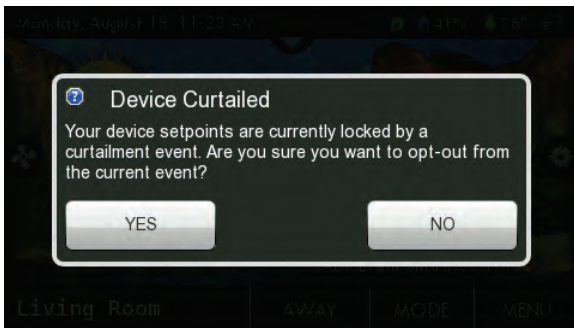


Main Menu Buttons - Settings

If a Warmer or Cooler button is pressed during an active ADR event, then the user is presented with this opt-out screen.



If a pricing triggered ADR event is enabled, there will be a green leaf on the top bar along with the actual cost of energy. This will be accompanied by associated text as shown below



Main Menu Buttons - Settings

• Installation Settings ▶

• Heat & Cool Stages ▶

(1h1c) ▶

• Heat & Cool Stages

(1h1c) ▶

Up to 2 Stages Cooling and 4 stages Heating.

• Compressor Stages

(1h1c) ▶

Up to 2 compressors.

• Aux Heat Stages

(1h1c) ▶

0 to 2 stages of Aux Heating.

} Only available when
dip switch is set for
Heat Pump operation.

• Timers & Deadbands ▶

• Cycles Per Hour

(6) ▶

At 6 cycles per hour, the HVAC unit will only be allowed to energize once every 10 minutes. The Cycles Per Hour limit may be overridden and reset by pressing the WARMER or COOLER buttons. (2, 3, 4, 5, 6, No Limit)

• Min Heat/Cool Difference

(2°) ▶

The minimum gap between Heat and Cool setpoints. (0 - 6 deg. F)

• Compressor Min OFF Time

(5m) ▶

None, 1 minute, or 5 minutes.

Main Menu Buttons - Settings

• Installation Settings



(Continued)

• Timers & Deadbands



(Continued)

The Deadband is the number of degrees or minutes that the thermostat waits before it initiates the stages of heating or cooling.

1st Stage Deadband Specifies the minimum temperature difference between the room temperature and the desired setpoint before the first stage of heating or cooling is allowed to turn on. For example, if the heat setpoint is 68° and the 1st Stage deadband is set to 2 degrees, the room temperature will need to drop to **66 degrees** before the heat turns on.

• 1st Stage Deadband

(2°)



(1 - 6 deg. F)

• 2nd Stage Deadband



• 2nd Stage Deadband

(2°)



Number of degrees past 1st stage before 2nd stage turns on. (0 - 10 deg. F)

• 2nd Stage Timer

(2mins)



Number of minutes past 1st stage before 2nd stage turns on. (0 - 60 mins.)
(The 2nd stage deadband must also be met)

• 2nd Stage Turnoff Point (Deadband)



Deadband or Setpoint.

• 3rd Stage Deadband



• 4th Stage Deadband



The 3rd and 4th stage deadband settings have the same adjustable steps as 2nd stage deadband.

Main Menu Buttons - Settings

• Installation Settings ▶

(Continued)

• Free Cooling ▶

Free Cooling requires additional dampers and duct work to be installed. Additionally, the thermostat is wired in a different manner for this feature to function properly. Before enabling this feature, please make sure these steps are completed.

• Free Cooling - DISABLED

• Free Cooling - ENABLED ✓

Turns on Free Cooling.

• Usable Outdoor Temp (65) ▶

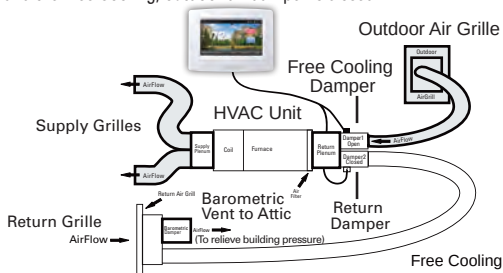
Free Cooling shuts off above this outdoor temperature. (40 - 80 degrees F)

• Mechanical Cooling? - NO

• Mechanical Cooling? - YES ✓

If you don't have a compressor, set Mechanical Cooling to "NO", Y1 will then be used to control the Free Cooling Damper(s) and Y2 will be disabled. If set to "YES", mechanical (compressor) cooling will be controlled by the Y2 terminal. (See page 67 for wiring diagram)

Mechanical air conditioning is turned on with a 2nd stage demand for cooling and the Free Cooling, outdoor air damper is closed.



