Fault Finding

Fault	Reason	Check	Repair
The lights and heater do not work	Power is not connected	Mains plug is not connected	Reconnect plug
		Fuse in plug is blown	Replace fuse (13A)
The heater does not switch on	Tube is faulty	Tube is correctly seated in the holders	Check and replace tube if necessary
	Ambient temperature is above 20°C		Heater will only turn on below 20°C
	Manual override has been set		Switch back to Auto using remote control
Heater and/or lights do not switch automatically	Manual override has been set		Switch back to Auto using remote control
The lights do not switch on	Light level is too high (daylight)		Lights will only turn on at low light levels
	A light is shining on the sensor	Sensor position and other sources of light	Reposition sensor if necessary
The lights do not switch off in daylight	Sensor is covered or in a shaded place	Sensor position	Reposition sensor if necessary
	Manual override has been set		Switch back to Auto using remote control
Remote Control does not work	Light on remote does NOT come on	Battery not fitted or exhausted	Fit or replace battery
	Light on remote does come on	Button press too short	Press button for a longer time.

CE

ZN1020 Issue 2

Eco-Quartz Heater

Instruction Manual

Sabring Ltd
Unit 4, Moderna Business Park,
Mytholmroyd, HX7 5QQ
West Yorkshire, England
Tel: +44 (0) 1422 886888
Fax: +44 (0) 1422 886444

www.smokinsolutions.com

CONTENTS

Please ensure
that you have read this instruction booklet
<u>BEFORE</u> attempting to install or operate
this heating unit

- Carefully replace the lid, ensuring that the ensure that the waterproof seal is still fitted in its groove and that the PIR is pointing in the correct direction
- Fit and tighten the screws.

To link more than one heater to a remote control follow procedure B for each heater in turn.. Similarly more that one remote control can be programmed to a heater.

<u>Specification</u>

Voltage	230V ac
Total Current	6A
Heater Maximum Power	1300W
Heater Maximum Power (Eco Mode)	975W
Lights Maximum Power (each)	50W
Total Power	1400W
Minimum mounting height from the floor	2.5m
Minimum distance from the ceiling	0.5m
Size (overall) (W x H x D)	602 x 320 x 220mm
Weight	8Kg
Lampholder (heater)	R7S
Lampholder (lights)	GU10
Ingress Protection	IP54
Lights On Level	70 LUX
Lights Off Level	500 LUX
Lower Temperature Switching Point	15°C
Upper Temperature Switching Point	20°C
On Time (Minimum)	4.5 minutes
Remote Control Frequency	433MHz

Programming

! DANGER !
! MAINS VOLTAGE IS PRESENT ON MANY !
! COMPONENTS ON THE !
! HEATER CONTROL CIRCUIT BOARD !

The heater remote control handset supplied is already programmed to operate the heater.

Should reprogramming become necessary ***this should only be carried out by a suitably qualified electrician*** in accordance with the current IEEE safety regulations, and by following the procedure below

- Disconnect the power.
- Remove the 4 screws securing the lid to the control box underneath the heater and remove the lid. Be careful as the PIR on the lid is connected to the circuit board in the box.
- Reconnect the power, a "Di, Di, Di" sound will be heard as the circuit starts up.

A: To reset the system and remove ALL remote control devices

- Press and hold down the "Learn key" on the circuit board, using an insulated screwdriver for more than 6 seconds, the circuit board gives out continuous long-sound "Dee, Dee, Dee" and then a short-sound "Di, Di, Di,…"
- When the sound has stopped release the "Learn key".

B: To link a new remote to the heater

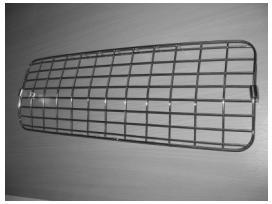
- Press and hold down the learn "key" for about 3 seconds until the <u>first</u> sound is heard. Release the Learn Key and the circuit board will continuously sound "Dee, Dee, Dee…"
- Remove the battery cover on the remote control handset and press the left hand button, the circuit board will sound "Di, Di, Di".
- The remote transmitter is now linked to the heater.

Unpacking

Please unpack and check the contents of the box before proceeding with the installation. The box should contain the following parts:


Heater Unit


PIR


Wire Grille


Temperature/Light Sensor


Wall Mounting Bracket


Remote Control Handset.


Heater Unit Bracket


Hardware Pack

If any of the above parts are missing please contact us, before proceeding, at the address shown on the front cover.

The Eco-Quartz heater warms people and not the air by radiant infrared heat. This form of heat, like the sun, is unaffected by wind and other weather conditions.

