Only operates if TT=OC. This is the heating temperature that will be used in “Occupied mode” and will temporarily replace the user heat set point while the TT terminals are shorted together.

**oC=OFF Occupied Mode Cool Set.**

Only operates if TT=OC. This is the cooling temperature that will be used in “Occupied mode” and will temporarily replace the user cool set point while the TT terminals are shorted together.

**SP=2 Stage 1 Span**

Hysteresis for Stage 1. (difference between heating and cooling turning on and off) Sp=1 0.5c SP=2 1.0c Sp=3 1.5c.

**Sd=2 Stage 2 Span**

Hysteresis for Stage 2. (difference between heating and cooling turning on and off) Sd=1 0.5c Sd=2 1.0c Sd=3 1.5c.

**DT=35 Upstage delay time**

Time in minutes before next stage of heating or cooling is to be called. Delay only operates if stage trip temperature has not yet been reached. Adjustable between 10 ~ 90 Minutes in 5 minute steps.

**OS=0 Optimised Start/stop. (Adaptive Recovery)**

OS=0 – Optimised start/stop function Off.

OS=1 – Optimised start/stop function running.

**C2=0.0 Calibration Remote Sensor**

Calibration Offset for the TT terminal temperature sensor. Adjustable range +/ – 5 deg C (+/ – 9 F).

**Co=0(41F) Cooling OFF temperature.**

Only operates if TT=OA and outside temperature sensor is fitted. Outside air temperature below this value will force the cooling function OFF. Adjustable between 5 ~37c. (41~98F).

**Ho=35 (95F) Heating OFF temperature.**

Only operates if TT=OA and outside temperature sensor is fitted. Outside air temperature above this value will force the heating function OFF. Adjustable between 5 ~37c. (41~98F).

**HB=37 (98F) High Balance Point.**

TT=OA, the outside temperature sensor must be fitted and Sw 1=off. 2nd (or 3rd) stage heating is locked out when the outside air is above this temperature. Adjustable between 5 ~37c. (41~98F).

**LB=9.5 (15f) Low Balance point.**

TT=OA, the outside temperature sensor fitted, H3=EH, Sw 1=off and Sw2=on. Outside temperatures below this value will automatically select Emergency Heat mode. Adjustable between – 9.5 ~37c. (15~98F).

**Ft=off Filter warning time Return air filter cleaning warning time.**

Adjustable between off and 900 hours. Ad=07 Modbus Address. Modbus communications address

Cd=01 Commissioning Mode..

Cd=0 – Commissioning mode is OFF.

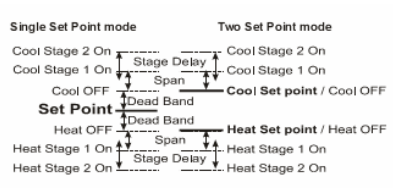
Cd=1 – All time delays are off or reduced to a very small value.

**tS=0 Factory test mode**

TS=0 – Factory test Mode OFF. TS=1 – Display configuration code.* TS=2 – Step cycle all relays in sequence, 1 2 3 4 5 etc.

## Control logic

Single Set Point mode Two Set Point mode This simple diagram provides a general insight into the control logic of the A4100 thermostat. It attempts to describe the action of the DB=XX, the SP=XX and SD=XX advanced installer control




capabilities in both two set point and single set point mode. By adjusting these three values to suit the needs of the user or equipment extremely tight temperature control can be achieved, or a more energy efficient temperature control profile can be set.

In single set point mode (sw8=off) the individual heating and cooling set points are replaced by a “Dead Band” where the heating and cooling differential is controlled by a installer set value. This is the simplest method of temperature control.

## Commissioning

As with any thermostat, commissioning ensures that the thermostat and the equipment connected to it are operating correctly and as expected. Although the A4100 is a multifunctional thermostat, commissioning is quite a simple process. Follow the steps detailed below and use the trouble shooting guide if you encounter a problem.

When the thermostat is fitted to the base plate and when 24VAC power is first applied, the LCD should briefly show all available segments (a LCD function test), then display the time and operating mode etc.

The A4100 is fitted with a number of safety and energy saving time delays. If desired,

these can be disabled for commissioning purposes by entering the installer mode and setting the CD=00 value to read CD=01. After exiting the installer menu you will note a “Spanner” icon flashing on the LCD to remind you that commissioning mode is ON. After commissioning has been completed it is important to disable commissioning mode by entering the installer menu once again and setting the CD=01 value back to CD=00.

