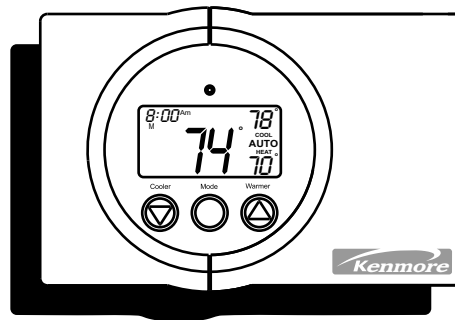


OWNER'S MANUAL

P/N TSTAT0713K

# 1 For All™ Programmable Temperature & Humidity



- 7 Day Programmable
- 4 Time Periods per Day
- **Thermoglow™** Backlight
- **One-For-All™** Technology
- Programmable Fan
- Separate Humidification and Dehumidification Terminals
- Read Outside Temperature with Optional Sensor
- Comfort Alert™ Diagnostics

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

*Complete Control from*



Kenmore ©2005

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### CAUTION

Follow *Installation Instructions* before proceeding.

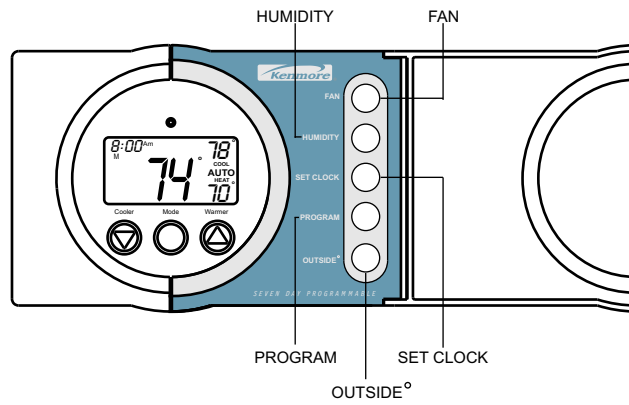
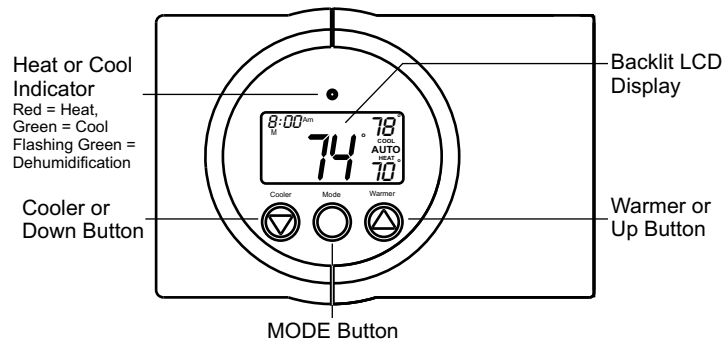
SET THERMOSTAT MODE TO "OFF" PRIOR TO  
CHANGING SETTINGS IN SETUP OR RESTORING  
FACTORY DEFAULTS.

