm (0.15in) under the head. Fit the keyhole slots on the back of the Strobe Module over the screw heads and slide the panel down vertically into position.

The mains adaptor should then be plugged into a socket. This mains socket must not be used for any other equipment and it must not be switched off. The mains plug must be readily removable (so the mains can be disconnected if necessary). **Note:** The unit **must not** be wired directly to a mains junction box.

Vibration Pad (Ei170RF only)

The primary vibration pad is supplied already plugged into its locking socket on the rear of the Ei170RF Strobe Module (see Figure 1a). Place the vibration pad under the pillow or mattress. It is important that the person in the bed can feel the vibration – check it is sufficient to wake a person by lying on the bed and pressing the test button on the Strobe Module – see also Section 4, Testing and Maintaining your System. Some mattresses may not transmit sufficient vibration, and in these cases it should be fitted under the pillow. **Note:** During testing, or in an actual alarm situation, the pad pulses on and off for greater effect on sleepers. The Strobe Module must not be exposed to dripping or splashing and items filled with liquids such as vases must not be placed on or above the apparatus.

Conversion Jack (Ei171RF only) - a conversion Jack is fitted instead of the primary vibration pad on the Ei171RF to prevent faults.

Note: Do not remove the conversion jack on the Ei171RF.

3. Setting up the RadioLINK System

It is essential to House Code the Ei170RF / Ei171RF to all the other Ei Electronics RF Alarms and devices in the system to ensure they will not communicate with nearby systems. Failure to house code the system may also result in a system malfunction.

1) Press and hold the House Code button on the strobe (see figure 4) using a small screwdriver (or similar, less than 3mm diameter) until the RadioLINK LED lights up blue, then release.

2) House code all other RF Alarms and devices in the system. Consult the instruction manuals on how to house code the Alarms and devices. It is essential that each individual Alarm/device is put into House Code mode in its final location.

3) Check the number of flashes on the Ei170RF / Ei171RF and on every other device. They should correspond to the total number of devices in your system. A system with 3 Smoke Alarms and 1 Ei170RF / Ei171RF will result in 4 flashes. It may take up to 10 minutes before all 4 flashes are seen.

The flash pattern will repeat every 5 to 10 seconds while the Ei170RF / Ei171RF remains in house code mode.

If it fails to flash the correct number of times, then consult the "Troubleshooting" section of this instruction manual.

To complete the commissioning, the RF system must exit House Code mode.

