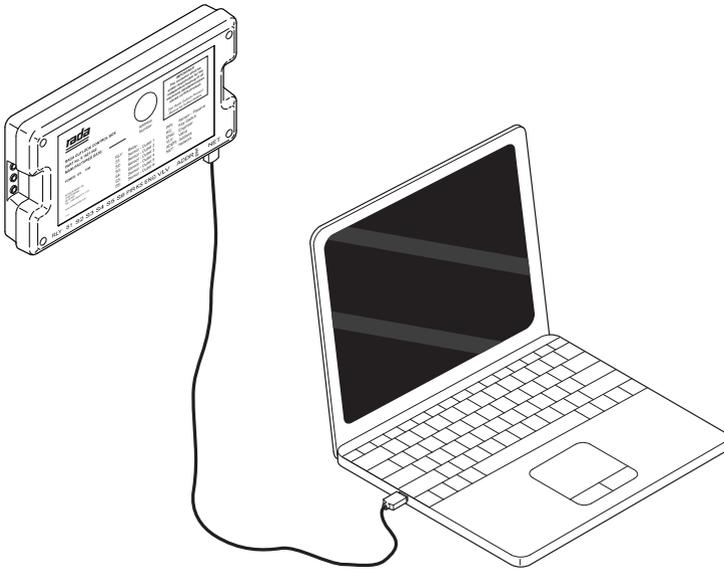




Rada Outlook Configuration Tool and USB Cable



T-logic™ Digital Intelligence



Product Manual

IMPORTANT

Installer: These instructions are for use with the UK version of this product only. This Manual is the property of the customer and must be retained with the product for maintenance and operational purposes.

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DESCRIPTION

The USB contains software that is designed to run on a Laptop or PC with a Windows based operating system

The software communicates with the Sensor Box and allows the user to:

- Control Group Bathing:** Alter the temperature/time settings of water outlets controlled by a Mixer Valve.
- Perform Disinfection Cycle:** Disinfect the Mixer Valve, outlet pipework and fittings.
- Perform Duty Flush:** Periodically flush the Mixer Valve, outlet pipework and fittings to reduce the build up of bacteria.
- Data Logging:** Duty Flush and Disinfection data logs can be recorded to monitor the performance of the washroom.

System Requirements

The USB and Configuration Tool are designed to run on Microsoft Windows XP, Windows Vista or Windows 7 operating systems.

Data Storage

Kohler Mira Limited shall not accept liability in contract, tort (including negligence or otherwise) for any loss of profits, business or anticipated savings, or loss or corruption of data, or any indirect or consequential loss arising out of the customer's use of Rada Outlook. The customer shall be solely responsible for the independent backup of all data/information stored on Rada Outlook. Notwithstanding the foregoing, none of the exclusions and limitations stated above are intended to limit any rights the customer may have under local law or other statutory rights which may not be excluded.

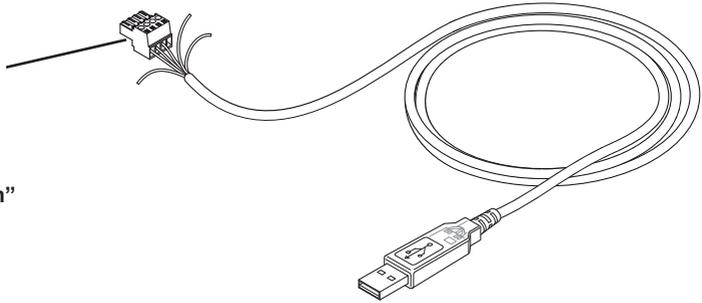
Legionella Control

Every precaution is taken to ensure this product leaves our manufacture and test facility free from microbiological contamination. However the presence of such microorganisms is universal and their control is dependent highly on the quality of on-site water management. The functions of "duty flush" and "thermal disinfection" present in Rada Outlook are there to assist in controlling Legionella, but facility owners/managers are responsible for regular cleaning, disinfection and maintenance as required to remain within any applicable control limits. The "duty flush" and "thermal disinfection" functions of Rada Outlook may not be enough to control Legionella in any specific location. Kohler Mira Limited only use WRAS approved materials in this product and Kohler Mira Limited take no responsibility for post installation contamination. After installation, suitable additional disinfection/sterilisation must be performed before use.

PACK CONTENTS

☐ 1 x RS485 - USB Cable

The cable needs to be connected to the Rada Outlook Sensor Box according to the system requirements. Refer to **“USB Cable Installation”** for further details.



☐ 1 x Installation USB Stick

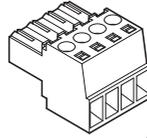
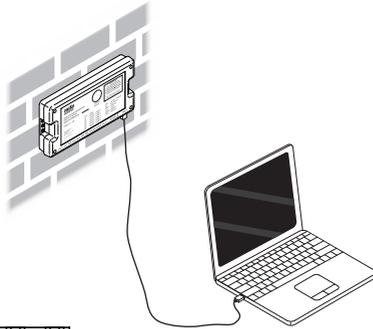


USB CABLE INSTALLATION

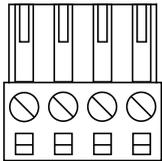
It is recommended that all connections should be made by someone familiar with electronic network installations.

Single Sensor Box

Connect RS485 - USB Cable to Network (NET) port of Sensor Box.

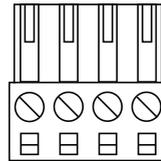


Crop excess wires back to insulation.



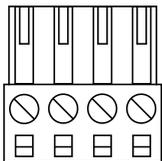
Internal Power
(without termination)

A (yellow)
B (orange)
0V (black)
N/C



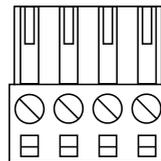
External Power
(without termination)

A (yellow)
B (orange)
0V (black)
+5V (red)



Internal Power
(with termination)

B (yellow)
B (brown)
A (green)
A (orange)
0V (black)
N/C



External Power
(with termination)

