



USER GUIDE

LOGIC SYSTEM²
S15 S18 S24 S30


When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Ideal Heating.

For the very latest copy of literature for specification and maintenance practices visit our website idealheating.com where you can download the relevant information in PDF format.

CONTENTS

1.1 Introduction	3	1.6 Points for the boiler user.....	5
1.2 Boiler Operation.....	3-4	1.7 Troubleshooting.....	6
1.3 Condensate Drain.....	4-5	1.8 Normal Operation Display Codes	6
1.4 General Information.....	5	1.9 Fault Codes	7
1.5 Loss of System Water Pressure	5		

USER



WEEE DIRECTIVE 2012/19/EU
Waste Electrical and Electronic Equipment Directive

- At the end of the product life, dispose of the packaging and product in a corresponding recycle centre.
- Do not dispose of the unit with the usual domestic refuse.
- Do not burn the product.
- Remove the batteries.
- Dispose of the batteries according to the local statutory requirements and not with the usual domestic refuse.



All Gas Safe Register installers carry a Gas Safe Register ID card, and have a registration number. Both should be recorded in the Benchmark Commissioning Checklist. You can check your installer by calling Gas Safe Register direct on 0800 4085500.

Ideal Heating is a member of the Benchmark scheme and fully supports the aims of the programme. Benchmark has been introduced to improve the standards of installation and commissioning of central heating systems in the UK and to encourage the regular servicing of all central heating systems to ensure safety and efficiency.



THE BENCHMARK SERVICE INTERVAL RECORD MUST BE COMPLETED AFTER EACH SERVICE

1.1 INTRODUCTION

The Logic System² S is a system boiler, featuring full sequence automatic spark ignition and fan assisted combustion.

Due to the high efficiency of the boiler, condensate is produced from the flue gases and this is drained to a suitable disposal point through a plastic waste pipe at the base of the boiler. A condensate 'plume' will also be visible at the flue terminal.

Safety

CURRENT GAS SAFETY (INSTALLATION & USE) REGULATIONS OR RULES IN FORCE.

It is the law that this appliance installation and any work carried out on the appliance is carried out by a Gas Safe Registered engineer in accordance with the above Regulations.

It is essential that the instructions in this booklet are strictly followed, for safe and economical operation of the boiler.

ELECTRICITY SUPPLY

This appliance must be earthed.

Supply: 230 V ~ 50 Hz. The fusing should be 3A.

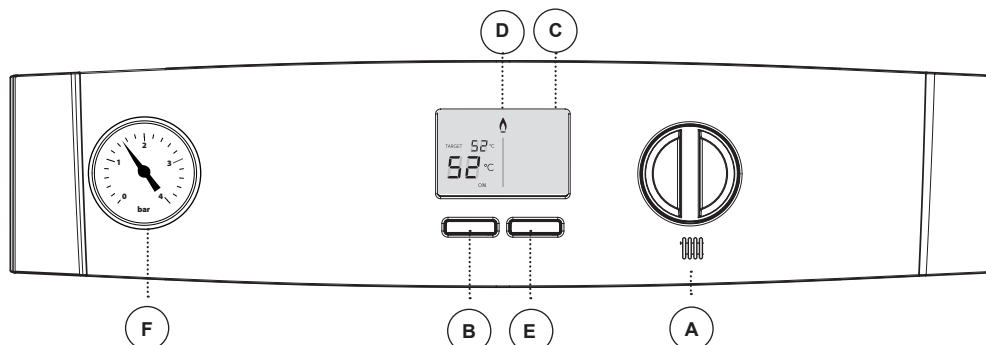
IMPORTANT NOTES

- This appliance must not be operated without the casing correctly fitted and forming an adequate seal.
- If the boiler is installed in a compartment then the compartment **MUST NOT** be used for storage purposes.
- If it is known or suspected that a fault exists on the boiler then it **MUST NOT BE USED** until the fault has been corrected by a Gas Safe Registered Engineer.
- Under **NO** circumstances should any of the sealed components on this appliance be used incorrectly or tampered with.
- **This appliance can be used by children 8 years and above. Also persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, provided they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.**

1.2 BOILER OPERATION

Legend

- A. Temperature Knob
- B. Mode Button
- C. Boiler Status Display
- D. Burner On indicator
- E. Restart Button
- F. System Pressure Gauge



If an L code is shown on the display then the boiler can be restarted by pressing the Restart button (E).

