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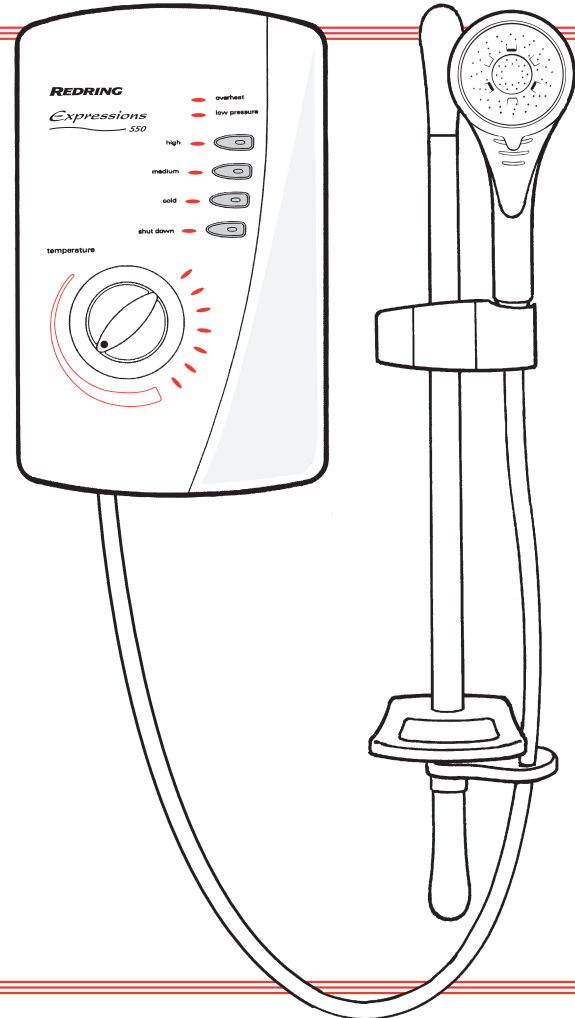
# **REDRING®**

## SHOWER HANDBOOK

*Expressions* Range  
550

### IMPORTANT:

This booklet should be given to the customer  
after installation and demonstration.



*Thank you for choosing a quality REDRING product manufactured in Peterborough, England*

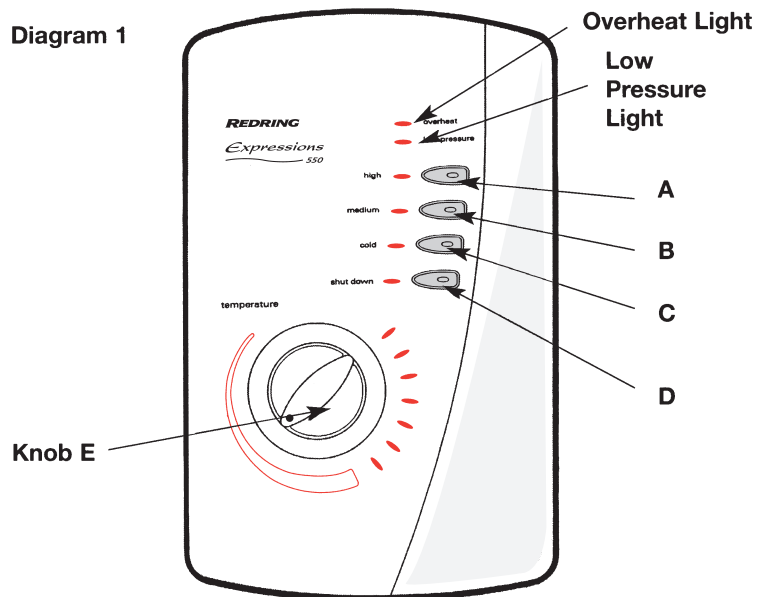
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## How to use your “Expressions 550” Shower

1. Ensure the electricity and water is turned on to the unit.
2. Functions of buttons:-  
**Button A** - Starts shower on “**HIGH**” giving maximum power.  
**Button B** - Starts shower on “**MEDIUM**” giving an economy setting.  
**Button C** - Starts shower on “**COLD**” giving water with no heating.  
**Button D** - “**SHUTDOWN**” Switches the shower off and cools the water automatically.  
 Your shower has 3 power settings selected by pushing the corresponding button on the front cover. It can be started by pressing **A**, **B** or **C** buttons. Once pressed a light will illuminate next to the button confirming that power selection has been made.