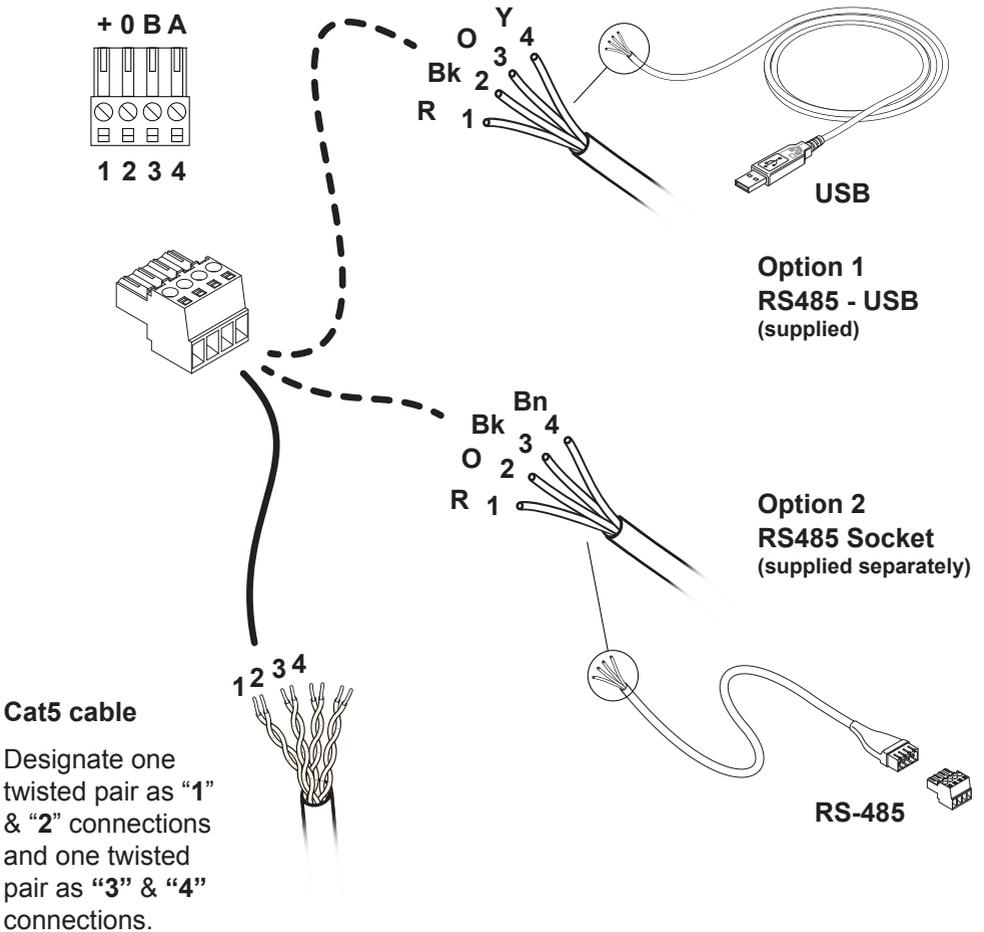
A (yellow)
A (brown)
B (green)
B (orange)
0V (black)
+5V (red)

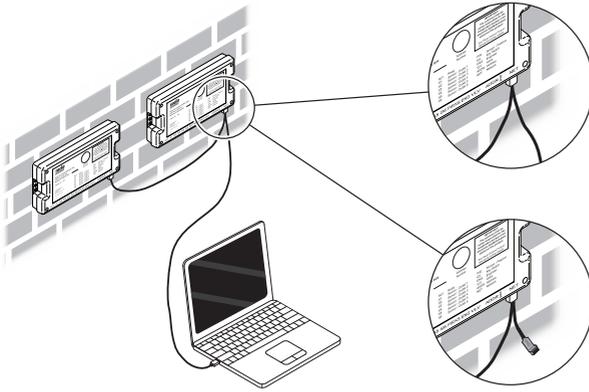
Multiple Sensor Boxes

Multiple Sensor Boxes can be connected together, up to a maximum of 31, to form a network (see wiring diagram). The recommended network cable is **Cat5 twisted pair** (not supplied).

To connect the Sensor Boxes to a PC/Laptop device there are two options:

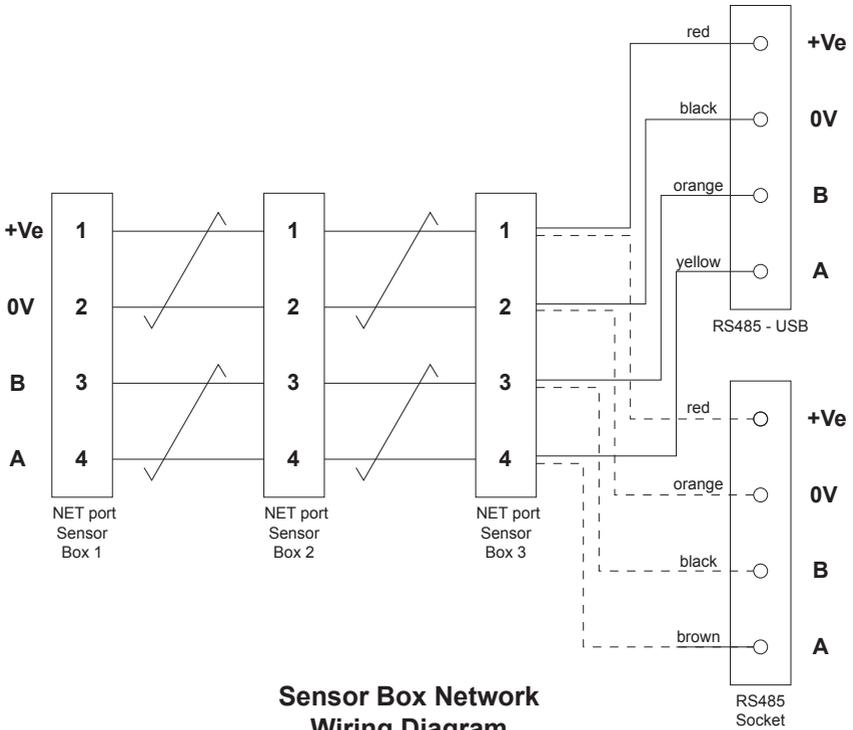
1. Connect both the RS485 - USB Cable and Cat5 cable to the Network (NET) port of one Sensor Box. Recommended for permanent connection.
2. Connect both the RS485 Socket and Cat5 cable to the Network (NET) port of one Sensor Box. Recommended for temporary connection.





Option 1
RS485 - USB
 (supplied)

Option 2
RS485 Socket
 (supplied separately)



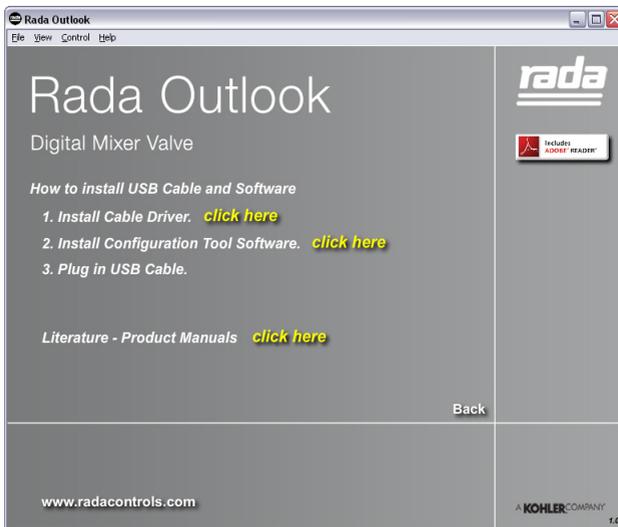
SOFTWARE INSTALLATION

Installation of RS485 - USB Driver on Windows

1. If you are running Windows XP or Windows XP SP 1, temporarily disconnect your PC from the Internet. This can be done by either removing the network cable from your PC or by disabling your network card by going to the “**Control Panel\Network and Dial-Up Connections**”, right-clicking on the appropriate connection and selecting “**Disable**” from the menu. The connection can be re-enabled after the installation is complete.

If you are running SP2 or above, the internet connection does not need to be disconnected.

