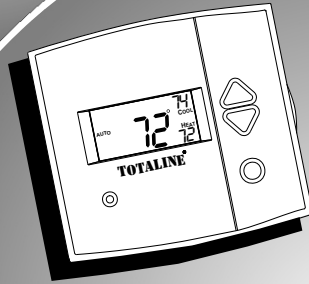


OWNER'S MANUAL

COMMERCIAL
THERMOSTAT
P/N P374-2700

HEAT COOL & HEAT PUMP



NON-PROGRAMMABLE DIGITAL THERMOSTAT

- 3 Configurable Outputs
- Control up to 2 Heat & 2 Cool Stages
- Backlit Display & Button Legends
- Aux Heat Indicator
- Dry Contact Equipped
- Set Point Limiting
- Remote Sensor Ready
- Outdoor Sensor Ready
- Accepts EZ Programmer™
- Accepts Optional Humidity Module: Controls Humidification and Dehumidification
- Accepts Optional IR Remote Control

Accepts the **OPTIONAL** **HUMIDITY MODULE**

- Use with most Air Conditioning & Heating Systems including: 1 or 2 Stage Electric Cooling & 2 Stage Gas Heating, Heat Pump, Electric or Hydronic Heat.

TOTALINE

Signature

Commercial Systems & Services © Carrier Corporation 08/05

TOTALINE

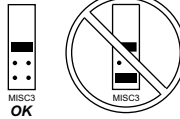
 **CAUTION**

Follow the Installation Instructions before proceeding.
Set the thermostat mode to "OFF" prior to changing
settings in setup or restoring Factory Defaults.

 **CAUTION**

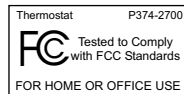
NEVER PUT MORE THAN ONE
JUMPER ON THE SAME MISC
JUMPER BLOCK!

THIS MAY DAMAGE YOUR
THERMOSTAT AND VOID
YOUR WARRANTY.



NOTE: Due to variations in environmental conditions, it is not
always possible to achieve the desired humidification or
dehumidification setpoint.

This device complies with Part 15 of the FCC Rules. Operation is
subject to the following two conditions: (1) this device may not cause
harmful interference, and (2) this device must accept any interference
received, including interference that may cause undesired operation.



How to Use This Manual

TOTALINE

The Table of Contents divides the thermostat features into sections making it easier to quickly find information.

The first page of each section contains a more detailed Contents of each section, such as the example page shown below.

The diagram shows a page layout for Section 14. At the top is a black header bar with the text "SECTION 14 Timers and Deadbands" and a "TOTALINE" logo. Below the header is a table of contents titled "Section 14 Contents:". The table lists five items with their respective page numbers: "Adjusting the Heat/Cool Differential.....14.2", "Adjusting the Cycles Per Hour.....14.3", "Adjusting the Deadband.....14.4", "Adjusting the Minutes of Run-Time Before the Next Stage.....14.6", and "Selecting 2nd Stage Turn Off Temperature.....14.7". A small black box with the number "14" is positioned to the right of the "14.6" page number. At the bottom left of the page is the text "Page 14.1". Callout arrows point to various elements: "Header shows section # and title of section" points to the header bar; "Section contents" points to the table of contents; "Visible section tab on the side of the page" points to the "14" box; and "Section and page #" points to "Page 14.1".

SECTION 14
Timers and Deadbands **TOTALINE**

Section 14 Contents:

- *Adjusting the Heat/Cool Differential.....14.2*
- *Adjusting the Cycles Per Hour.....14.3*
- *Adjusting the Deadband.....14.4*
- *Adjusting the Minutes of Run-Time Before the Next Stage.....14.6*
- *Selecting 2nd Stage Turn Off Temperature.....14.7*

14

Page 14.1

Header shows section # and title of section

Section contents

Visible section tab on the side of the page

Section and page #

In addition, this manual also has an Index to help you find any information regarding this thermostat quickly.

Glossary of Terms

TOTALINE

Auto-Changeover: A mode in which the thermostat will turn on the heating or cooling based on room temperature demand.

Configurable Output Jumper: Using jumpers on the thermostat you can configure the MISC1, MISC2, and MISC3 terminals to operate with regards to humidification, dehumidification, 2nd stage cooling, and economizer operation.

Cool Setpoint: The warmest temperature that the space should rise to before cooling is turned on (without regards to deadband).

Deadband: The number of degrees the thermostat will wait, once setpoint has been reached, before energizing heating or cooling.

Dehumidify: To reduce the amount of moisture in the air.

Differential: The forced temperature difference between the *heat setpoint* and the *cool setpoint*.

Heat Setpoint: The coolest temperature that the space should drop to before heating is turned on (without regards to deadband).

Humidify: To increase the amount of moisture in the air.

Icon: The word or symbol that appears on the thermostat display.

Mode: The current operating condition of the thermostat (i.e. Off, Heat, Cool, *Auto*).

Non-Programmable Thermostat: A thermostat that does not have the capability of running the *Time Period Programming*.

Temperature Swing: *Same as Deadband*.

Table of Contents

TOTALINE

<i>Quick Start</i>	1
<i>Getting to Know Your Thermostat</i>	2
<i>Basic Operation</i>	3
<i>Viewing Temperature and Humidity Sensors</i>	4
<i>Override Operation</i>	5
<i>Programming the Fan Operation</i>	6
<i>Thermostat Display Options</i>	7
<i>Humidification</i>	8
<i>Dehumidification</i>	9
<i>Viewing Equipment Run-Times</i>	10
<i>Electric Heat and Heat Pump Operation</i>	11
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<i>Programming Remote Sensor Operation</i>	13
<i>Programming the Dry Contact</i>	14
<i>Programming the Run-Time Alarms</i>	15
<i>Configuring the MISC Outputs</i>	16
<i>Factory Defaults, Calibration, and Sensors</i>	17
<i>Accessories</i>	18
<i>Advanced Setup Table</i>	19

SECTION 1

Quick Start

TOTALINE

1

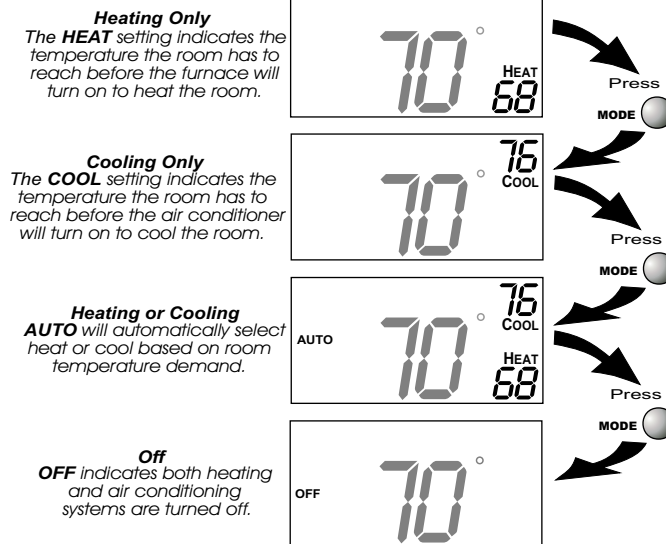
Section 1 Contents:

- **Selecting the Heat or Cool Mode.....1.2**
- **Selecting Your Desired Temperature.....1.3**
- **Using the Fan Button.....1.3**

Note: Following the instructions in this section will allow you to operate your thermostat using the factory default settings. These settings are depicted in the illustrations throughout this manual.

Selecting the Heat or Cool Mode

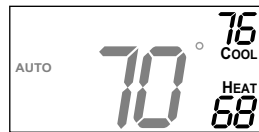
Select Mode by Pressing the MODE Button



1 *Selecting Your Desired Temperature
(adjusting the setpoints)*

AUTO MODE

Pressing the UP or DOWN buttons in Auto mode will adjust **both** the heat and cool set temperatures simultaneously.



Adjust the desired set temperature with the



buttons.

HEAT OR COOL MODE

Pressing the UP or DOWN buttons in Heat **or** Cool mode will adjust only the heat **or** cool set temperature.



