



ADC-T3000

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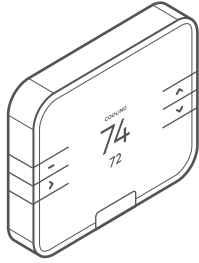
# SMART THERMOSTAT 2

## Product Manual

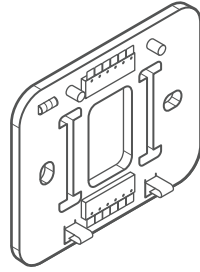


- Before installing or servicing the thermostat, turn off power to the system at the circuit breaker.
- Leave power off until you have finished installing or servicing.
- Shorting the electric terminals at the control on the heating or cooling system may damage the thermostat. Do not test the system this way.
- You must follow all local codes and ordinances for wiring the system.
- This thermostat should only be powered by 2 AAA alkaline batteries or a listed class 2 power supply at 24 VAC (C-Wire or wall transformer).
- An amperage higher than 1 amp through each thermostat terminal may cause damage to the thermostat.
- Verify that the system is 24 VAC. If the old system is labeled as 120 or 240 volts or has wire nuts, the system is high voltage. Do not install the thermostat to a high voltage system. Contact a local HVAC professional for help.

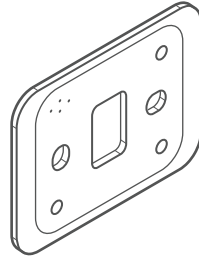
## BOX CONTENTS



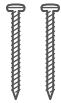
Thermostat



Backplate



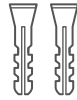
Trim Plate (Optional)



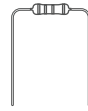
Drywall Screws (2)



AAA Batteries (2)



Drywall Anchors (2)

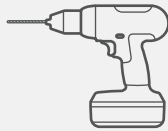


Power Resistor

## RECOMMENDED TOOLS



Needlenose Pliers

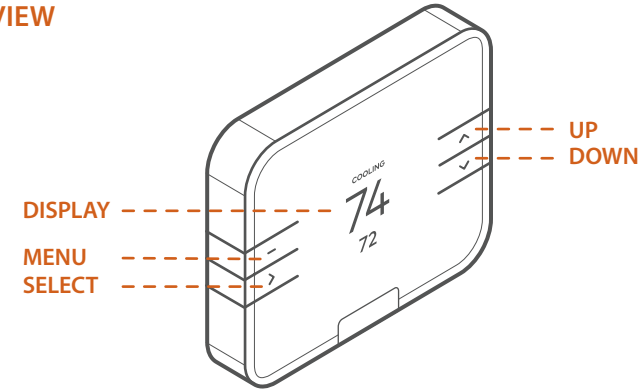
Phillips Head  
Screwdriver

Power Drill



Pencil

## THERMOSTAT OVERVIEW



### Buttons

- **UP** – Adjust target temperature up or navigate the MENU.
- **MENU** – Access MENU options to change the mode, fan, settings, and other features.
- **DOWN** – Adjust target temperature down or navigate the MENU.
- **SELECT** – Select options in the MENU. Can also be configured to control other features.

### Modes

- **HEAT** - Will activate the heating system.
- **COOL** - Will activate the air conditioner.

- **AUTO** - Will select either the HEAT or COOL mode automatically.
- **EMER** - For use with heat pumps only. Will bypass the heat pump and enable the auxiliary/emergency heat.
- **OFF** - The system will not heat or cool.

### Display

- **HEATING** – Illuminated in HEAT, EMER or AUTO mode when the thermostat is calling for heat.
- **COOLING** – Illuminated in COOL or AUTO mode when the thermostat is calling for cool.

## LOCATION

If replacing an old thermostat, the new thermostat can be mounted in its place. If a new location is desired it will be necessary to move the wiring.

New installations and relocation should follow the accompanying guidelines to ensure the most accurate temperature reading and ease of use.

