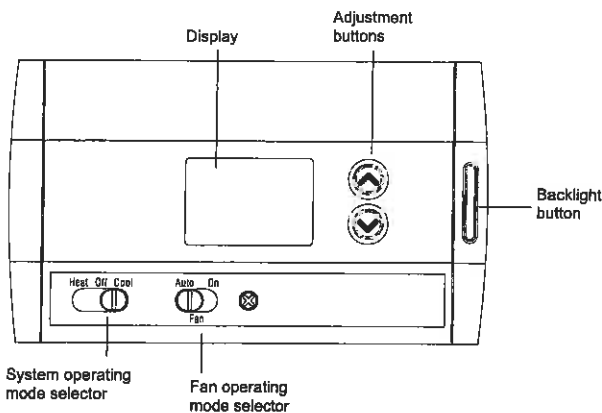


## 1 Introduction

The TH147 and TH148LE thermostats can be used to control:

- a gas, fuel oil or electric furnace - 2 or 3 wires
- a central air conditioner - 2 or 3 wires
- a hot water system with or without pump - 2 wires
- a millivolt system - 2 wires
- a central heating and cooling system - 4 or 5 wires

**Attention:** These thermostats are not compatible with heat pumps or multi-stage systems.



Functions		
Heating/cooling control	X	X
Fan control	X	X
Programmable cycle lengths	X	X
Temperature display in °C or °F	X	X
Backlit display	X	X
Battery replacement indicator	X	X
Unoccupied mode activated remotely (requires Aube's CT240)		X
Interchangeable faceplates (titanium, charcoal & taupe)		X

## 2 Installation

**Note:** The installation must be performed by an electrician or a qualified installer.

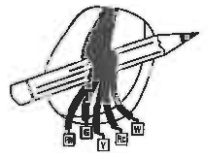
### 2.1 Removing the Old Thermostat

**IN ORDER TO AVOID ANY RISK OF ELECTRIC SHOCK, CUT POWER TO THE HEATING/COOLING SYSTEM.**

- 1 Remove the old thermostat to access the wires.

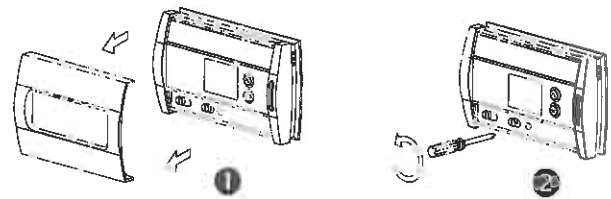
**Attention:** If the old thermostat was mounted onto an electrical box, it might have been powered by 120/240 volts. In this case, the TH147 or TH148LE thermostat cannot be used.

- 2 Identify and label each wire (with the corresponding letter on the wire terminal) and remove it from its terminal.
- 3 If necessary, strip the end of each wire (maximum of 6 mm).
- 4 Wrap the wires around a pencil to prevent them from falling into the wall.
- 5 If the hole in the wall is too big, insulate it using a non-flammable material in order to avoid air draughts behind the thermostat.

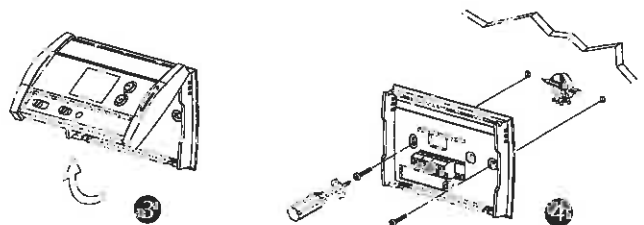


### 2.2 Installing the New Baseplate

For a new installation, choose a location approximately 1.5 m (5 feet) above the floor and on an inside wall. Avoid draughty areas (top of staircase, air outlet, etc.), dead air spots (behind doors), direct sunlight or areas near concealed pipes or chimneys.



- 1 Remove the thermostat faceplate.
- 2 Loosen the locking screw in order to separate the thermostat from its baseplate (the screw cannot be completely removed).



- 3 Gently tilt the thermostat upwards.