NOTE:when in commissioning mode ALL time delays are either OFF or reduced to a extremely low value, it is therefore normal to potentially call for 3rd stage heating almost instantly 0.5deg below the heating set point.

If you choose not to use commissioning mode you may see various words and Icons flashing in the LCD when ever a time period is in use. For example, the word “HEAT” may flash to indicate heating is required but being held off by the 4 minute anti – cycle timer. Or the word “HEATING” may be flashing to indicate set point has been achieved however heating is being held ON by the minimum run timer.

*The golden rule with the A4100 is anything that flashes is a time period overriding what would normally be expected to occur; either a function is being held on or off momentarily. Please be patient.*

## Test fan operation.

With the thermostat OFF (tap the mode key to show OFF in the LCD). Simply tap the fan key to cycle through the available fan speeds. As the LCD changes to show the fan speed or fan mode you should here faint “clicks” as the A4100 internal relays change, the equipment fan speed should change accordingly.

**Test heating and cooling (if both fitted).**

Turn the A4100 to Auto season change mode by tapping the mode key until the words “Heat” and “Cool” are shown on the LCD.

Using the temp + or Temp – key set the desired temperature a few degrees below the ambient temperature. After a few moments you will hear a click and the word “Heat” will change to “Heating”. Verify that the heating system is on and operating correctly.

Using the temp + or Temp – key set the desired temperature a few degrees above the ambient temperature. After a few moments you will hear a click and the word “Cool” will change to “Cooling”. Verify that the cooling system is on and operating correctly.

Tap the mode key turn the A4100 OFF. After any necessary timers have expired all heating, cooling and fan functions should stop. Verify that the system has shut down.

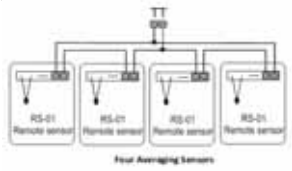
*NOTE:in HP mode (SW2=ON) it is normal for the reversing valve to remain energised after the compressor has stopped. This is done to prevent “decompression HISS” and to limit the wear on the reversing valve. 30 minutes after the last reversing valve use it will deenergise to conserve power.*

This commissioning of the A4100 is complete. If commissioning mode has been used it is important that the function be turned OFF before handover to the user.

Using the User Manual as a guide set the real time clock and the preferred user programme (if applicable). Explain equipment & thermostat operation to the user. Commissioning is complete.

**Using Remote Temperature**

Single or multiple room air temperature sensors can be connected to the A4100 “TT” terminals if temperature averaging over a larger area is desired. Shown are 4 examples of commonly used sensor configurations.




Note – Either TT=RS (remote sensor) or TT=Av (Averaging sensors) value must be set in the advanced installer menu for these sensors to be used.

Please note the configuration of RS – 01 & RS – 02 sensors in the examples provided above. Other sensor configurations are also available.

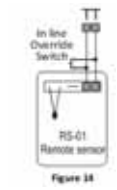


Figure 14

When used in Start / Stop commercial programmable mode (SW6=on SW8=off),the after hours run timer can be toggled on or off as required with a momentary press key on the remote sensor. See figure 14 Left.

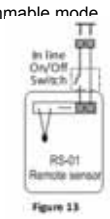


Figure 13

As the A4100 “Auto detects” sensors connected to the Switch Override Switch “TT” terminals, temperature sensors can also be switched on and off as required by placing a switch in the sensor wiring to open circuit the sensor loop. See figure 13 Right.

## Advanced Functions

**Modbus Communications**

The A4100 has integrated Modbus communications capabilities where, using a remote PC or building Direct Digital Control (DDC) system may view or adjust any of the A4100 functions remotely.

It is not the scope of this manual to provide detail on the communication capability of the A4100.

The communications port of the A4100 has 3 terminals marked “A”, “B” & “C”. Terminals “A” & “B” are used for communication, terminal “C” is used as a screen ground to protect the integrity of the Acommunication signal. To Network maximum of 35 A4100 can be connected to any single hub.

Figure 15

Each A4100 on the hub must have a unique network address (factory default is 7). These settings are adjustable from the advanced installer menu.

**Factory Test Mode**

The A4100 is fitted with a simple factory Test Mode where you can confirm that all relays outputs functions and the current configuration of the thermostat.

Ts=0 Factory Test Function is OFF

Ts=1 Test current switch configuration. The A4100 will display a unique code that will identify the current switch settings.

Ts=2 The A4100 will cycle each of its relays on then off in an endless loop.