- Mount thermostat on an inside wall, approximately 5 ft. (1.5m) above the floor in a frequently used room.
- Do not install in locations near appliances or devices that affect the local temperature such as televisions, lamps, or dryers.
- Avoid areas that are exposed to large temperature variances, such as: direct sunlight, near an AC unit, above or below auxiliary heat and air vents, and drafts from windows.
- Be aware of what is on the other side of the wall where the thermostat is being installed. Do not install on walls adjacent to unheated rooms, stoves, or housing hot water pipes.
- Damp areas will not only affect the humidity reading of the thermostat, but could lead to corrosion and shorten the life of the thermostat.
- Install in a location with good air circulation. Stagnant air will not accurately reflect the rate of temperature change in the room. Avoid areas behind open doors, corners, and alcoves.
- Wait until construction and painting are finished before installing.

## PREPARATION

### The Existing Thermostat

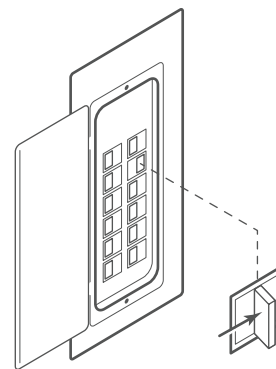
#### 1. Test The System

Verify that the heating and/or cooling system is operating properly before you try to install the new thermostat.

**DO NOT** test the system by shorting electric terminals at the furnace or air conditioner. This may damage the thermostat.

#### 2. Turn Power Off

- Turn all heating and cooling systems off. This can be done at the circuit breaker.



**CAUTION: DO NOT REMOVE** the existing thermostat until power has been turned off at the circuit breaker.

Once power to the heating AND cooling systems is off, follow these steps:

#### 3. Remove Thermostat Cover

- Remove the cover from the existing thermostat. **Do not disconnect the wires yet.**

Make sure the wires are identified correctly. If you have an unidentified wire, it may be necessary to identify the wire where it connects to the heating or air conditioning equipment.



**CAUTION: Wiring can vary for each manufacturer. Identify all wiring before removing it from the existing thermostat.**

**TIP: Take a picture of the wires before you detach them from the existing thermostat for future reference.**

- Disconnect all of the wires and remove the existing thermostat.

**TIP: Remember to secure the wires so they don't fall into the wall.**

### Prepare the Wires

Follow these guidelines for safe and secure wire connections:

- Ensure the wires are a proper gauge between 18-24 AWG.
- Make sure wires have exposed straight ends about 1/8" long.



**CAUTION: Verify that the system is 24 VAC. If the old system is labeled as 120 or 240 volts or has wire nuts, the system is high voltage. Do not install the thermostat to a high voltage system. Contact a local HVAC professional for help.**

## INSTALL YOUR NEW THERMOSTAT

### Install the Back Plate

Use the bubble level provided on the back plate as a guide. Mark where the screws will go with a pencil through the screw holes on the back plate. Ensure the top of the back plate is facing up.

**TIP: If necessary, use the trim plate to cover up any marks or holes left from the old thermostat. Attach the trim plate before securing the back plate to the wall.**

**TIP: Drill holes with 1/4" drill bit to tap in the drywall anchors for added support.**

### Wire Your New Thermostat

Reconnect the wires to the new thermostat.

**TIP: If you have extra wires do not install them in the new thermostat. Please contact your local HVAC professional for additional assistance.**

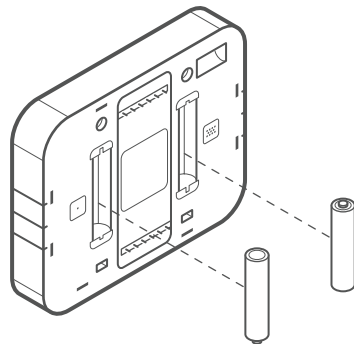
- If you have R, connect it to RH.
- Z1 or Z2 can be used for W3, H, DH, or EX.

