INSTALLATION & OPERATING INSTRUCTIONS

Installer please note:
Leave installation and operating instructions with customer

Revision	Date
0501M077.L	19/06/2019

1.0 Contents

2.0 Important Safety Information

Children of less than 3 years should be kept away unless continuously supervised.

Children aged from 3 years and less than 8 years shall only switch on/off the radiator provided that it has been placed or installed in its normal operating position and they have been given supervision or instruction concerning use of the radiator in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the radiator or perform user maintenance.

This radiator can be used by children aged from 8 years and above and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they are supervised or have been given instruction concerning use of the radiator in a safe way and understand the hazards involved. Children should not play with the radiator. Cleaning and user maintenance should not be carried out by children without supervision.

Caution
The radiator can become very hot and cause burns.
Particular attention has to be given where children and vulnerable people are present

Warning
The radiator must only be operated in the upright position and fitted to the wall with the fixing brackets supplied.

Warning
In order to avoid overheating,
DO NOT COVER THE RADIATOR

Do not obstruct the air circulation around the radiator, for example with curtains or furniture.

Warning
The radiator must not be located immediately below or in front of an electrical socket outlet.

Warning

THIS APPLIANCE MUST BE EARTHED.

Supply Voltage – 230-240VAC 50Hz

This radiator must be used on an AC supply only, and the voltage marked on the radiator must correspond with the supply voltage.

Installation must be in accordance with the requirements of the current edition of the IEE Wiring Regulations 17th Edition.

Supply

This radiator must be plugged into a switched socket or wired into a fused spur. If wiring into a fused spur remove the plug and dispose of safely. (If installing in France please ensure the radiator is wired into a fused spur only.)

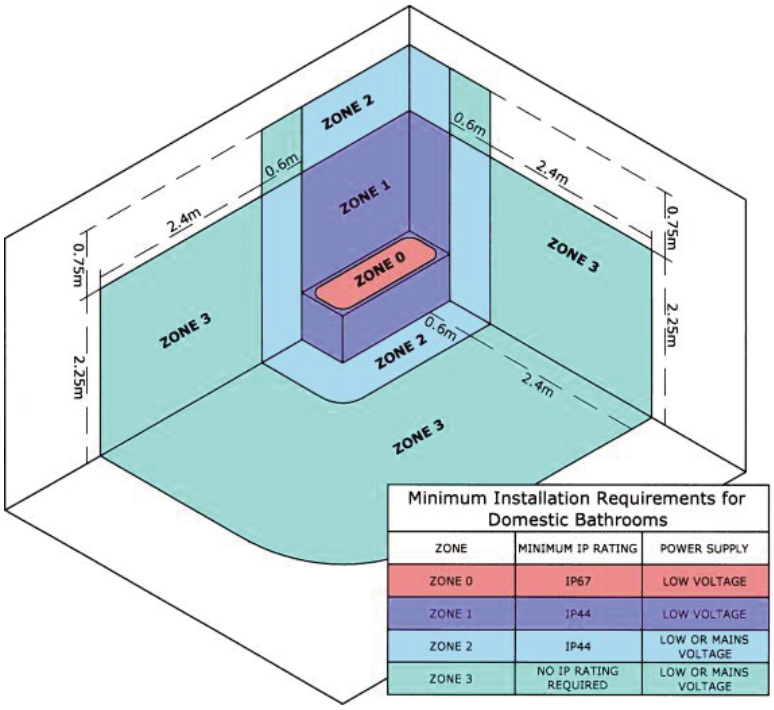
Supply cord

This radiator is fitted with a moulded plug incorporating a 13 amp fuse. Any replacement fuses must be approved by BSI to BS 1363. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.

DO NOT operate the radiator with the mains lead overhanging the radiator.

Ensure that the mains lead is properly secured to avoid trip hazards.

The radiator is a “class I” IP44 device and it can be installed in bathrooms zone 2 and 3 provided that no electric control unit can be touched by people using the bath-tub or the shower. If the radiator is installed in zone 2 or zone 3 it must be wired into a fused spur located in the appropriate zone.



Minimum Installation Requirements for Domestic Bathrooms

ZONE	MINIMUM IP RATING	POWER SUPPLY
ZONE 0	IP67	LOW VOLTAGE
ZONE 1	IP44	LOW VOLTAGE
ZONE 2	IP44	LOW OR MAINS VOLTAGE
ZONE 3	NO IP RATING REQUIRED	LOW OR MAINS VOLTAGE

Warning
The radiator must not come in direct contact with water. This includes excessive humidity or using wet hands to operate the controls.

