SMART·VENT
POSITIVE
Positive pressure ventilation

Digital Controller
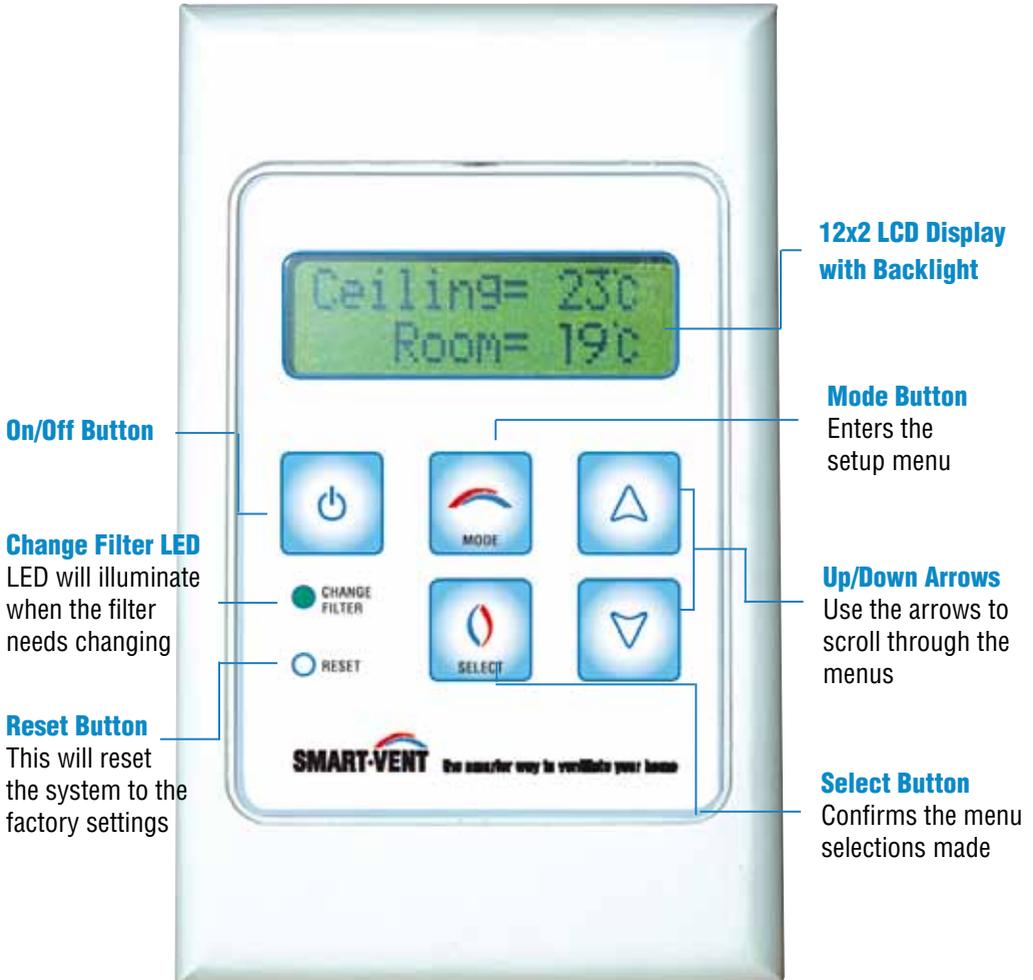# User Guide Manual

...your SMART·VENT
Digital Control Panel

12x2 LCD Display with Backlight

```
Ceiling= 23c
    Room= 19c
```

On/Off Button

Mode Button
Enters the setup menu

Change Filter LED
LED will illuminate when the filter needs changing

CHANGE FILTER

RESET

MODE

SELECT

Up/Down Arrows
Use the arrows to scroll through the menus

Reset Button
This will reset the system to the factory settings

SMART·VENT the smarter way to ventilate your home

Select Button
Confirms the menu selections made

CONTROL PANEL MAINTENANCE
To clean the control panel gently wipe the surface with a moist tissue. Do not spray cleaning solutions or water onto the control

Contents

SMART-VENT SUPPORT

For further support with your Smart-Vent
controller please contact Technical Support:
phone: 09 259 1662

1.General Information

The stylish, digital Smart-Vent controller provides automatic control of your family's living environment. With an easy-to-follow menu you can simply relax while your Smart-Vent system is hard at work providing a healthy comfortable living environment for you and your family.

• Key system settings displayed in summary screens
• Customisation of the system to individual preferences
• "Future-Proof" ability built in
• Maximum and minimum temperature range adjustable between 0 and 35^0C
• Three heater settings available when a heater is installed
• System calculates and displays the % of the filter used
• An LED flashes when the filter needs replacing
• Customer Service menu option
• Child lock facility
• Heat Transfer Mode available

HOW THE SMART-VENT SYSTEM WORKS

A Smart-Vent system lets you ventilate your home 24 hours a day.

Smart-Vent utilises any available warm air from the sunny side of your roof space. Smart-Vent passes the ventilation air through a high grade filter before being gently distributed around the home via diffusers set in the ceiling at strategic points. This continuous circulation of fresh drier air creates a positive pressure in the home thus pushing damp stale air out of the home.
In Operating Mode the Smart-Vent system will display the ceiling temperature which determines the operation of the system and the room temperature for the consumers benefit.

SMART-VENT PRODUCT RANGE

There are two main Smart-Vent product variants. The Smart-Vent controller will identify whether you have a summer function model or not by the text shown on the display. The Summer Function is where you have an inlet drawing air from outside the house. This is used during the hotter months to draw cooler air into the house.

Display shows as follows for models with Summer Function included:

```
Home Vent  ☀
Active
```

Display shows as follows for models without the Summer Function:

```
Home Vent
Active
```

ON/OFF BUTTON

This button turns the Smart-Vent controller ON and OFF. When the Smart-Vent is OFF the display shows either:
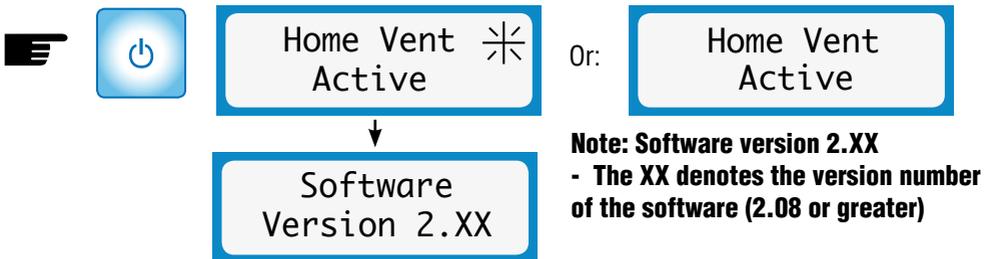
```
Home Vent  ☀
   OFF
```
OR
```
Home Vent
   OFF
```

