ES3247B
3 Channel Programmer

User and Installation Instructions
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What is a Channel 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 Central 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 Central 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 upon the changes between Winter and Summer time.

You may be able to temporarily adjust the heating programme, for example, ‘Override’, ‘Advance’ or ‘Boost’. These are explained in the manufacturer’s instructions. The Central Heating will not work if the room thermostat has switched the Central Heating off. And, if you have a Hot Water cylinder, the water heating will not work if the cylinder thermostat detects that the Central Hot Water has reached the correct temperature.
Introduction to the 3 Channel Programmer

This programmer can automatically switch your Central Heating or Hot Water ON and OFF either 2 or 3 times a day, at whatever times you choose. Timekeeping is maintained through power interruptions by a replaceable internal battery (by Qualified Installer/Electrician only) designed to last for the lifetime of the programmer and the clock is automatically put forward 1 hour at 1:00am on the last Sunday of March and back 1 hour at 2:00am on the last Sunday of October. The clock is factory pre-set to UK time and date, but you can alter it if you want. During installation, the installer selects 24 hour, 5/2 day, or 7 day programming and either 2 or 3 on/off periods per day, via the Technical Settings (see installation instructions).

The large, easy to read display makes programming easy and the unit is designed to eliminate the possibility of accidental changes to your programme. Buttons normally visible, only affect your set programme temporarily. All buttons which can permanently change your programme are located behind the flip over facia.

- The 24 hour programmer option runs the same programme every day.
- The 5/2 Day programmer option allows different ON/OFF times at weekends.
- The 7 Day programmer option allows different ON/OFF times for each day of the week.
- Pumped System (PU) allows independent control of Central Heating and Hot Water.
- Gravity System (Gr) does not allow Central Heating without Hot Water but can provide Hot Water without Central Heating.

**IMPORTANT**: These settings should only be changed by a qualified person. Contact your installer. This programmer is not suitable for the switching of devices greater than 6Amp rated. (e.g. Not suitable for use as an immersion timer)
Quick Operating Guide

1. Home (takes you back to home screen)
2. Next (moves you to the next option within a function)
3. Advance to the next programmed ON/OFF (ADV)
4. Add up to 3 hours of extra Central Heating/Hot Water (+HR)
5. Set Time and Date
6. Set Programmer Option (24hr, 5/2, 7 Day) & Central Heating
7. Set Programmer Option (24hr, 5/2, 7 Day) & Hot Water
8. Reset
9. Set Operation Mode (ON/AUTO/ALL DAY/OFF)
10. Runs the programme
11. +/- buttons for settings adjustment
12. Moves between days when programming Central Heating/Hot Water (DAY)
13. Copy function (COPY)
14. Holiday Mode
15 Day of the week
16 Time Display
17 AM/PM
18 Date Display
19 Displays which ON/OFF period (1/2/3) is being set when programming Central Heating/Hot Water
20 Displays whether setting the ON time or OFF time when programming Central Heating/Hot Water (ON/OFF)
21 Heating Zone 1 or Heating Zone 2 (1 / 2)
22 Operating Mode (ON/OFF/AUTO/ALL DAY)
23 Advanced temporary override is active (ADV)
24 Radiator/Tap symbol show that Central Heating/Hot Water is currently ON
25 + 1hr / 2hr / 3hr temporary override is active
Programming the Unit
The Factory Pre-Set Programme

This Channel Programmer has been designed to be simple to use, requiring minimal user intervention with a pre-programmed heating profile.

The pre-set heating times and temperatures will suit most people (see table below). To accept the factory pre-set settings, move the slider to RUN which will revert the programmer to Run Mode (the colon (:) in the LCD display will begin to flash).

If the user changes from the factory-set programme and wants to return to it, pressing the reset button with a non metallic pointed tool will return the unit to the factory-set programme. **NB.** Every time the reset is pressed, the time and date must be set again (page 10).