To START the boiler

- 1 Switch on electricity to the boiler and check that all external controls e.g. programmer, room thermostat and cylinder thermostat are all on.
2. If OFF is shown at the bottom of the screen press the Mode button (B) so that ON appears.
3. Turn the Temperature control knob (A) until 80°C is shown.

Once the boiler has lit see the following page about where the Temperature control knob should be set.

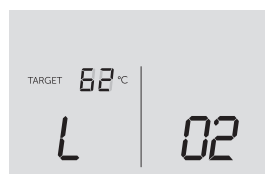
Note. In normal operation the boiler status display (C) will display messages.

Refer to Section
1.7

Boiler frost protection – boiler will fire if temperature is below 5°C.

During normal operation the burner symbol '🔥' will remain illuminated when the burner is lit.

If the boiler fails to light after five attempts the following fault messages will be displayed:



To restart the boiler, press Restart (E). The boiler will repeat the ignition sequence. If the boiler still fails to light consult a Registered Gas Installer.

OPERATION MODES

Winter/Summer Conditions – (Domestic Hot Water required, Central Heating may be required)

If OFF is shown at the bottom of the screen then press the Mode button (B) so that ON appears.

The boiler will fire and supply heat to the hot water cylinder and radiators.

Boiler Off – (neither Domestic Hot Water or Central Heating required)

If ON is shown at the bottom of the screen then press the Mode button (B) so that OFF appears.

CONTROL OF WATER TEMPERATURE

1. No Outside Sensor Connected

If no outside sensor is connected then the temperature of the water leaving the boiler to go to either the radiators or the hot water cylinder can be set anywhere between 80°C and 30°C by rotating the Temperature Control Knob (A) clockwise or anti-clockwise.

2. Outside Sensor Connected

If an outside sensor is connected then the temperature of the water going to the hot water cylinder is factory set to 80°C (but the temperature of the hot water to the tap is set by the thermostat on the hot water cylinder).

The nominal central heating room temperature can be set anywhere between 30°C and 10°C by rotating the Temperature control knob (A) clockwise or anti-clockwise (if you are too cold rotate the knob clockwise, if you would like to run your central heating more efficiently rotate the knob anti-clockwise).

For economy setting refer to Efficient Heating System Operation.

EFFICIENT HEATING SYSTEM OPERATION

The boiler is a high efficiency, condensing appliance which will automatically adjust its output to match the demand for heat. Therefore gas consumption is reduced as the heat demand is reduced.

The boiler condenses water from the flue gases when operating most efficiently. To operate your boiler efficiently (using less gas) turn the central heating temperature knob (A) lower. In winter periods it may be necessary to turn the knob towards a higher temperature position to meet heating requirements. This will depend on the house and radiators used.

Reducing the room thermostat setting by 1°C can reduce gas consumption by up to 10%.

BOILER FROST PROTECTION

The boiler is fitted with frost protection that operates in all modes, provided the power supply to the boiler is always turned on. If the water in the boiler falls below 5°C, the frost protection will activate and run the boiler to avoid freezing. The process does not guarantee that all other parts of the system will be protected.

If a system frost thermostat has been installed, the boiler must be set in winter mode, “(there should not be a cross through the radiator symbol)”, for the system frost protection to run.

If no system frost protection is provided and frost is likely during a short absence from home it is recommended to leave the system heating controls or built in programmer (if fitted) switched on and run at a reduced temperature setting.

For longer periods, the entire system should be drained.

MAINS POWER OFF

To remove all power to the boiler the mains power switch must be turned off.

