ADVANCED PROGRAMMING & FEATURES

Bard CompleteStat™
CS9B-THO, CS9B-THOC
CS9BE-THO, CS9BE-THOC

TABLE OF CONTENTS

Installation

Basic Operation

*NOTE: Implement **Controller Install/Operation/Quick-Start Guide** before using this manual.

Home Screen Features:

WED 11/19	3:20 PM
72 °F	COOL: ❄
	OCC: 🌙
	FAN: 🔃
	HUM: 36% RH
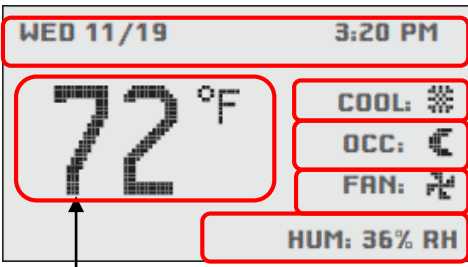
Current Room Temperature

Date and Time Line: Reference or Scheduling purposes

Current Operation Status: *Cooling*, *Heating*, or *Off* status, Indicated by "snowflake" icon, "heat waves" icon, or "OFF"

Occupancy Status: *Occupied*, *Unoccupied*, and *Temporary Override* option, indicated by "sun" icon, "moon" icon, or "OVR" letters respectively.

**Fan Status**: Fan blade icon, animated when "on"

System Information Rotation Values: **"HUM"** shows relative humidity, **"CO2"** shows ppm of Carbon Dioxide (if equipped with sensor), **"OAT"** shows outdoor air temp (if equipped with sensor).

*NOTE: *Rotation Values* will change approximately every five (5) seconds. These values can be customized if desired.

*NOTE: By default, controller will read temperature in Fahrenheit. To temporarily toggle reading to Celcius, simply press the *Enter* button for more than two (2) seconds. The new scale will stay in place until repeated, or until the controller is restarted. For permanent change read "**Changing Scale Values**."

Navigate the menus and change settings by pressing a combination of various arrow buttons and the Enter button. Push the:

- *Enter* button to select and/or exit value editing
- *Up* or *Down* button to move among entries
- *Right* or *Left* button to move among value fields
- *Left* button to return to the home screen
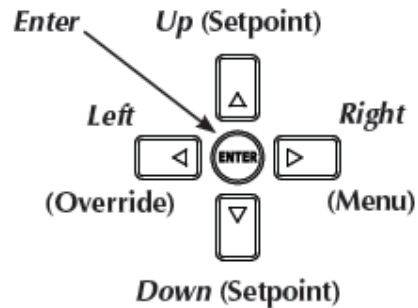
***Note:** Access to the Main Menu, setpoint adjust, and System/Occupancy/Fan override may require a password.

Enter   Up (Setpoint)

Left   Right

(Override)   (Menu)

Down (Setpoint)

Display Options: To adjust **Backlight**, change **Rotation Values**, and/or activate **Temperature Tenths**, press…
1. *Right* button to access the **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Down* button through entries to highlight **User Interface**
5. *Enter* button to select **User Interface** and enter **User Interface Screen**.
6. Controller will ask for **Admin Level Password**
   Factory Default Admin Level Password: **BARD**
   Press **Enter**
7. *Down* button to highlight entry of choice (**Backlight/Rotation Values/Temp Tenths/"Mode"**)
8. *Enter* button to select entry of choice
9. *Up/Down* to toggle between adjustments:
   - **Backlight** – Choose between **AUTO** (turns off after Inactivity Period), or **ON**
   - **Mode** – Choose between user interfaces:
     - **Standard** – User has all access, but may need Security Code for certain areas **(Default)**
     - **Hospitality** – User has simpler display, limited menu. Mostly used in hotel rooms.
     - **Locked UI** – User cannot access or change ANY item within controller
     NOTE: DO NOT ACTIVATE HOSPITALITY OR LOCKING UI UNTIL CONTROLLER IS COMPLETELY PROGRAMMED. DEACTIVATION IS INTENTIONALLY DIFFICULT (SEE SECURITY SETTINGS).
   - **Rotation Values** – Choose to Hide or Show: **Humidity**, **Outdoor Air Temp**, or **CO2** (if available)
   - **Show Temperature Tenths** – Choose **YES** (allows decimal temperature measurement) or **NO**.
10. *Enter* button to save changes
11. *Left button* (3x) to return to Home Page

Motion/Occupancy Sensor Detection Range

Top View

32.8 ft (10 m)

X

0°

55°

32.8 ft (10 m)

Side View

32.8 ft (10 m)

Y

46.5°

0°

32.8 ft (10 m)
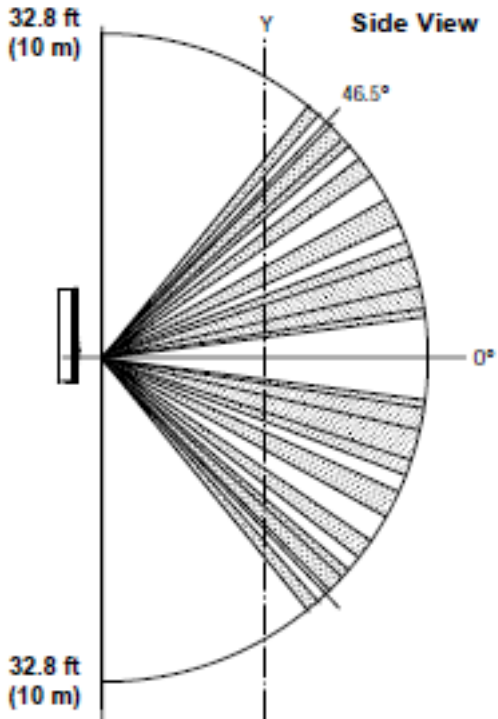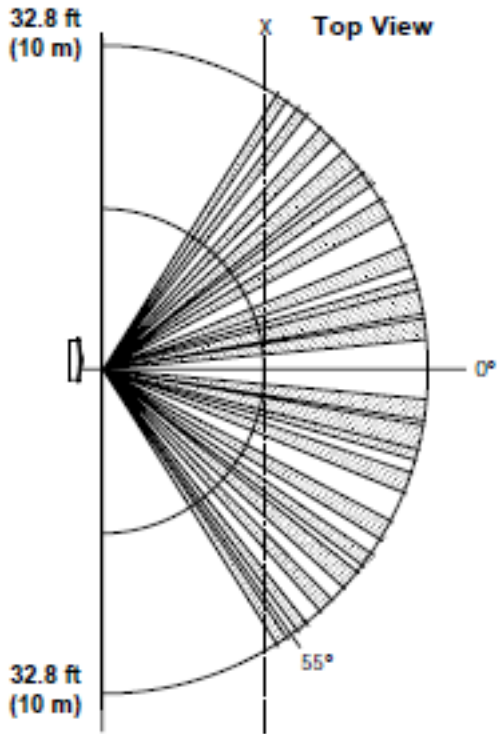
<u>**Operational Overviews**</u>: The factory-default settings will provide an intelligent, "learning" temperature control. **CS9B(E)-THO (Non- CO2 Sensing Capability) Models** come standard with scheduling features; however, from the factory, all the controllers are configured to have no "occupied" periods. In this default configuration, the **CompleteStat**^{TM} is typically in an *Unoccupied* (moon icon) mode enabling "setback" temperatures and disabling ventilation unless the controller senses motion. After sensing motion, the controller will enter a *Temporary Override* (**OVR** letters) mode and will maintain "occupied" temperatures and enable ventilation based on indoor fan operation[1] until motion ceases for a specified length of time (see *Adjust Temporary Override Time Length*).   If the scheduling function is provided with an "occupied" period, the scheduled *Occupied* (sun icon) mode will also maintain "occupied" temperatures and enable ventilation based on indoor fan operation[1] until the end of the programmed scheduled period.

