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The Reno
Installers Guide to the MMI

High Efficiency Combination & System Boilers &
RenoXtra High Efficiency Combination Boilers

Reno

Johnson & Starley

Contents

1 Information

This MMI is used on the Reno **Combi**, **System** and **Renoxtra** Boilers.

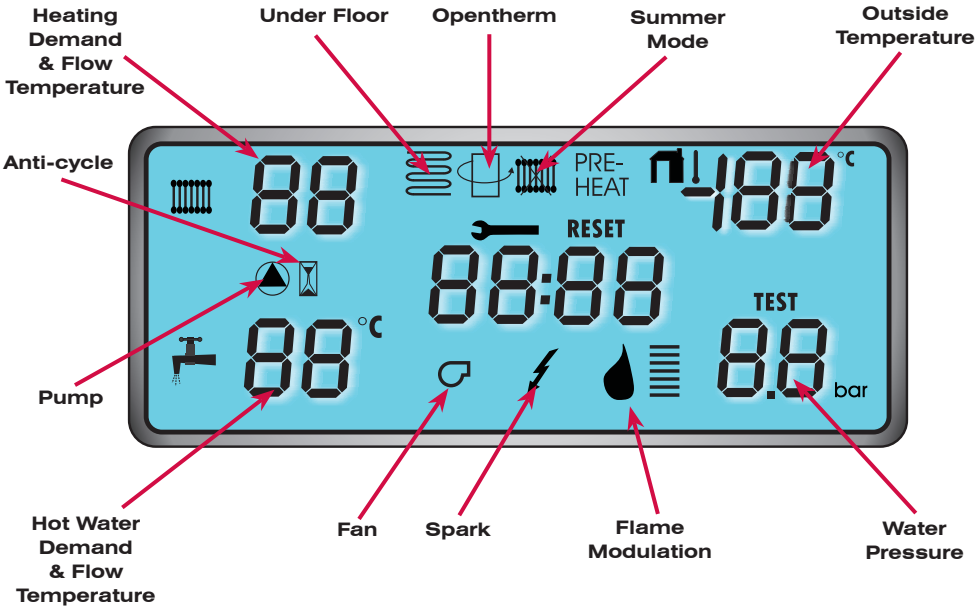
Reno

COMBI
HE**30**C **&** HE**37**C
SYSTEM
HE**16**S, HE**25**S & HE**31**S

RenoXtra
30C **&** **37**C

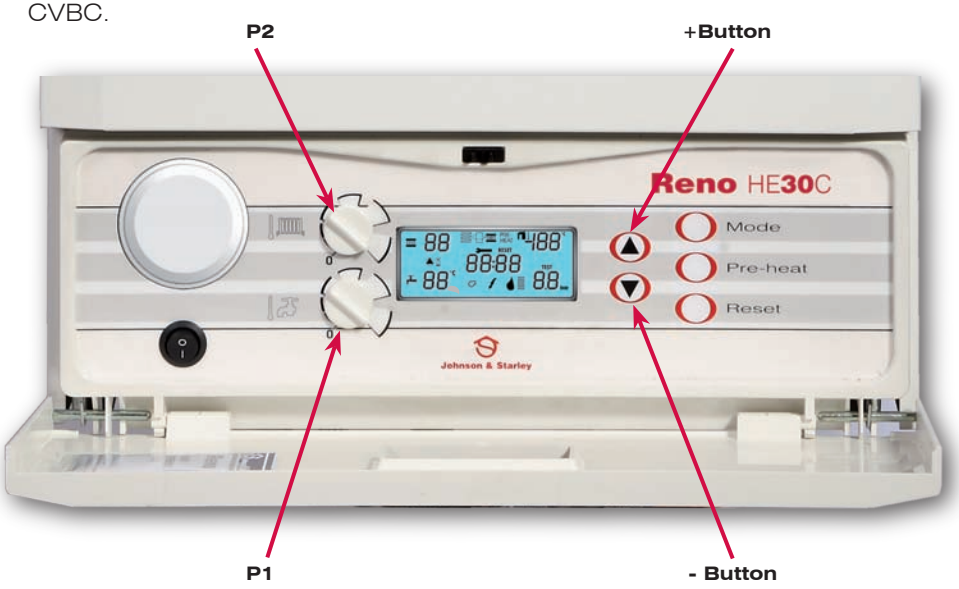
2 Indicators

The picture below shows the icons and digits on the LCD.



3 Controls

The picture below shows the controls that are used to control the MMI and CVBC.