---

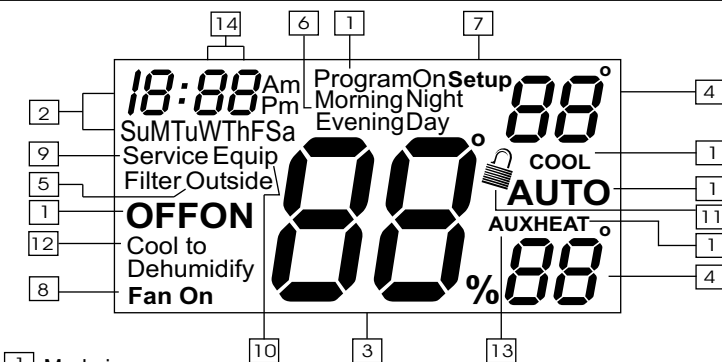
Kenmore ©2005

P/N TSTAT0713K

## Front Panel




## Display

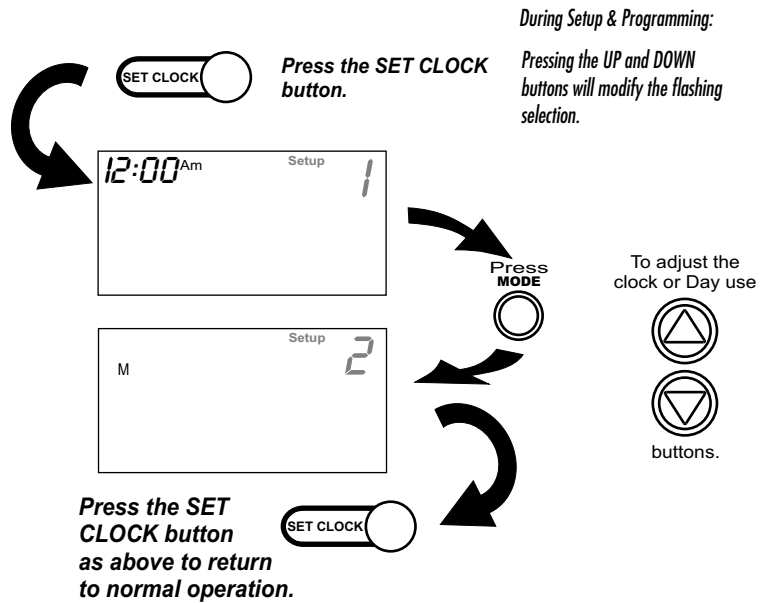


- 1 **Mode icons**  
Selects the operation mode of the equipment  
**HEAT** - Indicates the heat mode.  
**COOL** - Indicates the air conditioning mode.  
**AUTO** - Indicates the system will automatically changeover between heat and cool modes as the temperature varies.  
**OFF** - Indicates the entire system is turned off.  
**PROGRAM ON** - Indicates the stored time period program is enabled to run. *Page 6 & 9.*
- 2 **Clock with Day of the Week**  
Indicates the current time and day. This clock is also used to program the time periods. *Page 5.*
- 3 **Room Temperature Display**  
Indicates the current room temperature.
- 4 **Desired Set Temperature**  
Indicates desired room temperature(s). *Page 7.*
- 5 **Outside icon**  
Indicates the temperature displayed is from the optional outside sensor. *Page 25.*
- 6 **Morning, Day, Evening & Night icons**  
Indicates the program time period. *Pages 9-12.*
- 7 **Setup icon**  
Indicates the thermostat is in the programming mode. *Page 13.*

## Display

- 8 **Fan On** icon  
Indicates constant, continuous fan operation. When **Fan On** is not lit - indicates the fan will only operate when necessary to heat or to cool. *Page 7.*
- 9 **Service Filter** icon  
Appears when the filter should be serviced under normal conditions. Adjustable from 0 - 1950 hours of blower operation. *Page 13.*
- 10 **Service Equip** icon  
Appears when the Comfort Alert Diagnostics module is installed and has detected a problem with the HVAC unit. *Page 22.*
- 11  icon  
Indicates keypad has been locked. *Page 24.*
- 12 **Cool to Dehumidify** icon  
Appears when the humidity in the space is above the dehumidification setpoint (page 8 step 2) and dehumidification has been turned ON in the Advanced Setup. *Page 8, step 4.*
- 13 **AuxHeat** icon  
Indicates the Heat Pump is currently using 2nd stage electric strip heat. *Page 14.*
- 14 Room Humidity Display  
Indicates the current room humidity. Only displayed during Humidity Control setup screens. If the room humidity cannot be read, two dashes [--] will appear.

## Quick Start *Set the Clock and Go*



*TIP: Hold the FAN button while pressing UP or DOWN buttons to rapidly advance the hours in Set Clock.*

This thermostat is preprogrammed at the factory to operate 1 or 2 Stage equipment without the need for further programming. To optimize the installation of this thermostat follow the instructions in the Advanced Setup section.

## Basic Operation

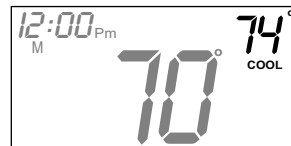
## Temperature Control

### Select Mode

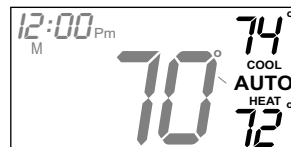
The **HEAT** setting indicates the temperature (minus the dead-band) the room has to reach before the furnace will turn on to heat the room.



The **COOL** setting indicates the temperature (plus the dead-band) the room has to reach before the air conditioner will turn on to cool the room.



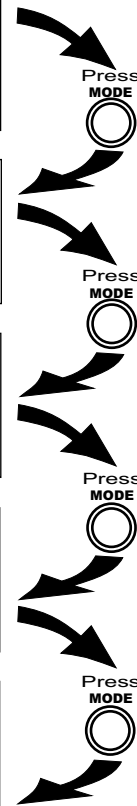
**AUTO** will automatically select heat or cool based on room temperature demand.



**Program On** will activate the stored time period operation. (Morning, Day, Evening & Night periods)



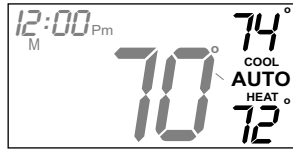
**OFF** indicates both heating and air conditioning systems are turned off.



## Basic Operation

## Temperature Control

### Select Desired Temperature



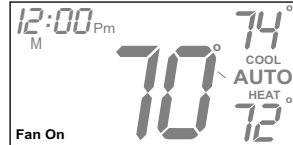
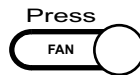
In any mode, adjust the desired Set Temperature



with  
buttons.