- 4 Mark and bore the appropriate mounting holes (or use the existing holes). Insert the plastic anchors.
- 5 Pass the wires through the opening of the baseplate and fix the baseplate to the wall using the screws provided.

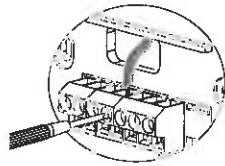
## 2.3 Connecting the Thermostat

Refer to the following table for matching the wire labels with the thermostat terminals.

Terminals	Description	Wire labels
Rh	Heating power supply	Rh, R, 4, V
Rc	Cooling power supply	Rc, R
W	Heating signal	W, W1, H
Y	Cooling signal	Y, Y1, M
G	Fan	G, F
Un / Un	Input for a remote control device (TH148LE only)	-

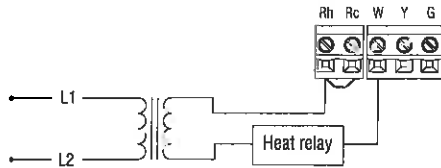
**Note:** Do not connect wires identified as C, X or B. Wrap the bare end of these wires with electrical tape.

- 1 Loosen the screws of the terminal block and insert the wires in the respective terminals.
- 2 Tighten the screws.

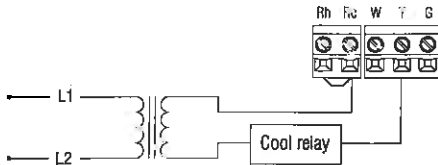


**Important:** The red jumper wire between Rh and Rc terminals must be removed in a 5-wire installation.

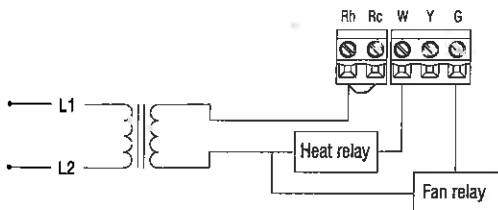
### 2.3.1 2-wire Heating



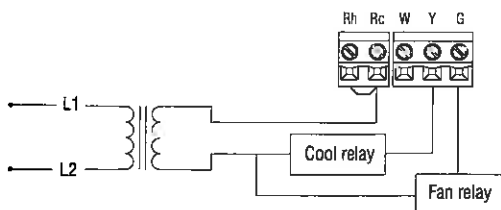
### 2.3.2 2-wire Cooling



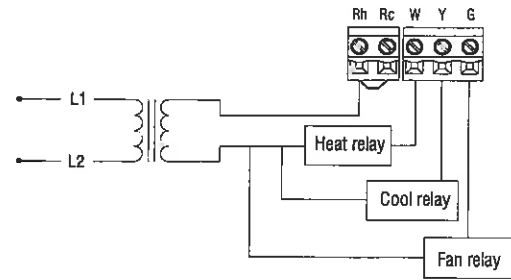
### 2.3.3 3-wire Heating



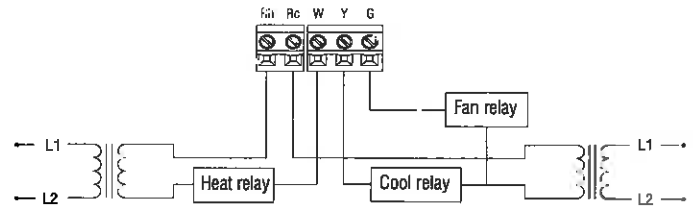
### 2.3.4 3-wire Cooling



### 2.3.5 4-wire Heating and Cooling



### 2.3.6 5-wire Heating and Cooling



**Note:** Remove the red jumper wire between terminals Rc and Rh.

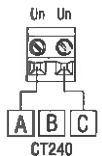
## 2.4 Remote Control Input (TH148LE only)

The TH148LE thermostat has an input to which a CT240 telephone controller (optional) or any other remote control system (e.g., home automation) can be connected. When the input receives a 12-VDC signal, the thermostat switches from its current mode to the unoccupied mode and vice versa when the signal is removed.

