

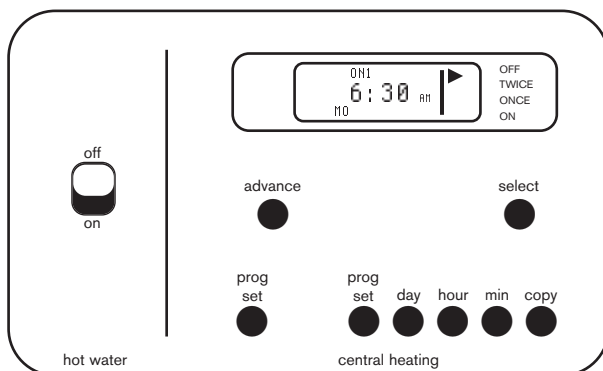


**Bosch Group**

**7716 192 008 Mk1 Round Buttons**

## **SINGLE-CHANNEL PROGRAMMER FITTING AND OPERATING INSTRUCTIONS**

General information about the boiler is given in the Users Instruction Leaflet despatched with the appliance and /or on the Lighting Instruction Plate fitted to the appliance.



STANDARD GAS BOILER G.C. NUMBER			
APPLIANCE	9.24 ELECTRONIC	WORCESTER 350	WORCESTER 240
Open Flue	47 311 04	not applicable	not applicable
Balanced Flue	47 311 05	not applicable	not applicable
Room Sealed Fanned Flue	47 311 06	47 311 13	47 311 12

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:** It is the law that all gas appliances are installed by a competent person, in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution. It is in your interest, and that of safety to ensure compliance with the law. The manufacturer's notes must not be taken, in any way, as overriding statutory obligations.

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

**IMPORTANT:** To get the best from your WORCESTER appliance please read these instructions carefully.

## PROGRAMMER

**7 Day Single Channel Timeswitch. Maintenance:** User maintenance should not be attempted.

**Switch Rating** 2(1)A 240V **Supply Voltage** 220 - 240 50Hz

## TO FIT THE PROGRAMMER

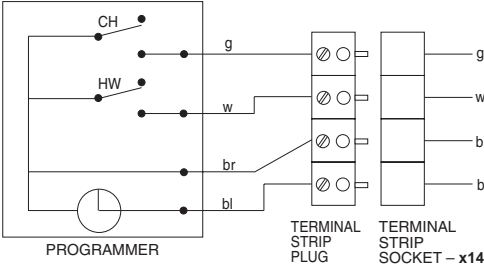
**WARNING:** Disconnect the electrical supply at the mains and turn off the gas supply at the service cock before commencing any work.

Access must be gained to the rear of the fascia as described in the appliance instruction book.

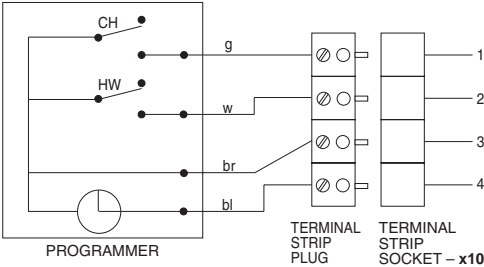
Unplug the operating switch from the 4-way terminal block. Remove the operating switch mounting panel from the fascia by unscrewing the four screws securing it to the fascia, two at the top and two at the bottom.

# ELECTRICAL CONNECTION

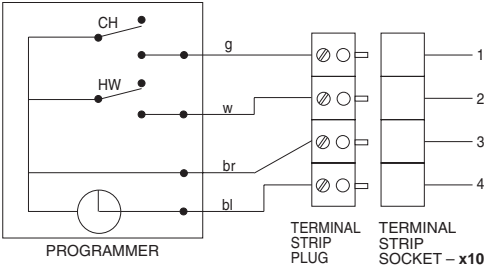
WORCESTER 350



WORCESTER 240



9.24 ELECTRONIC

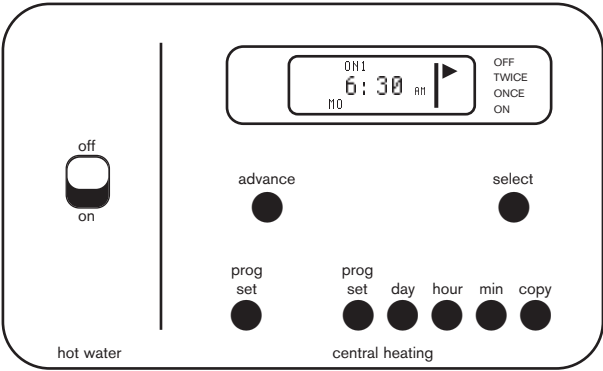


Fit the programmer assembly in the reverse order, carefully tightening the fixing screws. Plug in the programmer connection into the 4-way terminal block. Check that the plug-in terminal block is properly aligned before making the connection.

