

# DATATERM MK2

EMS+ Version 6.05

## The Intelligent Heating Control



## User Guide 2006

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## 1. Understanding Dataterm

Dataterm uses the latest technology to bring the benefits of energy saving within the range of almost any central heating system. Saving energy means not only saving the Earth's finite resources, but also, of course, saving money which is very important, particularly with VAT being added to fuel bills.

To get the best out of Dataterm you will need to avoid using high temperatures at times when you are usually active around the home and of course turn down the heat if you go out for a while.

You can have fuel savings or you can have comfort, in some cases both. Whatever you decide Dataterm will ensure you get the best for your money.

### Why Dataterm

Dataterm works in a different way to time clocks and programmers. It only needs to know what temperature you require and at what time, Dataterm removes the guess work and determines what time to turn the heating on to give you the ideal temperature required. This in itself will save you money and make sure you are comfortable.

Dataterm is able to take 6 different temperature instructions per day so that you can get the most from your heating system, with Dataterm there are no "ON or OFF" times Just temperature times. Dataterm will constantly monitor the temperature of your home and once the desired temperature is reached it will maintain it until told to do differently. Dataterm is ideal for reducing condensation or maintaining a low set back temperature while you are on holiday.

## 2. Setting the Clock

The clock will need setting after a power failure or at summer / winter time.

To set the clock press the “SELECT” button until MANUAL is highlighted.

| Programme | Automatic | Manual |
|-----------|-----------|--------|
| 18:46     | 20        | 20     |
| Mon       | Tues      | Wed    |
| Thurs     | Fri       | Sat    |
| Sun       |           |        |

Press the “DAY” button to highlight the current day.

Press the “HOUR” button to the correct hour (24 Hour Clock).

Press “Minute” button to display correct minute.

Press “SELECT” until Automatic is highlighted

## 3. Setting a Pre-Set Plan (PO1 - PO15)

The Dataterm has for your convenience 15 built-in lifestyle plans, see the guide in the rear of this book to see which one suits you best. To set the desired plan,

Press SELECT until “Programming” is highlighted,

| Programme | Automatic | Manual |
|-----------|-----------|--------|
| 0:00      | 0         |        |
| Mon       | Tues      | Wed    |
| Thurs     | Fri       | Sat    |
| Sun       |           |        |

Press “+” button and increase the temperature past 31°C

Select the programme No. required using the + or - buttons

| Programme | Automatic | Manual |
|-----------|-----------|--------|
| PO1       |           |        |
| Mon       | Tues      | Wed    |
| Thurs     | Fri       | Sat    |
| Sun       |           |        |

Press ENTER to set, you will get a double beep and the display will show:

| Programme | Automatic | Manual |
|-----------|-----------|--------|
| 0:00      | 0         |        |
| Mon       | Tues      | Wed    |
| Thurs     | Fri       | Sat    |
| Sun       |           |        |

Press SELECT until Automatic is highlighted, if the time and day are incorrect you can alter this as described in section 2 above.

Press REVIEW if you do not want to enter the plan and then press select to return to automatic.

## 4. Modify an Existing Plan

It is possible to edit any of the pre-set plans to suit your requirements. You may wish to alter a time or temperature set-point or change the plan for weekends...

## 4. Continued...

Make a note of your current plan number.

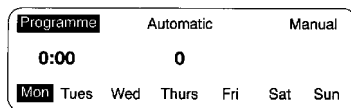
Make a further note of the temperatures you want to change.

Write down the time and temperature settings you require, you can have upto 6 per day.

### Removing a Time and Temperature Setting,

Press SELECT to highlight PROGRAMMING.

Press DAY to move to required day.



Press Review to see the set-points.

Select the day and set-point you want to change and press REMOVE once for each set-point you want to delete.

Now enter the time and temperatures you require in the position required using the hour, minute and temperature buttons (+ & -).

Holding the REMOVE button will delete all set-points on the selected day.

### Entering new time and temperature settings,

➔ With programming and the correct day highlighted,

Press the HOUR button until the correct hour is displayed.

Press the MINUTE button until the correct minutes are displayed.

Press + or - until the correct temperature is shown, higher temperatures will tend to turn the boiler on whilst lower settings will hold the boiler off.

When satisfied with your choice press ENTER, you should hear a double beep, this tells you Dataterm has accepted your instruction, a single beep means the instruction cannot be accepted and usually means all 6 set-points have been used.

➔ Now return to the section above to enter the next set-points.

## 5. Entering Your Own Plan.

Using the table below enter your required temperatures and times so that you have a copy for the future to make programming easier.

|           | S/P1     | S/P2     | S/P3     | S/P4     | S/P5     | S/P6     |
|-----------|----------|----------|----------|----------|----------|----------|
| Monday    | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Tuesday   | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Wednesday | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Thursday  | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Friday    | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Saturday  | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| Sunday    | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C | --:-- °C |
| HW        | H --:--  | C --:--  | H --:--  | C --:--  | H --:--  | C --:--  |

Press SELECT until programming is highlighted.

