

Ideal-BOILERS-C24-Logic-Plus-COMBI-Boiler-PRODUCT



Ideal BOILERS C24 Logic Plus COMBI Boiler User Guide

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Ideal BOILERS C24 Logic Plus COMBI Boiler



Specifications

- **Model:** Logic+ Combi C24, C30, C35
- **Type:** Combination boiler
- **Functions:** Central heating and instantaneous domestic hot water
- **Ignition:** Full sequence automatic ignition
- **Combustion:** Fan-assisted combustion
- **Power Supply:** 230 V ~ 50 Hz
- **Fusing:** 3A

When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specifications that we require.

Do not use reconditioned or copied parts that have not been authorized by Ideal Boilers.

For the very latest copy of literature for specification and maintenance practices visit our website

www.idealboilers.com

where you can download the relevant information in PDF format.

For alternative languages in our User Guides please visit our website www.idealboilers.com

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 Boilers is a member of the Benchmark scheme and fully supports the aims of the program. 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

INTRODUCTION

The Logic + Combi C is a combination boiler providing both central heating and instantaneous domestic hot water. Featuring full-sequence automatic 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.
- In your interest, and that of safety, it is the law that this boiler must be installed by a Gas Safe Registered Engineer, under the above regulations.
- In IE, the installation must be carried out by a Registered Gas Installer (RGII) and installed per the current edition of I.S. 813 "Domestic Gas Installations", the current Building Regulations and reference should be made to the current ETCI rules for electrical installation.
- The instructions in this booklet must be strictly followed, for the 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

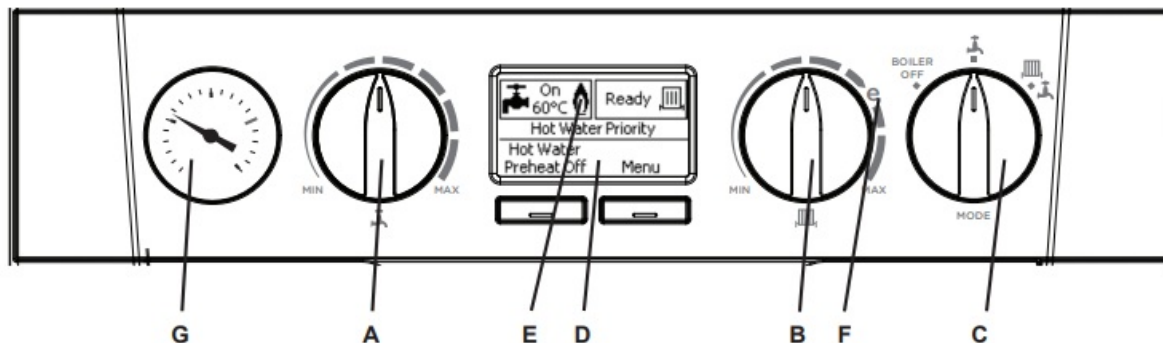
- This appliance must not be operated without the casing correctly fitted and forming an adequate seal.
- If the boiler is installed in a compartment then the compartment **MUST NOT** be used for storage purposes.
- If it is known or suspected that a fault exists on the boiler then it **MUST NOT BE USED** until the fault has been corrected by a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).
- 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.

BOILER OPERATION

Legend

- **A.** Domestic Hot Water Temperature Knob
- **B.** Central Heating Temperature Knob
- **C.** Mode Knob
- **D.** Boiler Status Display

- E. Burner 'on' Indicator
- F. Central Heating Economy Setting
- G. Pressure Gauge



TO START THE BOILER

If a programmer is fitted refer to separate instructions for the programmer before continuing.

Start the boiler as follows:

1. Set the mode knob (C) to 'BOILER OFF'.
2. Set the Domestic Hot Water temperature knob (A) and Central Heating temperature knob (B) to 'MAX'.
3. Ensure that all hot water taps are turned off.
4. Switch on electricity to the boiler and check that all external controls, e.g. programmer and room thermostat, are on.



