UbiquiSTAT

Commercial BACnet Controller
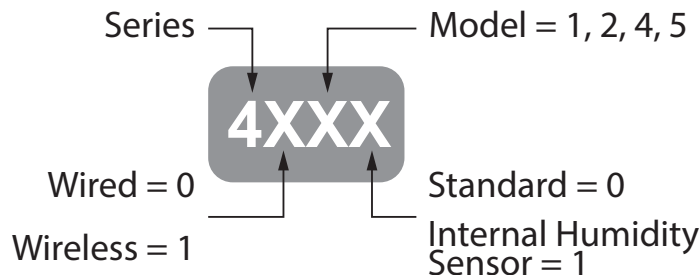
Contents

Model Number Definitions – A Key to Understanding UbiquiSTAT Series Model Versions

TCS offers 16 different UbiquiSTAT versions based on four Models: the US4010, US4020, US4040, and US4050 (refer to the UbiquiSTAT Product Data sheet for more information on the specific features of each Model).

Each UbiquiSTAT series is represented in the documentation by the following color icons:

Each Model in the series is available in several versions which can include wireless capability and an on-board dehumidification sensor. These versions are identified in the color icons following the code below:

4X1X	4X2X	4X4X	4X5X
US4010 Series	**US4020 Series**	**US4040 Series**	**US4050 Series**

Series ⌐ ┌ Model = 1, 2, 4, 5

4XXX

Wired = 0 ┘ └ Standard = 0

Wireless = 1 ┘ └ Internal Humidity Sensor = 1

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Introduction

Congratulations on choosing the UbiquiSTAT™ room controller! The Ubiquistat series of controllers are feature rich, multifunction touchscreen devices providing extensive controls across a wide range of HVAC applications.

This manual covers all 16 variations of Ubiquistats including wired, wireless, and built-in dehumidification. It includes all the information necessary to configure your UbiquiSTAT room controller, the communication network, and other devices via the touchscreen.

Complete the configuration after installation (refer to the UbiquiSTAT Installation Manual and after completion of the Startup Wizard (refer to the UbiquiSTAT Quick Setup Guide). Refer to the UbiquiSTAT BACnet Explorer Guide for advanced information on using the built-in BACnet Explorer to edit the device's BACnet programming objects directly.

Your configuration settings will be uploaded to Ubiquity Cloud the first time you make a connection to the site. Alternatively, you can skip configuring the UbiquiSTAT via the touchscreen and perform all configurations via Ubiquity Cloud or TCS Insight software, which is available for download on the TCS website.

If you have any questions regarding your UbiquiSTAT room controller, contact TCS Technical Support at 800.288.9383, ext. 2. Our Technical Support Department hours are Monday – Friday, 7:00 a.m. to 7:00 p.m. (CST).
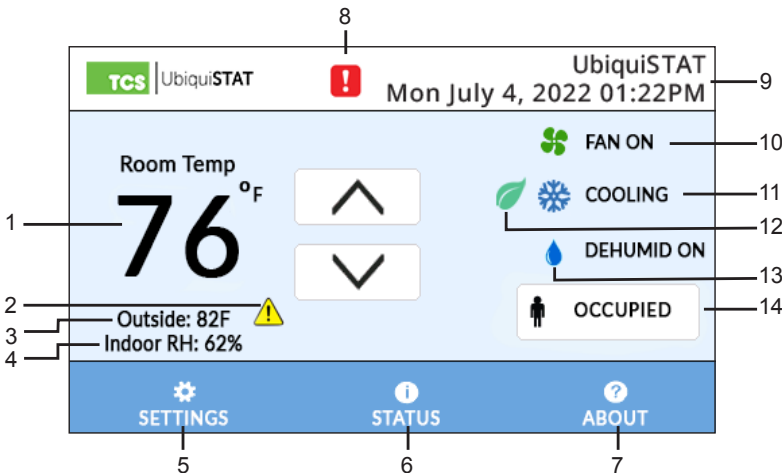
Configuring Via the Touchscreen Interface

Home Screen

The Home screen displays at-a-glance system information and basic user controls. The display automatically returns to the Home screen and the display dims after 10 minutes of inactivity.

From the Home screen, you can configure many parameters for the UbiquiSTAT. You can also change any initial settings you made when following the UbiquiSTAT Quick Setup Guide.

For configuration options using the built-in BACnet Explorer, refer to the UbiquiSTAT BACnet Explorer Guide.

| No.	Description (All models/versions unless otherwise indicated)
1	Room Temperature and Setpoints
2	Digital Input Setpoint Setback Active Indicator
3	Information Text (from connected sensors)
4	Indoor Relative Humidity 4X11 4X21 4X41 4X51
5	Settings Menu
6	Status Screens
7	About Screen
8	Service Status Indicator
9	Display Banner (Device Name and Date/Time)
10	Fan Operation Indicator
11	System Status (Heating/Cooling)
12	Economizer Status 4X4X 4X5X
13	Dehumidification Status 4X11 4X21 4X41 4X51
14	Occupancy Status

Room Temperature and Setpoints

The room temperature is rounded to the nearest whole number. The active heat and cool setpoints will appear in place of the room temperature when using the up/down arrows to adjust the temperature value or when touching the Room Temperature numbers. The up/down arrows will change color to indicate the current setpoints are being overridden (blue for cooler, orange for warmer). Touch the arrows to change the heating and cooling setpoints (User Setpoint Adjust) together incrementally, to a maximum of +/− 5°F from the programmed setpoint.
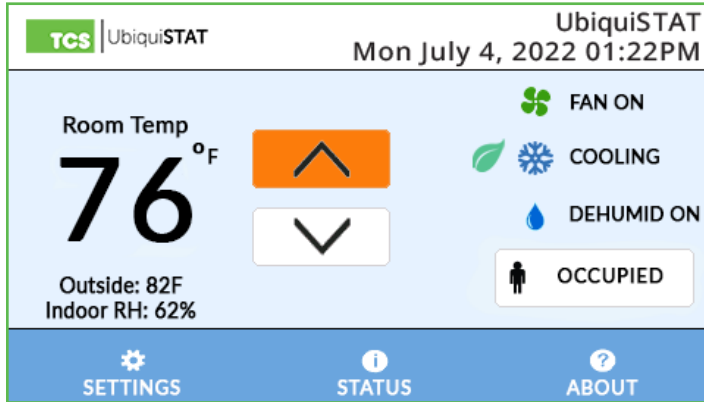
Setpoint Override Indication: Warmer
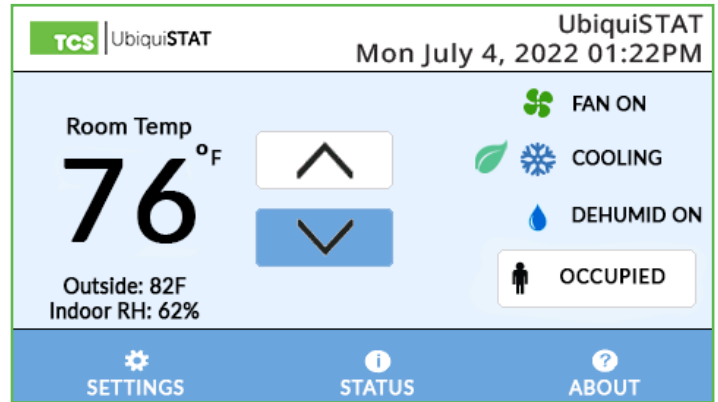
Setpoint Override Indication: Cooler

Digital Input Setpoint Setback Active Indicator

The Digital Input (DI) Setpoint Setback feature allows the user to adjust the effective heating and cooling setpoint values based on the state of a DI. This allows the controller to increase the cooling setpoint and decrease the heating setpoint by a predetermined amount and effectively create a setback response to an energy demand. The ⚠ indicator becomes visible then the DI Setpoint Setback feature is active. Touch the symbol to bring up a brief explanation of the feature.

Information Text Fields

The first line displays outside air when a remote temperature sensor is connected It can also be configured to display other system information. The second line displays the indoor relative humidity. `4X11` `4X21` `4X41` `4X51`

Settings Section

> **NOTE:** Several of the settings described herein were assigned during the initial setup of the UbiquiSTAT via the Startup Wizard (refer to the UbiquiSTAT Quick Setup Guide). Follow these instructions if you need to change those settings.

Access to this menu can be controlled by the use of an access code, which can be assigned via the Startup Wizard (refer to the UbiquiSTAT Quick Setup Guide) or ADVANCED SETTINGS.

Touching the SETTINGS button at the bottom of the HOME screen will bring up the Settings section.
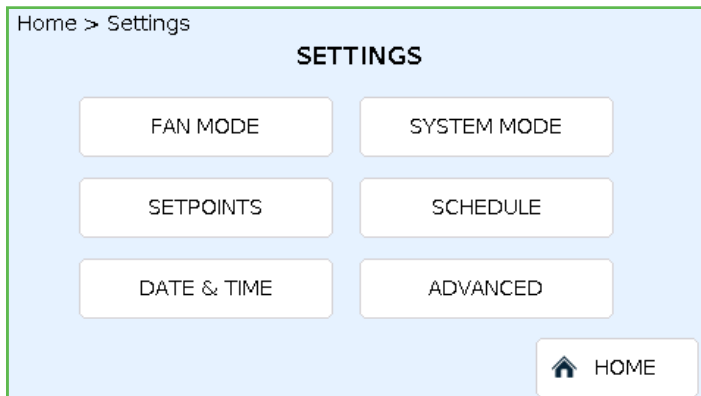
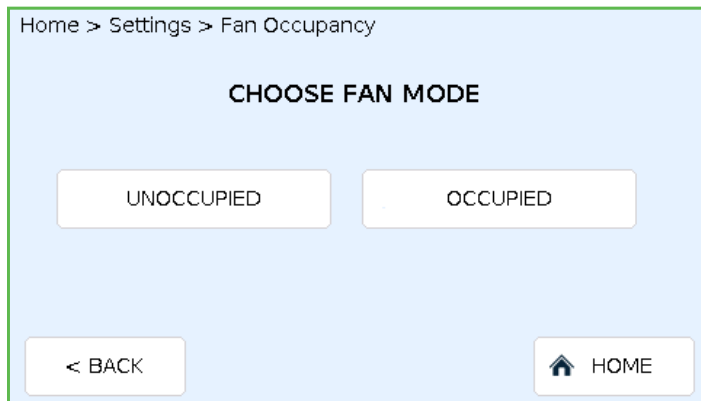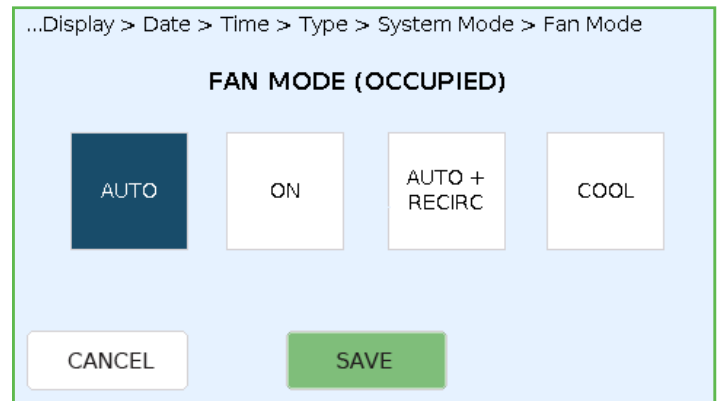*Settings Screen*

Fan Mode

Set/change the fan's operation mode for occupied and unoccupied status by touching the FAN MODE button on the SETTINGS screen. Select from the following modes:

• **Auto:** The fan runs only when there is a call for heating or cooling.