Diagram 1



3. Once either **A (HIGH)** or **B (MEDIUM)** have been pressed you will need to adjust the temperature of the water. This is done by rotating knob **E**. Turn the knob until 3 lights illuminate on the arc. Allow 20 seconds for the temperature to settle. If it is too low then turn the knob anti-clockwise, allow another 20 seconds. Repeat this procedure until the temperature is to your liking.
4. If the temperature is too high then turn knob “**E**” clockwise allowing 20 seconds between adjustments. The final adjustment can be anywhere on the scale. Summarising:  
**Clockwise**                      **Lowers temperature (less lights)**  
**Anti-Clockwise**              **Raises temperature (more lights)**  
 The more lights that are illuminated the hotter the water coming out of the handset.

The radial lights indicate the position of the flow knob in it's travel, i.e. All lights on - valve fully anti-clockwise (minimum flow). All lights off - valve fully clockwise (maximum flow). See Diagram 3 for relationship of flow to temperature.

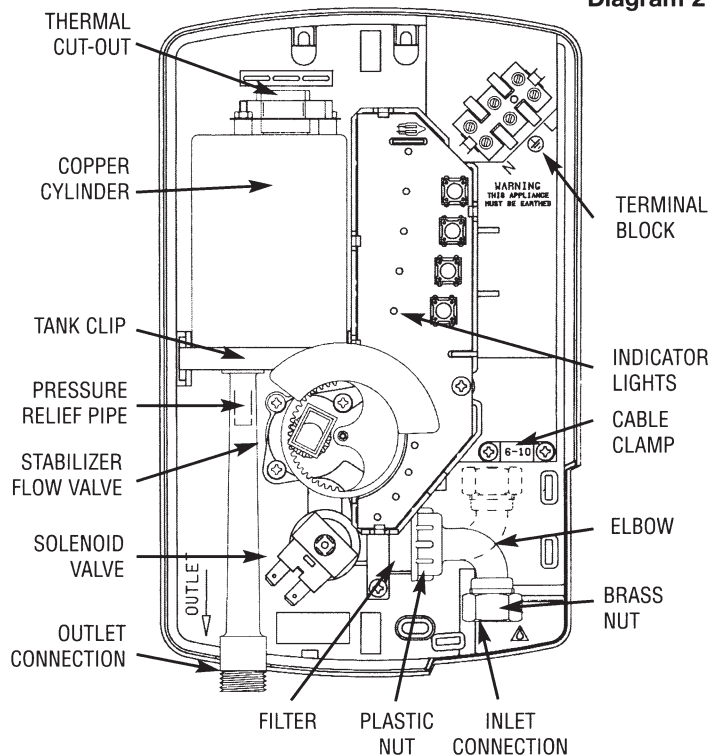
5. Once a temperature setting to your liking has been achieved knob "E" will rarely need adjusting, e.g. Adjust for variations of incoming mains water temperature between Summer and Winter.
6. When you have **finished** showering **push button "D" only**. The electricity to the elements is then disconnected and the adjacent light will flash, water will continue to flow for approximately 5 seconds before switching off. This reduces the temperature of the water in the tank for the next user. Switch off the electricity at the ceiling switch or local isolator, where fitted.
7. Your shower is **designed to stabilise temperature** changes caused by water pressure fluctuations. These can result from toilets being flushed or taps being turned on or off. When this happens your showering temperature will be held within a controlled band, provided that the minimum pressure required by the shower is maintained.
8. Your shower requires a minimum operating pressure of 0.7 Bar 69 kPa (10 p.s.i.) . At pressures above 0.7 Bar 69 kPa (10 p.s.i.) it will minimise temperature fluctuations as detailed in note 7. If the water pressure falls below 0.7 Bar 69 kPa (10 p.s.i.) it is likely that the pressure switch will turn off the power to the heating elements, resulting in a cold shower. The **"low pressure"** light will illuminate and the **"Overheat"** light may come on to indicate that this has happened.
9. During normal operation if an overheated water temperature is sensed by the shower then the thermal cut-out will switch off the heating elements. The **"Overheat"** light will illuminate to provide a visual indication that this has taken place. Water will continue to flow and as the water temperature falls the heating elements will be turned back on. If the **"Overheat"** light continues to cycle then

