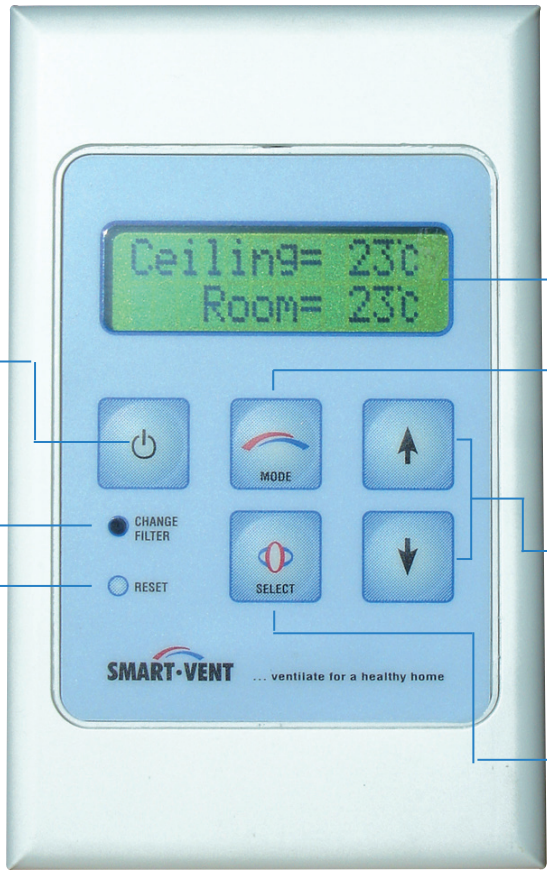
SMART•VENT

...the SMART way to Ventilate your Home

User Guide

Introducing your SMART·VENT Digital Control Panel



On/Off Button

Change Filter LED
LED will illuminate when the filter needs changing

Reset Button
This will reset the system to the factory settings

12x2 LCD Display with Backlight

Mode Button
Enters into the setup menu

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

Select Button
Confirms the menu selections made

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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^{0}C
- Three heater settings available including a Timer Mode, whereby one or two time periods can be set during which the heater will operate
- System calculates and displays the % of the filter used
- A LED flashes when the filter needs replacing
- Customer Service menu option
- Child lock facility
- Standard switch plate profile

How The Smart-Vent System Works

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

Smart-Vent utilises 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 operational 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 several Smart-Vent product variants, depending on the size of your home and the features you have requested. Your Smart-Vent controller will identify whether you have a summer function model or not by the text shown on the display.

Display shows as follows for models with Summer Function included:

Display shows as follows for models without the Summer Function:

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 panel. It is not waterproof.

Smart-Vent Support

For further support with your Smart-Vent controller please contact customer service:
phone: (09) 259 1662
email: sales@securimax.co.nz
website: www.smartvent.co.nz for additional information and frequently asked questions.

2. Getting Started

On/Off Button

This button turns the Smart-Vent controller ON and OFF. When the Smart-Vent is off the display shows either:

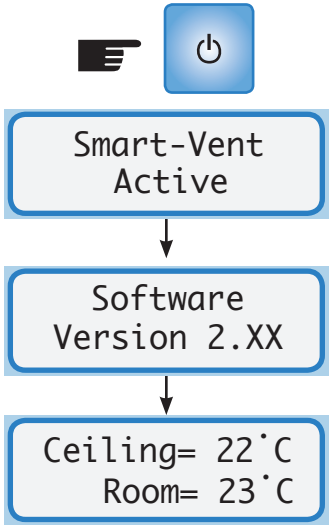
Or:

This is dependent on the model purchased. If the model purchased includes a summer function then the controller will state "Smart-Vent". If no summer function is included in the model purchased the controller will state "EcoSmart-Vent"

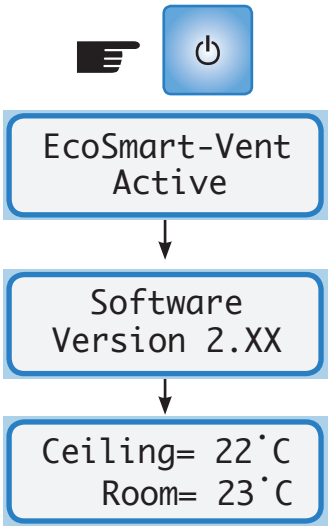
Note:

- 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 for 15 seconds if pressed
- Power is still active on both the controller and ceiling unit

To turn the Smart-Vent or EcoSmart-Vent on, press the ON/OFF button and the following screens will appear:



Or:

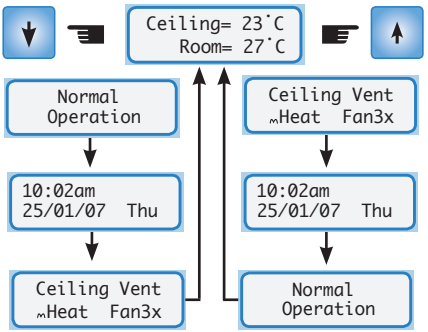


Note: Software version 2.XX - The XX denotes the version number of the software.

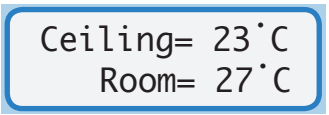
3. Operating Mode

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.

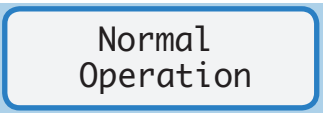


To show the other pages press either the up or down arrows as shown For the up button:

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

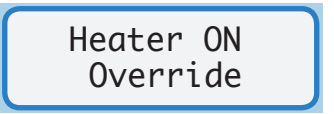
In this example, the Smart-Vent air is drawing from the ceiling cavity, the heater is disabled and the fan is operating at maximum speed.

Real time clock showing time, date and day.

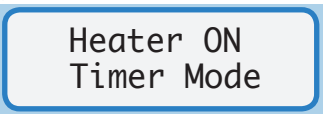


Display indicating the Smart-Vent is operating in Normal Mode, which means that the ceiling temperature and the maximum and minimum temperature settings determine the fan speed and whether the air is vented from the ceiling or the outside.

If the Heater is in Override Mode the display will show:



And if the heater is set to Timer Mode the display will show:



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

Setup Mode is designed to allow the householder to customise the Smart-Vent operational parameters to their individual requirements.

For example the householder may have preferences for the normal fan speed and the minimum temperature setting for activating the in-line duct heater (if installed)

Setup Mode also provides information on the % of filter life remaining, customer service contacts and the setting of the real time clock.

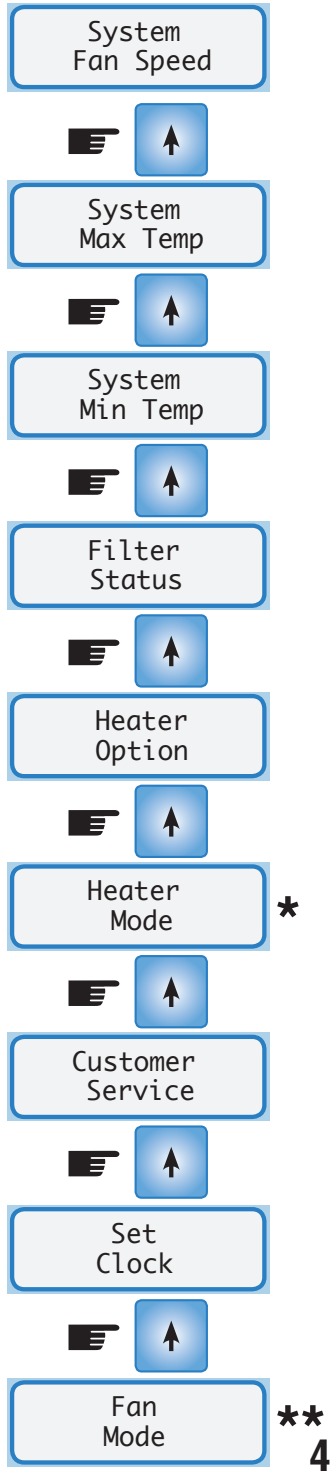
Setup Mode Menu

System Fan Speed
System Maximum Temperature
System Minimum Temperature
Filter Status
Heater Option
Heater Mode (if heater is installed & enabled)
Customer Service
Set Clock
Fan Mode (applies to Eco Smart-Vent models)

To enter Setup Mode, press the MODE button

System Setup

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



*

**

To select any of the settings press SELECT button.

* Setup Heater Mode option is displayed only if the heater is installed and Enabled in the Heater Option.