5. Set the mode knob (C) to ' (winter) '.

The boiler will commence the ignition sequence, supplying heat to the central heating, if required

Note. In normal operation, the boiler status display (D) will display messages (see section 7).

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



During normal operation, the burner on the symbol (E) will remain illuminated when the burner is lit.

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

Ignition Lockout 1/2	Ignition Lockout 2/2
Check Other Gas	If Fault Persists
Appliances Work	Contact Installer
Restart Boiler	
Restart Menu	Restart Menu

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

OPERATION MODES

- **Winter Conditions** – (Central Heating and Domestic Hot Water required)



- Set the mode knob (C) to 'WINTER' (winter).
- The boiler will fire and supply heat to the radiators.
- The domestic hot water preheat will operate with the preheat button set to 'Preheat On'.



- **Summer Conditions** – (Domestic Hot Water only required) Set the mode knob (C) to 'SUMMER' (summer).
 - Set the central heating demand on the external controls to OFF.
 - The domestic hot water preheat will operate with the preheat button set to 'Hot Water On'.

- **Boiler Off**

- Set the mode knob (C) to 'BOILER OFF'. The boiler mains power supply must be left on to enable frost protection (see Frost Protection).

- **PREHEAT – DOMESTIC HOT WATER**

- The domestic hot water heat exchanger within the boiler can be kept preheated to provide faster delivery of hot water at the tap. This is achieved by pressing the preheat button to "Preheat On".
- The boiler will operate periodically for a few seconds to maintain the domestic hot water heat exchanger in a preheated condition. The average time between operations is 90 minutes. This may vary considerably due to the surrounding ambient temperature of the boiler. The boiler will operate whenever there is a demand for domestic hot water.
- If standard hot water delivery is satisfactory set the preheat to 'OFF'.

- **Preheat Off**

CONTROL OF WATER TEMPERATURE

Domestic Hot Water

The domestic hot water temperature is limited by the boiler controls to a maximum temperature of 65°C, adjustable via the domestic hot water temperature knob (B). At low DHW draw off rates the maximum temperature may exceed 65°C.

Approximate temperatures for domestic hot water:


Knob Setting	Hot Water Temperature (approx.)
Minimum	40°C
Maximum	65°C

Due to system variations and seasonal temperature fluctuations domestic hot water flow rates/temperature rise will vary, requiring adjustment at the tap : the lower the flow rate the higher the temperature, and vice versa.


Central Heating

- The boiler controls the central heating radiator temperature to a maximum of 80°C, adjustable via the central heating temperature knob (B).
- Approximate temperatures for central heating:

Knob Setting	Central Heating Radiator Temperature (approx.)
Minimum	30°C
Maximum	80°C

For economy setting ‘’ refer to Efficient Heating System Operation.

EFFICIENT HEATING SYSTEM OPERATION


- The boiler is a high-efficiency, condensing appliance that 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 (B) to the ‘’ position or lower. In winter periods it may be necessary to turn the knob towards the ‘MAX’ 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%.

WEATHER COMPENSATION

When the Weather Compensation option is fitted to the system then the central heating temperature knob (B) becomes a method of controlling room temperature. Turn the knob clockwise to increase room temperature and anti-clockwise to decrease room temperature. Once the desired setting has been achieved, leave the knob in this position and the system will automatically achieve the desired room temperature for all outside weather conditions.

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, , 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.

BOILER RESTART

To restart the boiler, when directed in the listed fault messages (see section 9) press “Restart”. The boiler will repeat its ignition sequence. If the boiler still fails to start consult a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).