Main Menu Buttons - Settings

• Installation Settings ▶

(Continued)

• Heat Pump Settings ▶

(Only available when dip switch is set for Heat Pump operation.)

• Heat Pump Lockout - DISABLED ▶

• Heat Pump Lockout - ENABLED ✓

Turns on Heat Pump Lockout.

• HP Lockout Outdoor Temp (65°) ▶

Heat Pump will not run below this temp. (20 - 75 deg. F)

• Aux Heat Lockout - DISABLED ▶

• Aux Heat Lockout - ENABLED ✓

Turns on Aux Heat Lockout.

• Aux Heat Lockout Temp (65°) ▶

Aux Heat will not run above this temp. (0 - 75 deg. F) **GAS/EL** or **HP** dip switch must be set for **HP** and **GAS** or **ELEC** dip switch must be set for **ELEC**.

• Dual Fuel Settings ▶

This feature is for heat pump applications only.

This will only appear if the GAS/EL or HP dip switch is set for HP and the GAS or ELEC dip switch is set for Gas.

When Dual Fuel is ON, an outdoor temperature or, if Change With Outdoor is set to OFF a demand for third stage heat will be used to stop running the heat pump and switch to a fossil fuel source of heat. **NOTE:** Once the change to fossil fuel is made, the heat demand must finish with fossil fuel. Additional heat demands within 10 minutes will also use fossil fuel, regardless of outdoor temperature or stage demand.

- **Dual Fuel - ON/OFF**

- **Changeover With Outdoor - ON/OFF**

ON: Uses an outdoor sensor for changeover.

OFF: Uses a third stage heat demand for changeover.

- **Adjust Balance Point**

Choose the temperature for changeover to fossil fuel. (0 - 60 deg. F)

Main Menu Buttons - Settings

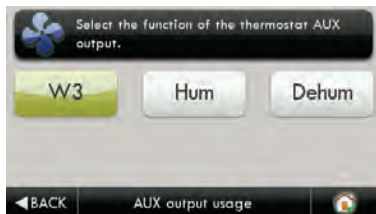
• Installation Settings ▶ (Continued)

• AUX Output Settings ▶

Allows the W3/AUX output to be used for Heating, Humidification, or Dehumidification.

• AUX output usage (W3) ▶

IMPORTANT: Aux Output Usage must be set for Hum or Dehum before any settings will take effect in the Humidity Main Menu.



• AUX output polarity (NO) ▶

The AUX Output polarity may be set for Normally Open or Normally Closed to accommodate different types of humidification and dehumidification equipment.

Main Menu Buttons - Settings

• Installation Settings ▶ (Continued)

• Fan Off Delay (0s) ▶

Runs the fan for a short time after Cooling or electric strip heat turns off to increase system efficiency. (0 - 120 Secs.)

• Sensor Settings ▶

• Control Sensor (thermostat) ▶

When a remote sensor is connected to the thermostat, the user may choose which sensor source is used to measure room temperature.

- Thermostat sensor only
- Remote Sensor only
- Average remote/thermostat

• Wired Sensor Use (remote) ▶

The wired sensor may be used as follows:

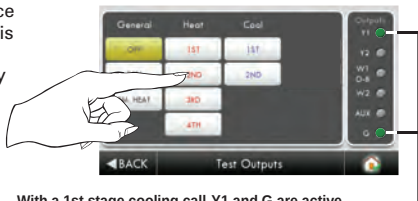
- Outdoor sensor
- Remote Sensor
- Supply Sensor
- Return Sensor

• Calibrate Sensors (0°) ▶

The thermostat and wired sensor may be calibrated -7 to +7 degrees F. The integral humidity sensor may be calibrated -20% to +20% RH

• Test Outputs ▶

The installer or service technician can use this feature to test the functions without any time delays of the thermostat.



With a 1st stage cooling call, Y1 and G are active

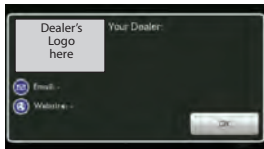
Main Menu Buttons - Settings

• Dealer Information ▶

A Dealer may enter their company contact information for the customer to use when they need service. This will appear when the “WhoTo Call For Service” button is pressed in the Information Menu.