4) The Ei170RF / Ei171RF will automatically exit House code mode after 30 minutes. Other devices may exit after only 15 minutes. Once coded, the system will not communicate with any other RF Alarms and devices outside of the house coded group.
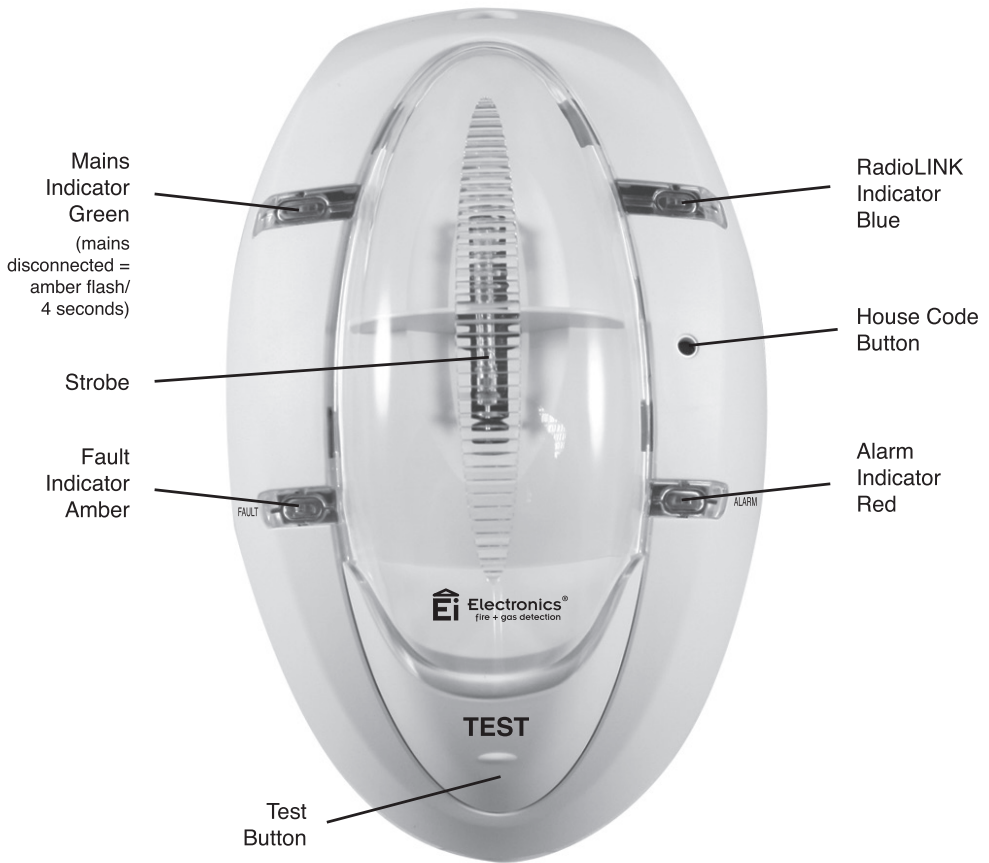
To manually exit House Code mode, press the House Code button again on the Ei170RF / Ei171RF until the RF indicator lights up blue, then release. This will send a signal to all the other RF Alarms and devices to exit House Code mode.

After a short period, the blue light will turn off and the system will return to standby mode. Depending on the number of RF Alarms and devices in the system this period could vary from 5 to 20 seconds.

Note: Not all devices are able to receive the Exit House Code mode signal from another device. If some devices continue to flash amber / red, please consult their instruction manual to manually exit house code mode.

Check that the RF indicators have stopped flashing on all devices.

5) To check the system, press the Test button for up to 60 seconds on any Alarm. After a few seconds all Alarms should sound, the strobe should flash and the vibration pad should pulse. All devices should be checked similarly.

Mains
Indicator
Green

(mains
disconnected =
amber flash/
4 seconds)

Strobe

Fault
Indicator
Amber

RadioLINK
Indicator
Blue

House Code
Button

Alarm
Indicator
Red

FAULT

ALARM

Êi Electronics®
fire + gas detection

TEST

Test
Button

Figure 4

4. Testing and Maintaining your System

We recommend regular testing of your RF system (at least monthly).

Frequent testing of the system is advised to ensure its continued and safe operation.

Guidelines and best practices for testing are as follows:

1. After the system is installed.

2. Once monthly thereafter.

3. After prolonged absence from the dwelling (e.g. after holiday period).

4. After repair or servicing of any of the systems elements or electrical works being carried out.

4.1 With regards to the Ei170RF / Ei171RF:

4.1.1 Check that the mains indicator on the strobe is on continuously (green light).

4.1.2 Check also that the fault indicator is not flashing amber.

4.1.3 Press and hold the Test button on one of the Alarms. The RF indicator will illuminate on the Alarm. Continue to hold the test button until all the Alarms in the system are sounding, the strobe flashes and the vibration pad pulses. Release the test button when the test is completed.

4.2 Testing the rechargeable battery

The rechargeable battery can take up to 20 hours to charge when the unit is first powered up. It is then maintained in a fully charged state by continuous trickle charge.

In the event of a mains failure the battery will power the system in standby for a week and then be capable of at least 4 minutes of alarm. The mains indicator on the Strobe Module will then flash amber every 4 seconds to indicate it is on battery power. The fault indicator will also flash amber every 4 seconds if the battery is almost depleted. Both indicators will go off to indicate the battery is depleted and the unit is totally unpowered.

The battery will last 5 years in normal use provided it is not exposed to extremes of temperature for prolonged periods, or fully discharged & charged a large number of times.