If the model purchased includes a summer function then the controller will display a flashing sun icon

Note:

- **All relays in the ceiling unit are turned OFF but the motor, damper assembly and heater should be treated as live⚡ at all times.**

- **The controller and the ceiling unit continue to communicate but remain passive in operation**

- **The other buttons will have no effect other than to illuminate the LCD if pressed**

- **Power is still active on both the controller and ceiling unit**

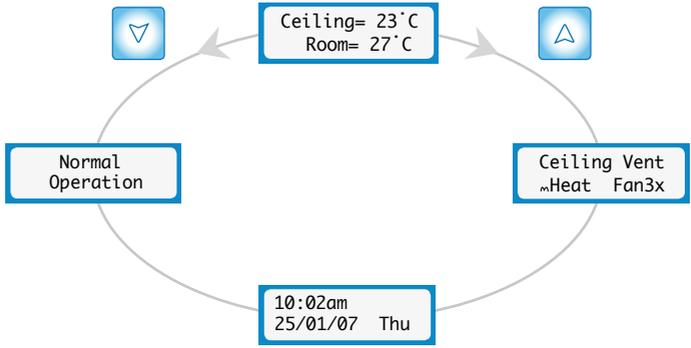To turn your Smart-Vent system ON, press the ON/OFF button and the following screens will appear:

```
Home Vent  ☀
   Active
```
Or:
```
Home Vent
   Active
```

↓

```
   Software
Version 2.XX
```

Note: Software version 2.XX - The XX denotes the version number of the software (2.08 or greater)

SETTING COMFORT TEMPERATURE

The below is the suggested Comfort Temperature settings.

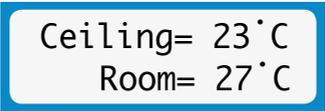|	Suggested Settings		Default Settings	Page Reference
	Summer	Winter		
Maximum Temp	22	35	30	8
Minimum Temp	5	5	5	8-9
Heat Transfer	disabled	23	25	20-24
Fan Min Mode	disabled	disabled	disabled	18

3.Operating Mode

Smart-Vent operates to the parameters set either by pushing the RESET button or those entered using the Setup Mode.

The 4 screens available for display in operating mode are shown below:

The default screen shows the temperature of the ceiling space and of the room that the controller is situated in.

```
Ceiling= 23°C
   Room= 27°C
```

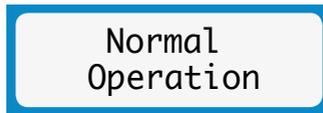To show the other pages press either the up ▽ or down △ arrows as shown
For the up button:

The next screen shows where the Smart-Vent air is being drawn from, the status of the heater and the fan speed.

```
Ceiling Vent
ʍHeat  Fan3x
```

In this example, the Smart-Vent air is drawing from the ceiling cavity, the heater is disabled and the fan is operating at maximum speed.

```
10:02am
25/01/07   Thu
```

Real time clock showing time, date and day.


```
      Normal
    Operation
```

Display indicating the Smart-Vent is operating in Normal Mode, which means that the Maximum and the minimum temperature setting determine the fan speed and whether the air is vented from the ceiling cavity or the outside.
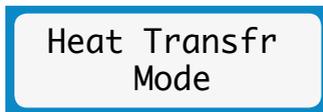
If the Heater is in Override Mode the display will show:

```
    Heater ON
     Override
```

If the Heater is set to Timer Mode the display will show:

```
    Heater ON
    Timer Mode
```

And if the Smart-Vent Heat Transfer Mode is operating the display will show:

```
   Heat Transfr
       Mode
```

Push the button to return to the default display screen.

Note: The display illuminates on the first press of a button, but no action is taken until the second press of any button.

After 15 seconds if the or buttons are not pressed the controller reverts to the default display.

4.Setup Mode

The Setup Mode allows you to customise the Smart-Vent operational parameters to your individual requirements. Setup Mode also provides information on filter usage, customer service, clock settings.

The following menu options are available:

System Fan Speed
System Maximum Temperature
System Minimum Temperature
Filter Status
Heater Option
Heater Mode*
Customer Service
Set Clock
Heat Transfer Option
Heat Transfer Mode
System Comfort Temp.*** (if heat transfer is installed and enabled)
Fan Mode**

* Setup Heater Mode is displayed only if the heater is installed and 'Enabled' in the Heater Option.
**Fan Mode max option only applies to Smart-Vent models excluding Summer Function: SV02, SV04 & SV06. It does not apply to Summer-Vent models: SV02S, SV04S & SV06S.
*** If Heat Transfer is installed and enabled

To enter Setup Mode, press the MODE button:

☞   [MODE]

    ╔══════════════════════════╗
      System Setup
    ╚══════════════════════════╝
    ...Use arrows to change settings & select to enter

To select any of the settings press SELECT button.