Pre-Set Temperatures: 5/2 Day

<table>
<thead>
<tr>
<th>Configuration 2PU &amp; 2Gr</th>
<th>Configuration 3PU &amp; 3Gr</th>
<th>Mon - Fri Times</th>
<th>Sat - Sun Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st ON</td>
<td>1st ON</td>
<td>06:30am</td>
<td>07:30am</td>
</tr>
<tr>
<td>1st OFF</td>
<td>1st OFF</td>
<td>08:30am</td>
<td>10:00am</td>
</tr>
<tr>
<td></td>
<td>2nd ON</td>
<td>12:00noon</td>
<td>12:00noon</td>
</tr>
<tr>
<td></td>
<td>2nd OFF</td>
<td>12:00noon</td>
<td>12:00noon</td>
</tr>
<tr>
<td>2nd ON</td>
<td>3rd ON</td>
<td>5:00pm</td>
<td>5:00pm</td>
</tr>
<tr>
<td>2nd OFF</td>
<td>3rd OFF</td>
<td>10:30pm</td>
<td>10:30pm</td>
</tr>
</tbody>
</table>

7 Day:
In 7 day setting, the pre-set settings are the same as 5/2 Day programme (Mon to Fri and Sat/Sun).

24 Hr:
In 24hr setting, the pre-set settings are the same as Mon to Fri of the 5/2 Day programme.
Setting the Programmer Option (5/2, 7 day, 24hr)

1. Switch the slider to HEATING. Press either the +/- button to move between 7 day, 5/2 day or 24hr operation.

   - **5/2 Day operation** is shown by MO, TU, WE, TH, FR flashing (5 Day) and then SA, SU flashing (2 Day)
   - **7 Day operation** is shown by just one day flashing at a time
   - **24 hr operation** is shown by MO, TU, WE, TH, FR, SA, SU flashing at the same time.

2. Wait 15 seconds to automatically confirm or press the Home button. Move the slider to RUN to return to Run Mode.

Setting the Central Heating Programme

1. Move the slider to HEATING. Choose between 5/2 day, 7 day or 24 hr programmer operation (see above steps 1-2).

2. Press the Next button. Press the Day button until the desired day/block of days you want to programme is flashing.

3. The display shows the 1st ON time. Press +/- to set the time (10 minutes increments). Press the Next button.

4. The display shows the 1st OFF time. Press +/- to set the time (10 minutes increments). Press the Next button.

5. The display will now show the 2nd ON time. Repeat steps 3-4 until all remaining ON/OFF periods have been set. On the last OFF period, press the Day button until the next desired day/block of days you want to programme is flashing.

6. Repeat steps 3-5 until all days/block of days have been programmed. Wait 15 seconds to automatically confirm or press the Home button. Move the slider to RUN to return to Run Mode.

**N.B.** The copy button can be used in the 7 day setting to copy any chosen day to the next day (e.g. Monday to Tuesday or Saturday to Sunday). Simply change the program for that day, then push copy repeatedly until all 7 days (if you so wished) have been changed.
Setting the Hot Water Programme

1. Move the slider to HW. Choose between 5/2, 7 day or 24 hr programmer operation (see page 6)

2. Press the Next button. Press the Day button until the desired day/block of days you want to programme is flashing.

3. The display shows the 1st ON time. Press +/- to set the time (10 minutes increments). Press the Next button.

4. The display shows the 1st OFF time. Press +/- to set the time (10 minutes increments). Press the Next button.

5. The display will now show the 2nd ON time. Repeat steps 3-4 until all remaining ON/OFF periods have been set. On the last OFF period, press the Day button until the next desired day/block of days you want to programme is flashing.

6. Repeat steps 3-5 until all days/block of days have been programmed. Wait 15 seconds to automatically confirm or press the Home button. Move the slider to RUN to return to Run Mode.

N.B. The copy button can be used in the 7 day setting to copy any chosen day to the next day (e.g Monday to Tuesday or Saturday to Sunday). Simply change the program for that day, then push copy repeatedly until all 7 days (if you so wished) have been changed.

Setting the Operation

1. Switch the slider to PROG. Press either the +/- button to move between ON/OFF/AUTO/ALL DAY. Press the Next button to move between the 3 channels.

   **ON**: Central Heating and Hot Water is **ON** continuously

   **AUTO**: Central Heating and Hot Water will be switched **ON** and **OFF** in accordance with set programmes

   **ALL DAY**: Central Heating and Hot Water will switch **ON** at the first **ON** and switch **OFF** at last **OFF**

   **OFF**: Central Heating and Hot Water will be permanently **OFF**

2. Wait 15 seconds to automatically confirm or press the Home button. Move the slider to RUN to return to Run Mode.
Temporary Manual Overrides
The Advance Function

The ADVANCE function allows the user to move to the next ON/OFF programme for a “one off” event, without having to change the programme or use the ON or OFF buttons.

