ecô

Intelligent Climate Control

Ecôstat Universal Thermostat

Operation Manual

Your new Ecôstat Universal Thermostat has been built using the highest quality components and design currently available. As a result, when properly installed and configured by your professional heating and air conditioning contractor, the Ecôstat will provide years of trouble-free operation.

The Ecôstat has been designed to be an attractive, highly reliable and easy-to-yse thermostat. By taking the time to read and understand this operation manual, you can take advantage of the many user features offered in this premium product.

Great care has been taken in the preparation of this manual. ECO takes no responsibility for errors or omissions contained in this document. It is the responsiblity of the user to ensure that this thermostat, or equipment connected to it is operating to their respective specifications and in a safe manner.
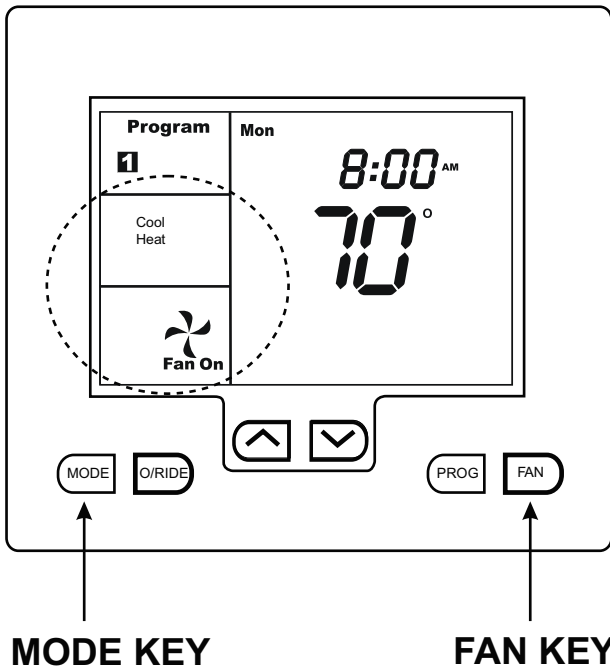
Introduction

The Ecôstat can be used for both residential and commercial applications. Within these applications the thermostat can be either programmable or non-programmable. The HVAC installer will have set these parameters to best suit your individual needs.

For clarity, this Operation Manual is broken into the following main sections:

☐ **Residential Programmable Mode (4 schedules per day)**

☐ **Commercial Programmable Mode (2 schedules per day)**

☐ **Non-programmablel Mode**

☐ **Common Functions**

The Ecôstat can be configured for a wide range of HVAC systems and applications requiring specific functions. Therefore, this manual may describe a function that is not active for your specific application.

Residential Programmable Mode

MODE KEY   **FAN KEY**

MODE Selection

Press the **MODE** key to cycle through the modes of operation and the LCD will display the following:

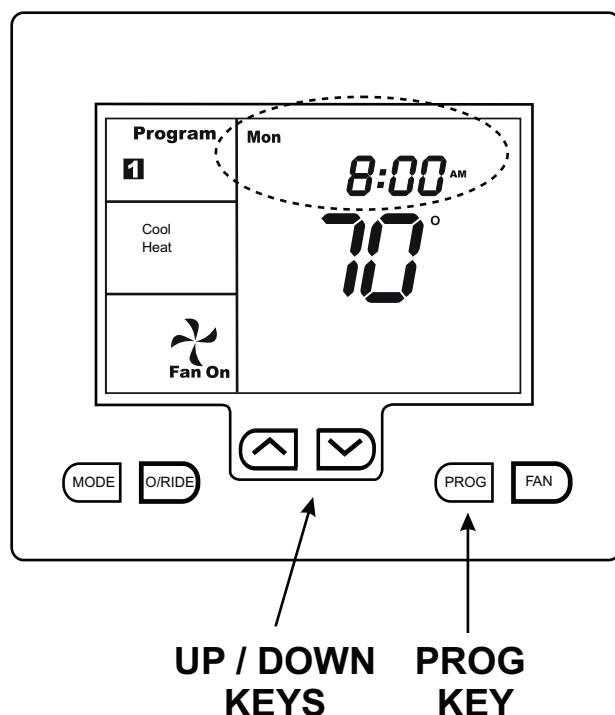|	
Heat	Heat Mode
Cool	Cool Mode
Cool Heat	Auto Changeover (Installer must activate this mode)
E. Heat	Emergency heat when T-32-P is configured for a heat pump system
OFF	Thermostat is off

FAN Selection

Press the **FAN** key to cycle through the fan selections. More details on fan functions can be found on page 20 of this manual.