Adjust the desired set temperature with the



buttons.

Using the Fan Button



Fan On indicates constant fan operation. If Fan On is selected the fan will run continuously at all times, except in Off, **and** will only run if there is a heating or cooling demand in Unoccupied periods. Pressing the FAN button toggles this feature on or off.

SECTION 2
Getting to Know Your Thermostat **TOTALINE**

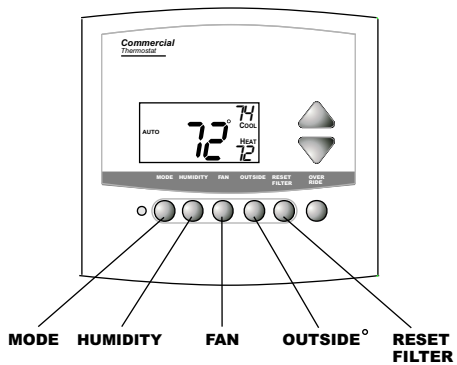
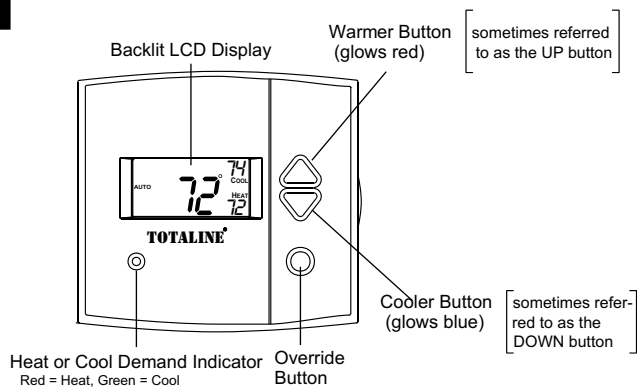
2

Section 2 Contents:

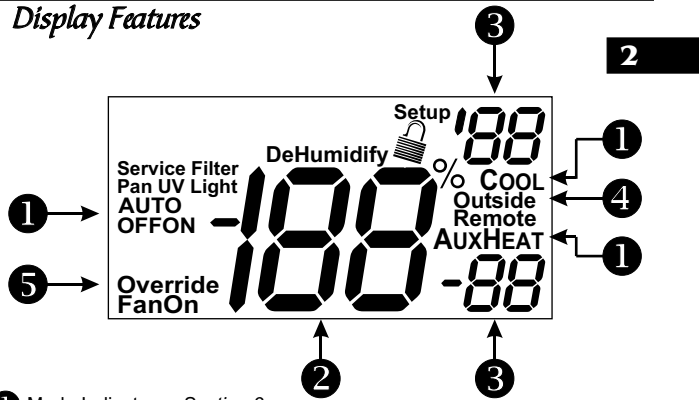
- *Front Panel Buttons*.....2.2
- *Display Features*.....2.3

Front Panel

2

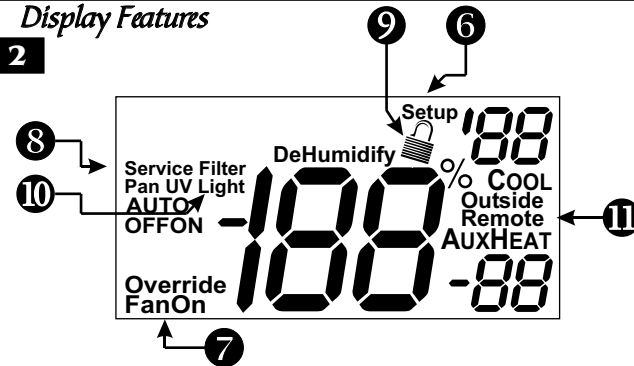



Display Features



- 1** Mode Indicators - *Section 3*
 Selects the operational mode of the equipment.
HEAT - Indicates the heating mode.
COOL - Indicates the air conditioning mode.
AUTO - Indicates the system will automatically changeover between heat and cool modes as the temperature varies.
OFF - Indicates heating and cooling is turned off.
- 2** Room Temperature Display - *Section 4*
 Indicates the current room temperature and displays the outside temperature when selected.
- 3** Desired Set Temperature - *Section 3/4*
 Indicates desired room temperature(s). Also displays the daily maximum and minimum outside temperatures.
- 4** Outside icon - *Section 4*
 Indicates the temperature displayed is from the optional outside sensor.
- 5** Override icon - *Section 5*
 Indicates that normal operation is currently being overridden for up to 4 hours.

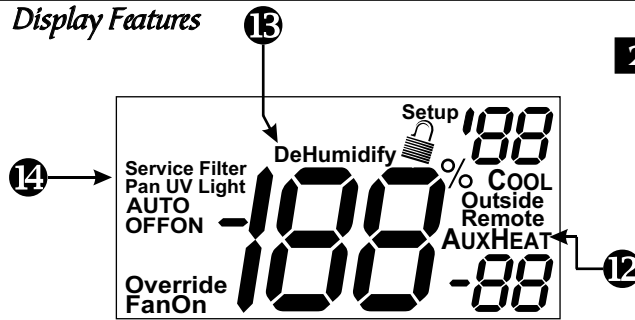
Display Features



- 6** **Setup** icon - *Sections 6-15*
Indicates the thermostat is in the setup mode.
- 7** **Fan On** icon - *Section 6*
Indicates constant, continuous fan operation. When **Fan On** is not lit - indicates the fan will only operate when necessary to heat or to cool.
- 8** **Service Filter** icon - *Section 15*
Appears when the filter should be serviced under normal conditions. Adjustable from 0 - 1950 hours of blower operation.
- 9**  icon - *Section 7*
Indicates keypad has been locked.
- 10** **UV Light** icon - *Section 10/15*
Appears when the UV bulb should be serviced under normal conditions. Adjustable from 0 - 1950 days of operation.
- 11** **Remote** icon - *Section 4*
Indicates the remote sensor reading of the thermostat is being viewed.

Display Features

2



- 12** **AuxHeat** icon - *Section 11*
 Indicates the Heat Pump is currently using 2nd stage electric strip heat.
- 13** **Humidify/DeHumidify** icon - *Sections 8-9*
 Indicates the system is currently humidifying/dehumidifying the air.
- 14** **Service Pan** icon - *Section 14*
 Indicates that a sensor (accessory) has detected the condensate drain pan is full and the compressor (Y1) has been locked out.

SECTION 3
Basic Operation

TOTALINE

3

Section 3 Contents:

- *Programming for Auto or Manual Operation.....3.2*
- *Selecting the Proper Operating Mode.....3.3*
- *Selecting Your Desired Temperature.....3.5*




Note: During setup & programming pressing the UP or DOWN buttons will modify the flashing selection.

Manual or Auto-Changeover Thermostat



3

When the very simplest operation is desired, this thermostat may be configured to be a manual heat and cool thermostat. Follow the step below.

The thermostat may be programmed to function as a Heat Only or Cool Only thermostat by selecting 'NO' in the setup screen below. This will lockout the Auto-Changeover screen and only allow the Off, Heat, and Cool screens to be accessed.

- MODE**  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*
- HUMIDITY** 
- MODE**  *Press the MODE button repeatedly until this setup screen appears.*

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

-  **YES**
Select Yes if you would like the thermostat to be Auto-Changeover or No for a Heat Only and Cool Only Thermostat.
-  **NO**



Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Operating Mode when the Thermostat is Configured to be:

3 MANUAL-CHANGEOVER - If the thermostat is configured to be Manual-Changeover, the following screens will be available by pressing the MODE button.

Select the Mode by Pressing the MODE Button

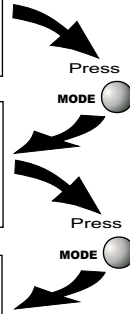
Heating Only
 The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.



Cooling Only
 The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.



Off
OFF indicates both heating and air conditioning systems are turned off.



Operating Mode when the Thermostat is Configured to be:

AUTO-CHANGEOVER - If the thermostat is configured to be Auto-Changeover, the following screens will be available by pressing the MODE button.