2. Follow the on screen instructions to install the USB Cable Driver and the Rada Outlook Configuration Tool.



If the USB storage stick does not start automatically, find the USB drive location using Windows Explorer and run the following file:



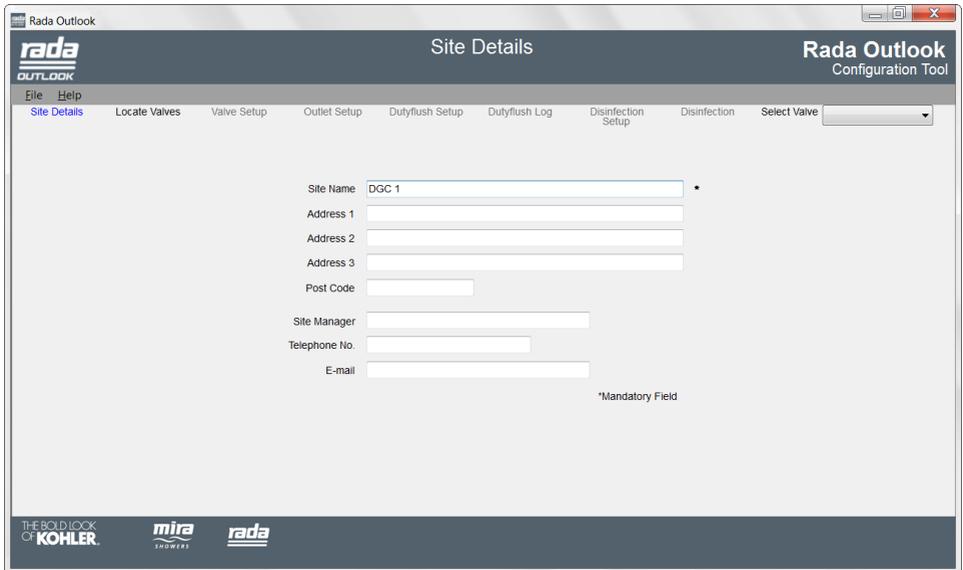
RADA_OUTLOOK.exe
Adobe Flash Player 10.1 r52
Adobe Systems, Inc.

For example if the USB stick is using drive “E:” find the following path:
E:\RADA_OUTLOOK.exe

3. Connect the USB Cable to the Sensor Box.

CONFIGURATION TOOL

Site Details



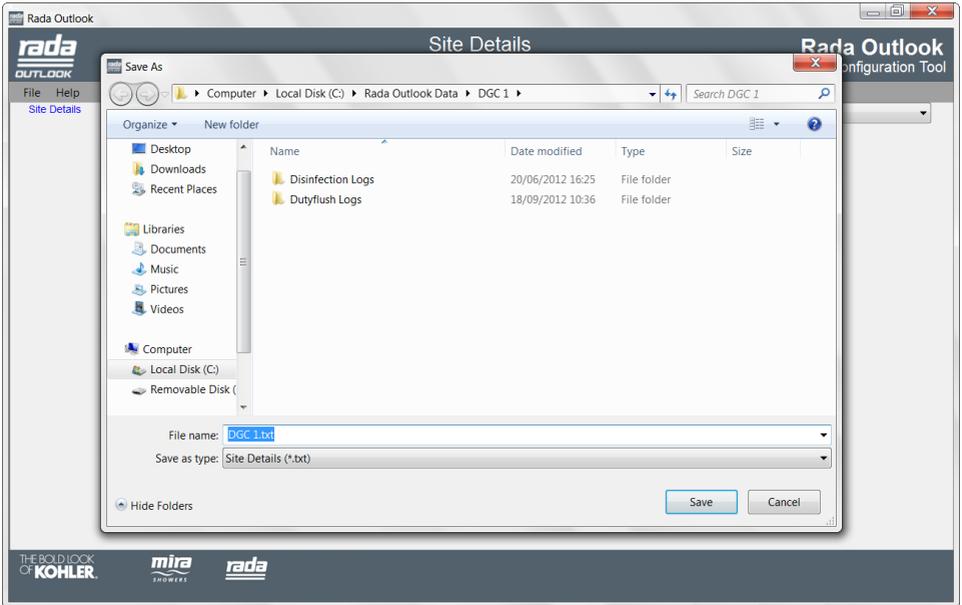
The screenshot shows the 'Rada Outlook Configuration Tool' window. The title bar reads 'Rada Outlook Configuration Tool'. The main window has a dark header with the 'rada OUTLOOK' logo on the left and 'Rada Outlook Configuration Tool' on the right. Below the header is a menu bar with 'File' and 'Help'. A navigation bar contains several tabs: 'Site Details' (selected), 'Locate Valves', 'Valve Setup', 'Outlet Setup', 'Dutyflush Setup', 'Dutyflush Log', 'Disinfection Setup', 'Disinfection', and 'Select Valve'. The main area is a form for entering site information. The fields are: Site Name (containing 'DGC 1'), Address 1, Address 2, Address 3, Post Code, Site Manager, Telephone No., and E-mail. A small asterisk and the text '*Mandatory Field' are located below the E-mail field. At the bottom of the window, there are logos for 'THE BOLD LOCK OF KOHLER', 'mira SHOWERS', and 'rada'.

Check the Sensor Box is connected to both the Mixer Valve and the PC/Laptop device. Double click the “**Rada Outlook**” icon on the desktop or search for and run the file “**Rada Outlook.exe**”.



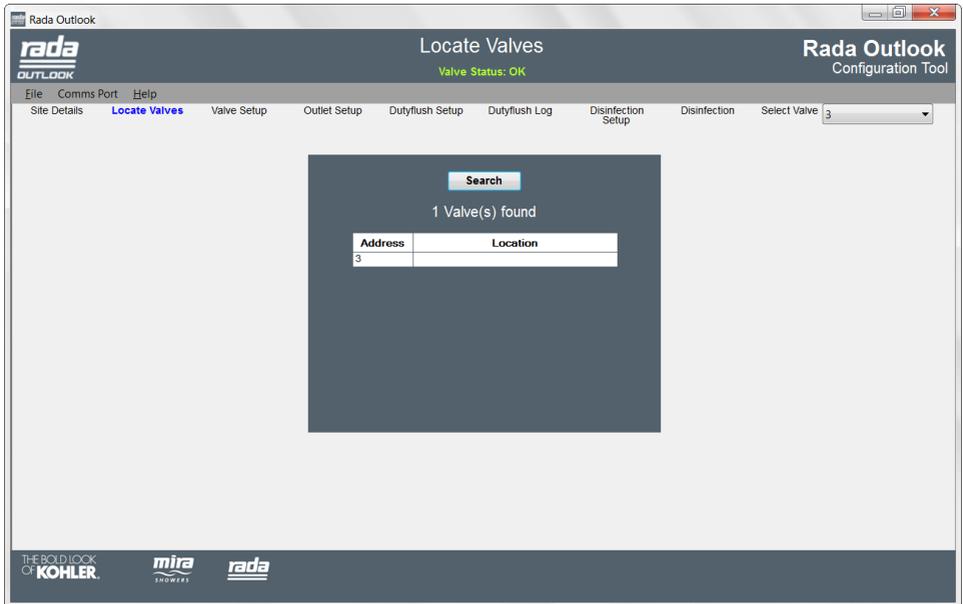
Rada Outlook

Enter the site details in the above screen and save using “**File**”, “**Save**”. A folder with the “**Site Name**” will be created automatically.



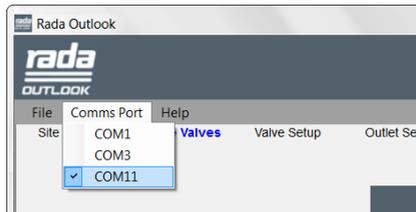
Enter the name of the file to be saved and press **“Save”**. A new text file will be created and used automatically each time the Configuration Tool is started.

