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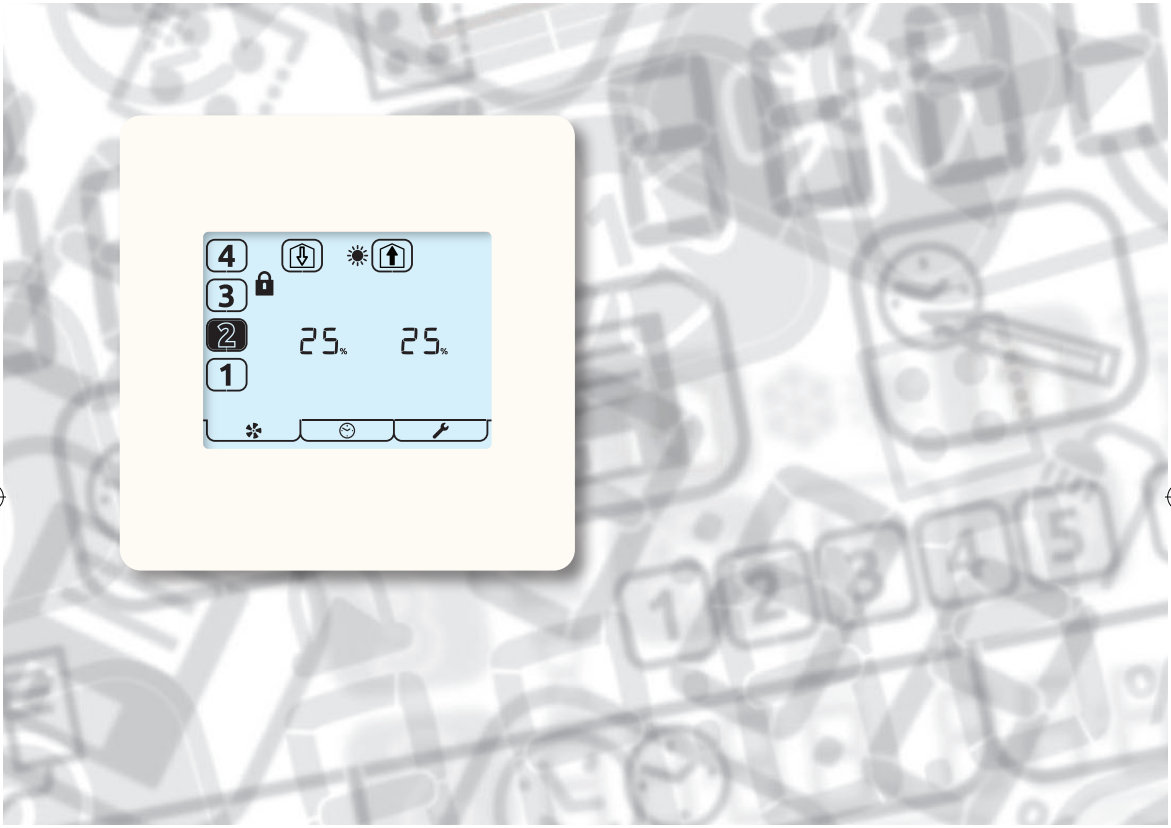


aura-t TP539

Product Manual

HRV controller HMB units

Titon®
ventilation systems

Warnings, Safety information and Guidance

Important Information

Read instructions fully before the installing this appliance.

1. This manual covers the operation of the HRV control system only, it must therefore be read in conjunction with the relevant heat recovery unit Product Manual.
2. Installation of the appliance and accessories must be carried out by a qualified and suitable competent person and be carried out in clean, dry conditions where dust and humidity are at minimal levels.
3. All wiring must conform to current I.E.E. Wiring Regulations and all applicable standards and Building Regulations.
4. aura-t must be connected using the communication cable provided.
5. Control & communication cables should not be placed within 50mm or on the same metal cable tray as any 230V lighting or power cables.
6. Ensure all cable glands are fully tightened.
7. The unit must be stored in a clean and dry environment. Do not install the appliance in areas where the following may be present or occur;

- Excessive oil or a grease laden atmosphere,
- Corrosive or flammable gases, liquids or vapours,
- Ambient temperatures above 40°C or below -5°C,
- Humidity levels above 90% or is a wet environment.