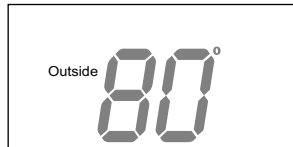
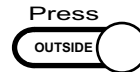
Pressing the UP or DOWN buttons in Auto or Program mode will adjust **both** the heat and cool set temperatures simultaneously. Pressing the UP or DOWN buttons in Heat or Cool modes will only adjust the heat or cool set temperature.

### Fan Operation



**Fan On** Indicates constant fan operation. This feature is active even if the thermostat is set to **Off**.

### View Outside Temperature



To view the outside temperature press the OUTSIDE button; the outside temperature will be displayed. Press the OUTSIDE button again to exit to the regular screen. Two dashes appear [--] if no outside sensor is connected.



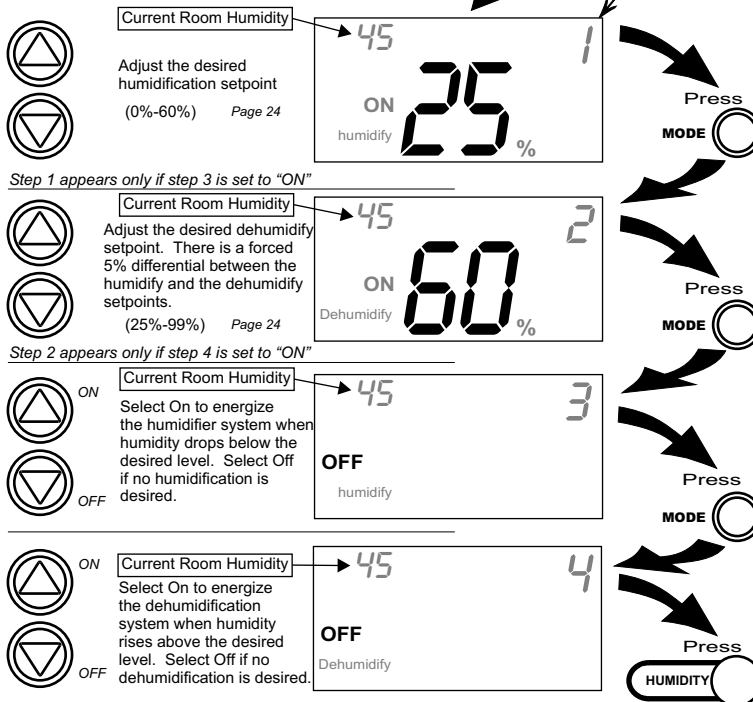
## Basic Operation

## Humidity Control



Press the Humidity button to enter Setup screens.  
Pages 18-20, 24

NOTE: Each step # is located at the top right corner of the display for easy reference.



Press the HUMIDITY button to leave the Humidity Control screens (if no buttons are pressed, the display will leave the Humidity Control screens after 60 seconds).

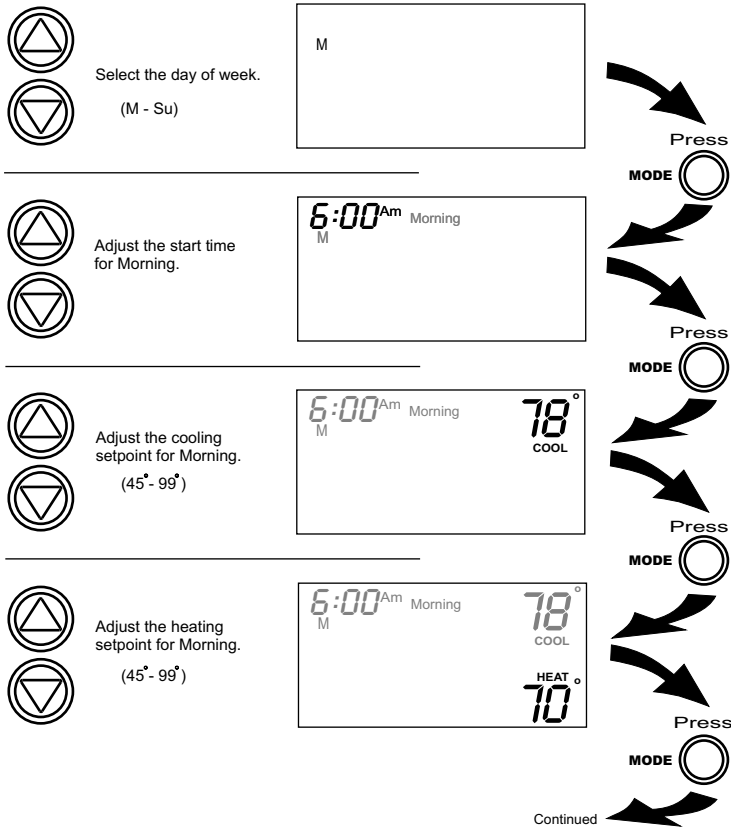
NOTE: You cannot set the dehumidify setpoint any lower than the humidify setpoint; a 5% differential is forced between the humidify and dehumidify setpoints. When both humidify (step #3) and dehumidify (step #4) are set to ON, the dehumidify setpoint will automatically be raised to 5% above the humidify setpoint, when required.