MAINS POWER OFF

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

SYSTEM WATER PRESSURE

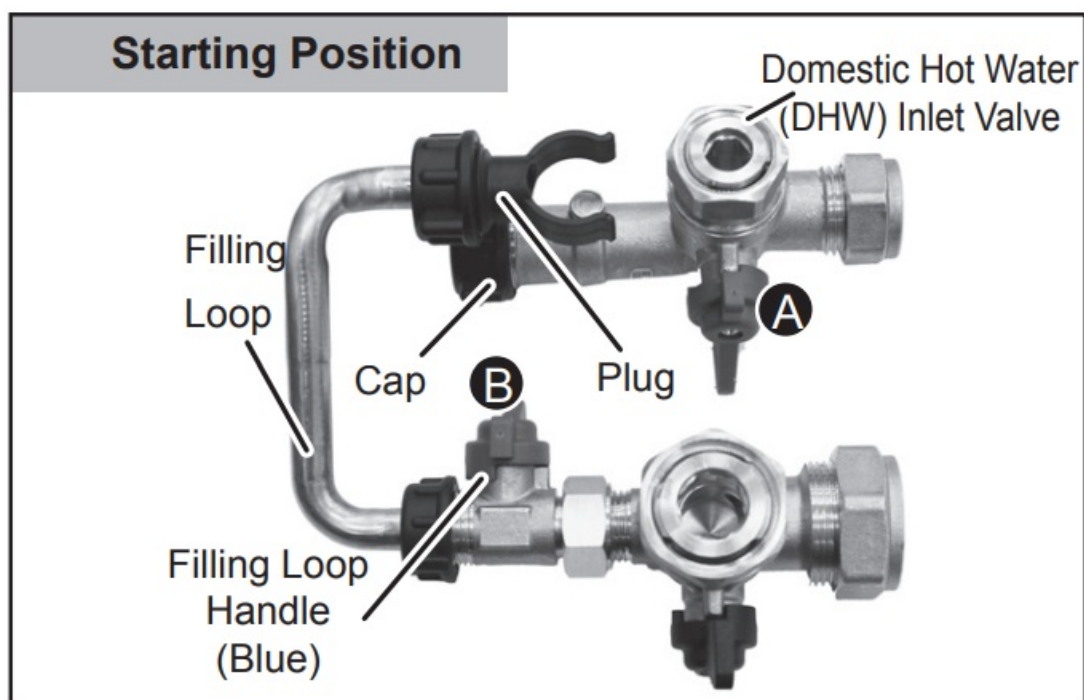
The system pressure gauge (G – see page 4) indicates the central heating system pressure. If the pressure is seen to fall below the original installation pressure of 1-2 bar over a period of time and continue to fall then a water leak may be indicated. In this event re-pressurise the system as shown below. If unable to do so or if the pressure continues to drop a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGI) should be consulted.



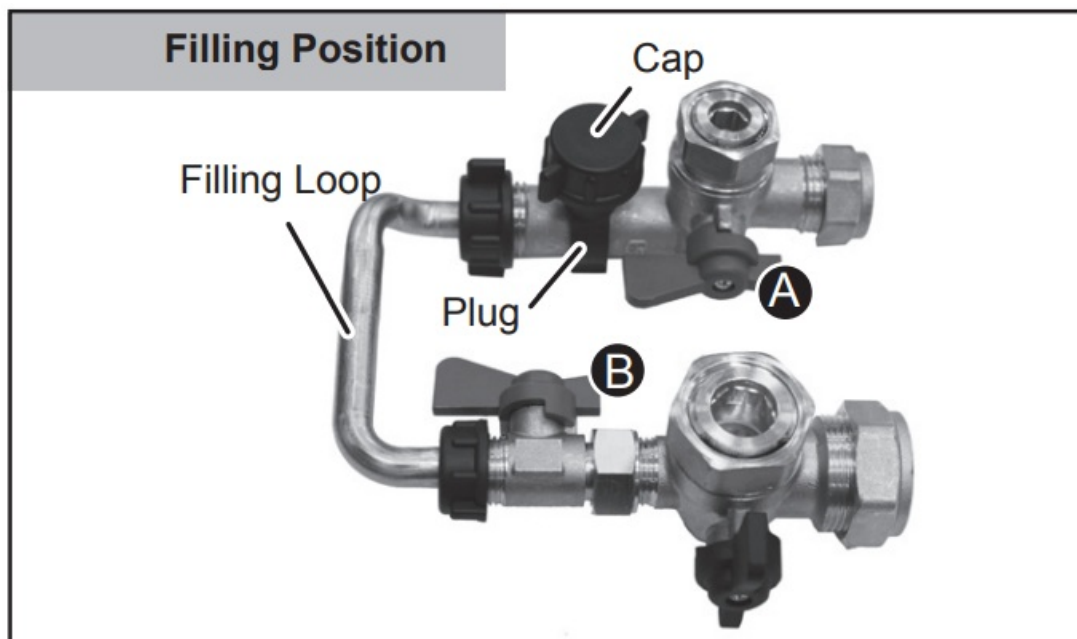
THE BOILER WILL NOT OPERATE IF THE PRESSURE HAS REDUCED TO LESS THAN 0.3 BAR UNDER THIS CONDITION.