The unoccupied mode can be used to re-adjust the temperature to save energy when you are away for an extended period of time. To set the unoccupied mode temperature, see section 4.

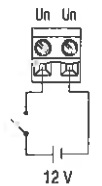
### 2.4.1 Connecting to CT240

Connect TH148LE terminals UN and UN to CT240 terminals A and C (no polarity to observe).



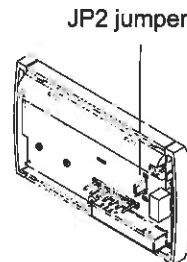
### 2.4.2 Connecting to a Home Automation System

Connect TH148LE terminals UN and UN to a 12-VDC circuit as shown.



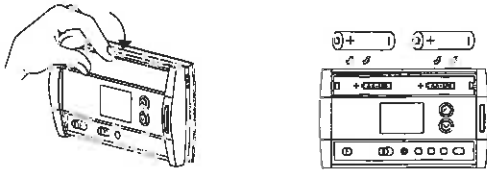
## 2.5 Setting JP2 Jumper

The jumper specifies how the fan will operate when it is placed in automatic mode.



HE	Place the jumper in this position if you have an electric furnace.
HG	Leave the jumper in this position if you have a gas or fuel oil furnace.

## 2.6 Installing the Batteries

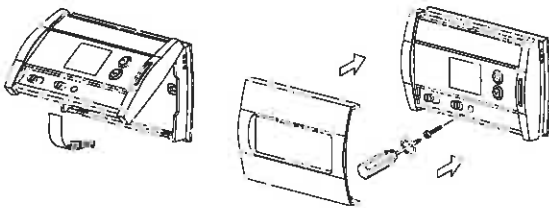


- ❶ Gently pull out the battery cover.
- ❷ Install the batteries as shown. Observe the polarity.
- ❸ Reinstall the battery cover. You will hear a clicking sound.

When batteries are installed for the first time, the thermostat performs a sequence of tests for about 5 seconds.

Afterwards, the thermostat displays the ambient temperature. It is normal that the displayed temperature will be higher than the ambient temperature if you hold the thermostat in your hands. It will return to normal shortly after the thermostat is installed on the wall. By default, the setpoint is 21°C (70°F).

## 2.7 Completing the Installation



- ❶ Once the baseplate and the batteries are installed, mount the thermostat on the baseplate.
- ❷ Secure the thermostat using the locking screw and install the faceplate.
- ❸ Apply power back to the system.

## 3 Basic Functions

### 3.1 System Operating Mode

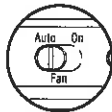
Use this selector switch to set the system to heating mode (HEAT), cooling mode (COOL), or Off.



**Note:** When you place the thermostat in cooling mode, you might need to wait up to five minutes before cooling can start. This delay is a safety feature for the compressor. The ❄ icon will flash on the screen until cooling can start again.

### 3.2 Fan Operating Mode

Use the selector switch to set the fan to automatic mode (AUTO) or continuous mode (ON).



**Note:** This switch is not used in a 2-wire installation as the fan is not connected to the thermostat.

AUTO	The fan operates only when heating or cooling is activated.
ON	The fan operates continuously.

### 3.3 Viewing and Setting the Ambient Temperature

The ambient temperature is normally displayed. To view the setpoint, press once on one of the ⏪ buttons. The setpoint is displayed for 5 seconds and is indicated by the 🔥 symbol on the display. During the setpoint display, press one of the ⏩ buttons to change it.

## 3.4 Backlight

The display illuminates for 12 seconds when the backlight button or either of the ⏪ buttons is pressed.

## 3.5 Unoccupied Mode (TH148LE only)

To place the thermostat in unoccupied mode, see section 2.4. In this mode, the 📦 icon is displayed and only the ⏪ buttons work to allow a temporary bypass.

### 3.5.1 Temporary Bypass (TH148LE only)

If you modify the setpoint (using the ⏪ buttons) when the thermostat is in unoccupied mode, the thermostat temporarily bypasses the setpoint of the unoccupied mode. The new setpoint will be maintained for 2 hours, then the thermostat will return to the setpoint of the unoccupied mode. The 📦 icon flashes during the bypass.