**Fan Mode option only applies to Eco Smart-Vent models: SV01, SV02, SV04 & SV06. It does not apply to Summer-Vent models: SV02S, SV04S & SV06S.

To “exit” the Setup Mode at any stage:
Either: Press the MODE button and return to Operational Mode:

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

5. Setup Functions

System Fan Speed

The Smart-Vent controller uses a 2 or 3 speed motor to control the flow of filtered air into the house. The householder has control over the motor speed when the ceiling temperature lies between the minimum and maximum settings during normal operation.

Above Maximum temp setting
- Automatic Fan Speed 1

Within temperature range
- Fan Speed 1, 2, and 3 available

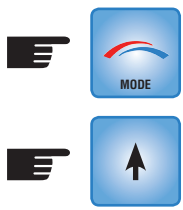
Below Minimum temp setting
- No heater or disabled - Fan Speed 1
- Heater enabled - Fan Speed 2

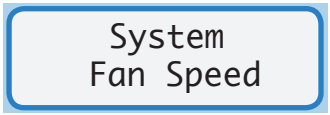
Ceiling Temperature

When the ceiling temperature exceeds the maximum temperature setting the fan speed automatically sets to fan speed one (slow)

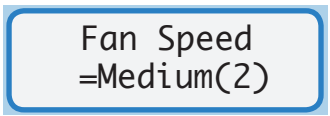
When the ceiling temperature drops below the minimum temperature the fan speed automatically sets to fan speed one if the heater is disabled (or no heater is installed) or speed two if the heater is enabled.

The controller uses a number 1,2 or 3 to represent low, medium and high speeds and a rotating icon on screen one of Operational Mode to represent a fan running at speed.

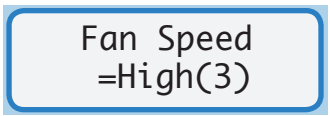




The display will indicate the current Fan speed for example: Speed 2:

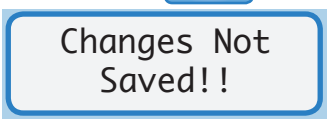


Use the and buttons to alter the fan speed, for example to change from displayed Medium speed (2) to high (3), press the button once.



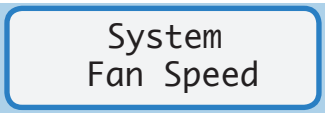
To activate this change in fan speed press SELECT, and the new fan speed is saved in memory.

Note: If you do not press SELECT but return to Operational Mode by pressing MODE, your changes will not be saved.

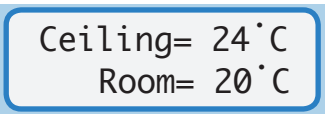


Also if you wait for the timeout of 15 seconds then the changes will not be saved.

Once SELECT is pressed the display returns to Setup Mode



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



Or use the and buttons to step forwards or backwards to another setup selection.

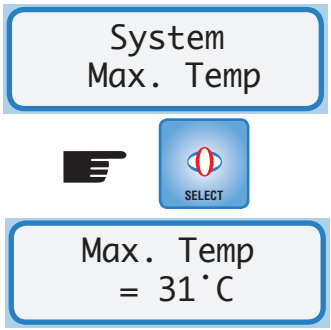
System Maximum Temperature

The controller uses the maximum temperature to control the point at which either outside air is vented into the house (if the summer feature is installed) or the system drops to fan speed 1. When the roof space temperature exceeds the maximum temperature the controller switches the fan speed to low and/or opens the outside air damper. This temperature is adjustable up to 35^{0}C and any setting that is at least 5^{0}C 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)



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 Operational Mode either wait for the 15 second timeout or press MODE

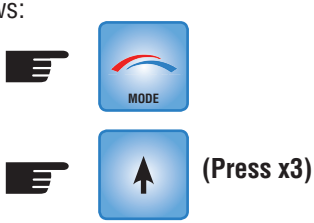
Note: Reset default for maximum temperature is 30^{0}C

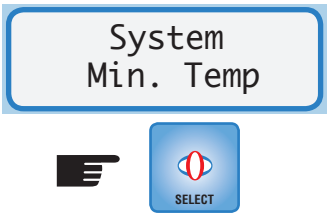
System Minimum Temperature

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 and disabled. This temperature is adjustable from 0^{0}C to at least 5^{0}C 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:





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.