NB: The ADVANCE function is only available when the programme is in AUTO or ALL DAY operating modes and the slider must be switched to RUN.

To Advance Central Heating

1. Press the Next ➤ button until either the first or second radiator symbol is displayed (depending on which heating zone you would like to advance). Press the ADV button. This will turn the Central Heating ON if it is in an OFF period and OFF if it is in an ON period. The word ADV will appear to the left hand side of the first radiator symbol for the first heating zone, and/or next to the second radiator symbol for the second heating zone.

2. It will stay in this state until either the ADV button is pressed again, or until a programmed ON/OFF period commences. To cancel the advance function, repeat the above steps.

To Advance Hot Water

1. Press the Next ➤ button until the tap symbol is displayed. Press the ADV button. This will turn the Hot Water ON if it is in an OFF period and OFF if it is in an ON period. The word ADV will appear to the left hand side of the tap symbol.

2. It will stay in this state until either the ADV button is pressed again, or until a programmed ON/OFF period commences. To cancel the advance function, repeat the above steps.

The +HR Boost Function

The +HR function allows the user to have up to 3 hours of extra Central Heating or Hot Water, without having to change the programme.
**NB:** The +HR function is only available when the programme is in AUTO, ALL DAY or OFF operating modes and the slider must be switched to RUN. If the programmer is in AUTO or ALL DAY mode when the +HR button is pressed and the resulting time of the boost overlaps a START/ON time, the boost will disengage.

**To +HR Boost Central Heating**

1. Press the Next button until either the first or second radiator symbol is displayed (depending on which heating zone you would like to boost). Press the +HR button.

2. One press of the button will give one extra hour of Central Heating; two presses of the button will give two extra hours; three presses of the button will give the maximum three extra hours. Pressing it again will switch off the +HR function.

3. The +1HR, +2HR or +3HR status of each zone will appear on the right hand side of the first radiator symbol for the first heating zone, or the second radiator symbol for the second heating zone.

**To +HR Boost Hot Water**

1. Press the Next button until the tap symbol is displayed. Press the +HR button.

2. One press of the button will give one extra hour of Hot Water; two presses of the button will give two extra hours; three presses of the button will give the maximum three extra hours. Pressing it again will switch off the +HR function.

3. The +1HR, +2HR or +3HR status will appear on the right hand side of the tap symbol.

**Holiday Mode**

Holiday Mode saves energy by letting you reduce the temperature for 1 to 99 days while you are away from home, resuming normal operation on your return.
1. Press 🗝️ to enter Holiday Mode and the screen will display d:1.

2. Press +/- buttons to select the number of days you would like the holiday mode to run for (between 1-99 days).

3. Press the Home button to confirm. The system will now turn OFF for the number of days chosen. The number of days will alternate with the time symbol on display and the number of days will count down.

4. Once the countdown has finished, the programmer will return to normal operation. It may be advisable to set the Holiday Mode 1 day less so the house is back up to temperature for your return.

5. To cancel the Holiday Mode, press the 🗝️ button to revert back to run mode.

**Basic Settings**

**Setting the Time and Date**
The time and date are factory set and changes between summer and winter time are handled automatically by the unit.

1. Switch the slider to Time/Date.

2. The hour symbols will flash, use the +/- buttons to adjust.

3. Press the Next ⟅ button and the minute symbols will flash, use the +/- buttons to adjust.

4. Press the Next ⟅ button and the day date will flash, use the +/- buttons to adjust the day.

5. Press the Next ⟅ button and the month date will flash, use the +/- buttons to adjust the month.

6. Press the Next ⟅ button and the year date will flash, use the +/- buttons to adjust the year.

7. Press the Next ⟅ button to set backlight ON/OFF (see page 11) or wait 15 seconds to automatically confirm and return to Run Mode.
Setting the Backlight

The backlight can either be set permanently ON or OFF. The programmer backlight is pre-set to be permanently OFF. When the backlight is permanently OFF, the backlight will turn ON for 15 seconds when + or – button is pressed, then turn OFF automatically.

To change setting to permanently ON, move the slider to TIME/-DATE. Press the Next button repeatedly until Lit is displayed. Press + or – to turn backlight ON or OFF. Press the next button or wait for 15 seconds to automatically confirm and return to Run Mode.

NB: Do not use Advance or +HR Boost Button to activate the backlight as it may engage the Advance or +HR facility and turn on the boiler. Only use the Home button.