## 3.6 Low-Battery Indicator

An icon appears when the batteries need replacement. This icon will flash for 120 days, then the thermostat will cut power to the heating/cooling unit. The icon disappears once the batteries are replaced and the thermostat reinstalled on its base.



**Warning:** Before removing the batteries, place the system switch on the thermostat to Off. Otherwise, the heating/cooling unit might still be running even after the batteries are removed.



**Note:** The thermostat settings are not erased when the batteries are dead or removed.

## 4 Configuration Menu

Temperature display	°C	°C or °F
📦 Unoccupied mode setpoint - heating (TH148LE only) <sup>1,2</sup>	10°C (50°F)	5°C to 28°C (41°F to 82°F)
📦 Unoccupied mode setpoint - cooling (TH148LE only) <sup>1,2</sup>	35°C (95°F)	15°C to 35°C (59°F to 95°F)
🔥 Heating cycles per hour <sup>2</sup>	4	2, 3, 4, 5 or 6 <sup>3</sup>
❄ Cooling cycles per hour <sup>2</sup>	4	2, 3, 4, 5 or 6 <sup>4</sup>

<sup>1</sup> To enable the Unoccupied mode, see section 2.4.  
<sup>2</sup> Use the system mode selector to switch the display between the heating parameter and the cooling parameter.  
<sup>3</sup> For optimal heating control, use the setting that matches your system as follows: 2=30 min (steam, gravity), 3=20 min (hot water, 90%+ high-efficiency furnace), 4=15 min (gas or oil), 5=12 min (alternate setting for gas or oil), 6=10 min (electric).  
<sup>4</sup> The corresponding cycle lengths are: 2=30 min., 3=20 min., 4=15 min., 5=12 min., 6=10 min.

- ❶ To access the configuration menu, press the backlight button for 3 seconds.
- ❷ To go to the next parameter (menu item), briefly press the backlight button.
- ❸ To modify a parameter, press ⏪.
- ❹ Repeat steps 2 and 3 if necessary.
- ❺ Press the backlight button for 3 seconds to exit the configuration menu.

## Technical Specifications

Power supply: 2 AA batteries  
Maximum load: 1 A @ 24 Vca per output  
Unoccupied load: 12 VCC / ± 10% / 20 mA  
Setpoint range (heating): 5 to 28°C (41 to 82°F)  
Setpoint range (cooling): 15 to 35°C (59 to 95°F)  
Display range: -10 to 50°C (14 to 122°F)  
Storage temperature: -20 to 50°C (-2 to 122°F)  
Temperature display resolution: 0.5°C (1°F)  
Accuracy: ± 0.5°C (1°F)  
Cycle length: 10, 12, 15, 20 or 30 min. (programmable)  
Compressor short-cycle protection (minimum off time): 5 minutes  
Dimensions: 127 mm x 75 mm x 28 mm (5 in. x 3 in. x 1 in.)

## Warranty

Aube warrants this product, excluding battery, to be free from defects in the workmanship or materials, under normal use and service, for a period of three (3) 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, Aube shall repair or replace it (at Aube's option).

If the product is defective,

- (i) return it, with a bill of sale or other dated proof of purchase, to the place from which you purchased it, or
- (ii) contact Aube. Aube will make the determination whether the product should be returned, 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 Aube that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

Aube's sole responsibility shall be to repair or replace the product within the terms stated above. AUBE 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 provinces and 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 THREE-YEAR DURATION OF THIS WARRANTY. Some provinces 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 province to province.



## Technical Assistance

For any questions regarding the product installation, operation or warranty, contact us at:

705 Montrichard  
Saint-Jean-sur-Richelieu, Quebec  
J2X 5K8  
Canada  
Tel.: (450) 358-4600  
Toll-free: 1-800-831-AUBE  
Fax: (450) 358-4650  
Email: [aube.service@honeywell.com](mailto:aube.service@honeywell.com)

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