☞   [SELECT]
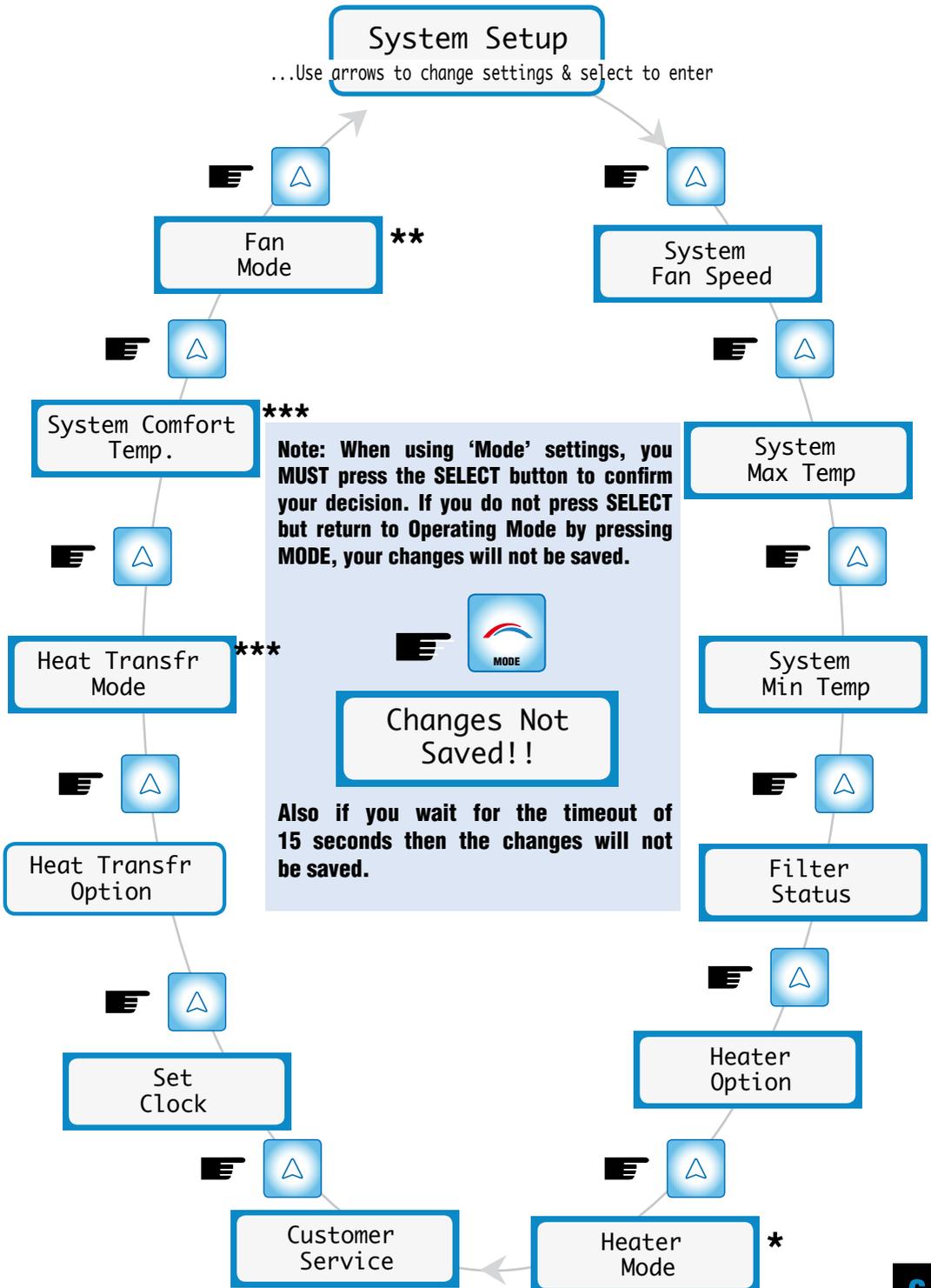
To "exit" the Setup Mode at any stage:
Either: Press the MODE button and return to Operating Mode:

☞   [MODE]

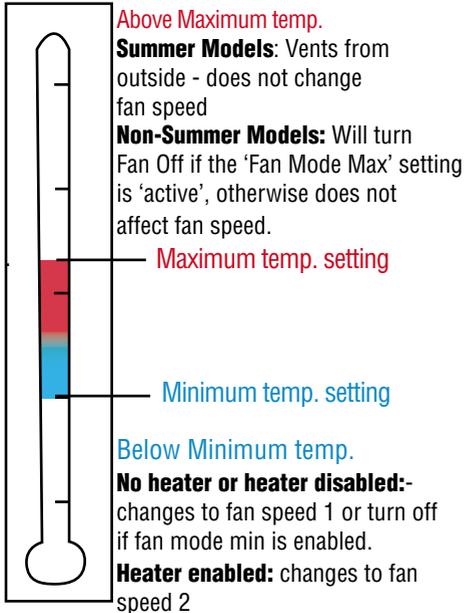Or: Wait 15 seconds and the controller will time out to Operating Mode

System Setup
...Use arrows to change settings & select to enter

👉 🔼

Fan Mode **

👉 🔼

System Comfort Temp. ***

👉 🔼

Heat Transfr Mode ***

👉 🔼

Heat Transfr Option

👉 🔼

Set Clock

👉 🔼

Customer Service

Note: When using 'Mode' settings, you MUST press the SELECT button to confirm your decision. If you do not press SELECT but return to Operating Mode by pressing MODE, your changes will not be saved.

👉 [MODE]

Changes Not Saved!!

Also if you wait for the timeout of 15 seconds then the changes will not be saved.

👉 🔼

System Fan Speed

👉 🔼

System Max Temp

👉 🔼

System Min Temp

👉 🔼

Filter Status

👉 🔼

Heater Option

👉 🔼

Heater Mode *

6

5.Setup Functions

SYSTEM FAN SPEED

The Smart-Vent controller uses a multi-speed motor to control the flow of filtered air into the house, the Fan speed is determined by your Minimum and Maximum temperature settings.

Above Maximum temp.
Summer Models: Vents from outside - does not change fan speed
Non-Summer Models: Will turn Fan Off if the 'Fan Mode Max' setting is 'active', otherwise does not affect fan speed.

Maximum temp. setting

Minimum temp. setting

Below Minimum temp.
No heater or heater disabled:-changes to fan speed 1 or turn off if fan mode min is enabled.
Heater enabled: changes to fan speed 2

Ceiling Temperature

When the ceiling temperature drops below the minimum temperature the fan speed automatically sets to fan speed 1 if the heater is disabled (or no heater is installed) or speed 2 if the heater is enabled.
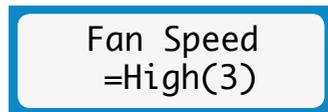
The controller uses a number 1,2 or 3 to represent low, medium and high speeds and a rotating icon on screen one of Operating Mode to represent a fan running at speed.

```
System
Fan Speed
```

SELECT

The display will indicate the current Fan speed for example: Speed 2:
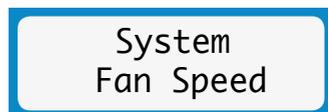
```
Fan Speed
=Medium(2)
```

Use the [△] and [▽] buttons to alter the fan speed, for example to change from displayed Medium speed (2) to high (3),

press the [△] button once.

```
Fan Speed
=High(3)
```

To activate this change in fan speed press SELECT, and the new fan speed is saved in memory.

SELECT

Once SELECT is pressed the display returns to Setup Mode

```
System
Fan Speed
```

Either press MODE or wait for 15 second timeout to return to Operating Mode.

```
Ceiling= 24˚C
    Room= 20˚C
```

Or use the [△] and [▽] buttons to step forwards or backwards to another setup selection.

SYSTEM MAXIMUM TEMPERATURE

The controller uses the maximum temperature to control the point at which outside air is vented into the house (if the summer feature is installed) or the Fan Mode becomes active for non-summer models which turns the fan completely off. When the roof space temperature exceeds the maximum temperature the controller opens the outside air damper or turns the fan off when Fan Mode is 'Active'. This temperature is adjustable up to 35^0C and any setting that is at least 5^0C greater than the minimum temperature.

Note: The controller will not allow the maximum temperature to be set lower than the minimum.

To change or check the value of the maximum temperature enter the Setup Mode as follows:

  (Press x2)

```
    System
   Max. Temp
```



```
  Max. Temp
   = 31˚C
```

Use the [△] and [▽] buttons to increase or decrease the maximum temperature setting.

Note: To activate this change in the maximum temperature setting you must press SELECT, and the new temperature will be saved in memory.

