



# **Thermostat**

# **Professional Install Guide**





### System Types

Compatible with 24-volt systems such as forced air, hydronic, heat pump, oil, gas and electric.

Does not work with electric baseboard heat (120/240V).



Mercury Notice: If this product is replacing a control that contains mercury in a sealed tube, do not place the old control in the trash. Contact the Thermostat Recycling Corporation at 1-800-238-8192 or thermostat-recycle.org for information on how and where to properly and safely dispose an old thermostat.



Disconnect power before installation.

Can cause electrical shock or equipment damage.

Must be installed by a trained, experienced technician

Read these instructions carefully. Failure to follow these instructions can damage the product or cause a hazardous condition.

### Included in your box:



Thermostat



Optional wall cover



Wall plate



Screws



Anchors

# **Also included:** "Getting started" homeowner guide

# Installation

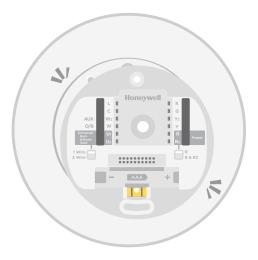
#### 1 Insert the recommended wall anchors

It is recommended that you use the provided anchors when mounting your thermostat. Recommended drill bit size is 7/32 - 1/4-inch.



# Optional: Attach the optional wall cover to the wall plate

If you choose to use the optional wall cover to hide blemishes, snap the wall plate to the optional wall cover before continuing.

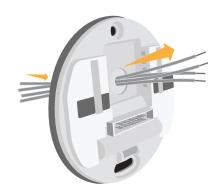


### Bundle and insert wires through the clear rubber holder

Guide the wires through the clear rubber holder on the back of the wall plate.



A Do not remove the clear rubber wire holder.



#### 3 **Set Jumper Switches**

#### R Jumper Switch:



For single transformer systems, move switch up.



For dual transformer systems, move switch down.

#### Universal Jumper Switch for humidifier, dehumidifier, or ventilation:



For single wire products, set the switch to 1 Wire.



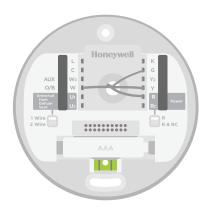
For two wire products, set the switch to 2 Wire.

#### 4 Connect all wires

Push each wire into its corresponding terminal until it is firmly in place. Gently tug on wires to verify they are secure. If you misplace a wire, use a ballpoint pen to push down on the terminals and release the wire.

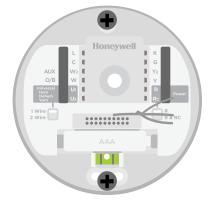
Refer to page 6 for wiring options, configurations, and notes.

Note: The illustration to the right shows the most common wiring configuration.



# Mount the wall plate using the provided screws





### 6 Firmly snap the thermostat into place

The thermostat will glow and display the Lyric screen for up to three minutes while it starts up.





# Wiring

### **Terminal Designations**

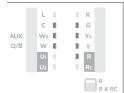
- L Heat pump system monitor
- C Common wire from secondary side of cooling transformer, if 2 transformers
- W2 2nd stage heat relay (heat pump(AUX) auxiliary)
- W 1st stage heat relay (changeover valve (O/B) for heat pumps)
  - U1 Universal terminal for indoor air quality products (humidifier, dehumidifier, ventilator)
  - U2 Universal terminal for indoor air quality products (humidifier, dehumidifier, ventilator)

- K Optional wire saver module
- **G** Fan relay
- Y2 2nd stage compressor contactor
- Y 1st stage compressor contactor
- R Heating power. Connect to secondary side of heating system transformer
- Rc Cooling power. Connect to secondary side of cooling system transformer

### Wiring Configurations

#### Two stage furnace and air-conditioning

R



- C Common wire (optional)
  W2 Heat relay (stage 2)
- W2 Heat relay (stage 2)
  W Heat relay
- **G** Fan relay
- Y2 Compressor contactor (stage 2)Y Compressor contactor (stage 1)
  - Power

#### Notes

- Thermostat C wire is optional for this application
- Set the R Jumper Switch on the wall plate to **R**

#### Separate heating and cooling transformers



Common wire (optional) С

w Heat relay G Fan relay

Υ Compressor contactor (stage 1)