increase the water flow rate by turning knob "E" clockwise and check that the handset does not require de-scaling. If the **"Overheat"** light still continues to cycle then press button "B" to the **"MEDIUM"** power setting (knob "E" will need adjusting ).

10. Note that knob "E" **IS NOT A TAP** and does not turn the water off.

**WARNING! DO NOT SWITCH THE SHOWER ON IF YOU SUSPECT IT OF BEING FROZEN. WAIT UNTIL YOU ARE SURE IT HAS THAWED OUT.**

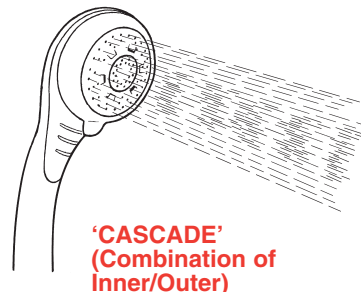
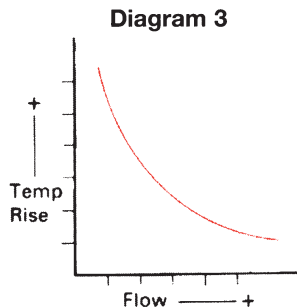
**Diagram 2**



# How your “Expressions 550” Shower Works

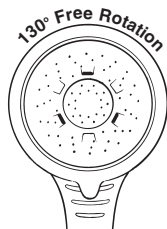
Your shower is designed for convenience, economy and Safety of use.

- 1 Water is heated instantaneously as it flows over the heating elements in the copper cylinder (diagram 2).
- 2 The required water temperature is achieved by adjusting the rate of water flow. Diagram 3 shows the principle involved in relating temperature rise to flow rate. The higher the water flow the lower the temperature rise, and vice versa. The temperature of the water supplied from the mains can vary considerably throughout the year from 5 to 20°C. This means that in Winter, the flow rate will be less than in the Summer to achieve the same outlet temperature. In Summer the “MEDIUM” power setting may give adequate hot water.
- 3 The heaters are only switched on when sufficient water is flowing. This is done automatically with a switch which works on water pressure.
- 4 The water is turned on and off by the solenoid valve built into the shower. This is switched on by button “A”, “B” or “C”.
- 5 The flow of water is automatically held at the level set by the user even though the supply pressure may vary (see “How to use your Expressions 550 shower” note 7).
- 6 If the water supply falls below a set limit, the pressure switch will operate and switch off the power to the elements. This is indicated by the “Low Pressure” light illuminating (See “How to use your Expressions 550 shower” note 8).



- 7 As a further safeguard, a thermal cut-out switches the power off if the water temperature climbs above a set limit and the “**Overheat**” light will come on. The cut-out gives an audible click when it switches off, but will reset itself if cold water is run through the shower for 10 to 20 seconds and the “**Overheat**” light will go out.
- 8 The pressure relief device is to safeguard against extreme abuse conditions.
- 9 There are 3 defined spray plate settings adjustable by rotating the spray plate (see diagram 4). If desired many combinations between the 3 can be achieved.