To return to Operating Mode either wait for the 15 second timeout or press MODE
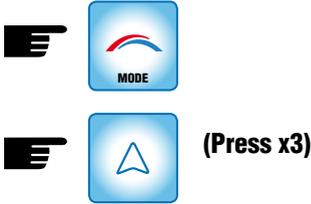

Note: Reset default for maximum temperature is 30^0C

SYSTEM MINIMUM TEMPERATURE

The controller uses the minimum temperature to control the point at which the fan speed drops to speed 1 if no heater is fitted or drops to speed 2 if a heater is fitted and enabled, or drops to speed 1 if a heater is fitted but disabled. This temperature is adjustable from 0^0C to at least 5^0C below the maximum temperature.

Note: The controller will not allow the minimum temperature to be set greater than the maximum.

To change or check the value of the minimum temperature enter the Setup Mode as follows:

👉 [MODE]

👉 [△] **(Press x3)**

```
System
Min. Temp
```

👉 [◊]

```
Min. Temp
= 5°C
```

Use the [△] and [▽] buttons to increase or decrease the minimum temperature setting.

Note: To activate this change in the minimum temperature setting you must press SELECT, and the new temperature will be saved in memory.

👉 [◊ SELECT]

To return to Operating Mode either wait for the 15 second timeout or press MODE

👉 [MODE]

Note: Reset default for minimum temperature is 5⁰C

FILTER STATUS

The Smart-Vent controller monitors the filter and calculates the % used. To show the % used enter the Setup Mode as follows:

👉 [MODE]

👉 [△] **(Press x4)**

```
Filter
Status
```

👉 [◊ SELECT]

```
Filter
4% Used
```

👉 [◊]

```
Filter
Status
```

To return to Operating Mode either wait for the 15 second timeout or press MODE

👉 [MODE]

When the filter is 100% used then it should be replaced. Please phone the customer service number 09 259 1662 to be directed to your nearest outlet to purchase a replacement filter.

The Smart-Vent controller flashes the 'change filter' light on the control panel when the filter needs replacing.

Change Filter Light flashing

The first line on the display changes from the ceiling temperature to show a 'filter full' message.
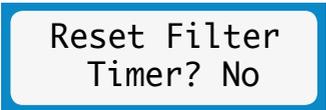
Filter Full
Room= 24˚C

Once a new filter has been installed it is a simple matter of resetting the filter usage to 0% through the Setup Mode.

When the filter has reached 100% an additional operation becomes available in the Setup Mode to reset the filter.

MODE

△ **(Press x5)**

Reset Filter
Timer

SELECT

Reset Filter
Timer? No

Use the △ and ▽ buttons to toggle between yes and no.

△

Reset Filter
Timer? Yes

Filter
Status

SELECT

Filter
0% Used

Note: Once the filter timer has been reset the Reset Filter Timer page is removed until the filter is full again. The timer calculates % usage of the filter based on the fan speed.
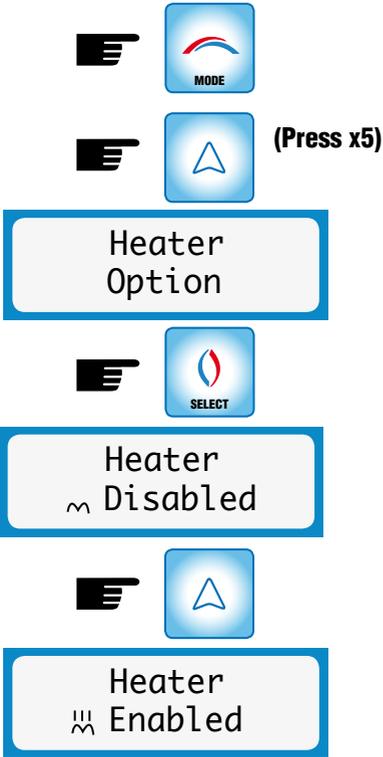**A Smart-Vent system operating on low speed will take approx 1^1/$_2$ years before reaching 100% filter usage. Personal fan speed preferences will affect the % filter usage rate.**

HEATER OPTION
This option allows the householder to enable or disable the heater (if installed).
Note: For the heater to work the heater must first be enabled. The reset default setting is for the heater to be turned OFF.
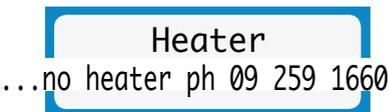
To enable the heater enter Setup Mode:

👉 **MODE**

👉 △ **(Press x5)**

```
Heater
Option
```

👉 **SELECT**

```
Heater
ᴧ Disabled
```

👉 △

```
Heater
ᵚ Enabled
```

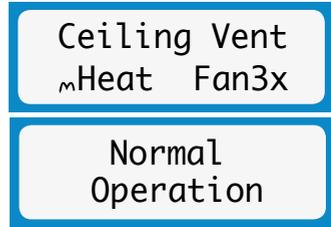**Note: The heater icon changes from ᴧ to ᵚ**

👉 **SELECT**

Heater is now enabled in Normal Mode. Return to Operating Mode by pressing MODE or 15 second timeout

If a heater is not installed the following screen will be displayed when you press SELECT:

```
     Heater
...no heater ph 09 259 1660
```

This informs the householder that they will need to phone customer service to purchase the heater option.

In the Operating Mode the screens will show as follows:

```
  Ceiling Vent
 ᴧHeat   Fan3x
```

```
    Normal
   Operation
```

Please note: The heater icon will show ᴧ if the heater is disabled and also if the heater is enabled but not operating.

If the heater is enabled and the ceiling temp. drops below your set minimum temperature. Screen 2 in the Operating Mode would show:

```
  Ceiling Vent
 ᵚHeat   Fan2x
```

Note:
The heater icon flashes on (ᵚ) then off (ᴧ) whilst the heater is ON. The fan speed automatically adjusts to medium (2) speed to ensure sufficient air passes over the heater element. The fan speed can not be adjusted in Heater Mode. The fan speed can be changed in Setup Mode but this change will not take effect until the ceiling temperature rises above your minimum temperature setting.

HEATER MODE

Once the heater is enabled this additional menu option is available. Heater Mode allows the householder to choose between the three heater mode settings.
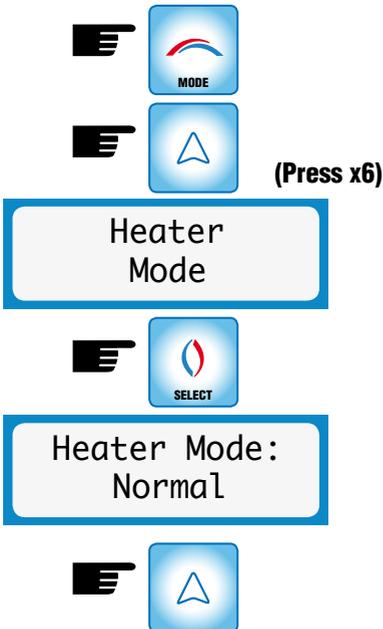
• Normal Mode, where the heater is turned ON and OFF depending on the ceiling temperature in relation to the minimum temperature.

