

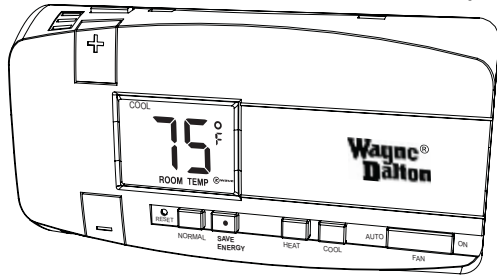


Products that speak Z-Wave
work together better.™

Z-Wave® Enabled Thermostat User Manual

For Model WDTC-20

**Manage and automate your home's
climate to maximize energy
conservation and comfort**



Thank you for purchasing the Z-Wave® Enabled Thermostat. It was designed to give you many years of reliable service and easy to use climate control when operated manually or by remote control in a Z-Wave® network. Z-Wave® products by Wayne-Dalton allow you to manage and control your home by remote control for convenience, comfort, safety and energy conservation. Your Z-Wave® Thermostat is a great addition to your Z-Wave® network and can maximize energy conservation and comfort while minimizing the effort required to maintain the appropriate temperature in your home whether you are at home or away. In addition to thermostats, indoor and outdoor lighting, security systems, garage door openers and window shades are just a few of the items you can easily control with additional Z-Wave® certified products.

Your new Z-Wave® Enabled Thermostat is compatible with the complete range of Wayne-Dalton Z-Wave® certified controllers. Your Z-Wave® Enabled Thermostat will also work with Z-Wave® certified controllers from other manufacturers and brands. Please consult the user manual and your controller supplier for more details.

Home Control Basics

Z-Wave® certified products will allow you to easily control multiple devices in a home with the push of a button in what is known as a “scene”. Turning on your home’s interior lights and activating the set-back on your thermostat from your in-vehicle remote as you come home is an example of a scene. Dimming the lights and automatically closing your curtains to watch TV with a single push of a button is another example of a scene.

Visit www.wayne-dalton.com/access for more ideas on how to create, set-up and use scenes for safety, security, comfort and convenience.

IMPORTANT NOTICE!

Read the enclosed instructions carefully before installing your new Z-Wave® Enabled Thermostat. Pay close attention to all warnings and notes and carefully follow the installation steps in the order they are presented to save time and minimize the risk of damaging the thermostat or the system it controls.

This manual should be retained for future reference.

Table of Contents

Introduction	1
Table of Contents	2
Glossary	3
Z-Wave® Enabled Thermostat Basics	4
Package Contents/Tools Required	5
Locating Thermostat	6
Removing Existing Thermostat	7
Mounting Thermostat	8
Wiring Information	9
Terminal Designation Reference Guide	10
Jumper Reference Guide	11
Wiring Diagrams and Jumper Configurations	12-17
Control Unit Installation	18
Installation Verification	19
Degrees C and F	20
Temperature Offset	20
General Operating Information	21
Manual Operation	22
Programming Target Temperatures	23-25
Z-Wave® Programming	26-27
Programming Example (WDUSB-10R with ThinkEssentials®) ...	28-29
Programming Example (Wireless Gateway, WDHA-12R)	30-31
Programming Example (Handy Remote, HA-09WD)	32-33
Customer Support/Compliance	34

Bind – Activates Z-Wave® module. Can be used to include Thermostat into a network, include into a Scene or delete thermostat from Scene or network. Similar to program button found on other products.

Calibration – Accuracy of thermostat (set at factory only, see Temperature Offset.)

Copy – See Replicate.

Delete – Erase transmitter or scene information from Controller. Also known as Exclude.

Device – Any item that is connected to a module (for example, lamps).

Exclude – Remove a module, transmitter or scene from the controller.

HVAC – Heating, Ventilation, and Air Conditioning system

Include – Add a module to the controller. Also known as Inclusion.

LCD – Liquid Crystal Display. The informational display on the thermostat.

Module – Any HomeSettings or Z-Wave® product that is controlled with a HomeSettings or Z-Wave® remote controller. A module can be part of more than one scene.

Network – A collection of Z-Wave® modules controlled by primary and secondary controllers operating on the same system. A network has its own unique identification code so that no one else can control the system.

Node – Single Z-Wave® endpoint (controller or module) on a network .

Primary Controller – The first controller used to set up your modules and network.

NOTE: Only the Primary Controller can be used to include or delete modules from a network. It is recommended that you mark the primary controller for each network for ease in modifying your network.

Replicate – Copy from one controller to another.

Scene – A scene is a series of Z-Wave® modules programmed to turn to a specific level (on, off or dim, normal mode, save mode, etc...) with the push of a button on a controller.

Schedule - A timer based event in the software that will activate a scene or turn on/off a zone at a specified time of day, or at sunrise or sunset.

Secondary Controller – A controller containing network information about other modules within the network, and is created FROM the primary controller. Secondary controllers cannot include or delete modules to the network.

Set-back temperature – Energy saving target temperature setting associated to SAVE ENERGY mode.

Target Temperature - Temperature to be maintained by thermostat.

Temperature Offset - Forced adjustment of thermostat read out to display a temperature either higher or lower than the actual temperature.

Z-Wave® Enabled Thermostat Basics

The Wayne-Dalton Z-Wave® Enabled Thermostat is compatible with most standard 24 Volt heating and cooling systems including:

- 1 and 2 stage heat pump systems
- 1 or 2 stage normal heating systems
- 1 stage cooling systems

The Wayne-Dalton Z-Wave® Enabled Thermostat also features:

- Support for all Z-Wave® controllers
- “Home” and “Away” programs via Z-Wave® or manual operation
- “Heat” and “Cool” modes via Z-Wave® or manual operation
- Temperature setting up or down via Z-Wave® or manual operation
- Easy Energy Savings buttons and Mode Switch
- Low Battery indicator

The Z-Wave® Enabled Thermostat is a new arrival into the Wayne-Dalton Z-Wave® product line and contains many new features that were not conceived when some Z-Wave® controllers were initially developed. The Wayne-Dalton Z-Wave® Enabled Thermostat has a special compatibility mode and is designed to work with your Z-Wave® network regardless of the manufacturer of your controller or its date of manufacture. When programming your thermostat to your controller, if it does not respond to the commands, reprogram it using the alternate programming method.

The Z-Wave® Enabled Thermostat is designed to live by your schedule rather than forcing you to live by the rigid schedule it was programmed with. Now you can program it to the “Away” Scene on a controller such as the Wireless Gateway and when you leave the house you can activate that Scene from your car to set-back your thermostat, then when you arrive home, you can activate the “Home” Scene to return the thermostat to your normal setting.

To begin using Z-Wave® Home Control technology it is helpful to understand that each Z-Wave® module, including the Z-Wave® Enabled Thermostat, communicate with each other using a low power radio transmitter and receiver. Large metal objects, house wiring, walls, furniture, refrigerators, microwaves and similar items can interfere with communication between the modules to reduce the range or even prevent communication. Placement of the Z-Wave® Enabled Thermostat and other Z-Wave® modules is very important to obtain a reliable network.

A Z-Wave® network is a collection of Z-Wave® modules in a mesh type of network. Each Z-Wave® module, regardless of manufacturer, communicates with other modules within range to route and repeat the signals from one device to the next, this creates a highly reliable and robust transmission throughout the home.

A Z-Wave® network can have only one primary controller. The primary controller establishes network security to ensure your network will not operate a neighbors network and vice-versa. It is a good practice to label and protect your primary controller since it is the only Z-Wave® controller that can add modules to or remove modules from your network. It is easy to add secondary controllers as your network grows. Your Z-Wave® Enabled Thermostat can belong to only one network, and therefore only one primary controller, but it can be added to as many secondary controllers or Scenes as you wish for added convenience.

For more tips and great ideas on how to use and expand your network please visit our web site, www.wayne-dalton.com/access.

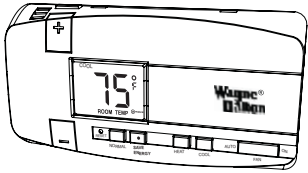
Definition of Symbol



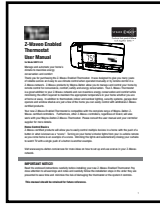
Warning

PACKAGE CONTENTS

User Manual



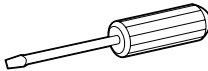
Z-Wave® Enabled Thermostat



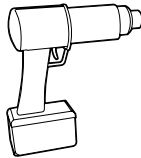
Wall anchors and mounting screws (2 each)

TOOLS REQUIRED

#1 Phillips screwdriver (small)



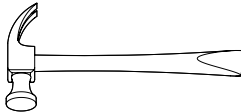
Drill with 3/16" (4.8 mm) drill bit



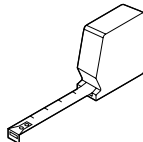
Pen or Pencil



Hammer



Tape Measure



Step 1: Thermostat Location

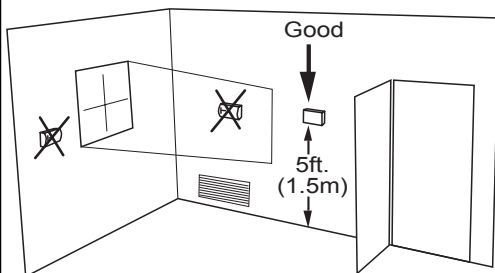
Retrofit or Replacement Installations:

Mount the new thermostat in the same location as the old one.

New Installations:

Follow the guidelines below and refer to the diagram:

- Locate the thermostat on an inside wall, about 5 ft. above the floor, and in a room that is used often.
- Do not install it where there are unusual heating conditions, such as in direct sunlight, near a lamp, radio, television, radiator register, or fireplace, near hot water pipes in a wall, near a stove on the other side of a wall.
- Do not locate in unusual cooling conditions such as on a wall separating an unheated room, or in a draft from a stairwell, door or window.
- Do not locate in a damp area. This can lead to corrosion that will shorten the life of the thermostat.
- Do not locate where air circulation is poor, such as in a corner or an alcove, or behind an open door.
- Do not install the thermostat unit until all construction work and painting has been completed.
- This thermostat does not require leveling for proper operation.