**High and Low balance points**

The A4100 is fitted with both High and Low Balance Point control capability. For these functions to operate the Installer setting must be TT=OA (outside air temperature sensor fitted), the outside air sensor must be installed and SW1 must be OFF (Single fan speed mode).

**High Balance point**

Set the installer menu value “HB=XX”. When the outside air temperature is above this value, second or third stages of heating are held off regardless of the room and set temperature. Set this function to prevent the excessive consumption of energy when the outside air temperature is warm enough not to require additional heating stages to be used.

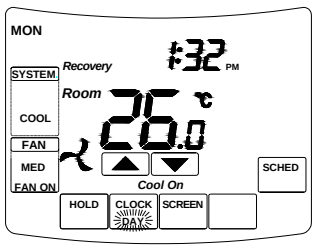
**Low Balance point**

SW2=on, W3 =EH (Emergency Heat Mode) Set the installer menu value “LB=XX”. When the outside air temperature is below this value the A4100 will automatically switch to emergency heat mode when only use the emergency heating system when heating is required. If the outside temperature is above this LB=XX value the emergency heat mode can be selected manually at anytime with the “PROG DAY” key.

**Setting up the Heat & Cool Off functions**

To conserve energy, the A4100 can suspend the heating or cooling functions if the outside air temperature is within a prescribed installer set range. If the outside air temperature is above the HO=XX (heating OFF) value, heating will not be called regardless of the room and set temperature. If the outside air temperature is below the CO=XX value, cooling will not be called regardless of the room and set temperature. “Heat” or “Cool” and the word “Locked” will flash on the LCD to show that these modes have been restricted.

**Adaptive recovery**




Only available in programmable mode (sw6=on). The adaptive recovery function of the A4100 permits the user to program a time that a desired set temperature is required, letting the thermostat calculate the most energy efficient time to turn on to achieve the desired temperature at the selected time.

For example, if the user typically returns home at 5:00pm at the end of the work day, setting program #3 (if used in residential programmable mode) to 5:00pm the A4100 will calculate the most energy efficient time based on set, room temperature and history of temperature change to bring on the Equipment to meet the set temperature by 5:00pm.

Adaptive recovery may also prevent the A4100 from running for a few moments just prior to a program change occurs. “recovery” is shown in the LCD when ever Adaptive recovery is being used.

**Specifications**

| | |
|---|---|
| Input Voltage | 24VAC 50/60 Hz +/ – 15%. |
| Relay rating | 24VAC @ 1Amp maximum per relay. |
| Operating Temperature | 0 – 50C (32 to 122F). |
| Operating | RH 0 – 95% (non condensing). |
| Storage Temperature | 0 – 65C (32 to 150F). |
| Size 113 x 103 x 23mm. | Display Size 74 x 55mm. |
| Temperature Sensor(s) | 10K NTC type 3. |
| Accuracy | +/ – 0.3deg C @ 25 C. (77F) |
| Stage Delays | Minimum temperature change over time method. |
| Timed upstage Delay | 5~90 minutes. |
| Anti – cycle Delay | Off to 4 minutes. |
| Maximum hourly cycles | Unlimited, 30, 10 or 6. (Installer set) |
| Display resolution | 0.5 deg C (1F). |
| Control Range | Off to 38c (100F). |
| Outside Air temp display range | – 8 ~ +60c (17 ~ 140F). |
| Back light Blue EL. | Backlight life 3,000 hours to half brightness. |
| Optimised Start/Stop method | Time to start vs temp differential method – updating. |
| Communications Protocol | Modbus – contact factory for objects list. |
| Fan speeds | Based on difference between room and set temp. |
| Approvals FCC (Part 15) (pending), | C – tick. |
| Warranty | 3 years |

Sensor Reference Table

| KΩ | 24.3 | 22.0 | 20.0 | 18.1 | 16.2 | 14.3 | 13.7 |
|---|---|---|---|---|---|---|---|
| C | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| F | 42.8 | 46.4 | 50 | 53.6 | 57.2 | 60.8 | 64.4 |
| KΩ | 12.5 | 11.4 | 10.4 | 10.0 | 9.57 | 8.75 | 8.05 |
| C | 20 | 22 | 24 | 25 | 26 | 28 | 30 |
| F | 68 | 71.6 | 75.2 | 77 | 78.8 | 82.4 | 86 |