Use the keyboard to enter your information.

- Dealer Name
- Contact Name
- Dealer Phone
- Dealer Email
- Dealer Website



• Upgrade Firmware ▶

Press to upgrade the thermostat firmware. The SD Card must be in the thermostat SD Card reader and contain the valid firmware. If an error message appears, confirm with ColorTouch Assistant that firmware is up to date or simply try reinserting the SD card.

If you are connected to Skyport Wi-Fi and you receive an Alert that new firmware is available, simply press the Upgrade Firmware button to upgrade wirelessly.

Note: Occasionally an update that requires a large amount of data is not possible to do wirelessly. In this case an update using an SD card will be required.

• Delete Custom Images ▶

Press to delete the custom photos you uploaded to the thermostat.

• Calibrate Clock (0 mins) ▶

If needed, the clock may be calibrated up to -10 to +10 minutes per month.

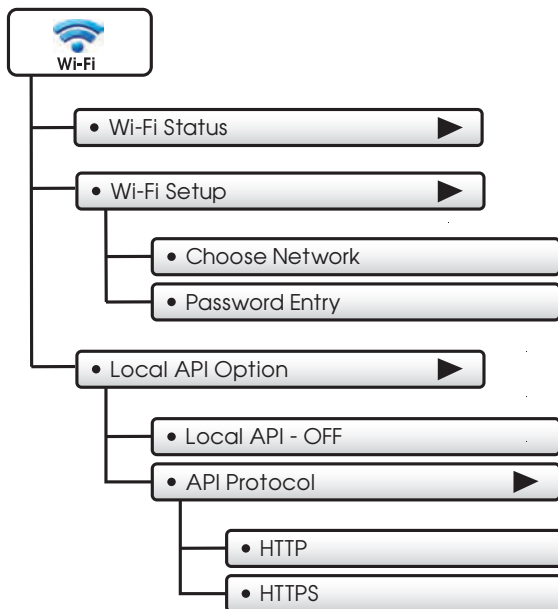
• Factory Defaults ▶

Press to reset the thermostat back to the factory settings.

• Restart Thermostat ▶

If needed, press here to restart the thermostat.

Main Menu Buttons - Wi-Fi

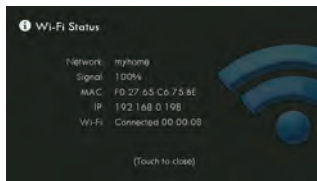


Main Menu Buttons - Wi-Fi



• Wi-Fi Status

It is here that you will find helpful information regarding the connectivity status of your thermostat, including the thermostat's ID.

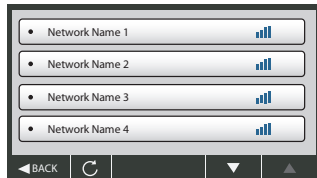


• Wi-Fi Setup

Choose your network from the list and enter the network password.



If your network does not appear in the list, hit the refresh button.



• Local API Option

Turning on the local API allows 3rd party software to interface with your thermostat, such as a home automation system.

Main Menu Buttons - Wi-Fi

This is the default with the local API OFF.

• Local API - OFF

• API Protocol (http) ▶

To turn on the HTTP Local API select **Local API**

• Local API - ON ✓

• API Protocol (http)

Press **BACK** to return to previous screen.

If a Secure API is preferred, then select **API Protocol**

• Local API - OFF

• API Protocol (http) ▶

Upon pressing **API Protocol**, the following screen will appear.

• HTTP ✓

• HTTPS

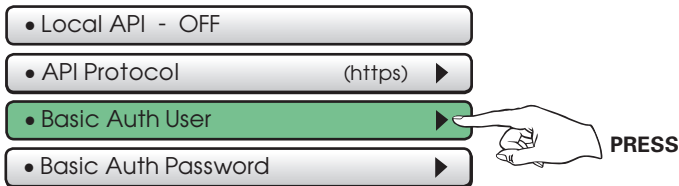
Then select **HTTPS** and press **BACK**

• HTTP

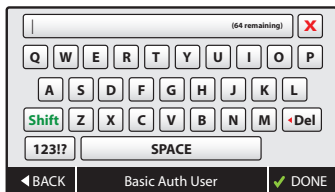
• HTTPS ✓

Main Menu Buttons - Wi-Fi

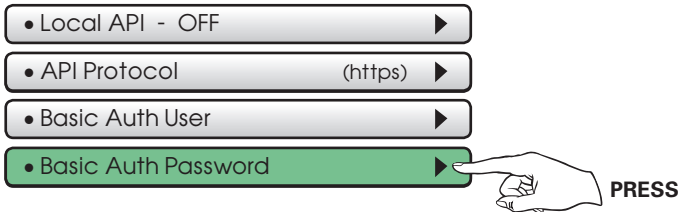
Upon pressing **BACK**, the screen will look like this.