• **On:** The fan runs continuously.

• **Auto + Recirc:** The same as Auto but with additional run time, if necessary to satisfy minimum air circulation requirements.

• **Cool:** The fan runs only when there is a call for cool (available only when thermostat type is conventional).

Choose Fan Mode Screen

Fan Mode Selection Example

System Mode

Set/change the System mode by touching the SYSTEM MODE button on the SETTINGS screen. Select from the following modes:

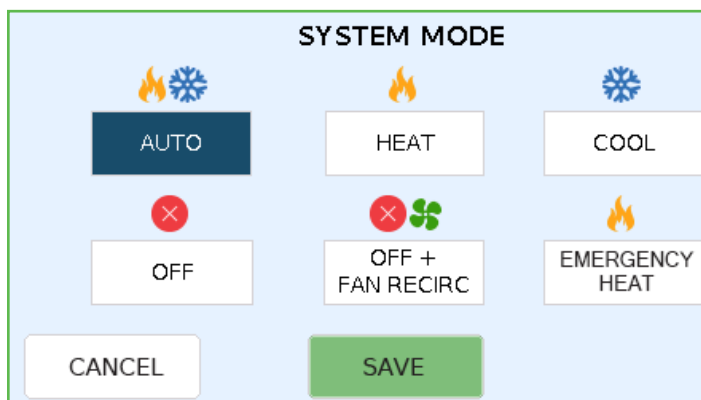**Auto:** Controls both heating and cooling

Heat: Controls only heating

Cool: Controls only cooling

Off: Turns off the system. All relays and analog outputs are inactive.

Off + Fan Recirc: Turns off the system but allows the fan to circulate air

**Emergency Heat:** Controls auxiliary heating (heat pump only)

*System Mode Screen*

Occupancy Setpoints

Occupancy Setpoints work in conjunction with Schedule Settings to determine when heating and cooling takes place on a given day. TCS recommends setting up occupancy setpoint parameters **before** creating occupancy schedules.

The UbiquiSTAT has five heating and cooling occupancy setpoint pairs: four for occupied status, and one for unoccupied status. Access the occupancy setpoint parameters by touching the SETPOINTS button on the SETTINGS screen.

Setpoint pairs are in effect when their corresponding schedules are active. To adjust an occupancy pair, select the Occupancy Setpoint button you wish to adjust and use the up/down arrows to change its heating or cooling setpoints.
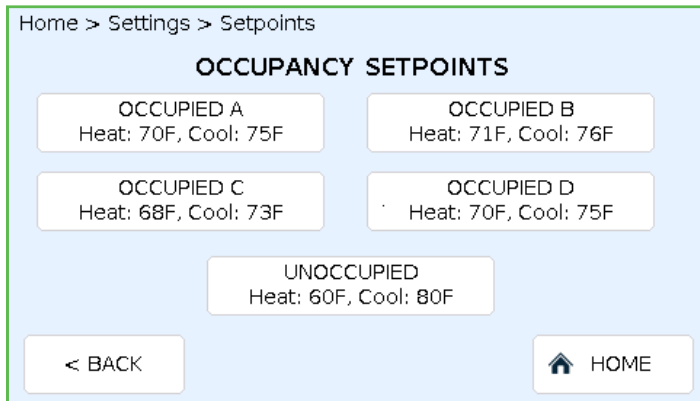
Occupancy Setpoints Screen
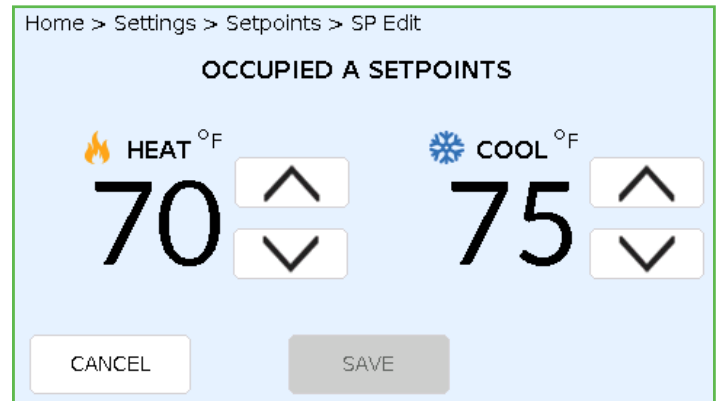
Heating and Cooling Setpoints Example

> **NOTE:** While the minimum "deadband" between heat and cool setpoints is set to one degree by default, TCS recommends a deadband of at least two degrees for most conditions.
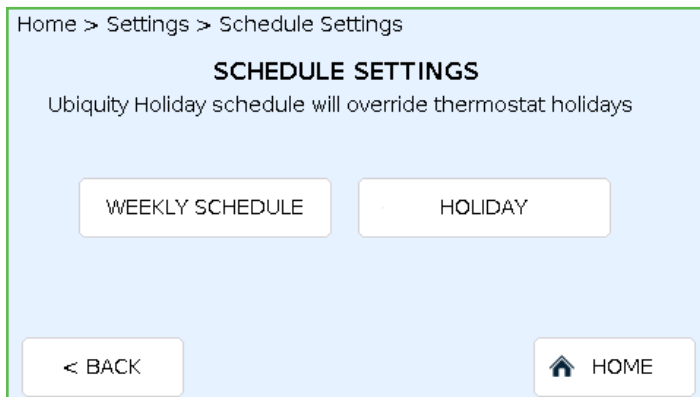
Occupancy Schedule Settings

> **NOTE:** While all UbiquiSTAT models allow you to configure weekly schedules from the touchscreen, holiday schedule settings are only available on wired models. To create holiday occupancy schedules on wireless models, use Ubiquity Cloud or TCS Insight software, which is available for download on the TCS website.

Regardless of which schedule settings you use, the UbiquiSTAT will automatically default to Unoccupied mode and begin using the Unoccupied setpoints at midnight each day. If no subsequent schedule changes are made for that day, the UbiquiSTAT will remain in Unoccupied mode until the next schedule change.

If you need to create a schedule that requires an Occupied mode to begin at midnight, you must create a schedule change for 12:00 AM in order to override the default.

Access the schedule settings by touching the SCHEDULE button on the SETTINGS screen, then selecting between weekly and holiday schedules.(On wireless models, touching the SCHEDULE button on the SETTINGS screen will take you directly to the WEEKLY SCHEDULES screen).

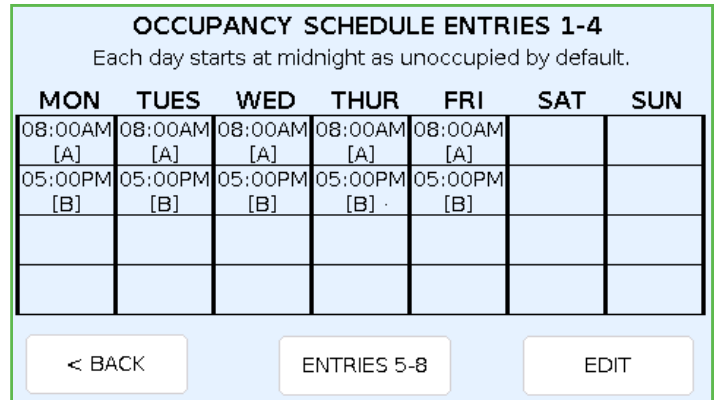*Schedule Settings Selection: Weekly or Holiday* 401X 402X 404X 405X

Configuration

Weekly Schedules

The UbiquiSTAT has a total of eight customizable schedule settings that can be used to create daily, weekly, or holiday schedules. (By default, the UbiquiSTAT includes two schedule settings: an Occupied setting [A] at 8:00 AM Weekdays setting, and an Unoccupied setting [B] at 5:00 PM Weekdays setting.) You can link schedules to the any of the five occupancy setpoints available. You can also combine schedules with different occupancy setpoint pairs to produce up to eight schedule settings per day.

To create a schedule setting:

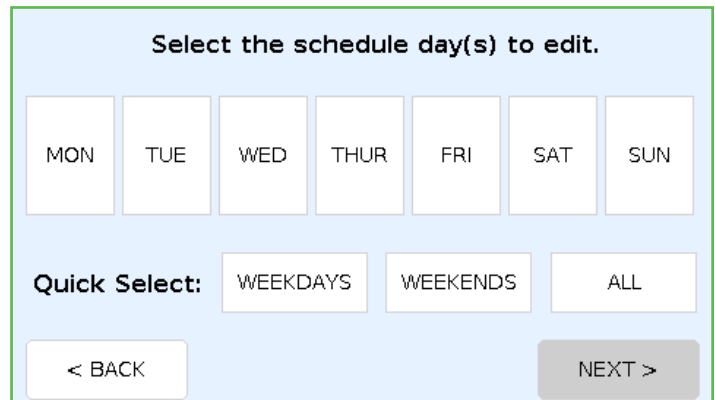**STEP 1** Touch the EDIT button on the Occupancy Schedule Entries screen.