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

Note: Reset default for minimum temperature is 5^{0}C

Filter Status

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

(Press x4)

```
Filter
Status
```

```
Filter
4% Used
```

```
Filter
Status
```

To return to Operational Mode either wait for the 15 second timeout or press 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 is full.

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.

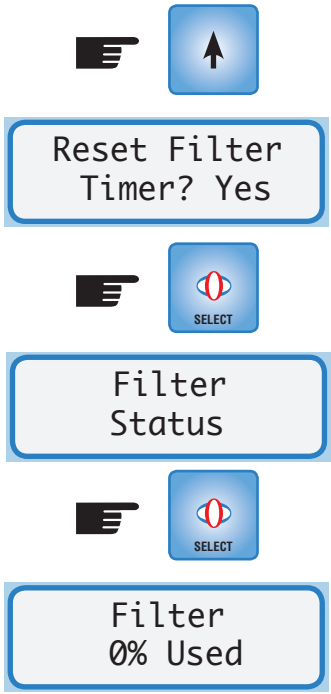
When the filter has reached 100% an additional operation becomes available in the Setup Mode to reset the filter.

(Press x5)

```
Reset Filter
Timer
```

```
Reset Filter
Timer? No
```

Use the and buttons to toggle between yes and no.



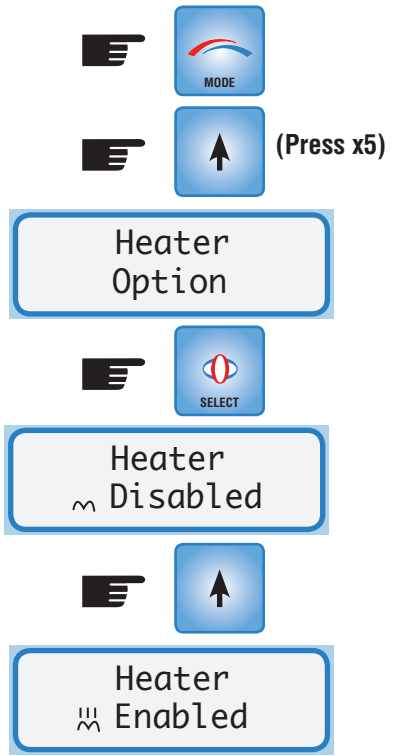
Note:
Once the filter timer has been reset the Reset Filter Timer page is removed until the filter is full again.
The timer calculates % usage of the filter based on the fan speed. A Smart-Vent system operating on low speed will take approx 1½ years before reaching 100% filter usage. Personal fan speed 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.

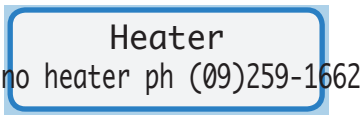
To enable the heater enter Setup Mode:



Note: The heater icon changes from ≃ to ≋

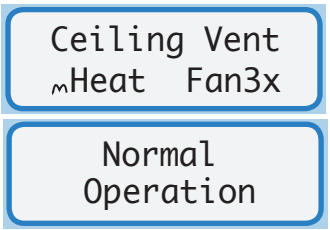
Heater is now enabled in Normal Mode. Return to Operational Mode by pressing MODE or 15 second timeout

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



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:



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

If the heater is enabled and the minimum temperature is greater than the ceiling temperature screen two in Operational Mode would show:

Note:
The heater icon flashes on (≋) then off (≃) 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 the minimum temperature setting.

Heater Mode

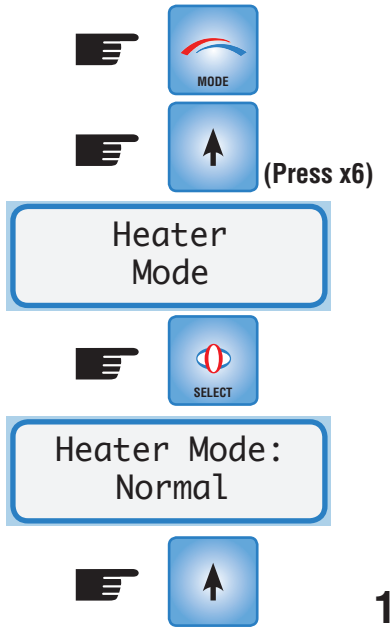
Once the heater is enabled this additional menu option is available. Heater Mode allows the householder to choose between the three heater mode settings.