8. The appliance is not suitable for installation to the exterior of the dwelling.
9. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
10. Children should be supervised to ensure that they do not play with the appliance.
11. To avoid damaging the touch screen, do not operate it with sharp or hard objects; do not apply excessive fingertip pressure.
12. Do not use abrasive cleaners, waxes, solvents or alcohol based cleaning products; do not use paper towels for cleaning the aura-t.

Contents

Description

The aura-t is a programmable touch screen controller which monitors and displays the status of a Titon HMB HRV unit. The aura-t gives the user manual control of fan speeds and enables access to enhanced commissioning functions of the HRV.

- Retrofitted to standard HMB units (Compatible units have a socket on the terminal box)
- Supplied with a HMB unit, to enable remote siting of the aura-t.
- Integrated into the unit (not available with H200)

Packaging Contents

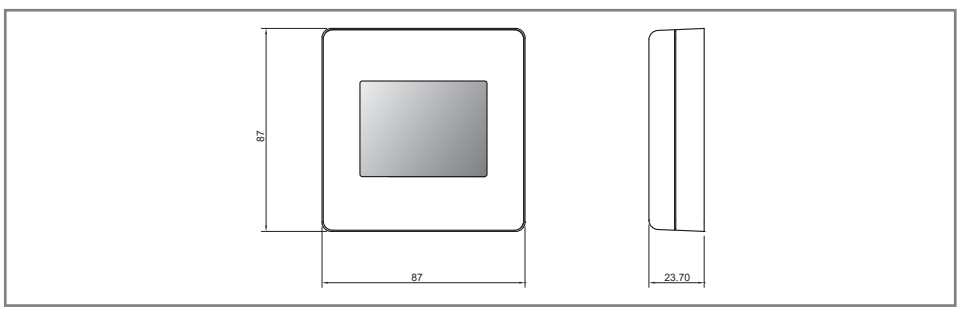
Inspect the unit when taking delivery. Check the unit for damage and that all accessories have been supplied.

Package supplied with:-

- 1 x aura-t controller.
- 1 x ~3m aura-t communication cable (not included with integrated versions).
- 1 x Product Manual.

Any shortages or damage must be immediately reported to the supplier.

Dimensions



aura - T

Product Overview

Controls & Features

Standard aura-t or auralite ready

The standard units have the ability to run standalone with the built in controller with potentiometer commission or connect either an aura-t controller for enhanced control and commissioning or an auralite LED status indicator using a the plug in connection.

Enhanced aura-t integrated or aura-t connected

These units use the aura-t, for control and commissioning, either integrated into the front of the units or connected using a the plug in connection.

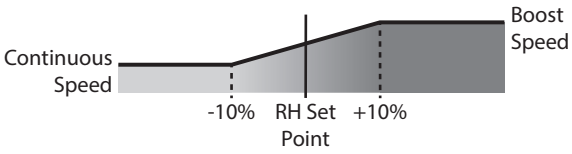
Unit Features

Feature	Standard without aura-t	Enhanced with aura-t connected or integrated
Programmable Speeds	The unit has 4 Speeds. Speed 1, Setback - Reduced ventilation. Setback Speed is automatically set at the mid point between minimum possible Continuous Speed and the selected Continuous Speed. Speed 2, Continuous - Normal ventilation. Speed 3, Boost - Increased ventilation. Continuous & Boost speeds are commissioned using the basic controllers potentiometer Speed 4, SUMMERboost® - Very high ventilation. This speed is set at 100%.	The unit has 4 programmable speed settings, all speeds are variable between 14-100% and allow independent speed setting of both supply and extract ventilation rates Speed 1, Setback - Reduced ventilation. Speed 2, Continuous - Normal ventilation. Speed 3, Boost - Increased ventilation. Speed 4, SUMMERboost® - Very high ventilation.