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

## Programming 4 Time Periods

 Press the **PROGRAM** button to enter time period programming.

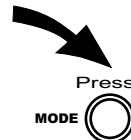
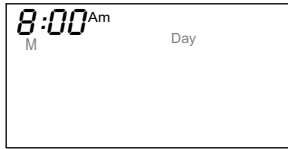
Use the *Programming Worksheet* on the back page to help with this section.



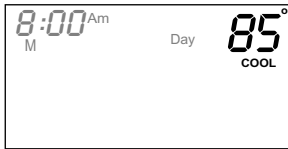
## Programming 4 Time Periods



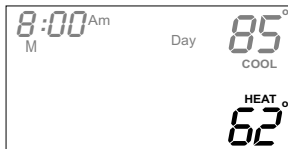
Adjust the start time for Day.



Adjust the cooling setpoint for Day.  
(45° - 99°)



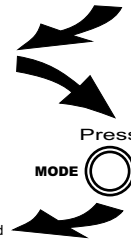
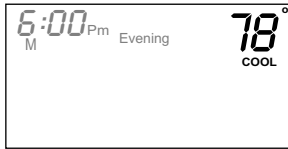
Adjust the heating setpoint for Day.  
(45° - 99°)



Adjust the start time for Evening.

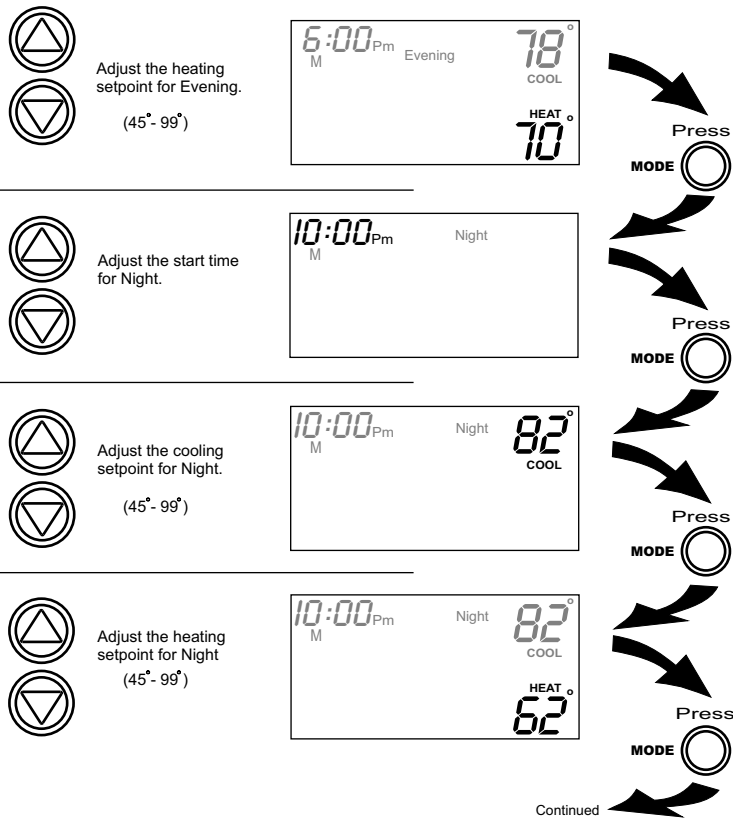


Adjust the cooling setpoint for Evening.  
(45° - 99°)



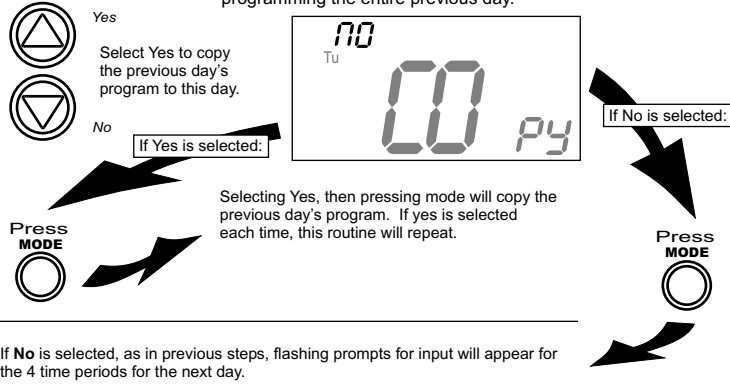
Continued

## Programming 4 Time Periods



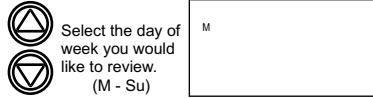
## Programming 4 Time Periods

The copy command becomes available after programming the entire previous day.

