



Bosch Group

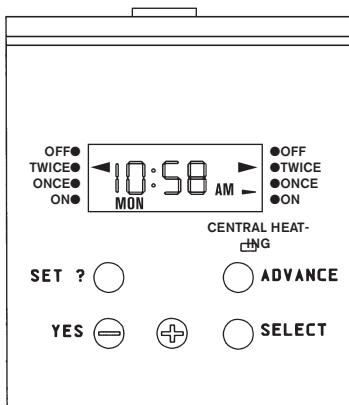
DIGITAL TWIN-CHANNEL PROGRAMMER

FITTING AND OPERATING INSTRUCTIONS

FOR GREENSTAR R HE COMBI, R HE SYSTEM &

GREENSTAR HIGHFLOW 440 BOILERS

General information is given in the users instruction leaflet despatched with the appliance and/or on the lighting instruction plate fitted to the appliance.



CONFORMS TO THE ESSENTIAL REQUIREMENTS OF
THE FOLLOWING DIRECTIVES:
89/336/EEC - Electromagnetic compatibility
73/23/EEC - Low voltage Directive



THESE INSTRUCTIONS APPLY IN THE UK ONLY

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER OR AT THE APPLIANCE

Gas Safety (Installation and Use) Regulations 1984 : All gas appliances must be installed by a competent person, in accordance with the above regulations. Failure to install the appliance correctly could lead to prosecution. The manufacturers notes must not be taken, in any way, as overriding statutory obligations.

IMPORTANT: Read these instructions carefully in order to get the best from your appliance.

WARNING: This appliance must be earthed and protected by a 3A fuse if a 13A plug is used, or, if any other type of plug is used, by a 5A fuse either in the plug or adaptor or at the distribution board.

PROGRAMMER

7 day twin channel timeswitch. The timeswitch operates central heating and the hot water preheat function on the combi boiler model. As with most combination boilers hot water from the tap will be available 24 hours per day on demand. However using the timer to control the hot water comfort mode the boiler will pre-heat the domestic hot water resulting in minimal delay at the tap. If used with the system boiler the hot water function is used with a hot water cylinder. User maintenance is not possible.

CONTROL

One or Two ON and OFF periods can be chosen per day, for each channel.

Programme times are set within a 23 hour 50 minute period.

To return the programmer to the standard programme and 12.00am MON press the SET and + buttons together.

BATTERY BACK-UP

Lifetime Lithium battery giving:

Display: 1 Hour min, 2 hour max every power loss.

Timekeeping: 7 hour min, 8 hour max every power loss.

Programme: 1.5 year min, 10 year typical.

TO FIT THE PROGRAMMER

WARNING: Switch off the power supply before starting work.

Remove the boiler casing.

Remove the fascia cover plate by releasing the clip at the top and withdraw it from the front.

Present the programmer to the fascia and plug in the programmer connector into the four-way connection on the board. (Fig. 1).

Push the programmer into position ensuring that the lead is not trapped and that the clip has been properly engaged.

Switch on the power supply.