1.3 CONDENSATE DRAIN

This appliance is fitted with a siphonic condensate trap system that reduces the risk of the appliance condensate from freezing. However should the condensate pipe to this appliance freeze, please follow these instructions:

- If you do not feel competent to carry out the defrosting instructions below please call your local Gas Safe Registered installer for assistance.
- If you do feel competent to carry out the following instructions please do so with care when handling hot utensils. Do not attempt to thaw pipework above ground level.

If this appliance develops a blockage in its condensate pipe, its condensate will build up to a point where it will make a gurgling noise prior to locking out, showing an $L0d$ or “ $L02$ ” fault code.

If the appliance is restarted it will make a gurgling noise prior to locking out, showing an $L02$ fault code.

To unblock a frozen condensate pipe;

- Follow the routing of the plastic pipe from its exit point on the appliance, through its route to its termination point.
Locate the frozen blockage. It is likely that the pipe is frozen at the most exposed point external to the building or where there is some obstruction to flow. This could be at the open end of the pipe, at a bend or elbow, or where there is a dip in the pipe in which condensate can collect. The location of the blockage should be identified as closely as possible before taking further action.
- Apply a hot water bottle, microwaveable heat pack or a warm damp cloth to the frozen blockage area. Several applications may have to be made before it fully defrosts. Warm water can also be poured onto the pipe from a watering can or similar. DO NOT use boiling water.
- Caution when using warm water as this may freeze and cause other localised hazards.
- Once the blockage is removed and the condensate can flow freely, restart the appliance. (Refer to “To Start the boiler”)
- If the appliance fails to ignite, call your Gas Safe Registered engineer.

Preventative solutions

During cold weather, set the central heating temperature knob (A) to maximum (must return to original setting once cold spell is over).

Place the heating on continuous and turn the room thermostat down to 15°C overnight or when unoccupied. (Return to normal after cold spell).



1.4 GENERAL INFORMATION

BOILER PUMP

The boiler pump will operate briefly as a self-check once every 24 hours, regardless of system demand.

MINIMUM CLEARANCES

Clearance of 165mm above, 100mm below, 2.5mm at the sides and 450mm at the front of the boiler casing must be allowed for servicing.

Bottom Clearance

Bottom clearance after installation can be reduced to 5mm.

This must be obtained with an easily removable panel, to enable the system pressure gauge to be visible and to provide the 100mm clearance required for servicing.

ESCAPE OF GAS

Should a gas leak or fault be suspected contact the National Gas Emergency Service without delay.

Telephone 0800 111 999.

Ensure that;

- All naked flames are extinguished
- Do not operate electrical switches
- Open all windows and doors

CLEANING

For normal cleaning simply dust with a dry cloth. To remove stubborn marks and stains, wipe with a damp cloth and finish off with a dry cloth. **DO NOT use abrasive cleaning materials.**

MAINTENANCE

The appliance should be serviced at least once a year by a Gas Safe Registered Engineer.

1.5 LOSS OF SYSTEM WATER PRESSURE

The gauge (G) indicates the central heating system pressure. If the pressure is seen to fall below the original installation pressure of 1-2 bar over a period of time then a water leak may be indicated. In this event conduct the re-pressurising procedure as follows:

Re-pressurise via the filling loop to 1 bar (if unsure contact your installer). Turn off the tap on the filling loop and press the "RESTART" button (E) to restart the boiler.

If unable to do so or if the pressure continues to drop after filling a Gas Safe Registered Engineer should be consulted.