Occupancy Schedule Screen

STEP 2 Select the days of the week you wish to assign the schedule to. (If desired, touch one of the Quick Select buttons to quickly select the respective days.) Touch the NEXT> button to bring up the EDIT SCHEDULE screen.
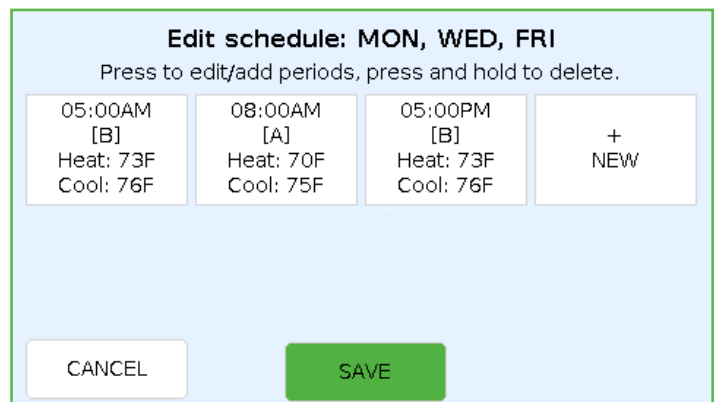
Edit Schedule Days Screen

STEP 3 The EDIT SCHEDULE screen will display any previously created schedules assigned to the selected days. From this screen you can select a setpoint pair and assign it to the weekdays you selected, or you can touch the NEW button to create a new setpoint pair for the selected days. You can also delete a previously selected setpoint pair by pressing and holding the button for three seconds.

Edit Schedule Periods Screen

Configuration

STEP 4 On the START TIME screen, use the up/down arrows to select the time you want the new schedule to start. Select the Occupancy Setpoint pair you wish to assign. (OPTIONAL: you can edit the setpoints for the setpoint group you selected, but this will change the values wherever that setpoint pair is assigned.) Touch DONE to save your entry. On the EDIT SCHEDULE screen, touch SAVE to save the changes.

NOTES: The first time you connect the UbiquiSTAT to Ubiquity Cloud, the schedule settings will be automatically uploaded to Ubiquity Cloud. After that, schedule settings must be changed in Ubiquity Cloud. This prevents unauthorized manual changes to the UbiquiSTAT.

Schedule periods stay in effect until the next schedule period start time assigned to that day or until midnight, at which point the UbiquiSTAT will revert to the default Unoccupied setpoint pair

Schedule Period Start Time Screen

Holiday Schedules `401X` `402X` `404X` `405X`

UbiquiSTATs can hold up to 30 holiday schedule settings. In most cases, holiday scheduling is managed via Ubiquity Cloud. However, you can set up holiday schedules when using a **wired, stand-alone** UbquiSTAT that is **not** connected to Ubiquity Cloud.

To create a holiday schedule:

STEP 1 Touch the HOLIDAY button on the Schedule Settings screen.

Schedule Settings Selection: Weekly or Holiday

STEP 2 Touch the NEW button on the Holiday Schedules screen.

Holiday Schedules Screen

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STEP 3 On the SET HOLIDAY screen, select the day, month and year you wish to create the holiday schedule for.

STEP 4 Select the Occupancy Settings pair you wish to attach to the new date. Touch DONE to save the settings.

NOTE: Schedule periods stay in effect until the next schedule period start time assigned to that day or until midnight, at which point the UbiquiSTAT will revert to the default Unoccupied setpoint pair.

Schedule Period Start Time Screen

Date and Time

Set/change the current date and time by touching the DATE & TIME button on the SETTINGS screen.

STEP 1 Use the up/down arrows to select the current date. Touch the NEXT button to advance to the SET TIME screen.

Set Date Screen

STEP 2 Use the up/down arrows to select the current time. Touch the SAVE button to save the settings and return to the SETTINGS screen.

Set Time Screen

Configuration

Advanced Settings

Touching the ADVANCED button on the SETTINGS screen brings up the first of two screens: ADVANCED 1/2 has buttons for Network Settings (wireless models), RS-485 Network (wired models), Thermostat Type, Analog Outputs, Display Options, and Temperature Calibration. ADVANCED 2/2 has buttons for Factory Defaults, Internal BACnet Explorer, Access Code, System Test Mode, and System Event Log.
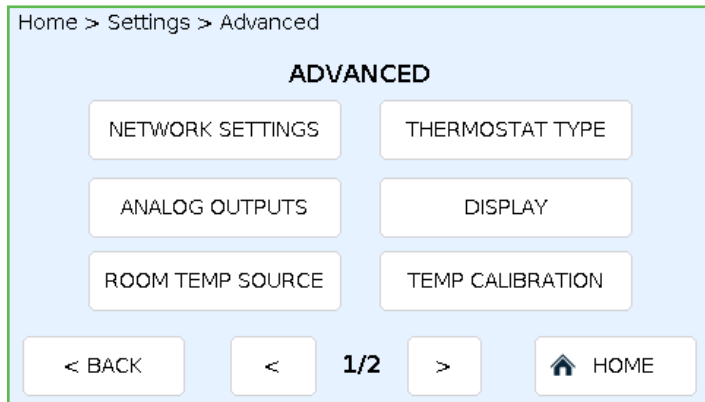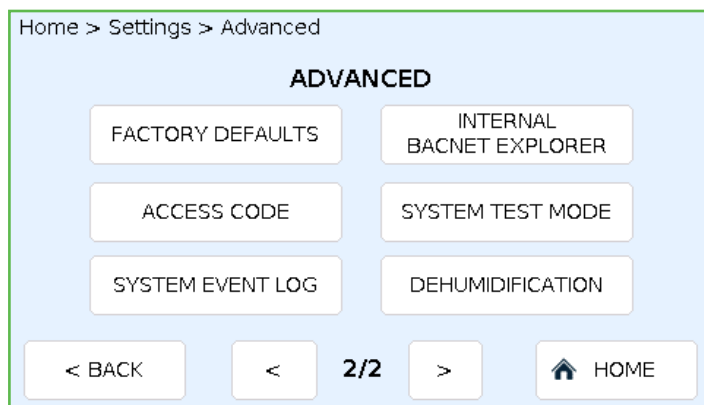

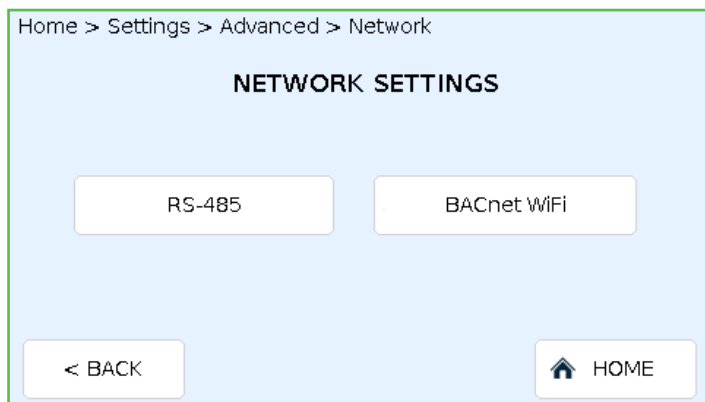Advanced Screen (1/2) 411X 412X 414X 415X
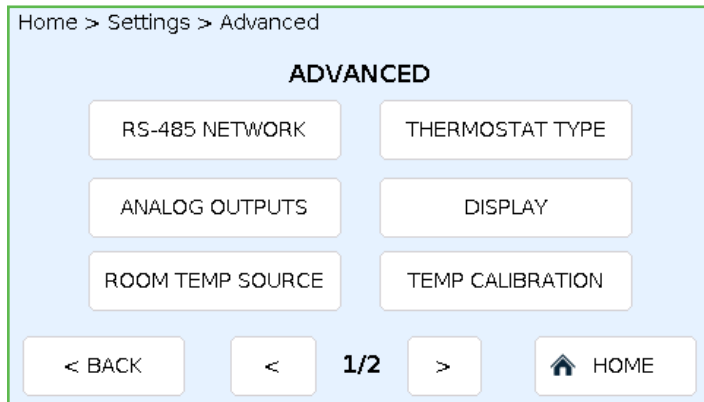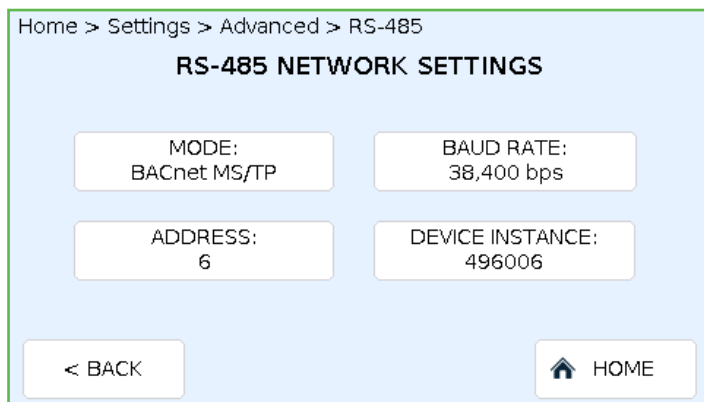

Advanced Screen (1/2)
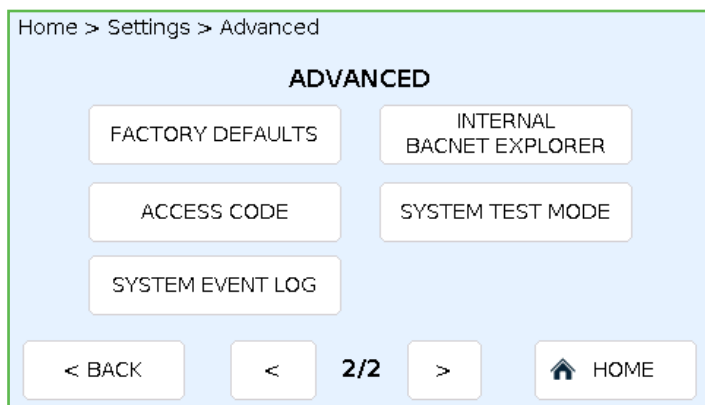
Advanced Screen (2/2)

Advanced Screen (2/2) 4X11 4X21 4X41 4X51

Network Settings

Selecting either NETWORK SETTINGS or RS-485 NETWORK on the ADVANCED 1/2 screen, will bring up options for configuring the RS-485 network or the BACnet Wi-Fi. You can then set/change the settings for either network.