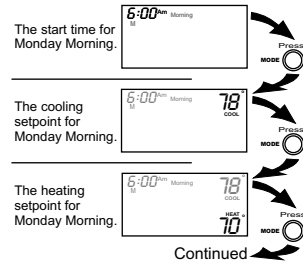


## REVIEWING YOUR PROGRAM

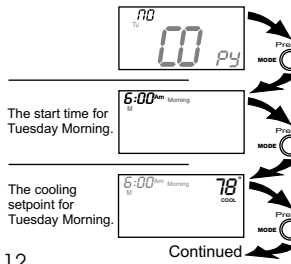
**PROGRAM** Press the **PROGRAM** button to enter time period programming.



Press the **MODE** button to review the temperature, start and stop times for each time period of the selected day.




When the copy screen is reached, press the **MODE** button again to view the next day, or press the **PROGRAM** button to exit.



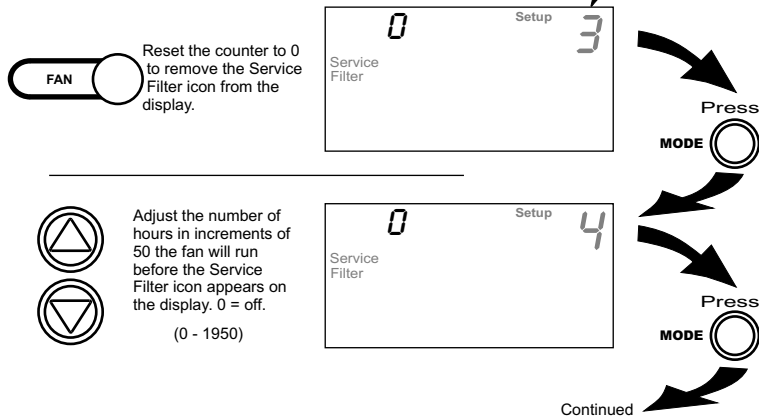
## Advanced Setup

**MODE**  **Before entering Advanced Setup, use the MODE button to place the unit in OFF.**

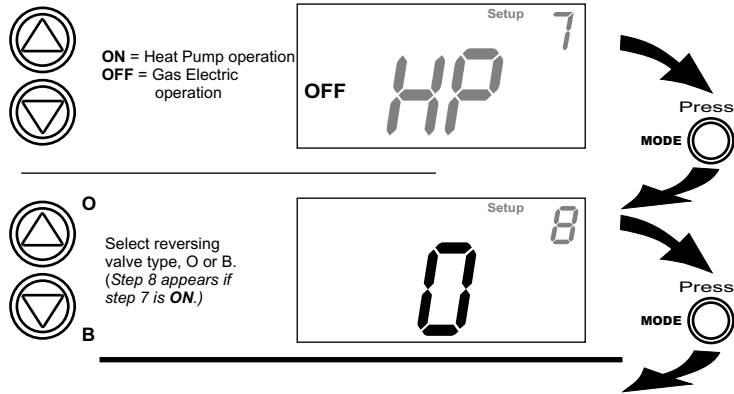
*\* These steps are normally set up by the installer.  
 \* Setting these values incorrectly may result in improper operation.  
 \* Setup steps 1 & 2 are found in the clock set section.*

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

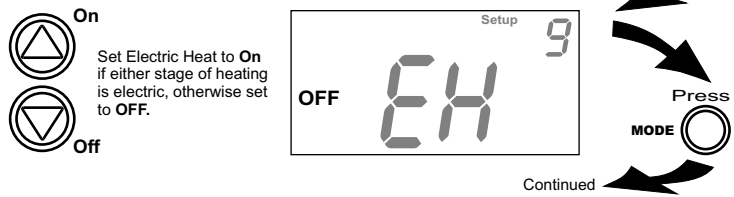
*NOTE: Each step # is located at the top right corner of the display for easy reference.*