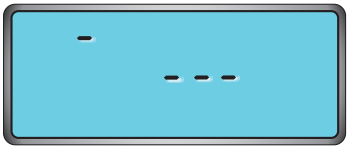
P1	DHW Set point Potmeter
P2	CH Setpoint Potmeter with OFF Position (Potmeter with 1 Detent)
SW1	+ Button
SW2	- Button
SW3	Mode Button
SW4	Pre Heat Button
SW5	Reset Button

4 Startup Sequence

If the power is switched off, all the segments are off.

If the power is switched on the following sequence takes place.

Action	Segment 2	Segment 5,6,7,8	Time (sec)
Backlight On			8
Software Version MMI	d	Actual Software Version MMI	2
Software Version CVBC HuP	H	Actual Software Version HuP	2
Software Version CVBC LuP	L	Actual Software Version LuP	2
Software Version CVBC EEPROM	E	Actual Software Version EEPROM	2



Display software version

Hup software version

Lup software version

EEprom software version

5 Operation Modes

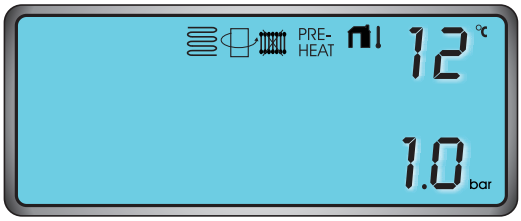
These paragraphs describe the operational modes.

5.1 Standby Mode

If there is no heat demand from any heat demand source the following information is shown at the MMI **(Standby Information)**

Information
Water Pressure
OTC Temperature (if connected)
If OpenTherm Room Unit is connected
If Pre Heat is selected
If Summer Mode is selected
If Floor Heating is selected

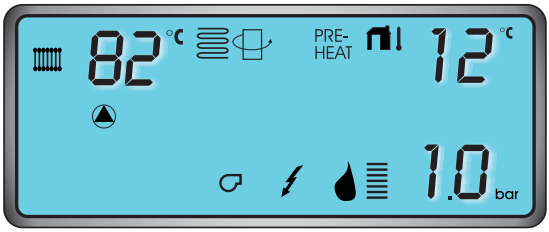
Pressing SW4 (preheat button) will toggle preheat function.



5.2 Heat Demand Mode

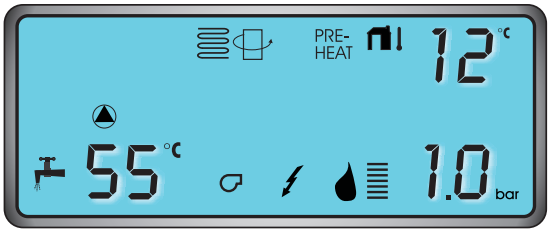
Besides the Standby Information the following information is shown is case of a CH heat demand.

Information
Actual Status
Actual CH Temperature



In case of a DHW heat demand the following information is shown.

Information
Actual Status
Actual DHW Temperature



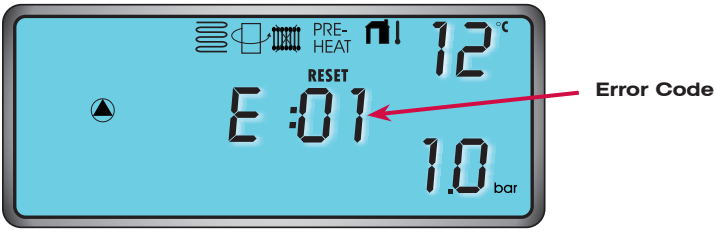
If there is a simultaneous demand from both the hot water and the central heating the hot water will take preference. The central heating symbol and temperature will disappear until the hot water demand has ended.

5.3 Error Mode

In this mode the same information is shown as in the Standby Mode, with the inclusion of the Error information shown in the centre of the display.

Information
'E'
Actual Error Code
'RESET' 'Flash at 2Hz' if error is resetable, Else segment off

When a resetable error is shown-pressing SW5 (reset button) will send a reset signal to the CVBC.



5.4 Test Mode (=Simulated Heat Demand Mode)

To put the appliance in test mode, first press ▲ and whilst holding it, press the MODE button and hold both together until the display changes (possible 5 sec time delay). If the display shows E H 15 press RESET and try again. The flow and return temperatures are displayed along with the flame current value and the fan speed. Whilst in test mode, the appliance overrides all temperature settings and defaults to the maximum rate. Pressing the ▼ and ▲ buttons allows you to scroll between maximum and minimum rates, whilst still overriding all temperature settings*. Press RESET to take the appliance out of test mode. If no changes are made, the appliance will stay in test mode for 30 minutes.