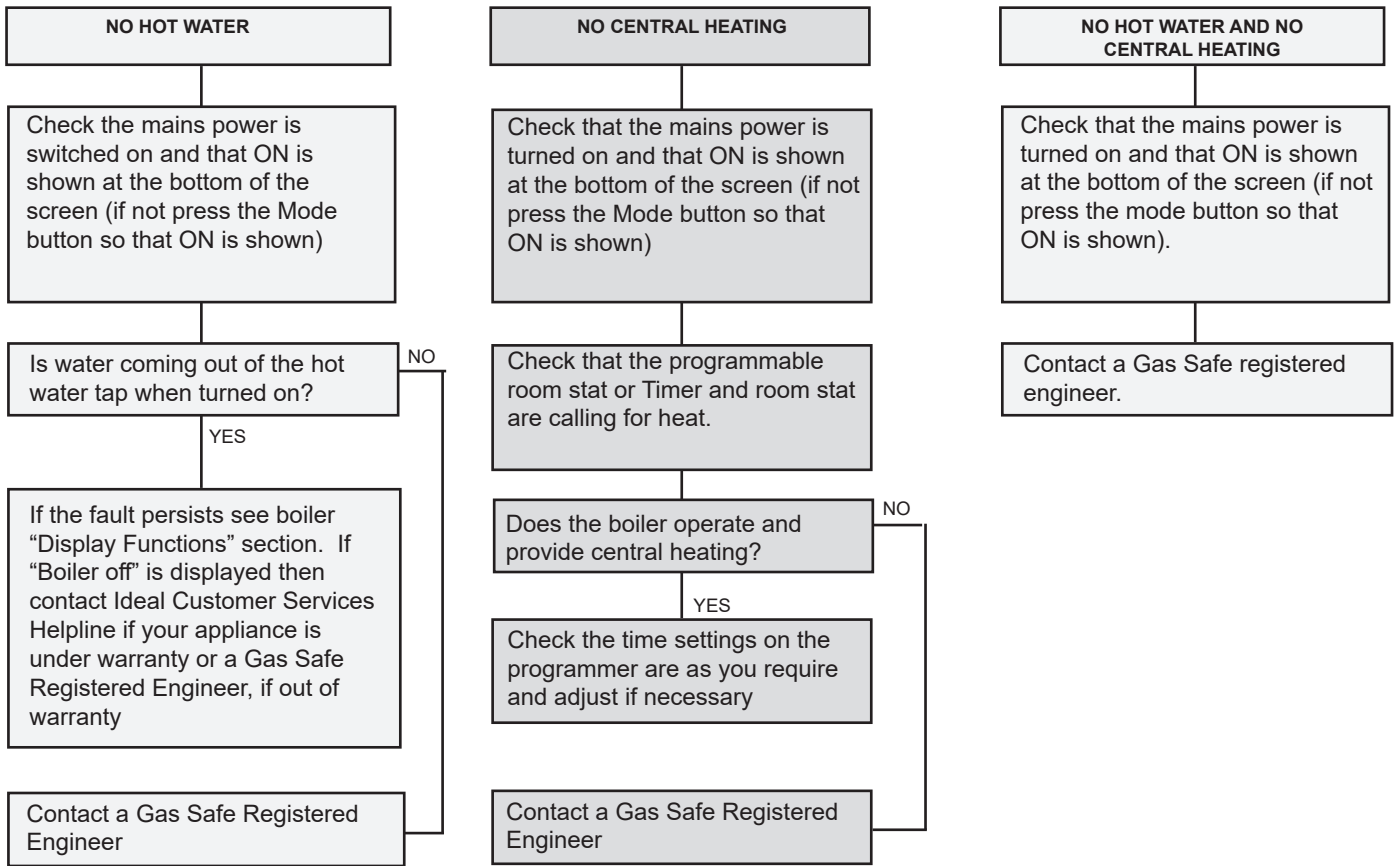
Note. The boiler will not operate if pressure has reduced to less than 0.3 bar under this condition.

1.6 POINTS FOR THE BOILER USER

In line with our current warranty policy we would ask that you check through the following guide to identify any problems external to the boiler prior to requesting a service engineers visit. Should the problem be found to be other than with the appliance we reserve the right to levy a charge for the visit, or for any pre-arranged visit where access is not gained by the engineer.