We recommend that the functioning of the rechargeable battery is checked at least yearly as follows:-

4.2.1 Ensure the Strobe Module has been mains powered for at least the previous 20 hours for the battery to charge.

4.2.2 Turn off the mains power to the unit by unplugging it or switching off the circuit at the distribution board. Check that the mains indicator starts flashing amber.

4.2.3 Press the Strobe Module test button for 20 seconds and check the strobe flashes brightly, the pad vibrates strongly and that all the RF Alarms sound. Check that the Alarm indicator flashes red while the test button is pressed. (Cover the strobe light to stop this dazzling you while looking at the red flashes).

If the red light flashes, the strobe light or the vibrations of the pad are weak, the battery will need to be replaced. The battery also needs to be replaced if it is over 5 years old (see "replace battery by" date on side panel). To remove the battery reverse the instructions in the first part of section 2 Contact the nearest address in this leaflet for advice about getting a replacement.

Replace the entire Strobe Module after 10 years operation. (see "replace unit by" date on side panel).

Switching off Mains for long periods

If the premises are regularly being left without mains power for long periods the battery should be disconnected to prevent it from becoming fully depleted.

5. Troubleshooting

If when Testing, the Ei170RF / Ei171RF does not respond, then:

5.1   Check carefully that all RF devices in the system are powered.

5.2   Ensure you have held the Test button of the Alarm until the RF indicator has flashed twice (this can take up to 20 seconds).

5.3   Reset the house code. Sometimes to resolve an RF communication issue, it may be necessary to reset and house code all RF Alarms and devices in the system again.
To reset the Ei170RF / Ei171RF, press and hold the House Code button. The RadioLINK indicator will light up blue, remain blue and will start flashing blue. At this point release the House Code button. The Ei170RF / Ei171RF is now reset. To reset the other devices in the system, consult the appropriate instruction manuals. Once all devices are reset, repeat the House Coding procedure (see the Setting up the RadioLINK System section).

5.4   Relocate the Ei170RF / Ei171RF and/or rotate/relocate the Alarms. There are several reasons why RF signals may not reach all the devices in your system. Try rotating or relocating Alarms as this can significantly improve signal reception.

Rotating and/or relocating the Alarms may move them out of the range of existing devices even though they may have already been House Coded correctly in the system. It is therefore important to check that all Alarms are communicating in their final installed positions. If Alarms are rotated/relocated, we recommend that all devices in the system are returned to the factory settings. Then House Code all devices again. The RF interconnection should then be checked again.

If the strobe flashes constantly for no reason (ie no alarm/RF signal received), then check that the vibration pad/Conversion Jack is fully connected and that the connection is not damaged.

If the amber fault indicator flashes, check that the battery is connected.

6. Limitations of Radio Communications

Ei Electronics radio communication systems are very reliable and are tested to high standards. However, due to their low transmitting power and limited range (required by regulatory bodies) there are some limitations to be considered:

Receivers may be blocked by radio signals occurring on or near their operating frequencies, regardless of the House Coding.

RF systems should be tested regularly, at least monthly. This is to determine whether there are sources of interference preventing communication, that the radio paths have not been disrupted by moving furniture or renovations, and if so, to give a warning of these and other faults.

7. Other Features & Accessories

Other Features

Strobe & Vibration Pad Module - Auxiliary Outputs - AUX 1 & AUX 2: The two auxiliary outputs are activated when the Strobe Module is in alarm. The Aux 1 socket can supply up to 180mA at 12 Volts. The AUX 2 socket can supply up to 20mA at 12 Volts.

Note: The AUX 2 socket can be used for low power devices such as pager trigger inputs.

Note: As supplied the two auxiliary sockets AUX 1 and AUX 2 are protected by latched plastic plugs which must be removed before the auxiliary devices can be plugged in (see figure 5). These plugs can be removed by pressing the latch lever (on the side nearest the "AUX" marking) before gently pulling the plug off.