## TO REPLACE THE PROGRAMMER

Follow the preceding instructions if it is necessary to replace the programmer.

## OPERATION OF CONTROLS



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

When a **CENTRAL HEATING** programme is selected, the appliance will operate at times dictated by the programmer in response to the system controls.

When the **HOT WATER** switch **ON** position is selected the appliance will operate whenever a demand for hot water irrespective of the setting of the programmes.

## PROGRAMMER OPERATING INSTRUCTIONS

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

Switch on the electrical supply.

Select the **OFF** programme by pressing the **SELECT** button until the arrow appears next to **OFF** on the display.

Press and release the **DAY** and **MIN** buttons simultaneously to get the display **Mon–12.00–AM**.

This must be done every time the programmer is re-activated after switching the system off for a long period.

**To Set the Clock**

Press **CLOCK SET** button and hold down. Press **DAY** until the correct day of the week appears. Press **HOURL** until the correct hour of the day appears with the appropriate **AM** or **PM** sign (the display is of the 12hr type). Press **MIN** until the correct minutes display appears. Release **CLOCK SET**.

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

**Central Heating Programme**

The programmer has an in-built programme of ‘standard’ switching times. These may be changed to suit your specific requirements as described below.

The standard programme is shown in the table below and, for simplicity, the switching operations are described as **ON1**, **OFF1**, **ON2** and **OFF2**. These indicate:

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

**OFF1**–End of the first timed **CH** period.

**ON2**–Start of the second (evening) **CH** period

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

SWITCHING	STANDARD PROGRAMME	
	Mon–Fri	Sat–Sun
ON1	6.30am	7.00am
OFF1	8.30am	9.00am
ON2	4.30pm	4.00pm
OFF2	10.30pm	11.00pm

**Changing the Programme**

Press **PROG SET** to display the ‘standard’ **CH** programme settings.

Press **PROG SET ON1–MO(Monday)–6.30–AM** will appear. The broad vertical line, at the right-hand side of the display, indicates that the **CH** (Central Heating) is being programmed.

Press **HOURL** to alter the hour and press **MIN** to alter the minutes (in periods of 10 minutes) to suit your requirements. Make sure that **AM** or **PM** is correct.

Press **PROG SET OFF1–MO–8.30–AM** will appear

Repeat the above instructions to set the **OFF1** time.

Press **PROG SET ON2–MO–4.30–PM** will appear.

Repeat the above instructions to set the **ON2** time.

Press **PROG SET OFF2–MO–10.30–PM** will appear.

Repeat the above instructions to set the **OFF2** time.

Press **DAY** to change the day to **TU**(Tuesday). Change the times if required as described above starting from **ON1**. If you wish to repeat all the settings made for the previous day press **COPY** with the **CENTRAL HEATING ON1** setting indicated on the display, or these may be repeated for the following days by single consecutive presses of **DAY** and **COPY**.

**NOTE:** The pre-set times indicated on Saturday and Sunday will be shown in the table.

Repeat the above instructions to set the operating time for each day of the week until **ON1–MO**(Monday) re-appears on the display.

Press and release **CLOCK SET**.

The programmer is now set and the day and time is displayed, set as described in the preceding notes.

Enter the new programme times in the table below:

**Central Heating**

	ON1	OFF1	ON2	OFF2
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
SATURDAY				
SUNDAY				

## FLASHING DELAY

This Indicates a mistake on the programming.

1. **OFF1** must be later than **ON1**  
**ON2** must be later than **OFF1**  
**OFF2** must be later than **ON2**  
**ON1** must be later than the previous **OFF2**
2. There must be less than 24 hours between **ON1** and **OFF2**
3. The **AM** and **PM** indication may be incorrect.

Press **PROG SET** and follow the preceding instructions to check that the settings are correct.

The display will continue to flash until all errors have been corrected.

If you wish to inspect a single days settings press **PROG SET** followed by **DAY** to get the desired day and then repeatedly press **PROG SET** to progress through the settings of that day. Alter the times as desired remembering to press **CLOCK SET** at the end. To return to the day and time display if no change to the programme is made press **CLOCK SET**.

The programmer can be reset to the start-up display and the standard pre-set programme by pressing **DAY** and **MIN** simultaneously.

Press **CLOCK SET** to return to the time of display which will be **MO 12.00AM**. Reset the day and time as described in the preceding notes.