- Override Mode, where the householder can force the heater ON for a certain time period irrespective of the ceiling temperature and minimum temperature setting.

- Timer Mode, where one or two time periods can be set by the householder to control the time the heater comes on, when the ceiling temperature is below the minimum temperature setting.

Note: To operate in the Override and Timer modes the real time clock must be set properly, because these are time relative operating modes. Refer to the Set Real Time Clock section.

OVERRIDE HEATER MODE

This mode operates independently of the temperature in the ceiling. The householder can enter this mode if the heater is enabled and wishes to have the heater turn on for either 1, 2, 4, or 6 hours from the time selected. The heater will stay ON for this period then turn OFF and Normal Mode will continue.

☞ [MODE]

☞ [△] **(Press x6)**

```
Heater
Mode
```

☞ [SELECT]

```
Heater Mode:
Normal
```

☞ [△]

```
Heater Mode:
Override
```

☞ [SELECT]

```
Heater ON:
for 1 hour
```

Use the [△] and [▽] buttons to display the time duration for the Override Heater Mode.

```
Heater ON:
for 2 hours
```

☞ [△]

```
Heater ON:
for 4 hours
```

☞ [△]

```
Heater ON:
for 6 hours
```

☞ [△]

When a choice has been made press SELECT

☞ [SELECT]

Smart-Vent will turn ON the heater at fan speed 2 when the controller returns to Operating Mode. Screen three in Operating Mode will display:

```
Heater On
   Override
```

To disable Override Mode enter Setup
Mode, and scroll to Heater Mode option:

```
  Heater
   Mode
```

☞ **SELECT**

```
Heater Mode:
   Normal
```

☞ **SELECT**

Heater will return to Normal Operation.
Pressing Reset will also return the heater to
Normal Operation.

**Note: Having entered an override time,
this can be changed to a greater or lesser
duration by simply re-entering Heater
Mode, selecting Override, changing the
time and selecting the new period.**

For example:
A four hour Override has been chosen but
the householder decides that this is too
long. Enter Setup mode and step through to
Heater Mode. Select Override Mode and set
the heater for 1 hour:

☞ **MODE**

☞ △ **(Press x6)**

```
  Heater
   Mode
```

☞ **SELECT**

```
Heater Mode:
   Normal
```

☞ △

```
Heater Mode:
  Override
```

☞ **SELECT**

```
Heater ON:
 for 1 hour
```

☞ **SELECT**

The heater will now stay on for 1 hour from
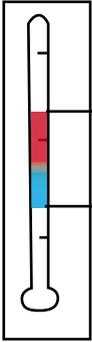the moment SELECT is pressed.

TIMER MODE

The purpose of Timer Mode is to enable the
householder to set certain times when the
Smart-Vent heater can be active. Normally
the heater will come ON and go OFF under
the control of the ceiling temperature and
the minimum temperature 24 hours a day.
The Timer Mode allows the householder to
limit this to one or two time periods during
the day when the ceiling temperature is
below the minimum temperature.

For example:
The ceiling temperature may fall below the
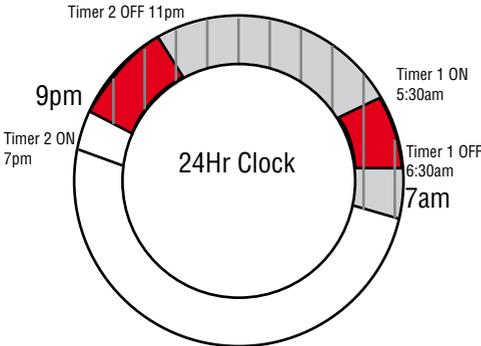minimum setting of 5^{0}C between the

hours of 3am and 7am. In Normal Mode the heater (if enabled) would come ON during this time. However if the householder only wants the heater on between 5:30am and 6:30am, then the householder can set the Timer Mode to achieve this.

Maximum temp. setting

Above Minimum the heater is OFF

Minimum temp. setting

Below Minimum temp. setting
Heater On only between
5:30am - 6:30am in Timer Mode

The mode has two timers and either one or both can be active. This is designed for a morning and evening period.
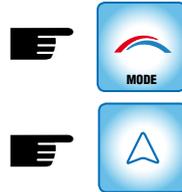
Timer 2 OFF 11pm

9pm

Timer 2 ON
7pm

24Hr Clock

Timer 1 ON
5:30am

Timer 1 OFF
6:30am

7am

▨ Ceiling temp. below Minimum(9pm-7am)
▮ Timer Mode when Heater Active - Time settings that the heater will operate only when the ceiling temperature drops below your minimum setting

This example assumes that the ceiling temperature is below the minimum setting from 9pm to 7am. The heater will only come ON if the ceiling temperature is less than the minimum temperature and the time at which this occurs lies within the Timer periods set. Timer 2 is set from 7pm however since the temperature in the ceiling

space is above the minimum temperature setting the heater will not come on until the temperature drops below the minimum level. (In this instance 9pm)

To enter Timer Mode, ensure the heater is enabled and go to the Setup Mode

```
Heater
Mode
```

Use the △ and ▽ buttons to step to Timer Mode:

```
Heater Mode:
Timer Mode
```

```
Set ON Time
05:30
```

The hours flash. Use the △ and ▽ buttons to set the hour you want the heater to come on. Press SELECT:

```
Set ON Time
05:30
```

14

The minutes flash. Use the ▲ and ▽ buttons to set the minutes. Press Select:

👉 (SELECT)

```
Set OFF Time
   06:30
```

Set the hours and minutes as for the ON time and press SELECT

👉 (SELECT)

The second time duration is then offered as a choice.

```
Set Period 2
    =No
```

Use the ▲ and ▽ buttons to scroll through YES or NO and press SELECT:

```
Set Period 2
    =Yes
```

👉 (SELECT)

```
Set ON Time
   19:00
```

Set the hours and minutes as for the first time period using the ▲ and ▽ buttons. Press Select:

👉 (SELECT)

```
Set OFF Time
   23:00
```

Set the hours and minutes as for the ON time and press SELECT to exit the mode.

👉 (SELECT)

Screen 3 in Operating Mode shows

```
Heater On
Timer Mode
```

To exit this mode, return to Setup and Heater Mode:

```
Heater
 Mode
```

👉 (SELECT)

```
Heater Mode
  Normal
```

👉 (SELECT)

Heater returns to Normal Operation. Pressing Reset will also return the heater to Normal Operation.