If there are any entries already programmed you will need to delete them, press review once followed by a long depression of REMOVE until the display looks like this one.

|           |           |                       |
|-----------|-----------|-----------------------|
| Programme | Automatic | Manual                |
| 0:00      | 0         |                       |
| Mon       | Tues      | Wed Thurs Fri Sat Sun |

Press REVIEW to make sure all entries are clear, press REMOVE to clear any set-points that are left. Now do the same for each day by pressing the DAY key in order to check the individual days... Repeat process until all are clear.

When you reach Sunday press Day again until all of the days are highlighted, this is the Hot Water Programme and can be deleted by pressing the REVIEW button followed by holding Remove to delete all of the set-points.

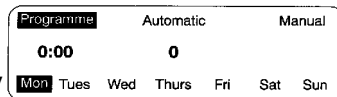
|           |           |                       |
|-----------|-----------|-----------------------|
| Programme | Automatic | Manual                |
| 0:00      |           |                       |
| Mon       | Tues      | Wed Thurs Fri Sat Sun |

**TIP! - Turn the power off and hold down REMOVE button, whilst holding down REMOVE turn the power back on, the system is now reset back to factory settings...**

To programme follow the instructions on the coming pages.

## 5. Continued...

Press SELECT to highlight Programming as shown in the illustration opposite,



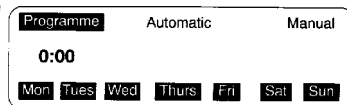
You are now ready to programme Monday by using the HOUR, MINUTES and + or - buttons.

Enter the time you want the desired temperature to be achieved and the temperature required using the appropriate buttons.

When done press ENTER, once the double beep is heard progress to the next set-point by pressing REVIEW then entering new times and temperatures.

**TIP! - If your set-points for the week are the same press REVIEW to show the 1st set-point then press DAY to show TUESDAY followed by ENTER then press DAY to move to WEDNESDAY followed by ENTER and so on throughout the week until you get to the hot water plan where all the days are highlighted.**

In HOT WATER mode press + once to display H and enter the time you want the hot water to turn on, (this will be the same for the whole week). Remember to press ENTER and wait for the double beep.



Then press REVIEW followed by (Minus) - once to display C and enter the time you want the hot water to turn off followed by the ENTER button.

Repeat this process until you have entered your hot water requirements.

Now continue programming the heating as above but ignore reference to HOT WATER as you have already done this above.

So with the display on Monday press REVIEW to show the 1st set-point then enter your desired time and temperature followed by the ENTER button, then press REVIEW to show the last set-point and then press DAY to show TUESDAY then press ENTER and so on as before to enter the set-points throughout the week. Repeating this process will enable you to quickly set a plan for the whole week, if certain days need to be different goto section 4.

**Remember you can select different temperatures for different times as required throughout the day.**

## 6. Over-riding Dataterm.

Dataterm once set can be left alone until you feel that you need to raise or lower the temperature or boost the hot water. There are 3 modes of operation and these are,

**Manual** - Used in the summer to hold the heating off and run only the hot water programme.

**Automatic** - Set it and forget it... Runs the heating and hot water programme all year even in the summer as long as your set-points don't ask for excessive temperatures the heating will mostly be off if it is warm enough outside.

**Programming** - Used to enter set-points for your day to day heating requirements.

In automatic mode you can over ride the temperature settings by pressing + or - to raise or lower the required set temperature, the programme will take over when the next set-point is due.

In manual mode the process is the same as above except it will stay at the temperature set until you change it back again, the programme will not advance to the next set-point.

Pressing the ENTER button will boost the hot water for 1 hour in automatic and 1.5 hours in manual mode.

**Holiday Mode** - Press Select to highlight Manual, then press - to set the background temperature to say 12 or 14°C, this will protect the building from frost damage in the winter and hold the temperature to that set. In the summer it will keep the heating off, it may be a good idea to turn your cylinder thermostat down to prevent hot water being produced although it would be nice to come back to a house with plenty of hot water after your break.

## 7. Quick Guide to Dataterm.

Setting the Clock...

Press "SELECT" and move to MANUAL

Press "DAY" to highlight the correct day

Press "HOUR" to set correct hour (24 hour clock)

Press "MINUTE" to set minutes

Press "SELECT" until AUTOMATIC is highlighted.

## 7. Continued...

Programming Hot Water.

Press "SELECT" to highlight PROGRAMMING

Press "DAY" until all days are highlighted, use HOUR and MINUTES buttons to set times and + and - to set On's and Off's as required remembering to press "ENTER" to set each entry.