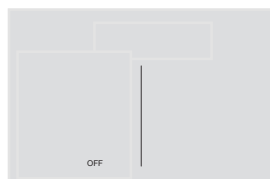
1.7 TROUBLESHOOTING



1.8 NORMAL OPERATION DISPLAY CODES

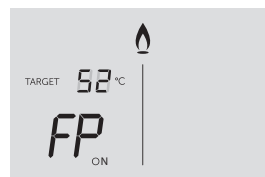
The user control has one display to inform the user about the status of the boiler. The display shows the status of the flame. If no flame is detected then flame symbol will not be visible. When the flame is detected the flame symbol will be visible permanently.

Below is a list with display function.



Boiler Off Mode

Press the Mode button to enable CH.



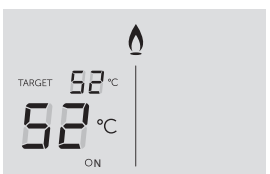
Boiler is active for boiler frost protection: operates if the ambient temperature is below 5°C until it reaches 19°C.



Boiler On Mode, no Heat Demand



Boiler is in Lockout for a specific error. Display will show a number after the "L" to indicate which error is detected



Boiler is active for Central Heating



Boiler has a fault for a specific error. Display will show a number after the "F" to indicate which error is detected.

1.9 FAULT CODES

DISPLAY CODE ON BOILER	DESCRIPTION	ACTION
<u>F 01</u>	Low Water Pressure	Check system water pressure is between 1 & 1.5bar on the system pressure gauge. To re-pressurise the system see Section 3. If the boiler still fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 02</u>	Flame Loss	<ol style="list-style-type: none"> 1. Check other gas appliances in the house are working to confirm a supply is present in the property. 2. If other appliances do not work or there are no other appliances, check the gas supply is on at the meter and/or pre payment meter has credit. If the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 03</u>	Fan Fault	Restart the appliance - if the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 04</u> <u>L 04</u>	Flow Thermistor	Restart the appliance - if the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 05</u> <u>L 05</u>	Return Thermistor	Restart the appliance - if the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 06</u>	Outside Sensor Failure	Restart the appliance - if the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>F 07</u>	Low Mains Voltage	Contact a qualified electrician or your electricity provider.
<u>F 09</u> <u>L 09</u>	Unconfigured PCB	Unconfigured/faulty PCB or gas valve short circuit. Please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>L 01</u>	Flow Temperature Overheat or No Water Flow	Check system water pressure is between 1 & 1.5 bar on the system pressure gauge. To re-pressurise the system see Section 3. If the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>L 02</u>	Ignition Lockout	<ol style="list-style-type: none"> 1. Check condensate Pipe for blockages 2. Check other gas appliances in the house are working to confirm a supply is present in the property. 3. If other appliances do not work or there are no other appliances, check the gas supply is on at the meter and/or pre payment meter has credit. If the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>L 06</u>	False Flame Lockout	Restart the appliance - if the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>LOC</u>	5 Boiler Resets in 15 minutes	<ol style="list-style-type: none"> 1. Turn electrical supply to boiler off and on. 2. If the boiler fails to operate please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>LOd</u>	Blocked Flue/Condensate	<ol style="list-style-type: none"> 1. Check condensate Pipe for blockages 2. Check other gas appliances in the house are working to confirm a supply is present in the property. 3. If other appliances do not work or there are no other appliances, check the gas supply is on at the meter and/or pre payment meter has credit. If the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.
<u>FOU</u>	Flow/Return Differential > 50°C	If the boiler fails to operate then please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period.

Refer to Section
1.6



At Ideal Heating we take our environmental impact seriously, therefore when installing any Ideal Heating product please make sure to dispose of any previous appliance in an environmentally conscious manner. Households can contact their local authority to find out how. See <https://www.gov.uk/managing-your-waste-an-overview> for guidance on how to efficiently recycle your business waste.

Technical Training

Our Expert Academy offer a range of training options designed and delivered by our experts in heating. For details please visit: expert-academy.co.uk

Ideal Boilers Ltd., pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

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