Note: For all heater modes, pressing the Reset button defaults to Normal Heater Mode with the heater disabled.

CUSTOMER SERVICE

To assist with any questions you may have regarding your Smart-Vent controller a contact number is conveniently stored in setup mode.
To access the help-line press MODE:

(Press x6)*

(Press x7) If heater is installed and enabled.

```
  Customer
  Service
```



```
  Helpline
(09) 259 1662
```
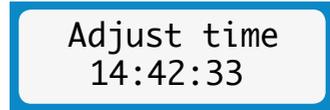
Press SELECT or MODE to exit.

SET REAL TIME CLOCK

The Smart-Vent controller has a real time clock, one to display the time but essentially to allow the householder to set the times the heater is active.

When the Smart-Vent is first installed it will be necessary to set the correct time, date and day in Setup Mode. Press MODE button:

(Press x2)*

```
    Set
   Clock
```

(Press x4) If heattrays are installed and enabled.


```
  Adjust time
   14:42:33
```

The clock appears in 24 hour format of hours, minutes and seconds. The hours will blink.

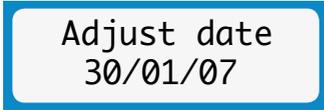Use the and buttons to set the correct hours, then press SELECT:

Then the minutes will blink.

Use the and buttons to set the correct minutes, then press SELECT:
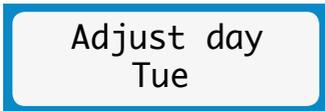
Then the seconds will blink.

Use the [△] and [▽] buttons to set the correct seconds, then press SELECT:

☞ SELECT

```
Adjust date
  30/01/07
```

The date page appears in DD/MM/YY format. Repeat the procedure as per the time page to set the correct date and press SELECT:

☞ SELECT

```
Adjust day
    Tue
```

Use the [△] and [▽] buttons to set the day, then press SELECT:

☞ SELECT

```
Set Clock
```

The real time clock has been set. Return to Operating Mode by pressing MODE or wait for timeout:

☞ MODE

Note:
1) In a power cut situation an on-board battery keeps the clock operational
2) The setting of the clock is done in 24hr format but for readability the clock that is displayed on screen 2 of Operational Mode is a 12 hour format (am/pm)
3) If for some reason such as touching the circuitry during installation the clock is 'upset' then the display flashes:

```
Clock Error
```

This can be fixed by resetting the clock as described on page 16.

4) If a heater is installed, enabled and in Timer or Override mode then a clock error disables the heater and these modes which rely on the clock are not functional until the clock is reset.

FAN MODE

Fan Mode controls the operation of the fan when the ceiling temperature exceeds/drops below the system maximum/minimum temperature setting. This feature is enabled when the user <u>does not</u> want the system to operate when the air in the ceiling space exceeds 35°C for example, or conversely when the air in the ceiling drops below 10°C for example.

PLEASE NOTE
<u>Max Temp</u> Setting Options applies to Non-Summer Vent Models

(SV02, SV04 & SV06) The Summer Function models will automatically draw air from outside when temperature is above your Maximum settings.

Maximum Temperature function
Use this function if you would like your system to turn OFF once your ceiling temperature exceeds the maximum temperature so the system stops pushing hot air into your home in summer.

Minimum Temperature function
Use this function if you would like your system to turn OFF once your ceiling temperature drops below the minimum temperature so the system stops pushing cold air into your home in winter.

Enable -will turn the fan OFF if your minimum or maximum temperature goes beyond the ceiling temperature
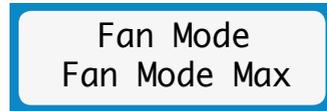
Disable - will continue to operate as Normal

The suggested minimum temperature setting is 5°C. This setting will ensure the fan will run on the selected speed setting for a longer period to help reduce condensation within the home.

Once the goal of reducing condensation has been achieved, the user can slowly increase the Minimum Temperature setting to a level where condensation is still controlled, but less cool air is introduced into the home.

To disable or enable the fan above maximum temperature:
To access the Fan Mode press:

MODE

  (Press x 1)

```
    Fan
   Mode
```


SELECT

```
  Fan Mode
  Fan Mode Max
```
Fan Mode Max option only for Non-Summer Models

SELECT

```
  Fan Mode
  Disabled
```



```
  Fan Mode
  Enabled
```

Note: Reducing the fan speed may have an effect on the amount of condensation experienced within the home.

To disable or enable the fan below minimum temperature:
To access the Fan Mode press:

👉 [SELECT]

👉 [▽] **(Press x 1)**

> Fan
> Mode

👉 [SELECT]   Fan Mode Max option only for Non-Summer Models

> Fan Mode
> Fan Mode Max

👉 [▽] **(Press x 1)**

> Fan Mode
> Fan Mode Min

👉 [SELECT]

> Fan Mode
> Disabled

👉 [▽]

> Fan Mode
> Enabled

The Fan icon will return to a rotating display when the ceiling temperature falls below the maximum temperature setting, rises above the minimum temperature setting or the fan operation is restored to normal or the system is RESET.
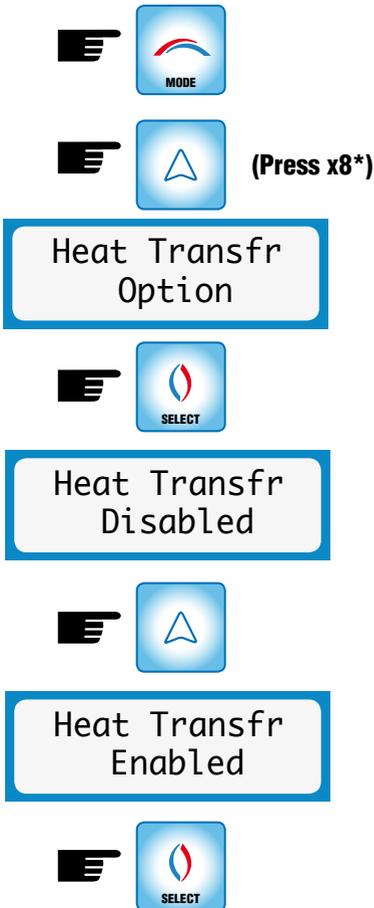
> Ceiling Vent
> ₍ₙ₎Heat Fan x

The Fan Mode has been set. Return to Operating Mode by pressing MODE.
If the maximum temperature threshold has been exceeded then the Normal Operating Mode shows the fan icon as stationary & no fan speed number.

In the 'Normal' setting the fan continues as normal when the ceiling cavity temperature rises above your maximum temperature setting.

HEAT TRANSFER OPTION

This mode is used to enable or disable the heat transfer of air. When enabled, and when your set 'comfort temperature' is exceeded, the system stops sourcing air from the ceiling cavity or outside the house and instead transfers excess warmed air from the heat source room to the other Smart-Vent outlets in your home.