**NOTE:** After use it is normal for some water to drip from the shower head for a few moments, this inhibits scale build-up over prolonged use.



**The Shower Head rotates through approximately 130°.**

IN ORDER TO MAINTAIN THE PERFORMANCE OF YOUR SHOWER YOU MUST CLEAN THE SHOWERHEAD. USE KEY PROVIDED TO REMOVE SPRAY PLATE.

All water contains particles of lime which build up in the showerhead and unit reducing the performance. It is therefore important to clean the showerhead by regularly dipping the spray plate in a suitable descaling solution.

The frequency of this will vary from weekly to quarterly depending on water hardness and experience.

Check the sprayplate is then free to rotate to give the three settings.

In some **winter** conditions, when the incoming mains water is particularly cold it may be necessary to select the inner or outer spray pattern only. This will ensure correct operation of the shower with a slightly lower water flow rate.

# What to do if things go wrong

## SELF HELP

If the shower is unsatisfactory, make the following checks before calling out the contractor. Any one of these adjustments could restore the performance

**a) Water too HOT** Increase water flow by adjusting the temperature control clockwise.  
Clean spray plate holes. (Select Outer or Combination spray patterns)  
Switch power to **"MEDIUM"** setting.  
Increase pressure of water supply e.g. fully open service valve or stop cock. Check hose is not kinked restricting the water flow.

**b) Water too COLD** Decrease water flow by adjusting the temperature control anti-clockwise. (select Inner or Outer spray patterns only)  
Switch power to **"HIGH"** setting.

**c) Spray Pattern poor** Clean spray plate and flush heater.  
(Select a Outer/Inner spray pattern)

**d) Water goes cold while using shower** Check power setting lights are on.  
Check water pressure has not fallen so far as to let pressure switch cut-out, e.g. another tap drawing water off, indicated by **"LOW PRESSURE"** light on. Raise position of handset.

**e) Broken parts** Please contact our spares department on 08709 000420. Fitting instructions are provided with spares.

## PROFESSIONAL SERVICE

If the previous checks fail to restore the performance, you should seek professional help.

The person who installed the shower is probably the best one to repair it and is certainly the person to contact if you have a problem in the guarantee period.

The following additional checklist is provided for the benefit of the qualified serviceman.

**WARNING: SWITCH OFF THE ELECTRICITY AT THE ISOLATING SWITCH BEFORE REMOVING THE COVER TO MAKE CHECKS.**

**a) Water too HOT** Water flow restricted by blockage in filter of solenoid valve. Switch off water and undo plastic nut on elbow, loosen brass nut to swing elbow away from solenoid.  
Remove filter in solenoid with long nosed pliers and flush clean.

**b) Water too COLD** Check circuit through thermal cut-out.  
Check circuit through microswitch on the pressure switch.  
Check each element circuit.  
Check tightness of electrical connections.

**c) Water leaks from burst pressure relief valve** Check for cause of high pressure and remove it. Blockage on outlet i.e: blocked spray plate. Replace the pressure relief disc.

**d) Water does not flow when button "A", "B" or "C" is pressed** Check circuit through solenoid coil.  
Check circuit through microswitch.  
Possible PCB fault, if defective, then replace. Power supply not reaching shower.

## Redring After Sales Service

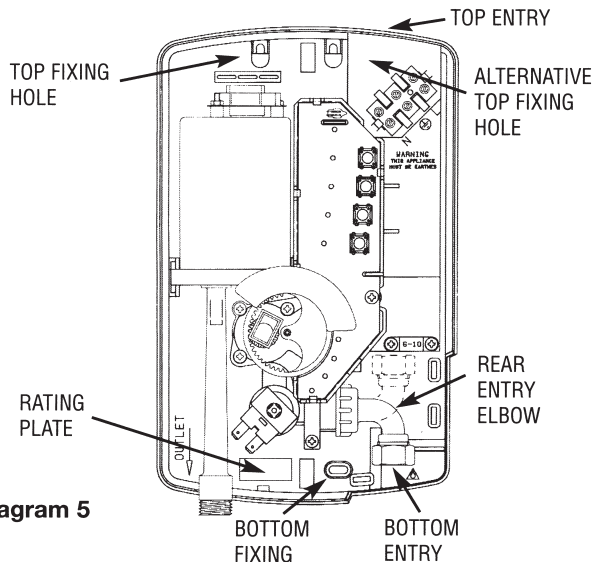
We offer a technical advisory service on the telephone to contractors and other customers with problems in the field.