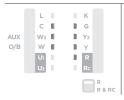
R Power

Rc Power

#### Notes

- Thermostat C wire is optional for this application
- Set the R Jumper Switch on the wall plate to R & Rc

### Single stage heat pump with auxiliary electric heat



Common wire (optional) AUX Auxiliary/Emergency heat O/B Reversing valve

Fan relay G

Υ Compressor contactor (stage 1) R

Power

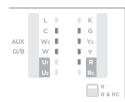
#### Notes

- Thermostat C wire is optional for this application
- Set the R Jumper Switch on the wall plate to R

### Two stage heat pump with auxiliary electric heat

Υ

R



Common wire (optional) С AUX Auxiliary/Emergency heat **O/B** Reversing valve

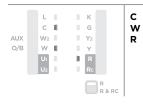
Y2 Compressor contactor (stage 2) G Fan relay

Compressor contactor (stage 1) Power

#### Notes

- Thermostat C wire is optional for this application
- Set the R Jumper Switch on the wall plate to R

#### Power open hot water zone valve

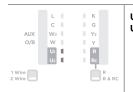


Common wire (optional) Heat relay Power

#### Notes

- Thermostat C wire is optional for this application
- Set the R Jumper Switch on the wall plate to **R**

#### Two wire powered humidifier, dehumidifier, ventilator

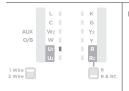


U1 Universal relayU2 Universal relay

#### Notes

 Set the Universal Jumper Switch on the wall plate to
 Wire

Single wire non-powered humidifier, dehumidifier, ventilator, or dehumidification with low speed fan



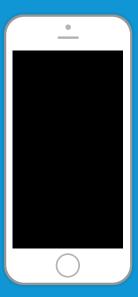
**U1** Universal relay

#### **Notes**

 Set the Universal Jumper Switch on the wall plate to 1 Wire

# Setup

Use one of the following options to setup the Lyric thermostat:





Download and login to complete the setup.







#### On-screen menus

Use instructions on the following pages to complete the setup.

### Setup: On-screen menus



1 Press and hold (Weather button) for 5 seconds to access the Main Menu.



Using ▼, highlightSetup and press OK.



2 Using ▼, highlight Device Details and press OK. Using ▼, find the 4-digit password (date code) and record it above. Press OK to exit.



4 Using ▼, highlightContractor and press OK.



Enter the password by pressing ▲ or
 ▼ to select the first digit and press
 OK. Continue for all four digits.



6 Highlight Setup and press OK.



7 Press ▲ or ▼ to highlight the setting and press OK. Continue until all settings have been configured. For a full list of setup options, see "Setup Options" on page 14. Note: To exit setup early, press ▼ to highlight Exit and press OK.



8 When all settings are configured, save changes. To save and confirm, highlight Yes and press OK. To exit without saving, press ▼ to highlight No and press OK.

# **Setup options**

- From the Contractor Menu, highlight **Set Up** and press **OK**.
- 2 Press ▲ or ▼ to highlight the setting and press OK. Continue until all settings have been configured.
- When all settings are configured, you will be prompted to save changes. Highlight **Yes** and press **OK** to save and exit. To exit setup early by pressing ▼ to highlight **Exit** and press **OK**.

ISU#	Description	Setting
1160	Temperature indication scale	0 = Fahrenheit 1 = Celsius
2120	Heating system type	1 = Conventional forced air heat 2 = Heat pump 3 = Radiant heat 5 = None (cool only)
2140	Heating equipment type	Conventional Forced Air Heat:  1 = Standard efficiency gas forced air  2 = High efficiency gas forced air  3 = Oil forced air  4 = Electric forced air  5 = Hot water fan coil  Heat Pump:  7 = Air to air heat pump  8 = Geothermal heat pump  Radiant Heat:  9 = Hot water radiant heat  12 = Steam
2160	Reversing valve O/B	0 = O (O/B on cool) 1 = B (O/B on heat)