To enable heat transfer enter Setup Mode:

☞ [MODE]

☞ [△] **(Press x8*)**

```
Heat Transfr
    Option
```

☞ [SELECT]

```
Heat Transfr
   Disabled
```

☞ [△]

```
Heat Transfr
    Enabled
```

☞ [SELECT]

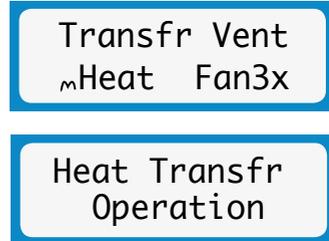* Press x8 if heater is 'disabled' or x9 if heater is 'enabled'

Heat Transfer is now enabled. Return to Operating Mode by pressing MODE or 15 second timeout. You will now need to set your 'Comfort Temperature'.

If a heat transfer kit is not installed the following screen will be displayed when you press SELECT:

```
    Heat Transfr
...no heat transfer option ph 09 259 1660
```

This informs the householder that they will need to phone customer service to purchase the Heat Transfer Upgrade Kit.

When the system is in heat transfer mode, the Operating screens will show as follows:

```
   Transfr Vent
  ⌒Heat   Fan3x
```

```
  Heat Transfr
    Operation
```

Please note: The heater icon will show ⌒ as the heater will always be **disabled** in the Heat Transfer Mode. The Fan speed can still be changed to any of the 3 speed settings.

HEAT TRANSFER MODE

Once the heat transfer is enabled this additional menu option is available. Heat Transfer Mode allows the householder to choose between the three heater mode settings.
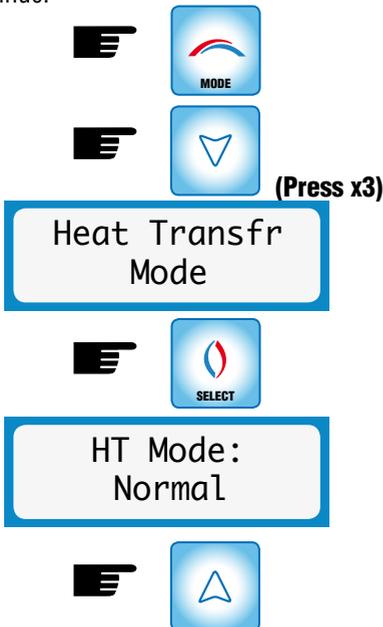
• **Normal Mode:** where the heat transfer is turned ON and OFF depending on the room temperature in relation to the system comfort temp.

20

- **Override Mode:** where the householder can force the heat transfer ON for a certain time period irrespective of the room temperature and system comfort.
- **Timer Mode:** where one or two time periods can be set by the householder to control the time the heat transfer comes on, when the room temperature is above the system comfort.

Note: To operate in the Override and Timer modes the real time clock must be set properly, because these are time relative operating modes. Refer to the Set Real Time Clock section.

OVERRIDE HEAT TRANSFER MODE

This mode operates independently of the temperature in the room. The householder can enter this mode if Heat Transfer is enabled and choose the heat transfer to turn on for either 1, 2, 4, or 6 hours from the time selected. The heat transfer will stay ON for this period then turn OFF and Normal Mode will continue.

(Press x3)

```
Heat Transfr
     Mode
```



```
HT Mode:
 Normal
```



```
HT Mode:
Override
```



```
HT ON:
for 1 hour
```

Use the and buttons to display the time duration for the Override Heat Transfer Mode.

```
HT ON:
for 2 hours
```



```
HT ON:
for 4 hours
```



```
HT ON:
for 6 hours
```


When a choice has been made press SELECT

Screen three in Operating Mode will display:

Heat Transfr
Operation

To disable Override Mode enter Setup Mode, & scroll to heat transfer Mode option:

Heat Transfr
Mode

SELECT

HT Mode:
Normal

Heat transfer will return to Normal Operation. Pressing Reset will also return the heat transfer to Normal Operation.

Note: Having entered an override time, this can be changed to a greater or lesser duration by simply re-entering Heat Transfer Mode, selecting Override, changing the time and selecting the new period.
For example:
A four hour Override has been chosen but the householder decides that this is too long. Enter Setup mode and step through to Heat transfer Mode. Select Override Mode and set the heat transfer for 1 hour:

MODE

(Press x3)

Heat Transfr
Mode

SELECT

HT Mode:
Normal

HT Mode:
Override

SELECT

HT ON:
for 1 hour

SELECT

The heat transfer will now stay on for 1 hour from the moment SELECT is pressed.
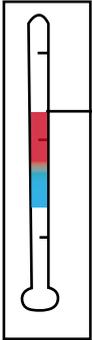
TIMER MODE

The purpose of Timer Mode is to enable the householder to set certain times when the Smart-Vent heat transfer can be active. Normally the heat transfer will come ON and go OFF under the control of the room temperature and the system comfort temperature 24 hours a day. The Timer Mode allows the householder to limit this to one or two time periods during the day when the room temperature is above the system comfort temperature.
For example:
The room temperature may rise above the comfort setting of 25^0C between the
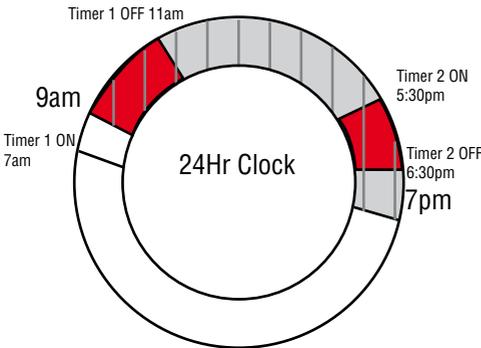
hours of 7am and 7pm. In Normal Mode the heat transfer (if enabled) would come ON during this time. However if the householder only wants the heat transfer ON only between 5:30pm and 6:30pm, then the householder can set the Timer Mode to achieve this.

System Comfort Temp
Above system comfort temperature the heat transfer is ON

The mode has two timers and either one or both can be active. This is designed for a morning and evening period.
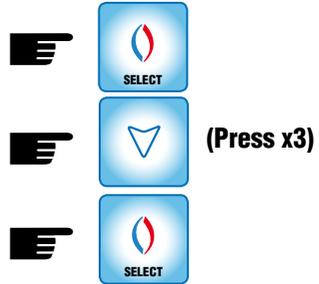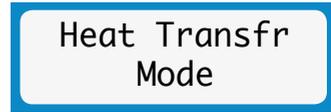
Timer 1 OFF 11am

Timer 2 ON 5:30pm

9am

Timer 1 ON 7am

24Hr Clock

Timer 2 OFF 6:30pm

7pm

Room temp. above system comfort temperature   (9am-7pm)

Timer Mode when heat transfer Active - Time settings that the heat transfer will operate only when the room temperature exceeds the systems comfort temperature.
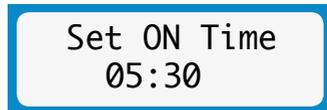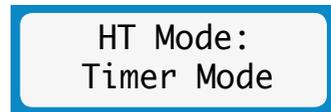
This example assumes that the room temperature is above the comfort setting from 9am to 7pm. The heat transfer will only come ON if the room temperature is above the system comfort temperature and the time at which this occurs lies within the Timer periods set.