Select **Basic Auth User**, and enter the appropriate information on the screen below and press **DONE** to save.



Select **Basic Auth Password** as the next step.



Main Menu Buttons - Wi-Fi

- Basic Auth Password ▶

Select **Basic Auth Password** and enter the appropriate information on the screen below and press **DONE** to save.

(64 remaining) X

Q W E R T Y U I O P

A S D F G H J K L

Shift Z X C V B N M Del

123!? SPACE

◀ BACK Basic Auth Password ✓ DONE

The last step is to turn the **Local API** as shown below.

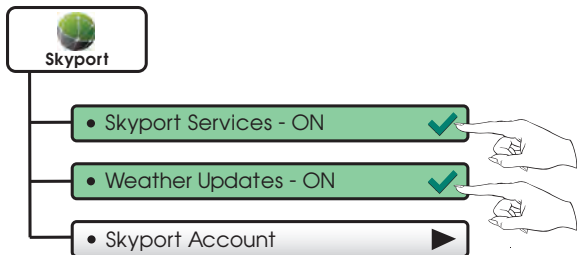
- Local API - ON ✓

- API Protocol (https)

- Basic Auth User ▶

- Basic Auth Password ▶

Main Menu Buttons - Skyport



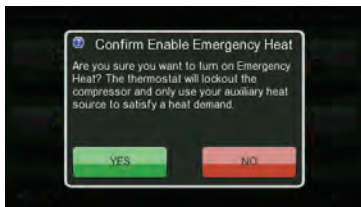
Pressing this button will let you know if you are paired with a Skyport account. If not, then you may follow prompt and instructions to create an account and add the thermostat to the account.

Main Menu Buttons - Emergency Heat



The Emergency Heat function is only available if your thermostat is set to control a Heat Pump.

To initiate the Emergency Heat feature, Press the Emergency Heat button. During Emergency Heat operation the thermostat will turn on the fan and auxiliary stages of heat when there is a demand for heat. The 1st stage of heating and all stages of cooling will be unavailable. To exit Emergency Heat, press the Emergency Heat button.



The ColorTouch Assistant

ColorTouch Assistant may be downloaded at no charge at:

www.venstar.com/thermostats/colortouch/assistant



Every time the user runs the ColorTouch Assistant software, it automatically connects to Venstar ColorTouch website in the background and updates the software and firmware (the operating system for ColorTouch) at no cost.

The **ColorTouch Assistant** allows you to use your computer to:

- Upload photos for background and slideshow images
- Program a time period schedule
- Configure installation settings
- Upload dealer and service contact information and company logo
- An alternative method to update thermostat firmware

The ColorTouch Assistant

Uploading Photos and Settings to your thermostat

When you are finished adding and editing photos and settings, click on **Save to SD**. When prompted, remove the SD card from the SD card reader on your computer.



Save to SD

*NOTE: A 2GB SD card is recommended.

At the thermostat:

Insert the SD card into the SD Card Slot.

Press

MENU

then



Next, press



SD Card Slot

Press

• SD Card



Then press

• Import Settings from SD Card



Select the items to import into your thermostat then press

NEXT



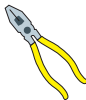
Your thermostat will automatically save your new photos and settings in its internal memory. When finished, you may remove the SD card. It is not needed for normal thermostat operation.

Installation Instructions

Remove and Replace the old thermostat

To install the thermostat properly, please follow these step by step instructions. If you are unsure about any of these steps, call a qualified technician for assistance.

- Assemble tools: Flat blade screwdriver, wire cutters and wire strippers.