- *Adaptive Start* intelligent temperature control has been enabled as a factory default. Controller will "learn" the typical occupancy schedules without having to manually program them into the scheduling feature and will automatically bring the space to "occupied" setpoints before the occupants arrive. If, however, no one arrives during a learned occupancy period, the **CompleteStat**^{TM} will revert to the setback temperatures within a specified period of time (see *Adjust Temporary Override Time Length*).
- *Optimum Start* intelligent temperature control has also been enabled as a factory default. If scheduled occupied periods are desired, the **CompleteStat**^{TM} will automatically begin to track the amount of time necessary to bring the space from "setback" temperatures to "occupied" temperatures. Based on recent run-times, the controller will adjust to ensure "occupied" setpoints are reached before the occupants arrive.

[1]<u>*NOTE:*</u> **CS9B(E)-THO (Non-CO2 Sensing Capability) Models** will only activate ventilation ("A" Terminal) when the indoor fan is running and in an "occupied" condition. To activate constant ventilation during occupied periods, the indoor fan will have to be placed into constant run mode during "occupied" conditions (see *Indoor Fan Settings*).

CS9B(E)-THOC (CO$_2$Sensing Capability) Models come standard with scheduling features; however, from the factory, all the controllers are configured to have no "occupied" periods. In this default configuration, the **CompleteStat**^{TM} is typically in an *Unoccupied* (moon icon) mode enabling "setback" temperatures and disabling ventilation unless the controller senses motion. After sensing motion, the controller will enter a *Temporary Override* (**OVR** letters) mode and will maintain "occupied" temperatures and enable ventilation based upon **CO$_2$** content[2] until motion ceases for a specified length of time (see **Adjust Temporary Override Time Length**).   If the programmability feature is enabled, the scheduled *Occupied* (sun icon) mode will also maintain "occupied" temperatures and enable constant ventilation based on **CO$_2$** content[2] until the end of the programmed scheduled period.

- *Adaptive Start* intelligent temperature control has been enabled as a factory default. Controller will "learn" the typical occupancy schedules without having to manually program them into the scheduling feature and will automatically bring the space to "occupied" setpoints before the occupants arrive. If, however, no one arrives during a learned occupancy period, the **CompleteStat**^{TM} will revert to the setback temperatures within a specified period of time (see **Adjust Temporary Override Time Length**).
- *Optimum Start* intelligent temperature control has also been enabled as a factory default. If scheduled occupied periods are desired, the **CompleteStat**^{TM} will automatically begin to track the amount of time necessary to bring the space from "setback" temperatures to "occupied" temperatures. Based on recent run-times, the controller will adjust to ensure "occupied" setpoints are reached before the occupants arrive.

[2]<u>*NOTE:*</u> **CS9B(E)-THOC (CO$_2$ Sensing Capability) Models** will only activate ventilation ("A" Terminal) when the CO$_2$ levels have exceeded the CO$_2$ setpoints and in an "occupied" condition. To adjust CO$_2$ level setpoint, see **Controller Install/Operation/Quick-Start Guide.**

<u>**Setting Date/Time**</u> – Unless scheduling is desired, the absolute date and time are not necessary, and only used for alarm reporting reference points. Not entering a date/time will have no operational effect upon the controller.
To enter the current date and time from the Home Screen, press...

1. *Right* button to access **Main Menu** screen
2. *Down* button through entries to highlight **Date/Time**
3. *Enter* button to select **Date/Time** and enter **Date/Time Screen**
4. *Enter* button to select **Date:**
5. *Up/Down* buttons to adjust existing **Month, Day, Year**
6. *Enter* button to select new entry
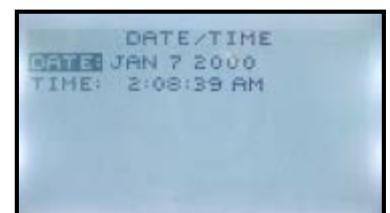
7. *Down* button to highlight Time:
8. *Up/Down* buttons to adjust existing **Hours, Minutes, Seconds**
9. *Enter* button to save new entry
10. *Left* button to navigate back to **Main Menu**
11. *Left* button to navigate back to **Home Screen**