Resetting the Unit

Press the reset button with a non-metallic pointed tool to reset the unit. This will restore the built in programme and also reset the time to 12:00pm and the date to 01/01/2000. To set the time and date, please refer to page 10.

NB: As a safety feature after resetting the unit will be in OFF operating mode. Reselect your required operating mode (page 6). Use of excessive force may result in the reset button sticking behind the front cover of the programmer. If this happens the unit will “freeze” and the button can only be released by a qualified installer.

Power Interuption

In the event of a mains supply failure the screen will go blank but the back-up battery ensures that the programmer continues to keep the time and retain your stored programme. When power is restored, switch the slider to RUN to return to Run mode.
Installation Instructions

Setting the Hot Water Programme

1. Move the slider to HW. Choose between 5/2, 7 day or 24 hr programmer operation (see page 6)
2. Press the Next button. Press the Day button until the desired day/block of days you want to programme is flashing.
3. The display shows the 1st ON time. Press +/- to set the time (10 minutes increments). Press the Next button.
4. The display shows the 1st OFF time. Press +/- to set the time (10 minutes increments). Press the Next button.
5. The display will now show the 2nd ON time. Repeat steps 3-4 until all remaining ON/OFF periods have been set. On the last OFF period, press the Day button until the next desired day/block of days you want to programme is flashing.
6. Repeat steps 3-5 until all days/block of days have been programmed. Wait 15 seconds to automatically confirm or press the Home button. Move the slider to RUN to return to Run Mode.

N.B. The copy button can be used in the 7 day setting to copy any chosen day to the next day (e.g. Monday to Tuesday or Saturday to Sunday). Simply change the program for that day, then push copy repeatedly until all 7 days (if you so wished) have been changed.

Setting the Operation

1. Switch the slider to PROG. Press either the +/- button to move between ON/OFF/AUTO/ALL DAY. Press the Next button to move between the 3 channels.

ON: Central Heating and Hot Water is ON continuously
AUTO: Central Heating and Hot Water will be switched ON and OFF in accordance with set programmes
ALL DAY: Central Heating and Hot Water will switch ON at the first ON and switch OFF at last OFF
OFF: Central Heating and Hot Water will be permanently OFF
## Technical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>230V AC, 50Hz</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 35°C</td>
</tr>
<tr>
<td>Switch Rating</td>
<td>230V AC, 6(2)A SPDT</td>
</tr>
<tr>
<td>Battery Type</td>
<td>Lithium Cell CR2032</td>
</tr>
<tr>
<td>Enclosure Protection</td>
<td>IP30</td>
</tr>
<tr>
<td>Plastics</td>
<td>Thermoplastic, flame retardant</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>Double</td>
</tr>
<tr>
<td>Wiring</td>
<td>For fixed wiring only</td>
</tr>
<tr>
<td>Back Plate</td>
<td>Industry standard</td>
</tr>
<tr>
<td>Dimensions</td>
<td>140mm(L) x 90mm (H) x 30mm (D)</td>
</tr>
<tr>
<td>Clock</td>
<td>12 hour am/pm, 1 minute resolution</td>
</tr>
<tr>
<td>BST/GMT Time Change</td>
<td>Automatic</td>
</tr>
<tr>
<td>Clock Accuracy</td>
<td>+/- 1 sec/day</td>
</tr>
<tr>
<td>Programme Cycle</td>
<td>24hr, 5/2 Day or 7 Day selectable</td>
</tr>
<tr>
<td>Programme ON/OFFs per day</td>
<td>2 ON/OFF or 3 ON/OFF selectable</td>
</tr>
<tr>
<td>Programme Selection</td>
<td>Auto, ON, All Day, OFF</td>
</tr>
<tr>
<td>Programme Override</td>
<td>+1, +2, +3Hr and/or Advance</td>
</tr>
<tr>
<td>Heating System</td>
<td>Pumped, Gravity selectable</td>
</tr>
</tbody>
</table>

N.B. The copy button can be used in the 7 day setting to copy any chosen day to the next day (e.g. Monday to Tuesday or Saturday to Sunday). Simply change the program for that day, then push copy repeatedly until all 7 days (if you so wished) have been changed.
**Installation Safety Instructions**

The unit must be installed by a suitably qualified person in accordance with the latest IEE Wiring Regulations.

Isolate mains supply before commencing installation. Please read all instructions before proceeding.