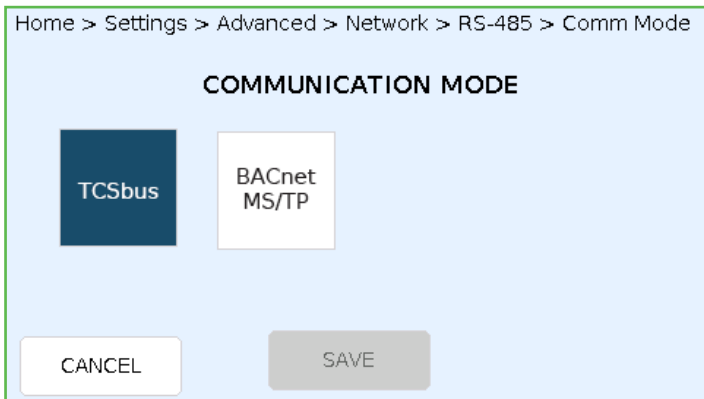Network Settings Screen (Wireless Models)

RS-485 Network Settings Screen − BACnet Mode (Wired Models)
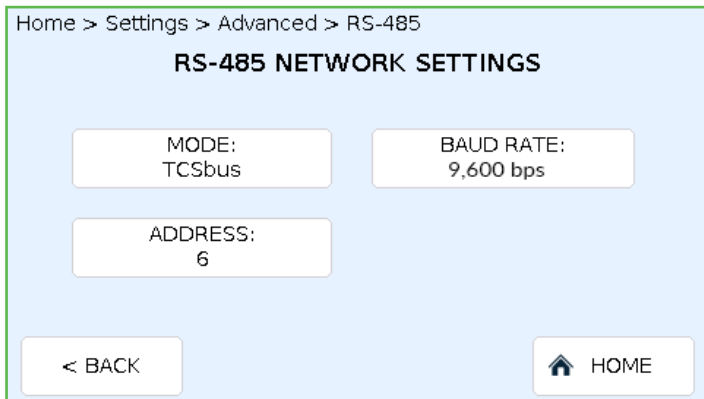
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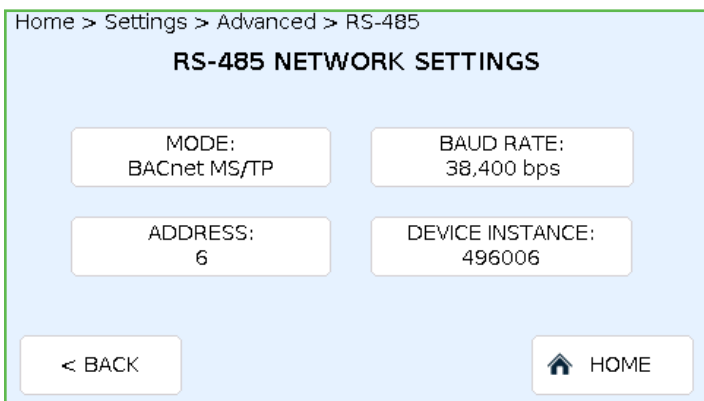
Configuration

RS-485 Network Settings

Set/change the network settings for mode type, baud rate, device address and device instance. Touch the SAVE button on each screen to save any changes.
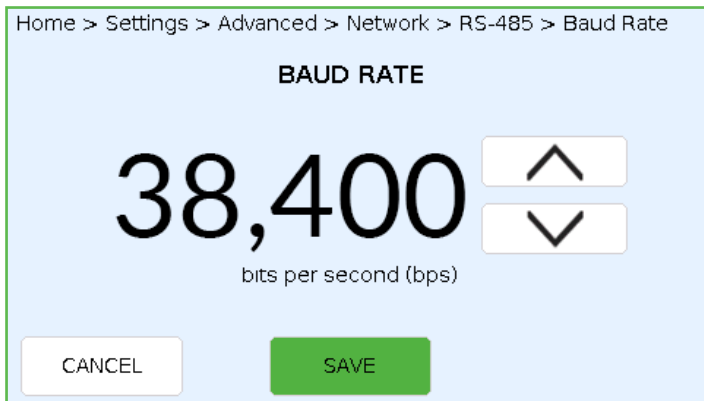

RS-485 Communication Mode Screen
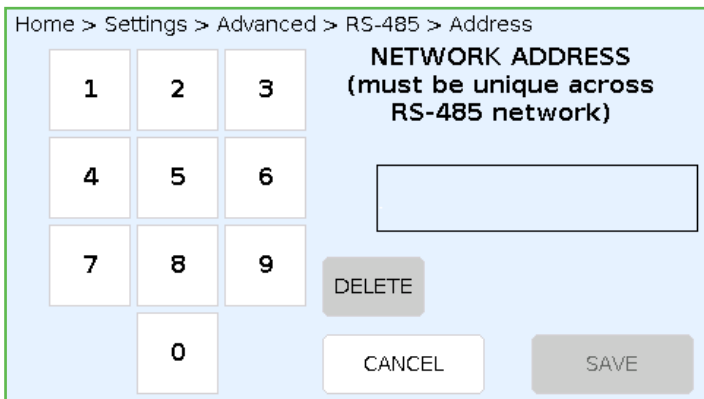

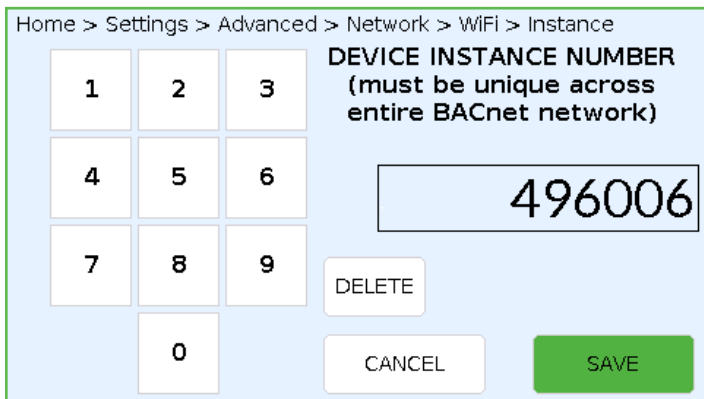*RS-485 Network Settings Screen – TCSbus Mode*

RS-485 Network Settings Screen – BACnet MS/TP Mode

RS-485 Baud Rate Screen

RS-485 Network Address Screen

BACnet Device Instance Number

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Configuration

BACnet Wi-Fi Settings 411X 412X 414X 415X

After selecting BACNET WI-FI on the NETWORK SETTINGS screen, touch the ENABLE SETTINGS button. This will activate the screens for scanning available Wi-Fi networks, assigning a port number, and a device instance number.
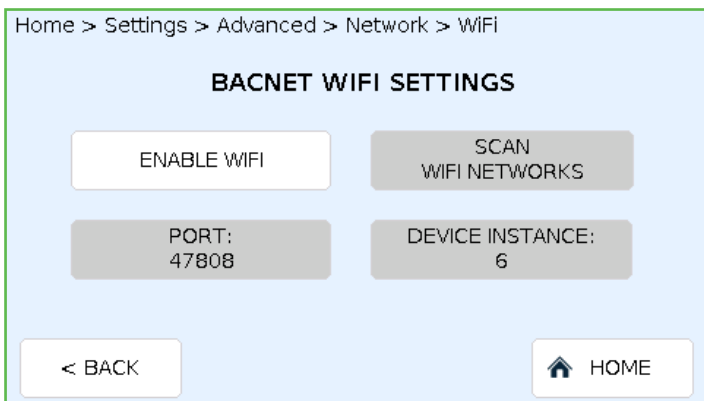
Enable Wi-Fi Screen
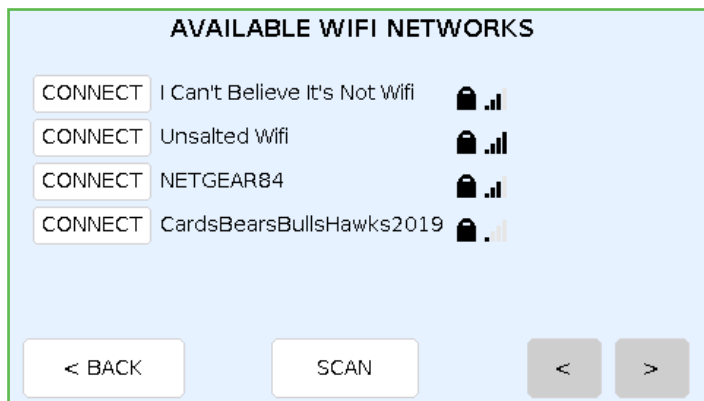
Available Wi-Fi Networks Screen
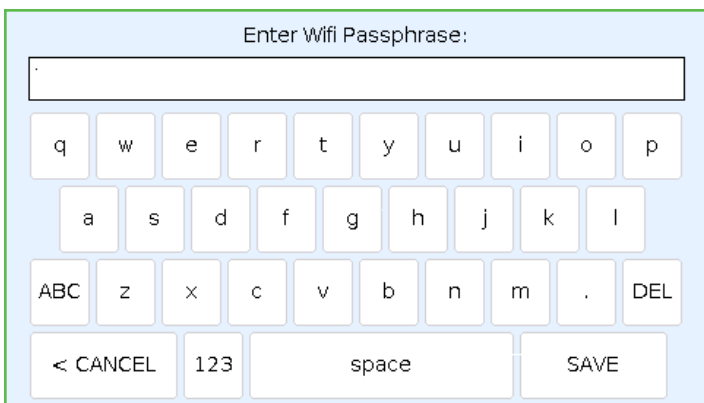
Wi-Fi Passphrase Screen