3.0 Radiator Installation Instructions

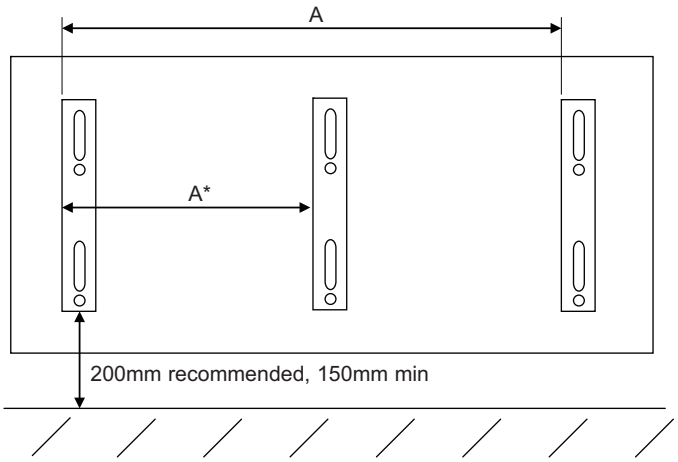
During transit the fluids contained in this radiator may have moved from important sensing positions.

To ensure reliable operation, the radiator should be carefully stood on one of its cardboard endcaps, with the control panel facing down, for thirty minutes prior to installation.

3.1 Positioning

A suitable position for the radiator should be chosen, and the positions of the mounting brackets marked on the wall, using the dimensions given below.

For optimum output, the bottom of the radiator should be 150mm from the floor. Any shelf or substantial projection should be a recommended minimum of 150mm above the top of the radiator.



Note: * dimensions for additional bracket for radiators 2000mm long only.

Model	3100	3140	3160	4100	4140	4160
Bracket Width (mm)	734	1134	1334	734	1134	1334
A* (mm)	-	-	-	-	-	-
Weight (kg)	25	33	35	33	44	50

Model	6040	6060	6080	6100	6120
Bracket Width (mm)	134	334	534	734	934
A* (mm)	-	-	-	-	-
Weight (kg)	25	29	40	50	58

3.2 Fitting

Ensure that the brackets are fitted towards the outside of the hangers on the radiator. This will prevent any lateral movement when the radiator is mounted.

To install the radiator at the recommended minimum height, the bottom of the wall fixing bracket should be approximately 200mm from the floor (see diagram and table above). To allow for other heights above the floor, note that the bottom of the fixing bracket is approximately 50mm above the bottom of the radiator.

For most efficient operation of the radiator, there should be a gap between the skirting board and the rear panel of the radiator to allow air flow behind the radiator. If the bottom of the radiator is below the top of the skirting board, it may be necessary to remove a section of skirting for this purpose.

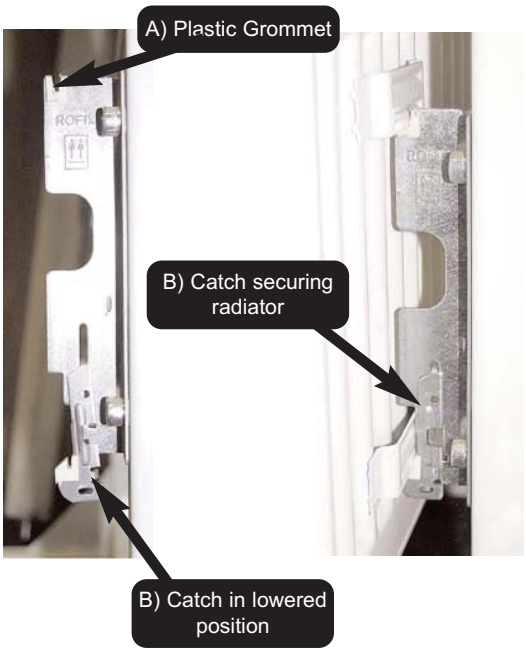
Place the bracket vertically against the wall at the appropriate height, and to suit the length of the radiator. Mark the positions of the fixing holes on the wall.

Warning
When drilling wall, care must be taken to avoid existing wires and pipes.