Locate Valves



The “**Locate Valves**” screen is where all connected Sensor Boxes are identified and their current settings are read into the Configuration Tool.

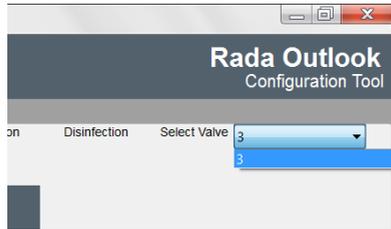
Select the Com Port where the RS485 - USB Cable is connected.



Press “**Search**” to find all connected Sensor Boxes.

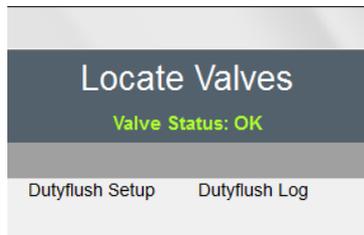
All devices found are listed with their network address and location. (When connecting to a device for the first time there will be no location assigned.)

Select Valve



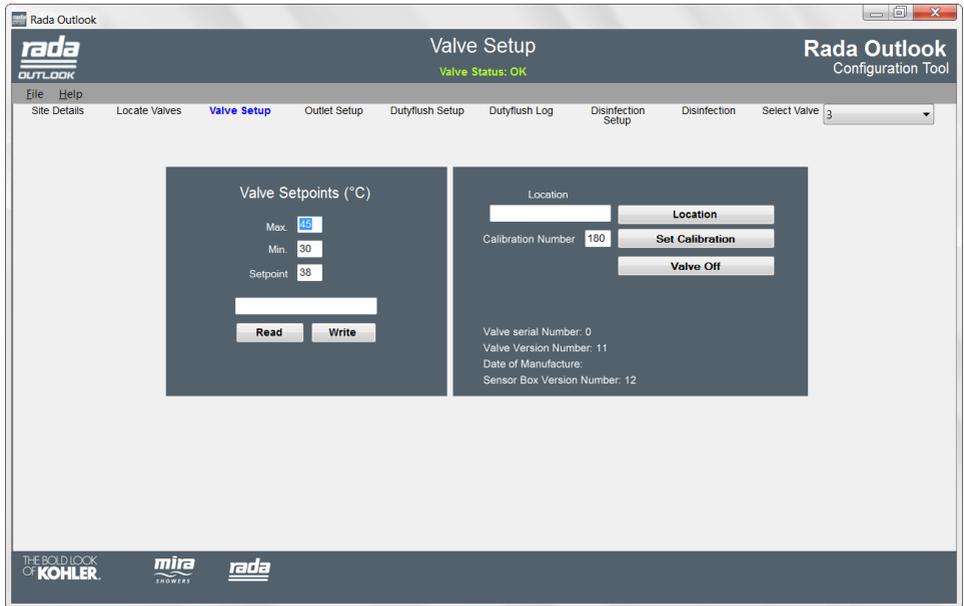
Change the selected Sensor Box and Mixer Valve from any of the main screens by using the drop down menu in the top right corner.

Valve Status



The “**Valve Status**” is displayed under the title of the screen. Error messages will appear in red.

Valve Setup



The Setpoint is the outlet temperature of the Mixer Valve to all six outlets. Input the desired **“Setpoint”** temperature and decide on a reasonable temperature range for the setpoint to be within. Input the range using the **“Max”** and **“Min”** values and press **“Write”**.

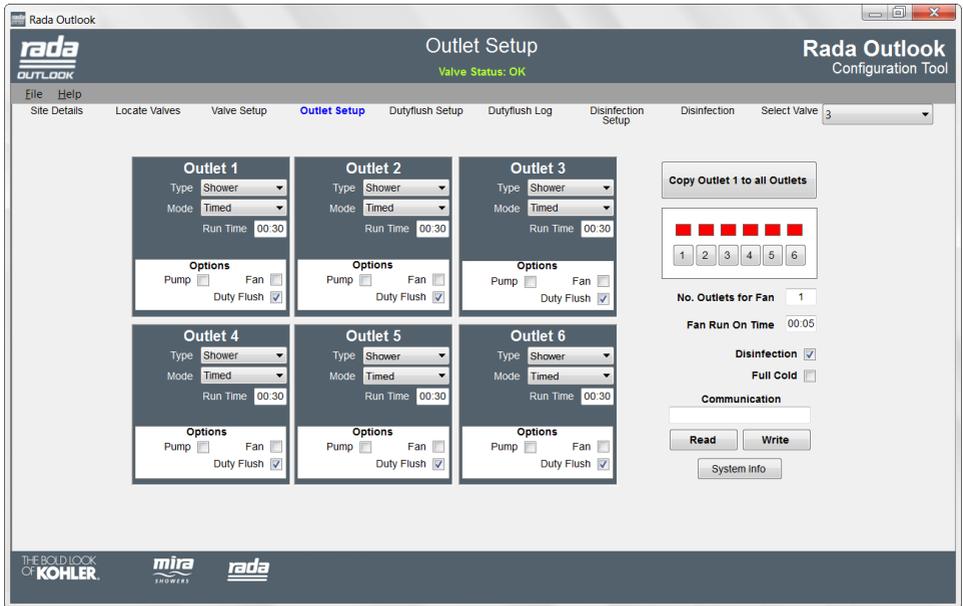
The **“Location”** is a name you give to the Sensor Box to identify it (usually the location of the device). Input a location name (up to 16 characters) and press **“Location”**.

The **“Set Calibration No.”** is used only if the Mixer Valve is required to be calibrated. This is necessary if the internal Mixer Valve Assembly or the Mixer Valve Control PCB are replaced. For further details see **“Maintenance - Valve Calibration”**.

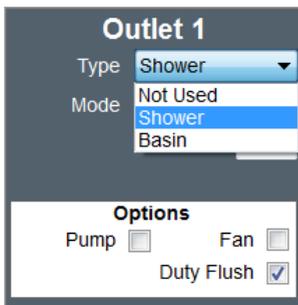
Activate any of the outlets to turn the Mixer Valve back on.

The current settings can be retrieved from the valve by pressing **“Read”**.

Outlet Setup



This screen shows how each of the six outlets are configured to operate. Alter the various settings for each individual outlet.



Select the outlet usage “Type”.

Outlet Setup - Basin

Outlet 1

Type: Basin

Mode: Automatic

Options

Pump Fan

Duty Flush

Select the **“Mode”**.

“Manual” - The outlet can be turned on or off with the sensor. The outlet stops automatically after the **“Run Time”** duration.

“Automatic” - The outlet runs continuously if the sensor is active continuously (i.e. hand held over the sensor). Once the sensor is uncovered, the outlet stops after the **“Run Time”** duration.

Outlet 1

Type: Basin

Mode: Automatic

Run Time: 00:30

Options

Pump Fan

Duty Flush

Set the required **“Run Time”** (mins:secs).

Outlet Setup - Shower

Outlet 1

Type: Shower

Mode: Timed

Options

Pump Fan

Duty Flush

Select the **“Mode”**.

“On/Off” - The outlet can be turned on or off with the sensor. The outlet stops automatically after the **“Run Time”** duration.