ISU#	Description	Setting
2180	Cool stages / compressor stages (#2120=HP)	0, 1, 2
2200	Heat stages / backup heat stages (#2120=HP)	Heat stages: 0, 1, 2 Backup heat stages: 0, 1
2220	Fan operation in heat	O = No fan 1 = Equipment controls fan 2 = Thermostat controls fan
2240	Backup heat type	31 = Electric forced air 32 = Gas/Oil Forced air (or Fossil forced air)
2260	External Fossil Fuel Kit	0 = Thermostat controls backup heat 1 = External Fossil Fuel Kit controls backup heat
3120	Staging control - backup heat differential	Comfort 2.0°F to 15.0°F from setpoint (in 0.5°F increments) 1.0°C to 7.5°C from setpoint (in 0.25°C increments)
3140	Backup heat upstage timer	Off 30, 45, 60, 75, 90 minutes 2, 3, 4, 5, 6, 8, 10, 12, 14, 16 hours
3160	Compressor lockout / balance point	Off 5°F to 60°F (in 5°F increments) -15.0°C to 15.5°C (in 2.5°C or 3.0°C increments)
3180	Backup heat lockout	Off 5°F to 65°F (in 5°F increments) -15.0°C to 18.5°C (in 2.5°C or 3.0°C increments)
3200	Cool cycles per hour	1 - 6
3220	Cool cycles per hour - stage 2	1 - 6
3240	Heat cycles per hour	1 - 12

ISU#	Description	Setting
3260	Heat cycles per hour - stage 2	1 - 12
3280	Backup heat cycles per hour	1 - 12
4120	Adaptive intelligent recovery	O = No 1 = Yes
4160	Minimum cool setpoint	50°F to 99°F 10.0°C to 37.0°C
4220	Maximum heat setpoint	40°F to 90°F 4.5°C to 32.0°C
8100	Humidifier type	O = None 1 = Steam 2 = Bypass or fan powered
8120	Humidification - window protection	0 = Off 1 = On
8140	Humidification control	O = Humidify only when heat is On 1 = Humidify only when fan is On 2 = Humidify on demand: Thermostat controls fan 3 = Humidify on demand: Humidifier controls fan
9100	Dehumidification equipment	O = None 1 = A/C with low speed fan 2 = A/C with high speed fan 4 = Whole house dehumidifier
9140	Dehumidification equipment setup	0 = Normally open 1 = Normally closed
9160	Dehumidification - overcooling limit	0, 1, 2, 3°F 0.0, 0.5, 1.0, 1.5°C
9180	Dehumidifier fan control	0 = Thermostat controls fan 1 = Equipment controls fan

ISU#	Description	Setting
10100	Ventilation type	O = None 1 = ERV / HRV 2 = Passive (fan only) 3 = Fresh air damper
10160	Ventilation fan control	0 = Thermostat controls fan 1 = Equipment controls fan
10240	Ventilation percent on time	10% to 100% (in 10 % increments)
10280	Ventilation low temperature lockout	Off -20°F to 40°F (in 5°F increments) -29.0°C to 4.5°C (in 2.5°C or 3.0°C increments)
10300	Ventilation high temperature lockout	Off 80°F to 110°F (in 5°F increments) 26.5°C to 43.5°C (in 2.5°C or 3.0°C increments)
10320	Ventilation high dew point lockout	Off 65°F to 85°F (in 5°F increments) 18.5°C to 29.5°C (in 2.5°C or 3.0°C increments)
11100	Home heat setpoint	40°F to 90°F 4.5°C to 32.0°C (in 0.5°C increments)
11120	Home cool setpoint	50°F to 99°F 10.0°C to 37.0°C (in 0.5°C increments)
11140	Setpoint for away mode	0 = Away setpoints 1 = Smart temperature setpoints
11160	Away heat setpoint	40°F to 90°F 4.5°C to 32.0°C (in 0.5°C increments)
11180	Away cool setpoint	50°F to 99°F 10.0°C to 37.0°F (in 0.5°C increments)

# **Advanced Setup**

### **Change Language**

To change the language to either English, French, or Spanish:

- 1 From the Main Menu, press ▼ to highlight Language and press OK.
- **2** Press ▼ to highlight the desired language and press **OK**.
- **3** To save and confirm the changes, highlight **Yes** and press **OK**. To exit without saving, press **▼** to highlight **No** and press **OK**.