**RING 08709 000430**

Spare parts can be supplied against any VISA or ACCESS cards.

**RING 08709 000420**

Remember to quote the exact type of shower, as written on the front of the shower and on this leaflet. It may also be of use to have a note of the Catalogue number as stated on the rating plate inside the shower. (See diagram 5 for location).



**Diagram 5**

## Installation Instructions

**ALL WIRING AND INSTALLATION MUST BE SUPERVISED BY A QUALIFIED ELECTRICIAN.**

**WARNING! DO NOT INSTALL THIS SHOWER IN A ROOM WHERE IT MAY BE SUBJECT TO FREEZING**

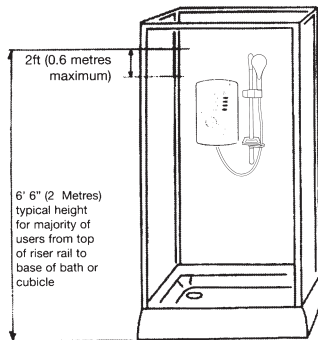
We recommend that the installation is done in the following sequence.

- (a) Fixing the shower to the wall
- (b) Plumbing
- (c) Electrical connections

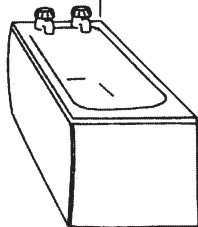
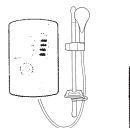
If you are replacing an existing "REDRING PLUS S or E SHOWER" then you will find that the fixing points, electricity and water feeds are the same as your existing unit.

### (a) Fixing the shower to the wall

1. Position the riser rail at the height recommended in diagram 6 and mark its position.
2. Position the heater so that the sides of the unit are vertical and the top is level with, **or up to 0.6 metres (2ft) maximum below the top of the riser rail**. Choose a flat piece of wall to avoid the possibility of distorting the backplate thus making the front cover a poor fit.
3. Adjust the positions to get the most convenient arrangement taking the following into account.
  - (a) The possible need to use the handset over a sink for hairwashing etc.
  - (b) The heater must not be mounted in the direct spray from the handset.



**Diagram 6**

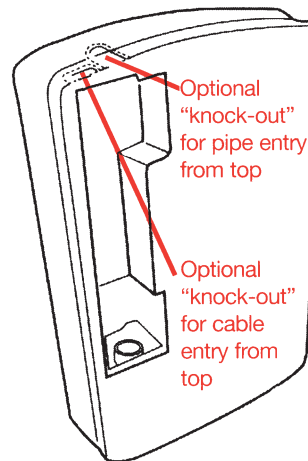
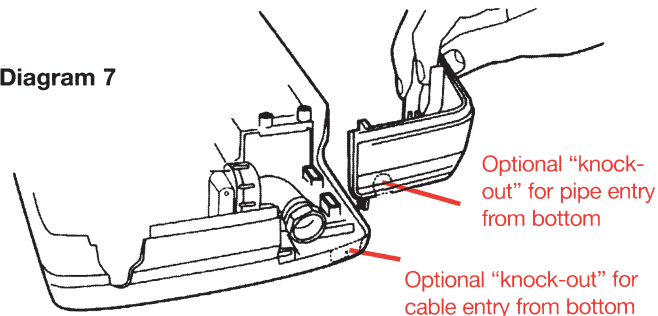


- (c) The handset must not be able to come into contact with used water in the cubicle, bath or basin. If it can, even after the hose has been retained by the soap dish (see diagram 11), then a vacuum breaker must be fitted. It should be noted that these devices are liable to minor leakage so they must be positioned so that any drips are not detrimental.