BACnet Port Number Screen

Device Instance Number Screen

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Thermostat Type

Touching the THERMOSTAT TYPE button on the ADVANCED (1/2) screen allows you to specify whether the UbiquiSTAT is controlling a conventional HVAC system or a heat pump system.
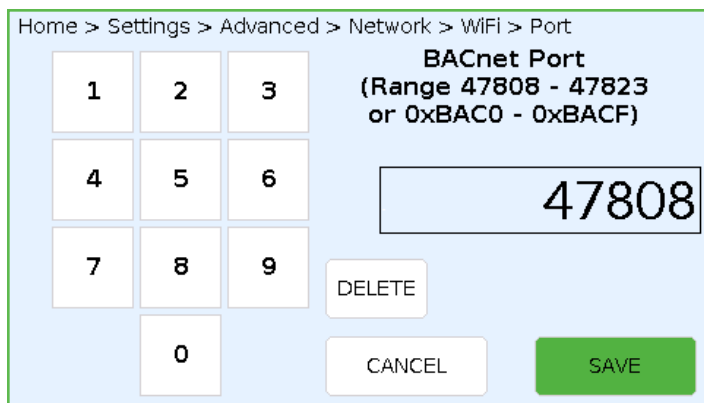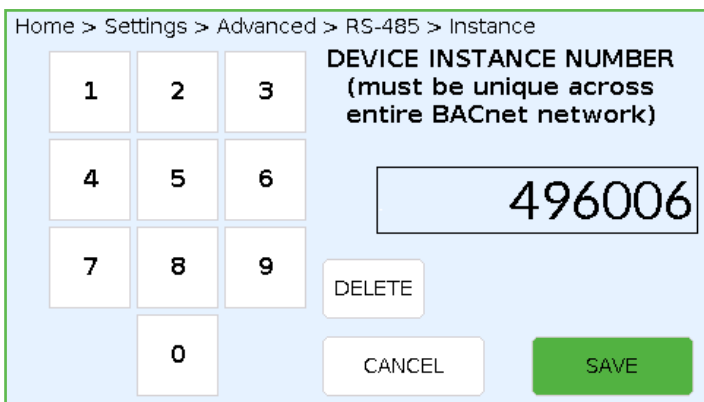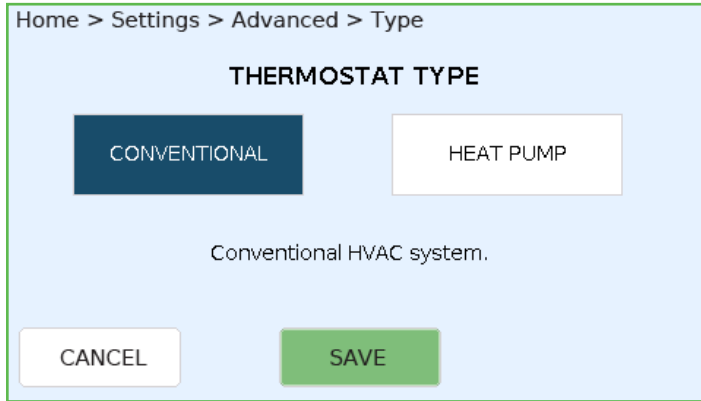

Thermostat Type Selection Screen

Analog Outputs

Touching the ANALOG OUTPUTS button on the ADVANCED (1/2) screen allows you to configure either of the UbiquiSTAT's Analog output ports for HVAC mode, to the type of action you wish to assign to the port and the range.
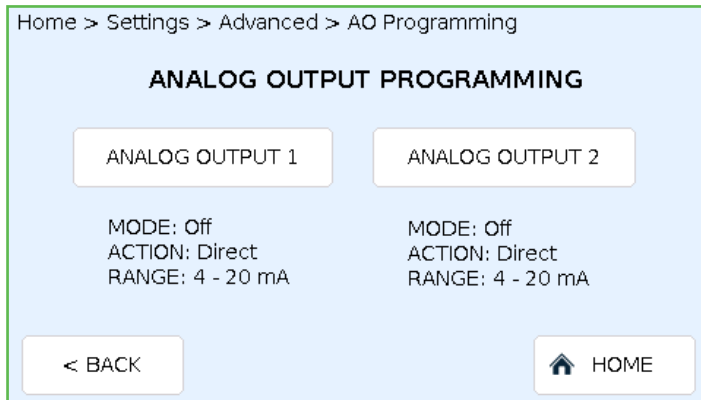
Analog Output Programming Screen
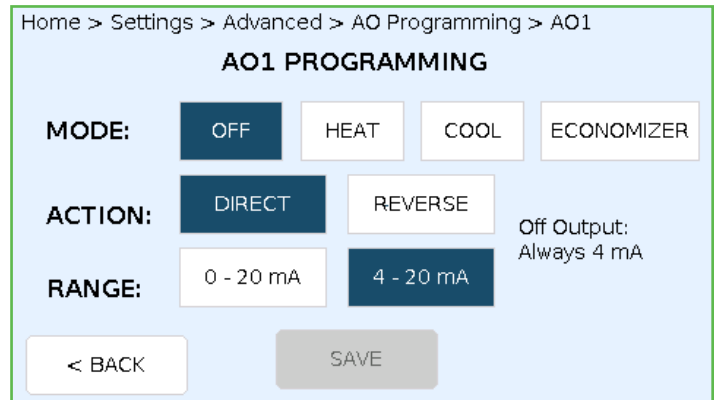
Analog Output Configuration Screen

Display Settings

Touching the DISPLAY button on the ADVANCED (1/2) screen allows you to configure the display's temperature units, clock duration, and the brightness (backlighting) the screen will use when it is active (the screen automatically dims after 10 minutes of inactivity.)

Setpoint Override Indication: Warmer

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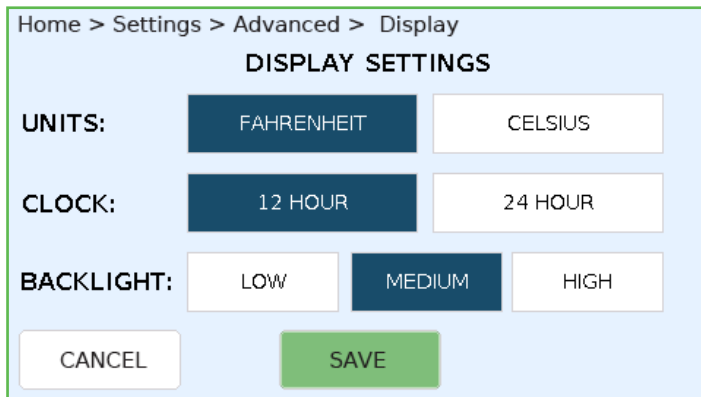
Configuration

Room Temperature Source

Touching the ROOM TEMP SOURCE button on the ADVANCED (1/2) screen allows you to configure the source of the UbiquiSTAT's room temperature measurement. You can select the device's internal temperature sensor, a remotely connected sensor, or you can configure an average of both. When selecting the AVERAGE button, you can fine-tune the weighting between the internal sensor and the external sensor in five-percent increments.
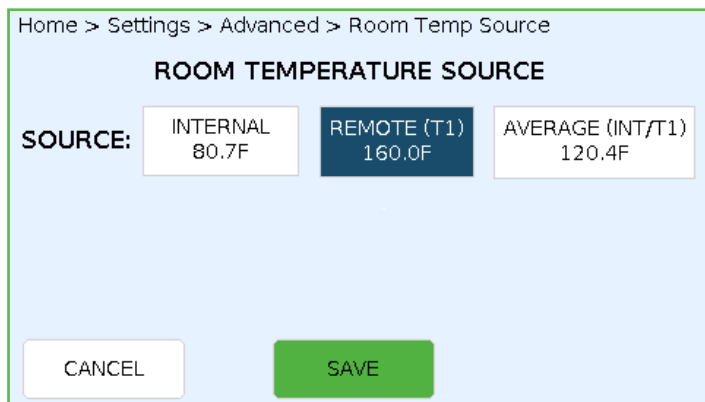
Room Temperature Source Screen
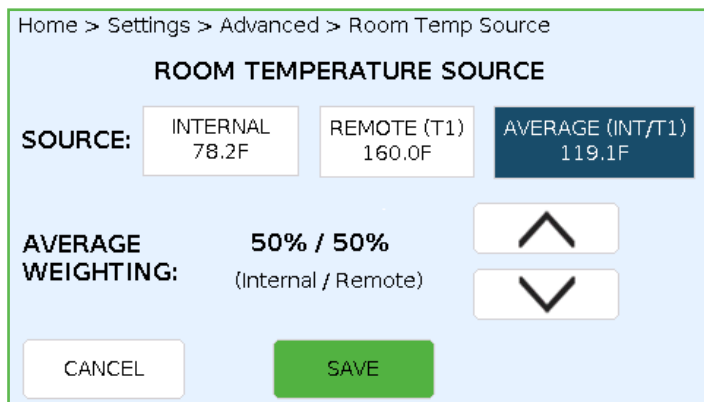
Room Temperature Source Averaging Screen

Temperature Calibration

Touching the TEMP CALIBRATION button on the ADVANCED (1/2) screen allows you fine-tune the temperature calibration for the internal temperature sensor or any connected sensors for monitoring remote/mixed temperature, discharge air temperature, or outdoor air temperature.
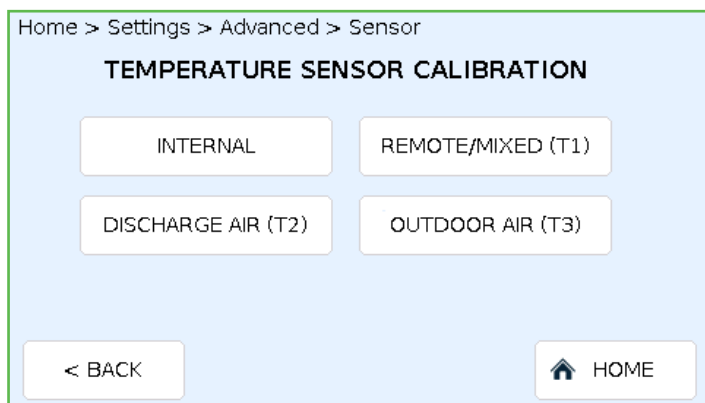
Temperature Sensor Calibration Screen
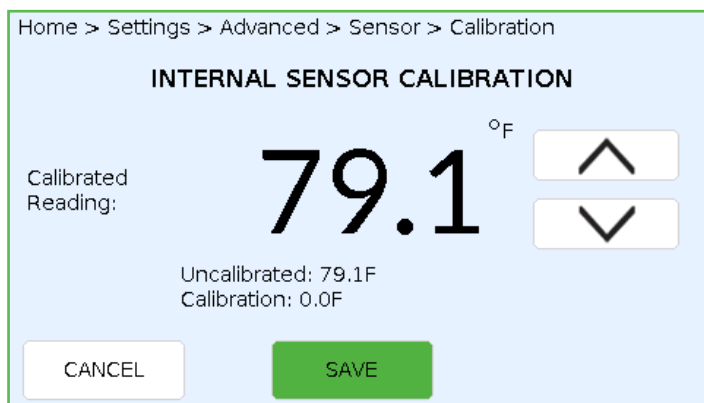
Internal Sensor Calibration Screen
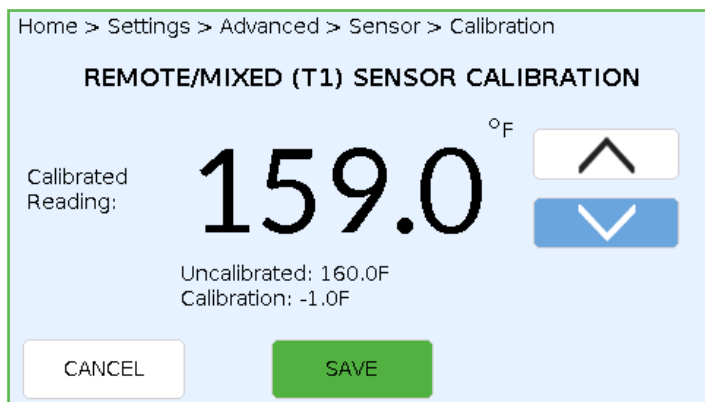
Remote/Mixed Sensor Calibration Screen
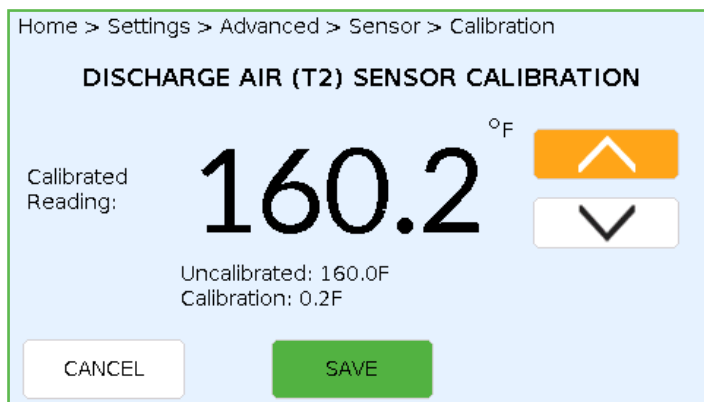
Discharge Air Sensor Calibration Screen

