

## SMART DISPLAY UNIT USER INSTRUCTION MANUAL



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### WARNINGS

- 1 This appliance must only be installed by a competent person in accordance with the requirements of the Codes of Practice or the rules in force.
- 2 All external wiring **MUST** comply with the current IEE wiring regulations.
- 3 Warning this appliance must be earthed.

# 1. Introduction.

## 1.1 General.

The Smart Display Unit (SDU) enables the user to view and adjust selected controller parameters within the controller. It provides all the facilities necessary for the operation of the Nordair/Niche Direct Gas Fired Heater.



fig.1. SDU unit

The SDU connects directly to the microprocessor controller located in the Nordair/Niche unit.

## 1.2 Buttons

The required data can be selected or changed via 4 LED illuminated push buttons.

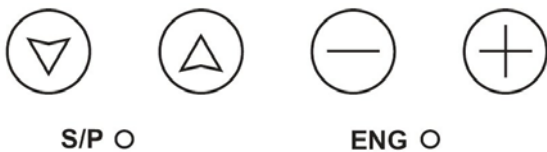
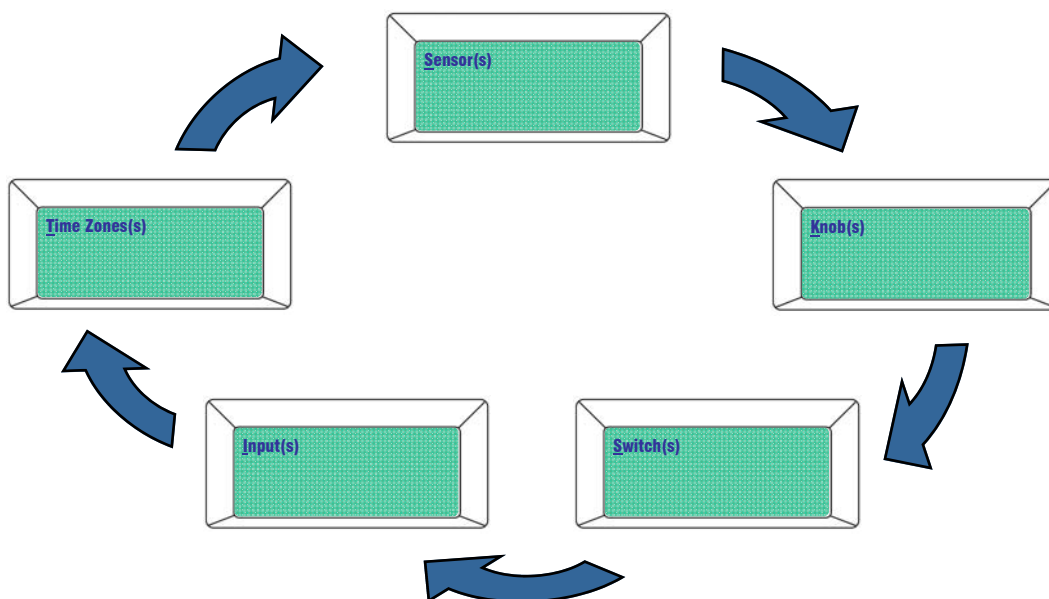


fig.2. User buttons

The display screen can be navigated by pressing the  $\ominus$  &  $\oplus$  buttons which will allow you to navigate through the various screen pages. The screen pages operate in a sequential continuous loop.

The main headings are as follows:



## 1.3 Display

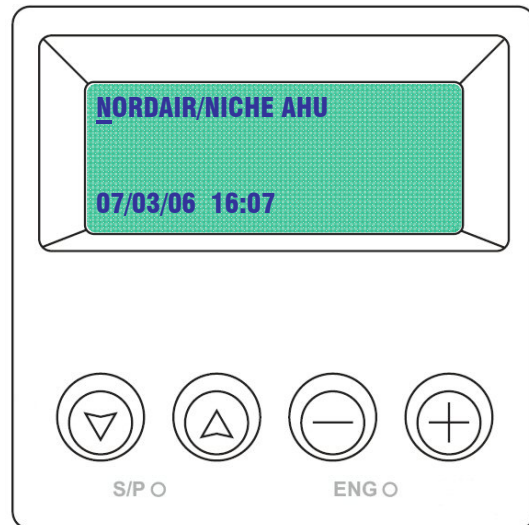


fig.3. Home Page Display

The SDU presents the information on a 4 row by 20-character backlit display. The backlight automatically switches off 20 seconds after the last button is pressed but re-pressing any of the buttons will re-activate.

