

MAKING MODERN LIVING POSSIBLE

Danfoss



FP735Si
*Electronic 3-Channel Full Programmer for
Heating and Hot Water with Service Interval Timer*

Danfoss Heating

User Guide

FP735Si

Electronic 3-Channel Full Programmer for Heating and Hot Water with Service Interval Timer

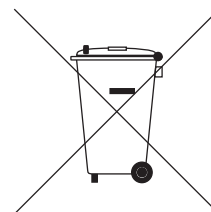


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Certification Mark

This product complies with the following EC Directives:
Electro-Magnetic Compatibility Directive.
(EMC) (2004/108/EC)
Low Voltage Directive.
(LVD) (2006/95/EC)



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User Instructions

FP735Si

Electronic 3-Channel Full Programmer

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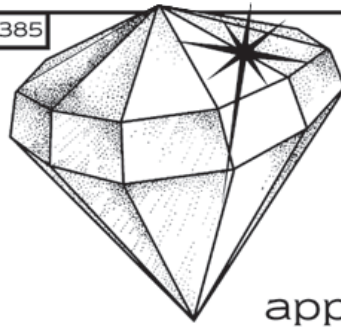
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TACMA

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11385



Crystal Mark

Clarity
approved by
Plain English Campaign

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The text below has been edited and approved by the Plain English Campaign, who has issued a Crystal Mark to be displayed with it.

What is a Programmer?

... an explanation for householders.

Programmers allow you to set 'On' and 'Off' time periods. Some models switch the central heating and domestic hot water on and off at the same time, while others allow the domestic hot water and heating to come on and go off at different times. Set the 'On' and 'Off' time periods to suit your own lifestyle. On some programmers you must also set whether you want the heating and hot water to run continuously, run under the chosen 'On' and 'Off' heating periods, or be permanently off.

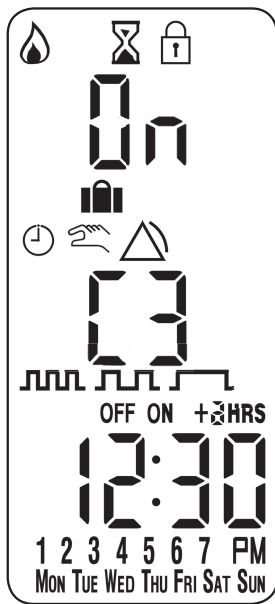
The time on the programmer must be correct. Some types have to be adjusted in spring and autumn at the changes between Greenwich Mean Time and British Summer Time.

This programmer works together with the room thermostats and the hot water thermostat. When the room and/or the hot water has reached its set temperature, the heating will go off. Even if the programmer has set it on.

1.0 User Instructions

1.1 Display

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← *Channel Status*
(Event number when programming)

← *Channel Number*

← *TIME*

← *Days of Week (Numbers or Text)*

KEY TO SYMBOLS

	Flame: shows when heating is on
	Hourglass: shows during programming delays
	Padlock: indicates keyboard is locked
	Suitcase: indicates Holiday Mode is set
	Clock: Timed Modes
	Hand: Manual Modes
	Alarm: Indicates alarm is active. Also used for service due
	3 on and 3 off events per day
	2 on and 2 off events per day
	1 on and 1 off event per day. All Day Mode
OFF	Timer (OFF) Mode
+HRS	+ HRS: Extends function by 1, 2 or 3 hours
ON	Timer (ON) Mode

1.2 Preset Programmes

Your FP735Si comes ready programmed with a set of operating times which often suit most people.

<i>Weekdays (Mon-Fri)</i>		
<i>Event</i>	<i>Time</i>	<i>Hot Water and Heating</i>
1	06:30	1st ON
2	08:30	1st OFF
3	11:30	2nd ON
4	13:30	2nd OFF
5	16:30	3rd ON
6	22:30	3rd OFF

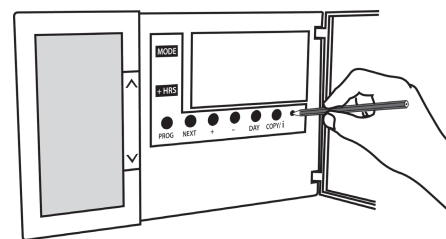
<i>Weekend (Sat-Sun)</i>		
<i>Event</i>	<i>Time</i>	<i>Hot Water and Heating</i>
1	07:30	1st ON
2	09:30	1st OFF
3	11:30	2nd ON
4	13:30	2nd OFF
5	16:30	3rd ON
6	22:30	3rd OFF

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If you want, you can change any of these settings by following the instructions on pages 12 to 17. First follow the steps on page 9 to set your display preferences.