3

Select the Mode by Pressing the MODE Button

Heating Only
The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.



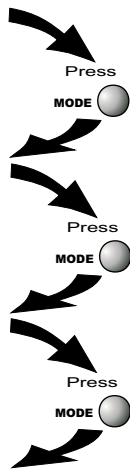
Cooling Only
The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.



Heating or Cooling
AUTO will automatically select heat or cool based on room temperature demand.



Off
OFF indicates both heating and air conditioning systems are turned off.



Selecting Your Desired Temperature (adjusting setpoints)

3**AUTO MODE**

Pressing the UP or DOWN buttons in Auto mode will adjust **both** the heat and cool set temperatures simultaneously. For more information on this see page 12.2.



Adjust the desired set temperature with the



buttons.

HEAT OR COOL MODE

Pressing the UP or DOWN buttons in Heat or Cool modes will adjust only the heat or cool set temperature.



Adjust the desired set temperature with the



buttons.

SECTION 4
Viewing the Temperature and Humidity Sensors

TOTALINE

4

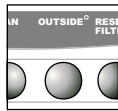
Section 4 Contents:

- *Viewing the Outside*
Temperature.....4.2
- *Viewing the Indoor*
Humidity.....4.3

Viewing the Outside Temperature

Requires an outside sensor (optional accessory) to be installed. To read the temperature from the Outside Sensor, press the OUTSIDE button. The display will then show the current outside temperature.

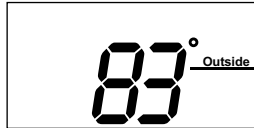
4



Press the OUTSIDE button to view the Outside temperature.

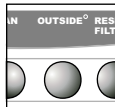


The current outside temperature will be displayed. This reading is from the sensor connected to RS2.



Current outside temperature.

Press the OUTSIDE button to leave the Outside temperature screen.




Note: If no sensors are connected 2 dashes [- -] will appear on the display.

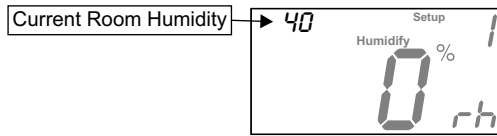
Viewing the Indoor Humidity

Requires the Humidity Module (optional accessory) to be installed. To display the current humidity at the thermostat, press the HUMIDITY button of the thermostat. The display will then show the current indoor humidity along with the humidification setpoint (Section 8).

4

Note: The humidity reading will not appear unless the Humidity Module has been installed. If a sensor has not been installed dashes will appear in place of the humidity reading.

HUMIDITY  To view the indoor humidity reading, press the HUMIDITY button



Press the HUMIDITY button again to return the display to normal operation.

NOTE: Due to variations in environmental conditions, it is not always possible to achieve the desired humidification or dehumidification setpoint.

SECTION 5 Override Operation

TOTALINE

Overriding the Normal Operation

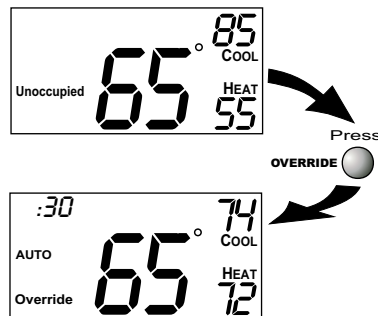
The OVERRIDE button may only be used when the Dry Contact has forced the thermostat into the Unoccupied mode.

Unoccupied Operation - During a Dry Contact forced unoccupied period pressing the OVERRIDE button will temporarily force the thermostat into the mode it was in before the Dry Contact forced it into the Unoccupied mode.

For example: If the thermostat was in the Auto mode and the Dry Contact forced the thermostat into the Unoccupied mode, then pressing the OVERRIDE button will force the thermostat back into the Auto mode.

The remaining override time will be displayed in the upper left hand corner of the display. The override timer can be set up to a maximum of four (4:00) hours, in increments of 30 minutes. If the timer has been set for the maximum time, the next press of the OVERRIDE button will reset the timer, returning the thermostat to the Unoccupied mode.

To adjust the setpoints for the Unoccupied mode, see page 15.4.



SECTION 6
Programming the Fan Operation

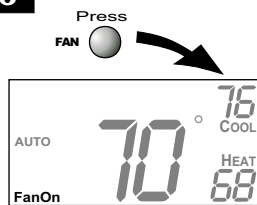
TOTALINE

Section 6 Contents:

- *Using the Fan Button.....6.2*
- *Setting the Fan-Off Time
Delay.....6.3*

Using the Fan Button

When the fan is set for automatic operation it will energize any time there is a call for heating or cooling, otherwise the fan will remain off. Pressing the FAN button will energize the fan and display the **FanOn** icon on the thermostat display. To operate the fan in the automatic mode, press the FAN button again and the FanOn icon will disappear.


6


Fan On indicates constant fan operation. If Fan On is selected the fan will run continuously at all times, except in Off, **and** will only run if there is a heating or cooling demand in Unoccupied periods. Pressing the FAN button toggles this feature on or off.


Setting the Fan-Off Time Delay

To increase cooling efficiency of your unit, the thermostat may be programmed to continue running the fan after a call for cooling has been satisfied. This delay may be set for 30, 60, or 90 seconds. If the Fan Off Delay is set for zero seconds, the fan will not energize after a call for cooling has been satisfied.



6

MODE  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*

HUMIDITY 


MODE  *Press the MODE button repeatedly until this setup screen appears.*

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

  Set the Fan Off Delay to 0, 30, 60, or 90 seconds.

:00 Setup 2

FanOn

Press


Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


SECTION 7
Thermostat Display Options


TOTALINE

Section 7 Contents:

- *Turning On/Off the*
7 *Backlight.....7.2*
- *Programming the Thermostat*
to Display Temperature in
Fahrenheit or Celsius.....7.2
- *Locking/Unlocking the*
Keypad.....7.3
- *Programming a Security*
Level.....7.4

Turning On/Off the Backlight

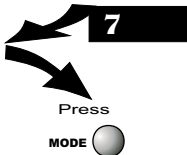
MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

MODE  Press the **MODE** button repeatedly until this setup screen appears.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*



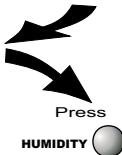
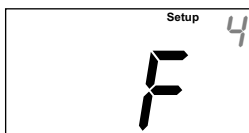
Select backlight operation:
ON - Light continuously.
OFF - Light for 8 seconds after a button press.



Programming the Thermostat to Display Temperature in Fahrenheit or Celsius




C
 Select thermostat operation in degrees Fahrenheit or Centigrade.
F



Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


Locking/Unlocking the Keypad

To prevent unauthorized use of the thermostat, the front panel buttons may be disabled. To disable, or 'lock' the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The  icon will appear on the display, then release the buttons.

7




Press all three buttons in the order outlined above for keypad lockout



To **unlock** the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The  icon will disappear from the display, then release the buttons.

Programming a Security Level

When a security level has been programmed, the thermostat will allow limited adjustment to the setpoints (steps # 6 and 7) and, in security levels 2 and 3, the thermostat will be locked into the current mode (off, heat, cool, or auto). To disable the security feature, program step #5 to 0; this will cause steps # 6 and 7 not to appear.

-  **MODE** Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.
 -  **HUMIDITY**
 -  **MODE** Press the **MODE** button repeatedly until this setup screen appears.
- Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*

7

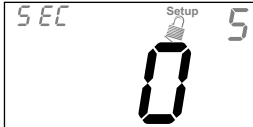


Select the security level:
 0=No security in effect
 1=Setpoint range limited
 2=1+ locked in current mode.
 3=2 + prohibits setpoint changes


Step #6 appears only if step #5 is not 0.


Adjust the maximum allowable heat setpoint when security is in effect.
 (35° - 99°)


Step #7 appears only if step #5 is not 0.