Ensure that the fixed wiring connections to the mains supply is via a fuse rated at not more than 6 amps and class ‘A’ switch having a contact separation of a minimum of 3mm in all poles. The recommended cable sizes are 1.0mm sqr or 1.5mm sqr.

No earth connection is required as the product is double insulated but ensure continuity of earth throughout the system. To facilitate this, an earth park terminal is supplied on the back plate.

If the unit is fitted to a metal surface, IT IS ESSENTIAL that the metal be earthed. DO NOT use a surface mounting box.

**Maintenance**

Always isolate the mains supply before commencing any work, servicing or maintenance on the system. And please read all instructions before proceeding.

Arrange for an annual maintenance and inspection schedule to be carried out by a qualified person on every part of the heating and hot water system.

**Safety Notice**

**WARNING!**

ALWAYS ISOLATE THE AC MAINS SUPPLY BEFORE INSTALLING. THIS PRODUCT MUST BE FITTED BY A COMPETENT PERSON, AND INSTALLATION MUST COMPLY WITH THE GUIDANCE PROVIDED IN THE CURRENT EDITIONS OF BS767 (IEE WIRING REGULATIONS) AND PART “P” OF THE BUILDING REGULATIONS.
Technical Settings

1. Move the slider to RUN. Hold down the Home button, the Day button and the button (under the facia) together for 3 seconds to enter the Technical Setting Mode.

2. Press +/- to choose between 2 or 3 ON/OFFs per day.

3. Press the Next button and press +/- to choose between Pu (Pumped, allows independent control of CH and HW) or Gr (Gravity, does not allow CH1 without HW and CH2, but can provide HW without CH1 and CH2, and can provide CH2 without CH1 and HW).

4. Press the Next button and press +/- to choose between Protection ON/OFF. The Protection mode helps ensures the system does not seize up during extended OFF periods. If the system does not call for heat for one week, the system turns ON for one minute. (This will only be for channel 1/2.)

5. Press the Next button and press +/- to choose between 12 hour clock or 24 hour clock.

Fitting the Back Plate

1. Position the wall-plate (terminals along top edge) with 60mm (min) clearance to its right, 25mm (min) above, 90mm (min) below. Ensure that the supporting surface will fully cover the back of the programmer.

2. Offer the back plate to the wall in the position where the programmer is to be mounted, remembering that the back plate fits to the left side of the programmer. Mark the fixing positions through the slots in the back plate, drill and plug wall, then secure back plate in position.

3. All necessary electrical connections should now be made. Ensure that the wiring to the wall-plate terminals leads directly away from the terminals and is completely enclosed within the wall-plate aperture. Wire ends must be stripped and screwed to the terminals so that minimal bare wire is showing.
New Installations
Example circuit diagram for a typical installation is shown below. This diagram is schematic and should be used as a guide only. Please ensure that all installations comply with the current IEE regulations. For reasons of space and clarity the diagram has been simplified. For instance some Earth connections have been omitted. Other control components shown in the diagram i.e. Valves, Room Stats etc are general representations only. However, the wiring detail can be applied to the corresponding model of most manufacturers e.g. Horstmann, Honeywell, Danfoss Randall, Drayton, ESi Controls etc.

The Programmer controls 3 x two port spring return valves via Room Stats and Cylinder Stat giving independent control of Hot Water and two zones of Heating. If the programmer is being installed on an existing system, additional equipment such as an extra zone valve may be fitted in order to achieve full three channel control.

Existing Installations
1. Remove the old programmer from its back plate mounting, loosening any securing screws as dictated by its design.
2. Check compatibility of existing back plate & wiring arrangement with that of the new programmer. See online Programmer Replacement Guide for direction.

3. Make all necessary changes to back plate & wiring arrangement to suit new programmer.

**Wiring Diagram**

![Wiring Diagram](image)

**Commissioning**

Switch on mains supply. Referring to User Instructions (page 3-11):

1. Use the buttons to ensure correct product functionality.

2. Set timing and programme details in accordance with customer requirements (page 6).

3. Normally the unit will be left with channel in ‘Auto’ mode.

4. Set backlight either permanently ON or OFF in accordance with customer requirements (page 11).

5. Leave these installation instructions with customer for reference.

**WARNING:** Interference with sealed parts renders the guarantee void.

In the interests of continuous product improvement we reserve the right to alter designs, specifications and materials without prior notice and cannot accept liability for errors.