1.3 Before you start

Open the flap on the front of your FP735Si. Using a non-metallic object, press and release the recessed **RESET** button (R/S).

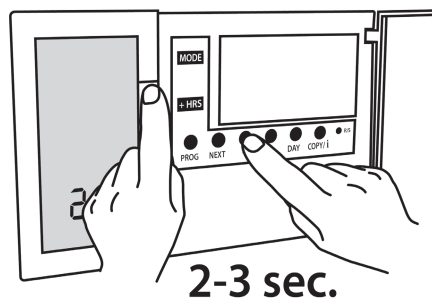


NOTE: Your FP735Si features a backlight on its display. Unless this has been disabled or set to be on all the time, the first press of any button will cause the backlight to come on. In order to action a function, a repeat press of the button will be required. All buttons will then operate as normal until the unit is left untouched for 2 minutes and then the next button press will activate the backlight again.

1.4 Display Preferences

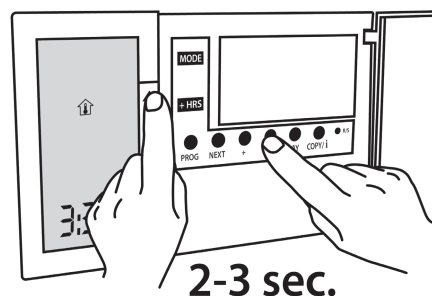
Clock display (12 or 24 hr)

Press and hold **Λ** and **+** buttons for 2-3 seconds until display changes.
(AM or PM will appear in 12 hr mode)



Days of the week (numbers or text)

Press **Λ** and **-** to toggle between day numbers and text



1.5 Setting the Time and Date

Setting the correct date and time

Your FP735Si incorporates a real time clock with calendar function that automatically changes time in both Spring and Autumn. The time and date is set in the factory, and does not normally require adjustment. However, should it be found necessary to adjust time or date for any other reason refer to the following instructions.

Date

31

Month

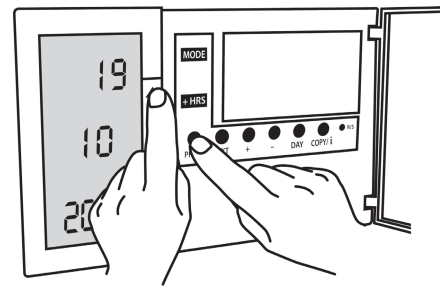
8

Year

20 13

Setting the date

Press and hold **Λ** and **PROG** buttons for 3 seconds, to display date.



2-3 sec.

GB

The **YEAR** number will flash, use **Λ** or **V** to correct the year (**Fig 1**).

Use - or + to move to **MONTH**, then use **Λ** or **V** to correct month (**Fig 2**).



Fig. 1



Fig. 2

Use - or + to move to **DATE** in month, then use **Λ** or **V** to correct day in month (**Fig 3**).

If you attempt to select an invalid date the unit will reject it and apply the nearest valid date. It is recommended that date is set in the order, yy/mm/dd.



Fig. 3

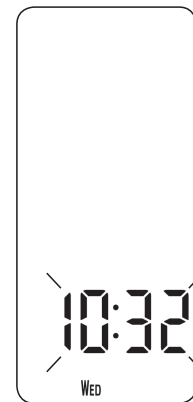


Fig. 4

Setting the correct time

After setting the date press **PROG** to display the time. The time display will flash on and off. Use the + and - buttons to set the correct time (press and hold to change in 10 minute increments). (**Fig. 4**)

Setting the correct day

The day of the week is set automatically from the date. Press **PROG** button to return to normal operation (**RUN**).

(Fig. 5)



Fig. 5

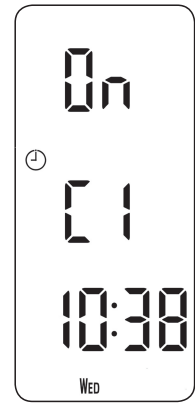


Fig. 6

1.6 Accepting the preset programmes

If you are happy to use the preset programmes on page 7, you do not need to do anything else. To accept these settings just close the front cover.

The unit is now in **RUN mode** (colon flashes in display) and the heating will operate according to the preset programmes.