Auto   The HVAC system fan will only run with a call for heating or cooling.

On   The HVAC system fan will run continuously.

UP / DOWN KEYS   **PROG KEY**

Setting the clock

The Ecôstat has a real-time clock that is used for programming functions. It is important that the time and day of week be set properly so that programmed events run correctly.
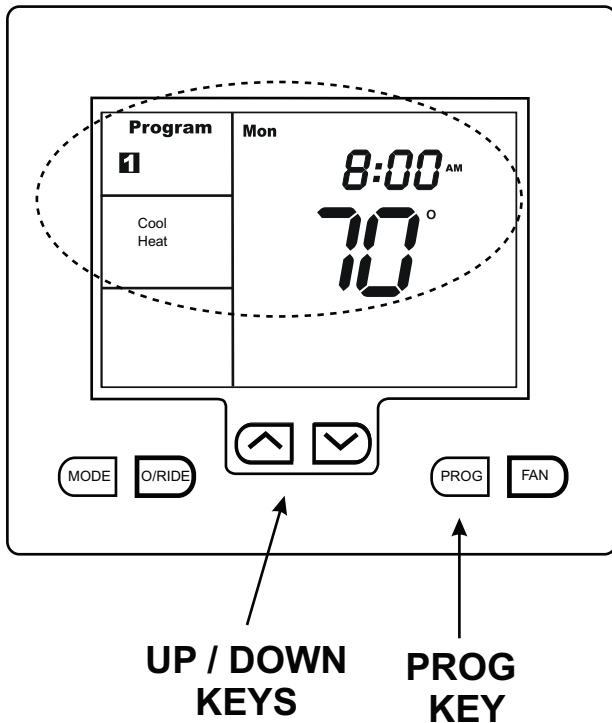
To set the clock, press the **PROG** key until the hour flashes on the LCD. Use the up (▲) or down (▼) key to set the current hour along with the AM and PM symbol. Press the **PROG** key again until the minutes flash. Use the up (▲) or down (▼) key to set the current minutes. Press the **PROG** key again until the day flashes. Use the up (▲) or down (▼) key to set the correct day of the week. Press the **PROG** again to exit the clock and day of week program.

Programming 4 daily events

The Ecôstat can be programmed to provide 4 individual time-of-day temperature settings for each day of the week.

Each event is noted on the LCD by numerals **1** **2** **3** **4**

At the start of each event, the programmed heating and cooling temperature will be maintained until the next event starts.

Entering the program mode

Hold the **PROG** key down for 3 seconds.

The display will show the number **1** and the day **MON** will flash.

Use the up (▲) or down (▼) key to set the day you wish to start programming.

Press the **PROG** key again and the hour will flash. Use the up (▲) or down (▼) key to set the time you wish program **1** to start. Make sure that the AM / PM is correct.

Press the **PROG** key again and the minutes will flash. Use the up (▲) or down (▼) key to set the minutes for program **1** to start.

UP / DOWN KEYS **PROG KEY**

Press the **PROG** key again and **Heat** or **Cool** will be displayed along with the temperature value. Use the up (▲) or down (▼) key to select the desired heating or cooling temperature to be maintained for the program **1** time period.

Press the **PROG** key again and the opposite mode and a temperature value will be shown on the LCD. Use the up (▲) or down (▼) key to select the desired temperature to be maintained for the program **1** time period.

Note: *There must be a least 2 degrees difference between the heating and cooling temperatures. The heating temperature must always be lower than the cooling temperature. If you set the heating or cooling temperature closer than the minimum value, the Ecôstat will automatically move one of the temperature settings to maintain the 2 degree difference.*

Press the **PROG** key again and the same day selected will be shown along with the number **2**, which represents the second program event. The hour will flash indicating that this value can now be programmed. Use the up (▲) or down (▼) key to advance the hour to the second event start time. Make sure that the AM / PM is correct.

Press the **PROG** key again and the minutes will flash. Use the up (▲) or down (▼) key to set the minutes for program **2** to start.

Press the **PROG** key again and the word **Heat** or **Cool** will be displayed along with the temperature value. Use the up (▲) or down (▼) key to select the desired temperature to be maintained for the program **2** time period.

