



Supporting Notes Heat Interface Monitor

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1 Introduction

This document is intended to be read in conjunction with the HIU Monitoring Application Manual D52257, and it provides supporting notes regarding installation of the software / hardware together with an in depth explanation of the HIU settings and the implications of making changes to them.

2 Software Installation

2.1 Requirements for the PC

- Windows 7.x or higher
- .Net Framework 4
- USB 2.0 ports (Type A)
- Administrator rights

2.2 Service cable

For the communication between the PC and the HIU, a service cable is needed. The cable can be ordered separately (1.8mtr cable Part No. 70-FTDI-CABLE-ASSY / 5 mtr cable Part No. 70-FTDI-CABLE-5M-ASS).



Figure 1: Service Cable

2.3 Software download

The EcoAdvance Monitor Software can be downloaded from our Wiki site, www.heatweb.co.uk/w By navigating to [HIU Monitor Application Software](#).

- Find the current version of the software and click on the blue link, [EcoAdvance Monitor V#.##](#)
- In the next screen that opens, click the blue link at the top of the screen [EcoAdvanceMonitor_installer_v#_##_#####.zip](#) to download the ZIP file.
- Once the ZIP file has downloaded, 'Extract' it to your desktop or another convenient location on your PC.
- Navigate to the 'Publish' folder and double click 'setup.exe'. The Heat Interface Monitor will start as soon as the installation is finished.

Name	Date modified	Type	Size
Application Files	4/12/2014 16:34	File folder	
HWTC_Monitor.application	4/12/2014 18:28	ClickOnce Applica...	6 KB
setup.exe	4/12/2014 18:28	Application	424 KB

Figure 5: Screenshot of folder that contains the setup program

3 Service Cable Installation

3.1 Manually installing the drivers for the service cable

USB Drivers for the service cable are also available on our wiki site. On this site there are also manuals for the installation of the drivers. For Windows 7 see: AN_119. For Windows 8 see the document: AN_234. For Windows 10 see the document AN_396.

After you have installed the correct drivers and connected the service cable to your PC a USB Serial Port is created. See "Control Panel/Device Manager" on your computer. The name shown below 'USB Serial Port (COM42)' that is assigned to the cable, is different for every cable and computer!

Note: When a cable is first plugged into the PC, it can take a minute or two for the cable to be registered and for its drivers to be installed.

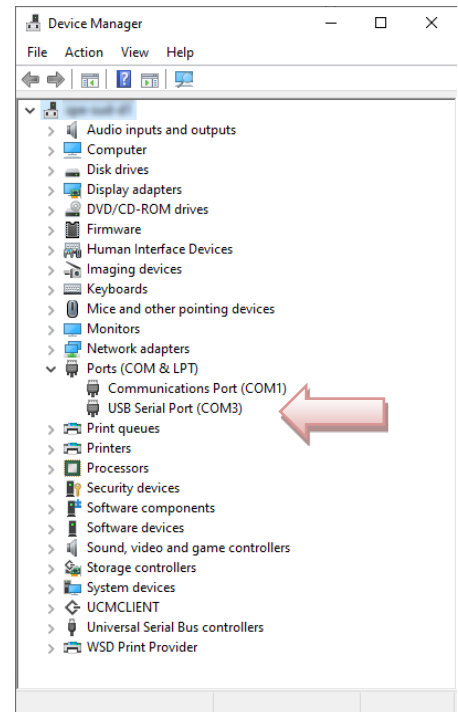


Figure 4: Screen capture for checking the assigned name of the COM-port.

3.2 Location of the log files

When the application starts it is necessary to select a folder, to which log files will be written. If no selection is made, the program automatically creates a folder named "HSF loggings" on the hard drive (full path C:\HIU_loggings).

The log files are comma separated text files (csv) and can be used for analysis.

For more information please contact our sales department.

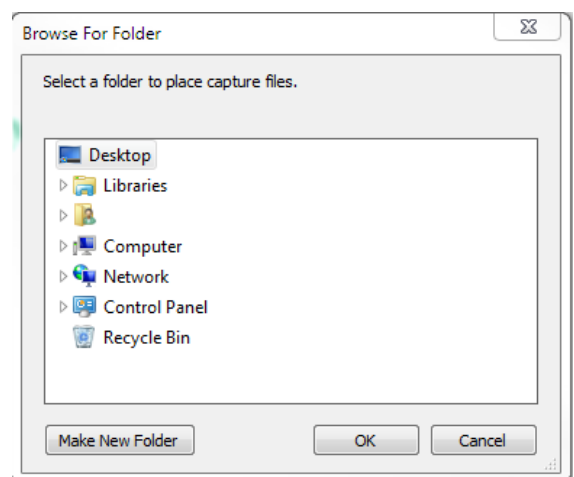


Figure 6: Screenshot of selection screen location of log files.