- Make sure your Heater/Air Conditioner is working properly before beginning installation of the thermostat.
- Carefully unpack the thermostat. Save the screws, any brackets, and instructions.
- Turn off the power to the Heating/Air Conditioning system at the main fuse panel. Most residential systems have a separate breaker for disconnecting power to the furnace.
- Remove the cover of the old thermostat. If it does not come off easily, check for screws.
- Loosen the screws holding the thermostat base or subbase to the wall and lift away.
- Disconnect the wires from the old thermostat. Tape the ends of the wires as you disconnect them, and mark them with the letter of the terminal for easy reconnection to the new thermostat. Additionally, we recommend taking a photo with your phone of the connections for future reference.
- Keep the old thermostat for reference purposes, until your new thermostat is functioning properly.

Installation Instructions

Wire Connections

If the terminal designations on your old thermostat do not match those on the new thermostat, **refer to the chart below or the wiring diagrams that follow.**

Wire from the old thermostat terminal marked	Function	Install on the new thermostat connector marked
G or F	Fan	G
Y1,Y	Cooling	Y1
W1,W	Heating	W1/O/B
Rh, R, M, Vr, A	Power	R
C	Common	C
O/B	Rev. Valve	W1/O/B*
W2	2nd Stage Heat	W2
Y2	2nd Stage Cooling	Y2
W3	3rd Stage Heat	W3
OUT -	Outdoor Sensor	SENSOR
OUT +	Outdoor Sensor	SENSOR

* O/B is used if your system is a Heat Pump.

Installation Instructions

Before you go any further, determine what your existing wiring and equipment situation is.

- A. If you have a **Heating only system** without Air Conditioning, the Venstar thermostat will require **3 wires**: R (24Vac), C (24Vac) and W (Heat). Most systems that only have Heating use very simple thermostats that require 2 wires: the R (24Vac) and W (Heat). The Venstar thermostat requires **3 wires** to the thermostat. In this case an Add-a-Wire accessory will not work and it will be necessary to install another wire for the C (24Vac) connection.
- B. If you have a **single stage fossil fuel heater with air conditioning**, the Venstar model will require **5 wires** for independent fan control. They are R (24Vac), C (24Vac), W (Heat), Y (Cooling), and G (Fan). You may connect only 4 wires, as instructed in the “Making 4 Wires Work When 5 Wires Are Required” section on page 74.

If there are only 4 wires present that are connected to the existing thermostat, there are at least 3 options available to connect the Venstar thermostat:

1. Use the 4 wires as instructed in the “Making 4 Wires Work When 5 Wires Are Required” section on page 74, and note that the fan will only operate with a Heating or Cooling demand.
 2. Pull new thermostat wire from the HVAC equipment to the thermostat so that there are at least 5 wires available.
 3. Purchase and install a Venstar Add-A-Wire accessory.
- C. If you have a **multi-stage HVAC system comprised of a fossil fuel heater with air conditioning**, the Venstar thermostat will require the 5 wires mentioned above (R, C, W, Y, G) plus an additional wire for each additional stage of Heating or Cooling. You may reduce the 5 wire requirement to 4 if you give up independent fan control following the instruction in the “Making 4 Wires Work When 5 Wires Are Required” section on page 53, or use the optional Add-A-Wire accessory.

Installation Instructions

- D. If you have a **heat pump without aux heat**, the Venstar model will require 5 wires: R (24Vac), C (24Vac), W1/O/B (Reversing Value), Y (1st Stage Compressor), and G (Fan).

If you are short 1 wire, there are at least 3 options available to connect the Venstar thermostat:

1. Use the available wires as instructed in the “Making 4 Wires Work When 5 Wires Are Required” section on page 56 and note that the fan will only operate with a Heating or Cooling demand.
2. Pull new thermostat wire from the HVAC equipment to the thermostat so that there are at least 5 wires available.
3. Purchase and install a Venstar Add-A-Wire accessory.

- E. If you have a **heat pump with aux heat**, the Venstar model will require 6 wires: R (24Vac), C (24Vac), W1/O/B (Reversing Value), Y (1st Stage Compressor), W2 (Aux Heat), and G (Fan).

If you are short 1 wire, there are at least 3 options available to connect the Venstar thermostat:

1. Use the available wires as instructed in the “Making 5 Wires Work When 6 Wires Are Required” section on page 57 and note that the fan will only operate with a Heating or Cooling demand.
2. Pull new thermostat wire from the HVAC equipment to the thermostat so that there are at least 6 wires available.
3. Purchase and install a Venstar Add-A-Wire accessory.