CAUTION:

Your thermostat is a precise instrument, handle it with care.

- *Turn off electricity to the heating and air conditioning units before installing or servicing the thermostat or any part of the system.*
- *Do not turn electricity on again until work is completed.*
- *Do not short (jumper) across electric terminals at control on furnace or air conditioner to test the system. This will damage the thermostat and void your warranty.*
- *All wiring must conform to local codes and ordinances.*
- *This thermostat is designed for use with 24 volt AC systems. The thermostat should be limited to a maximum of 1.0 amps, higher amperage may cause damage to the thermostat.*

Continued Next Page 

Step 2: Removing Existing Thermostat



WARNING: To avoid electrical shock and to prevent damage to the furnace, air conditioner, and thermostat disconnect the power supply at the circuit breaker or heater and air conditioner before beginning work.



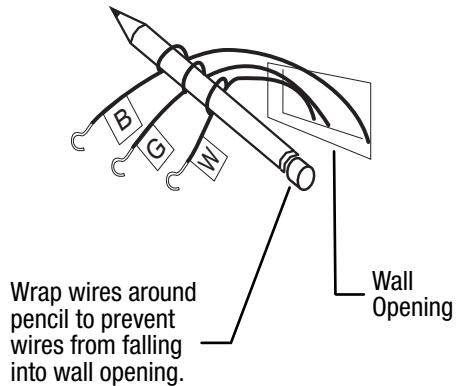
CAUTION: Read instructions carefully before removing any wiring from existing thermostat. Wires must be labeled before they are removed. **THERE IS NO STANDARD COLOR CODE.** When removing wires from their terminals, ignore the color of the wires since these may not comply with any standard.

1. Switch electricity to the furnace and air conditioner OFF by disconnecting the power supply at the circuit breaker or at each unit.
2. Remove cover from the existing thermostat. Most are snap-on types and simply pull off. Some have locking screws on the side or front and require the screws to be loosened before removal.
3. Note the letters printed near the terminals. ATTACH LABELS (enclosed) to each wire for identification.

Note: It is very important to label all wires before disconnecting them.

4. Label the wires one at a time. You must label all the wires before you proceed. With all wires labeled, remove them from the existing thermostat. Do not let the wires fall back inside the wall. Wrapping them around a pencil, as shown, will keep them from falling.
5. Loosen all screws on the existing thermostat and its mounting plate and remove it from the wall. Be careful not to disturb wiring labels.
6. (Optional) Fill wall opening with non-combustible insulation to prevent drafts.

IMPORTANT:
LABEL ALL WIRES BEFORE
DISCONNECTING THEM!



Note: Be careful, do not allow bare wires to touch, or short, each other.

Continued Next Page 

Step 3: Mounting Thermostat

Tools required:

Phillips or Slotted Screwdriver
 Drill
 3/16 inch drill bit
 Hammer
 Pencil

1. Separate the control unit (front) of the thermostat from the mounting base (back.) Grasp the thermostat and pry the control unit away from the base, lift up to remove the control unit from the base as shown. Set aside the control unit.

2. Pull the wires through the wire hole in the base.

Note: *Be careful, do not allow bare wires to touch, or short, each other.*

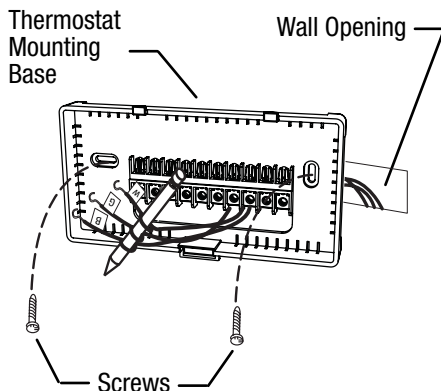
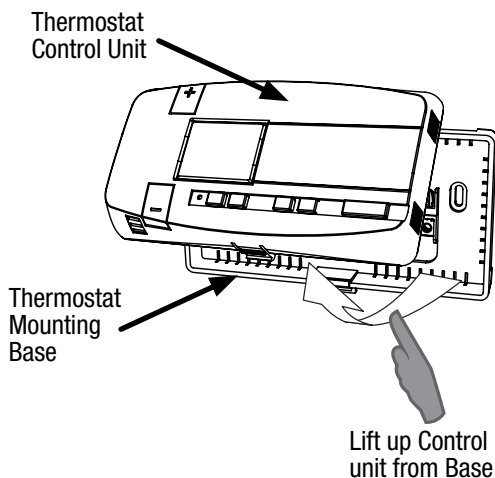
3. Hold the base against the wall with the wires coming through the opening below the terminal block, and position the base for best appearance. Mark the hole positions with a pencil or mount directly to the wall with the two screws provided.

If mounting the base to sheetrock or if using the existing mounting holes, use the plastic anchors provided. Drill a 3/16 in (4.8 mm) hole for the anchors at each screw location. Use a hammer to tap the screw anchors into the hole. Mount the base with the two screws provided.

Note: *This thermostat does not require leveling for proper operation.*

4. Be certain all wires are threaded through the hole in the thermostat base. Leave wires loose in the opening.

Note: *Be careful, do not allow bare wires to touch, or short, each other.*



Continued Next Page 

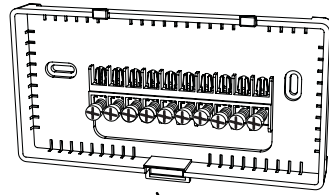
Step 4: Wiring Information

General wiring guidelines for safe and secure wire connections:

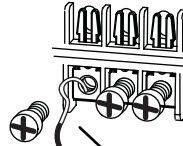
- Ends of wires should be stripped 3/8 inch as shown.
- Take care not to damage or lose labels for each wire during handling.
- Locate and dress wires to come in from behind the thermostat and turn up into the terminal area.
- Push excess wiring back into the wall opening.
- Do not allow wiring between thermostat mounting base and wall.
- Connect labeled wires only to a terminal with a corresponding letter.

Note: *Be careful, do not allow bare wires to touch, or short, each other.*

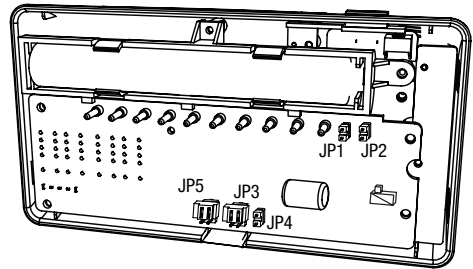
- Use the wiring diagrams on page 12 and cross reference chart on page 13 for your exact application as your guide.
- Fan wires out as illustrated in the wiring diagrams with the Z-Wave® enabled thermostat mounting base positioned below the wall opening.
- Insert the wire in the terminal and tighten the screw securely.
- Set the control unit configuration jumpers per the Wiring and Jumper configurations found on pages 14-17, choosing the one that matches your wiring needs. A needle-nose pliers may be required to remove the jumper to modify its position.



Terminal Block in Mounting Base



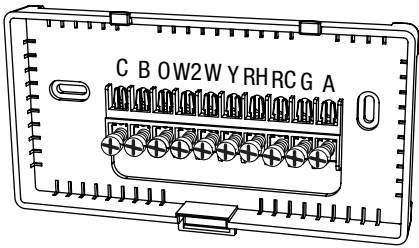
Wiring Strip length is 3/8 inch



Note: *Numbered Jumper Locations JP1 - JP5 are referenced in illustration above and in the wiring diagrams on the following pages.*

Continued Next Page 

Step 4: Wiring Information (continued)



Terminal Designation Reference Guide

Conventional Gas/Oil/Electric Heating and Cooling Systems (No Heat Pump):

- C** -- Common (power or hot) wire from secondary side of heating system transformer. (**Note:** *This wire is required for thermostat operation. If you do not have a "C" wire, please call customer support at 1-866-545-5765, e-mail at homesettings@wayne-dalton.com, or contact your HVAC professional to review possible solutions.*)
- W** -- Heat return or 1st stage relay (controls heating system)
- W2** -- 2nd Stage heat relay
- Y** -- 1st stage compressor contactor (controls air conditioning system)
- RH** -- Power for Heating system (**Notes:** *1. If there is just one power wire (R or RH) connect it to RH with jumper 3 ON (most systems are like this.) 2. Never short RH terminal to C terminal as severe damage to your HVAC system will occur.*)
- RC** -- Power for Cooling system.
- G** -- Fan control relay
- A** -- 3rd wire for 3-wire zoned hot water heating systems

Heat Pump Systems:

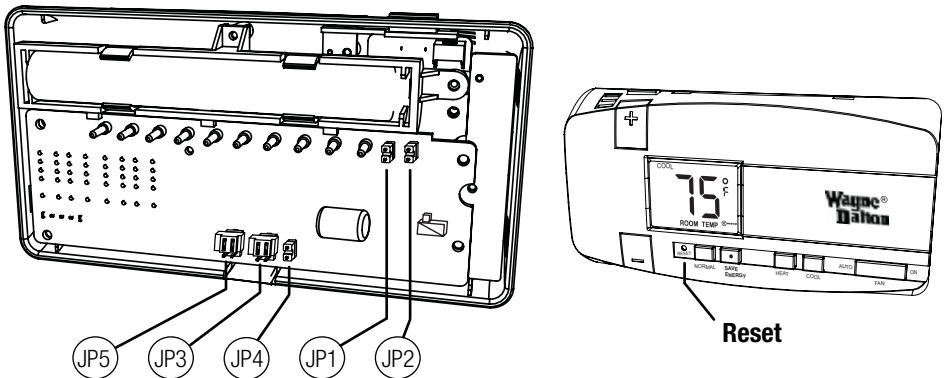
- C** -- Common (power or hot) wire from secondary side of heating system transformer. (**Note:** *This wire is required for thermostat operation. If you do not have a "C" wire, please call customer support at 1-866-545-5765, e-mail at homesettings@wayne-dalton.com, or contact your HVAC professional to review possible solutions.*)
- B** -- Changeover valve control (Powered in HEAT) (**Note:** *Never connect B and O terminals together as severe damage to your HVAC system will occur.*)
- O** -- Changeover valve control (Powered in COOL) (**Note:** *Never connect B and O terminals together as severe damage to your HVAC system will occur.*)
- W2** -- Auxiliary heat/2nd Stage heat relay
- Y** -- 1st stage compressor contactor (controls air conditioning system and 1st stage of heat pump)
- RH** -- Power for heat pump. (**Notes:** *1. If there is just one power wire (R or RH) connect it to RH with jumper 3 ON (most systems are like this.) 2. Never short RH terminal to C terminal as severe damage to your HVAC system will occur.*)
- G** -- Fan control relay

Continued Next Page 

Step 4: Wiring Information (continued)

IMPORTANT! Additional Wiring Notes:

- For heat pumps with O and B both present, connect O wire to O terminal and B wire to C terminal (**NOTE: This is typically for Trane Heat Pump products only.**) Do not connect B wire to B terminal as it may damage the 24VAC power system.
- For LENNOX Pulse systems, please contact customer support or contact your HVAC professional for specific information regarding installing the Z-Wave® Enabled Thermostat with your system.
- Use 18- to 22-gauge thermostat wire.
- Your Z-Wave® enabled thermostat must have a C wire (electrical power) and cannot operate from batteries alone. Batteries are for back up only.
- If you are unsure of how to connect your system, please call customer support for additional information or contact an HVAC professional.
- If you have 2 large wires (12 or 14 gauge or if it is bigger than paper clip wire) or know that your system operates on line voltage, immediately stop, re-install your existing thermostat and contact customer support. The Wayne-Dalton Z-Wave® Enabled thermostat operates on 24 Volts AC power only.



Jumper Reference Guide

The number below corresponds to the bubble number above.

- JP5** -- Fan Control: a) **NO FAN** -No fan control even with switch on front of thermostat (RARE.)(No jumper)
 b) **ELECT** - Fan is controlled from thermostat. (Jumper on top 4 pins)
 c) **GAS** - Fan is controlled by furnace. (Jumper on bottom 4 pins)
- JP3** -- Heat Pump Type: a) **OFF** - No heat pump system present (Conventional HVAC System) (No Jumper)
 b) **ON** - Bypasses heat pump 1st stage and immediately triggers auxiliary heating. (Eliminates time delay for effectively heating homes located in colder climates.) (Jumper on top 4 pins)
 c) **Heat Pump** - Normal heat pump setting to activate both stages. (Jumper on bottom 4 pins)
- JP4** -- Power: a) **RC-RH Connected** - For single transformer systems. (Jumper on both pins)
 b) **RC-RH Separate** - For systems with a separate transformer for A/C and heat. (No Jumper)
- JP1** -- Celsius/Fahrenheit: a) **°C** - Thermostat will display in degrees Celsius. (Jumper on both pins)
 b) **°F** - Thermostat will display in degrees Fahrenheit. (No Jumper)
- JP2** -- Heat Pump Auxiliary Type: a) Fossil fuels - Natural gas, propane, or oil auxiliary system. (Jumper on both pins)
 b) Elect - Electric auxiliary system. (No Jumper)

Reset -- Reset Button - Always press the reset button after changing jumper settings.

NOTE: Unused jumpers may be stored by attaching them to a single pin.

Continued Next Page →

Step 5: Match Wiring

Match the wiring diagram below with the wires you labeled in Step 3 and proceed to the page referenced for detailed set-up information for your application.

Note: The C wire (24 Volts AC) is not optional.

Note: If your combination of wires is not shown, go to Step 6 and modify your labeling per the cross reference chart.

2 Wire Heat + C

Wire	C	W	RH
------	---	---	----

Go to Page 14

3 Wire Heat + C

Wire	C	W	RH	G
------	---	---	----	---

Go to Page 14

4 Wire Heat/Cool + C

Wire	C	W	RH	Y	G
------	---	---	----	---	---

Go to Page 15

5 Wire Heat/Cool + C

Wire	C	W	RH	Y	G	RC
------	---	---	----	---	---	----

Go to Page 15

5 Wire Heat Pump with Auxilliary Heat + C

Wire	C	B or O	RH	Y	G	W2
------	---	--------	----	---	---	----

Go to Page 16

4 Wire Heat Pump without Auxilliary Heat + C

Wire	C	B or O	RH	Y	G
------	---	--------	----	---	---

Go to Page 16

1 Stage Cool, 2 Stage Heat + C

Wire	C	W2	W	G	RH	Y
------	---	----	---	---	----	---

Go to Page 17

3 Wire Zoned Hot Water + C

Wire	C	W	RH	A
------	---	---	----	---

Go to Page 17

Step 6: Modify Label Scheme

If your combination of wires is not shown, refer to the cross reference chart below. Add the corresponding Wayne-Dalton terminal designation label to your wire's label and then repeat Step 5 to match your wiring diagram. If a match is still not successful, contact customer support at 1-866-545-5765, e-mail at homesettings@wayne-dalton.com or contact your HVAC professional.

Note: The C wire (24 Volts AC) is not optional. If a C wire is not present, your Z-Wave® Enabled Thermostat will not operate, contact customer support for options.

Cross Reference Chart

Common Designations for Normal Gas, Oil and Electric systems and Heat Pump Systems

<i>Your Wires</i>	<i>Z-Wave® Enabled Thermostat Terminal Designation</i>
R or V or VR	RH and Jumper 3 ON - Single power for Heat and Cool
RH or R4	RH and Jumper 3 OFF - Power for Heat
RC	RC and Jumper 3 OFF - Power for Cool
W	W - Heat Control
W2	W2 - 2nd stage Heat
Y	Y - Cool Control
Y2	Do not connect and wrap exposed end with insulating electrical tape (2nd stage cool control is not supported)
G or F	G - Fan Control
C or X	C - Common 24 VAC power (to power thermostat)
E	Do not connect and wrap exposed end with insulating electrical tape (Emergency heat is supported by placing jumper 2 in the Aux position)
L	Do not connect and wrap exposed end with insulating electrical tape (System Monitor is not supported)
T	Do not connect and wrap exposed end with insulating electrical tape (Outdoor Sensor is not supported)
B or O	B - Heat pump changeover (cool to heat, powered in heat)
O	O - Heat pump changeover (heat to cool, powered in cool)
B and O	If there are both B and O wires (typical of Trane Heat Pumps), DO NOT CONNECT B to B terminal, Re-label B as C.

Common Designations for Zoned Hot Water Systems

2 Wire Zoned Hot Water

<i>Your Wires</i>	<i>Terminal Designation</i>
R	RH
W	W

3 Wire Zoned Hot Water Solenoid Valves

<i>Your Wires</i>	<i>Terminal Designation</i>
R	RH
W	W
Y(3rd Wire)	A

3 Wire Zoned Hot Water Motor Drive Valves

<i>Your Wires</i>	<i>Terminal Designation</i>
R	RH
W	A
Y(3rd Wire)	W

Common Designations for Lennox Heat Pump Systems

<i>Your Wires</i>	<i>Terminal Designation</i>
R or V or VR	RH
Y or W or W2	W2
M or Y	Y
G or F	G
C or X or X2	C
R or O	O

Common Designations for Trane Systems (American Standard)

<i>Your Wires</i>	<i>Terminal Designation</i>
B	C
W or W1	W2

Step 7: Configuration

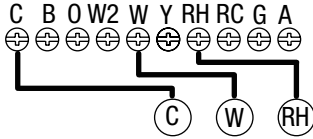
2 Wire Heat + C Wiring and Jumper Configuration

Your Labeled Wires

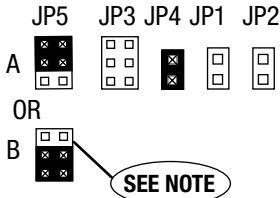
C W RH

STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Electric Heat set jumper JP5 in position A, for Gas or Oil Heat set jumper JP5 in position B.

Step D: Go to Page 18 to continue your installation.

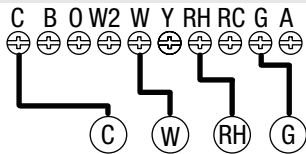
3 Wire Heat + C Wiring and Jumper Configuration

Your Labeled Wires

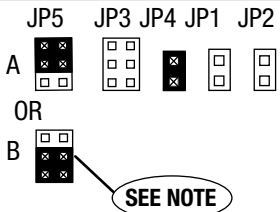
C W RH G

STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Electric Heat set jumper JP5 in position A, for Gas or Oil Heat set jumper JP5 in position B.

Step D: Go to Page 18 to continue your installation.

Step 7: Configuration

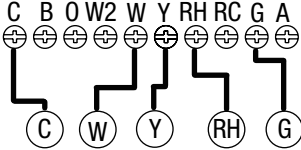
4 Wire Heat/Cool + C Wiring and Jumper Configuration

Your Labeled Wires

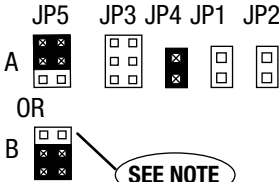
C W Y RH G

STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Electric Heat set jumper JP5 in position A, for Gas or Oil Heat set jumper JP5 in position B.

Step D: Go to Page 18 to continue your installation.