Feature	Standard without aura-t	Enhanced with aura-t connected or integrated
Speed Selection	Speed 1, Setback is enabled by connection of a volt free one-way switch, or combined with the Speed 3 Boost with the 3 position switch TP 508. Speed 3, Boost can be triggered by any device which provides a volt free one-way switch, such as a PIR, thermostat, humidistat or a standard one-way switch.	As the standard units with the additional functionality of: Speeds 1, 3 & 4 can be assigned to any of the volt free switch inputs. The unit speed can also be manually selected via the on screen 1, 2, 3 & 4 buttons/icons which are also used to display any automatically selected speed.
Summer Bypass	Summer Bypass is designed to operate during hot periods where fresh air can be vented straight into the property without being preheated by the extracted stale air. Summer Bypass operation is automatically controlled. The Summer Bypass mechanism diverts the stale air being extracted from the dwelling around the heat cell so that its heat energy is not transferred to the fresh air being supplied to the property.	

Feature	Standard without aura-t	Enhanced with aura-t connected or integrated
Volt free Switch inputs	Not configurable. Defaults: SW1 Summer Boost Disable SW2 Wet Room Boost SW3 Speed 1	The units have 3 configurable volt free switch inputs. Each of the switches can be configured to perform any one of the following functions: o Wet Room Boost - engages Speed 3 & uses Wet Room Boost Overrun Timer. o Kitchen Boost - engages Speed 3 & uses Kitchen Boost Overrun Timer. o SUMMERboost Disable - see right. o Speed 1 Setback o Speed 4 o Off (normally open) - switches off both fans o Off (normally closed) - switches off both fans o Manual Summer Bypass - engages bypass o Boost Inhibit - activates Boost Inhibit

Feature	Standard without aura-t	Enhanced with aura-t connected or integrated
SUMMERboost®	An optional SUMMERboost® facility is available that allows both the supply and extract fans to run at increased speed whenever the Summer Bypass is activate. By default SUMMERboost® is disabled by a Link Wire, see Wiring Diagrams. Removal of the link wire will enable SUMMERboost®. When SUMMERboost® is triggered by Summer Bypass the increased fan speed can be prevented either Manually or Automatically. Manual - This is by means of a volt-free switch wired directly into the controller PCB. Automatic - This is by means of a dedicated wall mounted room thermostat. SUMMERboost® will only operate when the temperature has exceeded the thermostat setting. Should the room temperature fall below the thermostat setting, then SUMMERboost® will not operate.	
Boost Overun Timer	Variable between 0 and 60 minutes. The Boost Speed can be triggered by any device which provides a volt free one-way switch, such as a PIR, thermostat, humidistat or a standard one-way switch.	
		Two independently configured timers are available. Wet Room & Kitchen
Boost Alert	Only available with auralite® LED status indicator.	The aura-t displays an alert if a switch has held the HRV in Boost for more than 2 hours.
Boost Inhibit	Not available.	Boost Inhibit is used to prevent the HRV's speed increasing

Feature	Standard without aura-t	Enhanced with aura-t connected or integrated
Internal Humidity Sensor	The fan speed increases proportionally between Continuous Speed & Boost Speed depending on the measured %RH. 	
	The Humidity Sensor's set point is variable from 55%RH to 85%RH Commissioned using the standard controllers' potentiometer.	The Humidity Sensor's set point is variable from 30%RH to 100%RH, Programmed via the touchscreen.
Filter Change Alert	Only available with auralite® LED status indicator.	The aura-t will display an alert after a specified time when the HRV filters require changing.
Eco Mode	Not available.	After a one minute period of inactivity the LCD will switch off.
Status Icons	LEDs with the auralite	The aura-t displays icons to indicates modes of operation in Real-time.
Fan Speed Cloning	Not available.	The current fan speeds can be saved to the aura-t and copied onto another HRV to reduce commissioning time.

When an aura-t controller is connected to a Standard unit all the Enhanced features are available and any setting changes made will be stored after the aura-t controller is disconnected.

Settings Reset

If required the controller can be reset. The following settings are returned to their default values:

Setting	Default Value
SW1	Summer Boost Disable
SW2	Wet Room Boost
SW3	Speed 1
Filter Change Period	6 months
Summer Bypass Extract Threshold	22°C
Summer Bypass Supply Threshold	15°C
SummerBoost	Enabled
Speed 4 :	Supply 100%
	Extract 100%

To reset the above settings:

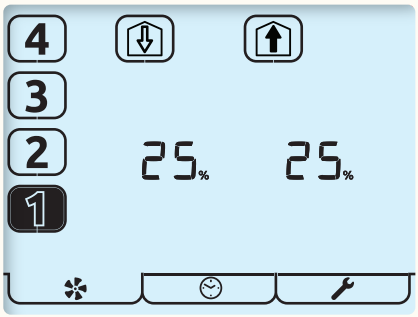
1. Power down the unit.
2. Place all three switch inputs into the closed position and the Commission switch on the unit PCB to the Continuous position.
3. Power up the unit for no longer than 10 seconds.
4. Power down the unit.
5. Return the commission switch on the unit PCB to the Run position and open the switches.
6. Power up the unit.