Caution

- Make sure that the heater has been securely fastened to the wall.
- Ensure that the heater is mounted not less than 2.5 metres from the floor.
- Ensure that the heater is mounted at least 0.5m below any ceiling or awning.
- Disconnect from the mains supply during installation, cleaning and/or maintenance.
- Do not cover the heater while it is in use.
- Do not use if the glass is cracked or broken.
- Keep the mains cable away from the body of the heater during use.
- When changing the infrared heating tube do not handle it with bare hands. If you should touch it, finger marks can be removed with methylated spirits or alcohol. Failure to do this will result in premature failure of the quartz tube.
- Do not touch the heater while it is in use as it will get very hot. Allow it to cool down before attempting to maintain or clean it.
- **Risk of fire:** Keep combustible materials such as paper, clothes, furniture, curtains etc at least 1 metre away from the front, side and rear of the heater. ***Do Not Cover***

- To refit the glass, locate it between the bosses on the lid. Make sure that it is fitted the right way up so that the logo appears correctly on the lower right hand side of the heater when viewed from the front outside face.
- Refit the glazing clips and carefully tighten the screws. Do not over tighten as this may cause damage to the glass and/or lid.
- Close the heater as described on the previous page.

Spares List

Controller PCB Assembly	ZN1044
Glass	ZN1017
Glass Seal	ZN1018
Hardware Pack	ZN1049
Heater Tube	ZN1007
Heater Tube Holder Assembly	ZN1048
Heatsink Clip Assembly	ZN1039
Lights	ZN1009
Light Holder	ZN1008
PIR	ZN1021
Reflector	ZN1019
Remote Control Handset	ZN1031-1
Temperature Sensor	ZN1047
Wall Bracket	ZN1004
Wire Grille	ZN1046

Spare parts can be obtained from the address shown on the front cover.

- Wipe the surface of the bulb with a clean lint-free cloth.
- Close the heater as described previously.

Change the heating element

- ***Ensure that the heater has had 20 minutes to cool down.***
- ***Do not touch the heater element with bare hands: fingerprints must be removed with a clean lint-free cloth and methylated spirits. Failure to do so will cause premature failure of the heater element.***
- Open the heater as described previously.
- At each end of the tube are heatsink clips. Open these by gently moving the tab in a downwards direction.
- Remove the heating element from its holder by pushing one end further into its holder and pulling the end that is free towards you.
- Fit the new element by placing one end into its contact and pushing against the spring until the other end can enter the contact.
- It is recommended that the glass moulding "pip" on the centre of the tube faces the reflector.
- Check that the element is correctly seated and that no finger marks have been left.
- Refit the heatsink clips by moving the tab in the opposite direction to the removal until the clip is heard to click in place.
- ***Failure to refit these clips will severely reduce the tube life.***
- Lightly polish the reflector to remove and finger marks.
- Close the heater as described on the previous page.

Change the glass

- ***Ensure that the heater has had 20 minutes to cool down***
- Open the heater as described previously.
- Remove the screws which hold the glazing clips at each end of the glass. Carefully remove the glass.

WARNING: THIS APPLIANCE MUST BE EARTHED
IMPORTANT: Fitting a different plug:

The wires in the mains lead are coloured in accordance with the following code:

Green and Yellow	Earth
Blue	Neutral
Brown	Live

If you fit your own plug the colours of these wires may not correspond with the identifying marks on the plug terminals. This is what you have to do:

1. Connect the Green and Yellow (Earth) wire to the terminal in the plug marked "E" or with the symbol ⏚ or coloured Green or Green and Yellow.
2. Connect the Blue (Neutral) wire to the terminal in the plug marked "N" or coloured Black or Blue.
3. Connect the Brown (Live) wire to the terminal in the plug marked "L" or coloured Red or Brown.

In the event of replacing the fuse in the plug supplied, a 13A ASTA approved fuse to BS1362 must be fitted.

With alternative plugs a 15A fuse must be fitted either in the plug, adaptor or the main fuse box.