To Top up the system :-

1. Ensure both A & B handles (blue) are in closed position (as shown below)
2. Remove the plug and cap and retain.
3. Connect the filling loop to the Domestic Hot Water (DHW) inlet and tighten. Also ensure that the other end of filling loop is hand tight.



4. Turn the Domestic Hot Water (DHW) Inlet A blue handle to the horizontal position.
5. Ensuring no leaks are seen, gradually turn the filling loop handle (blue) B to the horizontal position.
6. Wait for the pressure gauge to reach 1 to 1.5 bar.
7. Once pressure is reached turn valves A & B back to the closed position.
8. Disconnect the filling loop, replace cap and plug. Note there can be some water spillage at this point.



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:

- **a.** If you do not feel competent to carry out the defrosting instructions below please call your local Gas Safe Registered installer for assistance.
- **b.** 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 before lo

Preventative Solutions

During cold weather, set the central heating temperature knob (B) to "MAX", (Must return to the original setting once the cold spell is over).

Place the heating on continuously and turn the room thermostat down to 15°C overnight or when unoccupied. (Return to normal after the cold spell). cking out displaying "Ignition Lockout" on the display. If the appliance is restarted it will make a gurgling noise prior to it locking out displaying "Ignition Lockout" on the display..

To unblock a frozen condensate pipe;

1. 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. The pipe is likely 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.
2. 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 localized hazards.

3. 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 (B) to “MAX”, (Must return to the original setting once the cold spell is over).
- Place the heating on continuously and turn the room thermostat down to 15°C overnight or when unoccupied. (Return to normal after the cold spell).

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 (6 1/2”) above, 100mm (4”) below, 25mm (1”) at the sides, and 450mm (17 3/4”) at the front of the boiler casing must be allowed for servicing.

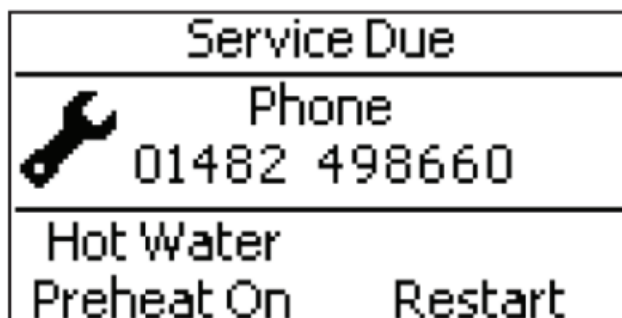
BOTTOM CLEARANCE

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.

SERVICE REQUEST FUNCTION

When the boiler has been installed for more than 1 year the following message will appear on the screen:



Press “Restart” to clear this message.

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 or in IE a Registered Gas Installer (RGII).