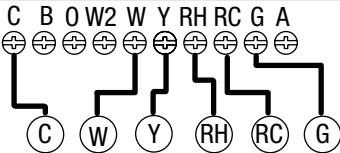
5 Wire Heat/Cool + C Wiring and Jumper Configuration

Your Labeled Wires

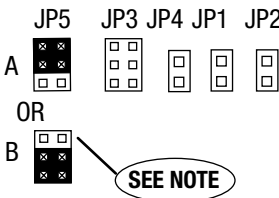
C W Y RH RC G

STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Electric Heat set jumper JP5 in position A, for Gas or Oil Heat set jumper JP5 in position B.

Step D: Go to Page 18 to continue your installation.

Step 7: Configuration

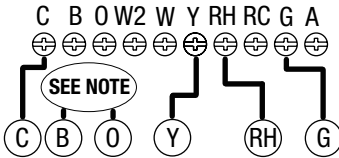
4 Wire Heat Pump without Auxiliary Heat + C Wiring and Jumper Configuration

Your Labeled Wires

C B or O Y RH G

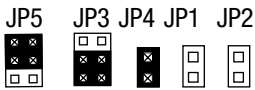
STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.

NOTE: Connect O wire to the O terminal OR B wire to the B terminal. If you have both O and B, connect O wire to the O terminal. Do not connect B to B terminal. See page 10 and call or e-mail customer support.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

Step D: Go to Page 18 to continue your installation.

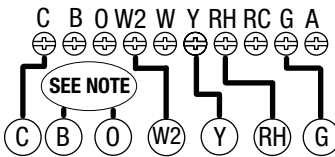
5 Wire Heat Pump with Auxiliary Heat + C Wiring and Jumper Configuration

Your Labeled Wires

C B or O W2 Y RH G

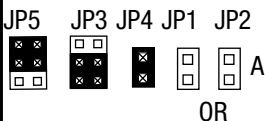
STEP A: Verify your labeled wire match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.

NOTE: Connect O wire to the O terminal OR B wire to the B terminal. If you have both O and B, connect O wire to the O terminal. Do not connect B to B terminal. See page 10 and call or e-mail customer support.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Gas Auxiliary Heat do not install or remove jumper on jumper JP2, for Electric Auxiliary Heat set jumper JP2 in position B.

SEE NOTE

Step D: Go to Page 18 to continue your installation.

Step 7: Configuration

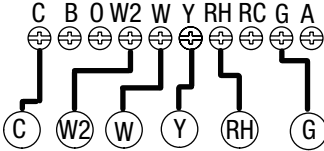
2 Stage Heat and 1 Stage Cool + C Wiring and Jumper Configuration

Your Labeled Wires

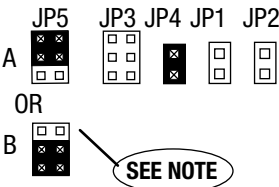
C W2 W Y RH G

STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 18 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

NOTE: For Electric Heat set jumper JP5 in position A, for Gas or Oil Heat set jumper JP5 in position B.

Step D: Go to Page 18 to continue your installation.

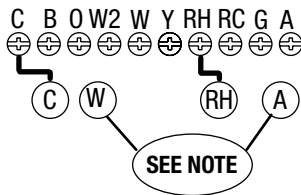
3 Wire Zoned Hot Water Heat + C Wiring and Jumper Configuration

Your Labeled Wires

C W RH A

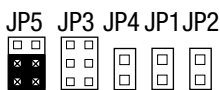
STEP A: Verify your labeled wires match the ones shown in the box to the left.

NOTE: Do not allow the wires to contact another terminal, touch each other or touch other parts of the thermostat.



STEP B: Connect your wires to the corresponding terminals on the thermostat base. Wrap wire around terminal screw and tighten securely using a Phillips or slotted screwdriver.

NOTE: For a Motor driven Valve connect "W" wire to "W" terminal and connect the 3rd wire to the "A" terminal. For a Solenoid valve connect "W" wire to "A" terminal, and connect the 3rd wire to "W" terminal. (all 3 wires must be connected)



STEP C: On the Control Unit PCB, install jumpers as shown. See the jumper reference guide on page 11 for jumper number designations. Black indicates position of jumper, otherwise remove or do not place jumper. Be certain jumpers are fully seated and in the correct position.

Important Operation Note: For 3 wire hot water system applications, the thermostat must be used in Heat and Heat Save Energy modes ONLY, in order to maintain power to the solenoid valves in the OFF position.

Step D: Go to Page 18 to continue your installation.

Step 8: Control Unit Preparation

Prepare the Z-Wave® Enabled Thermostat Control Unit for Installation:

1. Install 2 AA batteries as shown in the diagram to the right. The batteries are required to maintain your target temperatures during a power outage. If battery power is lost, or when changing batteries, you must reset your target temperatures.

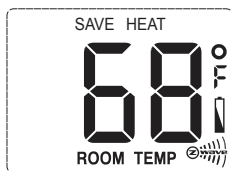
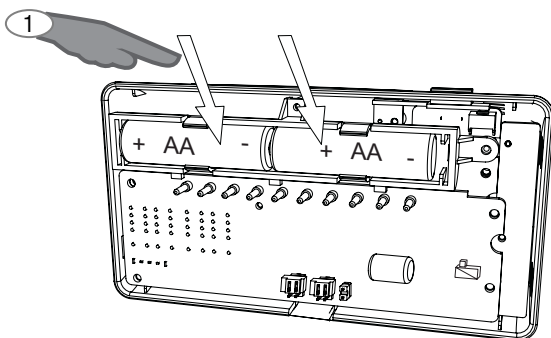
NOTE: Use Alkaline Batteries only, do not use rechargeable batteries.

NOTE: Replace the batteries if the low battery indicator icon is displayed.

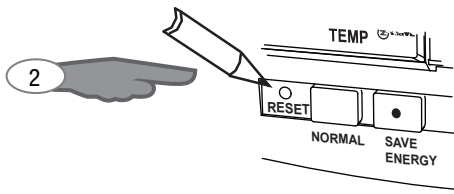


OPERATION NOTE: If the batteries die during a power outage, when AC power is restored the thermostat will power up in the OFF state.

2. Press and release the RESET button on the front of the control unit to initialize your jumper settings. If jumper settings are changed, you must press the RESET button.



Low Battery Icon Located on Thermostat LCD Display



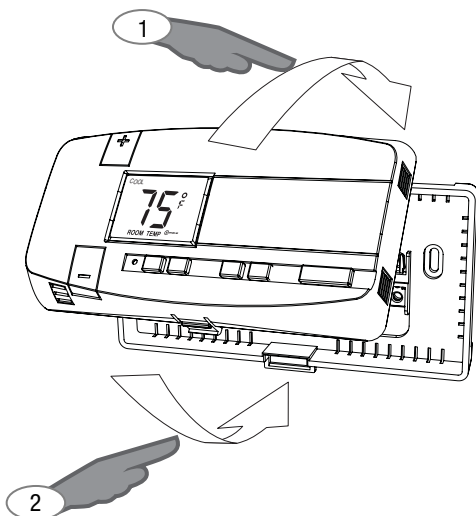
Step 9: Control Unit Installation

Install the Z-Wave® Enabled Thermostat Control Unit to the thermostat base mounted to the wall in Step 3.

1. Install the Thermostat Control Unit to the thermostat base in the following manner:

- Hook the top of the Control Unit to the thermostat base.
- Swing the unit down until it snaps in position.
- Push firmly on the center of the Control Unit to ensure the electrical contacts are mated properly.

NOTE: After handling, the control unit may require up to one hour to stabilize to room temperature.



Step 10: Installation Verification

Verify you have correctly installed the Z-Wave® Enabled Thermostat:

1. Restore Power: Turn on all electrical power turned off in Step 1.

2. Check Fan:

NOTE: Do this only if during installation the G wire or the fan relay was connected, otherwise proceed to 3.

- Slide fan switch to the ON position.
- Verify air is blowing from your system.
- Return to AUTO position for Normal operation.

3. Check Heat:

- Press and release the HEAT button on the front of the control unit. The word HEAT will appear in the display.
- Press the “+” symbol (Temperature up) button to raise the temperature to 90 degrees F.
- Wait 5 minutes, then verify warm air is blowing from your system.
- Press and release the HEAT button to shut off the heat.

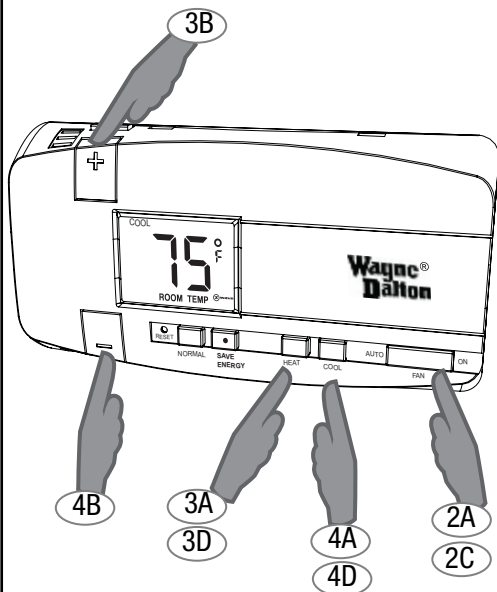
4. Check Air Conditioning:

NOTE: Wait 5 minutes after doing the Heat Check, before proceeding.

- Press and release the COOL button on the front of the control unit. The word COOL will appear in the display.
- Press the “-” symbol (Temperature down) button to lower the temperature 5 degrees less than the current reading.
- Wait 5 minutes, then verify cool air is blowing from your system.
- Press and release the COOL button to shut off the cooling system.

NOTE: If any of these checks do not function properly, review your wiring and jumper configuration. If the problem persists, contact customer support for assistance.