Assembling the Heater

1. The heater is shipped with the PIR disconnected. To fit the PIR, first place the heater on its top so that the mains control box is upper most and the heater glass window is towards you.
2. The PIR has a small connector on the lead that comes out of the top. Connect this to the lead that comes out of the hole in the mains control box so that the colours line up (ie Red to Red etc)
3. Push the excess wire into the mains control box and with the PIR window facing you, push the PIR into the hole on the mains wiring box until it is felt to "click into place"

Installation

1. For safety purposes, it is recommended that the heater bracket be mounted a minimum of 2.75 metres above the floor.
2. Place the wall part of the mounting bracket against the wall in the desired position and mark the location of the 4 fixing holes.
3. Drill each hole a minimum of 50mm deep using a 8mm masonry drill.
4. Fit the wall plugs and screw the bracket to the wall.
5. Fit the other part of the bracket to the back of the heater using the six screws supplied, being careful not to over tighten the screws.
6. Offer the heater assembly up to the wall bracket and fit the large screw so that it passes through the bracket and screw it into the captive nut

Sensor

1. Open the sensor box by gently prising off the base with a small screwdriver. 2 small slots are provided for this purpose.

2. Place the wall part of the mounting bracket against the wall in the desired position and mark the location of the 2 fixing holes.
3. Drill each hole a minimum of 25mm deep using a 5.5mm masonry drill.
4. Fit the base to the wall using the screws supplied in a position such that it is outside of the area covered by the heater and awning (if fitted). It should not be in direct sunlight, or within an area that will be illuminated at night.
5. Clip the sensor onto the base.
6. Fit the sensor plug to the socket on the rear of the heater control box.

Maintenance & Cleaning

Disconnect from the mains supply and allow to cool before attempting to clean or maintain the heater unit.

If the heater has recently been in use, allow 20 minutes for it to cool down before opening the heater.

- To ensure that the heater produces the optimum heat level it is recommended that the reflector and the inside surface of the glass is cleaned with a clean lint-free cloth after 80-100 hours of use.
- If a white deposit should be seen on the reflector and/or glass it should be cleaned immediately with a clean lint-free cloth.

Opening the heater

- Undo the three screws along the top edge of the heater lid while holding the lid to prevent it swinging down as this could cause damage to the glass and PIR.
- Gently lower the lid.

Closing the heater

- Ensure that the seal is still in place and swing the lid shut.
- Screw in the lid fixing screws *finger tight* only.
- Ensure that the lid is in the correct position and tighten the screws. Care must be taken to ensure that the screws are not over tightened.

Change the lights

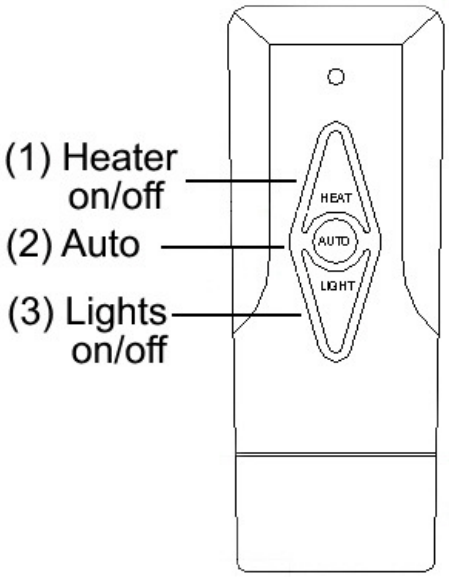
- ***Ensure that the heater has had 20 minutes to cool down***
- Open the heater as described previously.
- Grip the bulb and turn in a quarter turn anti-clockwise and withdraw the bulb.
- Offer up a new bulb and locate the contacts into the socket.
- Turn the bulb a quarter turn clockwise.

- ***If the ambient temperature is less than 15°C***

  a) The heater will only operate if a person moves within the reception range of the PIR detector mounted below the heater. The heater will switch on at full power for 4½ minutes.
  b) If the PIR detects movement within this period the heater will re-trigger and remain on for a further 4½ minutes from the last movement.
  c) Should the light sensor plug become disconnected, both the lights and heater will default to be continuously on.

Remote Control
The remote control provides the ability to override the light and heater functions.

- To manually control the heater, press the Heater On/Off button to switch the heater to be on or off all the time.
- To manually control the lights, press the Lights On/Off button to switch the lights to be on or off all the time.
- To return to fully automatic mode press the Auto button. If you are close enough you will hear the control box give 1 beep, "Di". Note: this will set both the heater and the lights to automatic.



- If the mains power supply is interrupted, the unit will return to the automatic mode when the power is reapplied.