**NOTE: If you have a 2-wire system (most common) or hydronic heating system, you must add the Power Resistor to the system. Connect this resistor at your heating equipment between the C and W terminals.**

## Terminal Designations

CONVENTIONAL SYSTEM	
Terminal	Description
RC	Cooling power
RH	Heating power
Z	Configurable W3, H (humidifier control), DH (dehumidifier control), EX (vent, external air baffle, ERV/HRV)
Z2	Configurable W3, H (humidifier control), DH (dehumidifier control), EX (vent, external air baffle, ERV/HRV)
W	Heat stage 1
W2	Heat stage 2
C	Common wire from secondary sid of heating transformer (if 2 transformers)
Y	Cool stage 1
Y2	Cool stage 2
G	Fan
O	Energized in Cool mode
B	Energized in Heat mode
HEAT PUMP	
RC	Cooling power
RH	Heating power
Z	Configurable W3, H (humidifier control), DH (dehumidifier control), EX (vent, external air baffle, ERV/HRV)
Z2	Configurable W3, H (humidifier control), DH (dehumidifier control), EX (vent, external air baffle, ERV/HRV)
W	Aux stage 1
W2	Aux stage 2
C	Common wire from secondary side of heating transformer (if 2 transformers)
Y	Pump stage 1
Y2	Pump stage 2
G	Fan
O	Energized in Cool mode
B	Energized in Heat mode

## Insert Batteries Into the Thermostat



The thermostat can be powered by battery or 24 VAC. If a wall transformer is used to power the thermostat, connect between C and RH.

Ensure the batteries are installed following the specified polarity markings on the thermostat.



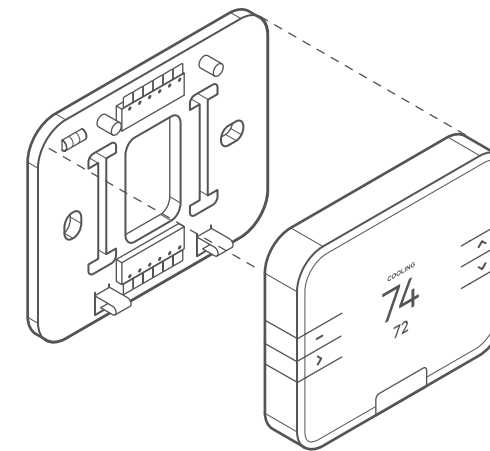
## CAUTION: Special Battery Warning

- Always replace the batteries as soon as you have low battery levels, indicated by a caution sign and “LOW BATTERY” flashing on the display. If the batteries drain, the thermostat could leave the HVAC system on or off, overheating or freezing the home.
- Always replace the batteries when they are low to protect the thermostat from damage and corrosion by leaking batteries.
- If the home is unoccupied for a month or more, such as vacation homes, you should replace the batteries as a preventive measure against battery failure while you are away.
- Always use new batteries as replacements.

## Install Thermostat Body to Back Plate

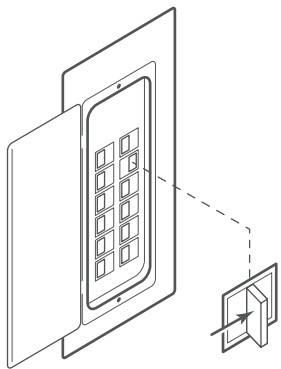
Verify that any excess wire is tucked back into the wall to allow room for the thermostat to sit flush against the back plate.

Return the thermostat to the wall plate by pressing the thermostat body firmly into the back plate mounted to the wall. Ensure that the pins on the body are correctly aligned with the back plate. Failure to do so could cause damage to the thermostat.



### Turn the Power On

Restore power to all the heating and cooling systems. This can be done at the circuit breaker.



## THERMOSTAT SETUP

- Thermostat will automatically detect the connected wires.
- Follow the on-screen instructions to complete the thermostat configuration.