Accessories

Ei174 - Auxiliary Vibration Pad: (draws 120mA). Supplied with 5m of cable and a suitable plug for connecting to the auxiliary socket. It should be plugged into AUX 1.

8. Getting your Product Serviced

If, within the guarantee period, your device fails to work after you have carefully read all the instructions and checked that the device has been installed correctly, then contact us.

If you are advised to return your product, follow the instructions given and place the device in a padded box with the proof of purchase, your contact details and a note stating the nature of the fault.

9. Guarantee

Ei Electronics guarantees this device for five years from the date of purchase against any defects that are due to faulty materials or workmanship. If this device should become defective within the guarantee period, we shall at our discretion repair or replace the faulty unit.

This guarantee only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorised dismantling, or contamination howsoever caused. This guarantee excludes incidental and consequential damage.

Do not interfere with this device or attempt to tamper with it. This will invalidate the guarantee but more importantly may expose the user to shock or fire hazards.

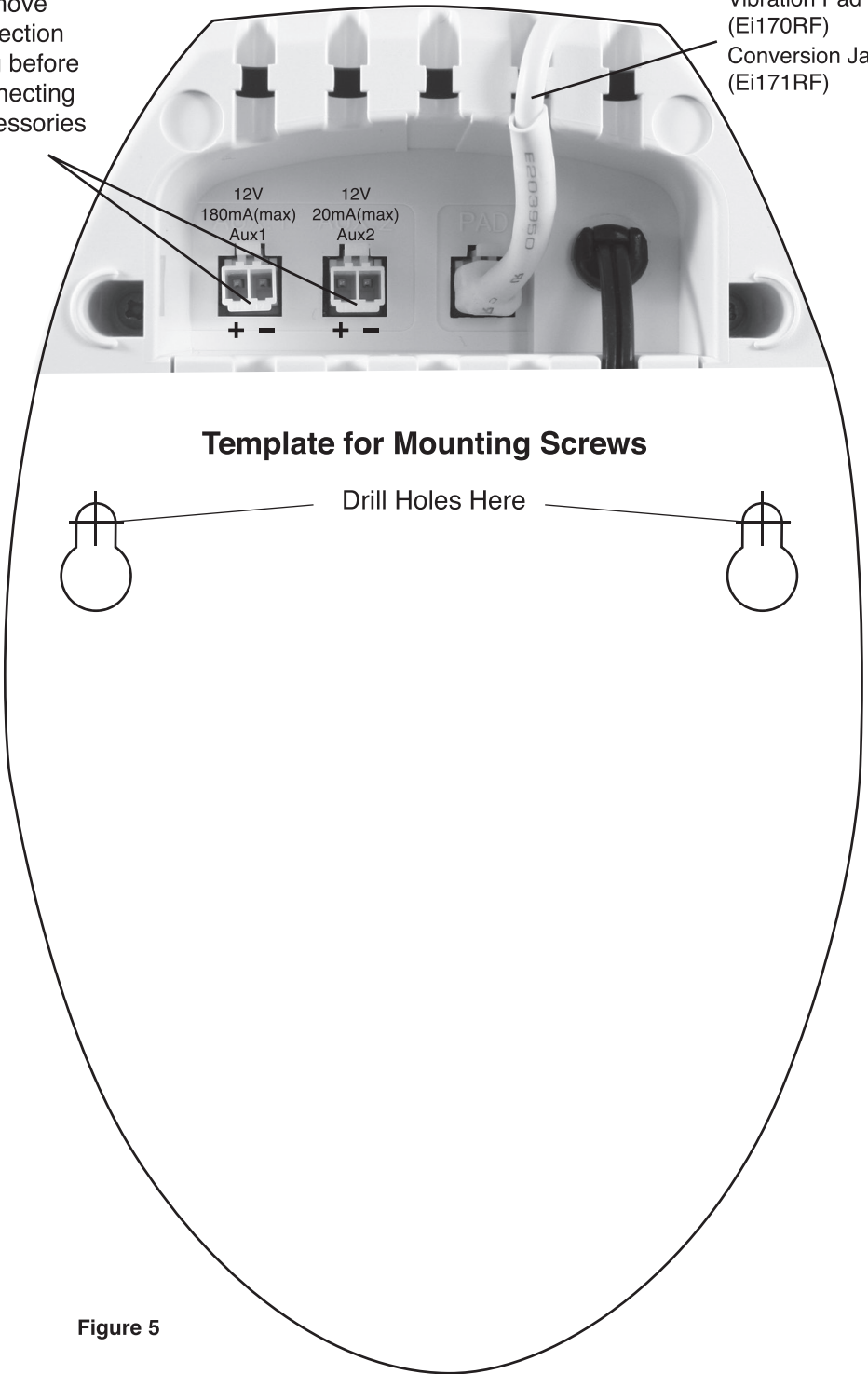This guarantee does not apply to any product that has been modified in any way by a third party or has been fitted with a third party element.