Scheduling – If desired, the CompleteStatTM can be manually programmed to offer specific ***Occ/Unocc*** time periods. During these scheduled time spans, the controller will keep the space within the occupied and unoccupied setpoints[3].
To access scheduling from the Home Screen, press…
1. *Right* button to access **Main Menu** Screen
2. *Down* button through entries to highlight **Schedule**
3. *Enter* button to select **Schedule** and enter **Schedule** Screen
   - Use the Up/Down buttons to scroll through schedule options
     Weekdays and **Weekend** for a "5+2" style of scheduling
       Up to six (6) separate Occ/Unocc periods/day
     Entire Week for a "7-Day" style of scheduling
       Up to six (6) separate Occ/Unocc periods/day
     Individual Days for specific day-customization scheduling
       Up to six (6) separate Occ/Unocc periods/day
     Holidays for up to twelve (12) holiday exceptions to the main scheduling
       ***Holidays** will override to setback temperatures for that specific date*
4. *Enter* button to select specific **Schedule** Option
5. *Enter* button to select specific period of Occ/Unocc
6. *Right* button to access hours/minutes/seconds
   Adjust as necessary with Up/Down buttons
7. *Right* button to access period status
   Adjust as necessary with Up/Down buttons
    - choice of **ON** (occupied), **OFF** (unoccupied), or **NULL** (do not program this value)
   "NULL" is used in certain Commercial Control platforms.
8. *Enter* button to save scheduling programming
9. Repeat steps 3-8 as necessary to complete Scheduling time periods.
10. *Left* button to navigate back to **Main Menu** Screen
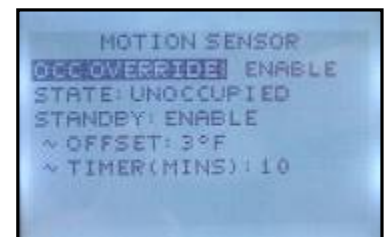11. *Left* button to navigate back to **Home Page**
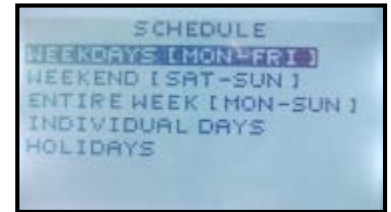
[3]***NOTE:*** During scheduled **Occ** periods, if the controller does not sense motion for a specific length of time, the controller will allow the space to enter "**Standby**" conditions, where temperature may offset by up to 3°F for the duration of the **Occ** period. To adjust this offset in degrees, or waiting period, see ***Adjusting Standby Conditions.***

Adjusting Standby Conditions – Users may opt to adjust temperature offset, change time length of waiting period, or even disable Standby feature.
To change Standby Conditions Parameters from the Home Screen, press…
10. *Right* button to access the **Main Menu** screen
11. *Down* button through entries to highlight **Advanced**
12. *Enter* button to select **Advanced** and enter **Advanced Screen**
13. *Enter* button again to select/enter **Applications Screen**
14. Controller will ask for **Admin Level Password**
    Factory Default Admin Level Password: **BARD**
    Press **Enter**
15. *Down* button to highlight **Additional Setup**
16. *Enter* button to select/enter **Additional Setup**
17. *Down* button to highlight **Motion Sensor**
18. *Enter* button to select/enter **Motion Sensor**
19. *Down* to highlight the following choices:
    • **Standby** (Enable/Disable)
    • **Offset** (specify °F offset span)
   • **Timer** (specify time length of waiting period)

20. *Enter* button to select/enter appropriate selection
21. *Up/Down* buttons to enter specific parameters
22. *Enter* button to save changes
23. *Left* button (4x) to navigate back to **Home Page.**

Temporary Temperature Override – Any changes to temperature from the Home Screen will result in a temporary "override" which will last for a programmable length of time (factory default is 10 minutes).

To change temperatures temporarily from the Home Screen, press…

1. *Up or Down* button to access the current temperature setpoint.
    "SET" will appear under temperature reading.
2. *Up or Down* button again to adjust current temperature setpoint
    to desired temperature.
3. *Enter* or *Left/Right* buttons to select temporary setpoint change.
    "OVR" will appear in the **Occupancy Status line.**
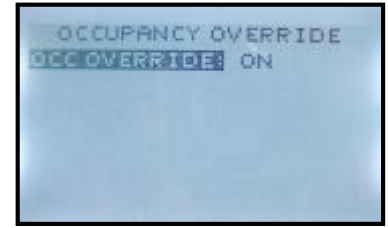
NOTE 1 If no "schedule" has been previously entered, "OVR" will already be displayed in the "Occupancy Status" line.

To cancel Temporary Override from Home Screen, press…

1. *Left* button to highlight **Current Operation Status Line**
2. *Down* button to highlight **Occupancy Status Line**
3. *Enter* button to select **Occupancy Status Line**
4. *Enter* button again to select **"Occ Override"** and
    highlight **"ON"**
5. *Up/Down* button to change from **"ON"** to **"OFF"**
6. *Enter* button to select override cancellation
7. *Left* button to navigate back to **Home Screen**

NOTE 2 If no "schedule" has been entered, Temp override will cancel, but "OVR" will remain in "Occupancy Status" line.

To adjust Temporary Override time length from Home Screen, press…

1. *Right* button to access **Main Menu** screen
2. *Down* button through entries to highlight **System**
3. *Enter* button to select **System** and enter **System Screen**
4. *Down* button through entries to highlight **Occ Overrride (Hrs)**
5. *Enter* button to select **Occ Override (Hrs)**
6. *Up/Down* button(s) to adjust time
    (5 minute increments, maximum 2000 minutes)
7. *Enter* button to select new override time limit
8. *Left* button to navigate back to **Main Menu**
9. *Left* button to navigate back to **Home Screen**
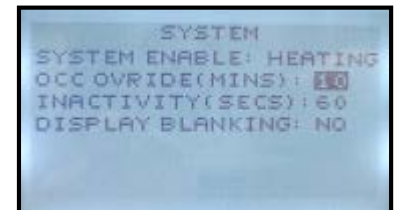
Staging Delay – While the typical delay between stages consists of 1°F, a length of time in minutes can be customized.

To access/change Staging Time Delay from the Home Screen, press…

1. *Right* button to access the **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Enter* button again to select/enter **Applications Screen**
5. Controller will ask for **Admin Level Password**
    Factory Default Admin Level Password: **BARD**
    Press **Enter**
6. *Down* button to highlight **Additional Setup**
7. *Enter* button to select **Additional Setup** and enter **Additional Setup Screen**
8. *Down* button to highlight **Staging**
9. Controller will ask for **Mfg Level Password**
    Factory Default **Mfg Level Password**: **1914**
    Press *Enter*
10. *Enter button* to select/change Stg Delay (Mins)
11. *Up/Down* buttons to adjust time
12. **Enter** button to save new **Stg Delay** entry

13. *Left* button (5x) to **Home Screen**

Remote Sensors – External sensors can be added to perform as a **Remote Indoor Air Temperature Sensor**, as an **Outdoor Air Temperature Sensor**, as a **Remote Occupancy Sensor**, and as a **Leaving Air Temperature Sensor**.