Press the **PROG** key again and the opposite mode and a temperature value will be displayed. Use the up (▲) or down (▼) key to select the desired temperature to be maintained for the program **2** time period.
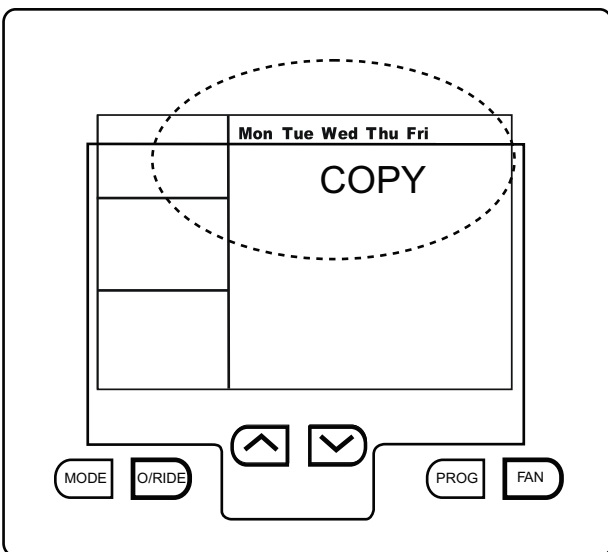
Continue to press the **PROG** key to advance through each programming step for program events **3** and **4**. Once you have completed programming the number **4** event, press the **PROG** key again and the LCD will display the word **COPY**. You now have two options.

Option 1 - Copy Program

To copy all the values you have programmed to other days of the week, press the up (▲) or down (▼) key and select each additional day you wish to duplicate the program. Press the **PROG** key again and the word **COPY** will flash briefly to confirm the copy process. Normal programming steps will resume showing the next day to be programmed.

Option 2 - Different Daily Program

If you chose to have the next day represent a different program, simply press the **PROG** key after the word **COPY** appears and the
T-32-P will advance to the next day. Follow the same programming steps as the prior day. This allows you to have a different schedule for each day of the week.

Temporary Temperature Override
The Ecôstat has a temporary program override function that permits you to change the current event set temperatures for a fixed period of time. The HVAC installer will have set the override period from 1 to 12 hours. If during the override period another scheduled event takes place, the override will be canceled.

To place the Ecostôt in the temporary temperature override mode, press the up (▲) or down (▼) key. The LCD will show the word **SET** and the current mode. (**Heat** or **Cool**) Press the up (▲) or down (▼) key to change the current temperature setting.

If the thermostat has been configured for auto-changeover, wait 3 seconds after adjusting the first mode (**Heat** or **Cool**) and the display will show the next mode which can also be changed after which the Ecôstat will exit the override program.

The LCD will now flash the current program number to remind you that an override is in progress. The override temperature settings will remain in effect until the override time expires or until the next scheduled event (whichever comes first). You can return to the programmed schedule at any time by pressing the **O/RIDE** key and then pressing it again. The program number will stop flashing confirming that the Ecôstat is now running the programmed schedule.

Permanent Temperature Hold

Press the **O/RIDE** key. The LCD will show the word **HOLD**. The current programmed heating and cooling temperatures will be held permanently or can be adjusted by pressing the up (▲) or down (▼) key which will display the current program temperature along with the word **SET**. Press the up (▲) or down (▼) key to change the temperature.

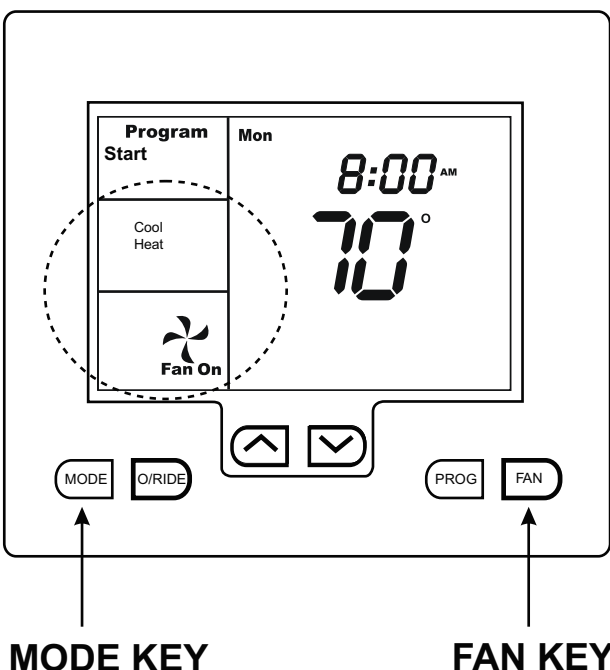To return to the programmed schedule, press the **O/RIDE** key until the word **HOLD** is no longer displayed.