#### View Device Details

To view device details, such as model, version, Wi-Fi version, and date code:

- **1** From the Main Menu, press **▼** to highlight **Device Details** and press **OK**.
- **2** Press **OK** to exit back to the main menu.

### Perform a System Test

To perform a system test:

- 1 From the Contractor Menu, press ▼ to highlight the **System Test** and press **OK**.
- **2** Press ▼ to highlight the category and press **OK**.
- **3** Press **▼** to highlight the test and press **OK**.
- 4 Once the test is complete, press **OK** to return to the Contractor Menu.

## **View Power Supply Details**

To view power supply details, such as battery status and eternal power details:

- 1 From the Contractor Menu, press ▼ to highlight Power Supply and press OK.
- **2** Press **OK** to exit.

# **Frequently Asked Questions**

#### Will Lyric still work if Wi-Fi connection is lost?

Yes, some features, including shortcuts and geofencing, are managed only through the Lyric app and will not function while the connection is down. The temperature can be adjusted directly at the thermostat. Lyric will automatically reconnect to Wi-Fi once the network is restored.

#### Will Lyric work with a Static IP Address Network scheme?

No, the router network needs to be set up for Dynamic Host Control Protocol (DHCP) for the thermostat to dynamically get an IP address. Consult the router's manual for set up instructions.

#### What Wi-Fi security standards are compatible with Lyric?

- OPEN
- WEP PSK
- WPA TKIP PSK
- WPA2 AES PSK
- WPA2\_MIXED\_PSK

#### Lyric is not finding the in home Wi-Fi network.

Lyric operates in the 2.4GHz range. That may be why the thermostat does not see the network but the smartphone, which operates in both the 2.4 and 5.0 GHz range, sees the network. Most routers will broadcast two networks, one SSID on the 5GHz radio and one SSID on the 2.4GHz radio.

#### Can Lyric be used in a home that does not have Wi-Fi?

Lyric can work as a basic thermostat without Wi-Fi. The key features—geofencing, Fine Tune and Smart Cues—require a Wi-Fi connection.

#### Is Wi-Fi needed to control ventilation, humidity or dehumidification?

Yes, these features are managed through the Lyric app.

# **Troubleshooting**

# Installation is complete but the screen just says Lyric with circles lighting up around it. What should be done?

When power is first restored to the Lyric thermostat, it takes up to three minutes to start up. The display will light up in circles as it advances through its initial power up. Then, it will display a unique network name, such as *Lyric Stat 03*. When the name is displayed, touch "OK" to begin thermostat configuration.

#### Can there be multiple users for geofencing?

Yes, there can be multiple users. Geofencing will trigger based on the last person to leave and the first person to return.

#### To properly use geofencing with multiple users:

- Each user needs to create their own Lyric account.
- Each user should use their login ID and password across his or her devices, including smartphones and tablets.
- No two users should share the same account.

#### How are multiple users set up with Lyric?

Access can be given to any or all of Lyric thermostat locations through the Lyric app.

Start by pressing the three-line menu icon in the upper left-hand corner of the home screen. Press the gear wheel next to the location name. Select Users and press + Add User located at the bottom of the screen. Type in the email address of the person to be invited. If they have a Lyric account set up, the location will be automatically added to their account. If they don't have an account, they will receive an email invitation prompting them to download the app and create their own account.

Note: All individuals with access to a thermostat share the same user privileges. Users added will be able to change the thermostat's settings and shortcuts, as well as add or delete other users.

#### Why does the screen on the Lyric thermostat go blank?

When someone is not near the thermostat, the display goes to sleep to conserve energy. The thermostat can still be controlled through the Lyric app. A motion detector on the thermostat senses when someone approaches and wakes it up.

# A change was made on the Lyric app but it has not shown up on the thermostat.

There may be a short delay after making temperature and setting changes in the app.

#### There is a message that says Thermostat Power Lost. What does that mean?

This is an indication that Power to the Lyric thermostat has been interrupted. Confirm that the heating and cooling system is still powered.

If everything is powered as expected but the Lyric thermostat is still offline, please contact the Lyric Technical Support team for assistance at 1-800-633-3991

#### There is a message that says Internet Connection Lost. What does that mean?

The thermostat is connected to the router, but the router is not connected to the Internet.