Outlet 1

Type

Mode

Run Time

Options

Pump Fan

Duty Flush

“Timed” - The outlet is turned on with the sensor and stops automatically after the **“Run Time”** duration.

Outlet 1

Type

Mode

Run Time

Blocking Time

Options

Pump Fan

Duty Flush

“Blocking” - The outlet will function the same as **“Timed”** mode but cannot be restarted during the **“Blocking Time”** period.

If the **“Mode”** is set to **“Blocking”**, set the required **“Run Time”** and **“Blocking Time”** (mins:secs).

Outlet Setup - Options

Outlet 1

Type

Mode

Run Time

Options

Pump Fan

Duty Flush

Tick the boxes for the required options as follows:

“Pump” - If a pump is available and required when this outlet is turned on.

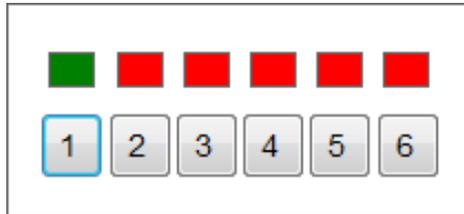
“Fan” - If a fan is available and required when this outlet is turned on. (See also **“No. of outlets for Fan”** and **“Fan Run On Time”**.)

“Duty Flush” - To include the outlet when a Duty Flush Cycle is performed.

Extra Outlet Options

“Copy Outlet 1 to all outlets” - Press to make the settings on all outlets the same as Outlet 1.

Press the required outlet number(s) to test the designation and flow. The boxes turn green when the outlets are switched on. The outlets turn off automatically after 5 seconds.



“No. Outlets for Fan” - Enter a number from 1 - 6 to control the number of outlets required to be active simultaneously for the fan to be switched on.

“Fan Run On Time” - The length of time the fan operates after all outlets are switched off. (Up to a maximum of 59 mins 59 secs.)

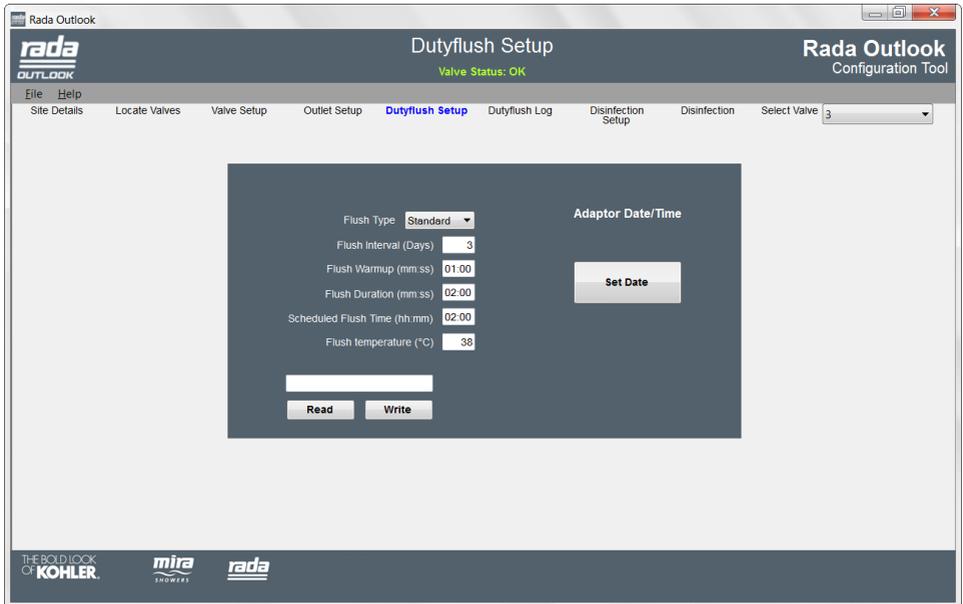
“Disinfection” - Enables a **Disinfection Cycle** to be performed on all outlets.

“Full Cold” - Alters the Mixer Valve to deliver full cold water immediately.

When all alterations are made, press **“Write”** to transfer the settings to the Sensor Box and Mixer Valve.

“System Info” - Creates a file with the current Sensor Box settings. A diagnostic tool for use by Service Engineers.

Duty Flush Setup



The Duty Flush Cycle settings for all outlets are controlled here. A Duty Flush Cycle will be performed on all outlets that have their “**Duty Flush**” option checked. See “**Outlet Setup**”.

“Flush Type”:

- “**None**” - Duty Flush disabled for all outlets.
- “**Standard**” - Duty Flush Cycle activates according to the settings.
- “**Smart**” - Duty Flush Cycle activates according to the settings and the period of inactivity. The system detects if an outlet is used within the “**Flush Interval**” and suspends the flush cycle automatically until the “**Flush Interval**” has expired. This conserves the water when it is not needed.

“**Flush Interval**” - Time between flushes (days).

“**Flush Warmup**” - Time allowed for water to reach “**Flush Temperature**” (mins:secs).

“**Flush Duration**” - Length of time to flush the Mixer Valve, outlet pipework and fittings (mins:secs).

“**Scheduled Flush Time**” - The time of day set to perform the Duty Flush Cycle (24 hour clock).

“Flush Temperature” - The temperature of the water during the Duty Flush Cycle (° C).

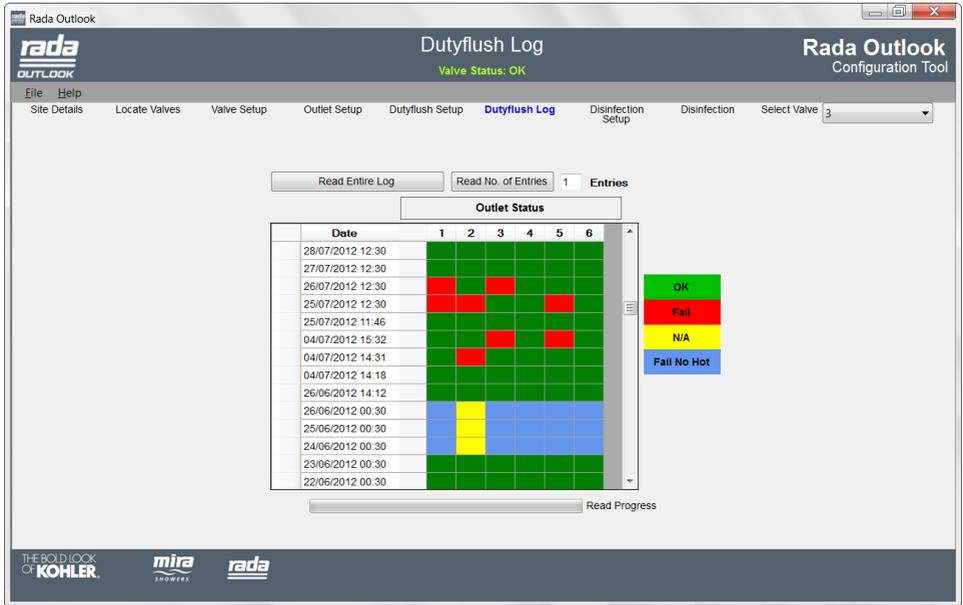
When all alterations are made, press **“Write”** to transfer the settings to the Sensor Box and Mixer Valve.

“Set Date” - Sets the Sensor Box’s date and time to the current PC/Laptop date and time.