Reviewing Set Temperatures

Your can review the set temperatures at any time by simply pressing the up (▲) or down (▼) key.

Factory Default Schedule

Default Schedule		Setpoint (Mon - Sun)	
Schedule	Start Time	Heating	Cooling
1	6:00 AM	70	75
2	8:00 AM	62	78
3	6:00 PM	70	75
4	10:00 PM	62	78

Commercial Programmable Mode

MODE Selection

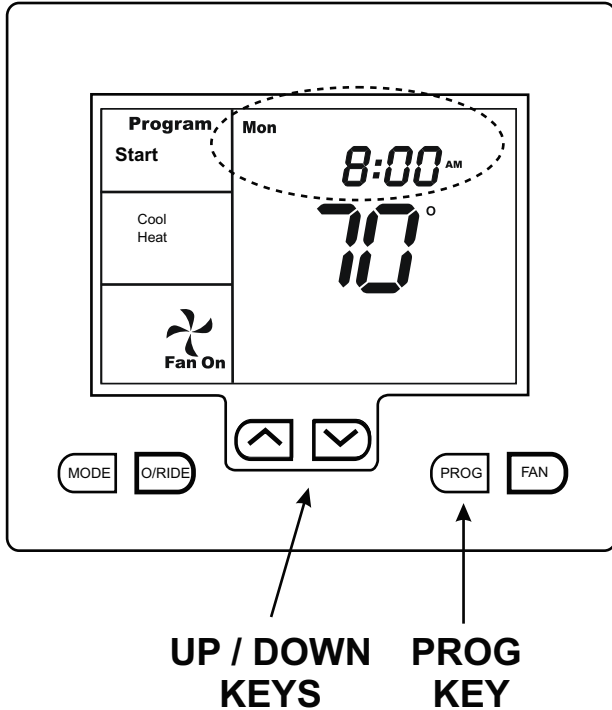Press the **MODE** key to cycle through the modes of operation and the LCD will display the following:

Heat	Heat Mode
Cool	Cool Mode
Cool Heat	Auto Changeover (Installer must activate this mode)
E. Heat	Emergency heat when Ecôstat is configured for a heat pump system
OFF	Thermostat is off

MODE KEY   **FAN KEY**

FAN Selection

Press the **FAN** key to cycle through the fan selections. More details on fan functions can be found on page 20 of this manual.

Auto The HVAC system fan will only run with a call for heating or cooling.
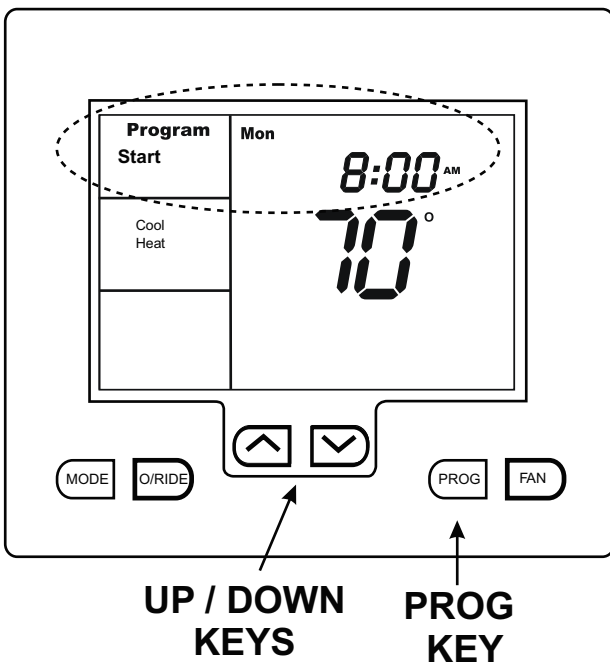**On** The HVAC system fan will run continuously.

Setting the clock

The Ecôstat has a real-time clock that is used for programming functions. It is important that the time and day of week be set properly so that programmed events run correctly.