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Configuration
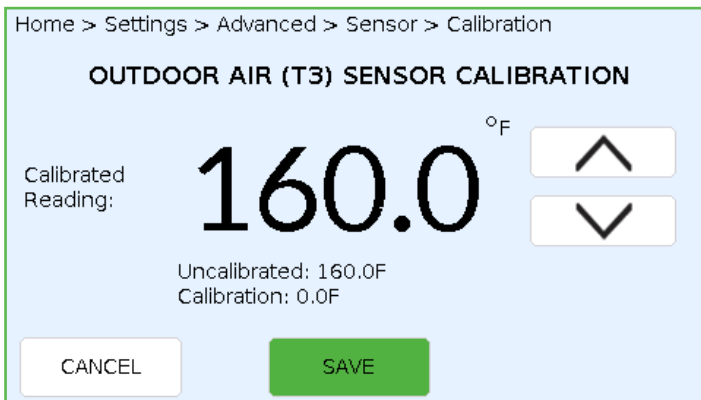
Outdoor Air Sensor Calibration Screen

> **NOTE:** The UbiquiSTAT will display a default temperature of 160°F if no sensor is detected.

Factory Defaults

Touching the FACTORY DEFAULTS button on the ADVANCED (2/2) screen will bring up a warning message advising you that loading the factory defaults will reset any programming changes you have made. Press the **LOAD** button to confirm your desire to reset the UbiquiSTAT **(this cannot be undone).** You will then return to the INITIAL SETUP screen at the beginning of the Startup Wizard (refer to the UbiquiSTAT Quick Setup Guide)
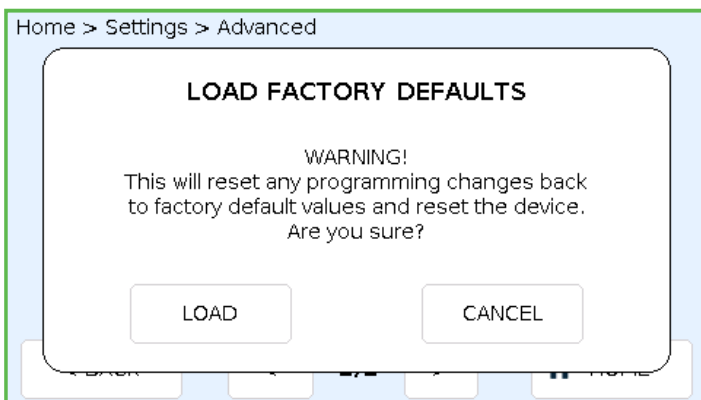
Load Factory Default Warning Screen
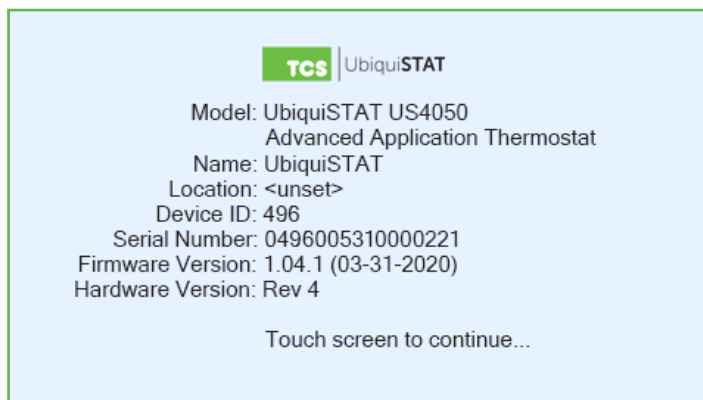
Initial Setup Screen

Internal BACnet Explorer

Touching the INTERNAL BACNET EXPLORER button on the ADVANCED (2/2) screen brings up the Internal BACnet Explorer. Use of the Internal BACnet Explorer is beyond the scope of this Configuration Guide. Refer to the UbiquiSTAT BACnet Explorer Guide for information on editing the UbiquiSTAT's BACnet programming objects.
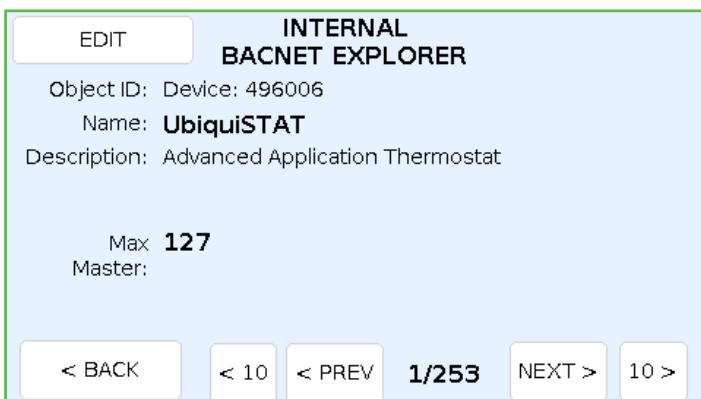
Internal BACnet Explorer Screen

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Configuration

Access Code

Touching the ACCESS CODE button on the ADVANCED (2/2) screen allows you enter a four-digit code to lock out most settings and discourage tampering. (Users will still be able to adjust the setpoints). After entering the four-digit code, you will be prompted to confirm the number.
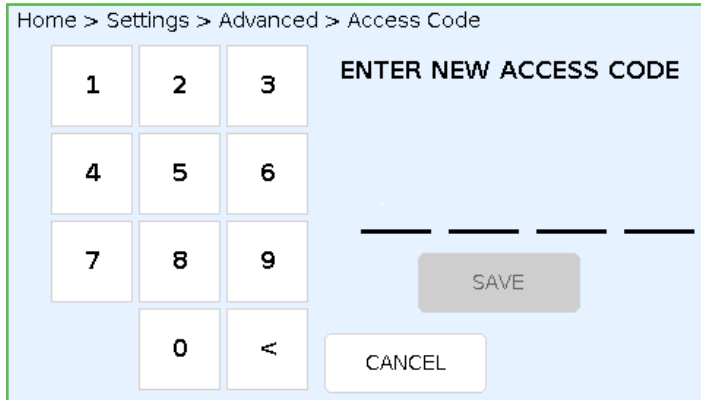
Access Code Entry Screen

Access Code Confirmation Screen

System Test Mode

Touching the SYSTEM TEST MODE button on the ADVANCED (2/2) screen will bring up the SYSTEM TEST screen, from which technicians can verify the devices connected to the UbiquiSTAT.

> **NOTE: Improper use of the testing mode can damage equipment connected to the HVAC system. Testing should only be performed by experienced, qualified HVAC technicians**.

During testing, all internal control logic is disabled and outputs will revert to inactive or zero percent inputs.

- **Relay Inputs (W1, W2, Y1, Y2, G, B/O, TC):** Touching the Relay Outputs buttons activates the connected equipment (after a three-second delay). Touching a heating or cooling relay also activates the fan.
- **Analog Outputs (AO1, AO2):** The mA output shows the actual signal from the output device. You can adjust the analog outputs up or down in increments of 10 percent.
- **Control Testing (Heat, Cool):** Activate either button to simulate a large load for 10 minutes. Heat/cool lockouts will be disabled, while discharge air limits will continue to operate. Affected AOs will operate at their maximum (manual AO testing is disabled.)
- **Input Readings (Temperature, Digital Inputs, Analog Inputs):** Located on the bottom half of the screen, inputs are updated every second. The temperature and analog inputs (T1, T2, T3, Internal, A1, A2) show the actual signal value. The digital inputs (DI1, DI2, DI3) show the description and status.
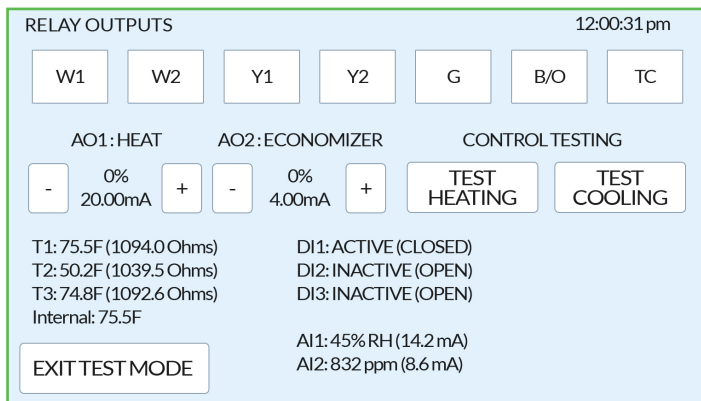

System Test Mode Screen Example (Appearance Varies by Model)

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System Event Log

Touching the SYSTEM EVENT button on the ADVANCED (2/2) screen will bring up log entries for the last 100 events. An event can be one of three classes: information, actions, and faults. Events contain a time stamp, description, and may contain an internal programming code. Additional information may also be displayed.