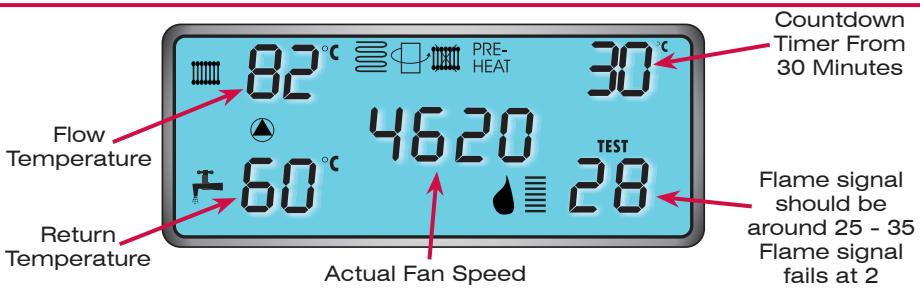
*On small heating systems, running at maximum output MIGHT cause the boiler to go into lockout and display E 3. Allow the heating system to cool and press RESET.

Information
Fan Speed
CH Supply Temperature
CH Return Temperature
Remaining Time
Actual Flame Current

Pressing SW1 (+button) will cause the burner to go to maximum power

Pressing SW2 (-button) will cause the burner to go to minimum power.

Pressing SW5 (reset button) will exit test mode to standby mode.



5.5 Set Point Change Mode

CH Set point : If the CH set point is changed by turning P2, the new set temperature will flash on the display. After 5 seconds of no further change, the MMI exits the Set point Change Mode.

If the P2 pot meter is completely turned counter-clockwise to the off position (Summer Mode) the following information is shown on the display.

DHW Set point : If the DHW set point is changed by turning P1, the new set temperature will flash on the display. After 5 seconds of no change, the MMI exits the Set point Change Mode.

5.6 Installer Mode

When SW3 (mode button) and SW1 (+button) are pressed for 3 seconds installer mode is entered.

The following information is displayed on the MMI

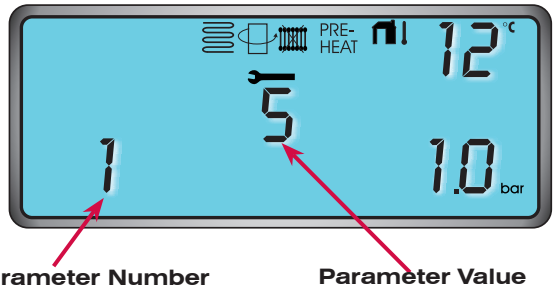
Information
On
Off
Index of parameter to be changed
Value of parameter
If value is changed, blink @ 2Hz
If value is changed, blink @ 2Hz

Pressing SW1 (+button) will increase value of parameter.

Pressing SW2 (-button) will decrease value of parameter.

When parameter value is changed pressing SW5 (reset button) will save the parameter value else installer mode will be exited.

After pressing SW3 (mode button) the next parameter is displayed.



5.7 Anti Cycling Mode

In addition to the Standby Information the following information is displayed on the MMI.

Information
On if anti-cycling is active

5.8 Error History Mode

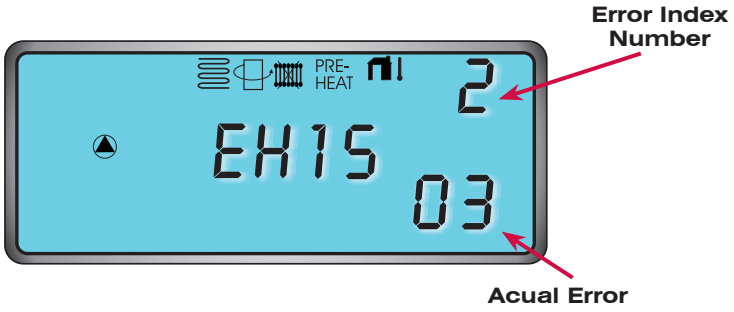
When SW3 (mode button) is pressed error history mode will be entered.

Besides the Standby Information the following information is displayed on the MMI

Information
'EHIS'
Error Index [1..8]
Error According Index

Pressing SW1 (+button) or SW2 (-Button) will change error index.

Pressing SW5 (reset button) will exit error history mode



6 Miscellaneous

6.1 Shunt

Shunt X7 is used to select Combi or System. When the shunt is placed CH and DHW can be used. When no shunt is placed only CH will work.

6.2 Preheat

When preheat is selected it will function up till 24 hours after the last DHW demand. After 24 hours with no DHW demand the symbol will stay on the display and the timer will start again on the next DHW demand.