## Advanced Setup

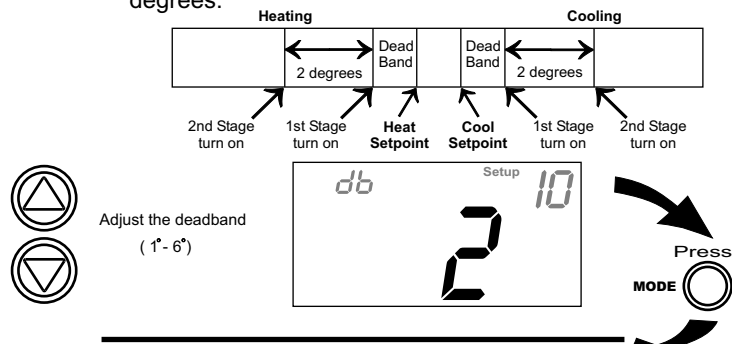


\* **ELECTRIC HEAT** - Setting Electric Heat to **ON**, will cause the thermostat to turn on the fan immediately any time there is a heat demand. Since most gas furnaces control the fan, this feature should be off unless the heater is only electric.

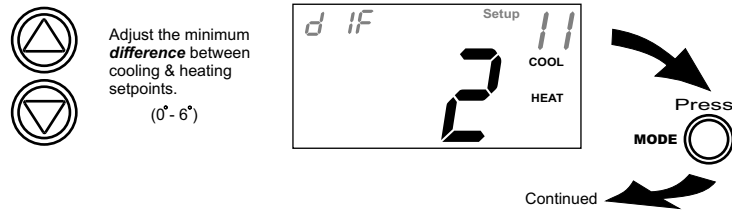


## Advanced Setup

- \* **MULTI-STAGE OPERATION** - Control up to 2 Heat, 2 Cool Stages  
 The **2nd Stage** of heat or cool is turned on when:  
**(A)** the 1st Stage has been on for two minutes **and**  
**(B)** *the setpoint plus the 1st stage deadband (two degrees) plus the 2nd stage deadband.* This 2nd stage deadband is adjustable from 1-6 degrees and the default is two degrees.



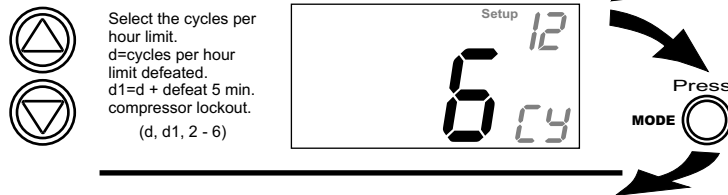
- \* **MINIMUM HEAT/COOL SETPOINT DIFFERENCE** -  
 The Heat and Cool setpoints will not be allowed to come any closer to each other than the value in this step. This minimum difference is enforced during Auto Changeover operation.



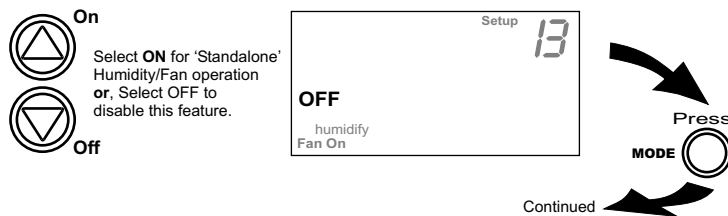


## Advanced Setup

- \* **CYCLES PER HOUR** - The Cycles Per Hour setting monitors 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 by pressing any button on the thermostat.



- \* **STAND ALONE HUMIDIFY/FAN OPERATION** - If ON is selected, the TSTAT0713K will automatically turn on the fan any time there is a demand for humidity. Selecting OFF will disable this feature.



## Advanced Setup

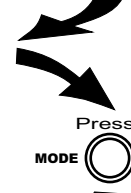
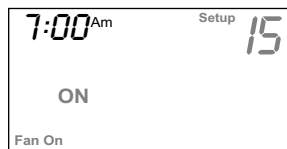
- \* **PROGRAMMABLE FAN** - This timer will start the fan at the top of each hour and the fan will run for the number of minutes selected in step #14. Steps 15 & 16 restrict the hours during which the programmable fan may operate; step #15 is the start time and step #16 is the stop time. Selecting the same start and stop times will cause the fan to operate 24 hours a day.



Adjust the Programmable Fan timer. 0 - 60 minutes. 0:00 = off



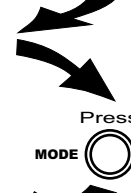
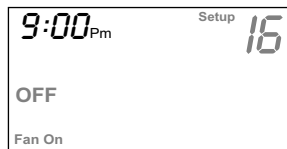
Adjust the Programmable Fan start time. Adjusts in 15 min. increments.



Step 15 appears only if step 14 is not 0:00.