## Programmer Flexibility

Switching Options for **CH** 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 appropriate **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) **TWICE** on some days but **ON** all day the others, first programme the '**TWICE**' days in the normal way. 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 appropriate **SELECT** button to **TWICE**.

### One Day Off Option

If you require the appliance to be off on a particular day, set **ON** 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 Shut Down

To shut down the **CH** (Central Heating) 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 visa-versa, press and release the **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.

### Hot Water Supply–COMBINATION BOILERS

Hot water is available at the switched **ON** times whenever a tap is turned on. The supply of hot water temporarily affects the delivery of heat to the central heating circuit only for the period the hot water is required.

### TEMPERATURE CONTROL

The temperature control knob gives control over the temperature of the water supplied to the radiators when the boiler is serving the central heating system. This control does not influence the temperature of the domestic hot water which is pre-set at the factory and has no user adjustment.

The operating temperature of the heating system may be set anywhere within the range, with a high setting the radiators will get hotter, and higher room temperature will be achievable. With lower settings the radiators will be cooler but in winter the rooms may not reach their design temperature.



## **TO LIGHT AND STOP THE APPLIANCE**

Refer to Users Operating Instructions or the Lighting Plate, where fixed to the appliance door panel, for detailed instructions on the lighting and operation of the appliance.

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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.



Bosch Group

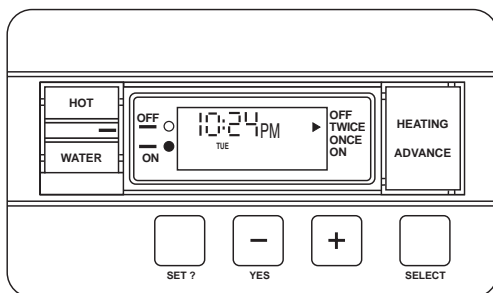
**7716 192 008 Mk2 Square Buttons**

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## **SINGLE-CHANNEL PROGRAMMER FITTING AND OPERATING INSTRUCTIONS**

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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**



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**THESE INSTRUCTIONS APPLY IN THE UK ONLY**

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

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Set the **CH** 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** (twice) and the **DAY** and **TIME** display will appear. Enter the new programme times in the table following.

**Central Heating**

	ON1	OFF1	ON2	OFF2
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

**Programme Test**

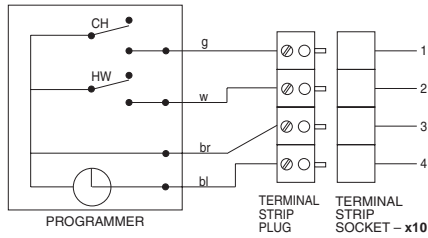
Press **SET** until **TEST?** appears.  
Press **YES** and 12.00 **AM** on that particular day will appear.  
Press and hold **YES** and the time display will run pausing for 2-3 seconds at each switchir operation. The **CH** indicator will be energised as appropriate.  
Release the **YES** button to 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.

If you wish to inspect a single days settings press **SET** to get **PROG?** followed by **YES** and **SET** get the desired day. Press **YES** to display the times and then repeatedly press **SET** to progre through the settings of that day. Alter the times as desired remembering to press **SET** at tl end. To return to the day and time display if no change to the programme is made repeated press **SET**.

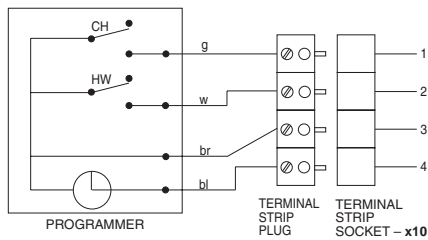
The programme can be reset to the start-up display and the standard pre-set programme l pressing **SET** and + simultaneously. You will have to reset the clock and then enter the pr gramme required following the preceding instructions.