Timer 1 is set from 7am, however since the temperature in the room is below the system comfort temperature settings, the heat transfer will not come on until the temperature rises above the system comfort temperature (in this case at 9am).

To enter Timer Mode, ensure the heat transfer is enabled and go to the Setup Mode

Heat Transfr
Mode

☞   SELECT

☞   ▽   **(Press x3)**

☞   SELECT

Use the △ and ▽ buttons to step to Timer Mode:

HT Mode:
Timer Mode

☞   SELECT

Set ON Time
05:30

The hours flash. Use the △ and ▽ buttons to set the hour you want the heat transfer to come on. Press SELECT:

The minutes flash. Use the [△] and [▽] buttons to set the minutes. Press Select:

☞ (*) SELECT

```
Set OFF Time
   06:30
```

Set the hours and minutes as for the ON time and press SELECT

☞ (*) SELECT

The second time duration is then offered as a choice.

```
Set Period 2
   =No
```

Use the [△] and [▽] buttons to scroll through YES or NO and press SELECT:

```
Set Period 2
   =Yes
```

☞ (*) SELECT

```
Set ON Time
   19:00
```

Set the hours and minutes as for the first time period using the [△] and [▽] buttons. Press Select:

☞ (*) SELECT

```
Set OFF Time
   23:00
```

Set the hours and minutes as for the ON time and press SELECT to exit the mode.

☞ (*) SELECT

Screen 3 in Operating Mode shows

```
HT Mode:
Timer Mode
```

To exit this mode, return to Setup and Heat Transfr Mode:

```
Heat Transfr
   Mode
```

☞ (*) SELECT

```
HT Mode
 Normal
```

☞ (*) SELECT

Heat Transfer returns to Normal Operation. Pressing Reset will also return the heater to Normal Operation.

Note: For all heater modes, pressing the Reset button defaults to Normal Heater Mode with the heater disabled.

24

```
Set ON Time
   05:30
```

SYSTEM COMFORT TEMPERATURE

When the Heat Transfer Mode has been 'enabled', the controller uses the temperature sensed (the system comfort temperature) by the wall panel controller to control the transfer of hot air from this heated room.

When the comfort temperature is exceeded the system stops sourcing air from the ceiling cavity or outside the house and instead transfers excess heated air from the controller room to other outlets in your home.

When the air temperature in the controller room reaches the pre-set comfort temperature the system will automatically start functioning in the Heat Transfer Mode. When the temperature in the controller room drops 1˚C below the preset comfort level, the system reverts back to a standard Smart-Vent™ configuration.

Note: The default setting and reset setting for the system comfort temperature is 25˚C. This temperature is independent on the systems maximum and minimum temperatures. The comfort temperature range you can choose from is 0˚C - 35˚C.

To change or check the value of the comfort

(Press x2)

```
   System
Comfort Temp
```

Note: Heat Transfer Mode has precedence over minimum and maximum temperature settings.


```
Comfort Temp
  = 25˚C
```

Use the and buttons to set your desired comfort temperature, then press SELECT:

Note: To activate this change you must press SELECT, and the new temperature will be saved in memory.

To return to Operating Mode either wait for the 15 second timeout or press MODE

Note: Your controller must be in the heat source room to read the comfort temperature and act accordingly. This system will allow your warmed room to reach your comfort temperature before it starts transferring the excess heat.

6.Reset Function

◯ **RESET**   This is used to restore the factory default settings for the minimum and maximum temperature range, the fan speed, heater operation, heat transfer and comfort temperature.

Reset is used when the householder needs to clear all previous settings and start over.

Factory default settings are:

Max Temp	30˚C
Min Temp	5˚C
Fan	3 (Fast)
Heater	Disabled
Heater Mode	Normal
Heat Transfer	Disabled
Comfort Temperature	25˚C

Unlike the other buttons RESET requires a firm press in the centre of the circle until a 'beep' confirms entry to this function. This has been designed deliberately to prevent accidental RESET

👉 ◯ **RESET**

```
Reset System
    =No
```

If a system reset is not required, press SELECT

👉 [SELECT]

System will return operation to Normal Mode

```
Ceiling= 24˚C
  Room= 20˚C
```

If the system RESET is required press the UP arrow

👉 [△]

```
Reset System
    =Yes
```

Then press SELECT

👉 [SELECT]

```
  System
  Reset
```

```
Home Vent
```

...take control,ventilate for a healthy home!

```
Home Vent
  Active
```

```
Ceiling= 24˚C
  Room= 20˚C
```

Note: RESET does not function when Smart-Vent is in the OFF mode

```
Home Vent
   OFF
```

7.Keypad Lock Function

8.Error Functions

At times it is useful to 'lock' the keypad so that those little fingers or even bigger ones don't reconfigure your settings.

To prevent the keys from being accidentally pressed, press and hold SELECT until the controller beeps x5


```
      Keypad
      Locked
```

```
  Ceiling= 22˚C
  🔒  Room= 24˚C
```

The padlock icon 🔒 shows the keypad is locked. Pressing any key will have no effect, except to display:

```
      Keypad
      Locked
```

To unlock the keypad, press and hold SELECT until the controller 'beeps' x2


```
      Keypad
      Unlocked
```

```
  Ceiling= 22˚C
    Room= 24˚C
```

Normal Operation is then restored and the padlock icon vanishes.

The Smart-Vent system monitors the communications and performance of the system.

If the Smart-Vent controller can not communicate with the ceiling unit the operational display flashes the error message every 5 seconds

```
      Error #1
      No Comms
```

If the temperature sensor in the ceiling unit fails, the operation display flashes the following error message every 5 seconds

```
      Error #2
      Ceiling Temp
```

If the temperature sensor in the control panel fails, the display flashes the following error message every 5 seconds

```
      Error #3
      Room Temp
```

Note: Errors #1 and #2 are critical and with no communications or a failed ceiling temperature sensor the ceiling unit shuts down all relay control of the heater, fan and damper. Error #3 is non-critical as the control panel temperature is not critical for the operation of the Smart-Vent.

However in all cases please contact Smart-Vent for technical support ph 09 259 1662 email: enquiry@smartvent.co.nz

27

Notes