Caution
Fix the brackets to the wall using fixings appropriate to the wall material and the weight of the radiator.
The radiators are supplied with wall brackets and fixings. These fixings may not be suitable for the type of wall fixing.

Insert the plastic grommets (A) onto the brackets (these minimise expansion and contraction noise.) Pull down the spring loaded part of the bracket (B), and push it back to locate it in its lower position.

Hook the radiator lugs on to the tops of the brackets. Return the spring loaded part of the bracket (B) to its original position, thereby securing the bottom of the radiator in its final position.



4.0 Operating Instructions

Note
This instruction manual should be read carefully and retained by the user. Particular attention must be made to the safety information at the beginning of this manual.

4.1 Before Switching On

Ensure that the radiator has been installed correctly and that all warnings and instructions have been read carefully and followed.

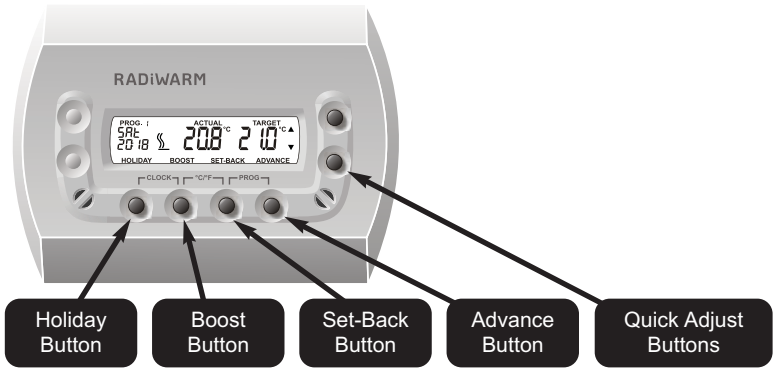
4.2 Switching On

When you are certain that you have completed the above, plug in and switch on at the wall socket. Switch the radiator ON by turning the knob clockwise. Check the supply light is illuminated ORANGE for a short while then either GREEN or RED depending on the ambient temperature of the room. This light can be seen on the control panel.

Warning
DO NOT switch off the radiator at the wall socket when the radiator is warm.

Note
It is strongly recommended that radiators (all models) are run for ½ hour each month during the summer to ensure that the pump is fit for winter operation.

5.0 Radio Frequency Control



Your Radio Frequency Controller (RFC) is a wireless thermostat giving high precision room temperature control. It is also a seven day programmer with up to six temperature settings per day. Each RFC can control any number of radiators.

The temperature control is primarily set by the RFC. To allow the RFC to control your radiator fully; the control knob must be turned fully clockwise. This will allow the RFC to run your radiator at full output if the need arises. You can however choose a lower radiator setting for systems where multiple radiators are operated by the same RFC by turning the control knob anti-clockwise.

5.1 Batteries

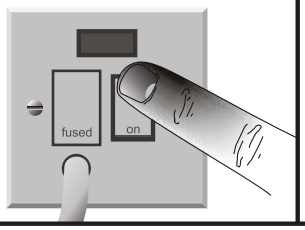
Your RFC is supplied with two factory fitted, AA size, alkaline batteries. These should last around two years. The low battery symbol appears when it is time to replace them. If you don't replace them for two weeks the symbol will start to flash. You must reset the clock after changing the batteries, but all other settings are unaffected.

5.2 Connecting your Radiator to your Controller

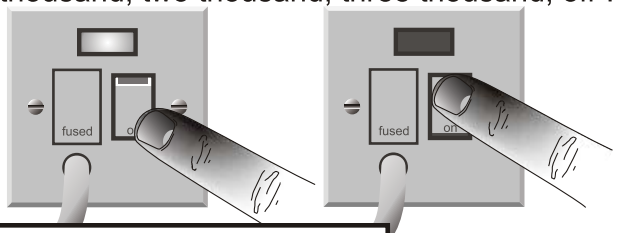
For radio control to work, you first need to establish a radio connection between your radiator and your RFC. You may wish to follow this procedure if you add more radiators.

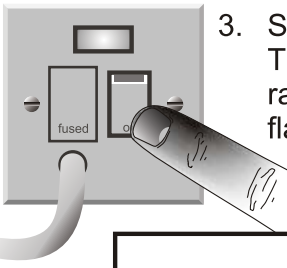
Turn the radiator thermostat knob fully clockwise.