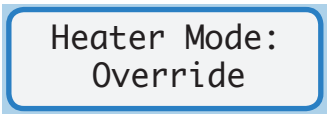
- Normal Mode, where the heater is turned ON and OFF depending on the ceiling temperature in relation to the minimum temperature.
- Override Mode, where the householder can force the heater ON for a certain time period irrespective of the ceiling temperature and minimum temperature setting.
- Timer Mode, 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.

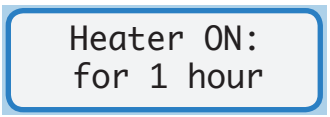
Note: To operate in the Override and Timer modes the real time clock must be set properly, because these are time relative operating modes. Refer to the Set Real Time Clock section.

Override Heater Mode

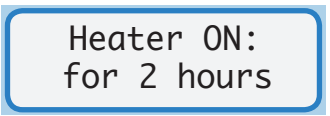
This mode operates independently of the temperature in the ceiling. The householder can enter this mode if the heater is enabled and choose the heater to turn on for either 1, 2, 4, or 6 hours from the time selected. The heater will stay on for this period then turn off and Normal Mode will continue.

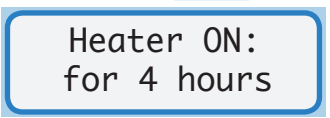


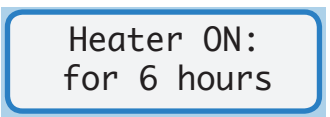




Use the and buttons to display the time duration for the Override Heater Mode.

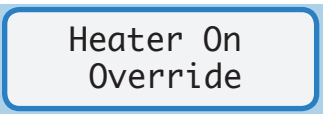




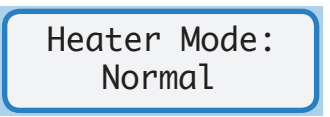


When a choice has been made press SELECT

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



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

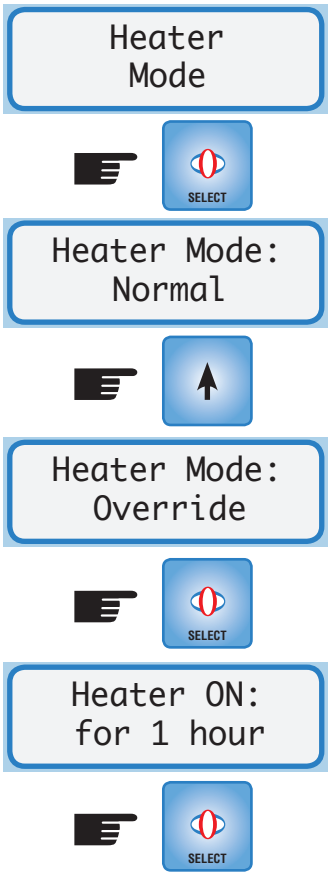


Heater will return to Normal Operation. Pressing Reset will also return the heater to Normal Operation.

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:

(Press x6)

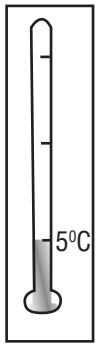


The heater will now stay on for 1 hour from the moment SELECT is pressed.

Timer Mode

The purpose of Timer Mode is so the householder can 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.

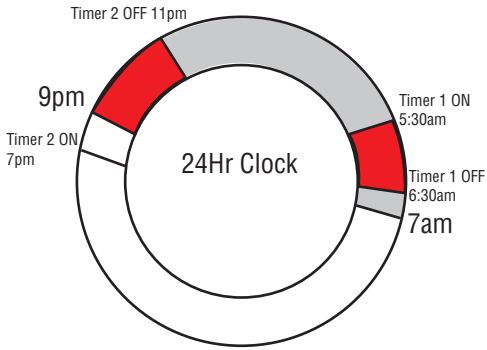
For example:
The ceiling temperature may fall below the minimum setting of 5^{0}C between the hours of 3am and 7am. In Normal Mode the heater (if enabled) will come ON during this time. However if the householder only wants the heater on between 5:30am and 6:30am, then the householder can set the Timer Mode to achieve this.



Above 5^{0}C the heater is OFF

Minimum Temperature setting
Heater On:
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.