Adjust the minimum allowable cool setpoint when security is in effect.
 (35° - 99°)

Press 

Press 

Press 

Press 

Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Section 8 Contents:

8

- *Installing the Humidity Module.....8.2*
- *Setting a Thermostat Jumper for Humidity Operation.....8.3*
- *Adjusting the Humidification Setpoint.....8.4*

NOTE: The humidification functions described in this section will only be available if a Humidity Module has been properly installed.

Disclaimer:

The manufacturer of this thermostat cannot be liable for misinstallation, improper connection or improper programming of the humidity functions of this thermostat that may result in water damage or mold growth.

Additionally, the manufacturer of this thermostat is not responsible for the fitness of the humidifier and/or installation of said humidifier connected to this thermostat. Furthermore, the maintenance of the humidifier components, including but not limited to, the filters and pads are not the responsibility of the thermostat manufacturer.

The Humidifier Service icon is only a suggestive reminder and should not take the place of the humidifier manufacturer's required maintenance requirements and schedule.

Installing the Humidity Module

To install the Humidity Module the thermostat must be detached from the back plate. Plug the Humidity Module into the Humidity Module connector as shown in Figure 2 below. Follow the detailed instructions included with the Humidity Module accessory. Once the Humidity Module has been installed, you must adjust the Humidity jumper setting to HUM as shown in Figure 1 below. This will allow you to access the humidification and dehumidification setup steps.

For proper humidity operation, this jumper must be set for HUM.

8

Back of P374-2700

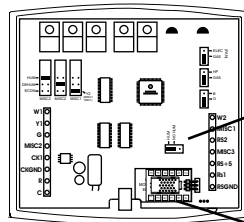
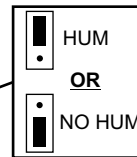
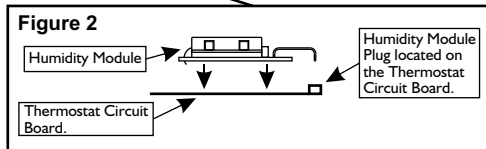


Figure 1



Install the Humidity Module (see Humidity Module Instruction Sheet for more detailed information).

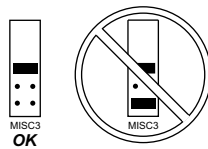
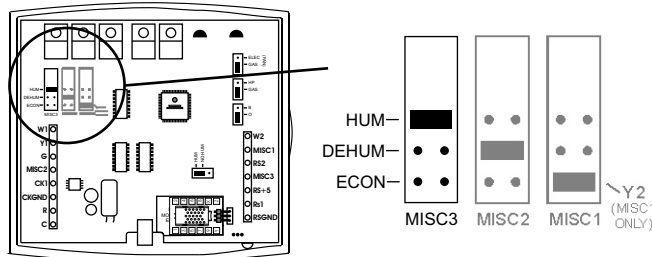


Setting a Thermostat Jumper for Humidity Operation

To operate one of the MISC outputs using humidity-based operation, place the MISC1, MISC2, or MISC3 jumper on the terminal labeled HUM (see diagram below). This will supply 24VAC to the selected MISC terminal based on the humidification programming in the following pages. Only one of the three outputs (MISC1, MISC2, or MISC3) is required to have this jumper. For more information regarding the MISC1, MISC2, and MISC3 outputs, please see Section 16.

8

In the diagram below, the MISC3 jumper has been set for HUM (humidify) operation.



IMPORTANT CAUTION

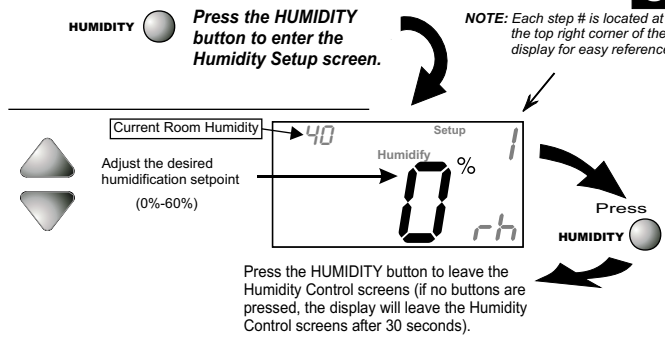
NEVER PUT MORE THAN ONE JUMPER ON THE SAME MISC JUMPER BLOCK!
THIS MAY DAMAGE THE THERMOSTAT AND VOID YOUR WARRANTY

Adjusting the Humidification Setpoint

If your HVAC unit is equipped with a humidification system and the Humidity Module has been installed, the thermostat will provide power to the appropriate terminal on the backplate of the thermostat when the humidity in the home falls below the setpoint you have chosen. The value for this setpoint ranges from 0% to 60%.

NOTE: Due to variations in environmental conditions, it is not always possible to achieve the desired humidification or dehumidification setpoint.

8



Humidification Notes: Press the button to set the humidity setpoint to 0% for no humidification operation.

You cannot set the dehumidify setpoint any lower than the humidify setpoint; a 5% differential is forced between the humidify and dehumidify setpoints.

SECTION 9
Dehumidification

TOTALINE

Section 9 Contents:

- *Configuring a Thermostat Output Jumper for Dehumidification Operation.....9.2*
- *Adjusting the Dehumidification Setpoint.....9.3*
- *Using Your Air Conditioner to Dehumidify.....9.4*
- *Using the DEHUM Terminal.....9.5*

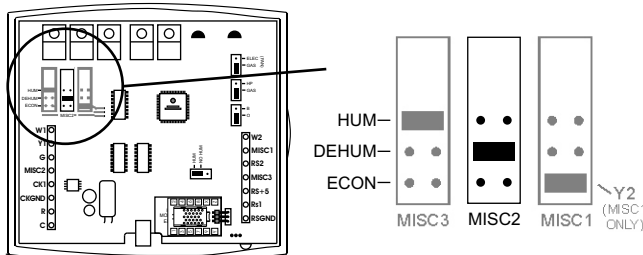
NOTE: The dehumidification functions described in this section will only be available if a Humidity Module has been properly installed. For instructions on installing the Humidity Module please see page 8.2.

Setting a Thermostat Jumper for Dehumidification Operation

To operate one of the MISC outputs using dehumidification-based operation, install the Humidity Module and place the Humidity Jumper on HUM (see page 8.2). Then place the MISC1, MISC2, or MISC3 jumper on the terminal labeled DEHUM (see diagram below). This will supply 24VAC to the selected MISC terminal based on the programming in the following pages. Only one of the three outputs (MISC1, MISC2, or MISC3) is required to have a jumper. For more information regarding the MISC1, MISC2, and MISC3 outputs, please see section 16.

9

In the diagram below, the MISC2 jumper has been set for DEHUM (dehumidification) operation.



IMPORTANT CAUTION

NEVER PUT MORE THAN ONE JUMPER ON THE SAME MISC JUMPER BLOCK!

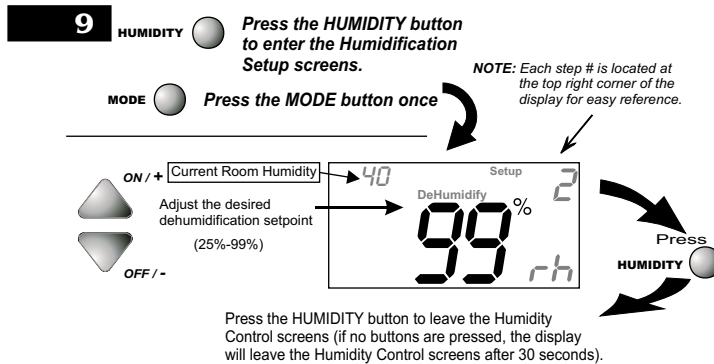
THIS MAY DAMAGE THE THERMOSTAT AND VOID YOUR WARRANTY


The diagram shows two examples of jumper placement on the MISC3 block. The first example, labeled 'MISC3 OK', shows a single black bar in the DEHUM row. The second example, labeled 'MISC3', shows multiple black bars in different rows, which is crossed out with a red circle and slash, indicating it is incorrect.