4 Changing settings on the software

Before changing any settings it is important to understand the implications of the change on the HIU, the property and the district heating network.

4.1 Domestic hot water settings

- Domestic Hot Water Setpoint (45..60°C)

This is the desired domestic hot water output temperature from the HIU. Setting it too low, may cause the customer to complain about low water temperature at the kitchen tap, however setting it too high may cause scalding. A temperature of 50-55°C is recommended, and this will require a district heating flow temperature of at least 5°C higher.

- Differential Pressure

This setting should not be altered, it should remain set to 'Auto' & 0.6 Bar.

- Keep-warm Setting
 - Keep-warm Temperature (25°C..60°C)

This is the desired temperature of the DHW plate heat exchanger when the HIU is in either 'Comfort' or 'Eco' keep-warm mode. Setting it too low, will slow down the heat up time when a tap is opened, but is far more energy efficient, however setting it too high will speed up the heat up time but can be seen as a waste of energy.

Maintaining a fairly low temperature ensures there is circulation in the primary pipework, but wastes the least energy. To understand this more please go to our wiki site, www.heatweb.co.uk/w and navigate to [Economy and Comfort Mode Functionality](#)

- Keep-warm time (minutes)

Choose the Choose between Comfort, Eco, and DHW circulation mode

The screenshot shows a software interface for 'Keep-warm Settings'. It includes a text input for 'Keep-warm Temperature (25°C .. 60°C)' with the value '40.00'. Below it is a dropdown menu for 'Keep-warm Time (minutes)' with the following options: 'Eco - 30 min', 'Eco - 0 min', 'Eco - 15 min', 'Eco - 30 min', 'Eco - 60 min', 'Eco - 120 min', 'Comfort - always' (highlighted), and 'DHW Circulation - always'. To the right of the dropdown, there is a partially visible text label: 'ected, EcoHeat Temperature should'. Below the 'Keep-warm Settings' section is another section titled 'District Heating Flow' with a text input for 'Warmup Boost (8 .. 20 l/min)'.

In the Comfort mode the heat exchanger will be kept warm 24 hours a day to guarantee a short response time. The keep warm temperature is selectable (40°C is in most cases a good compromise between energy savings and response time).

In the Eco mode the heat exchanger is heated only for a short period (time and temperature are selectable) after a hot water draw-off and energy is saved. The DHW response time may be longer in eco mode than in Comfort mode.

In DHW circulation mode the heat exchanger and DHW circulation circuit is kept warm 24 hours a day. The keep warm temperature is also selectable but for Legionella Prevention purposes this should be at least 55°C. In this mode there is higher energy usage. The classic legionella prevention program will not be able to heat the pipes high enough, so that option is automatically disabled when this mode is selected.

Note: When the HIU is set to 'Comfort' mode, and the keep-warm temperature is set below 55°C, the Legionella Prevention program should be activated.

- o Warm-up boost (8..20 l/min)

As the DHW tap is opened, the HIU begins to draw water from the primary flow pipe, the faster it draws water the quicker the HIU can warm-up, therefore setting the warm-up boost to a higher flow rate will clear any cold water from the primary pipe quicker, speeding up the response time of the HIU.

A higher figure is required for larger pipework diameters, and a lower figure is required for smaller pipework diameters, and also may not be necessary for HIU's closer to the riser or at the beginning or middle of pipework runs.

4.2 Central Heating settings

- District Heating Return Limit (30..55°C)

Low primary return temperatures are important on district heating systems. The DHW plate heat exchanger is designed to give a very low primary return temperature when in use, due to the low temperature of the mains cold water flowing through it, however the CH plate heat exchanger cannot achieve a primary return temperature any lower than the return temperature of the heating system within the property, so it is important that this temperature is as low as possible.

The only way to ensure this is to balance the CH system to achieve the maximum possible differential temperature across the heating flow and return pipework, however this process is often not carried out effectively.

Therefore this function forces the HIU to limit the heat input to the CH system, when the return temperature is higher than the District Heating Return Limit set point. Although this may have a negative effect on the CH performance in the property, it is designed to protect the district heating system from high return temperatures, and the inefficiencies that brings.

It is therefore imperative that the heating system is correctly balanced and that any radiators are fitted with pre-settable and thermostatically controlled valves.

- Maximum Supply (20..75° C)

This is the maximum supply temperature to the property's heating system. However please note that this is the 'Maximum', and if the district heating system is unable to provide enough temperature to achieve this temperature, the HIU will automatically track the district heating flow temperature and reduce the heating supply temperature to 5°C below the district heating flow temperature.

This is especially useful in the summer if you wish to reduce the district heating flow temperature by 5 or 10°C, as all HIU's will automatically follow suit.

- Pump Overrun time (minutes)

This is the time the CH pump remains running after the room thermostat / programmer switches off.

- Weather Compensator Slope & Displacement

Neither of these settings are used, and can therefore be discounted.