4. Fix the riser rail with screws provided. The fixing holes at the base of the brackets will be disclosed by removing the plastic covers. Assemble as shown in diagram 11. Additional "knock-out" slots are available if required to improve security. The soap dish has a removable insert for ease of cleaning.
5. Decide the position of the electrical cable to the unit. If top or bottom entry is chosen (according to diagram 5), cut away the walls of the backplate as shown in diagram 7.

6. Decide the position of entry of the cold water pipe into the unit. If top, cut away the backplate. If rear, please read the section on plumbing note 5b. If bottom, remove the front cover (complete with knob) and cut away the detachable corner section as shown.

**Diagram 7**



7. If you have not done so remove the front cover (complete with knob) of the unit by undoing the retaining screws at the top and bottom of the unit and lifting the cover off. Your shower is provided with two fixing positions in the backplate (see diagram 5). The top fixing hole is a key-hole slot (an alternative keyhole is provided for better access), and should be marked and drilled first. Tighten top screw with head protruding about

10mm from wall and hook the backplate over the screw head. This allows for correct and accurate alignment of your shower before marking and fixing the bottom position. You may not wish to tighten up both screws at this stage as the holes are elongated to allow for adjustment after other connections have taken place.



The top fixing key-hole maybe inconvenient. If this is the case then an additional top entry fixing hole is available (shown in diagram 5).

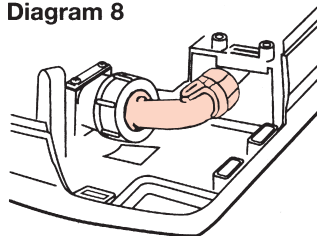
#### (b) Plumbing (See diagram 8)

The heater should be connected to the mains cold water supply. This must have a minimum running pressure of 0.7 Bar 69 kPa (10 p.s.i.) and a maximum pressure of 7.0 Bar 690 kPa (100 p.s.i.).

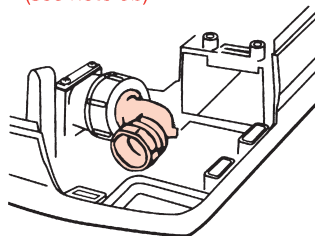
**Before connecting the pipework to the shower ensure that pipework is flushed out.**

1. It is recommended that a water council listed isolating valve is fitted between the rising main and the unit. This will allow the unit to be serviced without turning off the cold water or exchanged without having to turn off the water at the water stop valve.
2. The heater can be fed from a header tank provided this has a minimum head of 7 metres (23ft).
3. In extreme cases of difficulty in getting sufficient water pressure, consideration should be given to using a pump.
4. 15mm copper or stainless steel pipe should be used. To avoid cross threading do not remove the brass nut from the elbow when positioning pipe.  
In multiple shower installations correct pipework sizes should be calculated to maintain adequate flow to each shower.
- 5a. If top entry is chosen, turn the elbow 180° into the required position.
- 5b. If rear entry is chosen, turn the elbow 180° and treat as top entry with the additional fitting of a “Yorkshire” elbow (soldered type) in the rear channel.

**Diagram 8**



Top Entry or Rear Entry with addition of “Yorkshire” elbow (see note 5b)



Bottom Entry

**WARNING: DO NOT FIT A TAP ON THE SHOWER OUTLET. TAKE CARE TO AVOID RESTRICTING THE OUTLET OF THE PRESSURE RELIEF DEVICE.**

6. It is in order to use a W.R.C. (Water Research Council) approved sealant sparingly whilst avoiding excess finding its way into shower operating parts.
7. With stop valve connected, **flush the pipework through to remove particles etc**, before making the final connection to the shower. Blockage in the waterways (particularly the spray plate and solenoid valve) will prevent the heater working properly.
8. The shower is designed to have an open outlet and should only be used with recommended fittings. Do not connect the handset until after the shower front cover and corner section are fitted.