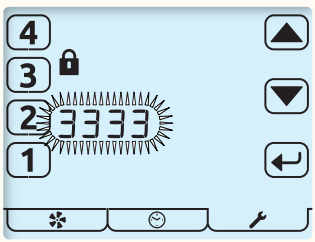
User Interface

The aura-t is operated via a LCD touchscreen. The screen is backlit, the backlight operates when the screen is touched.

Menu Tabs

The aura-t screen has three interactive menu screens which are selected via tabs at the bottom of the touchscreen.



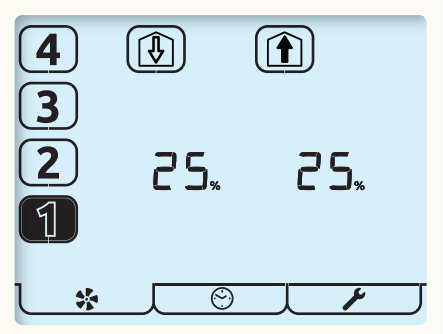


Passcode Screen

Tab			
Function	Monitor & Control Fan Commission	Running Hours	Setup
Name	Run Mode	Running Hours	Setup Mode
Description	Displays Fan Speed, Air Temperatures and Status. Gives access to Fan Speed Setup	Displays the length of time the HRV has been running in hours.	Gives access to RH threshold, Overrun Timers, Summer Bypass, Passcode settings, Filter Period & Filter Reset. Eco Mode & Switch Setup in a Sub-Menu.
If passcode is enabled enter 3333 to activate the above menus.			

Run Mode

The aura-t controls the HRV unit's 4 programmable speed settings.



This is the Run Mode screen; use the number buttons to select the required fan speeds. Speeds 1,3 & 4 are on a one hour timer, after the hour has elapsed the HRV will return to Speed 2.

The current running speed will be indicated by the corresponding number button being highlighted.

1 / 2	Press and Hold the [1] or [2] button to enable boost Inhibit, the Padlock icon will display to indicate Boost inhibit is active. Pressing and Holding either the [1] or [2] button again will disable Boost Inhibit.
Supply / Extract	Press the supply or extract buttons to cycle between fan speed and temperature. With fan speed selected the actual percentage speed of both fans is displayed. Selecting temperature displays the temperature of the air being supplied from the atmosphere and extracted from the property.

Status Icons

If the fan speed is being controlled by an external switch, or sensor this is indicated by an icon beneath the speed selection buttons being visible.

The icons are as follows:

	An external switch is active and is holding the HRV at the indicated speed. If this icon is flashing along with the Speed 3 button and the backlight a switch has held the HRV in Boost for more than 2 hours and Boost Alert is active.

	The speed the HRV is running at is being controlled by the internal humidity sensor.

Other Icons

Other status icon that may be visible on the screen are listed below:

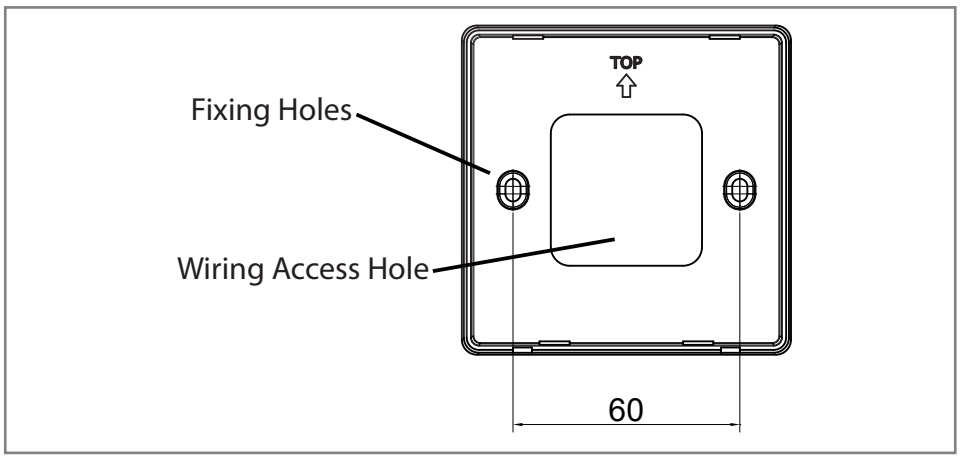
	The filters need changing or cleaning, refer to the Settings Menu for details of how to reset the timer.
	Frost Protection, if this icon is constantly lit the temperature outside is low and the speed of the HRV Supply Fan has been reduced to prevent damage to the Heat Cell. If the Frost icon and backlight are flashing the indoor temperature is low and both fans will have stopped. Tap any of the fan speed number buttons to restart the fans. If the temperature is still too cold, Frost Protection will be activated.
 	Summer Bypass is in operation, air from outside is being supplied directly to the property without recovering heat from the Heat Cell. This is often accompanied by SUMMERboost®, both fans switch to Speed 4 to increase the rate fresh air is supplied to the property and stale hot air is extracted. Press & Hold the [4] button to cancel SUMMERboost®.
	The Boost Overrun timer is active and is holding the HRV at Speed 3; this follows an external Boost switch being deactivated.
	The padlock icon adjacent to the Speed 3 button indicates Boost Inhibit is active. The HRV will not respond to external Boost switches or the internal Humidity sensor; it is only possible to select speeds 1 or 2.
	The warning icon flashing at the bottom of the screen adjacent to the Fan icon indicates a fan or thermistor failure has been detected; contact the installer. The corresponding icon will be flashing at the top of the screen. If very high temperatures are detected inside the HRV, fan failure mode will be enabled to protect the HRV from damage.

Location

The aura-t should be mounted in position convenient for the householder and where the supplied control cable will reach.

Fixing

1. Un-clip the front of the aura-t case from the Back Plate.
2. Thread the control cable through the hole in the Back Plate.

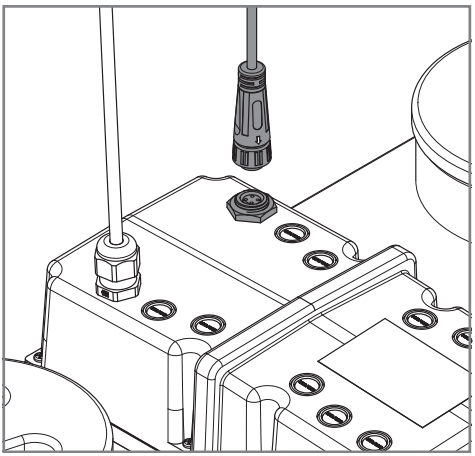


Connection to HRV

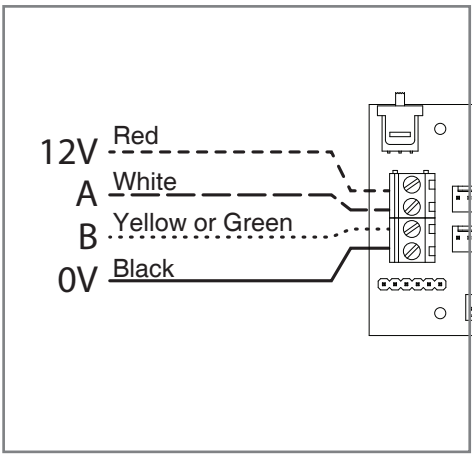
3. Fix Back Plate .
4. Connect the communication cable, see Wiring section.
5. Clip the front of aura-t to the Back Plate.