Remote Indoor Air Temperature Sensor (8301-062) can have multiple functions.   The controller can be configured to look at the **Remote** as the primary temperature sensor, or as an **Averaged** reading between the remote and the onboard sensor, or to choose between the **Highest** of the two readings, or to choose between the **Lowest** of the two sensors. Attach the 10k Ohm Thermister to the two terminals marked "**REM**" and **"GND"** on the baseplate of the controller, and configure the CompleteStat™ as noted below.

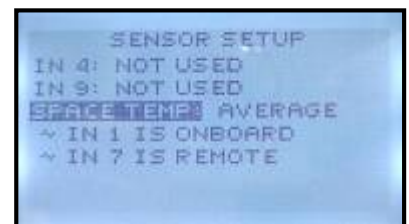**To add a remote temperature sensor/change the parameters of a remote sensor from the home screen, press…**

1. *Right* button to access the **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Enter* button again to select/enter **Applications Screen**
5. Controller will ask for **Admin Level Password**
   Factory Default Admin Level Password: **BARD**
   Press **Enter**
6. *Down* button through entries to highlight **Additional Setup**
7. *Enter* button to select/enter **Additional Setup Screen**
8. *Down* button through entries to highlight **Sensors**
9. *Enter* button to select/enter **Sensors Screen**
10. Controller will ask for **Mfg Level Password**
    Factory Default Admin Level Password: **1914**
11. Press **Enter**
12. *Down* button to highlight **Space Temp**
13. *Enter* button to access **Space Temp** entry
14. *Up/Down* button to toggle between **Space Temp** entries:
    - **Onboard** – integral temp sensor reading only
    - **Remote** – thermistor reading only
    - **Average** – averaged reading between remote thermistor and onboard sensor
    - **Highest** – controller will read highest of two readings
    - **Lowest** – controller will read lowest of two readings
15. *Enter* button to save new **Space Temp** entry
16. *Left* button (5x) to home screen
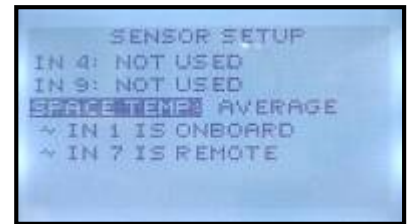
Outdoor Air Temperature Sensor (8301-061) can be used to simply show outdoor temperatures, or to configure auxiliary heat control strategy (see **Auxiliary Heat/Electric Heat Setup** in the Quick Start Manual. Attach the 10k Ohm Thermister to the two terminals marked "**OAT**" and **"GND"** on the baseplate of the controller, and configure the CompleteStat™ as noted below.

To add an outdoor temperature sensor/change the parameters of an outdoor sensor from the home screen, press…

1. *Right* button to access the **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Enter* button again to select/enter **Applications Screen**
5. Controller will ask for **Admin Level Password**
   Factory Default Admin Level Password: **BARD**
   Press **Enter**
6. *Down* button through entries to highlight **Additional Setup**
7. *Enter* button to select/enter **Additional Setup Screen**
8. *Down* button through entries to highlight **Sensors**
9. *Enter* button to select/enter **Sensors Screen**
10. Controller will ask for **Mfg Level Password**
    Factory Default Admin Level Password: **1914**
11. Press **Enter**

12. *Enter* button again to access **IN 4** entry
13. *Up/Down* button to toggle between **IN 4** entries:
    - **Not Used** – Default
    - **Outside Air Temp** – Remote Sensor
14. *Enter* button to save new **IN 4** entry
15. *Left* button (5x) to home screen

<u>Remote Occupancy Sensor</u> can be used to remote or enhance occupancy coverage. While Bard does not currently offer a branded sensor as a part number, the **Sensorswitch™ WV-16-R or CM-9-R Series Sensor** – or any equivalent close-on-occupancy switch – would work. The sensor works in conjunction with the onboard sensor to provide additional coverage; any motion sensed by either sensor will activate occupancy. Attach the close-on-occupancy switch leads to terminals marked **"ROS"** and **"GND"** on the baseplate of the controller and configure as noted below.

To add a remote occupancy sensor/change the parameters of an occupancy sensor from the home screen, press…

16. *Right* button to access the **Main Menu** screen
17. *Down* button through entries to highlight **Advanced**
18. *Enter* button to select **Advanced** and enter **Advanced Screen**
19. *Enter* button again to select/enter **Applications Screen**
20. Controller will ask for **Admin Level Password**
    Factory Default Admin Level Password: **BARD**
    Press **Enter**
21. *Down* button through entries to highlight **Additional Setup**
22. *Enter* button to select/enter **Additional Setup Screen**
23. *Down* button through entries to highlight **Sensors**
24. *Enter* button to select/enter **Sensors Screen**
25. Controller will ask for **Mfg Level Password**
    Factory Default Admin Level Password: **1914**
26. Press **Enter**
27. *Enter* button again to access **IN 8** entry
28. *Up/Down* button to toggle between **IN 8** entries:
    - **Not Used** – Default
    - **Occupancy** – Remote Sensor
29. *Enter* button to save new **IN 8** entry
30. *Left* button (5x) to home screen
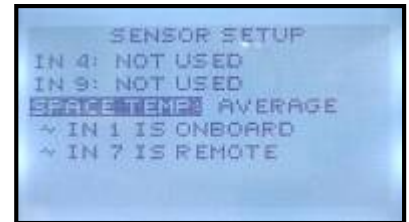
<u>Leaving Air Temperature Sensor</u> (8301-014) can be added, however, access to the temperature readings will only be available through a BACnet platform. No configuration of the controller is necessary. Attach the sensor leads to terminals marked "LAT" and "GND" on the baseplate of the controller.

<u>Dehumidification Setup</u> – the **CompleteStat™** can be configured to dehumidify, but only through a specific HVAC system that has built-in dehumidification capabilities (i.e.: hot gas reheat coil). Upon humidity rise past preset setpoint, the "D" terminal will become energized.