- **Info**: Describes events in the system for informational purposes only. An example is service status history, which records any service status activity including duration.
- **Action**: Describes changes made to the device from a local user or an outside programming source (e.g., Ubiquity Cloud).
- **Fault**: These are only reported when the UbiquiSTAT detects an unexpected behavior. Report any faults to TCS technical support.
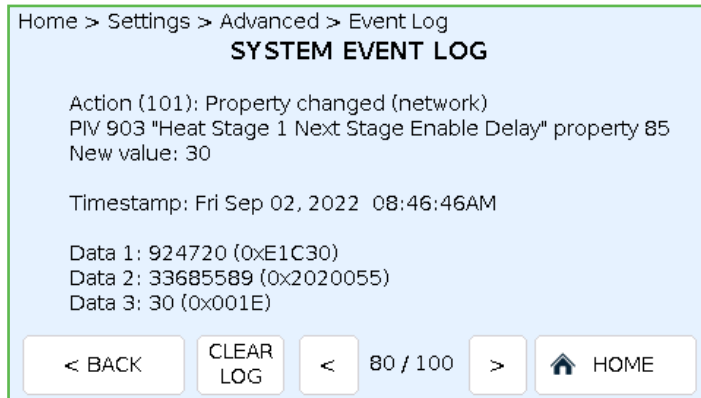
System Event Log Screen

Internal Dehumidification Sensor Programming 4X11 4X21 4X41 4X51

Touching the DEHUMIDIFICATION button on the ADVANCED (2/2) screen brings up the DEHUMIDIFICATION PROGRAMMING screen.
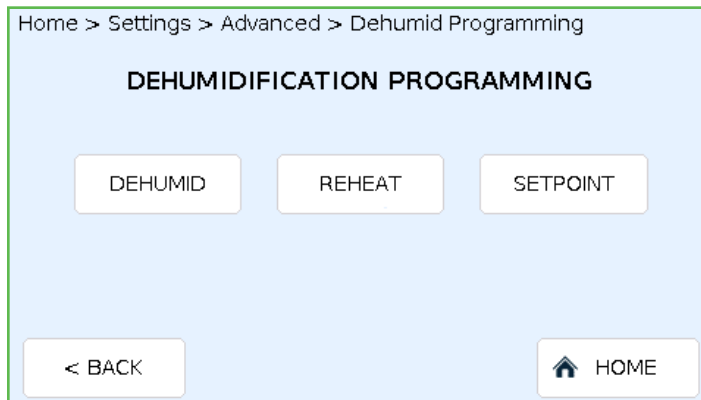
Dehumidification Programming Screen

This screen has three dehumidification programming options:

- **DEHUMID** allows you to turn off dehumidification, limit it to one or all available cooling stages, and control either a digital output or analog output.
- **REHEAT** allows you to select the reheat settings, depending on available heat stages or analog output. You can also choose to conduct reheating by activating the UbiquiSTAT's Digital Output (as in the case of controlling a heat pump), or you can suspend reheating entirely.
- **SETPOINT** allows you to determine the dehumidification setpoints for Occupied or Unoccupied modes.

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Configuration
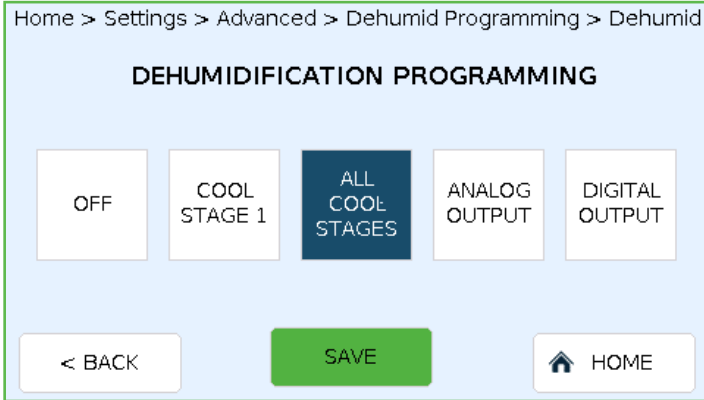
Dehumidification Controls
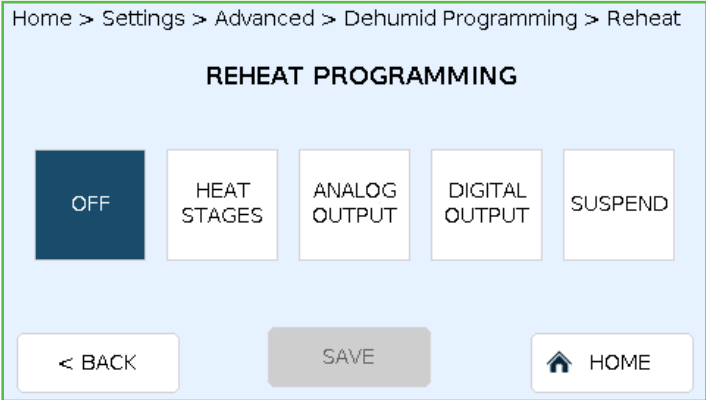
Reheat Controls
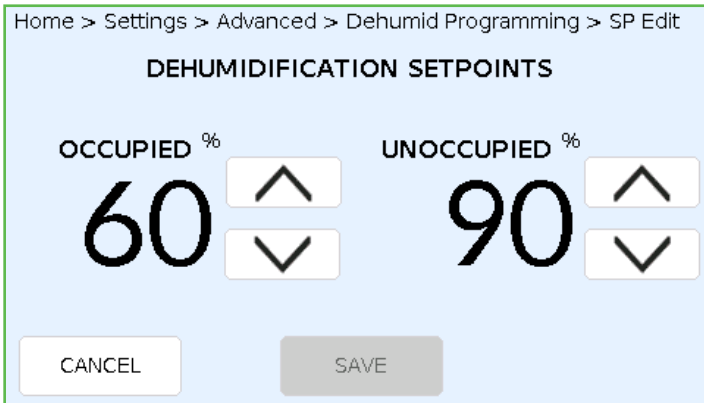
Setpoint Controls

Status Section

Touching the STATUS button at the bottom of the HOME screen brings up the Status section, from which you can verify all settings in real time. The screens in this section are grouped into three categories: System, Advanced, and Network. The information on each screen varies, depending on the UbiquiSTAT model.
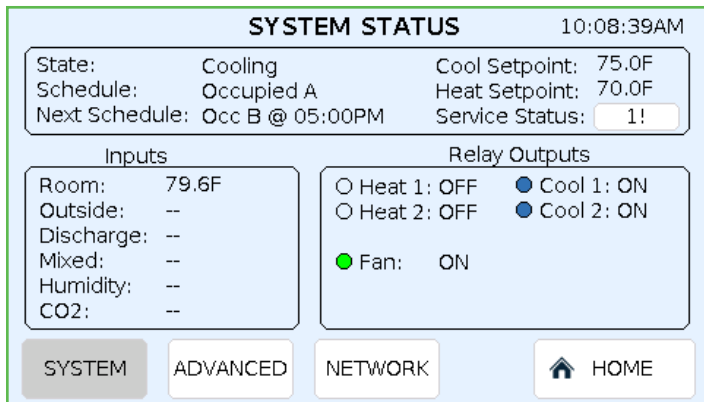
Status Section System Status Screen Example

Service Status Screen

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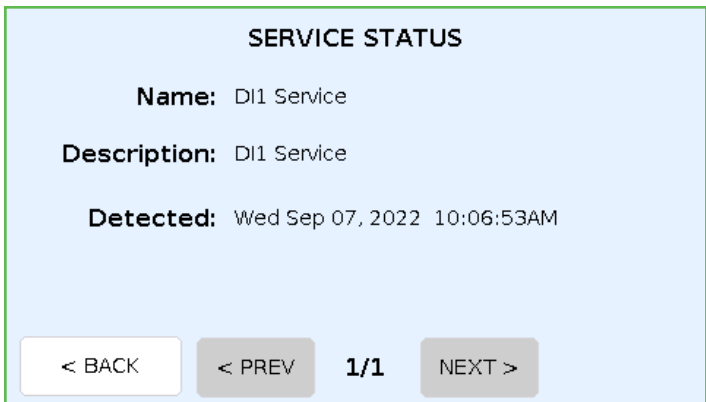
System Screen

The SYSTEM Screen displays the following information:

- **State:** The current system state, as shown on the HOME screen
- **Schedule:** The active setpoint pair
- **Next Schedule:** The next schedule change and the time it will occur (within 24 hours)
- **Cool and Heat Setpoints:** The setpoints currently in use
- **Service Status:** Displays the number of currently active Service Statuses, if any. If there is an active Service Status, touching the SERVICE STATUS button brings up the SERVICE STATUS screen.
- **Inputs:** The room temperature plus Information from external sensors, e.g., outside temperature, humidity, CO_2, etc.

NOTES: Inputs for Mixed Air and CO_2 are only available on 4X4X 4X5X

Input for Humidity is only available on 4X5X

- **Relay Outputs:** The current state of heating, cooling, and fan operation.

Advanced Status Screen

Status Section Advanced Screen Example

The ADVANCED STATUS screen displays the following information:

Operating Modes: Whether the UbiquiSTAT is in conventional HVAC or heat pump mode, system status, and fan operation mode

Digital Inputs: Status of DI1, DI2, and DI3 inputs

Economizer: 4X4X 4X5X Whether the Economizer feature is enabled, if free cooling is available, and whether Freeze Protect is active.

Analog Inputs and Outputs: Signal values of analog inputs AI1 and AI2, and analog outputs AO1 and AO2 are on.

Status Section Network Screen Example

Wi-Fi Status Subsection Screen

Configuration

Network Screen

The NETWORK screen displays the following information:

- **RS-485 Settings:** Shows which communication mode is selected: the device name, ID number, device address, and the selected baud rate
- **RS-485 Status:** Indicates the link status, activity, and traffic specifics. Touch the CLEAR button to update the status
- **Other:** Indicates any USB activity and whether the network override has been activated
- **WI-Fi Status:** (Wireless models only) Touching the Wi-Fi Status button brings up a screen displaying all Wi-Fi settings at a glance. Touch the CLEAR button to update the status

About Section

Touching the ABOUT button on the bottom of the HOME screen brings up the About section. The main About screen displays the following information:

- Model number
- Device Name
- Location (if set)
- Device ID
- Serial Number
- Firmware version
- Hardware version

By default, the display also features the TCS logo and TCS web site and support phone number. You can customize the logo and contact information via TCS Insight software, which is available for download on the TCS website.