**Troubleshooting**

| Symptom | Suspected Fault | Suggested remedy |
|---|---|---|
| Temperature display seems inaccurate | Air from the wall cavity may be leaking into therear of the thermostat / sensor enclosure. | Plug holes in wall with tape to prevent leaks |
| | The internally fitted temperature sensor is foldedback inside the Chameleon and not beingexposed to the room air temperature. | Carefully move the room temperaturesensor bead so that it is just behind thesensor opening in the case. |
| | External heat or cool source such as lamps,televisions or drafts from open doors affecting the accuracy of sensor. | Move lamps, vents or other sources of abnormal temperature away from sensors |
| | Sensor calibration may setting are incorrect | Adjust C1=XX value in installer mode to correct perceived sensor inaccuracy. |
| “Locked” appears on LCD and heating or cooling will not operate. | This is not a fault.Outside air temp to high to require heating Outside air temp to low to require cooling. | The Ho=XX &/or Co=XX value is inhibiting heating or cooling calls. Change these values in the installer menu, |
| Heating or cooling runs in dead band. | A4100 incorrectly set to HP mode. (A4100 keeps reversing valve energised after eating / cooling has stopped to limit ecompression noise from AC system.) | Set SW2=OFF and retest heating & cooling operation. |
| | Minimum run period has not yet expired. Words Heating” or “Cooling flash in the LCD | Sw7 sets minimum run period from 2 or 6 minutes. |
| | Compressor and reversing valve wiring crossed in HP mode (sw2=on) | Check W1 & Y1, Y2 for correct connections. |
| Wall controller has no display | Power failure or faulty A4100 | Check for 24VAC on the 24 & 24C terminals |
| Reversing valve remains energised after heating or cooling has stopped. | This is not a fault | The reversing valve remains energised after the heating/cooling has stoped to limit decompression hiss. Reversing valve will deenergise within 2 hours of the last call. |
| Spanner Symbol flashes on LCD | This is not a fault Commissioning mode enabled. | Exit commissioning mode before handover to user. |
| E.Heat or E.Heating is shown on LCD without manually selecting it. | This is not a fault. | LBP reached, outside air too cold for reliable HP operation. Set LBP with the LB=XX value in the installer menu, |
| The word OFF is flashing in the LCD. Mode button has no effect. | This is not a fault | TT=Of in advanced installer menu. |
| Some buttons do not appear to operate. Padlock is show on LCD. | Key board lock is on. | LC=XX value in advanced installer mode set the lock values. |
| Cannot enter heat or cool modes | A4100 thermostat set for Heating or cooling only modes | Heating or cooling mode not available on your air conditioning system. |
| Cannot set heating and cooling to desired value. Padlock symbol flashes | This is not a fault. | HL=XX (heating set point limit) and CL=XX (cooling set point limit) restrict control range.. |
| Outside Air Temp display is showing dashes | Outside air temperature air sensor has failed. | Check wiring and outside air sensor. Replace outside air sensor |
| | No outside air sensor fitted. | Change TT=AO to TT=RS in advanced installer menu. |
| “Heat” or “Cool” is flashing in the LCD. Heating or cooling has not started. | This is not a fault. Heating or cooling will start shortly. | Anti cycle delay in progress. This can be disabled if required for commissioning. |
| The Fan runs on for some time after the heating or cooling stops, even when I turn the A4100 OFF. | This is not a fault.` | The fan purge mode is set. FP=XX value |
| A4100 displays wrong mode (C or F). | The A4100 can operate in both Deg C and Deg F mode as set in installer menu. | Check the CF=XX value |
| Can not select multiple fan speeds | A4100 set for single fan speed Sw=OFF | Turn SW1 to ON. NOTE, 3 fan speed mode can only be used on single stage systems. |

# Touchscreen Thermostat Owner & User Manual

Your new air conditioning system thermostat has been built using the best components and design philosophy currently available. As a result, if properly installed A4100 thermostat will provide you with many years of trouble free comfort.

By taking the time to read and understand these simple instructions you can take advantage of many of the capabilities that are offered in this premium product.

## Introduction

The A4100 thermostat is able to be used as a residential programmable thermostat, a commercial programmable thermostat or as a simple to use manual thermostat. Your installer will have set these modes to best suit your individual needs.

For clarity, this user manual is broken into the following main sections.

Residential Programmable Mode.

Commercial Programmable Mode.

Manual Mode.

common Functions to all modes.

**Please Note:**

The A4100thermostat can be configured by your installer to a large variety of configurations and functions so that your A4100thermostat is perfect for you and your individual needs. As such, this manual may describe a function or feature not active on your thermostat.