Installation of your Wayne-Dalton Z-Wave® Enabled Thermostat is complete. Go to Page 21 for Operation and Programming information.



Celsius/Fahrenheit Readout

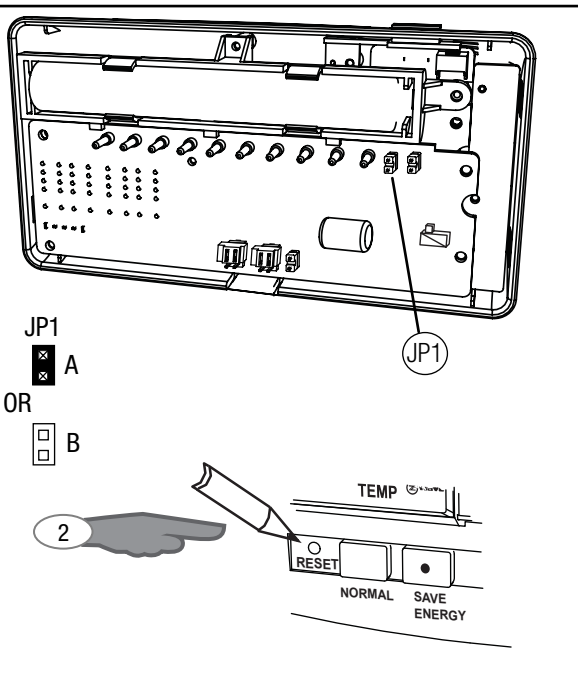
Modify your display to read degrees C or degrees F:

To display degrees Celsius:

1. Install jumper on jumper JP1 position A shown in diagram to the right.
2. Press and release the RESET button (using a paper clip or pencil point) on the front of the control unit to activate your setting.

To display degrees Fahrenheit:

1. Do not install jumper or remove jumper on jumper JP1 as shown on position B in the diagram to the right.
2. Press and release the RESET button on the front of the control unit to activate your setting.

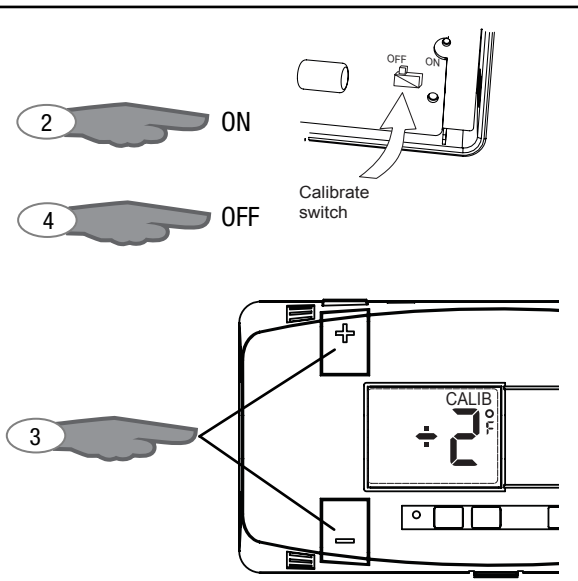


Temperature Offset

Your Wayne-Dalton Z-Wave® enabled Thermostat is very accurate and comes from the factory calibrated to +/- 1° of actual temperature. Temperature Offset can be used to force the thermostat to match another thermometer in your home to a maximum of +/- 6°.

1. Remove Thermostat Control Unit from the thermostat base.
2. Slide the calibration switch to the ON position.
3. Press either the + or - button on the front of the Control Unit until the desired temperature offset factor is reached.
4. Slide the Calibration switch to the OFF position.

NOTE: *If using this feature, Temperature Offset must be adjusted each time the thermostat is RESET or batteries are removed.*



Example: Display shows +2 degree Offset factor

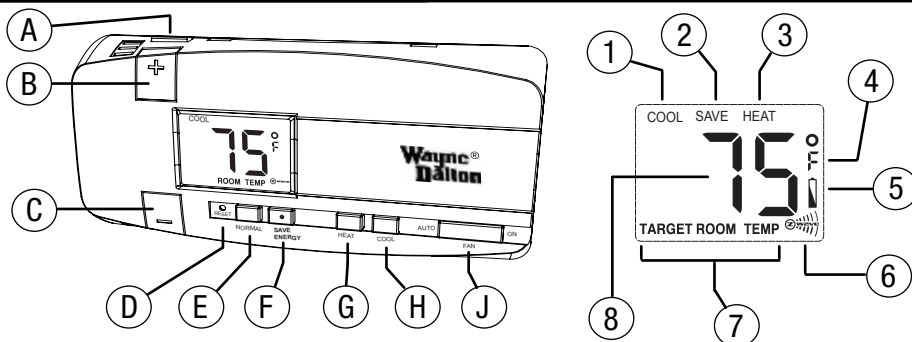
General Operation Basics

The Wayne-Dalton Z-Wave® Enabled Thermostat is a set-back thermostat with a unique Z-Wave® dual identity. The dual identity is designed to work with your Z-Wave® network regardless of the manufacturer of your controller or its date of manufacture. When programming your thermostat to your controller, if it does not respond to the commands, reprogram it using the alternate programming method to enable set-back capability.

The Wayne-Dalton Z-Wave® Enabled Thermostat operating as a set-back thermostat is ideal for use where the user does not have a defined living pattern but wants a comfortable environment when the home is occupied and energy savings when the home is unoccupied. The Wayne-Dalton Z-Wave® Enabled Thermostat can also be operated like a programmable thermostat when controlled by advanced Z-Wave® Controllers such as the Wayne-Dalton computer USB port controllers in PC and Mac formats. Visit the Wayne-Dalton web site, www.wayne-dalton.com, for more information.

Your Z-Wave® Enabled Thermostat can also operate as an ordinary thermostat by manually setting the target temperature for heat or cool modes.

General Operation Basics



General Operation Reference Guide

- A** --- **Bind button** - Activates Z-Wave® signal for inclusion, exclusion and adding to Scenes, Groups, Zones, etc...
- B** --- **Temperature Up** - increases temperature.
- C** --- **Temperature Down** - decreases temperature,
- D** --- **Reset button** - Locks in the jumper settings and restores default settings for HEAT, HEAT SAVE, COOL, COOL SAVE.
- E** --- **Normal mode** - changes temperature to Normal target temperature when either in Heat or Cool mode.
- F** --- **Save Energy mode** - changes temperature to Save Energy target temperature when either in Heat or Cool mode.
- G** --- **Heat** - activates heating system. Thermostat only operates heating system, starting heating when the room temperature falls one degree below the target temperature.
- H** --- **Cool** - activates cooling system. Thermostat only operates cooling system, starting cooling when the room temperature rises one degree above the target temperature.
- J** --- **Fan** - controls fan automatically with either heat or cool system if in AUTO mode. Will turn on Fan (if fan was connected during installation) and fan will continuously run.
- 1** --- **COOL** - Indicates Cool mode is activated and operating at the NORMAL target temperature.
- 2** --- **SAVE** - Indicates Save Energy target temperature is activated and will be paired with either HEAT or COOL to indicate whether it is Heat or Cool Save Energy mode.
- 3** --- **HEAT** - Indicates Heat mode is activated and operating at the NORMAL target temperature.
- 4** --- **F** - Readout is in degrees Fahrenheit, (**Note: If C is present, readout is in degrees Celsius**)
- 5** --- **Battery icon** - If present, indicates the battery power is low and the battery needs to be replaced.
- 6** --- **Z-Wave® icon** - If radio waves are present and flashing it indicates it is a node on a Z-Wave® network. If waves are not present, then the thermostat is not a node on any Z-Wave® network.
- 7** --- **ROOM TEMP** - indicates the numerical readout is actual room temperature.
TARGET TEMP - indicates the numerical readout is the target temperature in the mode displayed (either HEAT, COOL, COOL SAVE, or SAVE HEAT.)
- 8** --- **Number(75)** - indicates current room temperature if "Room Temp" is displayed below the number or indicates target temperature if "Target Temp" is displayed below the number.

Manual Operation

To manually operate your Zwave Enabled Thermostat:

NOTE: Confirm your thermostat has stabilized to room temperature prior to operation.

1. Confirm the Fan is in Auto mode by sliding the FAN switch to the left.

NOTE: To run the fan continuously with or without HEAT or COOL, slide the FAN switch to the right to the ON position.

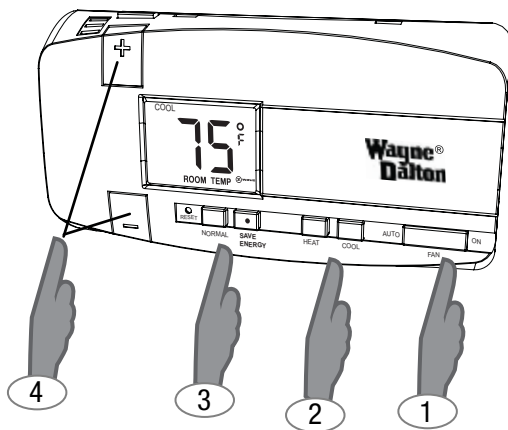
2. Press and release the desired temperature mode, either HEAT or COOL. The LCD will display either HEAT or COOL to match your selection.

NOTE: To turn the thermostat OFF, press the button that matches the active mode showing on the display. For example, if HEAT is displayed, press the HEAT button. The display will then not show either HEAT or COOL and will display the current room temperature only.

3. Press and release the desired operation mode, either NORMAL or SAVE ENERGY, to activate the desired pre-set temperature. The display will show the TARGET TEMPERATURE.

NOTE: The display will return to the ROOM TEMP after 5 seconds.

4. (OPTIONAL) If the target temperature is not suitable, press either the temperature up button (+ symbol) or temperature down button (- symbol) until the desired target temperature is reached.