Ceiling temperature is below 5^{0}C (9pm-7am)
Timer Mode - Time settings that the heater will operate if the ceiling temperature is below the minimum

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

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

Set OFF Time
06:30

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

Set ON Time
19:00

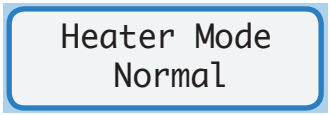
Set the hours and minutes as for the first time period using the and buttons. Press Select:

Set OFF Time
23:00

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

Screen 3 in Operational Mode shows

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

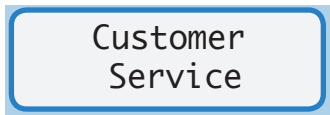


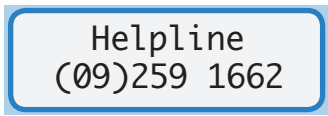
Heater returns to Normal Operation. Pressing Reset will also return the heater to Normal Operation.

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:



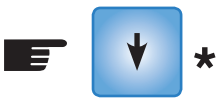


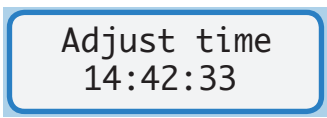
Press SELECT or MODE to exit.

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:





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

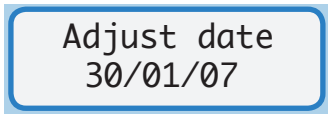
Use the and buttons to set the correct hours, then press SELECT:

Then the minutes will blink.

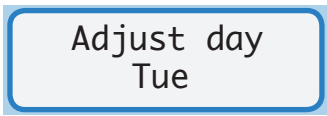
Use the and buttons to set the correct minutes, then press SELECT:

Then the seconds will blink.

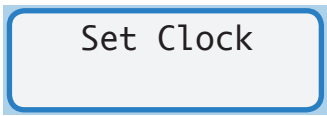
Use the and buttons to set the correct seconds, then press SELECT:



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:



Use the and buttons to set the day, then press SELECT:

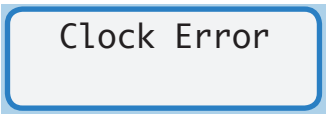


The real time clock has been set. Return to Operational Mode by pressing MODE or wait for timeout:

* Press x2 for Eco Smart-Vent models

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 two 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:



This can be fixed by resetting the clock as described above.

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

Note: Only applies to Eco Smart-Vent models (SV01, SV02, SV04 & SV06). Does not apply to Summer-Vent models (SV02S, SV04S & SV06S).

Use this function if you would like your system to turn off once your ceiling temperature exceeds the maximum temperature.

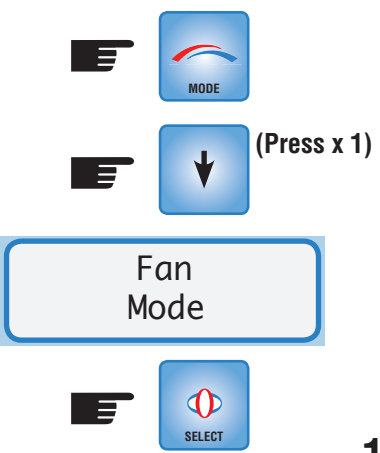
Fan Mode controls the operation of the fan when the ceiling temperature exceeds the system maximum temperature threshold. This feature is enabled when the user does not want the system to operate when the air in the ceiling space exceeds 35°C for example.

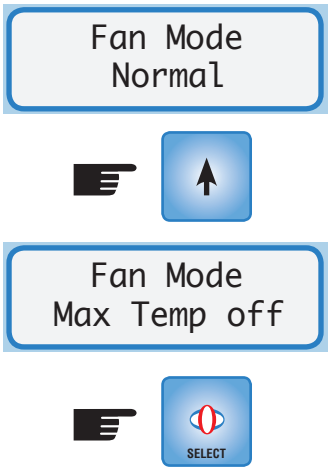
Default operation for Fan Mode is the fan operating at low (1) speed above maximum temperature.

The Reset button defaults to FAN Mode Normal.