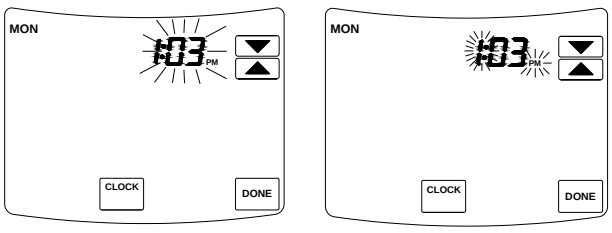
**Clean Thermostat Screen**

The thermostat has a touch screen interaction. Follow these steps to clean the screen without making thermostat changes:

1.Press the Screen key. Thermostat locks out all touch keys for 30 seconds to allow for cleaning.

2. To cancel the CLEAN SCREEN early, press the Cancel key.

## Setting the clock




The A4100 thermostat is fitted with a real time clock. This clock is used by the A4100 thermostat for the programming functions as described below.

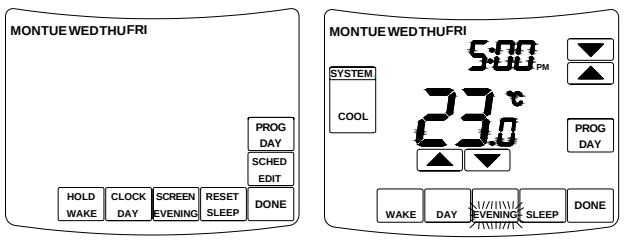
It is essential that the clock time and day are set accurately if you require your programmed events to start on time.

To set the clock, tap the “CLOCK key. The LCD will show the Hours Digit flashing. Use the up or down key to adjust the hours to the correct time (note the AM / PM symbol). Tap the “CLOCK” key again and now the minute’s digits will flash. Adjust this value using the up or down key to show the correct minute. Tap the “CLOCK” key again and now the weekday flashes, again use the up or down key to set this value to the correct day of the week. Tap the “DONE” key again to exit the clock set function.

Your clock is now set.

## Residential Programmable Mode

**Programming your 4 daily events**




The A4100 is an individual 7 - day and 5+2 programmable thermostat. For each day of the week you are able to have 4 timed set temperature changes or programmed events. For clarity these events are conveniently named “WAKE”, “DAY”, “EVENING”&“SLEEP”.

The number “WAKE” event may be used to set the temperatures of your home that you would like to wake to.

The number “DAY” event is typically used to set the temperatures you wish your home to maintain whilst you are away at work.

The number “EVENING” event is often used to set the temperature you wish to be greeted with upon returning home at the end of the day.

The number “SLEEP” event can be used to set a comfortable and energy efficient temperature while you sleep. You are permitted to have every event occur at a different time of the day and set a different heating and cooling set temperature for each of the 4 daily events. You are also able to set a heating set point temperature between Heating OFF and 38 degrees Celsius (100 F). You are able to set a cooling temperature between zero degrees Celsius (32F) and Cooling OFF (provided your installer has not set control limits that restrict this range of adjustment).

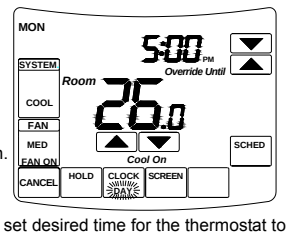
Remember, each of the 4 programmed event set temperatures will hold the home temperature until the next event time arrives where the new event set temperature will then be used. So The “WAKE” event set temperature will be the temperature of your home until the “DAY” event time arrives, then The DAY” event set temperature will be the temperature of your home until the “EVENING” event time arrives, then The “EVENING” event set temperature will be the temperature of your home until the “SLEEP” event time arrives, then The “SLEEP” event set temperature will be the temperature of your home until the next days “WAKE” event time arrives.

Programming your A4100 thermostat or setting these daily events is no more complicated than setting the clock as described previously. The same keys are used in the same sequence.The LCD shows only relevant information for the event being adjusted thus reducing possible errors that may be caused by having confusing information displayed on the LCD.

To enter the program mode. Press “SCHED” key. The display will change to show the period day and 4-period. Using the PROG DAY keys adjust the day to the day you wish to start programming or to the day you wish to edit an existing event or program.

Top the “WAKE”, “DAY”, “EVENING”&“SLEEP” botton to select period. using the “POOG DAY”to select workday or weekend or individual,using the up or down keys to make changes.use “DONE” key to exit the program set function

**Temperature Override**




Holds temperature temporarily until the next scheduled period time or until the time the user sets.

