

# User manual Upsilon boiler

These operation instructions describe the functioning and the operating of the Upsilon boilers. This manual is for the end user. For installation and servicing there is an installation & servicing instructions manual for the installer. Read this manual fully before operating the boiler. In case of doubt or errors contact your installer.

A.O. Smith reserves the right to change the specifications and dimensions without prior notice.

## Safety

**The device may be operated only by authorized persons who have been instructed on the operation and use of the device. Improper use may cause damage to the device and / or to the connected installation.**

**The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions.**

**Children being supervised are not to play with the appliance.**

**Work on the boiler must be carried out by a competent person, (Ref: Gas Safe Register) using correctly calibrated instruments with current test certification. When replacing parts use only A.O. Smith Service parts. Contact details for A.O. Smith can be found on the back page of this manual.**

## In case you smell gas:

- No naked flames! Do not smoke!
- Do not operate electrical switches for lights or any other appliance
- Do not use a telephone
- Turn off gas supply at meter
- Open windows and doors
- Notify any persons in the building and leave the building at once
- Call Gas company or installer only when outside the building

## Protection for corrosion

Do not use any sprays, chlorine containing agents, solvents, paint etc. around the boiler or around the air intake supply entrance of the boiler. These substances have negative influences on the boiler and can lead to corrosion resulting in failure of the boiler.

## Checking the water pressure

Check the water pressure in the central heating installation regularly.

Use only potable water for filling.

Additives only after clearance by A.O. Smith.

Contact your installer in case of doubt.

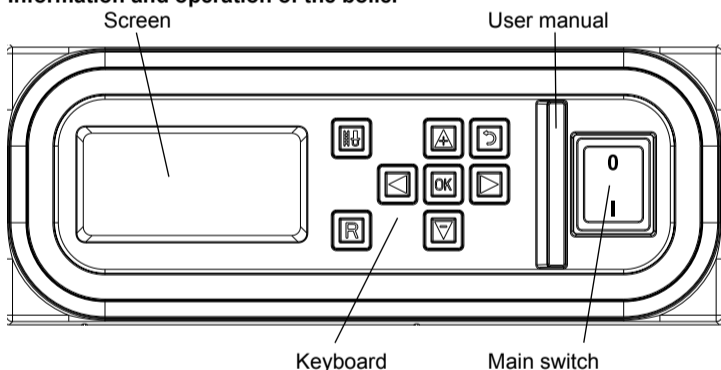
## Description of the boiler

The Upsilon boiler is a room sealed, condensing and modulating central heating boiler and meets the European requirements (CE). A declaration of conformity is available on demand from the supplier.

The efficiency of the boiler is very high and the radiation convection and standby losses very low. The emission of noxious substances is far below the fixed standards so the boiler meets the requirements of today.

If changes are made to the boiler construction the boiler no longer complies with the CE requirements.

## Information and operation of the boiler



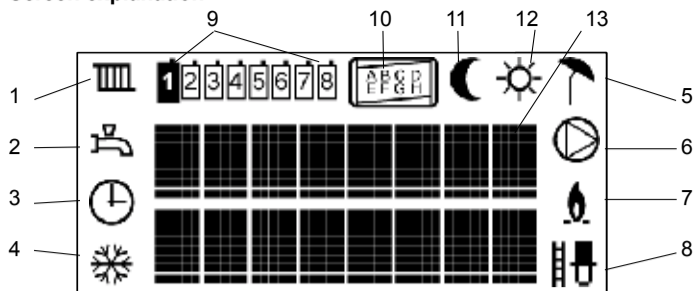
## Screen

The LCD screen is backlit. The light is activated by pushing one of the buttons. There are 2 light colours available. The various colours indicate the following:

Blue	Basic level
Red	Problem display

Having pressed the last button, the screen light stays on for 2 minutes.