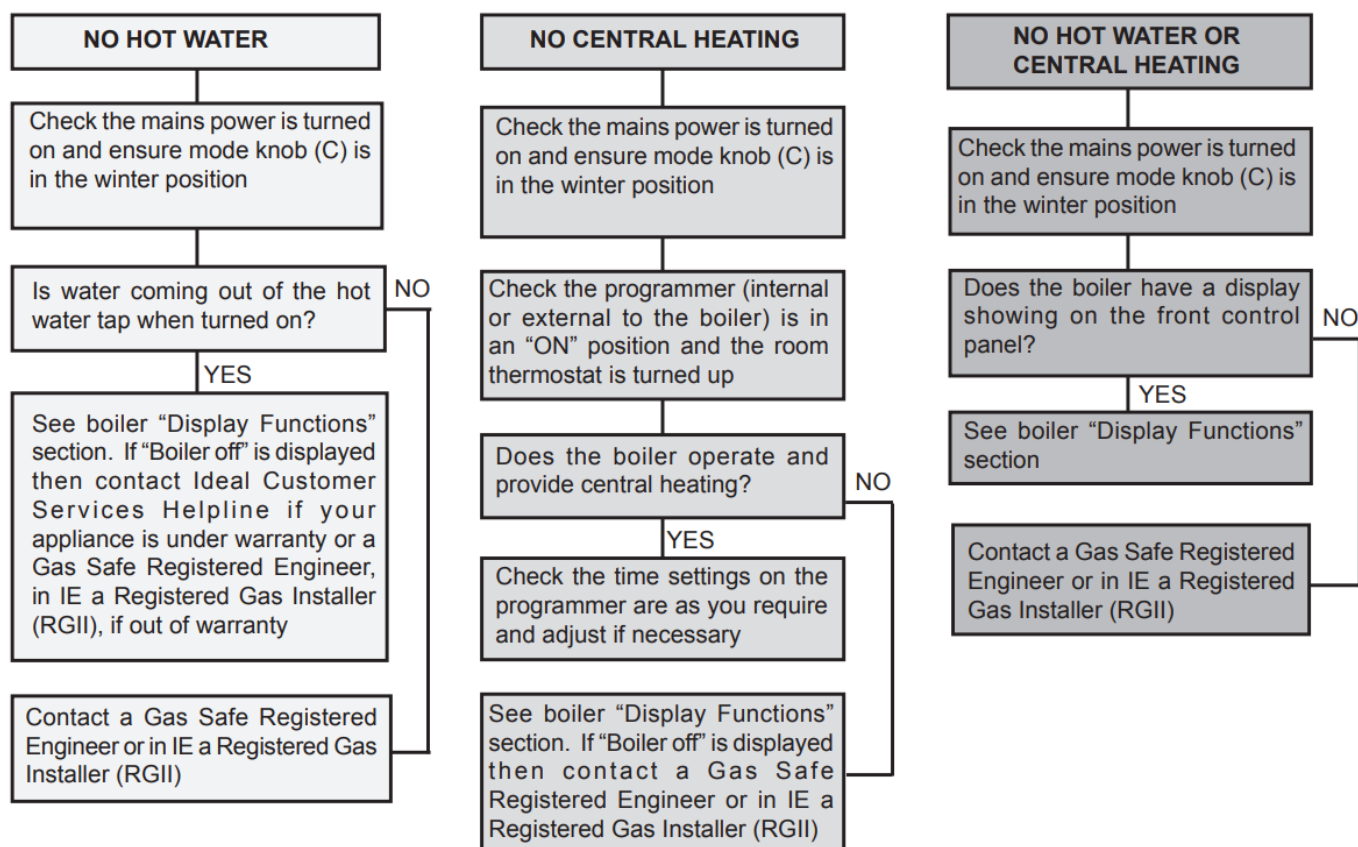
POINTS FOR THE BOILER USER

Note. 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 before requesting a service engineer's 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.

