



ADVANCED PROGRAMMING & FEATURES

**Controller: 8403-066
ECU Series Controller**



Manual: 2100-560
Supersedes: **NEW**
File: Tab 19
Date: 05-02-11

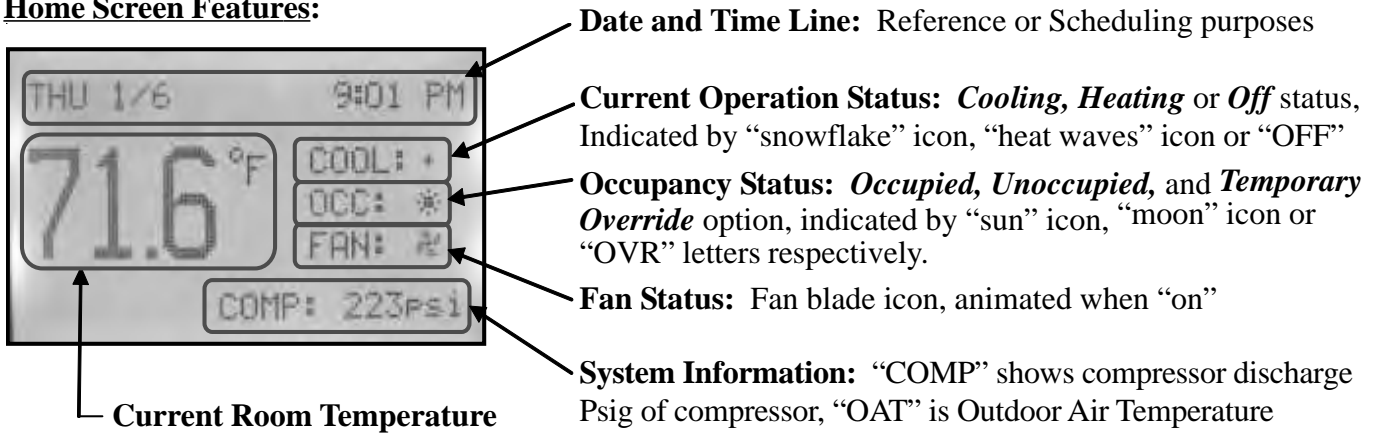
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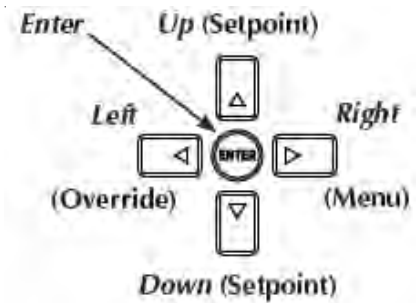
***NOTE:** Implement Controller Install/Operation/Quick Start Guide first.

Home Screen Features:



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

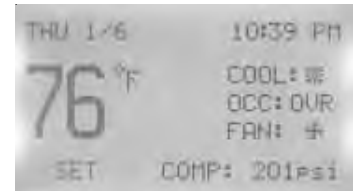


*Note: Access to the Main Menu, setpoint adjust, and System/Occupancy/Fan override may require a password.

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 1 hour).

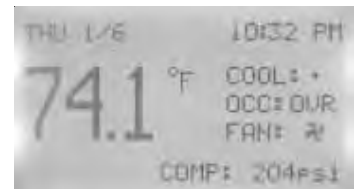
To change temperature temporarily from the Home Screen, press:

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**.



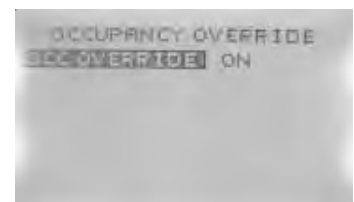
To cancel Temporary Override from the Home Screen, press:

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(s) to change from “ON” to “OFF”
6. **Enter** button to select override cancellation
7. **Left** button to navigate back to **Home Screen**



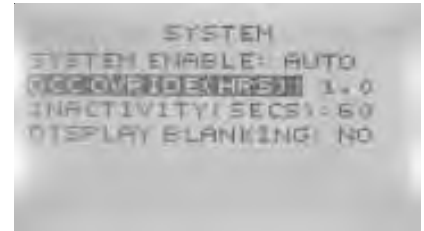
To adjust Temporary Override time length from Home Screen, press:

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**



Adjusting Temporary Override time length (continued)

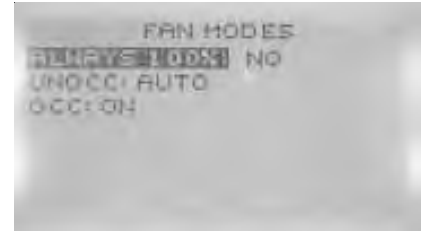
4. **Down** button through entries to highlight **Occ Override (Hrs)**
5. **Enter** button to select **Occ Override (Hrs)**
6. **Up/Down** button(s) to adjust time
(1/2 hour increments, Max. 12 hours)
7. **Enter** button to select new override time limit
8. **Left** button to navigate back to **Main Menu**
9. **Left** button to navigate back to **Home Screen**



Indoor Blower Settings: The indoor blower can be set to **always** run at 100% capacity regardless of call, and also to run in either continuous or auto mode during occupied (always) periods.