### (c) Electrical

The electrical installation must be in accordance with the current BS. 7671 (I.E.E. regulations). **If in doubt contact our After Sales Service Department for a data sheet.**

1. The shower is designed for a single phase A.C. electrical supply

Please check the rating plate on the unit to see what details apply to your unit

	Cable sizes	Fuse / MCB
8.5/7.8kW 240/230V	6mm <sup>2</sup>	40A Cartridge fuse 14m Max
	or	Type A MCB 22m Max
	10mm <sup>2</sup>	40 or 45A Cartridge fuse 22m Max
9.5/8.7kW 240/230V	10mm <sup>2</sup>	40 or 45A Cartridge fuse 22m Max

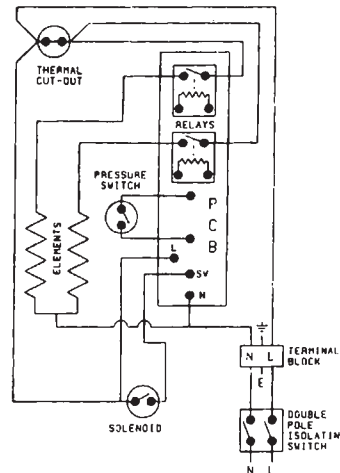
9.5/8.7kW version may be able to use 6mm<sup>2</sup> cable if Method 1 (clipped direct) is used.

Remember to uprate the cable if it runs in thermal insulation in a loft.

3. In order to provide a means of isolation, the heater **MUST BE** permanently connected to the electricity supply through a double pole linked switch with a contact gap of 3mm mounted in a convenient position. We recommend ceiling switches.
4. Cut back cable as in diagram 9. Connect cable to terminal block making sure that all the retaining screws are **VERY** tight and that no cable insulation is trapped under the screws.

**WARNING: FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN A FAILURE OF THE TERMINAL BLOCK.**

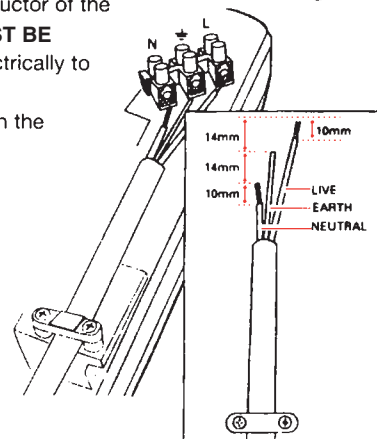
### Schematic Wiring Diagram



### 5. WARNING: THIS APPLIANCE MUST BE EARTHED

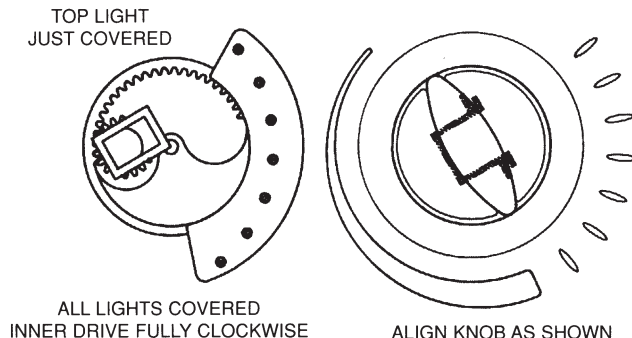
6. The earth continuity conductor of the electrical installation **MUST BE** effectively connected electrically to all exposed parts of the appliances and services in the room in which the water heater is to be installed in conformity with the current BS. 7671 (I.E.E. wiring regulations).

