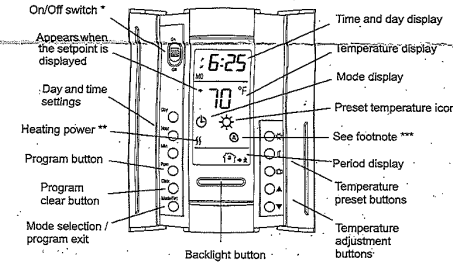


1 Description

Honeywell's TL8230A programmable thermostat can be connected to an electric heater to control the room temperature.



* Set the switch to Off to cut power to the heater. This will not affect the time and temperature settings.

** The thermostat displays the heater duty cycle required to maintain the desired temperature. For example, $\{\{\}$ appears when the heater is activated 40 percent of the time.

Display	$\}$	$\{\{\}$	$\{\{\{\}$	$\{\{\{\{\}$	$\{\{\{\{\{\}$
% of duty cycle	1 to 24%	25 to 49%	50 to 74%	75 to 99%	100%

*** The icon indicates this thermostat model is used to control the ambient temperature.

2 Configuration

Some thermostat configurations can be modified via switches on the back of the faceplate (control module). Default (factory) settings are inside the gray cells.

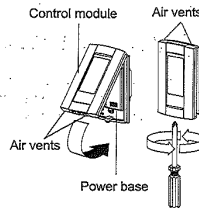


#	Configurations	UP	DN
1	Display format	$^{\circ}\text{F} / 12 \text{ h}$	$^{\circ}\text{C} / 24 \text{ h}$
2	Early Start ^a	Enable	Disable
3	Not used		

a. Early Start can be used in Automatic mode only. When this function is enabled, the thermostat calculates the optimal time to start heating in order to obtain the desired temperature by the set time. The thermostat re-assesses the start time daily based on the previous day's results.

3 Installation

- Refer to the installation instructions of the power base.
- Insert the tabs at the top of the control module in the slots at the top of the power base.
- Secure the control module using the captive screw underneath the base.



NOTE: Keep the thermostat's air vents clean and unobstructed at all times.

4 Clock and Day Setting

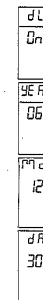
- Press the **Hour** button to set the hour.
- Set the **Min** button to set the minutes.
- Set the **Day** button to set the day.
- Press **Mode/Ret** to exit.

Daylight Savings Time

The thermostat can automatically re-adjust its clock at Daylight Savings Time changeover. When this function is enabled (On), the thermostat switches to Daylight Savings Time on the second Sunday of March and to normal time on the first Sunday of November.

NOTE: The function is disabled (default setting) when the clock loses its setting.

- Press the **Day** button (3 seconds) until **DLS** appears on the screen.
- Press the \blacktriangle to toggle between On (enabled) and Off (disabled).
- Press the **Day** button briefly. The year setting is displayed.
- Press the \blacktriangle to set the current year.
- Press the **Day** button briefly. The month setting is displayed.
- Press the \blacktriangle to set the current month.
- Press the **Day** button briefly. The date setting is displayed.
- Press the \blacktriangle to set the current date.
- Press **Mode/Ret** to exit.



5 Backlight

The display illuminates for 12 seconds when the backlight button is pressed.

When either of the \blacktriangle buttons is pressed, the display also illuminates for 12 seconds. The setpoint temperature appears for 5 seconds, then the actual (measured) temperature is displayed.

6 Temperature Adjustment

6.1 Setpoint Temperature

The thermostat normally displays the actual (measured) temperature. To view the setpoint, press one of the \blacktriangle buttons once. The setpoint will appear for the next 5 seconds.

To change the setpoint, press one of the \blacktriangle buttons until the desired temperature is displayed. To scroll faster, press and hold the button.

6.2 Preset Temperatures

The thermostat has 3 preset temperatures:

- Comfort temperature \star
- Economy temperature \leftarrow
- Vacation temperature \square

To use a preset temperature, press the corresponding button. The corresponding icon \star , \leftarrow or \square will be displayed.

The following table shows the intended use and the default setting of each of the preset temperatures.

Icon	Intended use	Default setting	New
\star	Comfort (when at home)	70°F (21°C)	
\leftarrow	Economy (when asleep or away from home)	62°F (16.5°C)	
\square	Vacation (during prolonged absence)	50°F (10°C)	

To store a preset temperature:

- Set the desired temperature using the \blacktriangle buttons.
- Press and hold the corresponding button until the corresponding icon is displayed.

7 Modes of Operation

The thermostat has 2 modes of operation.

7.1 Automatic Mode

The thermostat follows the programmed schedule. To place the thermostat in this mode, press **Mode/Ret** until \odot is displayed. The data of the current schedule period are also displayed.

Temporary Bypass

If you modify the setpoint temperature (by pressing the \blacktriangle , \star or \odot button) when the thermostat is in automatic mode, the new temperature will be used until the beginning of the next period. \odot flashes during the bypass. You can cancel the bypass by pressing **Mode/Ret**.