Touching the logo on the ABOUT screen will advance you to the second screen, which contains the following information:

- Bootloader version
- Manufacture Date
- Last restart information
- Sub-assembly serial number
- Factory codes

Touching the logo again will return you to the main ABOUT screen.
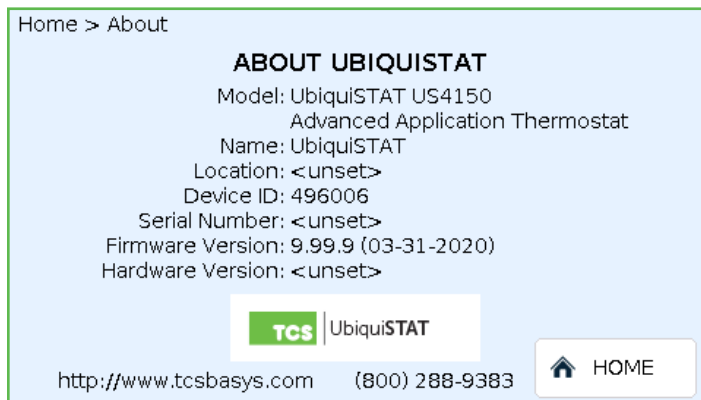
About Section Main Screen
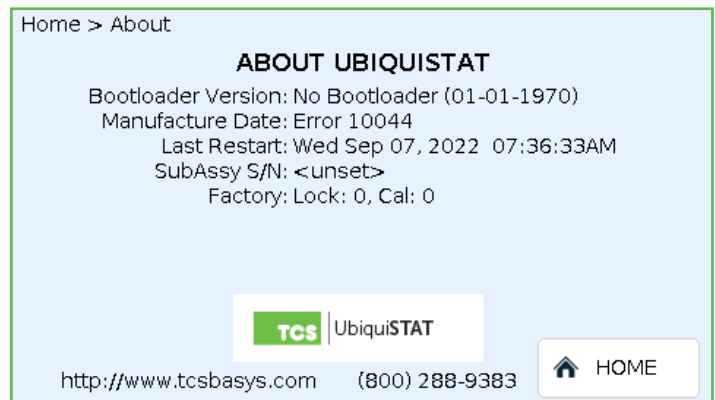
About Section Second Screen

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Additional Configurations

This section describes how to configure many of the advanced options built into the UbiquiSTAT. Configuring these advanced options calls for an understanding of the use of BACnet objects, which are accessible through the BACnet Explorer (see the ADVANCED (2/2) screen .) Each subsection describing the advanced configurations includes the relevant BACnet object number(s). Refer to the UbiquiSTAT BACnet Explorer Guide for screen identification and other information.

> **NOTE:** Explanations of BACnet and BACnet objects is beyond the scope of this manual. **Changing BACnet configurations should only be performed by experienced, qualified HVAC technicians**.

Adding Heating and/or Cooling Stages

By default, UbiquiSTATs ship with either one or two stages of heating and/or cooling enabled. However, the B/O and TC relays can be configured as additional stages of heating and/or cooling when the UbiquiSTAT is configured as a conventional thermostat. Reference BACnet IDs: MSV-316, MSV-317.

Scaling Analog Inputs `4X4X` `4X5X`

The analog inputs (A1, A2) measure signals from sensors wired to the inputs. The scaling of those signals can be independently adjusted to match the ranges of the sensors. Because the input signals are scalable, the UbiquiSTAT must be configured to the sensors' input ranges, signal minimums, and signal maximums:

- **Input Range:** Set the expected input range to 0 – 20mA or 4 – 20mA. Reference BACnet IDs: MSV-170, AV-171
- **Scaled Minimum:** Defines the sensor value when its signal is at the minimum range (0 or 4mA). Reference BACnet IDs: AV-161, AV-163
- **Scaled Maximum:** Defines the sensor value when its signal is at the maximum range (20mA). Reference BACnet IDs: AV-162, AV-164

In addition, there are four read-only analog BACnet objects which display the raw readings and the engineering scaled values. Reference BACnet IDs: AI-151, AI-152, AV-181, AV-182.

Setpoint Setback

The Setpoint Setback feature allows the user to increase the cool setpoint and decrease the heat setpoint by a predetermined amount based on the state of a Digital Input (DI). Reference BACnet IDs: AV-1254, BV-1536.

Economizer `4X4X` `4X5X`

The Economizer (also called "free cooling") uses outdoor air for cooling, when appropriate, to reduce the need for mechanical cooling. Reference primary BACnet IDs: AO-200, AV-240; MSV-210, MSV-220, MSV-230, AO-201, AV-241, MSV-211, MSV-221, MSV-231, MSV-1400, AV-1500, MSV-1501, MSV-1511, AV-1512. Reference secondary BACnet IDs relevant to your application: AV-1410, AV-1420, AV-1430, AV-1440, AV-1421, MSV-1431, AV-1441, AV-1510, AV-1513, AV-1514, AV-1515, BV-1516, BV-1517.

Commissioning the UbiquiSTAT

When commissioning the UbiquiSTAT for the first time, do the following:

- Verify all wiring connections to the mounting plate are secure, with no loose strands. Check all screws for tightness
- Ensure the front cover is lined up properly and snapped into place
- Ensure the UbiquiSTAT is connected to an appropriate power source. The screen should be lit
- Ensure you have completed all programming correctly
- Navigate to the SYSTEM TEST MODE screen and ensure the heating and cooling modes are functioning properly by turning on and off all outputs
- Verify modulating outputs are changing and then resetting the milliamp output (refer to the SCALING ANALOG INPUTS screen).
- If the UbiquiSTAT is to be networked, verify it has the proper network address, baud rate, mode, and device ID. If the network is active, confirm the RS-485 link status is "Connected": (refer to the NETWORK screen).

Troubleshooting

This section discuss the most common issues users encounter with their UbiquiSTAT room controller. Before contacting TCS Technical support, try the remedies shown here.

If you are still experiencing issues with your UbiquiSTAT room controller, do not hesitate to contact TCS Technical Support at 800.288.9383, ext. 2. Our Technical Support Department hours are Monday – Friday, 7:00 a.m. to 7:00 p.m. (CST).

Issue	Probable Cause(s)	Solution
No display	• No power to the device • Front cover not properly seated	• Remove cover and check for 24 VAC (22.8 to 27.6 VAC) on terminals labeled "+/- 24V". • Replace the cover and check for proper fit. • Ensure the two internal board connectors snap into place.
Fan does not come on (icon is animated to indicate the fan is on)	• Faulty wiring • Faulty relay • Incorrect programming	• Check wiring • Check system modes • Connect a jumper between the "R" and "G" terminals to see if the fan comes on. If the fan comes on, programming is incorrect or the relay in the thermostat may be faulty.
Heating or cooling does not come on when UbiquiSTAT is calling (or icon is showing on display)	• Faulty wiring • Faulty relay • Room temperature is above the cooling setpoint or below the heating setpoint	• Check wiring • Check for a relay failure by connecting a jumper across terminals "R" to "W1"; the heating should turn on. Connect a jumper across terminals "R" to "Y1"; the cooling should come on. If this does not happen, replace the relay. • Reprogram the UbiquiSTAT so the heating and cooling setpoints are on either side of room temperature.
Wrong temperature display	• Ubiquistat not properly calibrated • Remote sensor defective or Ubiquistat is not properly calibrated for lead resistance • Weighting value for room temperature source is incorrect	• Fine-tune the temperature calibration based on the configuration of your system. Refer to "Temperature Calibration" on page 14. • Adjust the weighting value for the room temperature source. Refer to "Room Temperature Source" on page 14
• UbiquiSTAT is overcooling or underheating	• UbiquiSTAT is placed too close to an air vent, in direct sunlight, or air is coming in through the wiring opening in the wall • The room temperature does not match the temperature displayed	• Relocate the UbiquiSTAT • Redirect the air flow from vents • Seal the wall where the wires enter the UbiquiSTAT • Use a remote sensor • Adjust the calibration settings for the room temperature source. Refer to "Room Temperature Source" on page 14

Issue	Probable Cause(s)	Solution
Service status symbol is on (⚠ icon is showing on display)	• Indicates The UbiquiSTAT needs service in one or more of the following conditions: ◦ Fan proving failure ◦ Filter needs changing ◦ Discharge high ◦ Discharge low	• Change the filter. • When the DI is configured for fan proving, the system will shut down if the fan is not detected or is not functioning. Check the fan to make sure it is operating correctly. • Check Discharge Air High setting. When the Discharge Air temperature exceeds the high limit value, the heat control shuts down until the condition no longer exists. • Check Discharge Air Low setting. When the Discharge temperature drops below the low limit value, the cool control shuts down until the condition no longer exists.
Outputs will not shut off	• Faulty wiring • Setpoints set improperly • Polarity of relay outputs are reversed	• Check wiring connections. • Verify heating and cooling setpoints are correct. • Reset the UbiquiSTAT by touching and holding the STATUS button for five seconds.
Analog outputs not working	• Faulty wiring • Improper programming • UbiquiSTAT is being powered from the same power source as actuators or motors.	• Check wiring connections. • Check programming. • Power the UbiquiSTAT from a separate power source.
Both heating and cooling are on	• Faulty wiring • Improper operating mode is selected	• Check wiring connections. • Check whether you have selected Heat Pump mode or Conventional Heating mode.
RS-485 network not recognized	• Faulty wiring • Improper continuity across network • Missing terminating resistor	• Check wiring connections. • Make sure proper continuity is maintained: A wires to A-ports, B wires to B-ports, etc. • Check whether there is a terminating resistor at the end of the network.
No Wi-Fi connection detected (WI-Fi models only)	• Incorrect SSID settings • Signal strength too weak • Incorrect network selected	• Check Wi-Fi Network menu and verify settings. • Test signal strength with separate device e.g., cell phone. Check Wi-Fi hub. If necessary, contact your IT department for assistance. • Select different network in Wi-Fi Configuration settings.

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