There is a cursor on the screen which should be located beneath the first letter of the module on the page. If the cursor is located anywhere else on the screen press the button until it is in the position shown.

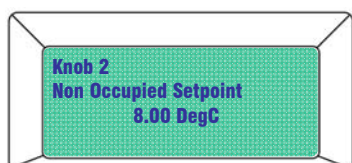
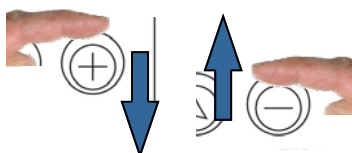
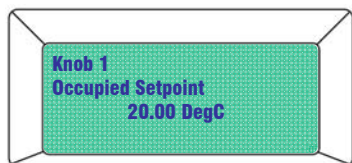
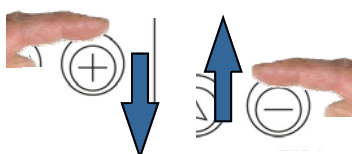
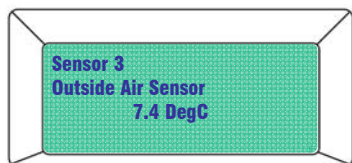
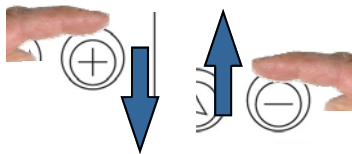
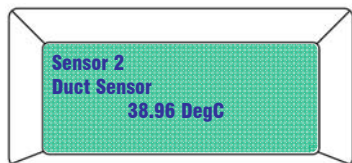
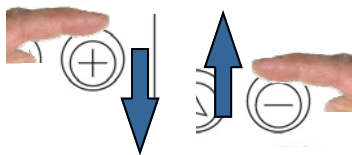
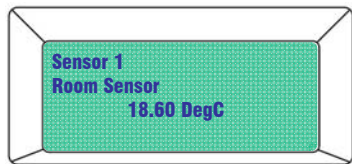
All the adjustments from the SDU can be PIN protected using the controller's built-in security system.

fig.4. Main heading sequence

## 2. Display Access.

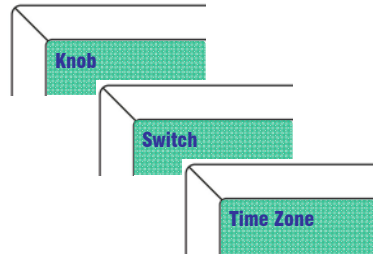
### 2.1 Description

Pressing the ⊕ & the ⊖ buttons will navigate through the various screen pages as this flow chart example shows.



### 2.2 Parameters.

The following screen pages have parameters that can be changed via the display buttons:



Find the screen page showing the parameter that you wish to change by pressing the ⊕ or ⊖ buttons.

Pressing the ▾ button will move the cursor to the line of the display you require.

Once the parameter has been modified, pressing the ▲ button will move the cursor up to the top line of the display.

The parameter has now been successfully changed.

### 2.3 PIN protection.

The SDU is supplied with PIN protection. If you attempt to change a parameter the display will ask for a PIN number.

Enter the first number of your PIN using the ⊖ and ⊕ buttons then press ▾ to move the cursor to the next number. Once the last number has been entered and ▾ button is pressed, the display will return to the parameter that you were attempting to adjust.