Wiring

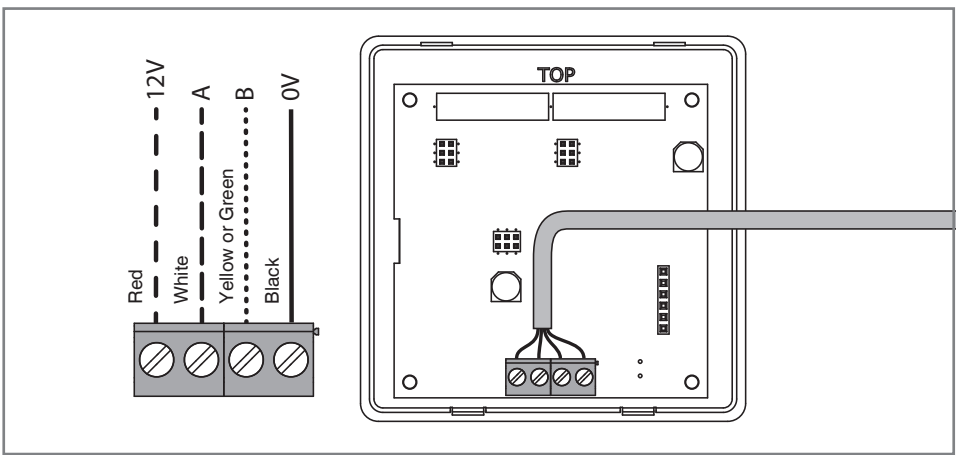
The aura-t's control cable will be supplied fitted with a plug in connector for connection to the HRV.



typical plug connection to HRV

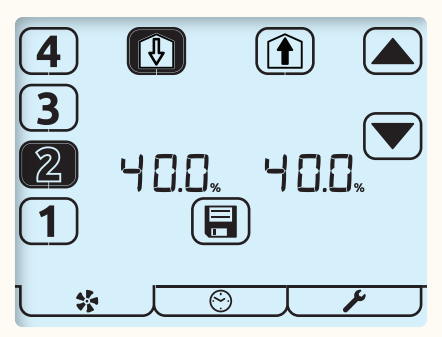


Wire connection to HRV



Connection to aura-t

Fan Commission



Commissioning

Fan Commission Mode is entered by pressing the Fan Button for 5 seconds whilst in Run Mode. The HRV's fan speeds will be displayed.

A flashing item on the screen indicates it is being edited.

1. Select the required fan speed using the number buttons at the left of the screen. The current fan speed is highlighted, the HRV will run at the selected speed.

Supply

Extract

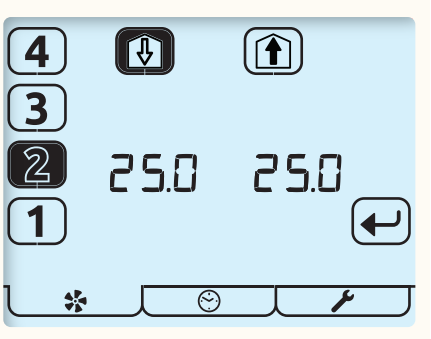
2. Use the Supply to dwelling or Extract from dwelling buttons at the top of the screen to select which fan is to be adjusted.

3. Use the arrow buttons to adjust the fan speed. The fan will respond in real-time to the adjustment being made.

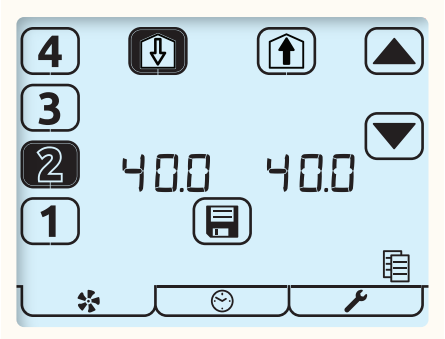
4. Repeat the above for all fan speeds requiring adjustment.

5. When all of the fan speeds are correct tap the Save button to write all the fan speed settings to the HRV and exit back to Run Mode.

Cloning



Cloning



Saving Fan Speeds to the aura-t

Enter Fan Commission Mode by pressing the Fan button for 5 seconds whilst in Run Mode. The HRV's fan speeds will be displayed. Tap the Fan button to display the fan speeds stored on the aura-t. The stored speeds can be viewed using the number buttons, the HRV will run at the selected speed.