To access the dehumidification option from the Home Screen, press…

14. *Right* button to access the **Main Menu** screen
15. *Down* button through entries to highlight **Advanced**
16. *Enter* button to select **Advanced** and enter **Advanced Screen**
17. *Enter* button again to select/enter **Applications Screen**
18. Controller will ask for **Admin Level Password**
    Factory Default Admin Level Password: **BARD**
    Press **Enter**
19. *Down* button to highlight **Additional Setup**
20. *Enter* button to select **Additional Setup** and enter **Additional Setup Screen**
21. *Down* button to highlight **Humidity**
22. *Enter* button to select **Humidity** and enter **Humidity Screen**
23. *Enter* button again to choose **Dehumidification**
24. *Enter* button again to highlight current **Dehumidification** choice (default Disable)
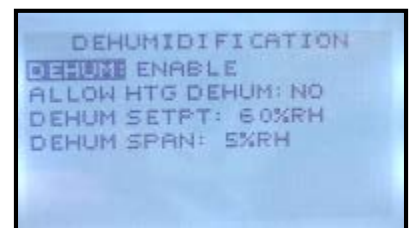
25. *Up/Down* button to toggle **Enable**
26. *Enter* button to select/save **Enable** choice
27. *Down* button through new **Dehumidification Screen** entries:
    - **Allow Htg Dehum** – allows dehumidification in heating as well as in cooling
    - **Dehum Setpt** – the Relative Humidity (RH) % setpoint
    - **Dehum Span** – the amount of RH% removal allowed past setpoint
28. *Enter* button on selected **Dehumidification** Screen entry
29. *Up/Down* button to toggle through available entries or levels
30. *Enter* button to save specific entry changes
    - Repeat steps 14 through 17 for remainder of Dehumidification Screen entries
31. *Left* button (6x) to **Home Screen**

Temperature Limits – absolute limits can be set to ensure no user can raise/lower occupied or unoccupied temperatures past specific setpoints, or that setpoints cross specific minimum differential margins.

To access/change temperature limits from the Home Screen, press…
1. *Right* button to access the **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Down* button to highlight **Limits**
5. *Enter* button to select/enter **Limits Screen**
6. *Up/Down* button to highlight appropriate choice:
    - Occ Min Clg
    - Occ Max Htg
    - Unocc Min Clg
    - Unocc Max Clg
    - Min Setpt Diff
7. *Enter* button to select/enter appropriate choice
8. *Up/Down* button to adjust limit temperatures
9. *Enter* button to save new limit choice
    - Repeat steps 6 through 9 for all changes to Temperature Limits
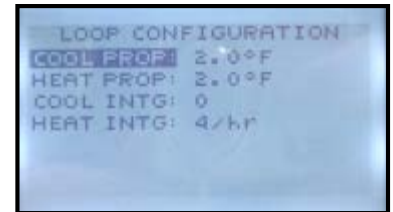10. *Left* button (3x) to **Home Screen**
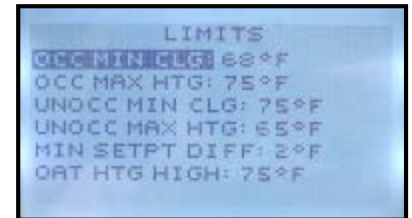
Minimum Setpoint Differential & Heating/Cooling Proportional Bands:
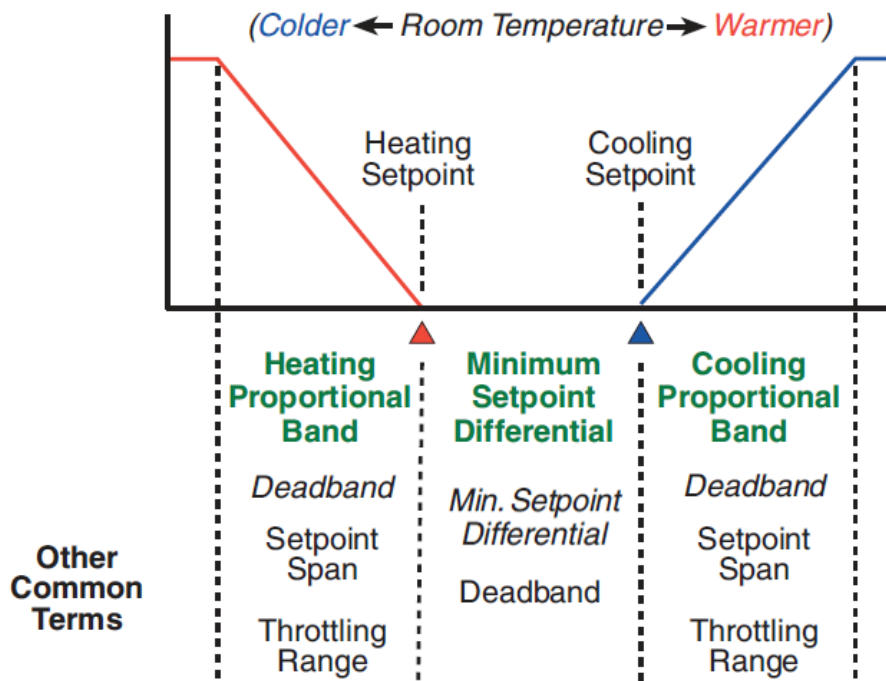
Heating/Cooling Loop Configuration – Heating/Cooling proportional bands and Integers can be adjusted
To access/change the PID Loop configurations from the home screen, press…

1. **Right** button to **Main Menu**
2. **Down** button to highlight **Advanced**
3. **Enter** button to select and enter **Advanced Screen**
4. **Down** button to highlights **Loops**
5. **Down** button to highlight appropriate choice…
   - **Cool Prop** – Cooling Proportional Band (Default 2°F)
   - **Heat Prop** – Heating Proportional Band (Default 2°F)
   - **Cooling Intg** – Do not change from factory default
   - **Heating Intg** – Do not change from factory default
6. **Enter** button to select appropriate choice
7. **Up/Down** buttons to adjust setting
8. **Enter** button to save new setting
9. **Left** button (3x) to **Home Screen**

Indoor Blower Settings – The indoor blower can be set for **Auto** or **On** in either **Occupied** or **Unoccupied** conditions.
To access/change Blower Settings from the Home Screen, press…