Default Values:

Flush Type.....	Standard
Flush Interval.....	3 days
Flush Warmup (mm:ss).....	01:00
Flush Duration (mm:ss).....	02:00
Scheduled Flush Time (hh:mm).....	02:00
Flush Temperature.....	38 °C

Duty Flush Log



The Duty Flush Log records the results every time a Duty Flush Cycle is performed.

Enter the number of data entries you wish to see and press **“Read No. of Entries”** or press **“Read Entire Log”**. The table consists of the following:

“Date” - The date and time of the cycle.

“Outlet Status” - If the cycle was successfully performed on each of the six outlets.

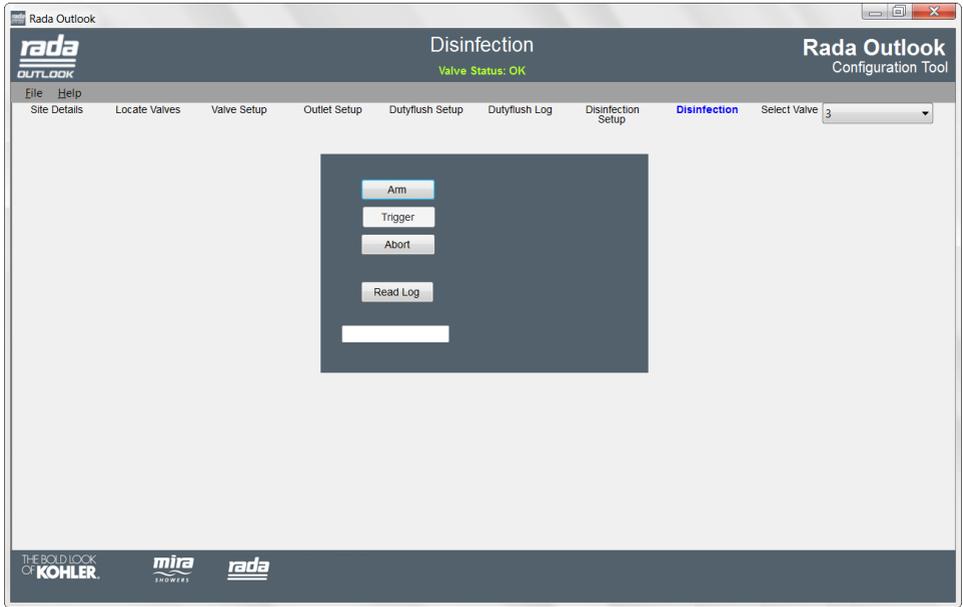
OK Duty Flush successful

Fail Duty Flush failed or interrupted.

N/A Duty Flush not required. Usually seen when the Duty Flush Setup is set to **“Smart”** mode. The outlet was used within the **“Flush Interval”**, so that particular duty flush cycle was not necessary and the water was conserved automatically.

Fail No Hot Duty Flush failed to reach the required temperature.

Disinfection & Disinfection Setup



The Thermal Disinfection function can only work with at least one Passive Infrared Sensor (PIR) installed and linked to the Sensor Box. See “Rada Outlook Digital Mixer Valve, Sensor Box and Sensor Product Manual” for further details.

IMPORTANT! PLEASE READ CAREFULLY

Thermal disinfection mode is a potentially hazardous process!



Warning! The Thermal Disinfection mode is not an automated process when used with the “**Rada Outlook Configuration Tool**” software. It is activated by the supervisor manually and will raise the water temperature to exceed the safe level for bathing and will scald or even kill. It is therefore the responsibility of the supervisor to make sure the process is carried out correctly and safely.

Rada Outlook can be connected to a BMS (Building Management System) or web server allowing Thermal Disinfection to become a completely automated process. It is still the responsibility of the site owner / site operator to make sure the system has adequate safe guards to prevent any potential injury during the process.

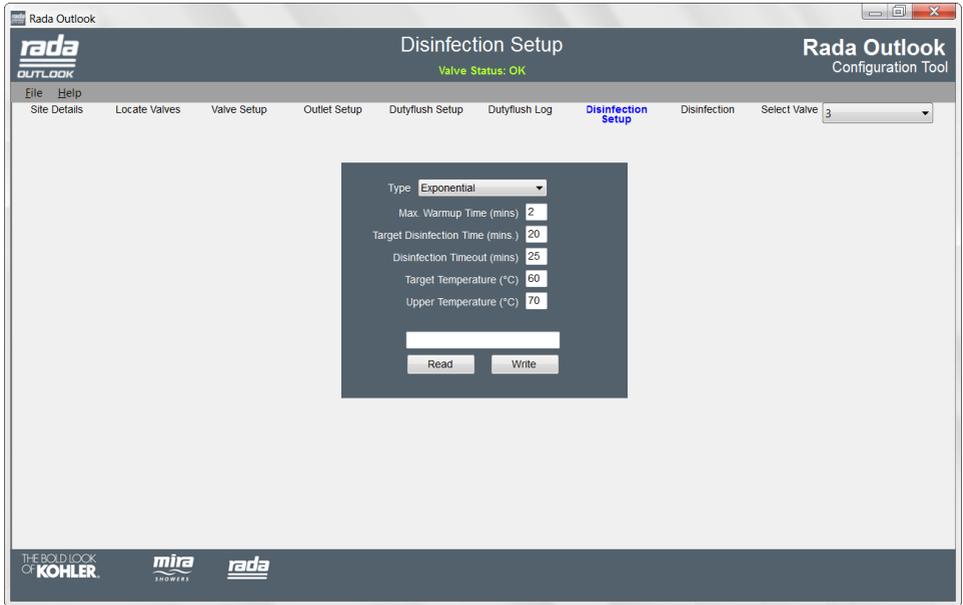
The following safety measures must be observed:

- **The disinfection process is not to be initiated unless adequate systems are in place to ensure that the area is clear of any persons prior to and during the disinfection process.** For this reason, the cycle can only be triggered **15 minutes** after the Mixer Valve was last activated.
- A PIR sensor connected to the Sensor Box must be used to detect the presence of any person in the affected area. Make sure it is fit for purpose according to the expected humidity levels during the Thermal Disinfection cycle. This will depend upon the size of washroom, the PIR position and the number of outlets used.
- The PIR system should be checked to ensure that the appropriate area is covered adequately and that the disinfection process can be aborted successfully.
- The operation of the PIR should be checked regularly and just before each disinfection cycle.

Please consult the national or local authority Legionella Legislation or Guidelines as appropriate for your country/area to see how the Thermal Disinfection process can be used to meet the required level of hygiene.

The disinfection cycle and its settings are controlled in the “**Disinfection**” and “**Disinfection Setup**” screens. Disinfection is enabled or disabled in the “**Outlet Setup**” screen.

Disinfection Settings



Press **“Read”** to display the current settings.

“Type” - “Standard” - The disinfection cycle will adhere to the values contained within the **“Disinfection Setup”** screen.

- **“Standard - Cold Inlet Supply”**

The default values for both types are:

Max Warm Up Time.....2 mins
Target Disinfection time.....5 mins
Disinfection Timeout.....10 mins
Target Temperature.....60 °C

- **“Exponential”**

- **“Exponential - Cold Inlet Supply”**

The default values for both types are:

Max Warm Up Time.....2 mins
Target Disinfection time.....20 mins
Disinfection Timeout.....25 mins
Target Temperature.....60 °C
Upper Temperature.....70 °C

Adjust these settings according to the national or local authority Legionella Legislation or Guidelines as appropriate for your country/area.