1.Press Up or Down arrow next to the temperature you want to adjust.

Hold Temperature Until time appears on the screen. The Hold Temperature Until time defaults to the start time of the next scheduled period.

2. Press Up or Down arrow next to the Time key to set desired time for the thermostat to resume

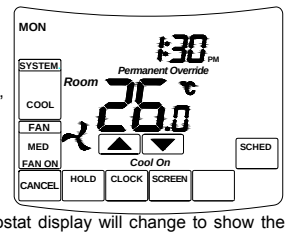
3. Press the Cancel or Sched key to cancel Override Temperature Until and resume schedule.

4. Press Done key.

*IMPORTANT*

*The current day of the week should already be set correctly. If not, see Installer Setup to set the day.*

**Permanent Program Hold.**



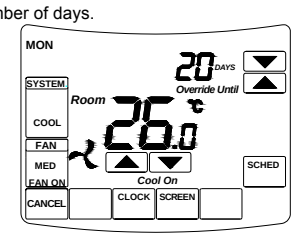

Tap the “HOLD” key to override the A4100 programmed time schedule and hold the currently set temperature. This set temperature will be maintained until released by tapping the “CANCEL” key. The LCD shows the word “P”

to confirm the A4100 time schedule has been held. If desired, while the program is held the current set temperature can be adjusted simply by pressing the up or down keys. The A4100 thermostat display will change to show the word “SET”, and the active set point for the current mode. (Heating or Cooling) as you hold the up or down keys the current set point will change. To Review the set Temperature.

Simply tap the up or down key to turn the LCD backlight on, tap the up or down key again and now the LCD will change and display the currently set temperature(s).

## Vacation Hold

Changes temperature setting for a designated number of days.




1. Press the Up and Down arrow keys to set the desired temperature while away on vacation.

Notice that —Override Until“ time is shown on the screen. (This is the time the Vacation Hold override expires after the number of days ends.)

2. Press Hold key twice. Screen shows — “Override Until“ one day.

3. Press Up and Down arrow keys to change the number of Days you desire thermostat to override the schedule.

NOTE: Days Up and Down arrows appear for approximately seven seconds. Pressing just below Hold Temperature Until on the screen allows the Days Up and Down arrows to reappear.

4. To cancel the Vacation Hold override early, press the Cancel key.

NOTE:When the number of days of Vacation Hold expires, the screen shows Following Schedule to indicate that Vacation Hold has ended.

## Commercial Programmable Mode

**Programming**

your 2 daily events Commercial programming of the A4100 has been designed to be an extremely simple and logical process. The A4100 permits you to program a DAY time for the air conditioning system, then a Stop time for each day of the week. When the A4100 is displaying “DAY” in the LCD, it will maintain whatever set point has been chosen. When the A4100 is displaying “EVENING” in the LCD, it will be OFF (or maintain an energy efficient maintenance temperature if set by the installer).

To enter the program mode. Press the “SCHED” key. To enter the program mode. The display will change to show the period day and 2-period.Use POOG DAY botton to selsct Programming Day. Use DAY and EVENING keys to select period. Using the up or down keys set the minute to the time you wish the building air conditioning system to “DAY” for the currently elected day.

**After hours Run Timer For convenience**

the installer may have set the after - hours run function. This function permits you to temporarily turn the A4100 on for an installer set period of time, at the conclusion of which the A4100 will automatically turn back off again. To activate the after - hours run timer, simply tap the “HOLD” key. (Or if fitted, the “After Hours” run key fitted to the remote room temperature sensor.) The LCD will show the word “TIMER” flashing in the LCD. Tapping the “CANCEL” key (or after hours key on the remote sensor) again will cancel any unexpired part of the timer and the A4100 will switch back off. To Review the set Temperature. Simply tap the up or down key to turn the LCD backlight on, tap the up or down key the LCD will change and display the currently set temperature(s).

## Manual Mode

Setting your desired temperature Simply press the up or down keys. The A4100 hermostat display will change to show the word “SET”, and the active set point for the current mode. (Heating or Cooling) as you hold the up or down keys the current set point will change. If Auto mode is selected, after adjusting the Heat set point wait without touching a key for 3 seconds for the A4100 thermostat display to change to show “Cool” and “SET” and your current cooling set temperature. If desired change this value with the up or down keys. Use “DONE” key exit this menu. Your new set temperatures will be maintained.