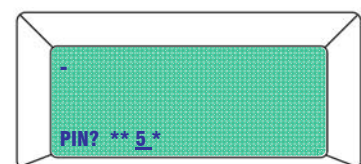
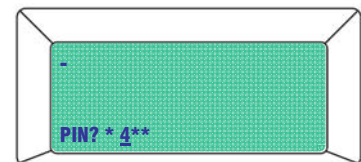
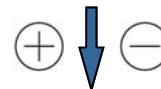
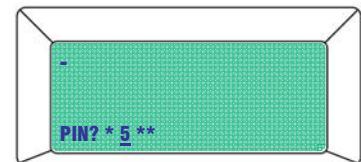
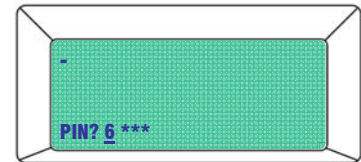
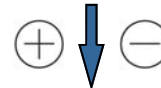
If the correct code has been entered the parameter will be adjustable.

If the incorrect code has been entered the display will ask you to enter the PIN again.

The PIN entry display will time-out 10 seconds after the last

button press. The PIN itself will remain active for 2 minutes after the last button is pressed after which it will expire.

#### 2.3.1 PIN entry.



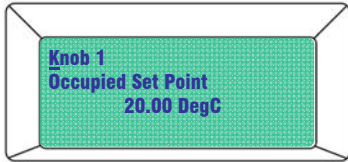
etc.

**YOUR PIN NUMBER IS SHOWN ON THE LAST PAGE OF THIS MANUAL**

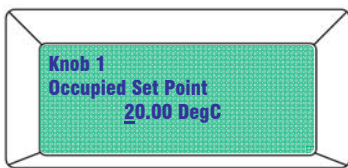
# 3. Parameter Settings.

## 3.1 Room Setpoint

Find the Occupied Set Point display by pressing the  $\oplus$  or the  $\ominus$  buttons.



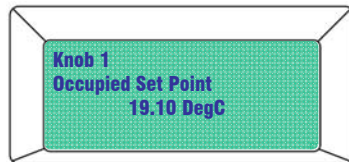
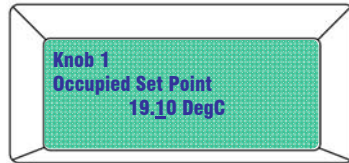
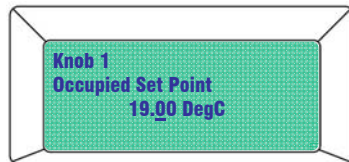
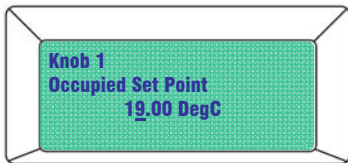
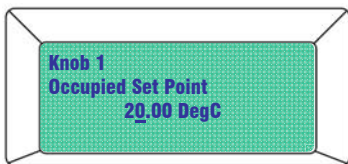
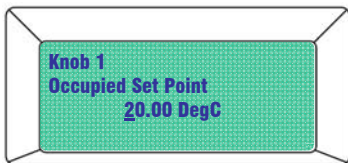
Pressing the  $\nabla$  button will move the cursor to the third line of the display.



Use the  $\nabla$ ,  $\triangle$ ,  $\ominus$  &  $\oplus$  buttons to set the On time

Once the temperature has been modified, pressing the  $\triangle$  button will move the cursor up to the top line of the display.

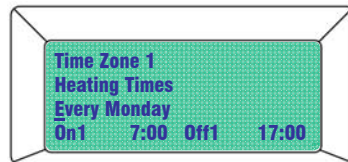
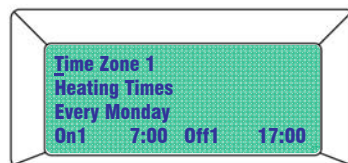
### Example



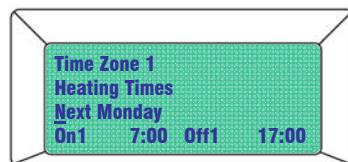
## 3.2 Setting Time Clock

Find the Time Zone 1 screen page by pressing  $\ominus$

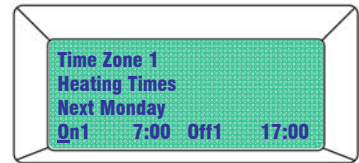
Pressing  $\nabla$  will move the cursor to the third line of the display.