Installation Instructions

Making 4 Wires Work When 5 Wires Are Required

If you would like to install the Venstar thermostat using only 4 wires when 5 are required, follow the directions below. You will need a screwdriver along with a 3" long piece of thermostat wire to use as a jumper:

1. Make sure the power is off.
2. Label and disconnect wires at the thermostat. Please note the color and corresponding wire designator with each color. *For example: The R wire is red and the W wire is white and so on.* You will need this information handy for the next step at the HVAC equipment.
3. At the HVAC equipment end of the thermostat wires (usually at the furnace), locate the terminals that the wires are attached to.
4. Remove the "G wire" from the terminal marked G.
5. Place the "G wire" on terminal C.
6. Place one end of the 3" long jumper on terminal G.
7. Place the other end of the 3" long jumper on terminal Y. Please note that there will be more than 1 wire on terminal Y.
8. When connecting the wires to the Venstar thermostat, note that the wire that was previously connected to the G terminal of the old thermostat will now be required to be connected to the C terminal on the Venstar thermostat. **All other wires** will be connected such that the connections on **each end of the individual wires match terminal designations.** *For example: Connect the yellow wire on the thermostat end to the Y terminal on the thermostat. The yellow wire will be connected to the Y terminal on the HVAC equipment end also.*

Installation Instructions

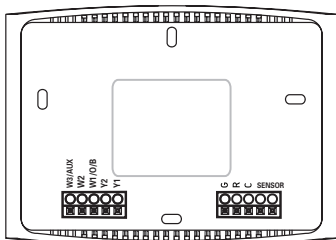
Making 5 Wires Work When 6 Wires Are Required

If you have a system that requires 6 wires, and you would like to install the Venstar thermostat using only 5 wires, follow the directions below. You will need a screwdriver along with a 3" long piece of thermostat wire to use as a jumper:

1. Make sure the power is off.
2. Label and disconnect wires at the thermostat. Please note the color and corresponding wire designator with each color. *For example: The R wire is red and the W wire is white and so on.* You will need this information handy for the next step at the HVAC equipment.
3. At the HVAC equipment end of the thermostat wires (usually at the furnace), locate the terminals that the wires are attached to.
4. Remove the "G wire" from the terminal marked G.
5. Place the "G wire" on terminal C.
6. Place one end of the 3" long jumper on terminal G.
7. Place the other end of the 3" long jumper on terminal Y. Please note that there will be more than 1 wire on terminal Y.
8. When connecting the wires to the Venstar thermostat, note that the wire that was previously connected to the G terminal of the old thermostat will now be required to be connected to the C terminal on the Venstar thermostat. **All other wires** will be connected such that the connections on **each end of the individual wires match terminal designations.** *For example: Connect the yellow wire on the thermostat end to the Y terminal on the thermostat. The yellow wire will be connected to the Y terminal on the HVAC equipment end also.*

Installation Instructions

The Venstar Backplate



NOTE:

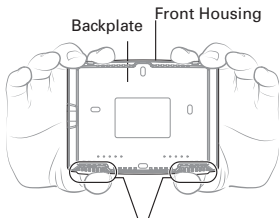
The backplate does not fully cover a full size vertical junction box. The ACC-WPLWH Venstar Wallplate or a single-gang, horizontally mounted junction box would be needed for that type of installation

To remove the thermostat backplate:

Using the Finger Pull Areas, pull the front housing away from the backplate.



Look for these tabs to locate the pull areas



Pull out with thumbs in these areas

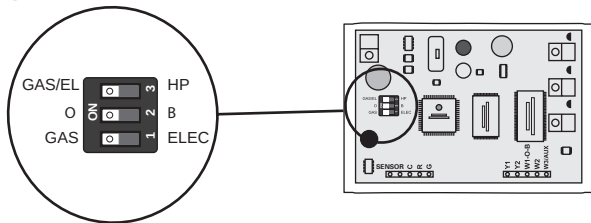
W3	3rd stage heat circuit
W2	2nd stage heat circuit
W1/O/B	1st stage heat circuit
Y2	2nd stage compressor relay
Y1	1st stage compressor relay
G	fan relay
R	24 VAC return
C	24 VAC common
SENSOR	remote/outdoor/supply/return sensor connections

IMPORTANT: This thermostat requires both R (24 VAC Return) and C (24 VAC Common) be connected to the backplate terminals.