To set the clock, press the **PROG** key until the hour flashes on the LCD. Use the up (▲) or down (▼) key to set the current hour along with the AM and PM symbol. Press the **PROG** key again until the minutes flash. Use the up (▲) or down (▼) key to set the current minutes. Press the **PROG** key again until the day flashes. Use the up (▲) or down (▼) key to set the correct day of the week. Press the **PROG** again to exit the clock and day of week program.

UP / DOWN KEYS   **PROG KEY**

Programming 2 daily events

The commercial programmable mode provides 2 schedules per day using a separate heating and cooling setpoint. The schedule is shown on the LCD as **Start** and **Stop**. **Start** represents the occupied mode and **Stop** represents the unoccupied mode. Programming steps are the same as a residential program other than there are only two events per day rather than four.

Entering the program mode

Hold the **PROG** key down for 3 seconds.

The display will show **Start** (occupied) and the day **MON** will flash.

Use the up (▲) or down (▼) key to set the day you wish to start programming.

Press the **PROG** key again and the hour will flash. Use the up (▲) or down (▼) key to set the hour you wish the program to start. Make sure that the AM / PM is correct.
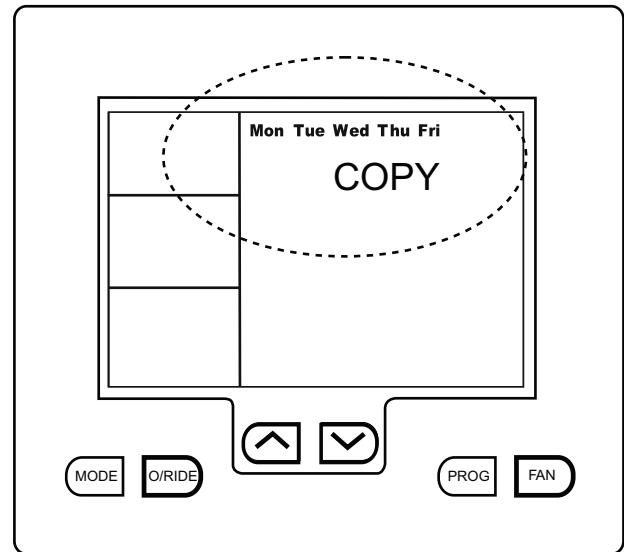
Press the **PROG** key again and the minutes will flash. Use the up (▲) or down (▼) key to set the minutes for the program to start.

UP / DOWN KEYS   **PROG KEY**

Press the **PROG** key again and the LCD will display the word **SET** and the temperature setting for the current mode (**Heat** or **Cool**). Press the (▲) or down (▼) key to change the setpoint. If Auto mode is selected (shown by both **Heat** and **Cool** on the display), wait 3 seconds after adjusting the first mode setpoint and the Ecôstat will change to show the next mode setpoint. Press the up (▲) or down (▼) key to change the setpoint.

Press the **PROG** key again and the LCD will display **STOP**. Follow the steps above to program the **STOP** (unoccupied) time and temperature settings. Press the **PROG** key again and the word **COPY** will appear on the LCD.

Option 1 - Copy Program

To copy the start and stop times you have programmed to other days of the week, press the up (▲) or down (▼) key and select each additional day you wish to duplicate the program. Press the **PROG** key again and the word **COPY** will flash briefly to confirm the copy process. Normal programming steps will resume showing the next day to be programmed.

Option 2 - Different Daily Program

If you chose to have the next day represent a different start and stop time, simply press the **PROG** key after the word **COPY** appears and the Ecôstat will advance to the next day. Follow the same programming steps as the prior day. This allows you to have a different start and stop time for each day of the week.

Temporary Temperature Override

To place the Ecôstat in the temporary temperature override mode, press the up(▲) or down(▼) key. The LCD will show the word **SET** and the current mode (**Heat** or **Cool**). Press the up (▲) or down (▼) key to change the current temperature setting. Wait 3 second and the next mode (**Heat** or **Cool**) will be displayed and can be changed. When the Ecôstat will exit the override program. The word **START** or **STOP** will flash confirming the override event. The HVAC installer will have set the override period from 1 to 12 hours. If during the override period another event takes place, the override will be canceled. To manually cancel the override, press the **O/RIDE** key twice. The thermostat will resume the programmed schedule.