Press "SELECT" to highlight AUTOMATIC.

To Remove a Plan.

Turn power off,

Press and hold "REMOVE"

Whilst holding REMOVE turn the power on, you may need some help from another person to achieve this. Once done the Dataterm has been re-set and is ready to programme (section 3 or 5).

Loading Your Own Plan.

Press "SELECT" to highlight PROGRAMMING.

Starting with MON use the HOURS and MINUTES buttons to set the time and the + or - buttons to set the desired temperature.

Press "ENTER" and listen for the double beep to confirm entry.

Repeat this process to enter all of the set-points for the week, refer to section 5 for more help on programming.

Once programmed press "SELECT" to highlight AUTOMATIC, the Dataterm will take over control at the next set-point.

### Summary of Pre-set Plans

These charts show how Dataterm's pre-selected programmes are grouped to allow choice of basic suitable pattern, and fine tuning within that group.

| MONDAY TO FRIDAY, HOME ALL DAY PROGRAMMES |       |       |      |                     |       |      |
|---|-------|-------|------|---------------------|-------|------|
| AVERAGE LIVING TEMPERATURES               |       |       |      | HIGHER TEMPERATURES |       |      |
| P01                                       | P02   | P03   | temp | P07                 | P08   | temp |
| times                                     | times | times |      | times               | times |      |
| 06.30                                     | 07.00 | 0800  |      | 07.00               | 08.00 |      |
| 17.00                                     | 17.00 | 17.00 |      | 17.00               | 17.00 |      |
| 19.00                                     | 19.00 | 19.00 |      | 19.00               | 19.00 |      |
| 22.00                                     | 22.30 | 23.30 | 12   | 22.30               | 23.00 | 12   |



For instance, you may be out of the house all day and require only average temperatures when at home. Thus you would choose from group PO4, PO5 or PO6. If for instance you tend to stay up later in the evening and leave the house a little later in the morning then you would choose programme PO6 as it most closely matches your needs.

| MONDAY TO FRIDAY, <b>OUT ALL DAY PROGRAMMES</b> |       |       |      |                     |       |      |
|---|-------|-------|------|---------------------|-------|------|
| AVERAGE LIVING TEMPERATURES                     |       |       |      | HIGHER TEMPERATURES |       |      |
| P04   | P05   | P06   | temp | P09                 | P10   | temp |
| times   | times | times |      | times               | times |      |
| 06.30   | 07.00 | 08.00 |      | 07.00               | 08.00 |      |
| 08.00   | 08.30 | 09.00 |      | 08.30               | 09.00 |      |
| 17.00   | 17.00 | 18.00 |      | 17.00               | 18.00 |      |
| 19.00   | 19.00 | 19.00 |      | 19.00               | 19.00 |      |
| 22.00   | 22.30 | 23.30 |      | 22.30               | 23.00 |      |
|   |       |       | 18   |                     |       | 20   |
|   |       |       | 14   |                     |       | 14   |
|   |       |       | 19   |                     |       | 21   |
|   |       |       | 20   |                     |       | 22   |
|   |       |       | 12   |                     |       | 12   |

Remember too, that Dataterm is a fully functioning independent 7 day heating and hot water control and on the following tables we can see how Saturday and Sunday heating profiles can differ in the various plan numbers.

Of course any of the pre-set plans can be edited to suit your own needs more suitably as described in section 4.

| MONDAY TO FRIDAY, <b>SPECIAL PROGRAMMES</b> |      |            |       |      |         |      |         |      |
|---|------|------------|-------|------|---------|------|---------|------|
| LUNCHTIME                                   |      | COMMERCIAL |       |      | ECONOMY |      | HOLIDAY |      |
| P11   |      | P12        | P13   |      | P14     |      | P15     |      |
| times                                       | temp | times      | times | temp | times   | temp | times   | temp |
| 07.00                                       | 18   | 08.30      | 09.00 | 20   | 07.00   | 16   | 06.00   | 7    |
| 08.30                                       | 14   | 17.30      | 18.00 | 7    | 08.30   | 14   | 23.00   | 7    |
| 12.30                                       | 18   | 18.30      | 19.00 | 7    | 18.00   | 16   |         |      |
| 14.00                                       | 14   |            |       |      | 22.00   | 7    |         |      |
| 17.00                                       | 20   |            |       |      |         |      |         |      |
| 22.30                                       | 12   |            |       |      |         |      |         |      |

When deciding your ideal lifestyle programme, it is easy to forget that Dataterm is an intelligent heating control, and works differently from more conventional controls where you use ON and OFF times and control temperature via a room thermostat.

Dataterm cuts out the forethought and uncertainty by optimizing the set-points to give you the temperature you want at the time required, thus saving fuel and making you more comfortable.