Installation Instructions

Explanation of Thermostat Dip Switches

Dip switches are located on the back of the thermostat



GAS/EL HP GAS/EL HP



This dip switch configures the thermostat to control a conventional gas/electric system or a heat pump. If your system is anything other than a heat pump, leave this switch set for GAS/EL.*

*For some commercial heat pumps, this switch may need to be set for GAS/EL. Consult the commercial heat pump literature.



When the GAS/EL or HP dip switch is configured for HP, this dip switch (O or B) must be set to control the appropriate reversing valve. If O is chosen, the W1/O/B terminal will energize in cooling. If B is chosen, the W1/O/B terminal will energize in heating.



1. When **GAS/EL or HP** is set for **GAS/EL**:
This switch (GAS or ELEC) controls how the thermostat will control the Fan (G) terminal in heating mode. When **GAS** is chosen, the thermostat will not energize the Fan (G) terminal in heating. When **ELEC** is chosen the thermostat will energize the fan in heating.

2. When **GAS/EL or HP** is set for **HP**:
This switch (GAS or ELEC) defines the Aux Heat type. When **GAS** is chosen, the auxiliary heat will not be allowed to run during heat pump operation. When using a Dual Fuel system, set this switch for **GAS**. When **ELEC** is chosen, up to two stages of auxiliary strip heat will be allowed to run.

Installation Instructions

Sample Wiring Diagrams with Dip Switch Positions

Conventional Heating and Cooling Systems

2 Wire, Heat Only

Residential & Commercial 1 Stage Heating with no Fan.

The thermostat will not work with 2 wires. Either pull new wire or purchase a model ACC0410 two-wire kit

GAS/EL		HP
O		B
GAS		ELEC

3 Wire, Heat Only

Residential & Commercial 1 Stage Heating with no Fan.

R	24VAC Power
C	24VAC Common
W1/O/B	1st Stage Heat

GAS/EL		HP
O		B
GAS		ELEC

4 Wire, Cool Only

Residential & Commercial 1 Stage Cooling.

R	24VAC Power
C	24VAC Common
Y1	1st Stage Cool
G	Fan

GAS/EL		HP
O		B
GAS		ELEC

5 Wire, 1 Stage Cooling, 1 Stage Heat

Residential & Commercial 1 Stage Cooling, with 1 stage Gas Heat.

R	24VAC Power
C	24VAC Common
W1/O/B	1st Stage Heat
Y1	1st Stage Cool
G	Fan

GAS/EL		HP
O		B
GAS		ELEC

5 Wire, 1 Stage Cooling, 1 Stage Heat

Residential & Commercial 1 Stage Cooling, with 1 stage Electric Heat.

R	24VAC Power
C	24VAC Common
W1/O/B	1st Stage Heat
Y1	1st Stage Cool
G	Fan

GAS/EL		HP
O		B
GAS		ELEC

8 Wire, 2 Stage Cooling, 3 Stage Heat

Residential & Commercial 2 Stage Cooling, with 3 stage Gas Heat.

R	24VAC Power
C	24VAC Common
W1/O/B	1st Stage Heat
W2	2nd Stage Heat
W3/AUX	3rd Stage Heat
Y1	1st Stage Cool
Y2	2nd Stage Cool
G	Fan

GAS/EL		HP
O		B
GAS		ELEC

Installation Instructions

Sample Wiring Diagrams with Dip Switch Positions

Heat Pump Systems

5 Wire, 1 Stage Cooling, 1 Stage Heat

Residential & Commercial Heat Pump with
'O' Reversing Valve

R 24VAC Power
C 24VAC Common
W1/O/B Reversing Valve
Y1 1st Stage Compressor
(Cool or Heat)
G Fan

GAS/EL  HP
O B
GAS ELEC

6 Wire, 1 Stage Cooling, 2 Stage Heat

Residential & Commercial Heat Pump with
'O' Reversing Valve

R 24VAC Power
C 24VAC Common
W1/O/B Reversing Valve
Y1 1st Stage Compressor
(Cool or Heat)
W2 Aux Heat
G Fan

GAS/EL  HP
O B
GAS ELEC

7 Wire, 2 Stage Cooling, 3 Stage Heat

Residential & Commercial Heat Pump with
'O' Reversing Valve.