Adjusting the Dehumidification Setpoint

If your HVAC unit is equipped with a dehumidification terminal and the Humidity Module has been installed, the thermostat will provide power to the appropriate terminal on the backplate of the thermostat when the humidity in the home is above the setpoint you have chosen. When the indoor humidity rises above the setpoint you have selected, the appropriate terminal will be de-energized (see page 9.5). The value for this setpoint ranges from 25% to 99%.

NOTE: Due to variations in environmental conditions, it is not always possible to achieve the desired humidification or dehumidification setpoint.





Dehumidification Notes: Press the  button to set the dehumidification setpoint to 99% for no dehumidification operation. This will lockout Advanced Setup steps 8 and 9 (see page 9.4).

You cannot set the dehumidify setpoint any lower than the humidify setpoint; a 5% differential is forced between the humidify and dehumidify setpoints.


Using Your Air Conditioner to Dehumidify

If Cool to Dehumidify is on and the Humidity Module is installed, the thermostat has the ability to initiate a cooling cycle for advanced dehumidification operation. When the thermostat detects the humidity percentage is above the setpoint for dehumidification, and heating or cooling is not on, the thermostat will force the compressor to run with the fan, thus reducing moisture in the air. This feature will also allow you to adjust the cooling overshoot of the setpoint, from 0° to 5° (adjustable in step #9). *For Example: If the cooling overshoot is set for 3°F and the cooling setpoint is set for 74°F, then as long as the room temperature reads between 71°F and 74°F this feature will energize the compressor and fan to dehumidify the air.*



9

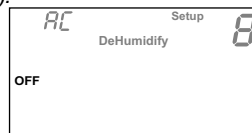
MODE  **HUMIDITY**  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*



MODE  Press the **MODE** button repeatedly until this setup screen appears.

Steps 8 and 9 only appear if the Dehumidification setpoint is not 99% (see page 9.3).

On  Select Cool to Dehumidify feature.
Off 



Step 9 appears only if step 8 is set to "ON"

 Adjust the maximum overshoot of the set temperature in Cool to Dehumidify mode. (0°- 5°)




Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


Dehumidification Notes: The thermostat must be in the Cool or Auto mode for the Cool to Dehumidify feature to be available.


Using the Dehum Terminal


If you configure a MISC output jumper for DEHUM, it may be programmed to operate in one of two ways:

- 1) **Normally Closed (NC):** The thermostat will de-energize the DEHUM terminal to allow the fan to run in low speed when there is a call for 1st stage cooling and the room humidity is greater than the dehumidification setpoint.
- 2) **Normally Open (NO):** The thermostat will energize the DEHUM terminal to allow the fan to run in low speed when there is a call for 1st stage cooling only and the room humidity is greater than the dehumidification setpoint.


9


MODE  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*

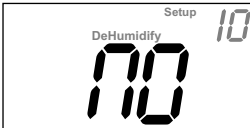
HUMIDITY 


MODE  *Press the MODE button repeatedly until this setup screen appears.*

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

 **NC** Normally Closed (NC) = DEHUM de-energized for low speed fan.

 **NO** Normally Open (NO) = DEHUM energized for low speed fan.



 **Press HUMIDITY**

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.




Dehumidification Notes: The DEHUM terminal will “release” and allow the fan to operate normally if there is call for 2nd stage cooling or if the call for Cooling and/or Cool to Dehumidify has been satisfied.

Section 10 Contents:


- *Viewing the Override
Run-Time.....10.2*
- *Viewing the Humidifier
Run-Time..... 10.3*
- *Viewing the UV Light* **10**
Run-Time.....10.4

Viewing the Override Operation Run-Time

This display will track the number of hours that your thermostat has been operating in the Override mode (see page 5.1). Press the FAN button to reset the counter.

- MODE**  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.
- HUMIDITY** 
- MODE**  Press the **MODE** button repeatedly until this setup screen appears.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*




- 10** Press  Counts the number of hours Override has been active. Press **FAN** to reset the Override Run-Time counter.




Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Viewing the Humidification Run-Time

After your humidification system has been operating for the number of days set in step #12 below, the Service Humidify icon will appear. This counter keeps track of the number of days since the Service Humidify icon was reset.

-  **MODE** Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.
 -  **HUMIDITY**
 -  **MODE** Press the **MODE** button repeatedly until this setup screen appears.
- Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.*

Press  **FAN**


Counts the number of days the humidifier has been running. Press **FAN** to reset the Service Humidify counter and remove the icon from the display.

Setup

Service Humidify

0 12

10


Press  **HUMIDITY**


Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


Viewing the UV Light Run-Time

After the UV light has been operating for the number of days set in step #13 below, the Service UV Light icon will appear. This counter keeps track of the number of days since the UV light icon was last reset.


10

MODE  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*

HUMIDITY 

MODE  *Press the MODE button repeatedly until this setup screen appears.*

Note: *Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.*


Press  **FAN** Counts the number of days since the UV Light was last reset. Press FAN to reset the Service UV Light counter and remove the icon from the display.

Setup

0

Service UV Light

13

Press  **HUMIDITY**

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

SECTION 11
Electric Heat and Heat Pump Operation

TOTALINE


Section 11 Contents:


- *Viewing the Heat Pump and Reversing Valve Jumper Setting.....11.2*
- *Viewing the Electric Heat Jumper Setting.....11.3*
- *Using Emergency Heat.....11.4*

11

Viewing the Heat Pump and Reversing Valve Jumper Settings

Steps 14 and 15 are 'Read Only' and may only be set with the jumpers on the circuit board of the thermostat.

MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

MODE  Press the **MODE** button repeatedly until this setup screen appears.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*

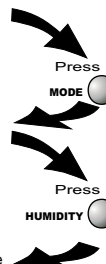
11



ON = Heat Pump operation
OFF = Gas Electric operation



Indicates that the thermostat jumper is set for an **O** reversing valve (energize in cooling) or a **b** reversing valve (energize in heating).





Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Viewing the Electric Heat Jumper Setting

Placing the jumper on ELEC will cause the thermostat to turn on the fan immediately any time there is a heat demand. Since most gas furnaces control the fan, this feature should be off unless the heater is only electric.

Step 16 is 'Read Only' and may only be set with the jumpers on the circuit board of the thermostat.

MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

MODE  Press the **MODE** button repeatedly until this setup screen appears.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*

11



ON indicates that the thermostat jumper is set for Electric Heat operation, or **OFF** for Gas/Electric or Heat Pump operation.

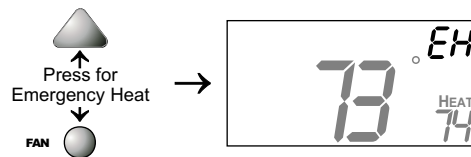


Press 

Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Using Emergency Heat

ENTER EMERGENCY HEAT: Only available if you have a Heat Pump installed. To initiate the Emergency Heat feature, press the FAN button. While holding the FAN button press the UP button. The Cool setpoint display will read 'EH' (emergency heat).



11

OPERATION: During Emergency Heat operation the thermostat will turn on the fan and the 2nd stage of heat when there is a demand for heat. Also during Emergency Heat the 1st stage of heating or cooling will be unavailable.

EXIT EMERGENCY HEAT: Follow the same steps as entering Emergency Heat by pressing the FAN and UP buttons. During Emergency Heat, only OFF and HEAT modes are available by pressing the MODE button.

SECTION 12
Timers and Deadbands




Section 12 Contents:


- *Adjusting the Heat/Cool
Differential.....12.2*
- *Adjusting the Cycles
Per Hour.....12.3*
- *Adjusting the Deadband.....12.4*
- *Selecting 2nd Stage Turn
Off Temperature.....12.6*

12

Adjusting the Heat/Cool Differential


The Heat and Cool setpoints will not be allowed to come any closer to each other than the value in this step. This minimum difference is enforced during Auto-Changeover operation.

MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

MODE  Press the **MODE** button repeatedly until this setup screen appears.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*

12



Adjust the minimum difference between cooling & heating setpoints.
(0° - 6°)


Setup

d IF

2

COOL

HEAT


Press 

Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


Note: To increase the spread between the heating and cooling setpoints, press the **MODE** button until only the heat setpoint is displayed. Adjust the desired setpoint. Press the **MODE** button until only the cool setpoint is displayed. Adjust the desired setpoint. Press the **MODE** button again to enter the Auto-Changeover mode where both the heat and cool setpoints are displayed.

Adjusting the Cycles Per Hour

The Cycles Per Hour setting may limit the number of times per hour your HVAC unit may energize. For example, at a setting of 6 cycles per hour the HVAC unit will only be allowed to energize once every 10 minutes. The Cycles Per Hour limit may be overridden and reset by pressing any button on the thermostat.

MODE  **Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.**

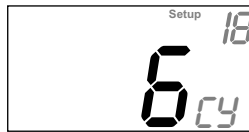
HUMIDITY 

MODE  **Press the MODE button repeatedly until this setup screen appears.**


Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.



Select the cycles per hour limit.
 d=cycles per hour limit defeated.
 d1=d + defeat 5 min. compressor lockout.
 (d1, d, 2 - 6)



12

Press 

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Adjusting the Deadband

MULTI-STAGE OPERATION - Controls up to two Heat and two Cool stages.

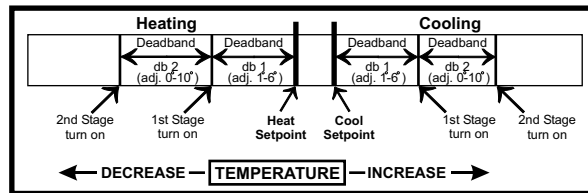
The **2nd Stage** of heat or cool is turned on when:

(A) The 1st Stage has been on for the two minutes.

And



(B) The temperature spread from the setpoint is equal to or greater than: *the setpoint plus the 1st stage deadband (step #19, next page), plus two degrees.*


12





Adjusting the Deadband

For more detailed information, please see the explanation on the previous page.


MODE  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*
HUMIDITY 

MODE  *Press the MODE button repeatedly until this setup screen appears.*

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

 Adjust the deadband for the 1st stage.
 (1- 6)

db Setup 19
2


12
 Press 

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.


Selecting 2nd Stage Turn Off Temperature



If ON is selected, the second stage of cooling or heating will remain energized until the thermostat reaches the setpoint on the thermostat display.

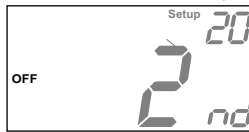
If OFF is selected, the second stage of cooling or heating will turn off after reaching the 1st stage deadband (see page 12.4 for more information).

MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

*Note: Press the **MODE** button momentarily to move through the setup screens. Press and hold the **MODE** button to move backwards through the setup screens.*

12 **MODE**  Press the **MODE** button repeatedly until this setup screen appears.

-  On Select On or Off:
On - 2nd stage will remain on until setpoint is reached.
-  Off Off - 2nd stage will turn off after reaching 1st stage deadband.



Press 

Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

SECTION 13
Programming Remote Sensor Operation

TOTALINE


Section 13 Contents:

- *Installing the Remote
Sensors.....13.2*
- *Controlling or Reading the
Remote Temperature (RS1)...13.3*

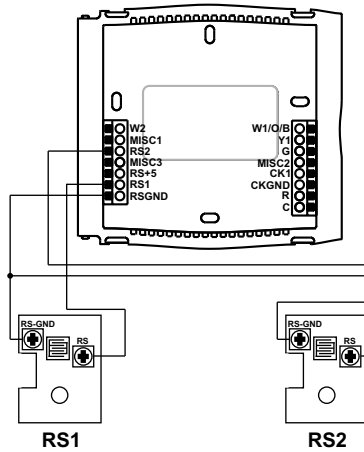
13

Installing the Remote Sensors

Up to two wired remote sensors may be installed on the thermostat to read outside temp (RS2) and/or control the temperature in another room (RS1). The designators RS1 and RS2 refer to the terminal locations on the thermostat's backplate. If a sensor is connected to RS1 and is programmed to control the thermostat, the degree icon on the thermostat will blink once per second to indicate that a remote sensor reading is being displayed. The wired sensor can be connected to the thermostat with **up to 150' of 18 ga., 300' of 20 ga., or 450' of 22 ga. unshielded, thermostat wire.**

 This wire ***MUST*** be completely separated from the thermostat or any other control wiring and must ***NOT*** be in the same conduit as high voltage wiring.

13



See the Remote Sensor accessory for further details.




Controlling or Reading the Remote Temperature (RS1)

The thermostat may be programmed to only READ the remote sensor, or to CONTROL to the remote sensor. Refer to Advanced Setup step #21, below.



Read Only Sensor (RS1): If step #21 is set to only READ to the remote sensor, this temperature may be viewed by pressing the OUTSIDE^o button on the thermostat and then pressing the MODE button.

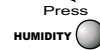
Control Sensor (RS1): If step #21 is set to CONTROL to the remote sensor, the thermostat will ignore the reading of its internal temperature sensor and only display the temperature reading from the remote sensor. The degree icon on the thermostat will blink once per second to indicate that a remote sensor reading is being displayed. This is the factory default setting.

13

- MODE  Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.
- HUMIDITY 
- MODE  Press the MODE button repeatedly until this setup screen appears.

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

- YES  Optional Remote Sensor:
YES = Read Only Remote Sensor RS1.
- NO  NO = Control to Remote Sensor RS1.



Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

SECTION 14
Programming the Dry Contact

TOTALINE

Section 14 Contents:


- *Dry Contact Operation*..... 14.2
- *Dry Contact Polarity*.....14.2
- *Dry Contact Programming*.....14.3
- *Override Operation*.....14.4
- *Soft Start Operation*.....14.5


14

Dry Contact Operation



If the dry contact is going to be used, select YES in step #22 below; if the dry contact is not going to be used, select NO. in step #22 below.

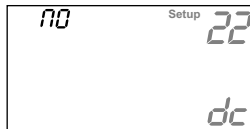
DRY CONTACT POLARITY - The terminals may be set to be Normally Open (NO) or Normally Closed (NC) in step #23. If NO is selected the dry contact will operate when it is forced closed. If NC is selected, the dry contact will operate until it is forced open.

MODE  *Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.*

MODE  *Press the MODE button repeatedly until this setup screen appears.*

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

YES
 Set to YES if the dry contact will be used.
 **NO**
 Set to NO if the dry contact will not be used.



14
 Press 

NC
 Dry Contact Polarity:
 Normally Open (NO)
 **NO**
 Normally Closed (NC).




Press 


Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Dry Contact Programming

VERRIDE OR SERVICE THE CONDENSATE DRAIN PAN - If Override is selected in step #24 (below), when the dry contact is energized the thermostat will be forced into or out of Unoccupied setpoints (next page) depending on the polarity of the Dry Contact. If Service Pan is selected, when the dry contact is energized the thermostat will lockout Y1 (compressor) and write Service Pan on the display.



MODE  **Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.**

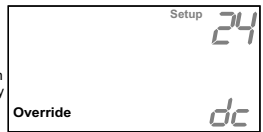
HUMIDITY 


MODE  **Press the MODE button repeatedly until this setup screen appears.**

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

14

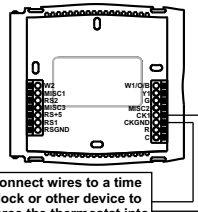
-  **Service Pan**
Select Override to enable Override setpoints when the dry contact is energized. Select Service Pan to lockout Y1 when the dry contact is energized.
-  **Override**



Press HUMIDITY 

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

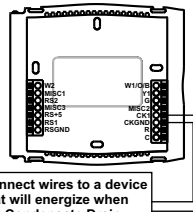
Override



Connect wires to a time clock or other device to force the thermostat into or out of Unoccupied.

OR


Service Pan




Connect wires to a device that will energize when the Condensate Drain Pan is full.


Dry Contact Programming

UNOCCUPIED SETPOINTS - If Override is selected in step #24 (see previous page), when the dry contact is energized the thermostat will be forced into or out of Unoccupied setpoints. To adjust the Unoccupied setpoints follow the setup steps below.