## Screen explanation

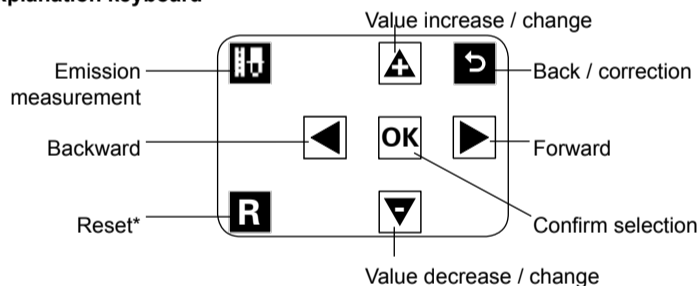


- 1. CH-program active
- 2. DHW-program active
- 3. Clock program active (CH and/or DHW)
- 4. Pump continuously active or pumps active when frost protection is active
- 5. Boiler off at:  
outside temperature > T-day (when day temperature is active)  
or > T-night (when night temperature is active)
- 6. System pump on
- 7. Burner on.  
*Starts flashing during ignition, continuous when burner is on.*
- 8. Chimney sweep function (100% power for emission measurement)
- 9. Boiler address:  
1 = Cascade Master  
2..8 = Cascade Slaves
- 10. Identification burner inside boiler  
A B C D  
E F G H
- 11. Night temperature active
- 12. Day temperature active
- 13. 2 text lines with 8 characters each  
*The operational status, messages and possible errors are displayed here.*

## Operational status

- **Standby** Standby. Boiler is ready for operation.
- **Vent.Phase** Ventilation stage
- **Ignition phase** Ignition stage
- **Burner lit CH** Burner active for heating
- **Burner lit DHW** Burner active for hot water
- **CH T > Tset** Burner off on account of too high flow temperature CH
- **Overrun CH** Overrun time pump over CH
- **Overrun DHW** Overrun time pump over DHW
- **Service** Boiler needs maintenance. Contact installer
- **Frost** Burner active for frost protection

## Explanation keyboard



## \* Reset

**Reset only functions in case of an Error or certain Messages. If reset is rapidly pressed over a short period of time, the device will block completely. Only loss of power (main switch) will restart the device completely.** Recommendation: contact your installer and inform them about the fault and give them the number code.

The main switch is located on the right hand side of the keyboard. This switch controls the 230V power supply.

## Standard read-out

Standard read-out: Good we 10:17  
Good indicates that the boiler operates normally (burner on or off)  
we 10:17 indicates the actual day and time.

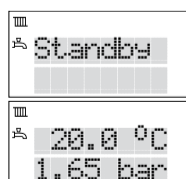


The standard read-out offers 3 information screens. Switching to different screen can be found using the + or - button.

1. "Good"-read-out Good with actual day and time (see above)

2. Operational status Refer to the explanation of texts at the top of this page

3. Technical read-out Actual water flow temperature. (T1 in °C) and water pressure (P in bar).



## Basic settings

With the illumination switched off, first press on one of the buttons to switch the illumination on and then continue with the setting. Having pressed the last button, the illumination will switch off after 2 min.

### Menu structure at Basic level

◀▶ With the arrow buttons you can go through the different chapters.

OK Press OK to select or to confirm a change.

▲▼ With the + and - button you can increase or decrease a selected value.

↩ Back to previous screen or standard read out: Press this 'return-button'.

Good				
▲ Operational status	Basic setting	Timeprog. options	Param Mode	Info
▼ Tech. Read-out	OK	OK	OK	OK
	▶ CH prog	▶ Set date and time	▶ Boiler param	▶ Cascade
	▶ DHW prog	▶ Timeprog. CH	↩	▶ Other
	▶ Pump prg.	▶ Timeprog. DHW		↩
	▶ Timeprog. CH	↩		
	▶ Timep. DHW			
	▶ CH temp			
	▶ DHW temp			
	▶ Units			
	▶ Language			
	▶ Restore Defaults			
	↩			

Remark: Depending which parameter settings are set, some options will not be displayed.

In the table below you find all sub settings of each parameter.

## Water pressure

When the screen shows 'FILL' the water pressure is too low. Press, if necessary the + or - button to read out the water pressure. Please contact your installer/supervisor to check the installation and top up.

## Turning the programs on or off

Proceed as follows:

- (Switch on the main power supply switch).  
From the standard blue illuminated screen:
1. Press the right arrow button:  
Screen displays: *Basic settings*;
  2. Press OK;
  3. Press the right arrow button:  
Screen displays: *CH prog off/on*;
  4. Press the + (on) or - (off) key:  
Screen displays: *CH prog on or off*;
  5. Press OK;
  6. Repeat procedure from point 3 onward.  
This switches off the functions *DHW prog.* and *Pump prg.* respectively.
  7. Press the return button to return to the standard display.



Depending which program is selected the corresponding symbol will be shown in the display.

In some cases it might be necessary to put the complete boiler out of operation. The boiler is put out of operation by switching off the three functions ( , and/or ). The frost protection will remain active. Leave gas supply open.

A.O. Smith recommends leaving the power switch switched on to ensure that the boiler pump(s) and three-way valve (if available) are automatically activated to prevent them from getting stuck.

▲ If your heating system is not being used during periods of frost we advise you isolate the power and drain the boiler and the system. In this case: close the gas valve.