1. **Left** button to highlight **Current Operation Status Line**
2. **Down** button to highlight **Fan Status Line**
3. **Enter** button to select **Fan Status Line** and enter
   Fan Modes Screen
4. **Down** button through selections, adjust as necessary…
   - **Unocc**: **"ON"** = system fan will run continuously during all operational modes,
     "Auto" = system fan will operate during call for cooling or heating, but will
     cycle off when no compressor or no heating is needed (**Factory Default**).
   - **Occ**: **"ON"** = system fan will run continuously during all operational modes
     (**Factory Default**), **"Auto"** = system fan will operate during call for cooling or
     heating, but will cycle off when no compressor or no heating is needed.
5. **Enter** button to save changes to Fan Modes selections
   - Repeat steps 4 through 5 for all changes to Fan Modes Selections
6. **Left** button to return to Home Screen

Alarms Feature – High temperature, low temperature, high CO2 levels, and other specific anomalies will be
recorded within an internal page. Alarms may be viewed and deleted as necessary for serviceability[4].
To view/delete internal Alarms, press…

1. **Right** button to access **Main Menu** screen
2. **Down** button through entries to highlight **Alarm**
3. **Enter** button to select **Alarm** and enter **Alarm Screen**
   - Logged alarms with show brief description/date
4. **Enter** button to show more detailed description of **Alarm**
5. **Enter** button to be given **delete** choice
6. **Enter** button to delete alarm
7. **Left** button to navigate back to **Main Menu**
8. **Left** button to navigate back to **Home Screen**

[4]***NOTE:*** When an internal alarm has been registered, a "Service" indicator will begin
flashing on the Home Screen. This does not interfere with normal operation and will
disappear once all alarms have been deleted.

Security Settings – There are two (2) locking styles of User Interfaces (see **Display Options**), five (5) separate areas that
can be controlled by passwords, and four (4) individual levels of security.
To deactivate locking user interface (Hospitality or Locked UI), press…

1. **Right** button AND **Enter** button simultaneously, hold for 5 seconds
2. **Left** button (while still holding **Right** and **Enter** buttons), hold for 5 seconds
3. Release **Right** button (while still holding **Left**/**Enter** buttons), hold for 5 seconds

4. Once **FLEXSTAT** screen appears, *Down* button two (2) spaces past the **TIME** line
5. *Enter* button to deactivate locking user interface and return to Main Menu[5]

[5]**NOTE:** This will only temporarily deactivate the locking user interface.

To cancel locking user interface from Main Menu Screen, press…
1. *Down* button through entries to highlight **Advanced**
2. *Enter* button to select **Advanced** and enter **Advanced Screen**
3. *Down* button through entries to highlight **User Interface**
4. *Enter* button to select **User Interface** and enter **User Interface Screen**
5. Controller will ask for **Admin Level Password**
   Factory Default Admin Level Password: **BARD**
   Press **Enter**
6. *Down* button to highlight **Mode**
7. *Enter* button to select Mode
8. *Up/Down* to toggle **Standard**
9. *Enter* button to save **Standard** mode
10. *Left* button (3x) to **Home Screen3**
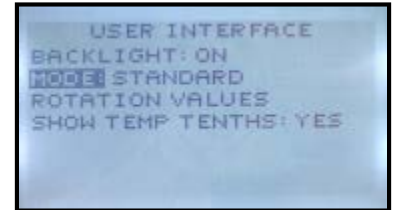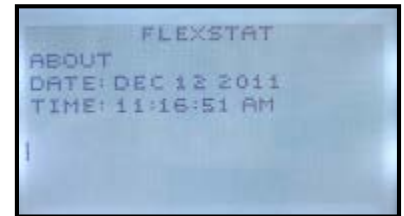
To access/program areas of security from Home Screen, press…
1. *Right* button to access **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Down* button through entries to highlight **Security**
5. *Enter* button to select **Security** and enter **Security Screen**
6. Controller will ask for **Admin Level Password**
   Factory Default **Admin Level Password**: **BARD**
7. *Enter* button to select **Access Levels** and enter **Access Levels Screen**, Scroll through and select among the **five (5) Access Levels** you would like to secure:
   Setpoint Adj, **Main Menu**, **System Mode**, **Occ Override**, and/or **Fan Occ/Unocc**
8. *Up/Down* button to select among the **four (4) levels of security** for each **Access Level**…
   None, **User**, **Operator**, and **Administrator**
9. *Enter* button to select the new level of security for the **Access Level**
   - Repeat steps 6 through 8 for each of the five (5) **Access Levels**
10. *Left* button to navigate back to **Security Screen**
11. *Left* button to navigate back to **Advanced Screen**
12. *Left* button to navigate back to **Main Menu**
13. *Left* button to navigate back to **Home Screen**
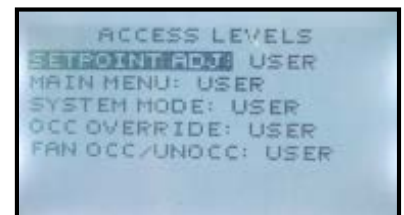
To access/change Passwords from the Home Screen, press…
1. *Right* button to access **Main Menu** screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Down* button through entries to highlight **Security**
5. *Enter* button to select **Security** and enter **Security Screen**
6. Controller will ask for **Admin Level Password**
   Factory Default **Admin Level Password**: **BARD**
7. *Down* button through entries to highlight **Passwords**
8. *Enter* button to select **Passwords** and enter **Passwords Screen**
10. *Up/Down* button to select among the **three (3) levels of security passwords**
    User, **Operator**, and **Administrator** ("None" Level has no Password)
11. *Enter* button to select specific **Password**
12. *Up/Down* and *Right* button to enter digits to specific **Passwords**
13. *Enter* button to save **Password**
    - Repeat steps 9 through 12 for each of the **three (3) levels of security passwords**
14. *Left* button to navigate back to **Security Screen**

15. *Left* button to navigate back to **Advanced Screen**
16. *Left* button to navigate back to **Main Menu**
17. *Left* button to navigate back to **Home Screen**

[5]***NOTE:*** After any password is given, the only delay to enabling security programming will be the **Inactivity (Secs)** setting of controller (60 seconds is factory default). Once 60 seconds of button inactivity is realized, security settings will go into effect.

[6]***NOTE:*** If Admin password is changed to "0000," it will inactivate all security passwords, and allow unlimited access at all levels.