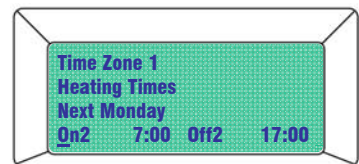
Press the  $\ominus$  or  $\oplus$  buttons to toggle and choose between every days of the week and next days of the week.



Pressing  $\nabla$  will move the cursor to the to the fourth line of the display.

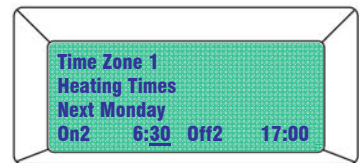


Press the  $\ominus$  and  $\oplus$  buttons to toggle and choose between the three available time zones for every day. i.e. the unit can be programmed to turn On and Off three times within each day.

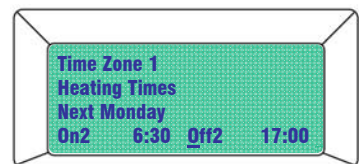


Pressing  $\nabla$  will move the cursor to the On time.

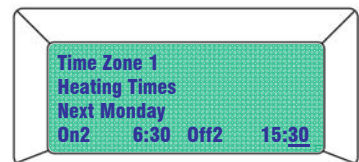
Use the  $\nabla$ ,  $\triangle$ ,  $\ominus$  &  $\oplus$  buttons to set the On time



Pressing  $\nabla$  will move the cursor to the Off time.

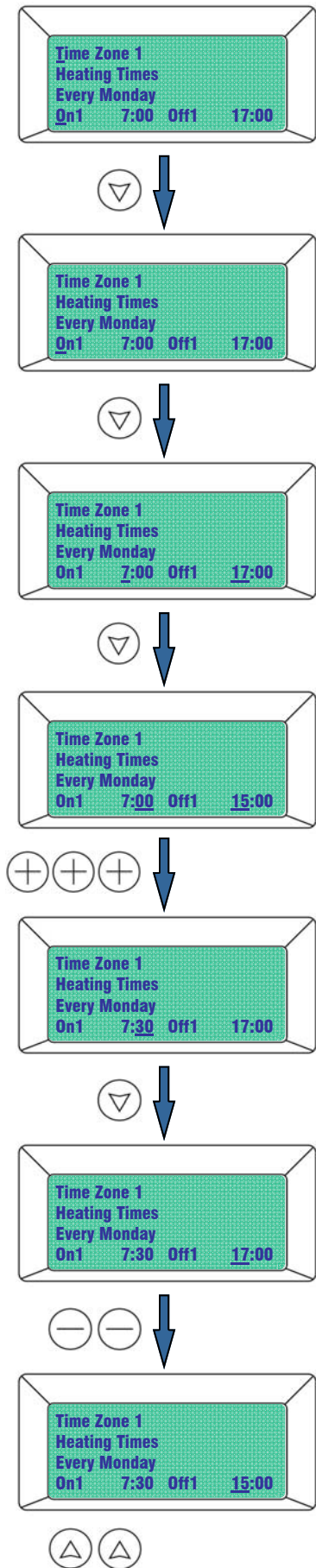


Use the  $\nabla$ ,  $\triangle$ ,  $\ominus$  &  $\oplus$  buttons to set the Off time



Once the On and Off times have been modified, pressing the  $\triangle$  button will move the cursor up to the top line of the display. The On & Off times have now been saved.

### Example



### 3.3 Fault Indication

The Nordair/Niche unit has in-built safety features. If the unit senses a fault the Red Fault light above the display will illuminate.