FOR ANY QUERIES PLEASE RING THE IDEAL CONSUMER HELPLINE: 01482 498660

NOTE. BOILER RESTART PROCEDURE – To restart the boiler press the Restart button

TROUBLESHOOTING



DISPLAY FUNCTIONS – NORMAL OPERATION MODE

The display scrolls through a maximum of 3 messages under any operational condition, as shown below.

Note. The temperatures shown below are for illustration purposes only. The measured temperatures will be shown on the boiler.

Mode Knob in "BOILER OFF" position:	<div>Boiler Off</div> <div>Menu</div>	Domestic hot water operation with call for CH:	<div> On 60°C Ready </div> <div>Hot Water Priority</div> <div>Hot Water Preheat Off Menu</div>
Mode knob in "I" position and no heat demand:	<div> Ready Off </div> <div>Hot Water Preheat Off Menu</div>	Central Heating Operator:	<div> Ready On 70°C </div> <div>Hot Water Preheat Off Menu</div>
Mode knob in "I" position and no heat demand:	<div> Ready Ready </div> <div>Room Stat or Timer Off</div> <div>Hot Water Preheat Off Menu</div>	Preheat operation:	<div> Pre heat Off </div> <div>Hot Water Preheat On Menu</div>
Domestic hot water operation without call for CH:	<div> On 60°C Ready </div> <div>Room Stat or Timer Off</div> <div>Hot Water Preheat Off Menu</div>	Boiler frost protection:	<div> Boiler Frost Protection On </div> <div>Room Stat or Timer Off</div> <div>Hot Water Preheat On Menu</div>

Service required:	Service Due
	Phone
	01482 498660
	Hot Water Preheat On Restart

DISPLAY FUNCTIONS – SETTINGS CHANGED

Note. The temperatures shown below are for illustration purposes only. The measured temperatures will be shown on the boiler.

DHW temperature knob moved:	<div>Hot Water Temperature</div> <div> 62 °C </div> <div>OK</div>	Pre-Heat If preheat is switched on, then the boiler will periodically fire the burner. Thereby reducing the time taken to provide hot water. If preheat is switched off the response time will be reduced, although gas consumption will also be reduced.
CH temperature knob moved:	<div>Radiator Temperature</div> <div>80 °C </div> <div>OK</div>	To switch preheat on press the "Hot Water Preheat Off" button: <div> Ready Ready </div> <div>Room Stat or Timer Off</div> <div>Hot Water Preheat Off Menu</div>
CH temperature knob moved with outside sensor connected:	<div>Room Setpoint</div> <div>20 °C </div> <div>OK</div>	To switch preheat off press the "Hot Water Preheat On" button: <div> Ready Ready </div> <div>Room Stat or Timer Off</div> <div>Hot Water Preheat On Menu</div>

DISPLAY FUNCTIONS

FAULT MESSAGES

BOILER DISPLAY MESSAGE	ACTION
<div>Outside Sensor Fault</div> <div>Contact Installer</div> <div>Restart Menu</div>	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. In IE contact a Registered Gas Installer (RGII).
<div>Low Mains Voltage</div> <div>Contact Electricity Provider</div> <div>Menu</div>	Contact a qualified electrician or your electricity provider.
<div>PCB Fault</div> <div>Contact Installer</div> <div>Restart Menu</div>	Unconfigured PCB. Please contact Ideal (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).
<div>Too Many Restarts</div> <div>Contact Installer</div> <div>Restart Menu</div>	<ol style="list-style-type: none"> 1. Turn power off and on at the fused suppr. 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. In IE contact a Registered Gas Installer (RGII).
BOILER DISPLAY MESSAGE	ACTION
<div>Flame on Before Gas On</div> <div>Contact Installer</div> <div>Restart Menu</div>	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. In IE contact a Registered Gas Installer (RGII).
<div>Water Pressure 1/3</div> <div>With Boiler Off & System Cold</div> <div>Fill system to 1.0 Bar</div> <div>Menu</div> <div>↓</div> <div>Water Pressure 2/3</div> <div>Bleed Radiators</div> <div>Refill System to 1.0 Bar</div> <div>Restart Menu</div> <div>↓</div> <div>Water Pressure 3/3</div> <div>If fault persists</div> <div>Contact Installer</div> <div>Restart Menu</div>	Check system pressure is between 1 & 1.5bar on the pressure gauge. 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. In IE contact a Registered Gas Installer (RGII).