Permanent Temperature Hold

Press the **O/RIDE** key. The LCD will show the word **HOLD**. The current programmed heating and cooling temperatures will be held permanently or can be adjusted by pressing the up (▲) or down (▼) key which will display the current program temperature along with the word **SET**. Press the up (▲) or down (▼) key to change the temperature.

To return to the programmed schedule, press the **O/RIDE** key until the word **HOLD** is no longer displayed.

Reviewing Set Temperatures

Your can review the set temperatures at any time by simply pressing the up (▲) or down (▼) key.
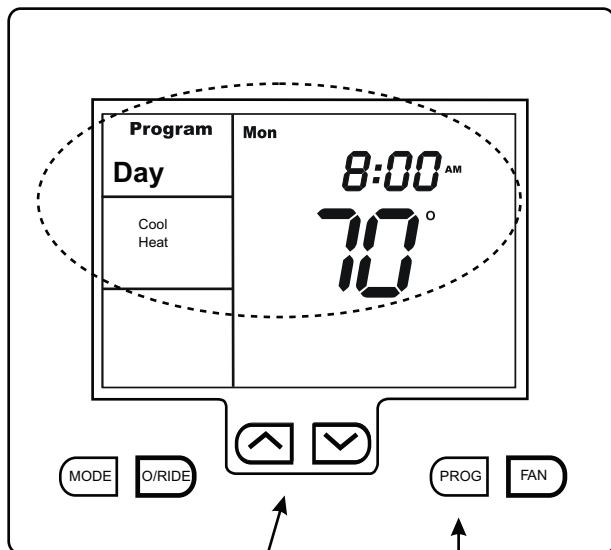
Advanced Fan Operation

In many commercial applications, code requires constant ventilation during occupied periods. The HVAC installer can configure the Ecôstat to allow the fan to run continuously during the **START** schedule. When the thermostat changes to the **STOP** schedule, the fan shuts down and only operates with a heating or cooling call.

Factory Defaults

Default Schedule		Setpoint (Mon - Sat		Setpoint (Sat - Sun)	
Schedule	Start Time	Heating	Cooling	Heating	Cooling
Start	6:00 AM	70	75	62	83
Stop	6:00 PM	62	83	62	83

Non-programmable Mode

UP / DOWN KEYS   **PROG KEY**

MODE Selection

Press the **MODE** key to cycle through the modes of operation and the LCD will display the following:
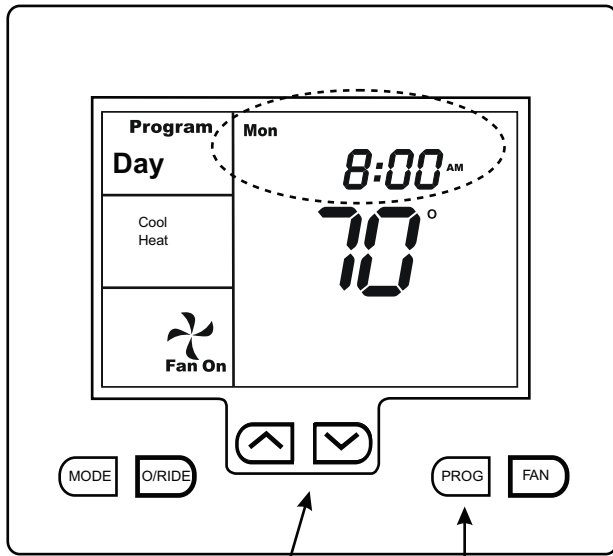
Heat	Heat Mode
Cool	Cool Mode
Cool Heat	Auto Changeover (Installer must activate this mode)
E. Heat	Emergency heat when Ecôstat is configured for a heat pump system
OFF	Thermostat is off

FAN Selection

Press the **FAN** key to cycle through the fan selections. More details on fan functions can be found on page 20 of this manual.

Auto   The HVAC system fan will only run with a call for heating or cooling.

On   The HVAC system fan will run continuously.

UP / DOWN KEYS   **PROG KEY**

Setting the clock

The Ecôstat has a real-time clock.

To set the clock, press the **PROG** key until the hour flashes on the LCD. Use the up (▲) or down (▼) key to set the current hour along with the AM and PM symbol. Press the **PROG** key again until the minutes flash. Use the up (▲) or down (▼) key to set the current minutes. Press the **PROG** key again until the day flashes. Use the up (▲) or down (▼) key to set the correct day of the week. Press the **PROG** again to exit the clock and day of week program.