To copy the stored speeds to the HRV tap the Enter button, the arrow buttons will be illuminated and the speeds could be adjusted as detailed in **Commissioning** or simply written to the HRV by tapping the Save button

Saving Fan Speeds to the aura-t

Supply

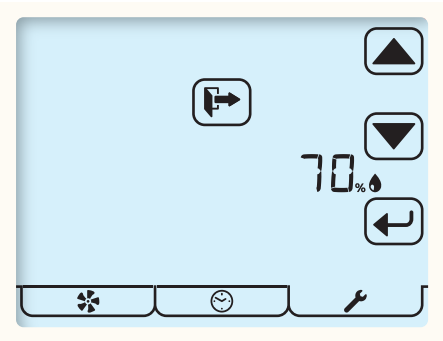
Extract

To save the current fan speed to the aura-t press and hold the Supply or Extract buttons. The copy icon will be illuminated and when save is tapped the fan speeds will be saved to the aura-t and written to the HRV.

Copy

The aura-t could then be connected to another HRV and the stored speeds written or **Cloned** to it as detailed above.

Controller Setup



Enter key.

Exit Key.

Tap the Setup Mode tab to enter the Setup Mode menu.

All the editable settings in the Controller Setup menu are accessed in the same way. Menu navigation is achieved by first Setting Selection and then Editing.

Setting Selection

- Arrow keys are used to select a setting, the setting will flash.
- Tapping the Enter key will allow the setting to edited.
- Tap the Exit button to return to Run Mode.

Setting Editing

- Arrow keys are used to change setting value.
- Tapping the Enter key whist editing will save and move to the next setting in the list.

The order in which editable settings are displayed is as follows.

1. Humidity threshold

2. Kitchen Overrun timer.

3. Wet room Overrun timer.

4. Summer Bypass Setup.

5. Passcode Disable / Enable.

6. Filter Period

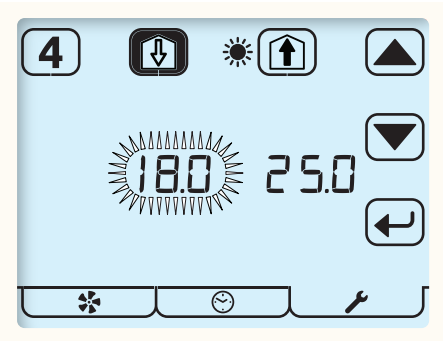
7. Filter Reset

If a filter change is required the reset ring will be flashing. Tap the Enter key to reset or the Exit key.

If a filter change is not due but the filter timer requires resetting press the Enter key twice. Reset the filter timer if the Filter Period has been changed to initialise the new period.

Tap Exit key to return to Run Mode.

Summer Bypass Setup



Use to adjust value up or down.

Enter key.

Supply

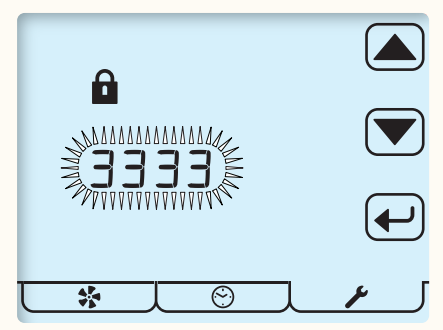
Extract

Use the Supply and Extract buttons to select which threshold is to be adjusted. Supply represents from atmosphere air temperature; Extract represents from dwelling air temperature.

4

Tap button[4] to enable / disable SUMMERboost.
Unfilled icon (shown) represents disabled.

Passcode Enable / Disable



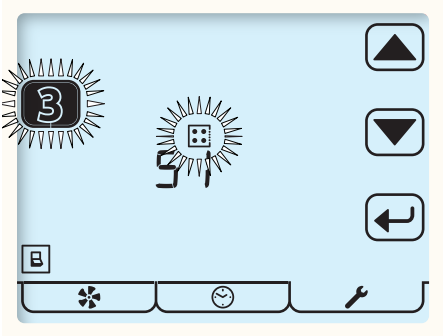
Tap Enter key to edit state.

Use to enable / disable Passcode.

- - - - indicates Passcode is disabled.
3 3 3 3 indicates Passcode is enabled.

Eco Mode and Switch Setup Menu

In this Sub-Menu of the Setup Menu the installer can enable or disable Eco Mode and configure the function of the HRV unit's switch inputs SW1, SW2, SW3 (see HRV Product Manual for details).



Enter key.

Exit Key.

Press and Hold the Setup Mode tab to enter the Eco Mode and Switch Setup Mode menu.*

Select between "Lcd-Eco and Lcd-On " to enable or disable Eco Mode. Switch Setup menu active.