**Switching between day and evening set points**

The A4100 will keep two sets of temperature in its memory (if enabled by your installer), typically used for day and night temperatures. This provides you with a quick and simple way to change between your day and evening time set temperatures. Simply tap the “SCHED” key to switch between Day & Evening Modes. Set the Day and separate Evening temperatures as described previously.

## Turning your thermostat OFF

To turn your A4100 Off, simply tap the “SYSTEM” key until the LCD shows the word “OFF”.

## To Review the set Temperature.

Simply tap the up or down key to turn the LCD backlight on and now the LCD will change and display the currently set temperature(s).

## Common Functions

The Keys Explained

**System key**

Tap this key to cycle the A4100 thermostat through the available modes, Heat only, Cool only, Auto season change over mode, Emergency Heat (if fitted), and OFF. (Note – Not all modes may be active on your A4100)

NOTE, the installer may have activated the Anti freeze function where your heating system will turn on whenever the room temperature falls below 5c (41f), regardless of the currently selected mode or whether the A4100 is On or Off.

**Hold key**

Commercial Programmable Mode.

This key initiates the after hours run timer where, for an installer programmed period the A4100 will replace the stop program temperatures and temporarily use the start program temperatures to maintain the building temperatures.

Residential Programmable Mode.

The “HOLD key is used to override the current programs time schedule and to hold the currently set temperature indefinitely. This set temperature will be maintained until released the held temperature by tapping the “CANCEL” key. Timer will be displayed in the LCD to confirm this function is active.

**Tempature up key**

Use tempature up key to increase the desired room temperature for the heating or cooling modes, or increase a “value” in programming modes. Also used to force override the preprogrammed temperatures and temporarily replace them with a new higher set temperature.

**Tempature down key**

Use tempature down key to decrease the desired room temperature for heating or cooling modes, or decrease a “value” in programming modes. Also used to force override the pre - programmed temperatures and temporarily replace them with a new lower set temperature.

Clock key

Tap the “CLOCK” key to begin setting the clock.

Sched key

Press the “SCHED” key to begin programming your daily events. In Manual mode: Tap the “**SCHED**” key to switch between Day & Night modes..

**Fan key**

Fan Single Speed Fan systems - . Tap this key to cycle between Continuous Fan (Fan ON) and Auto Fan. Three Speed Fan systems – Tap this key to cycle between the 7 available fan modes being Low speed, Medium speed, High speed & Auto Fan speeds in auto fan mode and then Low speed, Medium speed, High speed in Fan ON mode. If the A4100is OFF, tapping the “FAN” key will turn the fan ON or OFF as desired. If your system has 3 fan speeds these can also be selected by tapping the “FAN” key.

**Wake Day Evening Sleep key**

Tap those key can select period in programming mode.

**Reset key**

Tap Reset key clean filter count.

**Prog Day key**

Tap this key to select project day in programming mode.

**Cancel key**

Tap this key to Cancel override mode and setting clock mode.and etc.

**Done key**

Tap this key to finish setting.

## Control Modes

**Heat Only Mode**

The A4100 thermostat will turn on the Heating when the room temperature falls below the Heat set point temperature. In Heat only mode the A4100thermostat will NOT bring on the Cooling regardless of the room temperature and the Cooling Set point temperature. In Heat only mode, only the word “Heat” will be displayed in the LCD. When your A4100is calling for heat, the word “Heating” will be displayed in the LCD. If the word “Heat” is flashing in the LCD the A4100is performing a safety anti - cycle delay prior to restating the heating.

**E. Heat Mode**

The A4100 thermostat will only use your emergency heating device to maintain your desired heating temperature. This method of heating can be quite expensive therefore it is not recommended to use emergency heat mode unless it is essential. When your air conditioning system is heating using emergency heat, the word “E.Heat” in the LCD will change to the word “E.Heating”.

**Cool Only Mode**

The A4100 thermostat will turn on the Cooling when the room temperature rises above the Cool set point. In Cool only mode the A4100thermostat will NOT bring on the Heating regardless of the room temperature and Heating set point temperature. In Cool only mode, only the word “Cool” will be displayed in the LCD. When your air conditioning system is cooling, the word “Cool” in the LCD will change to the word “Cooling”. If the word “Cool” is flashing in the LCD the A4100is performing a safety anti - cycle delay prior to restating the Cooling.