Diagram 9



7. Fit the corner section back into the back plate.

**Diagram 10**



8. Fit the front cover back into position making sure the **knob is aligned correctly with the flow valve** (see diagram 10). If knob drive is removed the mask mechanism will need re-aligning. Turn flow valve fully clockwise, position mask to cover all the lights and then replace drive in position shown in diagram 10. Check that when the flow valve is turned fully anti-clockwise that all lights are visible. When re-fitting the cover, start by locating the outlet “tang” around the recess for the outlet pipe, and then “roll” the front cover over the knob and onto the top of the backplate. Secure with top and bottom screws.
9. Operate the shower first without the handset to flush out particles, fit handset and then operate the shower as on page 2 and check:
  - (a) That the water gets to a satisfactory temperature.
  - (b) Water flow can be adjusted by knob “E”.
  - (c) Power selection does give a change in water temperature and power lights illuminate.
  - (d) Check again for leaks.
  - (e) That the holes in the spray plate are not blocked.

10. DEMONSTRATE OPERATION TO USER.

## How To Maintain your “Expressions 550” Shower

It is recommended that the shower unit, riser rail, hose etc. be cleaned using a soft cloth and that the use of abrasive or solvent cleaning fluid be avoided, especially on any plated finishes.

We recommend that before cleaning, the isolating switch be turned off, thus avoiding accidentally switching on the shower.

The showerhead should be periodically cleaned as detailed on page 5.

## Additional Accessories

White 2 metre Shower Hose	Catalogue No. 83-593529
1 metre Riser Rail	Catalogue No. 83-593530
Extended Shower Control Lever (Interchangeable with Control Knob)	Catalogue No. 83-590710
Water Control Tap	Catalogue No. 93-792452
Shower De-scaling Powder	Catalogue No. 95-711015
Curtain and Rail Pack	Catalogue No. 83-792802
Curtain and Rail Pack with non-slip Bath mat	Catalogue No. 83-792801

**Spare parts/accessories can be supplied against any Visa or Access cards from Redring Sales Hotline 08709 000420.**

ASSEMBLY OF  
RISER RAIL,  
HANDSET AND  
SOAP DISH

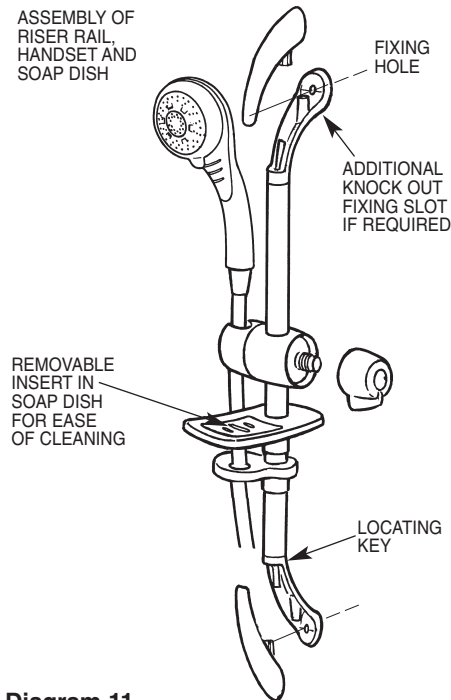


Diagram 11

## GUARANTEE

We, GDA Applied Energy Ltd., guarantee that should this instant water heater prove to be defective by reason of faulty workmanship or material within 36 months (12 months outside of U.K.) of the date of purchase or commencement of hire we will replace the defective parts **FREE OF CHARGE** on the condition that:

- a) The appliance has been correctly installed and used only on the supply circuit or voltage stamped on the rating plate.
- b) The appliance has been used in accordance with these instructions and has not been tampered with or otherwise subject to misuse, neglect or accident.
- c) The appliance has not been taken apart, modified or repaired except by a person authorised by us.
- d) EVIDENCE of the date of purchase in the form of an invoice, receipt (hire purchase documents) is included with the appliance if returned under guarantee.

‘This Guarantee does not affect your statutory rights’

Full details of terms and conditions are available on request from:–

**REDRING®**

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