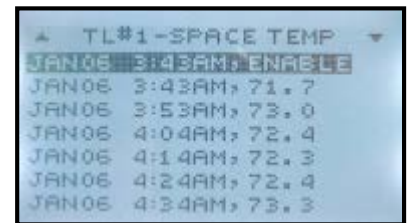**To access/change Inactivity (Secs) setting of controller from the Home Screen, press…**
1. *Right* button to access the **Main Menu** Screen
2. *Down* button through entries to highlight **System**
3. *Enter* button to select **System** and enter **System Screen**
4. *Down* button through entries to highlight **Inactivity (Secs)**
5. *Enter* button to select **Inactivity** and highlight seconds
6. *Up/Down* button to adjust amount of seconds of inactivity
7. *Enter* button to save new time limit
8. *Left* button to navigate back to **Main Menu**
9. *Left* button to navigate back to **Home Screen**
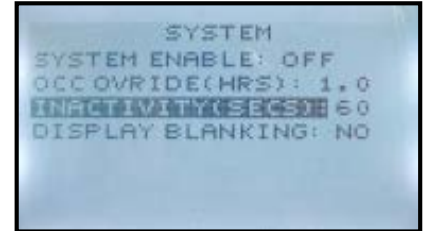
Trend Logs – The controller can be enabled to show a history log of recorded information, specific to input sensors installed on the unit. Space temperature and CO2 levels have been set up as a factory default logs, with ten (10) minute-samples taken continuously. Adjustments may be made to duration and frequency of sampling, and logs may be customized to show additional information.

To access Trend Logs from the Home Screen, press…
1. *Right* button to access the **Main Menu** Screen
2. *Down* button through entries to highlight **Trend Viewer**
3. *Enter* button to select **Trend Viewer** and enter **Trend Viewer Screen**
4. *Down* button through entries to highlight chosen **Log**
5. *Enter* button to select **Log** and view recorded results
6. *Left* button to navigate back to **Trend Viewer Screen**
7. *Left* button to navigate back to **Main Menu**
8. *Left* button to navigate back to **Home Screen**

To program new Trend Logs from the Home Screen, press…
1. *Right* button to access the **Main Menu** Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select **Advanced** and enter **Advanced Screen**
4. *Down* button through entries to highlight **Trend Logs**
5. *Enter* button to select **Trend Logs** and enter **Logs Screen**
6. *Down* button to highlight chosen Trend Logs
    - **Trend1** is factory default set-up to trend space temp
    - **Trend2** – **Trend8** are programmable
7. *Enter* button to select chosen **Log** and enter **Setup Screen**
8. *Down* button to highlight **Object Ref**.
9. *Select* button to select **Object Ref** and choose from the following…
    - **AV40** – Space Temperatures (Factory Default Trend1)
    - **AV78** – CO_2 Levels (Factory Default Trend3)
    - **AI5** – Humidity Levels
    - **BI6** – Occupancy
    - **AV23** – Outdoor Air Temperature
    - **AI3** – Leaving Air Temperature
10. *Down* button to highlight **Log Enable**
11. *Enter* button to select **Log Enable**
12. *Up/Down* button to toggle **False** to **True**
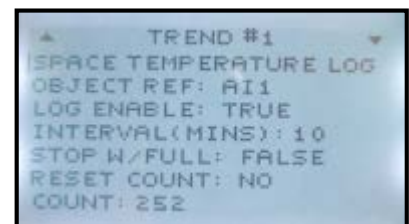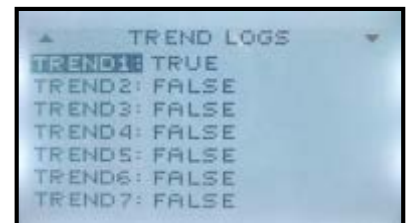
13. *Enter* button to save **True** Setting
14. *Down* button to highlight Interval (Mins)
15. *Enter* button to select Interval (Mins)
16. *Up/Down* button to adjust minutes of interval between readings
17. *Enter* button to save new setting
18. *Left* button to navigate back to **Trend Log Screen**
19. *Left* button to navigate back to **Advanced Screen**
20. *Left* button to navigate back to **Main Menu Screen**
21. *Left* button to navigate back to **Home Screen**

Restart – Should the controller exhibit erratic/haphazard performance during programming or operation, a "soft-restart" function has been enabled into the programming.

To initiate a Restart from the Home Screen, press…
1. *Right* button to access the **Main Menu Screen**
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Restart/Restore**
5. *Select* button to select/enter **Restart/Restore** Screen
6. Controller will ask for **Admin Level Password**
   Factory Default **Admin Level Password**: **BARD**
7. *Enter* button to select **Restart**
8. *Up/Do*wn button and choose from the following options:
   - Warm Start (least intrusive, quickest response)
   - Cold Start (comprehensive restart)
   - No (no Restart made)
9. *Enter* button to initiate (Note: controller will restart to **Home Screen**)
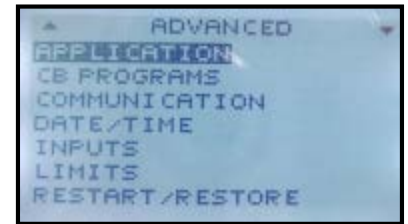
Restore Factory Settings – If the controller becomes unmanageable due to improper settings, the device can be reset to "factory" settings by initiating a Restore Factory command.

To initiate a Factory Reset from the Home Screen, press…
1. *Right* button to access the Main Menu Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Restart/Restore**
5. *Select* button to select/enter **Restart/Restore** Screen
6. Controller will ask for **Admin Level Password**
   Factory Default **Admin Level Password**: **BARD**
7. *Select* button to select/enter **Restart/Restore**
8. *Down* button through entries to highlight **Restore Factory**
9. *Enter* button to select **Restore Factory**
10. *Up/Do*wn button to Toggle **"No"** to **"Yes"**
11. *Enter* button to initiate (Note: controller will restart to **Home Screen**)
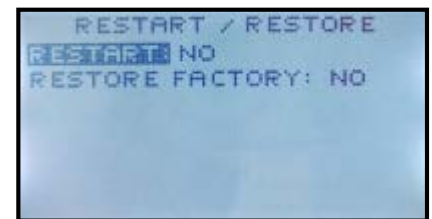
BACnet Communications – The Bard CompleteStat™ is a native BACnet Advanced Application Controller (B-AAC), and can simplify networked zone control for many kinds of common packaged HVAC equipment. The following section addresses the needs of BACnet applications only.

Typical Wiring for BACnet applications: For MS/TP communications, connect the EIA-485 wiring to the **–A** and **+B** terminals on the base plate of the controller. For Ethernet, IP, and Foreign Device communications (on "E" Models), plug an Ethernet cable directly into the **RJ-45** modular jack on the back of the controller.