Programmed Schedule

The schedule consists of 4 periods per day which represents a typical week day. You can program the thermostat to skip the periods that do not apply to your situation. For example, you can skip periods 2 and 3 for the weekend.

Period	Description	Associated temperature setting
\odot	Wake-up	\star
\odot 1 \star	Away from home	\odot
\odot 1 \star	Return home	\star
\odot	Sleep	\odot

The Comfort (\star) temperature is used in periods 1 and 3 and the Economy (\odot) temperature is used in periods 2 and 4. For example, when the period changes from 1 to 2, the setpoint automatically changes from Comfort (\star) temperature to Economy (\odot) temperature. You can have a different program for each day of the week; i.e., each period can start at different time for each day of the week. The thermostat has been programmed with the following schedule.

Period	Setting	MO	TU	WE	TH	FR	SA	SU
\odot	\star	6:00 a.m.	6:00 a.m.	6:00 a.m.	6:00 a.m.	6:00 a.m.	6:00 a.m.	6:00 a.m.
\odot 1 \star	\odot	8:00 a.m.	8:00 a.m.	8:00 a.m.	8:00 a.m.	8:00 a.m.	--	--
\odot 1 \star	\star	6:00 p.m.	6:00 p.m.	6:00 p.m.	6:00 p.m.	6:00 p.m.	--	--
\odot	\odot	10:00 p.m.	10:00 p.m.	10:00 p.m.	10:00 p.m.	10:00 p.m.	10:00 p.m.	10:00 p.m.

To modify the schedule:

- Press **Pgm** to access the programming mode. Period 1 is selected.
- Press **Day** to select the day to program (hold for 3 seconds to select the entire week).
- Press **Hour** and **Min** to set the start time of the selected period, or press **Clear** if you want to skip the period (-- is displayed).
NOTE: If you intend to use only 2 periods, set periods "1 and 4" or periods "2 and 3". *Early Start will not work if you set periods "1 and 2" or periods "3 and 4".*
- Press **Pgm** to select another period, or press **Day** to select another day. Then repeat step 3.
- Press **Mode/Ret** to exit the programming mode.

NOTE: If no button is pressed for 60 seconds, the thermostat will automatically exit the programming mode.

7.2 Manual Mode

The programmed schedule is not used. The temperature must be set manually. To place the thermostat in this mode:

- Press **Mode/Ret** until \neq is displayed.
- Set the temperature using the \blacktriangle , \star or \odot button.

8 Error Messages

LD The measured temperature is below the thermostat's display range. Heating is activated.

HI The measured temperature is above the thermostat's display range. Heating is deactivated.

Er Verify the thermostat and sensor connections.

9 Technical Specifications

Power supply: Refer to the power base's installation guide.

Display range: 32 °F to 158 °F (0 °C to 70 °C)

Ambient setpoint range (A/AF modes): 40 °F - 86 °F (5 °C to 30 °C)

Floor setpoint range (F mode): 40 °F - 104 °F (5 °C to 40 °C)

Floor limit range (AF mode): 40 °F - 104 °F (5 °C to 40 °C)

Display resolution: 1 °F (0.5 °C)

Operating temperature: 32 °F to 120 °F (0 °C to 50 °C)

Storage temperature: -4 °F to 120 °F (-20 °C to 50 °C)

Heating cycle length: Refer to the power base's installation guide

Data backup: In the event of a power failure, most settings are saved. Only the time must be re-adjusted if the power failure lasts more than 6 hours. The thermostat will return to the mode that was active prior to the power failure.

Warranty

Honeywell warrants this product, excluding battery, to be free from defects in the workmanship or materials, under normal use and service, for a period of five (5) years from the date of purchase by the consumer. If at any time during the warranty period the product is determined to be defective or malfunctions, Honeywell shall repair or replace it (at Honeywell's option).

If the product is defective,

- return it, with a bill of sale or other dated proof of purchase, to the place from which you purchased it, or
- call Honeywell Customer Care at 1-800-468-1502. Customer Care will make the determination whether the product should be returned to the following address: Honeywell Return Goods, Dock 4 MN10-3860, 1885 Douglas Dr N, Golden Valley, MN 55422, or whether a replacement product can be sent to you.

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Honeywell that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

Honeywell's sole responsibility shall be to repair or replace the product within the terms stated above. HONEYWELL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS THE ONLY EXPRESS WARRANTY HONEYWELL MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE FIVE-YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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

If you have any questions concerning this warranty, please write Honeywell Customer Relations, 1885 Douglas Dr, Golden Valley, MN 55422 or call 1-800-468-1502. In Canada, write Retail Products ON15-02H, Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V4Z9.

Customer Assistance

If you have any questions about the operation of your thermostat, please go to <http://yourhome.honeywell.com>, or call Honeywell Customer Care toll-free at 1-800-468-1502.