## Error, maintenance and warranty

If a fault is detected the boiler will be blocked. This will be reflected, with an E for Error, a B for Blocking or M for Message and a number code on the display. You can try to reset the boiler by pressing the Reset key once. If the problem remains please contact your installer and inform them about the fault and give them the number code.

If, on the screen the message "Service" appears, the installer must perform maintenance according to the installation and service manual. Please contact your installer.

We advise you to obtain a service contract with your installer for regular maintenance and adjustment to keep your boiler safe and in good condition.

If you discover any leaks from the boiler contact your installer.

The casing of the boiler consists of metal and plastic parts which can be cleaned with a normal non abrasive cleaning agent.

## ▲ Important!

It is in your own interest to register your warranty, visit the website [www.aosmithinternational.com/content/product-registration](http://www.aosmithinternational.com/content/product-registration) and fill in the Product Registration Form. Registering the boiler gives the owner of the boiler supplied by A.O. Smith Water Heaters the right to the warranty which defines the commitments of A.O. Smith Water Heaters to the owner. You can find the warranty conditions in the Installation and Service Manual which is supplied with the boiler.

Basic settings		Basic settings		Description		Range	
PARA	factory setting						
CH prog	off	CH-program				on/off	
DHW prog	off	DHW-program				on/off	
Pump prg	off	Pump program (frost protection)				on/off	
Timeprg CH	off	Clock program CH				on/off	
Timeprg DHW	off	Clock program DHW				on/off	
CH temp	90	Adjusted maximum flow temperature in °C (only active with connected outdoor sensor & P101=0)				10-90	
DHW temp	65	Adjusted maximum DHW temperature in °C (only visible when DHW is activated)				10-80	
Units	SI	Selection possibility units SI=Europe, Imp(erial)= USA				SI/Imp	
Language	GB	Language selection				GB, NL, I, D, F, PL, TR, DK, E	
Restore defaults		Reset of the factory settings (dependant of selected level)					

Timeprog options		Clock program options		Description		Range	
PARA	factory setting						
<b>Set date and time</b>							
Set Time	00:00	Actual time setting in hours and minutes					
Set Date	DD-MM-YY	Actual date setting day-month-year					
Daylight saving	Europe	Zone for daylight saving				Off-Eur-USA	
12/24hrs	0-24h	12-hour (AM/PM) or 24-hour display				AM/PM-24h	
Date format	DD-MM-YY	Reproduction of date display (DD-MM-YY, MM-DD-YY, YY-MM-DD)					
<b>Time prog CH (only visible when NOT OpenTherm or 0-10V)</b>							
Day temp	T-day 20	Day temperature according heating line in °C (if outdoor sensor is NOT connected: max flow temp.)				10-30 (10-90)	
Night temp	T-night 15	Night temperature according heating line (Eco) in °C				10-30	
Select Preset	Preset 1	Choice for the preselected time programm CH				1 or 2	
Adjust Timeprog	mo1 off 03:00	It is possible to select 4 switch moments (steps of 30 min.) per day. Choice: on, off, - - - Copy function to next day: after switch moment 4.					
Store Preset		Store of the adjusted time program for CH					
<b>Timeprg DHW (only visible when NOT OpenTherm)</b>							
Select Preset	Preset 1	Choice for the preselected time programm DHW				1 or 2	
Adjust Timeprog	mo1 off 03:00	It is possible to select 4 switch moments (steps of 30 min.) per day. Choice: on, off, - - - Copy function to next day: after switch moment 4.					
Store Preset		Store of the adjusted time program for DW					

Param Mode		Parameter chapter		Description		Range	
PARA	factory setting						
<b>Boiler param</b>							
P132	1	Boiler parameters					
		Pump continuously				1-2	
		1:Unit pump P1					
		2:Unit pump P1 and installation pump P3					
<b>Info</b>							
<b>Cascade</b>							
T3	xx.x°C	DHW temperature T3 in external cylinder in °C (if connected and P100 is selected for DHW)					
T4	xx.x°C	Outdoor temperature T4 in °C (if connected)					
T10	xx.x°C	Temperature T10 sensor in low velocity header in °C					
<b>Boiler</b>							
Information of the boiler							
T3	xx.x°C	DHW temperature T3 in external cylinder in °C (if connected and P100 is selected for DHW)					
<b>Others</b>							
Stand-by	xx h	Number of hours stand by					
Burn. On	xx h	Number of running hours with burner on					
Service	xx h	Number of running hours to go for maintenance interval					
Ignition	xx	Number of times ignition					
Faults	xx	Number of times in error					