**NOTE: If the thermostat screen does not show all the connected wires, remove the thermostat from the wall and verify that all wires are properly connected. If issues persist, there may be an HVAC problem. Please contact an HVAC service provider for assistance.**

Depending on the system type and configuration, the thermostat may request the following information during setup:

### Fan on During Heating

Tells the thermostat whether the fan should be on during a heating cycle.

- *Forced Air Heating - Yes*
- *Radiant Floor Heating - No*
- *Fossil/Electric Baseboard Heating - No*
- *Radiators - No*
- *If Unsure - Not sure*

### Backup Heat Type

Tells the thermostat what type of auxiliary/backup heating the heat pump uses.

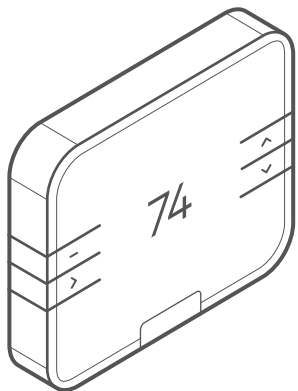
- *Electric - This is the most common type of backup heating.*
- *Dual Fuel - Some heat pumps use a fossil furnace (for example, natural gas, oil, or propane) or backup heating.*
- *If Unsure - The system will automatically detect which heat type is appropriate for your system.*


### Z1/Z2 Terminal Function

These are the “dynamic” terminals. If an auxiliary wire has been connected, please specify the function it will perform.

- *W3 - Third stage of heat or aux*
- *H - Humidifier*
- *DH - Dehumidifier*
- *EX - Vent (external air baffle)*

### Connect the Thermostat to the System



1. Put the thermostat in **OFF** mode.
2. Put the Z-Wave controller into **ADD** mode. Refer to the controller documentation for more information.
3. Press the **MENU**  button
4. Select **SETTINGS**

5. Select **NETWORK**
6. Select **ADD**
7. Log in to your online account to sync the thermostat with the account, or contact your Service Provider for installation setup.

**Write your login information below once you have chosen a personal password.**

User ID: \_\_\_\_\_

Password: \_\_\_\_\_

### CONFIGURE THE SYSTEM

While the default settings online will be sufficient in most cases, you also have the option to change advanced configuration settings, such as: Swing, Differential, Recovery Setting, Fan Circulation Period and Duty Cycle, Maximum Setpoints, Minimum Setpoints and Thermostat Lock.





**WARNING: Use caution when changing advanced configuration settings. These configuration settings should only be changed by those familiar with heating and cooling systems' parameters. Contact a local HVAC professional for help.**

### CHECK THE SYSTEM



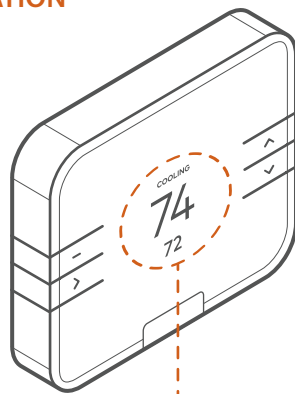
**WARNING: Do not test the AC during cold weather or heat during hot weather. Wait for mild weather to fully test the system.**

#### To Check Heating

1. Press the **MENU**  button to select and use **UP/DOWN** to scroll to **MODE**. Press **SELECT** to choose the mode option. Use **UP/DOWN** to scroll to **HEAT**. Press **SELECT** to choose the **HEAT** option.
2. Press the **UP**  button to raise the setpoint above room temperature.
3. Wait 5 minutes for the system to turn on.
4. After verifying the heating system is working, return the setpoint to the desired temperature.



## OPERATION



Display ● - - - - -

### Waking the Device

1. Press any button to wake the thermostat up.
2. After waking, the display will show the current mode, room temperature, and setpoint.