There are two standard faults:

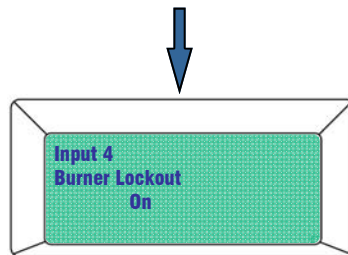
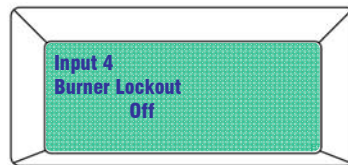
- Lockout
- Overheat

The fault light can also be used to indicate the other faults. These fault indications are not standard and are only possible if the customer has specified them. Some examples are:

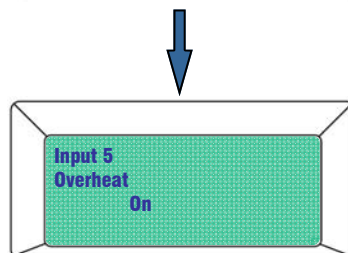
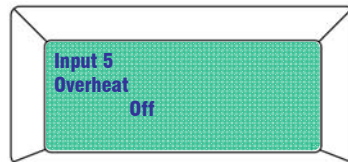
- Filter Dirty
- Fan Trip
- Inverter Fault

To find the cause of the Fault Light check the Status Pages by pressing the '+' button.

The Burner Lockout Status Page would appear as below.



The Overheat Status Page would appear as below.



### 3.3.1 Lockout reset

The Nordair/Niche Heater unit has Flame Safe Guard Controls (FSGC) fitted as standard to comply with the EN525 standard.

The FSGC will lockout the unit for the following reasons:

- Insufficient airflow
- Faulty flame detection
- Faulty gas valve solenoid
- Loss of flame
- Loss of airflow

If the unit senses a fault the Red Fault Light above the display will illuminate.

Check the lockout status page to make sure the unit is in a lockout state. See diagram opposite.

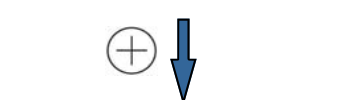
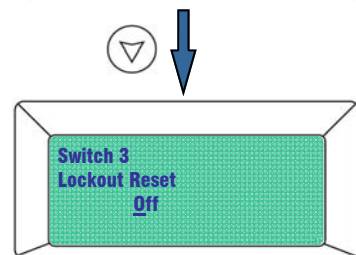
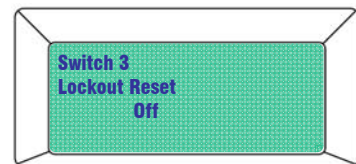
The unit will cease to operate in this state.

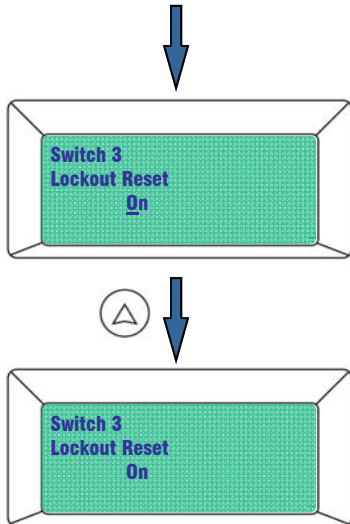
To reset the lockout find the lockout reset mode page by pressing the '+' button.

Press 'v' to move cursor to line three.

Press '+' to bring up On.

Press '^' and wait for 60 seconds for the light to turn off and for the unit to attempt to start up. If the lockout light turns on again you will need to call the Nordair/Niche service department for further assistance.





### 3.3.2 Overheat Status

The Nordair/Niche Heater unit has an overheat stat fitted as standard to comply with the EN525 standard.

If the temperature within the Nordair/Niche unit increases beyond a factory set safe temperature limit, the unit will automatically cut the power to the controls of the unit.

If the unit overheats the red fault light above the display will illuminate.

Check the overheat status page to make sure the unit is in an overheat state. See diagram on previous page.

The unit cannot be reset via the controller.

Call a qualified gas engineer to carry out a full inspection of the unit.

## 4.0 Additional details

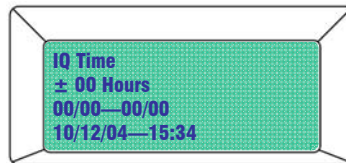
### 4.1 BST/GMT

Press and hold all four buttons together.



Release buttons when the screen flashes.

Find the IQ Time screen page by pressing the  $\oplus$  button.



### 4.2 PIN Number

**USE PIN NO. 3232**



Due to continuous product innovation, Ambi-Rad reserves the right to change product specification without due notice.

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