OWNER'S MANUAL

P/N P474-1050

1 For All[™] Programmable Digital Thermostat



- Dual Setpoint
- 5+2 Day Programmable
- 4 Time periods
- Very Easy to Program
- Large, Easy To Read Display
- Thermoglow[™] Backlight
- No Batteries Required
- Auto Changeover
- No Batteries Required
- Locking Keypad

Meets California Title 24 Residential

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



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CAUTION

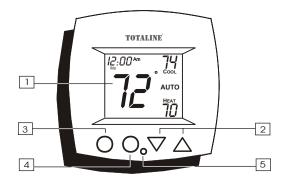
Follow Installation Instructions before proceeding.

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

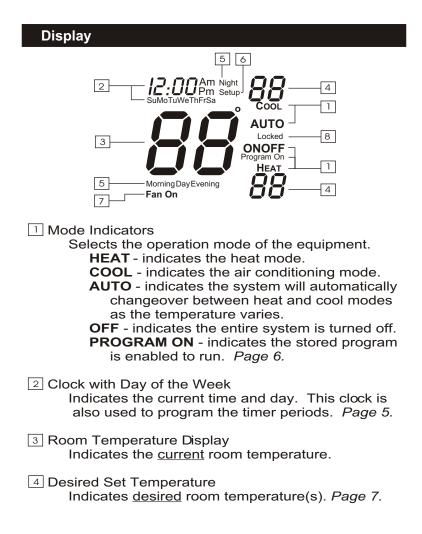
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P/N P474-1050

Front Panel



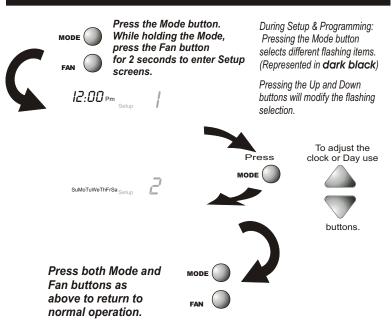
- □ Liquid Crystal Display with Thermoglow ™
- **Up/Down Buttons**
- **3** Mode Button
- 4 Fan Button
- 5Heat or Cool IndicatorHeat = Red, Cool = Green



Display

- 5 Morning, Day, Evening & Night Indication Indicates the program time period. Page 8-11.
- 6 Setup Indication Indicates the thermostat is in the programming mode. *Page 12.*
- Fan Operation Indication
 Fan On 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.
- 8 Locked Indication
 - **Locked** appears after the right combination of buttons are pressed, rendering the buttons inoperative. *Page 18.*

Quick Start Set the Clock and Go



The thermostat is preprogrammed from 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.

* The thermostat is not preprogrammed from the factory to operate electric heat or heat pump systems. To control these systems, follow the steps in the Advanced Setup section, pages 12 & 13.

Basic Operation

Select Mode

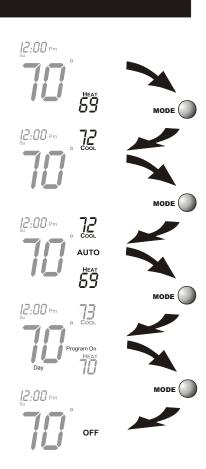
The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.

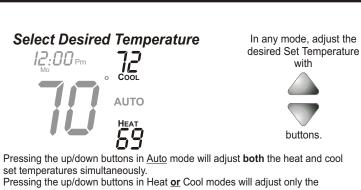
The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.

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

Program On will activate the stored timer operation. (Morning, Day, Evening, Night)

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





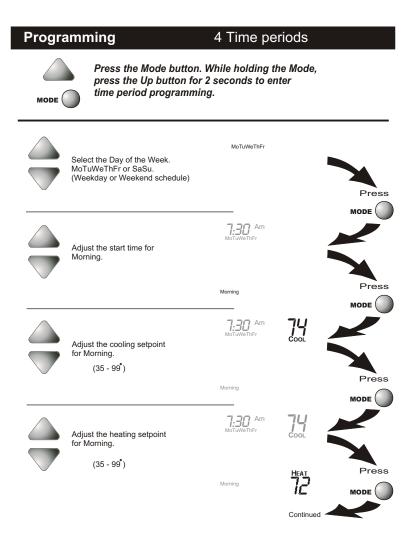
heat or cool set temperature.



Basic Operation



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



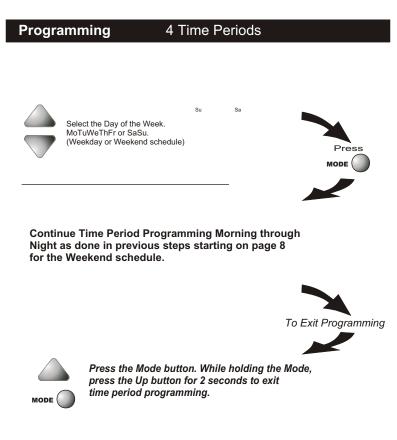
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Progra	amming	4 Time Peric	ods	
	Adjust the start time for Day.	MotuWethFr Day	ı	Press
	Adjust the cooling setpoint for Day. (35 - 99)	MetuWethFr	75 	Press
	Adjust the heating setpoint for Day. (35 - 99)	MotuWether	75 1 1 73	Press
	Adjust the start time for Evening.	5:30 MotoWernifr Evening	Í	Press
	Adjust the cooling setpoint for Evening. (35 - 99)	5:30Pm MoTuWoThFr	Continued	Press