Setting the temperatures

Press the up (▲) or down (▼) key for 3 seconds. The Ecôstat will display the word **SET** and the temperature setting for the current mode (**Heat** or **Cool**). Press the up (▲) or down (▼) key to change the setting. If Auto mode is selected (Shown by both **Heat** and **Cool** on the display), after adjusting the heating temperature wait without touching a key for 3 seconds. The Ecôstat will change to show **Cool** and **SET.** Press the up (▲) or down (▼) key to change the temperature setting for cooling. Wait 3 seconds and the Ecôstat will automatically exit the menu.
The new temperature settings will be maintained in memory.

Switching between day and night temperature settings

If the HVAC installer has set the **Day / Night** function, the Ecôstat will keep two heat and two cool temperature settings. This provides a convenient method to manually select **Day** (occupied) or **Night** (unoccupied) settings. To toggle between the **Day** and **Night** settings, press the **PROG** key. Set the **Day** and **Night** temperature settings as previously described.

Reviewing Set Temperatures

You can review the set temperatures at any time by simply pressing the up (▲) or down (▼) key.

Common Functions

MODE Key

The **MODE** key is used to cycle through the available modes.

> **OFF**
> **Heat**
> **Cool**
> **Heat / Cool** (Auto)
> **E. Heat** (emergency heat for heat pump systems only)

O/RIDE Key (Override) **Residential Programmable Mode**

The **O/RIDE** key is used to override the programmed schedule and to hold the current set temperature indefinitely or until the **O/RIDE** button is pressed again. The word **HOLD** will be displayed on the LCD to confirm this function is active.

O/RIDE Key (Override) **Commercial Programmable Mode**

The **O/RIDE** key is used as an after hours run timer for a programmed period established by the HVAC installer (0.5 - 12 hours) or Off which will hold the override until the next scheduled event. When the **O/RIDE** key is pressed, the LCD will display the flashing word **TIMER** and the **Start** (occupied) temperatures will be initiated. The override can be canceled at any time by simply pressing the **O/RIDE** key and the flashing word **TIMER** will disappear on the display.

Up Key (▲)

This key is used to increase a desired temperature or value in programming.

Down Key (▼)

This key is used to decrease a desired temperature or value in programming.

PROG Key (Program) **Residential or Commercial Programmable Mode**

This key is used to set the clock and program daily events.

PROG Key (Program) **Manual Mode**

This key is used to set the clock and switch between **Day** and **Night** modes.

FAN Key

This key is used to select continuous fan (**Fan ON**) or intermittent fan (**Auto Fan**).

Advanced Fan Function

The Ecôstat has an Advanced Fan function that will run the fan continuously during occupied mode and only run with a call for heating or cooling in the unoccupied mode. If this function has been enabled by the installer, the fan key must be set to **ON**. To disable the function, simply set the fan key to **Auto**. If the thermostat is configured for 4 schedules per day, the fan will run continuously in schedules 1, 2 and 3 and in Auto in schedule 4. If the thermostat is configured for 2 schedules per day, the fan will run continuously in the Start mode and in Auto in the Stop mode.