	All switch inputs to the HRV unit; SW1, SW2, SW3 can be assigned any of the following functions.
3	Kitchen Boost, Speed 3.
3	Wet Room, Boost, Speed 3.
1	Speed 1, Setback
4	SUMMERboost disable.
4	Speed 4
OFF-no	Off Normally Open
OFF-nc	Off Normally Closed
	Manual Summer Bypass
	Boost Inhibit

* If Passcode is enabled this menu is only available from the Humidity threshold setup menu.

The aura-t is maintenance free.

Cleaning Exterior

For best results use a clean damp micro fibre cloth. Do not use abrasive cleaners, waxes, solvents or alcohol based cleaning products; do not use paper towels for cleaning the aura-t.

Appendix

aura-t Configurable Defaults

The table below details the default values and the range of available settings, plus any additional information about those settings the aura-t can configure. There is space available in the table where the installer should record all configuration settings.

Configurable Item		Range		Default	Configured	Additional information
		Min	Max			
Boost Overrun	Kitchen	0 mins	60 mins	10 mins		
	Wet Room	0 mins	60 mins	30* mins		*The exact value will be dependant on the PCB pot setting.
Boost Overrun timers are set independently for Kitchen and Wet Room inputs. Boost Overrun timers must be set greater than zero for any momentary switch to trigger boost. When using latching switches to initiate Speed 3, Boost, the Overrun timer will start when the latching switch is disengaged.						
Proportional Humidity Set point		30%	100%	70%*		
Proportional Humidity proportionally varies the fan speed between Continuous Speed 2 and Boost Speed 3 depending on the measured RH. This occurs over a 20%RH operating range with the set point being the mid point of this range. When the measured RH reaches a level 10%RH below the set point the fan speed starts to increase in proportion to the measured RH. This increase continues until at 10%RH above the set point the fans will be running at Boost speed. Note:- for set points of 80%RH or above the 20%RH operating range will be reduced and Speed 3 may not actually be reached.						
Speed 1, Setback.	Supply	14%	100%	18%		
	Extract	14%	100%	18%		
Speed 2, Continuous.	Supply	14%	100%	18%*		
	Extract	14%	100%	18%*		

Configurable Item		Range		Default	Configured	Additional information
		Min	Max			
Speed 3, Boost.	Supply	14%	100%	100%*		
	Extract	14%	100%	100%*		
Speed 4, SUMMERboost®	Supply	14%	100%	100%		
	Extract	14%	100%	100%		
Summer Bypass	Extract (From property)	17°C	35°C	22°C		
	Supply (From atmosphere)	10°C	20°C	15°C		
In order for the Summer Bypass to operate the temperatures of both the air being extracted from the property and supplied from outside must be above their individual thresholds. If the temperature of the Supply air is less than 1°C cooler than the Extracted air the Summer Bypass does not operate to prevent the warmer air being supplied directly to the property. Manual Summer Bypass switches the Summer Bypass in or out regardless of the measured temperatures.						
SUMMERboost®		Enabled	Disabled	Enabled		
SUMMERboost® operates in conjunction with Summer Bypass and switches the fans to Speed 4. It can also be disabled by a latching switch if fitted.						
Filter Change Interval		1 month	24 months	6 months		
Display Mode		ECO	ON	ECO		
Switch Inputs	SW1			SUMMERboost® Disable		
	SW2			"Wet Room Boost"		
	SW3			Speed 1 Setback		
Switch options are: Kitchen Boost, Wet Room Boost, Speed 1, SUMMERboost disable, Speed 4, OFF (normally open), OFF (normally closed), Manual Summer Bypass and Boost Inhibit. When configured as Kitchen or Wet room Boost, the switch will use the associated Boost overrun time for that room. When configured as OFF (normally open) both fans will stop when the switch is closed or if OFF (normally closed) is configured the fans will stop when the switch is opened.						

Some control features documented in this manual may not be compatible with older Titon HRV units. If you are replacing an older auralite controller please check with technical at Titon to confirm unit is compatible with aura-t.

In the event of any queries please contact the system installer.

Ensure this booklet is passed to the householder once installation & commissioning of the ventilation system is complete. This Product Manual must be kept in the Home Information Pack.

Installed by:

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