This guarantee is in addition to your statutory rights as a consumer.

Remove protection plug before connecting accessories

Vibration Pad (Ei170RF)
Conversion Jack (Ei171RF)

12V
180mA(max)
Aux1

12V
20mA(max)
Aux2

+ −   + −

Template for Mounting Screws

Drill Holes Here

Figure 5

Indicator Summary

Mode	MAINS / STANDBY Green Light	MAINS / STANDBY Amber Light	ALARM Red Light	FAULT Amber Light	STROBE Light	VIBRATION Pad	Aux1 Aux2	RADIOLINK Blue Light
Standby -								
Mains on	on	off	—	—	—	—	—	—
Mains off, battery connected	off	1 flash / 5 sec	—	—	—	—	—	—
Mains off, battery virtually depleted	off	1 flash / 5 sec	—	1 flash / 5 sec	—	—	—	—
Mains off, battery fully depleted	off	off	off	off	off	off	off	off
In Alarm								
Activated by an Alarm RF signal	—	—	1 flash / 2 sec	—	40 flashes / min	2 sec on/off pulse	on	—
Test Mode -								
Test button pressed	—	—	1 flash / 2 sec	—	40 flashes / min	2 sec on/off pulse	on	on for 4 sec
Test button pressed on RF Alarm	—	—	1 flash / 2 sec	—	40 flashes / min	2 sec on/off pulse	on	on for 4 sec
Fault Mode -								
Vibration Pad disconnected	—	—	—	1 flash / 5 sec	40 flashes / min	—	on	—
Battery disconnected (mains on)	on	off	—	1 flash / 5 sec	—	—	—	—
House Code Mode for RF -								
In house code mode	—	—	—	—	—	—	—	flashes

Indicator Summary

Control Panel Indicators

Mains
Indicator
Green
(mains
disconnected =
amber flash/
4 seconds)

Strobe

Fault
Indicator
Amber

FAULT

ALARM

Ei Electronics®
fire + gas detection

TEST

RadioLINK
Indicator
Blue

Alarm
Indicator
Red

The crossed out wheelie bin symbol that is on your product indicates that this product should not be disposed of via the normal household waste stream. Proper disposal will prevent possible harm to the environment or to human health. When disposing of this product please separate it from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on collection and proper disposal, please contact your local government office or the retailer where you purchased this product.

CE

Hereby, Ei Electronics declares that this Ei170RF / Ei171RF RadioLINK Alarm System is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The Declaration of Conformity may be consulted at www.eielectronics.com/compliance

UKCA

Hereby, Ei Electronics declares that this Ei170RF / Ei171RF RadioLINK Alarm System is in compliance with the essential requirements of the Radio Equipment Regulations 2017. The Declaration of Conformity may be consulted at www.eielectronics.com/compliance

Aico
Oswestry,
Shropshire SY10 8NR, U.K.
Telephone: 01691 664100
www.aico.co.uk

Ei Electronics
Shannon, V14 H020, Co. Clare,
Ireland.
Telephone: +353 (0)61 471277
www.eielectronics.com