To set protocol and parameters for BACnet communications from the home screen, press…
1. *Right* button to access the Main Menu Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Communication**
5. *Enter* button to select/enter **Communication Screen**

6. Controller will ask for **Mfg Level Password**
   Factory Default **Mfg Level Password**: **1914**
7. *Enter* button select **Active**
8. *Up/Down* button through entries to edit **Active** communication selection and select appropriate method…
   - **MS/TP** – Factory Default
   - **IP**[7] – Requires restart of controller (see **Restart**)
   - **Ethernet**[8] – Requires restart of controller (see **Restart**)
   - **Foreign Device**[7] – Requires restart of controller (see **Restart**)
   - **Configure** – Do not choose at this point
9. *Enter* button to select/save new method of communication, will require restart if different than default
10. Once restarted, follow steps 1 through 6 to return to **Communication**
11. With new/default selection in place, view the parameters associated with that specific choice
    - **MAC Address**, **Baud**, **Auto-Baud**, **Max Master**, etc. - All are READ-ONLY at this point
12. To edit read-only parameters, *Up/Down* button to highlight **Active**
13. *Enter* button to select **Active**
14. *Up/Down* button to toggle **Configure**
15. *Up/Down* button to choose communication settings to edit **(Ethernet, IP, Foreign Device, MS-TP)**
16. *Enter* button to select communication settings (now will allow editing)
17. *Up/Down* button to select specific parameter
18. *Enter* button to choose specific parameter
19. **Up/down** button to change parameter settings
20. Repeat steps 17 through 19 for each parameter that needs adjustment
21. *Left* button to **Communications** screen
22. *Enter* button to initiate (Note: controller will restart to **Home Screen**)
23. *Up/Down* button to highlight **Active**
24. *Enter* button to select **Active**
25. *Up/Down* button to change **Configure** setting to original/desired mode of communication
26. *Enter* button to save mode of communication
27. *Left* button (3x) to Home Screen.
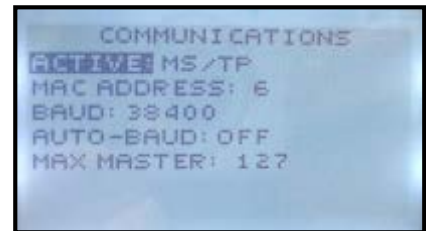
NOTE[7]: Please consult with local system administrator for the appropriate settings for the IP Address, Subnet Mask, Gateway, and UDP Port.

NOTE[8]: Ethernet communications are essentially plug-and-play, and the MAC address is not changeable.

To access the device Instance, Name, and Location from the home screen, press…
1. *Right* button to access the **Main Menu** Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Device**
5. *Enter* button to select/enter **Device**
6. Controller will ask for **Mfg Level Password**
   Factory Default **Mfg Level Password**: **1914**
7. *Up/Down* button through entries to highlight choice:
   - **Instance**
   - **Location**
   - **Name**
8. *Enter* button to select highlighted choice:
9. *Up/Down* to change default entry of selected choice
10. *Enter* button to save choice
    - Repeat steps 7 through 9 to change other entries
11. *Left* button (3x) to Home Screen.
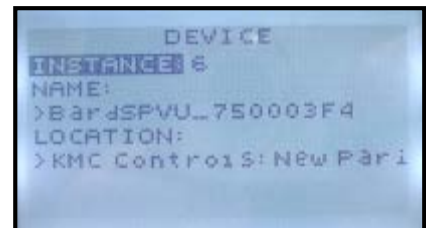
Advanced Time Settings for BACnet Applications: If a **CompleteStat™** is used in a BACnet network with UTC (Coordinated Universal Time) synchronization (via broadcasting or addressing a single thermostat) set the **UTC Offset Value**. The **UTC Offset value** is in minutes and corresponds to the distance of the local time zone to the zero degree meridian. In stand-alone operation or networks that do not have UTC broadcasts, setting this value is not necessary.

To set the UTC Offset Value from the home screen, press…
1. *Right* button to access the Main Menu Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Date/Time**
5. *Enter* button to select/enter **Date/Time**
6. *Down* button through entries to highlight **UTC OFFSET**
7. *Enter* button to select/change **UTC OFFSET**
8. *Up/Down* button to enter appropriate minutes of offset from chart below
9. *Enter* button to save **UTC OFFSET** minutes
10. *Left* button (3x) to Home Screen

UTC Offset Minutes Sample Time Zones:

Alaska	540 Minutes
USA/Canada Pacific Standard Time	480 Minutes
USA/Canada Mountain Standard Time	420 Minutes
USA/Canada Central Standard Time	360 Minutes
USA/Canada Eastern Standard Time	300 Minutes
Bolivia, Chile	240 Minutes
Argentina, Uruguay	180 Minutes
United Kingdom, Portugal	0 Minutes
Europe (Most Countries)	- 60 Minutes
Egypt, Israel, Turkey	- 120 Minutes
Kuwait, Saudi Arabia	- 180 Minutes
United Arab Emirates	-240 Minutes
India, Sri Lanka	- 330 Minutes
China, Mongolia	- 480 Minutes
Korea, Japan	- 540 Minutes
New Zealand	- 720 Minutes

WARNING: All other levels of programming within this control are specific to performance parameters of this unit, and changes or alterations may result in damage to the unit and/or component failure. Before making any changes to specific programming details not present in this manual, please consult with the Technical Service Department of Bard Manufacturing Co.

Temperature Sensor Calibration – Using an accurate thermometer, measure the temperature of the space immediately surrounding the CompleteStat™. If an undesirable difference exists between the thermometer reading and the on-board temperature sensor reading, you may install an offset to more accurately present the temperature.

To initiate a Factory Reset from the Home Screen, press…
1. *Right* button to access the **Main Menu** Screen
2. *Down* button through entries to highlight **Advanced**
3. *Enter* button to select/enter **Advanced Screen**
4. *Down* button through entries to highlight **Inputs**
5. *Enter* button to select/enter **Inputs** Screen
6. *Enter* button again to select **Space Temp**
7. *Down* button through entries to select/enter **Cal. Offset**
8. *Up/Down* button to enter amount of degrees offset desired
9. *Enter* button to save desired degrees of calibration offset
10. *Left* button (4x) to **Home Screen**