NOTE: The NORMAL and SAVE ENERGY buttons allow you to quickly switch between the NORMAL target temperature and the SAVE ENERGY target temperature, sometimes referred to as a set-back temperature.

Programming Target temperatures

Target temperatures are programmed into the thermostat as the desired temperature for the mode being programmed. A total of four modes are available for programming:

- a) Normal Heat, b) Save Heat,
- c) Normal Cool, d) Save Cool

NORMAL modes are used when the home is occupied, and **SAVE ENERGY** modes are used for when the home is unoccupied. The **SAVE ENERGY** mode is a pre-determined set-back temperature.

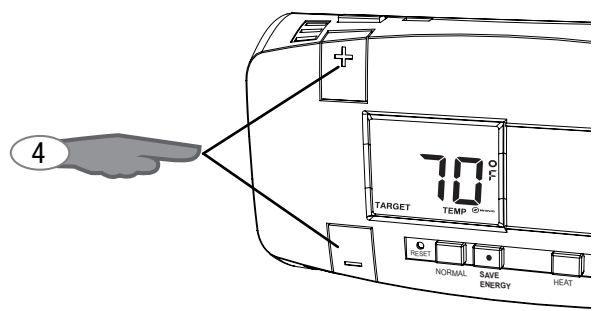
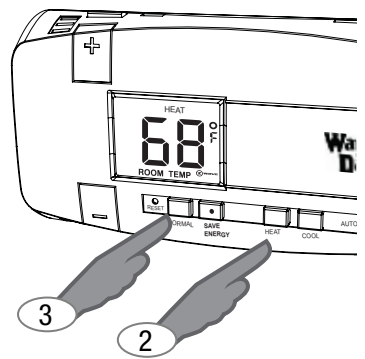
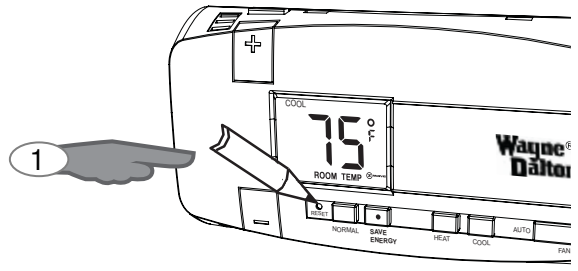
1. FOR FIRST TIME SET-UP ONLY:

Press and release the RESET button (use a paper clip or pencil point) to initialize the jumper settings and reset the target temperatures to default settings. After reset the thermostat will be in the OFF state.

NOTE: *If this is not the first time set-up, place your thermostat into the OFF position. If the display is showing the word COOL, press the COOL button to turn the unit off. If the display is showing the word HEAT, press the HEAT button to turn the unit off.*

Programming NORMAL HEAT target temperature:

2. Press and release the HEAT button. HEAT will appear in the display.
3. Press and release the NORMAL button. TARGET TEMP will appear in the display.
4. The default NORMAL HEAT target temperature is 70° F. To accept the default temperature wait 5 seconds and the unit will exit target temperature programming mode. If the default setting is not desired, press either the temperature up button (+ symbol) or temperature down button (- symbol) until the desired target temperature is reached. Wait 5 seconds and the unit will exit target temperature programming mode and save your settings and display the ROOM TEMP.



Continued Next Page →

Programming Target Temperatures (continued)

Programming SAVE HEAT target temperature:

NOTE: If this is not the first time set-up, place your thermostat into HEAT mode. If the display is showing the word COOL, press the HEAT button to change to HEAT mode. The LCD will display the word HEAT.

5. With the word HEAT displayed on the LCD, press and release the SAVE ENERGY button. TARGET TEMP and SAVE will appear in the display.

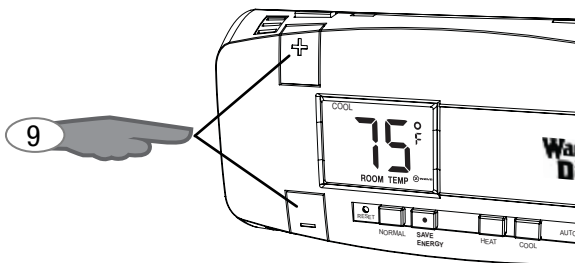
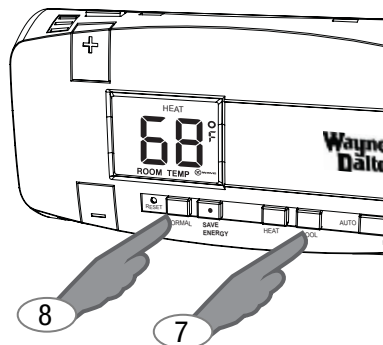
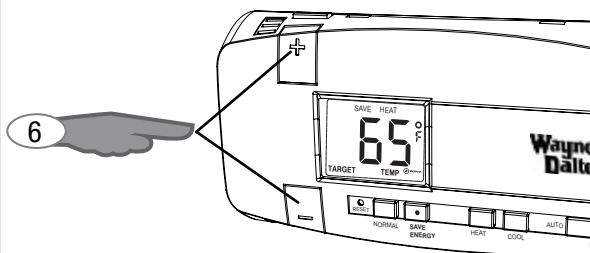
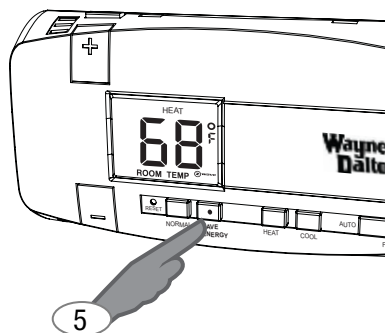
6. The default HEAT SAVE ENERGY target temperature is 65° F. To accept the default temperature wait 5 seconds and the unit will exit target temperature programming mode. If the default setting is not desired, press either the temperature up button (+ symbol) or temperature down button (- symbol) until the desired target temperature is reached. Wait 5 seconds and the unit will exit target temperature programming mode, remain in SAVE HEAT mode and display the actual ROOM TEMP.

Programming NORMAL COOL target temperature:

7. Place your thermostat into COOL mode. If the display is showing the word HEAT, press the COOL button to change to COOL mode. The LCD will display the word COOL.

8. With the word COOL displayed on the LCD, press and release the NORMAL button. TARGET TEMP will appear in the display.

9. The default NORMAL COOL target temperature is 75° F. To accept the default temperature wait 5 seconds and the unit will exit target temperature programming mode. If the default setting is not desired, press either the temperature up button (+ symbol) or temperature down button (- symbol) until the desired target temperature is reached. Wait 5 seconds and the unit will exit target temperature programming mode, remain in COOL mode and display the actual ROOM TEMP.



Continued Next Page →

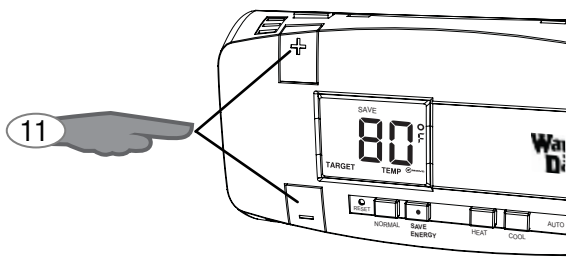
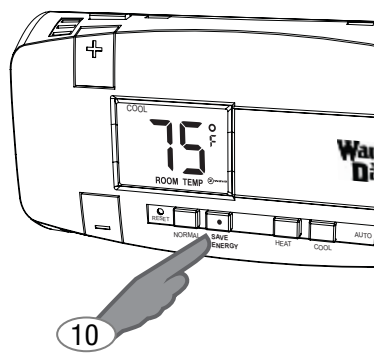
Programming Target Temperatures (continued)

Programming COOL SAVE target temperature:

NOTE: *If this is not the first time set-up, place your thermostat into COOL mode. If the display is showing the word HEAT, press the COOL button to change to COOL mode. The LCD will display the word COOL.*

10. With the word COOL displayed on the LCD, press and release the SAVE ENERGY button. TARGET TEMP and SAVE will appear in the display.

11. The default COOL SAVE ENERGY target temperature is 80° F. To accept the default temperature wait 5 seconds and the unit will exit target temperature programming mode. If the default setting is not desired, press either the temperature up button (+ symbol) or temperature down button (- symbol) until the desired target temperature is reached. Wait 5 seconds and the unit will exit target temperature programming mode and remain in COOL SAVE mode and display the actual ROOM TEMP.



NOTE: *Your Wayne-Dalton thermostat is designed to maintain your target temperature within 1 degree.*

In HEAT mode, if the temperature falls more than 1 degree below the target temperature, your HVAC system will turn on and then shut off when the temperature rises above the target by 1 degree.

In COOL mode, if the temperature rises more than 1 degree above the target temperature, your HVAC system will turn on and then shut off when the temperature falls below the target by 1 degree.

Z-Wave® Programming and Operation

Z-Wave® controllers from various manufacturers may support the Z-Wave® Thermostat General V2 Device Class used by the Wayne-Dalton Z-Wave® Enabled Thermostat. The following procedure will allow the thermostat to be added to a Z-Wave® network with its full functionality.

NOTE: For Wayne-Dalton controller models, HA-07WD and HA-09WD, please proceed to the next page, "Alternate method of Z-Wave® Programming and Operation."

GENERAL PROGRAMMING DIRECTIONS (For controllers with full thermostat device class compatibility) :

1. Set your primary controller to INCLUDE mode, to add the thermostat as a node on your network (see your specific controller's User Manual for detailed instructions.)
2. Press and release the BIND button on the thermostat.

Your controller will indicate the thermostat was successfully added to its network (see your specific controller's User Manual for details.) Also, your thermostat will indicate it was successfully added to the network by flashing the entire Z-Wave® logo.

For other controller specific tasks such as adding the thermostat to Scenes or Groups, or deleting the thermostat as a node, use the BIND button to activate the Z-Wave® signal.