1.7 Before you change the preset programmes

Your installer will have set your unit to operate in either **7-day mode**, **5+2 day mode** or **24 hour mode**. To tell which mode your unit is set press **PROG** until Event 1 flashes in the display. The list of week days at the bottom of the display indicates the chosen mode.

In **7-day** mode (Fig. 7) you can programme different settings for each day of the week (see page 12).

Note: Only one day of the week is shown in the display.

In **5+2 day** mode (Fig. 8) you can enter one set of programmes for weekdays and another set for weekends (see page 13).

Note: Either weekdays or weekend days are shown in the display.



Fig. 7

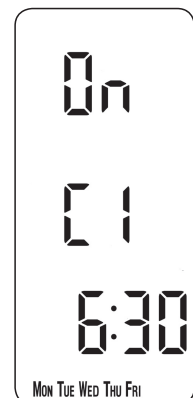


Fig. 8

In **24 hour** mode (**Fig. 9**) you can enter one set of programmes which repeats every day (see page 14).

Note: No days of the week are shown in the display.



Fig. 9

Note:

Event times cannot be set out of sequence.

To return to **RUN** mode at any time, press and hold **PROG.** Alternatively, do not press any buttons and the unit will automatically return to **RUN** after 2 minutes.

Your installer will have set your unit to operate with either 2, 4 or 6 events per day. This will determine the number of events per day that you are able to programme.

1.7.1 Changing Zones

The FP735Si is a 3 Zone timer and can schedule individual times to switch each Zone of your Central Heating and Hot Water system. To view or set the on/off schedule for each Zone the corresponding Channel number must be showing on the display.

- a) Press the **CH** button to change the currently viewed Zone identified by the channel number in the display (**Fig 10**).
- b) Press the CH button again to scroll through the Zone channels 1 to 3



Fig. 10

Note:

Each Zone will correspond to a different area of your heating system and / or hot water. Which Zone belongs to which Channel of the FP735Si depends on the installation wiring, details of which can be obtained from your installer. It is recommended that this is noted in the supplied Quick Guide for future reference.

1.7.2 Programming in 7-day mode

(Separate programmes for each day of the week)

GB

a) Press **PROG** until Event 1 flashes (**Fig. 11**).

b) Change the time as follows:

i) Use the **+** or **-** buttons to alter the time (press and hold to change in 10 minute increments).

ii) Press **NEXT** to advance to next Event for that day.

iii) Repeat steps i and ii above for the remaining events (**Fig. 12**).

c) When all events are correct, press **DAY** to programme events for the next day. (If a day's event times are to be repeated in another day of the week then the **COPY** function can be used - see below).

d) Repeat steps b and c to programme (or **COPY**) events for the rest of the week.

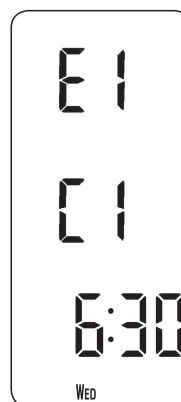


Fig. 11

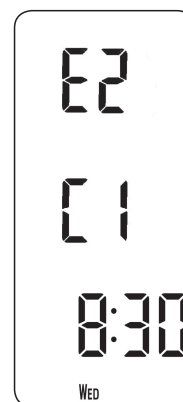


Fig. 12

To return to **RUN** mode, press and release the **PROG** button. The display will change to show the current time (**Fig. 13**).

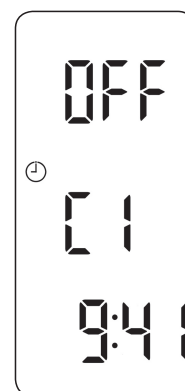


Fig. 13

Normal Copy Function

1. At step d press the **COPY** button and the previous day's events will be copied into the currently displayed day.

Advanced Copy Function

1. When all 6 events are correct, press the **COPY** button.
2. Press the **DAY** button to select which day to copy to.
3. When day is selected press the **COPY** button.
4. Continue steps 2 and 3 until all the days you would like to copy to have been copied.
5. To exit advanced copy mode press the **DAY** button until the day copied from is selected and press the **COPY** button.

Note: Advanced Copy can only be used if the Advanced

Copy Function has been enabled in option 2 in **Advanced Programming** (see page 20).

1.7.3 Programming in 5+2 day mode

(One set of programmes for weekdays, another for weekends)

GB

- a) Press **PROG** button until Event 1 flashes, then press the **DAY** button until display shows weekdays (**Fig. 14**).
- b) Follow steps b and c on page 11 to programme times for weekdays (**Fig. 15**).
- c) Press the **DAY** button to programme events for weekend (Day 6-7) or press the **COPY** button to repeat weekday programme.