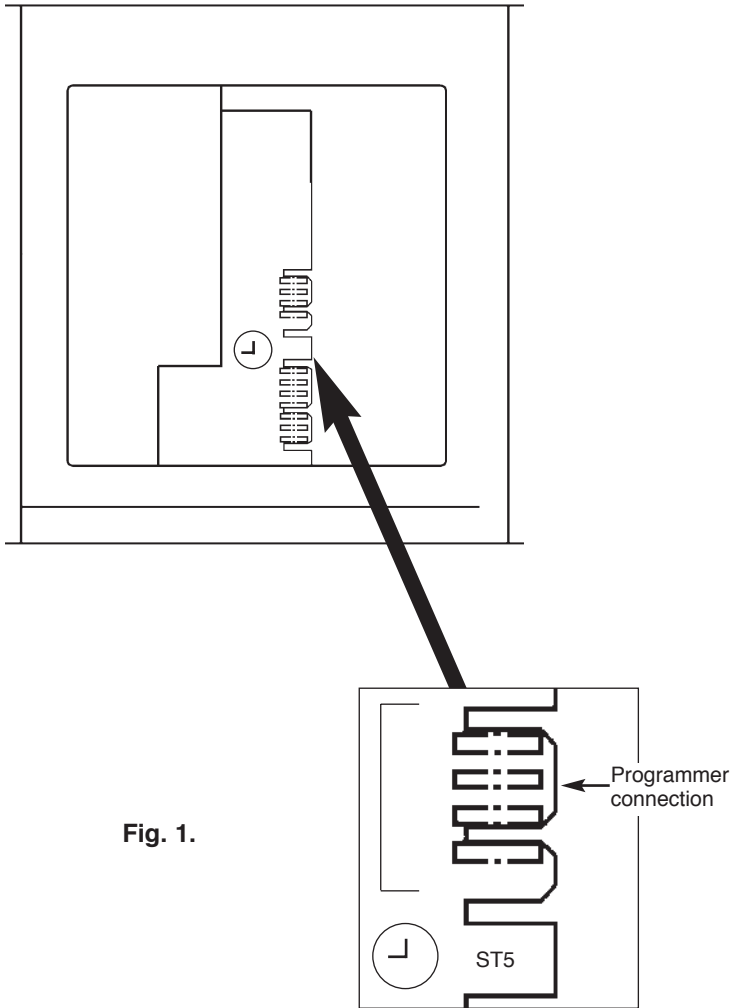


Fig. 1.

TO REPLACE THE PROGRAMMER
Follow the preceding instructions.

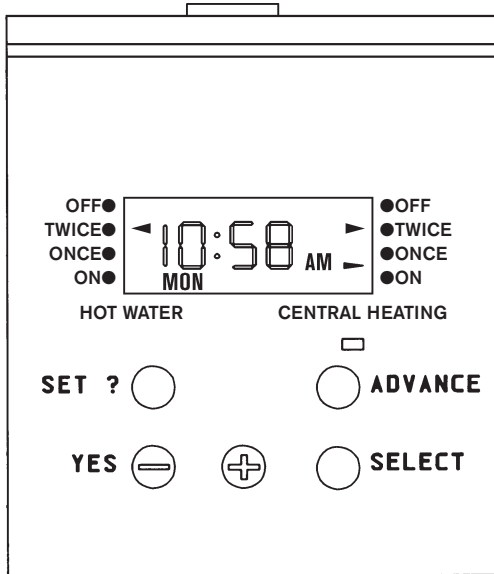


Fig. 2.

PROGRAMMER OPERATING INSTRUCTIONS

The programmer controls the operation of the central heating and hot water functions independently.

Pressing the **SET** button repeatedly progresses you through the settings. To reset at any point the **YES** button must be pressed, followed by the + and – buttons as necessary.

NOTE: The – button is also the **YES** button.

Check that the gas supply to the appliance is **OFF** and that the room thermostat, if fitted, is at minimum to prevent the accidental operation of the appliance during the initial setting of the programmer. It is not necessary to do this when making adjustments to the programmer at a later date. Check that all taps and showers are shut.

Switch on the power supply.

TO SET THE CLOCK

Starting with the display showing the time of day press **SET**.

The display will ask **SET CLOCK ?**. If the clock display is not correct, press **YES**.

The display will show the current time and day with the day flashing.

Use the + and – buttons to change to the correct day. Press **SET** to lock in the day.

The display will show the hours flashing. Use the + and – buttons to set the hours (remember to take into account **AM** or **PM**), press **SET** to lock in the hours.

Repeat the actions to set the minutes.

The display will show **SET PROG?** See Changing the Programme.

Press **SET** and **TEST ?** will appear - See Programme Test.

Press **SET** and the **DAY** and **TIME** display will appear.

If the unit is left in the programme mode it will automatically revert to the normal display after a period of 1 to 2 minutes.

Do not forget to re-set the clock when British Summer Time changes.

STANDARD PROGRAMME

The programmer has an in-built programme of “standard” switching times shown in the table. These may be changed to suit your specific requirements.

SWITCHING	STANDARD PROGRAMME			
	Mon.-Fri.		Sat.-Sun.	
	CH	HW	CH	HW
ON1	6.30 a.m.	6.30 a.m.	7.00 a.m.	7.00 a.m.
OFF1	8.30 a.m.	8.30 a.m.	9.00 a.m.	9.00 a.m.
ON2	4.30 p.m.	4.30 p.m.	4.00 p.m.	4.00 p.m.
OFF2	10.30 p.m.	10.30 p.m.	11.00 p.m.	11.00 p.m.

ON1 – Start of the first timed period of the day.

OFF1 – End of the first timed period.

ON2 – Start of the second (evening) period.

OFF2 – Final shut down for each day (up to 23hr 50min after ON1).