## SATURDAY PROGRAMMES

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| <b>P01</b> | <b>P03</b> | <b>P07</b> | <b>P12</b> | <b>P14</b> | <b>P15</b> |
| <b>P02</b> | <b>P06</b> | <b>P08</b> | <b>P13</b> |            |            |
| <b>P04</b> |            | <b>P09</b> |            |            |            |
| <b>P05</b> |            | <b>P10</b> |            |            |            |
| <b>P11</b> |            |            |            |            |            |
| times temp | times temp | times temp | times temp | times temp | times temp |
| 00.05 12   | 00.05 12   | 00.05 12   | 00.05 7    | 00.05 7    | 00.05 7    |
| 08.00 18   | 08.30 18   | 08.00 20   | 17.30 7    | 07.00 16   | 06.00 7    |
| 17.00 19   | 17.00 19   | 17.00 21   |            | 08.30 14   | 23.00 7    |
| 19.00 20   | 19.30 20   | 19.00 22   |            | 18.00 16   |            |
| 23.00 12   | 23.00 12   | 23.00 12   |            | 22.00 7    |            |

## SUNDAY PROGRAMMES

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| <b>P01</b> | <b>P03</b> | <b>P07</b> | <b>P12</b> | <b>P14</b> | <b>P15</b> |
| <b>P02</b> | <b>P06</b> | <b>P08</b> | <b>P13</b> |            |            |
| <b>P04</b> |            | <b>P09</b> |            |            |            |
| <b>P05</b> |            | <b>P10</b> |            |            |            |
| <b>P11</b> |            |            |            |            |            |
| times temp | times temp | times temp | times temp | times temp | times temp |
| 00.05 12   | 00.05 12   | 00.05 12   | 00.05 7    | 00.05 7    | 00.05 7    |
| 08.30 18   | 09.00 18   | 08.30 20   | 17.30 7    | 07.00 16   | 06.00 7    |
| 17.00 19   | 17.00 19   | 17.00 21   |            | 08.30 14   | 23.00 7    |
| 19.00 20   | 19.00 20   | 19.00 22   |            | 18.00 16   |            |
| 22.30 12   | 22.30 12   | 22.30 12   |            | 22.00 7    |            |

## HOT WATER PROGRAMMES

|            |            |            |            |            |
|------------|------------|------------|------------|------------|
| <b>P01</b> | <b>P02</b> | <b>P03</b> | <b>P14</b> | <b>P12</b> |
| <b>P04</b> | <b>P05</b> | <b>P06</b> |            | <b>P13</b> |
|            | <b>P07</b> | <b>P08</b> |            | <b>P15</b> |
|            | <b>P09</b> | <b>P10</b> |            |            |
|            | <b>P11</b> |            |            |            |
| times      | times      | times      | times      | times      |
| 06.30 H    | 07.00 H    | 08.00 H    | use h/w    |            |
| 08.30 C    | 09.00 C    | 10.00 C    | boost as   |            |
| 18.00 H    | 18.00 H    | 18.00 H    | required   |            |
| 22.00 C    | 22.30 C    | 23.30 C    | 06.00 C    | 06.00 C    |

## 9. Conversion Charts

### Temperature

|      |      |      |      |
|------|------|------|------|
| 7 C  | 45 F | 17 C | 63 F |
| 8 C  | 46 F | 18 C | 64 F |
| 9 C  | 48 F | 19 C | 66 F |
| 10 C | 50 F | 20 C | 68 F |
| 11 C | 52 F | 21 C | 70 F |
| 12 C | 54 F | 22 C | 72 F |
| 13 C | 55 F | 23 C | 73 F |
| 14 C | 57 F | 24 C | 75 F |
| 15 C | 59 F | 25 C | 77 F |
| 16 C | 61 F |      |      |

### Time

| AM            |               | PM            |               |
|---------------|---------------|---------------|---------------|
| 12 Hour Clock | 24 Hour Clock | 12 Hour Clock | 24 Hour Clock |
| 1.00          | 1.00          | 1.00          | 13.00         |
| 2.00          | 2.00          | 2.00          | 14.00         |
| 3.00          | 3.00          | 3.00          | 15.00         |
| 4.00          | 4.00          | 4.00          | 16.00         |
| 5.00          | 5.00          | 5.00          | 17.00         |
| 6.00          | 6.00          | 6.00          | 18.00         |
| 7.00          | 7.00          | 7.00          | 19.00         |
| 8.00          | 8.00          | 8.00          | 20.00         |
| 9.00          | 9.00          | 9.00          | 21.00         |
| 10.00         | 10.00         | 10.00         | 22.00         |
| 11.00         | 11.00         | 11.00         | 23.00         |
| 12.00         | 12.00         | 12.00         | 24.00         |