MODE  Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.

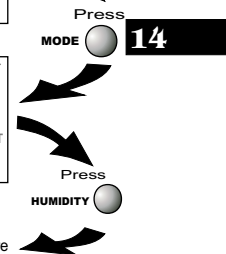
MODE  Press the **MODE** button repeatedly until this setup screen appears.

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

 Adjust the cooling setpoint for unoccupied periods.
(35° - 99°, OF)



 Adjust the heating setpoint for Unoccupied periods.
(OF, 35° - 99°)



Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.



Random Start Operation

This feature causes a 2 to 30 second delay before energizing the thermostat outputs after any of these events:

Loss of Power to the thermostat: When power to the thermostat is interrupted and then restored, Random Start will lockout the outputs of the thermostat for a random amount of time. This delay helps to keep multiple thermostats from energizing their outputs at the same time after a power outage.

Changing from an Unoccupied time period to an Occupied time period: If the thermostat is running in the Program On mode and the start time for an Occupied period forces the thermostat from Unoccupied to Occupied 1, Random Start will lockout all outputs of the thermostat for a random amount of time. This delay helps to keep multiple thermostats from energizing their outputs at the same time each day.

Closure of the Dry Contact to force Occupied 1 time period: If step #24 (*previous page*) is programmed for Occupied 1, then Random Start will lockout all outputs of the thermostat for a random amount of time when a Dry Contact closure occurs (*depending on step #23*). This delay helps to keep multiple thermostats from energizing their outputs each time the Dry Contact is used.


Section 15 Contents:

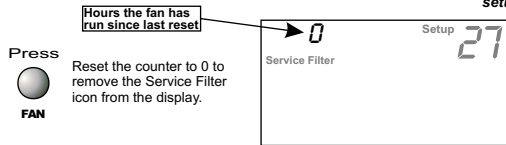
- *Setting and Resetting the Service Filter (Fan Run-Time) Alarm.....15.2*
- *Setting and Resetting the UV Light Run-Time Alarm.....15.3*
- *Setting and Resetting the Humidify Run-Time Alarm.....15.4*


How to Set and Reset the Service Filter (Fan Run-Time) Alarm

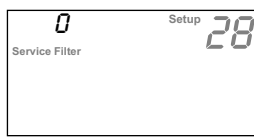
This counter keeps track of the number of hours of fan run-time whether the fan is energized in the Heating or Cooling modes, or in stand alone fan operation. The Service Filter icon will appear after the preset number of hours of fan run-time in step #28 (below) has been achieved. Setting this counter to zero in step #28 will prevent the Service Filter icon from ever appearing.

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

RESET FILTER  **Press the RESET FILTER button to enter this setup screen.**






15  Adjust the number of hours in increments of 50 the fan will run before the Service Filter icon appears on the display. 0 = off. (0 - 1950 hours)



Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

How to Set and Reset the UV Light Run-Time Alarm

This counter keeps track of the number of days since the UV Light counter has been reset. The UV Light icon will appear after the number of days has been achieved, as shown in step #29 (below). Setting the counter to zero in Step #29 will prevent the Service UV Light icon from ever appearing.

-  **MODE** Press the **MODE** button. While holding the **MODE**, press the **HUMIDITY** button to enter Setup screens.
 -  **HUMIDITY**
 -  **MODE** Press the **MODE** button repeatedly until this setup screen appears.
- Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.*

Days since the UV Light icon has been reset

→


0


Service UV Light

Setup

13

15

Press  **FAN** Reset the counter to 0 to remove the Service UV Light icon from the display.

 **MODE** Press the **MODE** button repeatedly until this setup screen appears.


→


0

Service UV Light

Setup

29




Press  **HUMIDITY**

 Adjust the number of days in increments of 10 before the UV Light icon appears on the display. 0 = off.
 (0 - 1990 days)


Press the **HUMIDITY** button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

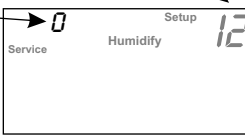
How to Set and Reset the Humidifier Run-Time Alarm


This counter keeps track of the number of days since the Service Humidify icon was last reset; this icon will appear after the number of days set in step #30 (below) has elapsed. Setting this counter to zero in step #30 will prevent the Service Humidify icon from ever appearing.


- MODE**  **Press the MODE button. While holding the MODE, press the HUMIDITY button to enter Setup screens.**
 - HUMIDITY** 
 - MODE**  **Press the MODE button repeatedly until this setup screen appears.**
- Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.*

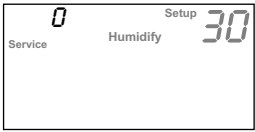
Days since the last reset of the Service Humidify counter.


Press  **FAN** Reset the counter to 0 to remove the Service Humidify icon from the display.




15 **MODE**  **Press the MODE button repeatedly until this setup screen appears.**

 Adjust the number of days in increments of 10 before the Service Humidify icon appears.
0 = Off
(0 - 1990 days)



Press  **HUMIDITY**

Press the HUMIDITY button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

 **The humidifier run-time alarm does not take the place of any humidifier manufacturer's recommended maintenance plan; it only serves as a helpful reminder.**

SECTION 16
Configuring the MISC Outputs

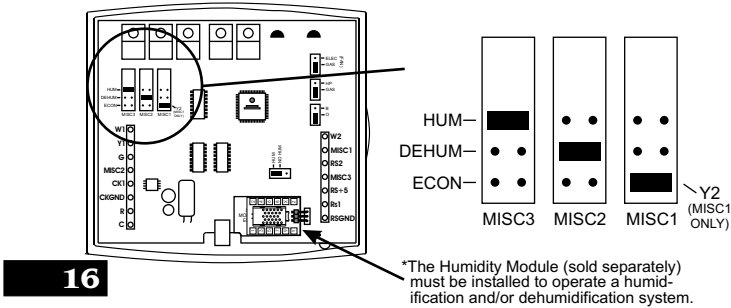
TOTALINE

Section 16 Contents:

- *Configuring the Jumpers.....16.2*
- *Explanation of Jumper
Settings.....16.3*

Configuring the Jumpers

For additional flexibility, your thermostat has three configurable outputs. These outputs are designed to have different functions depending on how the jumpers are set (*below*). Each output, labeled MISC1, MISC2, and MISC3 may be set for one of the four choices available. In the diagram below, the MISC3 jumper has been set for HUM* (humidification) operation, the MISC2 jumper has been set for DEHUM* (dehumidification) operation, and the MISC1 jumper has been set for Y2 (second stage cooling) operation.



*The Humidity Module (sold separately) must be installed to operate a humidification and/or dehumidification system.

CAUTION
NEVER PUT MORE THAN ONE JUMPER ON THE SAME MISC JUMPER BLOCK!
DOING SO MAY DAMAGE YOUR THERMOSTAT AND VOID THE WARRANTY.



Explanation of Jumper Settings

HUM JUMPER SETTING

If the jumper for MISC1, MISC2, or MISC3 is set to HUM, the corresponding MISC screw terminal on the backplate will control a humidification system.

HUMIDIFICATION OPERATION - SECTION 8

If your HVAC unit is equipped with a humidification system and the Humidity Module (sold separately) has been installed, the thermostat will provide power to the MISC1, MISC2, or MISC3 terminal of the thermostat when the humidity in the home falls below the humidity setpoint you have chosen. The value for this setpoint ranges from 0% to 60%. If no humidity is desired or if a humidification system has not been installed, set the value to OFF.

DEHUM JUMPER SETTING

*If the jumper for MISC1, MISC2, or MISC3 is set to DEHUM, the corresponding MISC screw terminal on the backplate will be connected to the dehumidification terminal of a furnace board.
NOTE: Not all furnaces have a dehumidification terminal.*

DEHUMIDIFICATION OPERATION - SECTION 9

If your HVAC unit is equipped with a dehumidification system the thermostat will operate in one of two ways.