#### Is there a way to extend the signal strength?

The range or distance of the Wi-Fi signal is determined by the homeowner's router. Check the router's manual for additional information.

#### There is a message that says Wi-Fi Signal Lost. What does that mean?

The Wi-Fi signal to the Lyric thermostat has been lost. Wait for the thermostat to reconnect or select a new network from the connection menu. If the thermostat is unable to reconnect, you will need to troubleshoot the router to determine the cause.

#### What happens to the thermostat if the power goes out in the home?

All the settings and shortcuts are stored and managed via the Lyric app. If power to the thermostat is out, nothing will have to be reset. When power is restored, the thermostat will start operating automatically according to set preferences.

#### Why is the thermostat showing up as offline?

If the Lyric thermostat displays a no Wi-Fi icon on its screen or shows up as offline on the Lyric app, it has lost connection to the network. Make sure the router is powered and broadcasting. The home's Wi-Fi network may need to be reset by power cycling the router; consult the router's instruction manual for directions on power cycling. When the network has been restored, the thermostat will automatically reconnect.

#### An activation email hasn't been received.

An email will be sent from connected-Home@alarmnet.com. An activation email is needed to complete the Lyric account setup. If an activation email is not received after five minutes, check the Spam folder of the email account. If you do not find it in the Spam folder, click on the Resend button and the activation email will be resent. If you still do not receive your activation email, please contact the Lyric Technical Support team at 1-800-633-3991 for help.

# **Specifications**

### **Electrical Ratings:**

Terminal	Voltage (50/60 Hz)	Max. Current Rating
W - O/B (Heating)	18 to 30 VAC	1.00 A
W2 - Aux/E (Heating)	18 to 30 VAC	0.60 A
Y (Cooling)	18 to 30 VAC	1.00 A
Y2 (Cooling)	18 to 30 VAC	0.60 A
K	18 to 30 VAC	1.00 A
G (Fan)	18 to 30 VAC	0.50 A
L (Output)	18 to 30 VAC	1.00 A
U1, U2	18 to 30 VAC	0.10 A

#### **Power Consumption:**

Full brightness = 3.0 VA

#### Wi-Fi Communication:

2.4GHz band

## **Temperature Setting Range:**

**Heating:** 40 to 90 °F (4.5 to 32 °C) **Cooling:** 50 to 99 °F (10 to 37 °C)

#### **Humidification Setting Range:**

10% to 60% RH

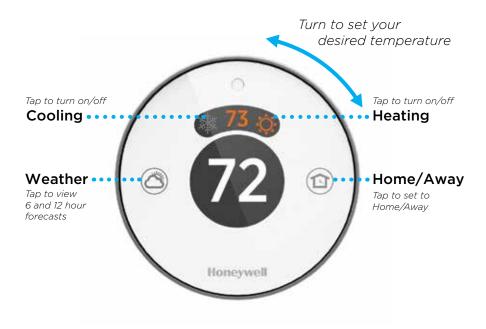
#### **Dehumidification Setting Range:**

40% to 80% RH

### **Humidity Display Range:**

0% to 99% RH

# **Basic Operations**



# How to use the Lyric app

Once your thermostat is configured and connected to your smartphone, you can take advantage of the following features:



# Get the most from Lyric



### Geofence

Enable geofencing and the Lyric thermostat will automatically adjust based on your smartphone's location. You can also manually override your current setting when you'll be out for a few hours by tapping the Away button on the thermostat or in the app.



#### **Shortcuts**

Tailor your comfort to any situation at the touch of a button. Create unique shortcuts for unique situations or save the shortcuts you really like and they'll be available on your app any time you want. Customizable comfort has never been so simple.



#### **Fine Tune**

Comfort is about more than just the temperature.

To make sure you are always comfortable, the Lyric thermostat considers indoor temperature, humidity and outdoor weather to make subtle adjustments, so 72° really feels like 72°.



#### **Smart Cues**

Receive maintenance notifications and extreme conditions alerts to help you manage your heating/cooling system.

# Adaptive recovery

The Lyric thermostat learns your heating and cooling cycle times to deliver just the right temperature, right when you want it

## **Auto changeover**

When enabled, the thermostat automatically selects heating or cooling depending on the indoor temperature.

# **Notes**





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#### **Automation and Control Solutions**

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