CHANGING THE PROGRAMME

Check that the time is correctly set before changing the programme.

Press **SET** until **SET PROG?** appears.

Press **YES** until Time, Monday-Friday, **CH ON** appears.

NOTE: If you press **SET** after each operation of **YES** you advance that setting to its next stage i.e. Mon-Fri to each individual day or **CH** to **HW** etc.

You can now set the **CH** operating times for the Monday-Friday period.

Press – and + buttons to set the **CH ON** time in 10 minute steps.

Press **SET** to enter the **ON1** time. **OFF** will appear.

Press – and + buttons to set the **CH OFF** time.

Press **SET** to enter the **OFF1** time.

Continue and set the **ON2** and **OFF2** times.

HW appears.

Press **YES** to get **HW ON**.

Set **HW ON1** to **OFF2** as previously described.

When the **OFF2** time is entered **SET MON PROG** will appear.

You can now enter **CH** operating times for **MONDAY** only if required.

Press **YES** until Time, **ON** appears.

Press – and + buttons to set the time and continue as described in the preceding instructions to set **CH** and **HW**

The final press of **SET** will change the day. Amend the times as required.

Continue until **SAT SUN** appears.

Set the **CH** and **HW** operating times for these two days as described in the preceding instructions.

It will then be possible to set specific times for **SATURDAY** or **SUNDAY** as required.

The final press of **SET** produces **TEST?** on the display.

Press **SET** and the **DAY** and **TIME** display will appear.

Record your new programme times in the table following.

Central Heating

	ON1	OFF1	ON2	OFF2
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Hot Water

	ON1	OFF1	ON2	OFF2
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

PROGRAMME TEST

Press **SET** until **TEST?** appears.

Press **YES** and **12.00 AM** on that particular day will appear.

Press and hold **YES** and the time display will run pausing for 2-3 seconds at each switching operation. The **CH** or **HW** indicator will be energised as appropriate.

Release the **YES** button to hold the switching time for longer than 2-3 seconds.

Press **YES** to continue the examination moving through each day of the week.

Press **SET** (twice) to return to the Day and Time display.

RESET

The programme can be reset to the start-up display and the standard pre-set programme by pressing SET and + simultaneously. You will have to reset the clock and then enter the programme required following the preceding instructions.

OPERATIONAL NOTES

Programmer Flexibility

Switching options for **CH** and **HW** are:

OFF	–	Off all the time
TWICE	–	On for two periods each day.
ONCE	–	On for one period each day (ON1 → OFF2).
ON	–	On all the time.

Operate the **SELECT** button to move the arrow in the display to the option you require.

MIXING ONCE OR TWICE OPTIONS

To have your **CH** (Central Heating) or **HW** (Hot Water) Twice on some days but **ON** all day the others, first programme the “Twice” days in the normal manner. For the other days set **ON1** to the required switch-on time and then set **OFF1**, **ON2** and **OFF2** all at the same required switch-off time. Finally, set the **SELECT** button to Twice.

ONE DAY OFF OPTION

If you require the appliance to be off on a particular day, set the relevant **ON1** and **OFF1** to the same time and **ON2** and **OFF2** to the same later time on that particular day. Set the appropriate **SELECT** button to **ONCE** or **TWICE** as required.

CENTRAL HEATING OR HOT WATER SHUTDOWN

To shut down the **CH** (Central Heating) or, where appropriate, **HW** (Hot Water) without disturbing the programme, set the appropriate **SELECT** button to **OFF**.

ADVANCE

If you wish to switch the central heating from **ON** to **OFF** or vice-versa, press and release the appropriate advance button. The regular programme will be automatically resumed as the later switching times are reached.

Advance does not operate if you have selected the **ON** or **OFF** options,

TO LIGHT AND STOP THE APPLIANCE

Refer to the User operating instruction leaflet or the lighting instruction plate on the appliance.



Worcester Heat Systems Ltd. (Bosch Group), Cotswold Way, Warndon, Worcester WR4 9SW.
Telephone: 01905 754624. Fax: 01905 754619. Technical Helpline 08705 266241.
www.worcester-bosch.co.uk

This booklet is accurate at the date of printing but will be superseded and should be disregarded if specifications and/or appearances are changed in the interests of continued improvement.
All goods sold are subject to our official Conditions of Sale, a copy of which may be obtained on application.

PUBLICATION 8 716 114 724a (10/07)