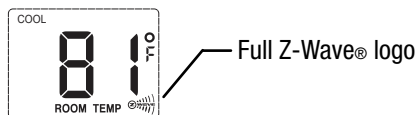
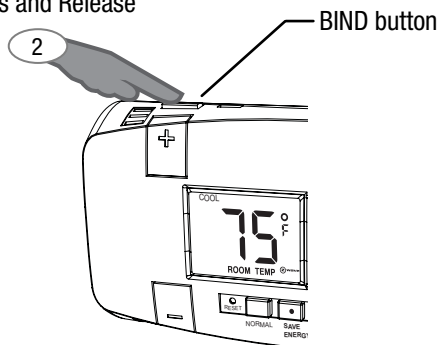
OPERATION:

See your specific controller's User Manual for detailed instructions on operating your thermostat. If your controller supports full thermostat device class functions then the following remote features are available:

- a) Up and Down Temperature Control.
- b) Change between HEAT and COOL modes.
- c) Change between NORMAL and SAVE ENERGY modes.
- d) Read the current temperature.
- e) Read target temperatures for NORMAL and SAVE ENERGY modes.
- f) Set target temperatures for NORMAL and SAVE ENERGY modes.
- g) Set indicator to Red, Green, Amber or Off.

TIP: Prior to Z-Wave® Programming, be certain the thermostat does not belong to another Z-Wave® network by observing the Z-Wave® logo on the display. If the complete logo with waves flashing is present, use your controller to remove the thermostat from the network. See your specific controller's User Manual for details on removing devices (nodes) from a Z-Wave® network.

Press and Release



NOTE: An example of programming to a controller with full functionality is shown on page 28.

Continued Next Page →

Z-Wave® Programming and Operation (continued)

If your controller does not support full thermostat device class functions, it may still be able to control the NORMAL/SAVE ENERGY mode (ie. set back) of the thermostat through basic ON/OFF commands similar to those used by lighting switches. By sending the basic commands, ON and OFF, to the thermostat, the sending controller can switch between NORMAL (ON) mode and SAVE ENERGY (OFF) mode.

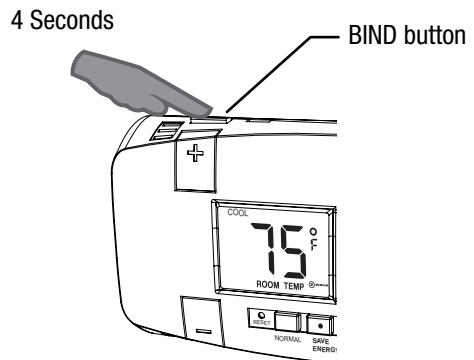
TIP: Set the thermostat into the mode (NORMAL or SAVE ENERGY) before depressing the BIND button to include the thermostat into a specific SCENE on the controller. This will allow the controller to learn the NORMAL or SAVE ENERGY mode for the specific scene. See the example for the Wayne-Dalton Wireless Gateway, WDHA-12R, on page 32.

ALTERNATE PROGRAMMING DIRECTIONS: (For controllers that do not support thermostat device class or do not support basic command class):

If your controller does not support any thermostat device class functions, and also does not support basic ON/OFF commands used by lighting switches, then a special compatibility feature in your Wayne-Dalton Z-Wave® enabled thermostat is available so that it can be controlled by binary switch command class ON/OFF commands.

The special compatibility feature is accessed by pressing and holding the thermostat BIND button for 4 seconds, then releasing the button during controller programming. This feature allows generic and older Z-Wave® controllers to control the NORMAL (ON) mode and SAVE ENERGY (OFF) mode of the thermostat using binary switch command class ON/OFF commands. See the programming example on page 30 for the Wayne-Dalton Handy Remote, HA-09WD.

NOTE: Your Wayne-Dalton thermostat will work in a network using both normal and alternate programming to accommodate all controllers present in the network.



NOTE: An example of programming to a controller using the alternate programming method is shown on page 30.

Z-Wave® Programming ThinkEssentials® Example

EXAMPLE: Programming the Z-Wave® Thermostat to ThinkEssentials® software

NOTE: The following directions apply only to Wayne-Dalton's WDUSB-10R, Z-Wave® USB Adapter, and ThinkEssentials® software.

1. Open ThinkEssentials® to the HOME tab and then ensure the DESIGN TAB is active by pressing it with your mouse.
2. Press the ADD DEVICE button in the ThinkEssentials® window.
3. Press and release the BIND button on the thermostat. If successful, ThinkEssentials® will display a message that the device was added successfully and a thermostat icon will appear.

The thermostat icon will appear red when in NORMAL mode and GREEN when in SAVE ENERGY mode. The current room temperature will also be displayed.



Red Thermostat Icon is NORMAL mode



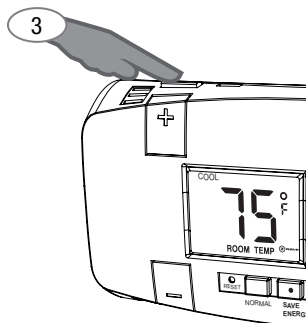
Green Thermostat Icon is SAVE ENERGY mode



Step 1: Activate DESIGN tab



Step 2: Adding thermostat



Continued Next Page →

Z-Wave® Programming ThinkEssentials® Example (cont.)

OPERATING THERMOSTAT:

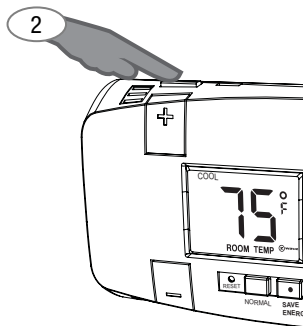
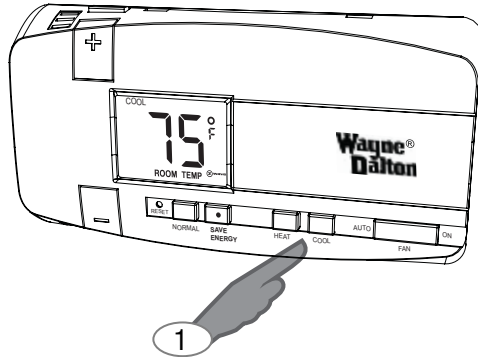
1. Place the thermostat manually in the desired mode, either HEAT or COOL.
2. Click on the icon to change from NORMAL to SAVE ENERGY.
3. Refer to the Wayne-Dalton WDUSB-10R User Manual for specific instructions on adding your thermostat to Scenes, Zones and schedules for automated control.

NOTE: Please visit the Wayne-Dalton web site, www.wayne-dalton.com for updates to your ThinkEssentials® software. Future updates may include additional thermostat functionality.

REMOVING THERMOSTAT FROM THINKESSENTIALS®:

1. Press the REMOVE DEVICE button located in ThinkEssentials® on the DESIGN TAB.
2. Press and release the BIND button on the thermostat. If successful, ThinkEssentials® will display a message that the device was removed successfully and a thermostat icon will appear.

See the WDUSB-10R User Manual for detailed instructions.



Z-Wave® Programming Example with WDHA-12R

Use this method to add the Z-Wave® Thermostat to your existing network and your Wireless Gateway. When a Key Chain Remote, 3150R, (or in-vehicle remote) is used with the Gateway, this set-up will allow the thermostat to be controlled from your automobile so, for example, you can switch your thermostat into SAVE ENERGY mode when you leave your home, or switch into NORMAL mode when you arrive home.

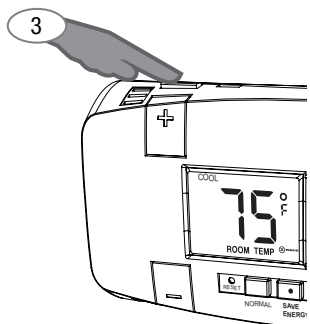
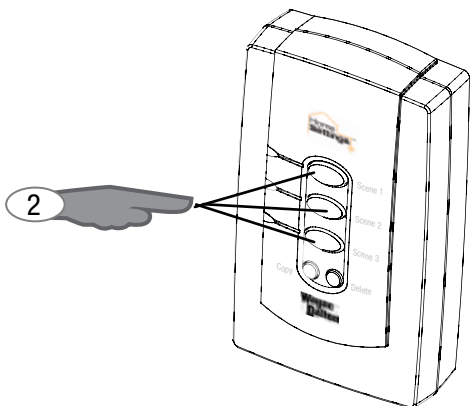
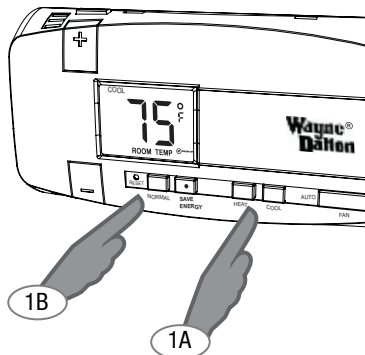
NOTE: The following example assumes the Wireless Gateway is the primary controller on your Z-Wave network. If it is not the primary, first add the thermostat to your network using your network's primary controller and then follow steps 1 through 6.

NOTE: Perform this procedure while the Wireless Gateway is battery powered only. Do not plug the Wireless Gateway into AC power to program.

1. On the Wayne-Dalton Z-Wave® Enabled Thermostat press either the HEAT or COOL mode, then the NORMAL mode button. The thermostat must be in either HEAT or COOL, NORMAL mode, to be added to the network correctly.
2. On the Wireless Gateway, press and hold the SCENE button you wish to program (either Scene 1, 2 or 3) for NORMAL mode. The LED on the Wireless Gateway will turn on immediately, then turn off, then turn on again.
3. While holding the desired SCENE button on the Wireless Gateway, press and release the BIND button on the thermostat.

The LED on the Wireless Gateway will flash three (3) times quickly to indicate the programming is successful. Do not release the Scene button until you see the LEDs flash (30 second max wait.)