R 24VAC Power
C 24VAC Common
W1/O/B Reversing Valve
W2 3rd Stage Heat
Y1 1st Stage Compressor
(Cool or Heat)
Y2 2nd Stage Compressor
(Cool or Heat)
G Fan

GAS/EL  HP
O B
GAS ELEC

(Number of Compressor Stages set to 2)

8 Wire, 2 Stage Cooling, 4 Stage Heat

Residential & Commercial Heat Pump with
'O' Reversing Valve.

R 24VAC Power
C 24VAC Common
W1/O/B Reversing Valve
W2 3rd Stage Heat
W3 4th Stage Heat
Y1 1st Stage Compressor
(Cool or Heat)
Y2 2nd Stage Compressor
(Cool or Heat)
G Fan

GAS/EL  HP
O B
GAS ELEC

(Number of Compressor Stages set to 2)

Installation Instructions

Sample Wiring Diagrams with Dip Switch Positions

Heat Pump Systems with Dual Fuel

7 Wire, 2 Stage Cooling, 3 Stage Heat
Residential & Commercial Heat Pump with
'O' Reversing Valve and Fossil Fuel furnace.

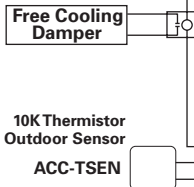
R	24VAC Power
C	24VAC Common
W1/O/B	Reversing Valve
W2	3rd Stage Heat (connected to furnace)
Y1	1st Stage Compressor (Cool or Heat)
Y2	2nd Stage Compressor (Cool or Heat)
G	Fan

GAS/EL		HP
O		B
GAS		ELEC

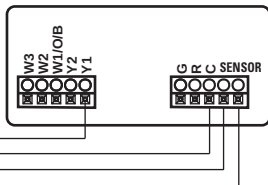
Number of Compressor Stages
set to 2
(see *Compressor Stages*, pg. 33)

Dual Fuel set to On
(see *Dual Fuel Settings*, pg. 36)

Free Cooling



Use 18-22 gauge thermostat wire.



Free Cooling utilizes the Y1 terminal for the operation of 1st stage cooling. If mechanical (compressor) cooling is also present, the mechanical cooling is connected to the Y2 terminal in this instance.

Free Cooling may be used with a Gas/Electric or Heat Pump system.

Temperature Sensor: ACC-TSEN Temperature Sensor 10K ohm sensor at 77F/25C. Negative Temperature Coefficient.

Troubleshooting

- **SYMPTOM:** The thermostat touchscreen buttons are not responsive.
CAUSE: The touchscreen is out of calibration.
REMEDY: Remove the thermostat from the backplate. Push the thermostat back onto the backplate, while keeping your finger pressed firmly against the center of the touchscreen, until the Calibration screen appears. Re-calibrate the touchscreen. *See Touch Calibration section of full user's manual (page 19).*
- **SYMPTOM:** The display is blank.
CAUSE: Lack of proper power.
REMEDY: Make sure the power is on to the HVAC and that you have 24vac between **R & C**.
- **SYMPTOM:** The air conditioning does not attempt to turn on.
CAUSE: The cooling setpoint is set too high.
REMEDY: Lower the cooling setpoint or lower the cooling set-point limit. *See Setpoint Limits (page 28).*
- **SYMPTOM:** The heating does not attempt to turn on.
CAUSE: The heating setpoint is set too low.
REMEDY: Raise the heating setpoint or raise the heating set-point limit. *See Setpoint Limits (page 28).*
- **SYMPTOM:** When controlling a residential heat pump, and asking for cooling, the heat comes on.
CAUSE: The thermostat reversing valve dip switch is set for **"B"**.
REMEDY: Set the reversing valve jumper for **"O"**.
- **SYMPTOM:** When calling for cooling, both the heat and cool come on.
CAUSE: The thermostat equipment dip switch is configured for **"HP"** and the HVAC unit is a Gas/Electric.
REMEDY: Set the equipment dip switch for **"Gas"**.
- **SYMPTOM:** Air handler control board fuse blows when thermostat is attached to backplate with power on, but does not blow until the thermostat is placed onto the backplate.
CAUSE: The Outdoor sensor and/or sensor wiring is shorted.
REMEDY: Check/replace Outdoor sensor and/or sensor wiring.

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Warranty

One-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer's sole option to replace any defective part, will be provided without charge for the part itself provided the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

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

Patents Issued & Pending



Printed on recycled paper.
P/N 88-1088 Rev. 1 04/15

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