To return to **RUN** mode, press and release the **PROG** button. The display will change to show the current time (**Fig. 16**).

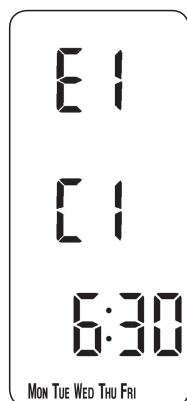


Fig. 14



Fig. 15

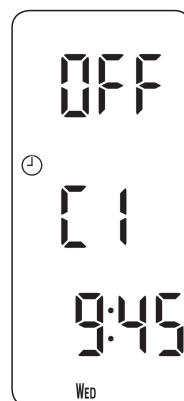


Fig. 16

1.7.4 Programming in 24 hour mode

(Every day of the week uses the same programme)

- a) Press the **PROG** button until event 1 flashes (**Fig. 17**).
- b) Amend the time as follows:
 - i) Press the **+** and **-** buttons to alter the time (press and hold to move in 10 minute increments).
 - ii) Press the **NEXT** button to advance to the next event (**Fig. 18**).
 - iii) Repeat the steps above for the remaining events.
- c) When all events are programmed press the **PROG** button to return to **RUN** mode (**Fig. 19**).

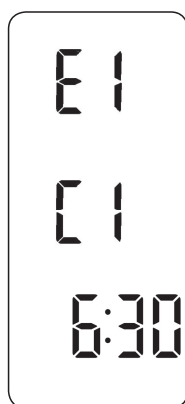


Fig. 17

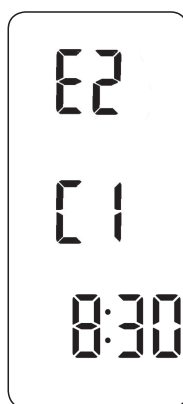


Fig. 18

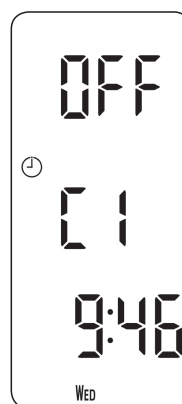


Fig. 19

1.7.5 Programming in A+B mode

(The Advanced Programming parameter 6 must be set to 5+2 days)

Press and hold the **PROG** and **V** buttons for 3 seconds. The display will change to that shown in **Fig. 20**. This will take you into **Advanced Programming Mode** option 1.

Use the **A** or **V** buttons to enable or disable the function (1=enabled, 0=disabled).

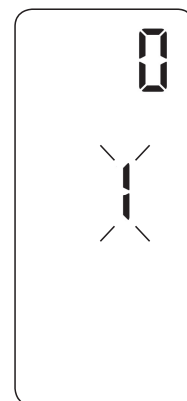


Fig. 20

Press and hold the **PROG** button for 5 seconds until the display returns to previous **RUN** mode (**Fig. 21**).

Press the **PROG** button, the display will change to show the default days assigned to “A” days (MON, TUE, WED, THU, FRI) (**Fig. 22**).

Use the + or - buttons to scroll forwards or backwards through the days of the week.

To deselect a day press the **V** button, (for example TUE). To select a day press the **Λ** button (for example SUN).

Any deselected days are automatically assigned to “B” days.

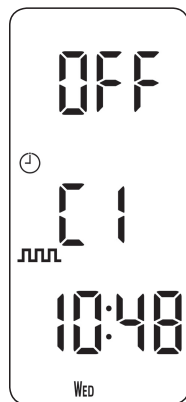


Fig. 21

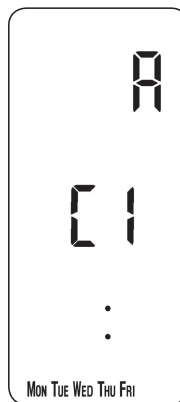


Fig. 22

Programming “A” days and events

- Press the **PROG** button, the first preset time. (Event 1 for Programme A) appears in display (**Fig. 23**).
- Use the + or - buttons to adjust the **TIME** (press and hold to change in 10 minute increments).

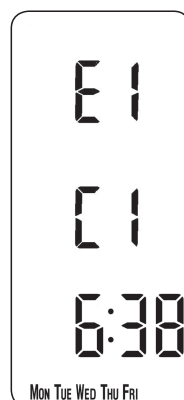


Fig. 23

- c) Press the **NEXT** button to move to the next preset time (Event 2) (**Fig. 24**).
- d) Repeat steps b, c, and d to programme the remaining events.