“Max. Warmup Time (mins)” - The maximum time allowed for the disinfection temperature to be reached. If the temperature is not reached within this period, then the disinfection will be cancelled. (If unsure, leave as default.)

“Target Disinfection Time (mins)” - The minimum disinfection cycle duration.

“Disinfection Timeout (mins)” - The maximum duration of the cycle. If cycle is not completed within this period, then the disinfection will be cancelled. (If unsure, leave as default.)

“Target Temperature (C)” - The maximum temperature required to perform a successful disinfection cycle.

“Upper Temperature (C)” - If the water temperature is between the **“Target Temperature”** and the **“Upper Temperature”**, the disinfection time is progressively reduced. The reduction is computed continuously and has the effect of halving the time for each 5 °C increase above the **“Target Temperature”**. Should the temperature rise above the **“Upper Temperature”** then no further time reduction accrues.

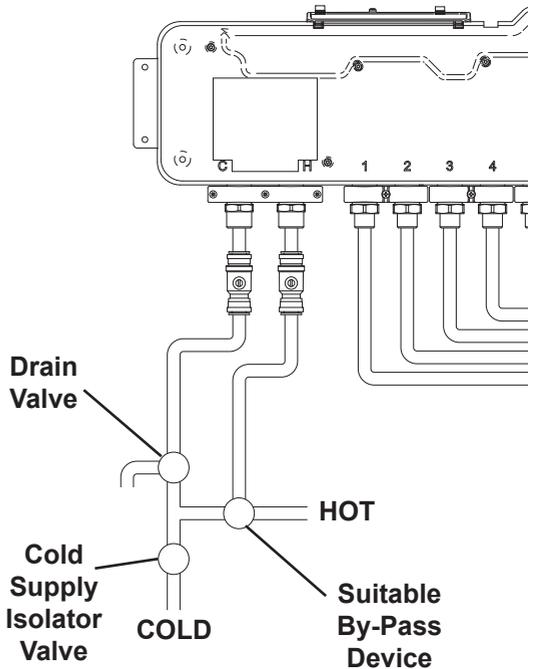
Exposure to temperatures over 80 °C can limit the life of the Rada Outlook product.

When all alterations are made, press **“Write”** to transfer the settings to the Control Box and Mixer Valve.

Disinfection of Cold Supply

The Rada Outlook is able to disinfect the cold supply pipes as well as the digital mixing valve and each of the outlets. In order for this to happen, the cold supply must have a suitable by-pass device to allow a feed from the hot supply (to disinfect the entire cold water supply of a building, the by-pass should be located close to the water meter or the stand pipe). The by-pass diverts the hot water flow through the cold supply pipe temporarily for the disinfection cycle. Once this by-pass is active, the Rada Outlook can be set to automatically disinfect through the cold supply.

The thermal disinfection of cold supply pipes is dependent upon local or national legislation and may not be required in every installation. The cold supply disinfection is generally required when the system is either used for the first time or has not been in use for a prolonged period (to make sure that the cold supply pipes are free from high levels of bacteria).



1. Close cold supply isolator valve.
2. Turn by-pass valve to allow hot water to flow into cold pipework.
3. Operate Cold Supply Disinfection routine.
4. Turn by-pass valve to stop water entering cold pipework.
5. Open drain valve and remove residual hot water from cold pipework to valve.
6. Close drain valve and re-open cold supply isolator valve.
7. Allow up to 1 hr for Outlook valve brass material to cool.
8. Operate as normal.

WARNING!

- As with any type of thermal disinfection process, the feature is not to be used unless adequate systems are in place to ensure that the area is clear of any persons prior to and during the disinfection process. This includes any exposed or uninsulated pipework that will reach an unsafe temperature.

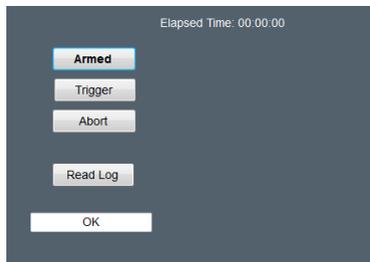
- Set the Disinfection Type to “**Standard Cold Inlet Supply**” or “**Exponential Cold Inlet Supply**” depending upon the requirements for the site conditions and perform the disinfection cycle according to the instructions in this guide.
- Reset the by-pass to normal position after the disinfection cycle has finished to restore the cold water supply.

Disinfection cycle



Warning! Thermal disinfection mode is a potentially hazardous process! Make sure all safety measures in this guide have been adhered to before activating the Thermal Disinfection process.

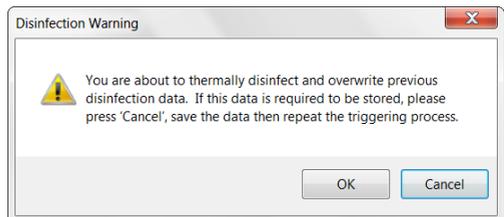
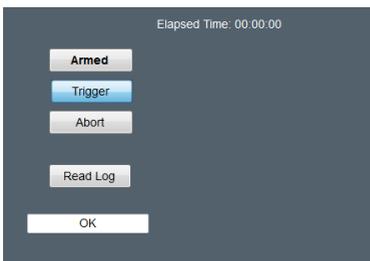
A disinfection cycle can only be initiated when the Mixer Valve is switched off using the “**Valve Off**” button in the “**Valve Setup**” screen.



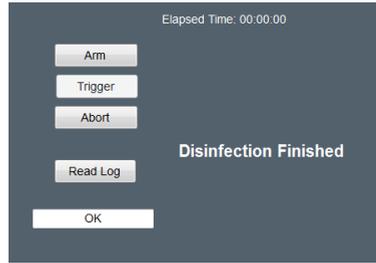
Press “**Arm**” to enable the disinfection feature.

Arming the disinfection cycle is confirmed when the box states “**Armed**”.

Press “**Trigger**” within 10 seconds of arming to activate the disinfection cycle.



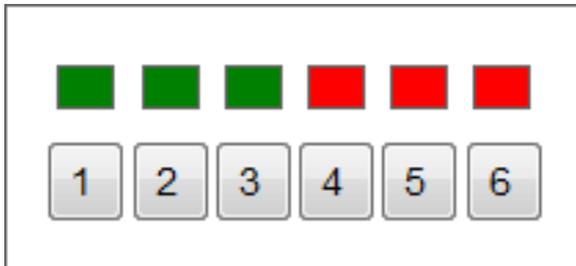
Confirm the trigger by pressing “**OK**”.



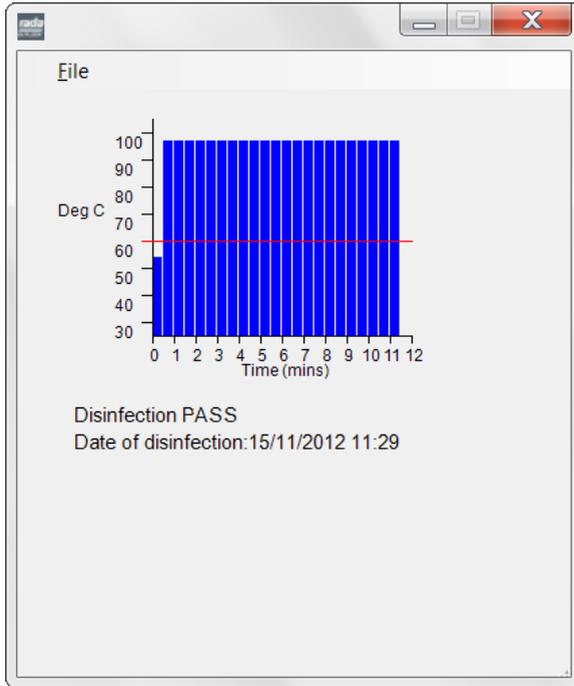
Water flow starts when the countdown reaches “0”.