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4 Time Periods Programming 5:30 Pm MoTuWeThFr Adjust the heating setpoint for Evening. (35 - 99) Press MODE Evening MoTuWeThFr Night Adjust the start time for Night. Press MoTuWeThFr Night **78** Adjust the cooling setpoint for Night. (35 - 99) Press MoTuWeThFr Adjust the heating setpoint for Night. (35 - 99) Press Continued

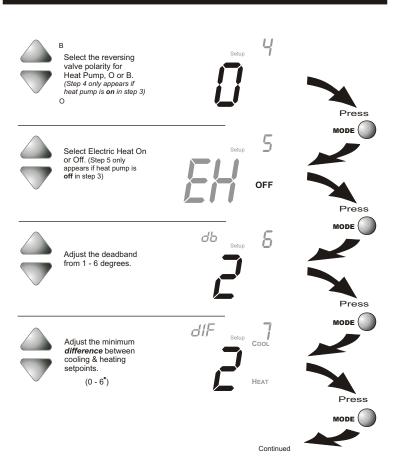
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Advanced Setup Press the Mode button. While holding the Mode, press the Fan button MODE (**NOTE:** Each step # is located at the top right corner of the display for easy reference. for 5 seconds to enter Setup FAN screens. 12:00 ^{Am} Adjust the time of day clock. Tip: To change hours quickly, press and hold the Fan button in and press the up or down buttons. Press 2 Мо Setup Select the day of the week. Press 3 On Setup Select residential Heat Pump, ON or OFF. OFF Press Off Continued

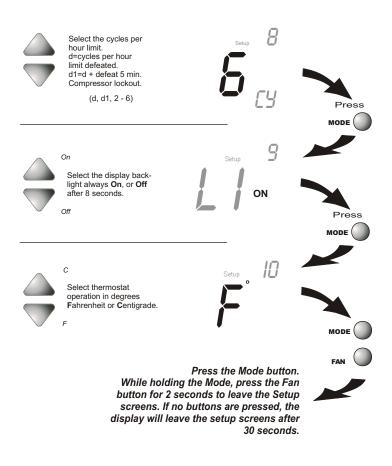
Page 12

Advanced Setup



Page 13

Advanced Setup



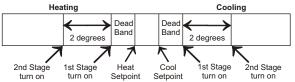
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Advanced Setup

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	Heat Pump	Off / On	Off
4	Reversing Valve polarity	O/B	0
5	Electric Heat	Off / On	Off
6	Deadband or Temperature swing	1 - 6	2
7	Forced minimum difference heat/cool	0 - 6	2
8	Cycles per hour	d, d1, 2 - 6	6
9	Thermoglow backlight	Off / On	On
10	Fahrenheit or Centigrade	F/C	F

 2 STAGE OPERATION - The 2nd Stage of heat or cool is turned on when (1) the 1st Stage has been on for a minimum of two minutes, <u>and</u> (2) the temperature spread from the setpoint is equal to or greater than: *the setpoint plus the deadband, plus 2 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 set in Advanced Setup step #7, on page 13. This minimum difference is enforced during Auto changeover and Program On operation.

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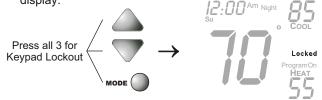
EMERGENCY HEAT - Is a feature available to Heat Pump installations. To turn on Emergency Heat press in the Fan button. While holding the Fan button press the Up button for 2 seconds. The Cool setpoint display will read 'EH'.



During Emergency Heat the thermostat will turn on the fan and the 2nd stage of heat, when there is a demand for heat, locking out the 1st stage compressor. Exiting Emergency Heat is the same as entering. During Emergency Heat only OFF and HEAT are available.

 ELECTRIC HEAT - Selecting Electric Heat on, page 13, step 5, will cause the thermostat to turn on the fan immediately any time there is a heat demand. Since all gas furnaces control the fan, this feature should be off unless the heater is only electric.

 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 in the Mode button. While holding the Mode button in, press the Up and Down buttons in together. The Locked icon will appear on the display.



To **unlock** the buttons, again press and hold the Mode button. While holding the Mode button in, press the Up and Down buttons in together. The **Locked** icon will disappear from the display.

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DUAL SETPOINT BEHAVIOR - The adjustable setpoint range is: 35 - 99 degrees in Fahrenheit and 7 - 35 degrees in Centigrade. When in the modes Heat or Cool, this adjustable range is unhampered.

When adjusting any Auto mode, including programming Occupied and Unoccupied periods, the 1050 will not allow the Heat setpoint to get closer to the Cool setpoint than the value programmed as the minimum difference in *step 7, page 13.*

When entering the Auto mode from Cool, 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. <u>Both</u> 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. <u>Heat</u> is limited to how close it can come to Cool by *step 7, page 13.*

FACTORY DEFAULTS - If, for any reason it is desirable to return all stored settings back to the factory default settings, press the Mode button. While holding the Mode button in, press the Down button for 2 sec. All icons will appear. Press and hold in the Fan button until Fd appears. This resets all factory settings. <u>To calibrate</u> <u>room temperature</u>, press the Mode button once more. At this point use the Up and Down buttons to calibrate room temperature, if needed. Press the Mode button to return to normal operation. NOTE CAUTION ON PAGE 1.

Warranty

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 TOT 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 MANY 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. AL 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 owners manual including filter cleaning and/or replacement and lubrication.
- Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
 Failure to start due to voltage conditions, blown fuses, open circuit breakers or other
- 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.
- Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
 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 from any reason whatsoever including additional or unusual use of supplemental electric heat.
- 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 form state to state. P/N 88-334
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