7 Installer Mode Parameters

	Parameter Description
1	CH Slope
2	CH Off Time
3	CH Kp
4	CH Ki
5	DHW Kp
6	DHW Ki
7	Delta Flow
8	Ignition Level
9	Fan Kp
10	Fan Ki
11	Floor heating 0=disable 1=enable
12	OTC offset
13	OTC curve
14	Max boiler stat setting
15	Boiler stat hysteresis

8 Error Code Table

CODE	FAULT	REASON	ACTION
N/A	Boiler will not run.	No call for heat to boiler control board.	Check all external controls if fitted. Check settings of the time clock. Check settings of boiler controls.
N/A	No DHW output.	No call for DHW to boiler control board. No, or reduced, water flow.	Check water flow from appliance is correct. Check cold water-inlet filter. Check the wiring to the flow sensor. Check operation of the flow turbine.
01	Flame lockout after several ignition attempts.	Flame not detected.	Check gas supply and gas cock. If burners are alight, check flame sensor and wiring to control board. Check operation of gas valve.

CODE	FAULT	REASON	ACTION
02	False Flame	N/A	
03	High water temperature limit.	Air in boiler. No water flow.	Vent boiler. Check pump.
05	No tacho from fan.	Fan not running or wiring faulty.	Check that fan runs. Check wiring between control board and fan.
07	High flue gas temperature.	Poor heat exchange into water.	Check heat exchanger insulation pad. Check heat exchanger for magnetic build up.
08	Flame circuit error.	Flame sensing lead shorted to earth.	Check flame detection lead between sensing probe and ignition control board.
09	Valve driver circuit error.	Gas valve not detected.	Replace ignition control board or gas valve
11	Flow return sensor calibration error.	During calibration period flow and return sensors do not come within 3˚C within the maximum 5 minute time period.	Sensors not connected to pipes. Zone valves preventing water flow through boiler. No bypass fitted Faulty sensors.
10-25	Internal control board fault.		Replace main control board
26	Flame signal lost 5 time in 4 minutes.	Flame sensing error. Falling gas pressure. Fan fault. Flue blockage	Check flame detection lead between sensor and ignition control board. Check gas supply, does pressure fall when boiler fires. Check that flue system is not blocked.
30	Boiler flow temperature sensor short circuit	Temperature sensor shorted to earth or failed.	Check wiring and connections for shorting to earth. Check sensor resistance.
31	Boiler flow temperature sensor open circuit.	Temperature sensor not connected or failed.	Check wiring and connections. Check sensor continuity..
32	DHW temperature sensor short circuit.	Temperature sensor shorted to earth or failed.	Check wiring and connections for shorting to earth. Check sensor resistance.
33	DHW temperature sensor open circuit	Temperature sensor not connected or failed.	Check wiring and connections. Check sensor continuity.
34	Low mains supply voltage.	Electrical supply fault to property. Faulty wiring to appliance.	Check incoming mains supply and wiring to appliance.
35-36	Power supply fault.	No fault on boiler.	Boiler power supply should be checked by a qualified electrician.
37	Low supply water pressure.	Water pressure low or sensor failed.	Check system pressure on dial gauge and if correct check pressure sensor and wiring. Re pressurize system.
39	Open therm sensor (if fitted) shorted to earth.	Short circuit in wiring between sensor and control board.	Check wiring to sensor. Check the electrical resistance of the sensor.
40	High system water pressure.	System water pressure too high. Pressure sensor failed.	Check cold system pressure. Check expansion tank change pressure with system pressure release. Check pressure sensor.
43	Boiler return temperature sensor short circuit.	Temperature sensor shorted to earth or failed.	Check wiring and connections for shorting to earth. Check sensor resistance.
44	Boiler return temperature sensor open circuit.	Temperature sensor not connected or failed.	Check wiring and connection. Check sensor continuity.
45	Flue gas temperature sensor short circuit	Short circuit in wiring between sensor and control board	Check wiring to sensor. Check the electrical resistance of the sensor
46	Flue gas temperature sensor open circuit	Temperature sensor not connected or failed	Check wiring connections. Check sensor continuity.
99	Communication Error.	No connection between MMI and CVBC.	Check wiring and plug connections. There should be 4 plug connectors to MMI, X2, X3, X5 and C1.

9 Definitions

MMI	Man Machine Interface (user panel)
CVBC	Combined Valve and Boiler Control
CH SLOPE	Rate of increase of flow temperature
CH OFF TIME	Amount of time boiler is off in anti cycle mode
DHW	Domestic Hot Water
OTC CURVE	Outside temperature compensation setting
OTC OFFSET	Outside temperature compensation setting
FAN KP	Fan Control Setting
FAN KI	Fan Control Setting
EEPROM	CVBC memory version
LuP	CVBC Software
HuP	CVBC saftery software
DISP	MMI display software
DELTA FLOW	Feed forward constant
IGNITION LEVEL	Modulation rate at which boiler ignites

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