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Programming "B" days and events

- a) Press the **DAY** button until the first preset time (Event 1 for Programme B) appears in display (**Fig. 25**).
- b) Use the + or - buttons to adjust the **TIME** (press and hold to change in 10 minute increments).
- c) Press the **PROG** button to move to the next preset time (Event 2) (**Fig. 26**).
- d) Repeat steps b, c, and d to programme the remaining events.

Running the programme

Press the **PROG** button to return to previous **RUN** mode. The heating will now follow the times programmed (**Fig. 27**).

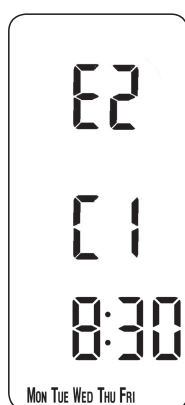


Fig. 24

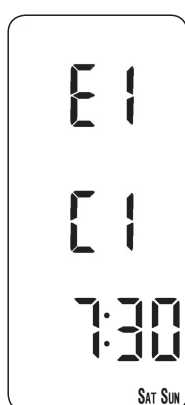


Fig. 25

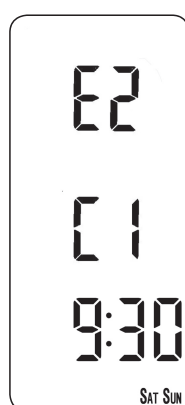


Fig. 26

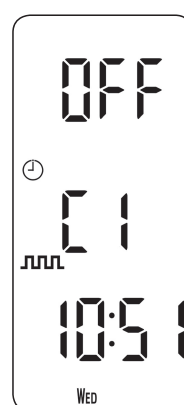


Fig. 27

Note: Advanced copy function is only available in 7 day mode.

2.0 Advanced Functions

2.1 Mode

GB

The MODE button allows the operation of the programmed events to be altered between:

1. *Auto mode*

- a.  6 events
- b.  4 events

2. *Allday mode*

- a.  Only the first and last programmed events run

3. *“ON” mode*

In the “ON” mode the heating is permanently turned on.

4. *“OFF” mode*

In the “OFF” mode, the heating is permanently turned off.

Note: When in Auto or Allday modes, the clock symbol is displayed to indicate the programmed events will be followed.

2.2 Holiday Mode

The FP735Si can temporarily switch off all programmed on events while you are away on holiday, returning to your programmed settings at a specified date.

Press and hold the **DAY** button for at least 3 seconds (the display will show a suitcase and a date with the year flashing - **Fig 28**). Now you can set the date of your return.

The **YEAR** number will flash, use the **Λ** or **V** buttons to set the year of your return.

Use the - or + buttons to move to **MONTH**. The **MONTH** number will flash (**Fig 29**). Then use **Λ** or **V** to set the month of your return.

Use the - or + buttons to move to **DAY** in month of your return. The **DAY** number will flash (**Fig 30**). Then use the **Λ** or **V** button to set on which day in month you will return.

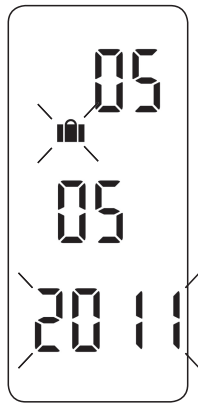


Fig. 28

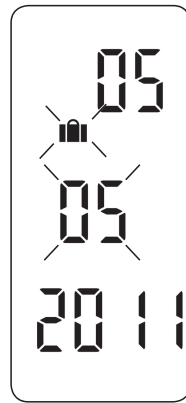


Fig. 29

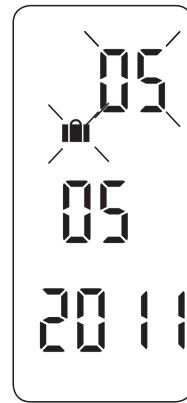


Fig. 30

Once the date of return is set correctly, press the **DAY** button to start holiday mode and then no more – the display will change to show a flashing suitcase.

The modes (auto, all day, or on or off) of operation to return to can be selected using the **MODE** button.

To cancel Holiday Mode, or if returning early from holiday, simply press the **DAY** button to resume normal operation.

When in Holiday Mode, a hand symbol is shown to indicate this is a manual setting mode.