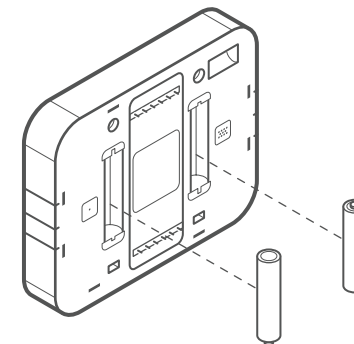
### To Check Cooling

1. Press the **MENU** button to select **COOL** mode.
2. Press the **DOWN** button to lower the setpoint below room temperature.
3. Wait 5 minutes for the system to turn on.
4. After verifying the cooling system is working, return the setpoint to the desired temperature.

### Changing the Mode and Setpoint

1. Press the **MENU** button to access the menu screen.
  2. Press **SELECT** on the **MODE** option.
    - The modes are **HEAT**, **COOL**, **AUTO**, **EMER** and **OFF**.
    - **EMER** mode is available for Heat Pump systems.
    - When in **EMER** mode, the display will read **EMER** when the thermostat wakes up and the **HEAT** icon will be displayed. Changing the mode will leave **EMER** mode.
  3. Press **SELECT** on the desired mode.
  4. Once in the desired mode, press the **UP** or **DOWN** button to adjust to the desired setpoint.
- In **AUTO** mode when the system is idle, the screen will display **AUTO**. The thermostat will display **HEATING** when calling for heat and **COOLING** when calling for cool.

## CHANGING THE BATTERIES



If the thermostat batteries are low, replace the batteries with two new AAA batteries.

1. Remove the thermostat from the back plate by pulling the thermostat straight out and off the wall.
2. Take out the existing batteries.
3. Insert the new batteries following the specified polarity markings on the thermostat.
4. Return the thermostat to the wall plate by pressing the thermostat body firmly into the back plate mounted to the wall. Ensure that the pins on the body are correctly aligned with the back plate. Failure to do so could cause damage to the thermostat.

## TROUBLESHOOTING

### Heating or Cooling Doesn't Turn On When the Setpoint is Above or Below the Room Temperature

To prevent damaging the compressor, the thermostat inserts a delay when cycling the compressor. If you think the system should be on and it's not, then change the setpoint to be 2 degrees beyond the current setpoint and wait 5 minutes to see if the system turns on. If not, contact a local HVAC professional.

### Heat Pump is "Cooling When it Should be Heating" or "Heating When it Should be Cooling"

Some heat pumps use the O terminal, while others use the B terminal. Try switching the O or B wire to the opposite terminal. Contact a local HVAC professional for further assistance.

### Thermostat Buttons Flash Red and Screen Will Not Illuminate

The batteries in your thermostat are extremely low. Replace the batteries with fresh batteries immediately.

### Accessing the INSTALLER (Setup) Menu

The initial setup menu can be accessed at any time:

1. Press the **MENU** — button
2. Select **SETTINGS**
3. Select **INSTALL**

### Exclude the Thermostat From the Z-Wave Network

If for some reason the thermostat must be excluded from the network, follow the steps below to do so.

1. Set the thermostat to **OFF** mode.
2. Put the Z-Wave controller into Delete mode. Refer to the controller documentation for more information.
3. Press the **MENU** — button
4. Select **SETTINGS**
5. Select **NETWORK**
6. Select **REMOVE**. Follow the on-screen instructions.

## NOTICES

### FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

—and—

2. This device must accept any interference received, including interference that may cause undesired operation.

**This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with FCC's RF exposure guidelines, the distance must be at least 20 cm between the radiator and your body, and fully supported by the operating and installation configurations of the transmitter and its antenna(s).

### IC

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with RSS-102 — Radio Frequency (RF) Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. le dispositif de a été évalué à répondre général rf exposition exigence.pour maintenir la conformité avec les directives d'exposition du RSS-102-Radio Fréquence (RF), ce matériel doit être installé et exploité à une distance minimale de 20 cm entre le radiateur et votre corps.

**Note:** The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

For more help, contact your Service Provider.



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[www.Alarm.com](http://www.Alarm.com)

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