Heating Call

When the Ecôstat is in the **Heat** mode and there is a call for heating, the LCD will display the word **Heating**. If the word **Heat** flashes, this confirms that the Ecôstat is initiating a time delay before the heating call takes place.
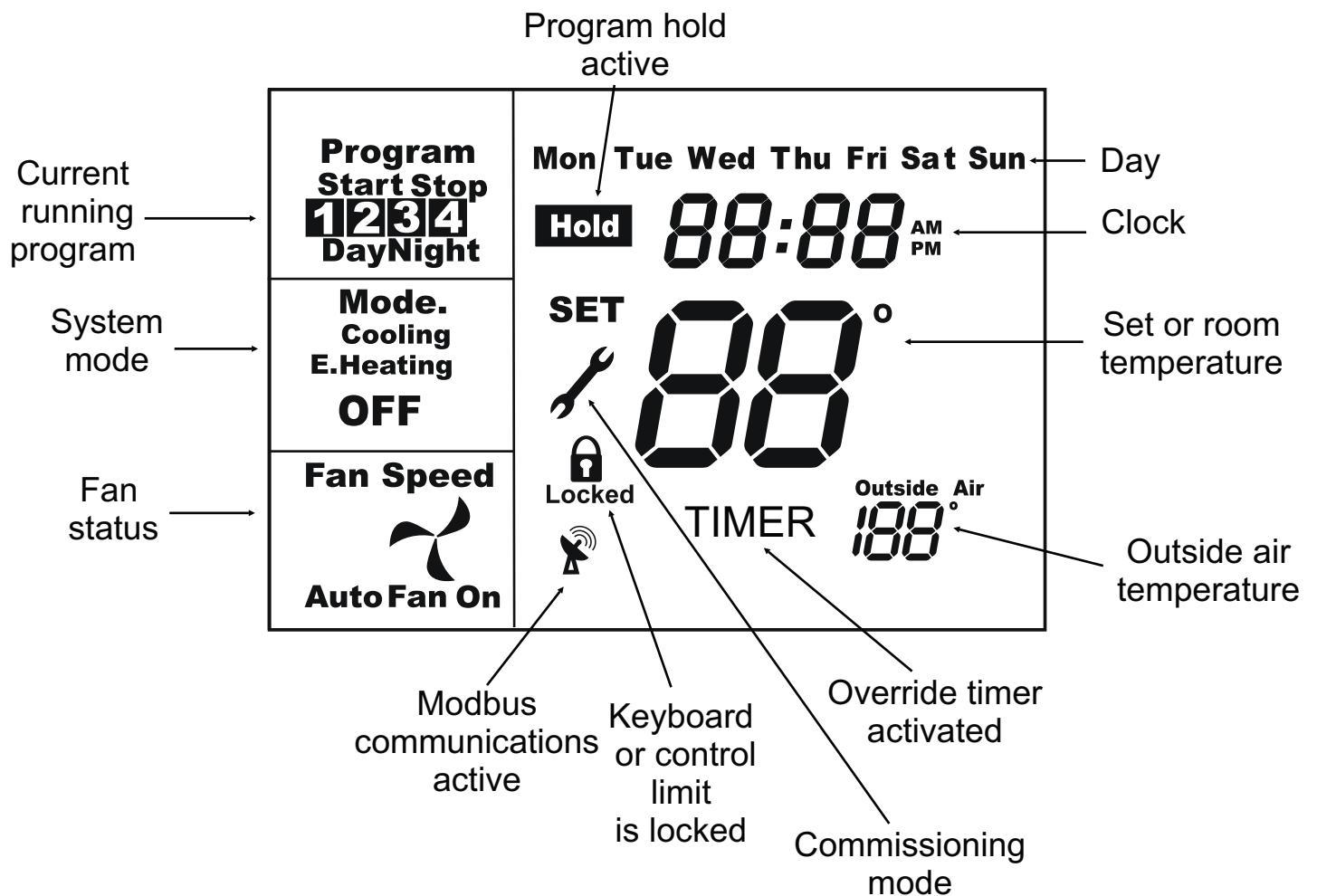
E. Heat Call (emergency heat)

When the Ecôstat is used with a heat pump system, and the **E. Heat** mode is selected, the LCD will display the word **E. Heating** whenever there is a call for emergency heat.

Cooling Call

When the Ecôstat is in the **Cool** mode and there is a call for cooling, the LCD will display the word **Cooling**. If the word **Cool** flashes, this confirms that the Ecôstat is initiating a time delay before the cooling call takes place.

LCD Symbols

Program hold active

Current running program

System mode

Fan status

Day

Clock

Set or room temperature

Outside air temperature

Modbus communications active

Keyboard or control limit is locked

Override timer activated

Commissioning mode

The Ecôstat is capable of many advanced control options. Not all LCD symbols may appear on your specific thermostat configuration.

Troubleshooting

LCD display is blank	☐ Check HVAC circuit breaker and reset if necessary. ☐ Make sure power switch at HVAC system is on. ☐ Make sure furnace door is closed securely.
Heating or cooling system does not respond	☐ Press MODE key to set system to Heat. Make sure the temperature is set higher than the inside temperature. ☐ Press MODE key to set system to Cool. Make sure the temperature is set lower than the inside temperature. ☐ Check circuit breaker and reset if necessary ☐Make sure power switch at HVAC system is on. ☐ Make sure furnace door is closed securely. ☐ If Heat or Cool is flashing, the T-32-P has initiated an equipment protection time delay. Wait 4 minutes for the system to restart.

If for any reason your Ecôstat does not function properly, contact your installing HVAC contractor.

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Intelligent Climate Control

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