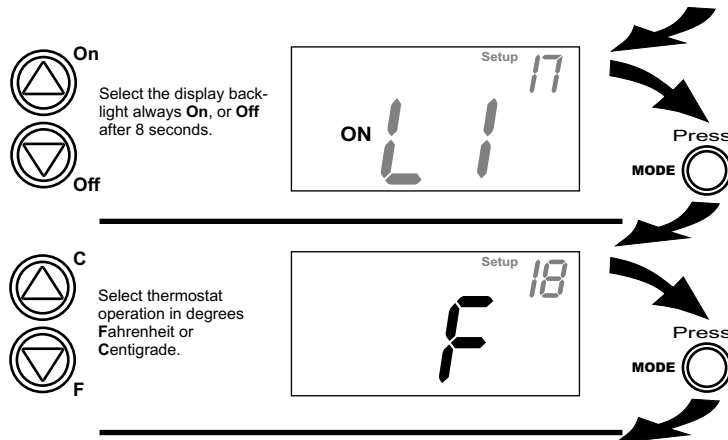
Adjust the Programmable Fan stop time. Adjusts in 15 min. increments.



Step 16 appears only if step 14 is not 0:00.

Continued

## Advanced Setup



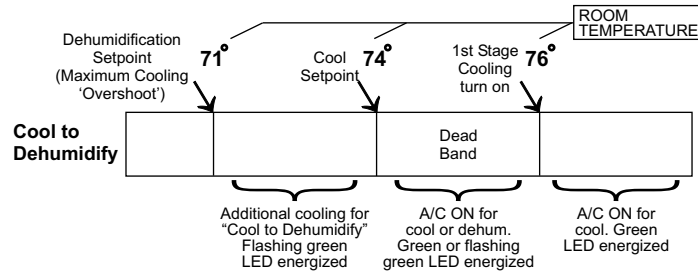
- \* **DEHUMIDIFICATION** - There are 2 methods of Dehumidification:
  - 1) Using your A/C to dehumidify (see below and next page).
  - 2) Using the Dehum Terminal (see page 20).

- \* **COOL TO DEHUMIDIFY** - If Cool to Dehumidify is ON, the thermostat has the ability to initiate a cooling cycle for advanced dehumidification operation. When the thermostat detects a humidity percentage 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 allow you to adjust the cooling overshoot of the setpoint, 0° to 5° (adjustable in step #20, next page). *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.*

Continued 

## Advanced Setup

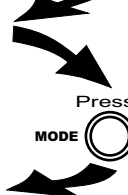
This diagram depicts cooling operation when step #20 = 3 degrees:



On  
Select Cool to Dehumidify feature.



Adjust the maximum overshoot of the set temperature in Cool to Dehumidify mode.  
(0° - 3°)



Continued

## Advanced Setup

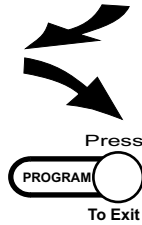
- \* DEHUMIDIFICATION TERMINAL - The DEHUM terminal may be programmed to operate in one of two ways:
  - 1) **Normally Closed (NC)**: The thermostat will de-energize the DEHUM terminal to allow the fan to run in low speed when there is a call for 1st stage cooling and the room humidity is greater than 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.



**NC** Normally Closed (NC) =  
DEHUM deenergized for  
low speed fan.



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



## Advanced Setup

### Advanced Setup Table

Step #	Description	Range	Factory Default
1*	Time of day clock set	24 hour	12:00 Am
2*	Day of the week	Sun - Sat	Monday
3	Reset Service Filter icon	-	-
4	Service Filter run time set	0-1950	0
7	Heat Pump operation	Off / On	Off
8	Reversing valve polarity	O / B	O
9	Electric Heat	Off / On	Off
10	Deadband, temperature swing	1 - 6	2
11	Heat - Cool temperature difference	0 - 6	2
12	Cycles per hour	d, d1, 2 - 6	6
13	Standalone humidity with fan	Off / On	Off
14	Programmable fan	0:00 - 0:60	0:00
15	Programmable fan start time	24 hour	7:00Am
16	Programmable fan stop time	24 hour	9:00Pm
17	Thermoglow backlight	Off / On	On
18	Fahrenheit or Centigrade	F / C	F
19	Cool to Dehumidify	On / Off	Off
20	Max Dehum Cool setpoint overshoot	0 - 3	2
21	State of DEHUM for normal fan operation	NO / NC	NO

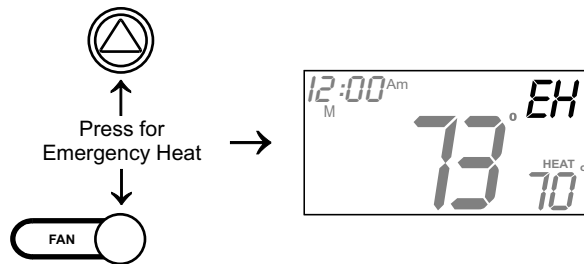
\* These setup steps may be accessed by pressing the SET CLOCK button (page 5).