1. Switch the radiator's mains supply off.



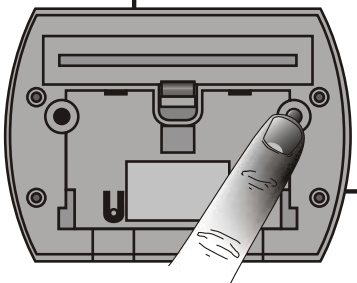
2. Now, **timing is critical**: switch it on for three seconds then off again. You can say, "On, one thousand, two thousand, three thousand, off".





3. Switch it back on. The light on the radiator should be flashing green; if it is not flashing restart the procedure.

4. You now have half a minute to press the button at the back of RFC. Once pressed, the light on the radiator will immediately stop flashing and possibly change to yellow or red depending on the RFC settings and the room temperature.



Now that it's connected you shouldn't ever have to do it again, though you may also wish to follow this procedure if you add more radiators or move your radiator to another RFC.

5.3 Choosing a position in the room.

The RFC should be positioned in a place where its temperature will not be changed by local events. Avoid:

- Draughty places near windows, doors and vents.
- Places near the radiator or any other heat sources in the room.
- Places in direct sunlight.
- Places where it may get wet.
- Places where, for example, it could be hit by a door.

5.4 Range Test.

Having connected your radiator and chosen a position for the RFC you can test the wireless connection.

Place or hold your RFC in position. Press BOOST and ADVANCE together The RFC will transmit a special test signal every 5 seconds causing the radiators supply light to flash twice.

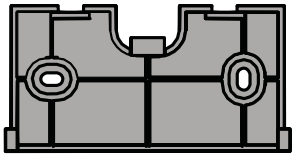
In the unlikely event that the radiator does not respond, check that you have connected to the radiator. If it still does not work try a different location.

Poor reception can be because :

- The RFC is too far from the radiator.
- There are metal objects (including parts of the building) obstructing the signal path. Metal objects can also cause reflections that can interfere with signal strength.
- There are other 433Hz transmissions nearby. This should not be a problem as all such devices may transmit occasionally and for short periods of time.
- The range test lasts for 10 minutes or until you press CLEAR.

5.5 Fixing the RFC to the Wall.

Remove the wall plate from the rear of the RFC and mark through the screw holes on the rear (60 mm centres). Drill and plug the wall to accept No. 6 or No. 8 screws and mount the wall plate. Clip the RFC back onto the wall plate.



Clean the RFC

Clean the RFC only with a soft, lint-free cloth. Avoid getting moisture on buttons or openings. Do not use sprays, liquids or abrasives; doing so may damage the RFC.

5.6 Reverting your Radiator to Manual Control.

If for any reason you want to use your radiator without the RFC, you can revert to Manual Control.

- If the radiator is on, switch the mains supply off and turn the control knob to maximum.
- Switch it on for 3 seconds then switch it off again.
- Repeat this process another 5 times.
- The supply light will flash for 50 seconds and your radiator will be back to manual control.

Note
If the radiator does not heat up when the RFC is on a low setting, this is normally because the room is warmer than the temperature selected on the controller, and is not due to a fault in the radiator. If the room temperature falls below that selected on the control knob, the radiator will then warm up to bring the room temperature to the selected level.

5.7 Choosing a new ID

Every RFC has an identifying code . When you connect a radiator you are teaching the radiator to listen for the RFC's code. If your radiator switches on and off when it should not, it may be that another RFC in the vicinity has the same code. This is very unlikely since there are many thousands of possible codes.

To make the RFC pick a new random code, hold the button on the back of the controller on for 5 seconds until the display says "rE5 id" , then press OK to confirm within 5 seconds. If you don't confirm no action is taken.

After selecting a new ID you must re-connect your radiator(s).

5.8 Frost Protection

If used with the RFC, the controller can be used to set the radiator to the frost protection mode. Ensure the control knob is not turned off.

5.9 Cleaning

Warning
Always disconnect from the power supply and allow the radiator to cool before cleaning.