**Auto - change Over Mode**

The A4100 thermostat will turn on the Heating if the room temperature falls below the Heat Set point temperature and the Cooling if the room temperature rises above the Cool Set point. This is the recommended mode as it provides automatic control of the air conditioning system to maintain the desired room temperature. Auto changeover mode is indicated by both the words “Heat” & “Cool” in the LCD. If the word “Heat” or “Cool” is flashing in the LCD the A4100is performing a safety anti - cycle delay prior to restating the air conditioning system.

## Fan Functions Explained

**Auto Fan Mode**

If the user has selected Auto Fan mode with the “FAN” key the indoor fan will turn on when the heating or cooling turns on, and off again once the heating or cooling turns off. To conserve energy your fan may continue to run monetarily after the heating or cooling has stopped to extract all the warm or cool air still remaining in he air condition system and bring that conditioned air into the building.

**Fan On Mode**

**Manual Thermostat Mode**

Your fan will run continuously.

**Residential Programmable Mode**

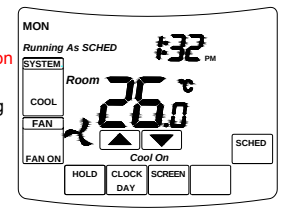
By selecting “Fan On” or continuous fan mode the A4100 thermostat indoor fan “may” operate continuously between “WAKE” programs and the “SLEEP” programs and then turn on and off as required with heating and cooling outside of those programmed events.

## Commercial Programmable Mode

By selecting “Fan On” or continuous fan mode the A4100 thermostat indoor fan “may” operate continuously between “DAY” programs and the “EVENING” programs and then turn on and off as required with heating and cooling outside of those programmed events.

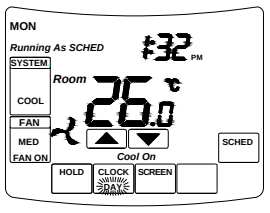
Please Note – Your installer may have activated some of the many advanced indoor fan management capabilities of the A4100 thermostat that work in partnership with the Fan On Mode. This may result in the fan operating differently than described above. If you find this to be the case and un - desirable, please contact your authorised service agent for advice on altering the function.

**Fan Speeds Single Fan Speed**




If your air conditioning system has one fan speed, your A4100 thermostat will display the fan information shown on the picture to the left The words “High”, “Med” or “Low” will be absent from the LCD. Tapping the “FAN” key with permit you to select either “Fan On mode” or “Auto Fan mode” as described above.

**Three Fan Speed**




If your air conditioning system is fitted with 3 fan speeds your A4100 thermostat will display the fan speeds as shown on the picturet to the left.

Tapping the “FAN” key will step the fan speed selection through “Low”, then “Med(ium)”, then “High” fan and Auto fan speed(indicated by all three fan speeds being shown on the LCD)in auto fan mode, the “Low” “Med”(ium) and “High” in Fan On mode.

If auto fan speed has been selected the A4100 thermostat will indicate the automatically selected fan speed by flashing in appropriate word in the LCD.

If Auto Fan Speed has been selected your A4100thermostat will automatically select the most appropriate fan speed based on the difference between the room and set temperatures.

LCD Explained

**Padlock Symbol.**

Whenever this symbol is show, a control limit has been reached a key or a function has been locked out.

**“Spanner” Icon.** I

If you see a spanner ICON flashing on your LCD, the installer has left your thermostat in “Commissioning mode” Although your thermostat will operate your heating and cooling system whilst in “commissioning mode”, all active safety and energy conservations delays have been disabled. It is therefore HIGHLY recommended that you contact your installer and request that the installer mode be disabled.

**TEXT “Locked”.**

The temperature of the outside air can initiate or prevent certain functions within the A4100 thermostat control logic. If such a function has been prevented based on the outside air temperature, the word “LOCKED” appears. These functions will automatically “unlock” once the outside air temperature becomes favourable.

**TEXT “RENEW FILTER”.**

When the “RENEW FILTER” show LCD display,it reminder to you to clean or replace your return air filter. Once you have cleaned or replaced your return air filter PRESS RESET keys. The “RENEW FILTER”will disappear and the filter counter will reset back to 000 hours.

**TEXT “RECO”.**

If the A4100 Adaptive Recovery mode is active, the A4100 will pre - warm or pre - cool your building to ensure your set temperatures are reached by your scheduled event start time. Whenever the A4100 is performing a pre - warming/cooling the word “Recovery” will be sown on the LCD.

Note: Your A4100 thermostat is capable of many advanced control capabilities, designed to both save energy and improve comfort levels. If any part of the A4100display is flashing during normal use, a safety, energy management or program delay/override is in progress. This is normal and is no cause for concern.

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