PRODUCT OVERVIEW

The Savastat reactive programmer is an electronic water heater control designed to optimise the fuel efficient operation of gas and electric water heaters. Each CPU can control up to 4 heaters with optional sequence control.

The unit is set up with four time periods mirroring the expected main water demand. During the timed periods the water heater operates in normal mode. Outside the pre-set time periods the unit is switched off and in 'reactive' mode constantly monitoring the hot water temperature.

When stored water temperature decays or is lowered by an unexpected load, to the pre-set 'reactive temperature' the unit will re-activate the heater, for a pre-set 'reactive time'. During this time period the thermostat on the appliance will take over as normal.

A safety time is programmed within the unit that will not allow a gas fired water heater to re-fire within five minutes of the burner shutting down.

INSTALLATION

Only a technician that is properly qualified to work on the appliance and ancillaries should install the Savastat reactive programmer..

NB The input to the unit is auto-selecting voltage 110 - 240v, single phase. The unit will switch loads up to 16 amps.

COMMISSIONING

Once wiring is completed and jumper positions have been set for the number of modules/heaters on both CPU and each module it will be necessary to check continuity and final system settings - and make changes to factory defaults if required.

The reverse of the CPU main PCB has two buttons T1 and T2. Both switches are only active when the LCD is showing the normal display, i.e. Time, temp and operating mode.

If button T2 is pressed, then the LCD displays TEST MODE 1 - ALL BOILERS ON and all the boilers will be turned on *and will fire subject to boiler thermostat settings.* If T2 is pressed again, the LCD displays TEST MODE 2 - ALL BOILERS OFF and all the boilers will be turned off. To return to normal operation press 'C' on the front panel.

If button T1 is pressed, the LCD will display SWITCH BOILER and following the display will be a list of the switches pressed and when they are pressed. e.g. Pressing 'up' will display   SWITCH ^
                BOILER 1
And boiler 1 will be turned on, pressing both 'up and right' will display
            SWITCH ^ >
            BOILER 1 3

The idea is that if any of the switches don't work this will be obvious as each one is tried, or if any of the switches are stuck on, this will also be obvious because it will show on the display. Also the first 4 switches will turn on the 4 boilers so these can be checked at the same time. To return to the normal display press T1 again.

DISPLAYING THE SETTINGS

The right arrow key will allow the menu/settings to be viewed in order viz:
Factory defaults in italics

Programme time 1	*06.00 to 09.00*
Programme time 2	*12.00 to 15.00*
Programme time 3	*18.00 to 22.00*
Programme time 4	*00 - 00*
Reactive time	*30 minutes*
Reactive temperature	*46°C* in 2° increments
Time of day	*00.00*
Boiler sequencing	On / *OFF*
Restore defaults	
Temperature	*°C* or °F

The left arrow can be used to scroll back.

Sequencing - *during reactive mode*
If selected, No.1 boiler will fire initially, subsequent boilers will ignite if the selected operating temperature has not been achieved within 5 minutes.

EDITING THE SETTINGS

The unit has been pre-set to recommended defaults these may be changed as individual circumstances necessitate. Editing should be undertaken as listed below:
1. Select the item to be edited
2. Press the 'P' button
The display will now show PASS?
A) Enter the pass code *(pass code - UP, RIGHT, P,C)*
B) Use the left/right arrows to change digit
C) Use the up/down arrows to change digit
D) When changes complete, press 'P' button to save changes
        To exit without making changes press the 'C' button
N.B. If a key is not pressed within 20 seconds the unit will revert to the main display.

CHANGING ON/OFF STATES

To change the ON/OFF status of the programmed time zones, 1 - 4:
Select zone to be switched with right arrow key
Use the 'up' key to turn on and the 'down' key to turn off zone.
Enter the 'pass' code to save change.

MAIN DISPLAY

The flashing asterisk on the main display indicates that the unit is in operation.

1. When the unit is within one of the pre-set time periods the display will show:

21:32	61°C	*
HEAT ON		

2. When the unit is out of the pre-set time periods but above the reactive temperature the display will show:

21:32	61°C	*
HEAT OFF		

3. When the unit is out of the pre-set time period and in reactive heat mode the display will show:
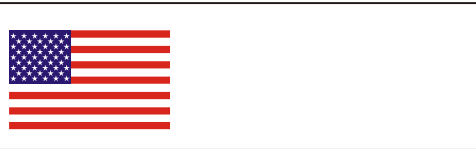
21:32	61°C	*
HEAT ON (REACT)		

PASS CODE   The pass code is: UP, RIGHT, P, C.

SAVASTAT HW

Water Heater Reactive Programmer

Installation & Operating Instructions