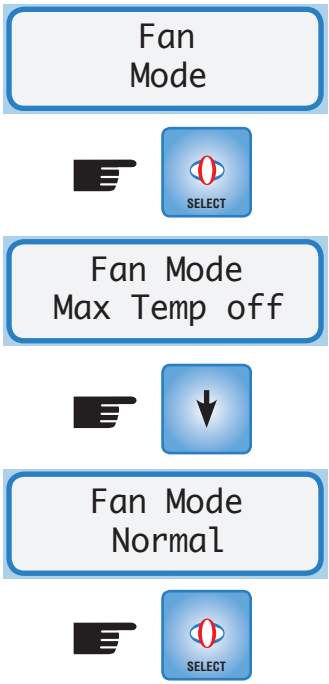
To disable the fan above maximum temperature:

To access the Fan Mode press:





The fan will now be disabled above the maximum temperature. Repeat the procedure to restore the fan operation to Normal Mode.



The Fan Mode has been set. Return to Operational Mode by pressing MODE.

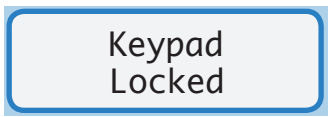
If this Fan Mode is active and the maximum temperature threshold has been exceeded then the Normal Operating Mode shows the fan icon as stationary & no fan speed number.

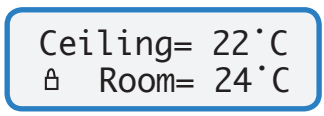
The fan icon will return to a rotating display when the ceiling temperature falls below the maximum temperature threshold or the fan operation is restored to normal or the system is RESET.

6. Keypad Lock Function

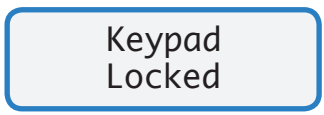
At times it is useful to 'lock' the keypad so that those little fingers or even bigger ones don't reconfigure your setup codes.

To prevent the keys from being accidentally pressed, press and hold SELECT until the controller beeps x4

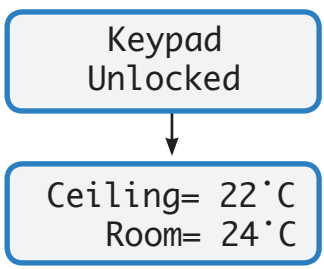




The padlock icon shows the keypad is locked. Pressing any key will have no effect, except to display:



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



Normal Operation is then restored and the padlock icon vanishes.

7. Reset Function

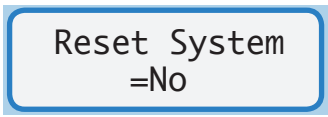
This is used to restore the RESET factory default settings for the minimum and maximum temperature range, the fan speed and the heater operation.

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

Factory default settings are:

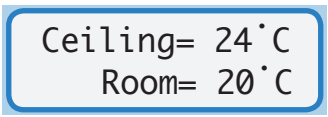
Max Temp	30C
Min Temp	5C
Fan	3 (Fast)
Heater	Disabled
Heater Mode	Normal

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

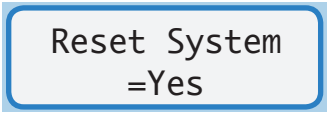


If a system reset is not required, press SELECT

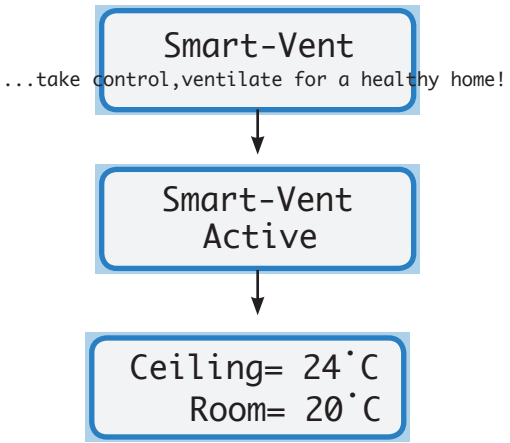
System will return operation to Normal Mode



If the system RESET is required press the UP arrow



Then press SELECT



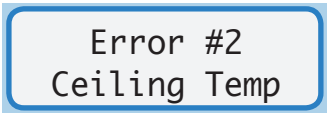
Note:
RESET does not function when Smart-Vent is in the OFF mode

8. Error Functions

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:

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



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

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 no-critical for the operation of the Smart-Vent.

However in all cases please contact Securimax for technical support ph (09) 259-1662

Customer Support Telephone (09) 259 1662 Facsimile: (09) 259 1661

Email: sales@securimax.co.nz Website: www.smartvent.co.nz

SECURIMAX LIMITED

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