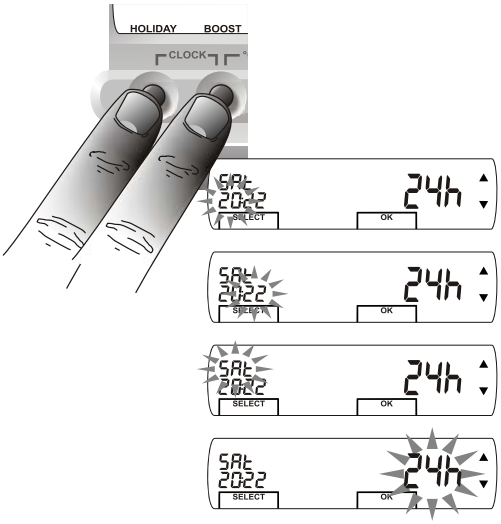
Do not use detergents, abrasive cleaners, or polish on the radiator as these may damage the finish.

Wipe the radiator with a dry cloth to remove dust and marks.

Note
Only external cleaning is permitted.

6.0 Your RFC Unit.

6.1 Setting the Time and Day.



To set the clock press **HOLIDAY** and **BOOST** together. The hours will start to flash and you can adjust them with ▲ and ▼.

Using **SELECT** you can adjust minutes, day of week or change from 24 hour clock to 12 hour clock. When finished press OK.

6.2 Factory set Program.

	Mon to Fri		Sat and Sun	
1	06:30	21.0°C	08:00	21.0°C
2	08:30	4.0°C	23:00	4.0°C
3	16:30	21.0°C	--:--	--.-°C
4	23:00	4.0°C	--:--	--.-°C
5	--:--	--.-°C	--:--	--.-°C
6	--:--	--.-°C	--:--	--.-°C

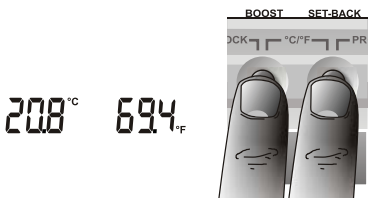
On each weekday the target temperature is 21°C from 6:30am to 8:30am, then 4°C (frost protection) until 4:30pm, then it is 21°C until 11:00pm and finally 4°C until **PROG.1** the next day.

Press ▲ and ▼ together from Setting the 7 day program to restore this program.

6.3 Frost Protection 4°C.

For frost protection set the Target temperature to 4°C. There is no frost protection if you set it to **- - -**.The snowflake symbol appears if the actual temperature ever falls below 4°C.

6.4 Celsius or Fahrenheit



Pressing **BOOST** and **SET-BACK** together changes Actual and Target temperature between Celsius and Fahrenheit.

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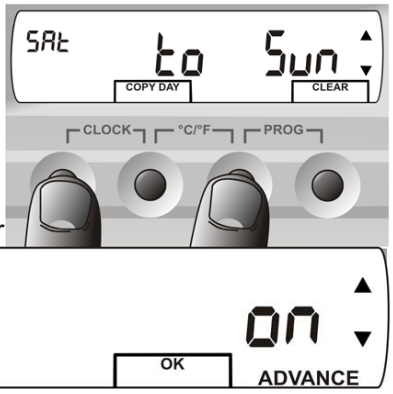
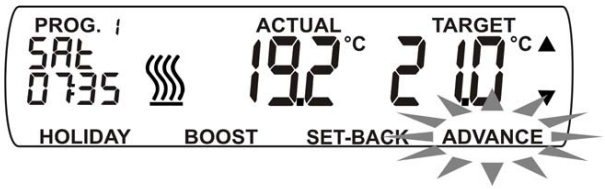
6.5 Adaptive Start (Auto Advance)

If you enable adaptive start, the thermostat learns to predict how long the room takes to heat up. You should design your 7 day program accordingly. So suppose you need it to be 21°C by 08:00. Without adaptive start you might program it to start at 07:30 hoping it will be warm by 08:00. But with adaptive start you simply program it for 08:00 and the thermostat starts heating up at its predicted optimal time.

To enable or disable adaptive start, first find *Copy Day* as explained in *Setting the 7 day program* then press these two buttons. Now that the display shows Auto ADVANCE you can switch adaptive start on or off with ▲ and ▼. Press **OK** when you are done.

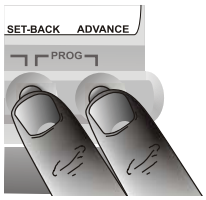


Once enabled, it flashes ADVANCE during predicted heat ups. Here, at 07:35 it has advanced to prog.1 to reach 21°C by 08:00.