- 1) **Normally Closed (NC):** The thermostat will **de-energize** the MISC1, MISC2, or MISC3 terminal of the thermostat (this MISC terminal is connected to the DEHUM terminal on your furnace) to allow the fan to run in low speed when the humidity in the home is above the dehumidify setpoint you have chosen and there is a call for 1st stage cooling. **16**
- 2) **Normally Open (NO):** The thermostat will **energize** the MISC1, MISC2, or MISC3 terminal of the thermostat (this MISC terminal is connected to the DEHUM terminal on your furnace) to allow the fan to run in low speed when the humidity in the home is above the dehumidify setpoint you have chosen and there is a call for 1st stage cooling.

Explanation of Jumper Settings (continued)

ECON JUMPER SETTING

If the jumper for MISC1, MISC2, or MISC3 is set to ECON, the corresponding MISC screw terminal on the backplate will be connected to an economizer.

ECONOMIZER OPERATION - If your HVAC unit is equipped with an economizer system, the thermostat will provide power to the MISC1, MISC2, or MISC3 terminal of the thermostat when the thermostat is in an occupied time period. The MISC1, MISC2, or MISC3 terminal will be de-energized when the thermostat is in an unoccupied time period.

Y2 JUMPER SETTING

If the jumper for MISC1 is set to Y2 the MISC1 screw terminal on the backplate will control a second stage of cooling.

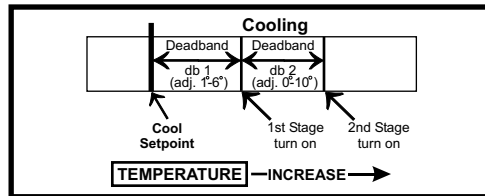
Y2 OPERATION - SECTION 12

The **2nd Stage** of heat or cool is turned on when:
 (A) The 1st Stage has been on for the two minutes.

And

(B) The temperature spread from the setpoint is equal to or greater than: *the setpoint plus the 1st stage deadband (step #19, page 12.5), plus two degrees.*

16



SECTION 17
Factory Defaults, Calibration, and Sensors

TOTALINE

Section 17 Contents:

- *Resetting the Thermostat to the
Factory Default Settings.....17.2*
- *Calibrating the Temperature
and Humidity Sensors.....17.3*


17

Resetting the Thermostat to the Factory Default Settings (for default values see page 19.1)

If, for any reason, you desire to return all the stored settings back to the factory default settings, follow the instructions below.



WARNING: This will reset all Advanced Programming to the default settings. Any information entered prior to this reset may be permanently lost.

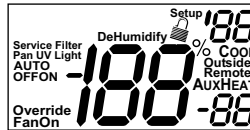
1

MODE  Place the thermostat in the OFF mode.




2

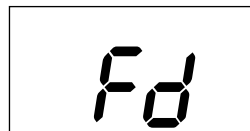
MODE 
FAN  Press and hold the MODE button. While holding the MODE button, press and hold the FAN button for 5 seconds. All icons will appear on the display.




3

17

FAN  After all of the icons appear, release the MODE and FAN buttons. Then press and hold the FAN button for 5 seconds.



4


MODE  After the letters Fd appear on the display (Factory Default), release the FAN button. Press the MODE button **once** to return to normal operation.



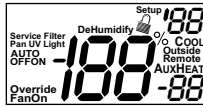
Calibrating the Temperature and Humidity Sensors

Under normal circumstances it will not be necessary to adjust the calibration of the temperature and humidity sensors. If calibration is required, please contact a trained HVAC technician to correctly perform the following procedure.


- 1** **MODE** Place the thermostat in the OFF mode.



- 2** **MODE** Press and hold the MODE button. While holding the MODE button, press and hold the FAN button for 5 seconds. All icons will appear on the display.

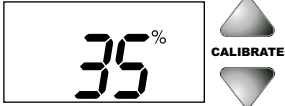
FAN


- 3** **PRESS** **THERMOSTAT SENSOR**
Press the UP and DOWN buttons at the same time twice. The thermostat temperature will be displayed and may be calibrated using the UP or DOWN buttons.

TWICE


- 4** **MODE** **REMOTE SENSOR**
Press the MODE button once. The remote sensor temperature will be displayed and may be calibrated using the UP or DOWN buttons. If a remote sensor is not installed, only dashes will appear.


- 5** **MODE** **HUMIDITY SENSOR**
Press the MODE button once. The relative humidity at the thermostat will be displayed and may be calibrated using the UP or DOWN buttons.



After calibration is complete, press the MODE button **once** to return to normal operation.

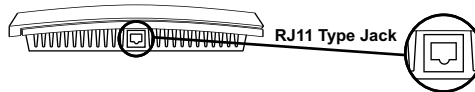
SECTION 18

Accessories

TOTALINE

ACCESSORY PORT - The RJ11 Jack is used to connect the P374-2700 to the IR Receiver P/N P374-0431 for wireless communication or the EZ Programmer P/N P374-0432 for easy downloading or uploading of thermostat information.

The Accessory Port is located on the bottom of the thermostat.



IR RECEIVER / REMOTE CONTROL (optional accessory) - When the IR Receiver is connected, the thermostat can be controlled using an IR Remote Control. The thermostat may also interface with other wireless systems in your home. For more information see the instruction sheet for the IR Receiver P374-0431.

EZ PROGRAMMER (optional accessory) - When the EZ Programmer is connected, the thermostat Time Period Programming and Advanced Setup Programming can be stored into the EZ Programmer's memory. This information can then be uploaded to other thermostats. For more information see the instruction sheet for the EZ Programmer P/N P374-0432.

18 **WEB KIT** (optional accessory) - The P374-2700 Thermostat is capable of communication via the World Wide Web and phone by installing the optional Web Kit. Heating and cooling functionality may be accessed and controlled through the phone or internet. For more information contact your dealer.

SECTION 19
Advanced Setup Table

TOTALINE

Step#	Description	Pg#	Range	Df*	Step#	Description	Pg#	Range	Df*
1	Auto-Changeover Thermostat	3.2	Yes/No	Yes	17	Minimum Heat/Cool Differential	12.2	0° - 6°	2°
2	Fan Off Delay	6.3	0, 30, 60, 90	0	18	Cycles Per Hour	12.3	1 - 6	6
3	Thermoglow Backlight	7.2	Auto/On/Off	Auto	19	Deadband/Temp. Swing 1st Stage	12.5	1° - 6°	2°
4	F or C	7.2	F/C	F	20	2nd Stage turn off at setpoint	12.6	On/Off	On
5	Security Level	7.4	0 - 3	0	21	Thermostat READ to RS1	13.3	Yes/No	No
6	Max Heat Setpoint	7.4	35° - 99°	80°	22	Dry Contact Operation	14.2	Yes/No	No
7	Min Cool Setpoint	7.4	35° - 99°	55°	23	Dry Contact Polarity	14.2	NO/NC	NO
8	Cool to Dehumidify	9.4	On/Off	Off	24	Dry Contact Programming	14.3	Override Service Pan	Override
9	Maximum Dehum Overshoot	9.4	0° - 5°	3°	25	Unoccupied Cool	14.4	35° - 99°	85°
10	DEHUM Terminal Polarity	9.5	NO/NC	NO	26	Unoccupied Heat	14.4	35° - 99°	55°
11	Override Run-Time	10.2	--	--	27	Reset Service Filter Icon	15.2	--	--
12	Reset Service Humidity Icon	10.3	--	--	28	Service Filter Run Time Set	15.2	0 - 1950	0
13	Reset UV Light Icon	10.5	--	--	29	UV Light Run-Time Set	15.3	0 - 1990	0
14	Heatpump Jumper Setting	11.2	--	--	30	Service Humidify Run-Time Set	15.4	0 - 1990	0
15	Reversing Valve Jumper Setting	11.2	--	--					
16	Electric Heat	11.3	--	--					

*Df = Factory Default Setting

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see *Run-Time*

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Section 21 Warranty

TOTALINE

One-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer's sole option to replace any defective part, will be provided without charge for the part itself provided the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.