# ELECTRICAL CONNECTIONS

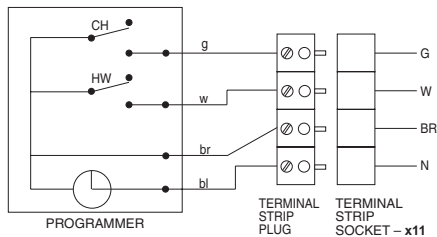
## Worcester 230



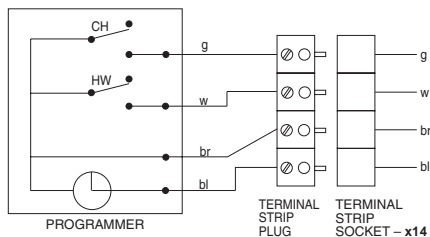
## Worcester 240



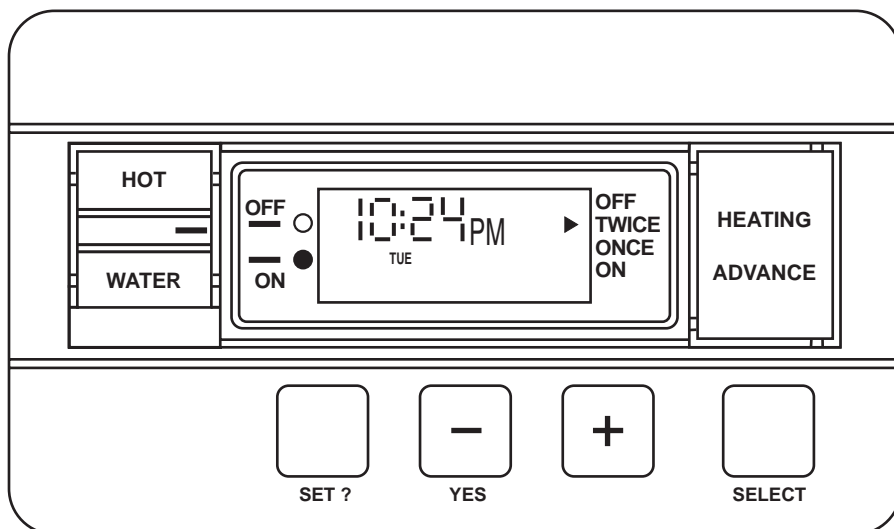
## Worcester 280



## Worcester 350



## OPERATION OF CONTROLS



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

When a **CENTRAL HEATING** programme is selected, the appliance will operate at times dictated by the programmer in response to the system controls.

When the **HOT WATER** switch **ON** position is selected the appliance will operate whenever a demand for hot water is made irrespective of the setting of the programmes.

## PROGRAMMER OPERATING INSTRUCTIONS

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

Switch on the electricity supply.

Select **OFF** by pressing the **SELECT** button until the arrow appears next to **OFF** on the display.

Press and release the **SET** and **+** buttons simultaneously to get the display **Mon – 12.00 – AM**.

### To Set the Clock

Press **SET** and **SET CLOCK?** will appear.

Press **YES** and **TIME** and **DAY** will appear. The day will flash.

Press **–** and **+** buttons to alter the day.

Press **SET** to enter the day. The Hours will flash.

Press – and + buttons to alter the hour.

Press **SET** to enter the hour (with the correct **AM** or **PM**). The minutes will flash.

Press – and + buttons to alter the minutes.

Press **SET** to enter 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 programme is left in the programming mode it will automatically revert to the normal mode after a period of 1 to 2 minutes.

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

### Central Heating 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.
ON1	6.30 a.m.	7.00 a.m.
OFF1	8.30 a.m.	9.00 a.m.
ON2	4.30 p.m.	4.00 p.m.
OFF2	10.30 p.m.	11.00 p.m.

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

**OFF1** – End of the first timed CH period.

**ON2** – Start of the second (evening) CH period.

**OFF2** – Final shut down of CH 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.

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.

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.

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

Continue until **SAT SUN** appears.

Set the **CH** 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** (twice) and the **DAY** and **TIME** display will appear. Enter the new programme times in the table following.

**Central Heating**

	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** 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.

If you wish to inspect a single days settings press **SET** to get **PROG?** followed by **YES** and **SET** to get the desired day. Press **YES** to display the times and then repeatedly press **SET** to progress through the settings of that day. Alter the times as desired remembering to press **SET** at the end. To return to the day and time display if no change to the programme is made repeatedly press **SET**.

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** 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) on Twice on some days but **ON** continuously the other days, 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 Shut Down

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.

### Hot Water Supply – Combination Boilers

Hot water is available at the switched **ON** times whenever a tap is turned on. The supply of hot water temporarily affects the delivery of heat to the central heating circuit only for the period the hot water is required.

### Temperature Control

The temperature control knob gives control over the temperature of the water supplied to the radiators when the boiler is serving the central heating system. This control does not influence the temperature of the domestic hot water which is pre-set at the factory and has no user adjustment.

The operating temperature of the heating system may be set anywhere within the range, with a high setting the radiators will get hotter, and a high room temperature will be achievable. With lower settings the radiators will be cooler but in winter conditions the rooms may not reach their design temperature.

## TO LIGHT AND STOP THE APPLIANCE

Refer to the user's operating instructions or the lighting instruction plate fixed to the appliance door panel, for detailed instructions on the lighting and operation of the appliance.



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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 8 716 102 484d 03/01**