Press “**Abort**” to stop the cycle.

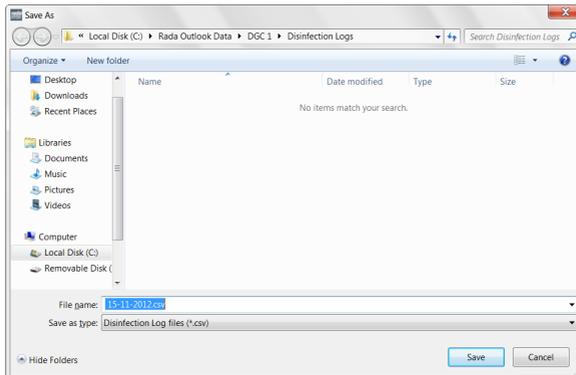
The outlets are activated three at a time. The Outlet Status/Test display in the “**Outlet Setup**” screen shows which of the six outlets are currently active.



When the disinfection cycle has finished, wait 10 seconds and press “**Read Log**” in the “**Disinfection**” screen to display a record of the last cycle for the chosen Sensor Box.



If the log has indicated a failed disinfection cycle, check the hot water supply for sufficient temperature and flow rate and recommence the disinfection cycle.

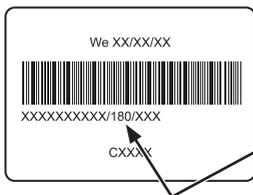
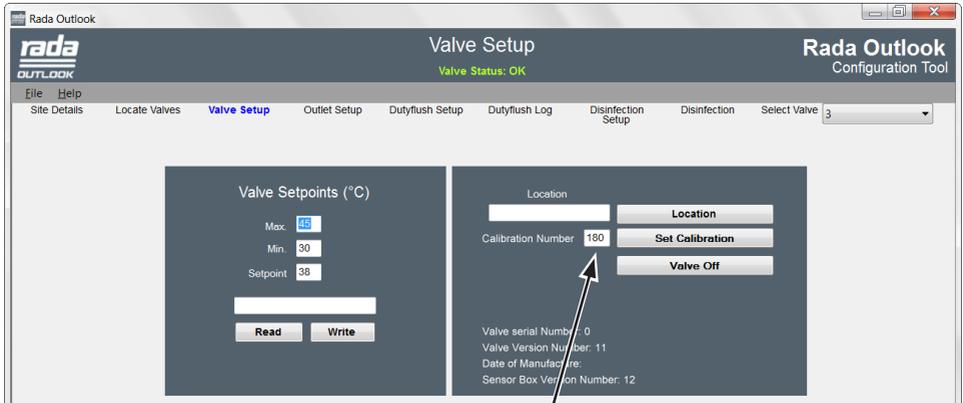


The log can be saved by using **“File”**, **“Save”**. A folder called **“Disinfection Logs”** is created automatically within the **“Site Name”** folder (see **“Site Details”**). Accept the default file name of the date the log was created, or rename if required and press **“Save”**.

MAINTENANCE

Valve Calibration

The valve calibration number **must** be set if the internal Mixer Valve Assembly or the Mixer Valve Control PCB are replaced. The calibration number is required and can be found on the Mixer Valve body.



Calibration No.

Press “**Valve Off**” to turn off the Mixer Valve and enable the **Calibration No.** to be changed.

Enter the calibration number and press “**Set Calibration No.**”.

Activate any of the outlets to turn the Mixer Valve back on.

GUARANTEE

Guarantee

Rada Outlook Configuration Tool and RS485 - USB Cable

We guarantee these products against any defect in materials or workmanship for the period of **one year** from the date of purchase. For terms and conditions refer to the back cover of this guide.

NOTES

CUSTOMER SERVICE

Guarantee

Your product has the benefit of our manufacturer's guarantee which starts from the date of purchase.

Within the guarantee period we will resolve defects in materials or workmanship, free of charge, by repairing or replacing parts or product as we may choose.

This guarantee is in addition to your statutory rights and is subject to the following conditions:

- The product must be installed and maintained in accordance with the instructions given in this guide.
- Servicing must only be undertaken by us or our appointed representative. **Note!** if a service visit is required the product must be fully installed and connected to services.
- Repair under this guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date.
- For shower fittings or consumable items we reserve the right to supply replacement parts only.

This guarantee does not cover:

- Call out charges for non product faults (such as damage or performance issues arising from incorrect installation, improper use, inappropriate cleaning, lack of maintenance, build up of limescale, frost damage, corrosion, system debris or blocked filters) or where no fault has been found with the product.
- Water or electrical supply, waste and isolation issues.
- Compensation for loss of use of the product or consequential loss of any kind.
- Damage or defects caused if the product is repaired or modified by persons not authorised by us or our appointed representative.
- Routine maintenance or replacement parts to comply with the requirements of the TMV2 or TMV3 healthcare schemes.
- Accidental or wilful damage.
- Products purchased ex-showroom display.

What to do if something goes wrong

If your product does not function correctly when you first use it, contact your installer to check that it is installed and commissioned in accordance with the instructions in this guide.

If this does not resolve the issue, contact our Customer Services Team who will offer you or your installer help and advice.

If the performance of your product declines, check in this guide to see if simple home maintenance is required. If you require further assistance call our Customer Services Team.

Technical Helpdesk Service

Our Customer Services Team is comprehensively trained and can offer help and advice, spare parts, accessories or a service visit.

We will need you to have your model name or number, power rating (if applicable) and date of purchase.

As part of our quality and training programme calls may be recorded or monitored.

Rada Website (www.radacontrols.com)

From our website you can view our full product catalogue or download a brochure.

Spares and Accessories

We maintain extensive stocks of genuine spares and accessories and aim to provide support throughout the product's expected life.

Payment can be made by phone at time of order using most major Credit or Debit cards and we aim to despatch orders within two working days.

Items purchased from us are guaranteed for 12 months from date of purchase.

For safety reasons spares exposed to mains voltages should only be fitted by competent persons.

Returns – items can be returned within one month of date of purchase, providing that they are in good condition and the packaging is unopened. If you wish to return any items please notify us in writing with seven days of receipt.

Service / Repairs

Our nationwide team of Service Technicians can carry out all service or repair work to your product within the guarantee period and beyond.

You have the assurance of a fully trained Technician, genuine Rada spare parts and a 12 month guarantee on any chargeable work done.

Service Contracts

A regular service visit ensures your product continues to perform at the peak of performance. We offer annual or biannual servicing carried out by our fully trained technicians subject to site survey.

To Contact Us - Customer Service and Specification Enquiries UK

Telephone: 0844 571 1777

E-mail: rada_technical@mirashowers.com

Fax: 0844 472 3076

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