A newly installed thermostat may take about a week to optimise its predictions for your room and radiator configuration.

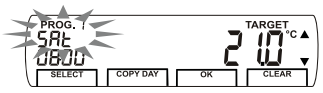
6.6 Setting the 7 day program



To set the program press **SET-BACK** and **ADVANCE** together. This will take you to stage 1 below. You can program the RFC1 with up to 6 temperature levels per day.

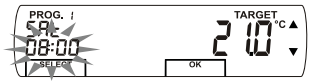
Program times cannot overlap, for example if **PROG.3** Mon is 16:30 then **PROG.3** Mon can only be set to times before 16:30.

Stage 1



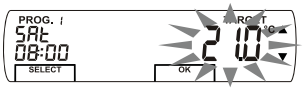
The program number and day will flash. You can change it with ▲ and ▼. **SELECT** takes you to stage 2.

Stage 2



The time flashes . You can adjust it with ▲ and ▼. **SELECT** takes you to stage 3.

Stage 3

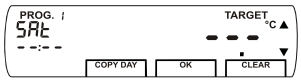


The temperature flashes . You can adjust it with ▲ and ▼ for room temperature, 4°C (frost protection) or --- (no heating). **SELECT** takes you to stage 1.

Stage 4

When you have finished setting the program press **OK** to return to normal operation.

Clearing a Program



If you clear a prog it displays as --:--,--.-- °C and the program is ignored.

From Stage 1 press **CLEAR** to clear a prog and press it again to un-clear it.

Copy Day

Use this to copy all 6 programs from the day you were adjusting to another day. Press **COPY DAY** to actually do the copy. **CLEAR** returns to stage 1

Manual Operation

If you clear all 6 programs in all 7 days, there is no program at all.

The temperature control is done entirely by Quick Adjust.

7.0 Trouble Shooting Guide

Symptom	Possible cause	Remedy
Radiator makes “gurgling” or “swishing” sound on first switching on.	This is normal, and the noise will go away after a short period. It is due to the initial movement of a small amount of air which is left in the radiator to allow for expansion.	If the sound is still present on constant running after a day or so, contact your installer to discuss the Trouble Shooting Exercise.
Radiator does not heat up.	No electricity supply to radiator.	Check radiator is switched on at the mains, and on the appliance. Check fuse in plug or fused spur. Check the supply light is on.
	Temperature of room is higher than the temperature selected on the thermostat knob.(the supply light shows Green or Orange)	If you require the room to be warmer, turn the thermostat knob to a higher setting. The radiator should then warm up. (the supply shows Red)
	One of the fail-safe safety devices has operated. (the supply light is off)	Contact your supplier to discuss the Trouble Shooting Exercise.
Supply light is Green and stays on	Tuned to factory controller	Follow instructions 5.2
Supply light Is alternating red-green flashing.	One of the fail-safe safety devices has operated.	Follow instructions 3.0

8.0 After Sales Service

If our recommended Trouble Shooting Guide does not solve the problem, warranty terms will then be followed as per below;

Radiators manufactured by RADiWARM are covered by a two year warranty from date of purchase. We will exchange within this period any radiators found to be defective due to a manufacturing fault.

Should you experience any problems with your radiator do not try to rectify it yourself as this will invalidate the warranty.

Please contact RADiWARM quoting the model and serial number of the radiator (this can be found on the lower left-hand side of the radiator)

Warranty repairs made during the warranty period are warrantied for the remainder of the original warranty.

The warranty does not cover:

a) Damage from physical abuse such as dropping the unit or impact from hard objects.

b) Damage resulting from any other use other than what it was intended for

c) Any unit that has been repaired or had an attempted repair to it made by unauthorized personnel.

d) Damage due to incorrect connection, connection to faulty equipment or connection to faulty or incorrect power supplies.

If goods are returned without prior written authorisation, an administration charge may be raised.

Carriage is chargeable on all non-warranty work and on warranty work that has been returned as a result of incorrect operation.

All quotations and charges are subject to VAT at the current rate.

Repair Warranty Policy

All RADiWARM repairs carry a limited warranty against defects in materials and workmanship. This warranty pertains only to the specific repair and any new and different defect in materials or workmanship will be treated as a new incident. Parts and products provided as a result of warranty service may be other than new but will be in good working order. All defective materials that are replaced become the property of RADiWARM.