If the Wayne-Dalton Z-Wave® Enabled Thermostat was successfully added to the network the entire Z-Wave® logo will appear on the thermostat display and will be flashing.



Continued Next Page →

**Z-Wave® Programming
Example with WDHA-12R**

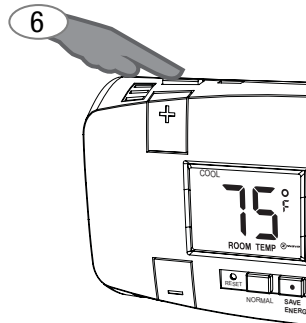
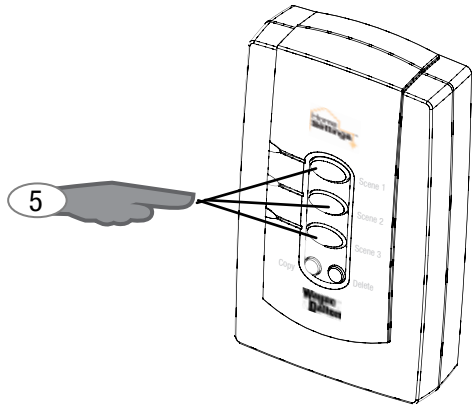
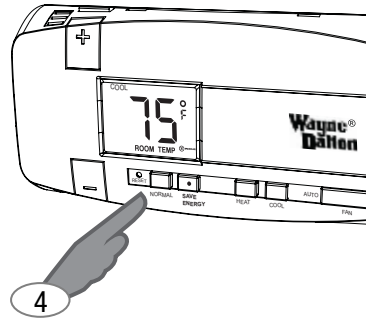
4. On the Wayne-Dalton Z-Wave® Enabled Thermostat press the SAVE ENERGY mode. The thermostat must be in either HEAT or COOL, SAVE ENERGY mode, to be added to the network correctly.

5. On the Wireless Gateway, press and hold the SCENE button you wish to program, (either Scene 1, 2 or 3 but choosing a different SCENE than in Step 2) for SAVE ENERGY mode. The LED on the Wireless Gateway will turn on immediately, then turn off, then turn on again.

6. While holding the desired SCENE button on the Wireless Gateway, press and release the BIND button on the thermostat.

The LED on the Wireless Gateway will flash three (3) times quickly to indicate the programming is successful. Do not release the Scene button until you see the LED's flash (30 second max wait.)

Thermostat programming to the Wireless Gateway is now complete.



OPERATING THERMOSTAT:

1. Place the thermostat in either the HEAT or COOL mode by manually pressing the appropriate button.

2. Press the controller SCENE button you programmed for NORMAL target temperature to activate the NORMAL mode, or press the controller SCENE button you programmed for SAVE ENERGY to activate the SAVE ENERGY mode.

See the Wireless Gateway User Manual for directions on operating Scenes and key chain remote operation.

REMOVING THERMOSTAT FROM WIRELESS GATEWAY (primary controller):

Remove the thermostat from the Wireless Gateway as you would remove any Z-Wave® module. Use the BIND button the same as the PROGRAM button, to activate the Z-Wave® signal. See the Wireless Gateway User Manual for specific instructions.

Z-Wave® Alternate Programming Example with HA-09WD

For Z-Wave® controllers that do not support the Z-Wave® Thermostat General V2 Device Class use this alternate method to control the Wayne-Dalton Z-Wave® Thermostat in a Z-Wave® Network. This procedure will allow the thermostat to act as a binary switch in the network to switch between NORMAL and SAVE ENERGY modes.

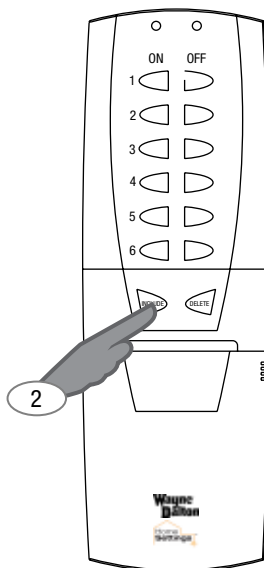
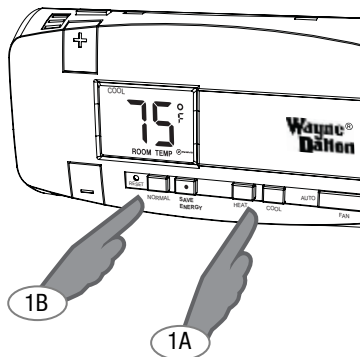
NOTE: The following example assumes the controller is the primary controller on your Z-Wave network. If it is not the primary, first add the thermostat to your network using your network's primary controller and then follow steps 2 through 6.

NOTE: The following directions apply only to the HA-09WD used in the example to the right:

1. On the Wayne-Dalton Z-Wave® Enabled Thermostat press either the HEAT or COOL button, then the NORMAL button. The thermostat must be in either HEAT or COOL NORMAL mode to be added to the network correctly.
2. Press and release the INCLUDE button on your HA-09WD Remote Control. The green LED will flash indicating that the controller is ready to add modules to the system. (If the green LED stops flashing, the controller has "timed out". The INCLUDE button must be pressed again.)
3. Press and release the BIND button on the thermostat. If successful, the LED on the controller will turn solid green. If not successful, the red LED will flash and it will be necessary to repeat steps 2 and 3 until the green LED on the controller turns solid green and does not flash.

If the Wayne-Dalton Z-Wave® Enabled Thermostat was successfully added to the network the entire Z-Wave® logo will appear on the thermostat display and will be flashing.

NOTE: HA-09WD shown is an example of Primary Controller, see your specific controller's User Manual for detailed instructions on adding modules (devices) to a Z-Wave® network.



Continued Next Page →

Z-Wave® Alternate Programming Example with HA-09WD (continued)

4. On the HA-09WD Remote Control, simultaneously press and hold the ON and OFF buttons of the desired SCENE. Both red and green LEDs will flash. (Note: The LEDs will time out after 10 seconds. If this happens, this step needs to be repeated). Release the ON and OFF buttons.

5. While holding the INCLUDE button on the controller, press and hold for 4 seconds the BIND button on the Z-Wave® Enabled Thermostat, then release. The green LED on the controller will flash.

6. Thermostat programming to the Controller is now complete.

OPERATING THERMOSTAT:

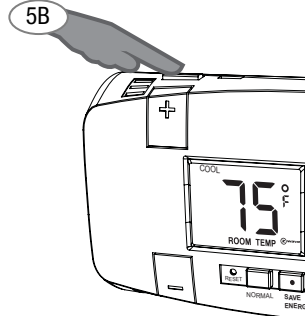
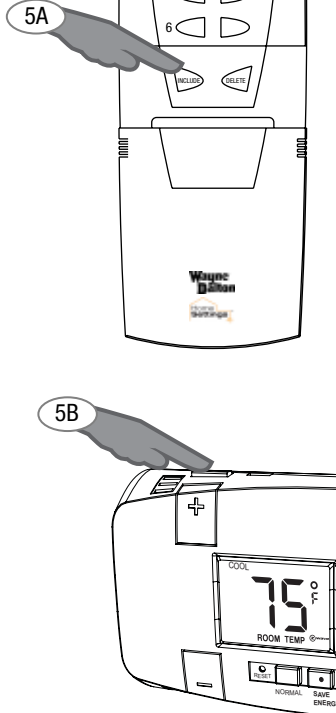
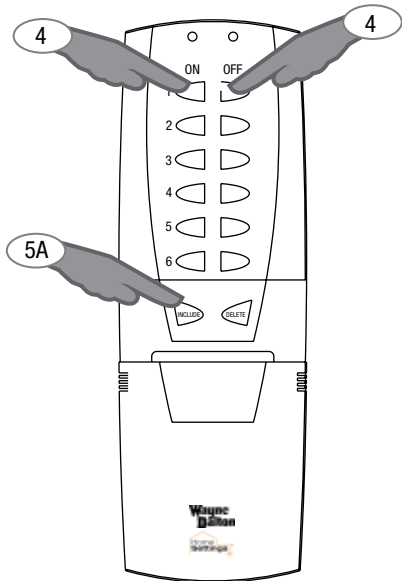
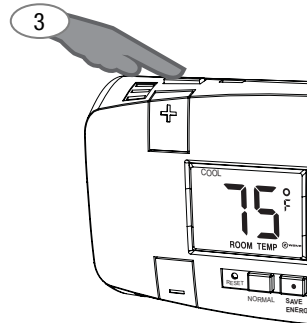
1. Place the thermostat in either the HEAT or COOL mode by manually pressing the appropriate button.

2. Press the controller SCENE button ON for NORMAL target temperature and the SCENE button OFF for SAVE ENERGY target temperature.

REMOVING THERMOSTAT FROM PRIMARY CONTROLLER:

Remove the thermostat from the primary controller as you would remove any Z-Wave® module. Use the BIND button the same as the PROGRAM button, to activate the Z-Wave® signal. See the controller User Manual for specific instructions.

4 Seconds



CUSTOMER SUPPORT

For Installation support ONLY, please call 1-866-545-5765.

For Z-Wave programming support, please e-mail: homesettings@wayne-dalton.com

Additional product information and general information on Wayne-Dalton Home Control products may be found on our web site at www.wayne-dalton.com/access.

FCC and IC Statement

FCC Regulatory Information:

NOTE: 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 instruction, 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 and correct the interference by one or more of the following measures:

- a) reorient or relocate the receiving antenna,
- b) increase the separation between the equipment and receiver,
- c) 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.

IC Regulatory Information:

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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 of the device.

Cet appareillage numérique de la classe B répond a toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

WARNING: Changes or modifications to this receiver not expressly approved by Wayne-Dalton Corp. could void the user's authority to operate this equipment.