2.3 User Overrides

Sometimes you may need to change the way you use your heating temporarily, e.g. due to unusually cold or warm weather. The FP735Si has several user overrides, which can be selected without affecting the set programmes. When user overrides are active, the hand symbol will be flashing to indicate a manual change is active.

2.3.1 Move to next event

Press the **V** button to move forward to the next event. Press **V** button again to return to programmed operation.

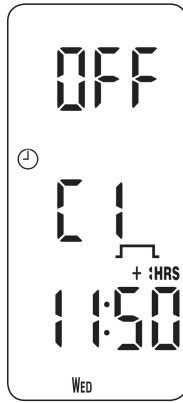


Fig. 31

2.3.2 Extend the current set time by 1, 2 or 3 hours (Fig. 31).

Press the **Λ** button once for 1 extra hour, twice for 2 extra hours, 3 times for 3 extra hours, and press 4 times to remove override.

The display will indicate the number of extended hours have been set. A fourth press will cancel the override.

2.3.3 Changing the clock forwards and backwards

This is handled automatically, however, if the manual changeover has been selected (in Advanced Programming) follow the instructions below.

To change from Summer to Winter (turn clocks back)

With clock display showing, press and hold the - button until time moves back.

To change from Winter to Summer (move clocks forward)

With clock display showing, press and hold the + button until time moves forward.

3.0 Advanced Programming

3.1 Overview of installer selectable features which may affect the operation of your timer

Settings References

<i>Installer Settings</i>		
<i>Parameter</i>	<i>Function</i>	<i>Installer Set Value</i>
1	A+B Days (Enabled/Disabled)	
2	Copy functions (Standard/Advanced)	
3	Summer/Winter (Automatic/Manual/Disabled)	
4	Backlight (On/Off/On for 15s)	
5	4 Events/6 Events per day (4/6)	
6	Programming Mode (7-day/24 hour/5+2 A+B days)	
7	Keyboard Lock (Locked/unlocked)	

3.1.1 Keyboard lock

This allows the installer to limit or lock the keyboard to prevent unauthorised changes to programme values and limits overrides.

Note:

Partial keyboard - Padlock symbol will flash

Full keyboard - Steady Padlock symbol

4.0 Service Interval Timer

If the property is owned by a landlord he may, for gas safety reasons, have instructed the installer to set the service interval timer.

- **WARNING:** If set, 28 days prior to the service due date, a visual and audible warning will start each day at noon. The audible warning will last for 10 seconds and will be repeated every hour. The display will show SEr and the service due date. The visual and audible warnings will remain until a button is pressed to cancel them. If cancelled the alarm will recommence the following day at noon. The alarm symbol will flash as a constant reminder.

- **SERVICE OVERDUE:** If the boiler is not serviced before the due date, a visual and audible warning will start each day at noon. The audible warning will last for 1 minute and will be repeated every hour. The display will show SEr and the service due date. The visual and audible warnings will remain until a button is pressed to cancel them. If cancelled the alarm will recommence the following day at noon. The alarm symbol will flash as a constant reminder.
- In addition, all overrides and programming buttons will be disabled and the heating may operate for a limited amount of time each hour or not come on at all depending on the installer settings.
- The installer may cancel or reset the service interval timer as part of the boiler service.
- This is a gas safety feature that can only be accessed by an installer.

5.0 Resetting the unit

Reset

Press and release the **RESET** button (**R/S**) if display freezes for any reason. This does not reset any programme, clock or date but will reset any manually selected overrides. It is recommended that this is done at time of installation.

Full reset

Press and hold the **PROG** and **V** buttons for 5 seconds to go to Advanced Programming. Press and release **RESET** button (**R/S**) whilst holding down the **PROG** button. This resets event times to their defaults (see 1.2). Any **ADV**ance overrides and **+HRS** overrides are cancelled. Pre-programmed parameters (Installation Guide) are reset to default values. Clock and date are not changed.

6.0 INFO Button (COPY/i)

The **INFO** button will allow various information to be accessed and displayed, although the information available will depend on how the unit is set up. The information elements are shown in sequence as the info key is pressed repeatedly.

GB

Model number

The Danfoss model number is displayed at the top of the display.

Software version

The user application software version of the programmer is displayed.

Next event time

The next event time of the currently displayed channel is displayed.

Service Due Date (if applicable)

The Service Due date is displayed if set by the installer. In holiday mode, the info key provides the information.

Holiday End Date

If the holiday mode has been set, a press of the INFO button will display the holiday end date.

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