BOILER DISPLAY MESSAGE	ACTION
<div>Overheat Lockout 1/4</div> <div>With Boiler Off & System Cold Fill system to 1.0 Bar</div> <div>Restart Menu</div>	<p>Check system pressure is between 1 & 1.5 bar on the pressure gauge. 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. In IE contact a Registered Gas Installer (RGII).</p>
<div>Overheat Lockout 2/4</div> <div>Bleed Radiators Refill System to 1.0 Bar</div> <div>Restart Menu</div>	
<div>Overheat Lockout 3/4</div> <div>Check Radiator Valves And Boiler Valves Are Open</div> <div>Restart Menu</div>	
<div>Overheat Lockout 4/4</div> <div>Restart Boiler If Fault Persists Contact Installer</div> <div>Restart Menu</div>	

BOILER DISPLAY MESSAGE	ACTION
<div>Flame Loss</div> <div>Contact Installer</div> <div>Menu</div>	<p>1. Check other gas appliances in the house are working to confirm a supply is present in the property.</p> <p>2. If other appliances do not work or there are not 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. In IE contact a Registered Gas Installer (RGII).</p>
<div>Ignition Lockout 1/2</div> <div>Check Other Gas Appliances Work Restart Boiler</div> <div>Restart Menu</div>	<p>1. Check other gas appliances in the house are working to confirm a supply is present in the property.</p> <p>2. If other appliances do not work or there are not 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. In IE contact a Registered Gas Installer (RGII).</p>
<div>Ignition Lockout 2/2</div> <div>If Fault Persists Contact Installer</div> <div>Restart Menu</div>	
<div>Fan Fault</div> <div>Contact Installer</div> <div>Restart Menu</div>	<p>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. In IE contact a Registered Gas Installer (RGII).</p>

BOILER DISPLAY MESSAGE	ACTION
<div>Flow Thermistor Fault</div> <div>Contact Installer</div> <div>Restart Menu</div>	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. In IE contact a Registered Gas Installer (RGI).
<div>Return Thermistor Fault</div> <div>Contact Installer</div> <div>Restart Menu</div>	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. In IE contact a Registered Gas Installer (RGI).

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

FAQ

(Frequently Asked Questions)

- **Q: How can I verify the credentials of my installer?**
 - A: Gas Safe Register installers carry a Gas Safe Register ID card and have a registration number. You can verify your installer by calling Gas Safe Register directly at 0800 4085500.
- **Q: What is the Benchmark scheme?**
 - A: The Benchmark scheme aims to improve the standards of installation and commissioning of central heating systems in the UK. It also encourages regular servicing of all central heating systems to ensure safety and efficiency. Ideal Boilers is a member of the Benchmark scheme and fully supports its aims.
- **Q: What should I do after each service of the boiler?**
 - A: The Benchmark Service Interval Record must be completed after each service.


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Registration No. London 322 137

Ideal Consumer Helpline: 01482 498660

www.idealboilers.com

Documents / Resources

	Ideal BOILERS C24 Logic Plus COMBI Boiler [pdf] User Guide C24 Logic Plus COMBI Boiler, C24, Logic Plus COMBI Boiler, COMBI Boiler, Boiler
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References

-  [Ideal Heating | New Boilers, Heat Pumps & Heating Controls](#)

- [User Manual](#)

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