Wiring

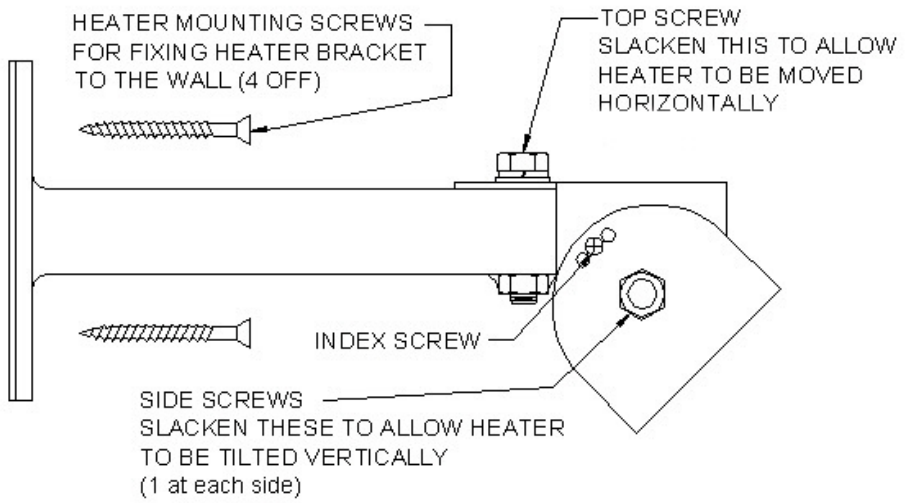
⚠ *Warning: This appliance must be earthed*

- All heaters are supplied as standard with 4 metres of cable and a moulded plug
- We recommend that a RCD be used between the mains plug and the wall socket.
- If the heater is being used outdoors it is recommended that a waterproof socket is used for the connection. Otherwise the plug should be connected to a socket indoors
- If it is required that the heater be permanently installed, then **this should only be carried out by a suitably qualified electrician in accordance with the current IEEE safety regulations**, and by following the procedure below:

1. This procedure is for the situation where the existing cable is too short or the heater needs to be permanently wired.
   - ***Ensure that the heater is disconnected from the mains supply before proceeding past this point.***
2. Remove the 4 screws securing the lid to the control box underneath the heater and remove the lid. Be careful as the PIR on the lid is connected to the circuit board in the box.
3. Unscrew and remove the supply wires from the terminal block on the circuit board.
4. Slacken the barrel nut of the compression gland and withdraw the cable.
5. Remove the barrel nut from the old cable and place onto the new cable. Ensure that this cable contains Live, Neutral and Earth wires and its diameter is 8mm; larger cables may require a replacement cable gland. The cable must have a minimum cross sectional area of 1.00mm².
6. Feed the cable through the compression gland and connect the Live, Neutral and Earth wires to the appropriate terminal block.
7. Fit and tighten up the barrel nut, ensuring that there is some slack cable inside the box.
8. Carefully replace the lid and tighten the screws until no gap can be seen between the lid and the box to ensure that the box remains resistant to water ingress.

Adjustment

During normal operating conditions the outside of the heater, especially the glass, reaches a high temperature. Any adjustments should only be made with the power disconnected and the heater allowed to cool down if it has previously been in use



The heater can be operated in any position from horizontal to vertical providing that the heater tube remains horizontal, AND the black plastic box housing the electronics is **NEVER POSITIONED ABOVE THE HEATER.**

To adjust: Slacken the Side Screws on the bracket and twist to the desired angle, and retighten the Side Screws. If it is required that the heater is set to a fixed angle of 30°, 45° or 60° then fit and tighten the Index Screws before tightening the Side Screws.

Aiming the PIR

The PIR can be mechanically adjusted both horizontally and vertically to give you the ability to point it where you like.
If the vertical movement becomes slack it can be tightened using the finger nut on the side of the elbow,

Operation

There are no user adjustments inside the heater.

Please ensure that you have read and adhere to the Wiring section on page 6

- Switch on the power.
- The control box will sound 4 beeps, "Di, Di, Di, Di". This indicates that that the heater is working normally. You may have to be close to the heater to hear this.
- When the power is first applied the heater will turn on for about 4½ minutes, this is normal. At the end of this period the heater will enter the Automatic mode.
- The lights will only operate if the natural light levels are low.

- ***If the ambient temperature is above 20°C***

  a) The heater will not operate.

- ***If the ambient temperature is between 15 - 20°C***

  a) The heater will only operate if a person moves within the reception range of the PIR detector mounted below the heater.
  b) The heater will switch on at full power for about 2¼ minutes and then the heat output will be reduced to the lower power level for a further 2¼ minutes.
  c) If the PIR detects movement within the first 2¼ minutes at full power the movement will be ignored. If the PIR detects movement within the 4½ minutes at reduced power the heater will re-trigger and remain on for a further 4½ minutes at reduced power from the last movement.
  d) If the heater is re-triggered after it has switched off then it will switch back on for 2¼ minutes at full power and repeat the cycle as in b) & c) above.