## About Advanced Features & Operation

- \* COMFORT ALERT DIAGNOSTICS - Your thermostat installation may include an external Comfort Alert diagnostics module that monitors your heat pump or air conditioning compressor. If the Comfort Alert detects an abnormal condition, the Service Equip icon will flash on the thermostat display.
- \* DUAL SETPOINT BEHAVIOR - The adjustable setpoint range is: 45 - 99 degrees in Fahrenheit and 7 - 36 degrees in Centigrade. When in the Heat or Cool modes, this adjustable range is unhampered. When adjusting any Auto mode, including programming 4 time periods, the thermostat will not allow the heat setpoint to get closer to the cool setpoint than the value programmed as the minimum difference in *step #11 page 15*. When entering the Auto mode, the heat and cool setpoints will remain spread apart by the amount that they were adjusted, prior to entering Auto. For example: If the cool setpoint was set to 80° while in the cool mode and the heat setpoint was adjusted to 70° while in the Heat mode, upon entering the Auto mode the heat and cool setpoints would be 80° and 70°. **Both** setpoints would then move up and down together, (in this example spread by 10 degrees), by pressing the up or down buttons. To move the Heat and cool setpoints closer together, enter the Cool or Heat mode by pressing the MODE button, then adjust the setpoint(s) closer together. The heat setpoint is limited to how close it can come to cool by *step #11 (page 15)*.

## About Advanced Features & Operation

- \* **EMERGENCY HEAT** - 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).




**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 or cooling will be unavailable.

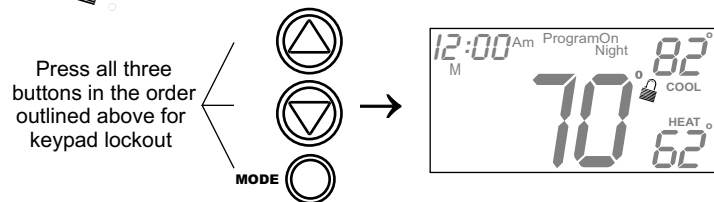
**EXIT EMERGENCY HEAT:** Follow the same steps as entering Emergency Heat by pressing the FAN and UP buttons. During Emergency Heat, only OFF and HEAT modes are available by pressing the MODE button.


- \* **FACTORY DEFAULTS** - If, for any reason, you desire to return all the stored settings back to the factory default settings, press the MODE button. While holding the Mode button, press the FAN button for 5 seconds; all icons will appear. Press and hold the FAN button until **Fd** appears; this resets all factory settings. To return to normal operation, press the MODE button once.



## About Advanced Features & Operation

- \* **HUMIDIFICATION/DEHUMIDIFICATION SETPOINTS** - When adjusting the humidification and dehumidification setpoints, the thermostat will not allow the dehumidification setpoint to get closer to the humidification setpoint than 5%. For example: If the humidification setpoint was set to 35%, then the dehumidification setpoint would not be able to be set any lower than 40%. Additionally, if the dehumidification setpoint was set to 25%, then the humidification setpoint would not be able to be set any higher than 20%.  
**NOTE: The HUM terminal will be energized any time that there is a call for Humidity. For the operation of the DEHUM terminal see pages 8 and 18-20.**
- \* **KEYPAD LOCK** - 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.



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.

- \* **MEMORY BACKUP** - In the event of a power loss, the TSTAT-0713K will retain the stored program settings without external power or batteries.

## Advanced Features & Operation

- \* **OUTSIDE SENSOR (Optional Accessory)** - When connected to terminals RS+5, RS1, & RS GND on the back of the thermostat, the thermostat will read the temperature from the outside sensor. This thermostat will not control to this sensor, it is only to read outside temperature. To read the temperature from the outside sensor, press the OUTSIDE button. The display will then only show outside temperature. Pressing the OUTSIDE button will then return the display to normal operation. The outside sensor is available in a wired or wireless version. 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.**

*See the Outside Sensor instructions for further details.*

## Warranty

Five-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within five years 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.

# Programming Worksheet

see page 9

DAY	PERIOD	START TIME	COOL	HEAT
M O N D A Y	Morning			
	Day			
	Evening			
	Night			
T U E S D A Y	Morning			<i>Copy Mon → Tue</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			
W E D N E S D A Y	Morning			<i>Copy Tue → Wed</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			
T H U R S D A Y	Morning			<i>Copy Wed → Thu</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			
F R I D A Y	Morning			<i>Copy Thu → Fri</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			
S A T U R D A Y	Morning			<i>Copy Fri → Sat</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			
S U N D A Y	Morning			<i>Copy Sat → Sun</i>
	Day			<input type="checkbox"/> No
	Evening			<input type="checkbox"/> Yes
	Night			



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