To access/change Blower Settings from the Home Screen, press:

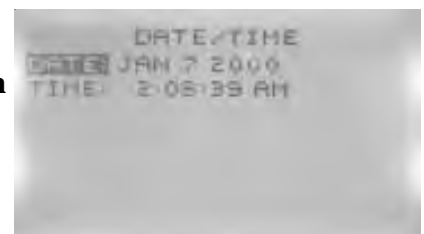
1. **Left** button to highlight **Current Operation Status Line**
2. **Down** button to highlight **Fan Status Line**
3. **Enter** button to select **Fan Status Line** and enter **Fan Modes Screen**
4. **Down** button through selections, adjust as necessary.
 - **Always 100%: "YES"** = system blower always runs 100% speed regardless of compressor modulation or stages of heating, **"NO"** = system blower modulates to specific speeds engineered by factory for best efficiency (**Factory Default**)
 - **Unocc:** Since scheduling is not active on this controller, this setting has no effect on fan operation.
 - **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



Setting Date/Time: 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** button(s) to adjust existing **Month, Day, Year**
6. **Enter** button to select new entry
7. **Down** button to highlight **Time:**
8. **Up/Down** button(s) to adjust existing **Hours, Minutes, Seconds**
9. **Enter** button to select new entry
10. **Left** button to navigate back to **Main Menu**
11. **Left** button to navigate back to **Home Screen**



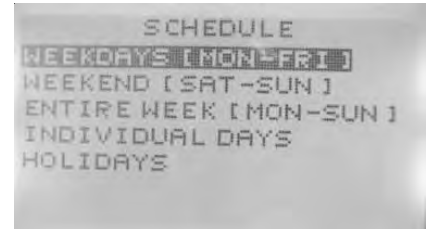
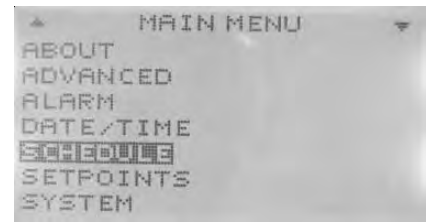
Scheduling: Scheduling is not a necessary part of the initial programming. It is an optional function meant to allow for **setback** temperatures during **unoccupied** periods. From the factory, the controller has no scheduling and will only allow **occupied** setpoints unless otherwise scheduled. If scheduling is desired, current **Date/Time** will be necessary (see above).

***Note:** Scheduling is NOT available for **CCVC** or **CCFC** system operation.

Scheduling: (continued)

To access scheduling from the Home Screen, press:

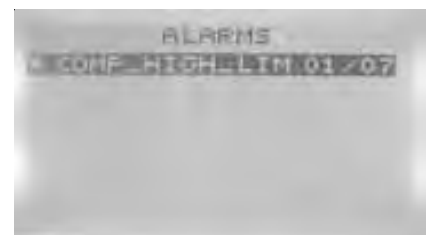
1. **Right** button to access **Main Menu** Screen
2. **Down** button through entries to highlight **Schedule**
3. **Enter** button to select **Schedule** and enter **Schedule** Screen
 - Use the Up/Down buttons to scroll through schedule options **Weekdays** and **Weekend** for a “5+2” style of scheduling
 - *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, and is not suitable for use in a stand-alone ECU-Controller configuration.
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**



Alarms Feature: High pressure, low pressure, high temperature, and low temperature anomalies will be recorded within an internal page. Alarms may be viewed and deleted as necessary for serviceability.

To view/delete internal Alarms, press:

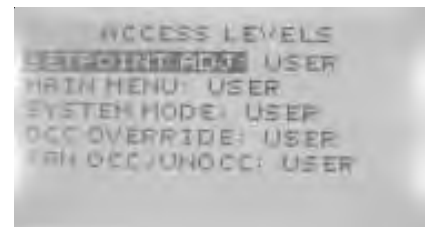
1. **Right** button to access **Main Menu** Screen
2. **Down** button through entries to highlight **Alarm**
3. **Enter** button to select **Alarm** and enter **Alarm** Screen
 - Logged alarms with show brief description/date
4. **Enter** button to show more detailed descriptions of **Alarm**
5. **Enter** 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**



Security Settings: There are five (5) separate areas that can be controlled by passwords, and four (4) individual levels of security.

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**

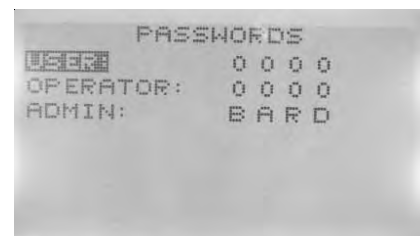


Security Settings: (continued)

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 Fan Occ/Unocc
8. **Up/Down** button(s) 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**
9. **Left** button to navigate back to **Security Screen**
10. **Left** button to navigate back to **Advanced Screen**
11. **Left** button to navigate back to **Main Menu**
12. **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**
9. **Up/Down** button(s) to select among the **three (3) levels of security passwords**
User, Operator, and Administrator (“None” Level has no Password)
10. **Enter** button to select specific **Password**
11. **Up/Down** and **Right** button(s) to enter digits to specific **Passwords**
12. **Enter** button to save **Password**
- Repeat steps 9 through 12 for each of the **three (3) levels of security passwords**
13. **Left** button to navigate back to **Security Screen**
14. **Left** button to navigate back to **Advanced Screen**
15. **Left** button to navigate back to **Main Menu**
16. **Left** button to navigate back to **Home Screen**

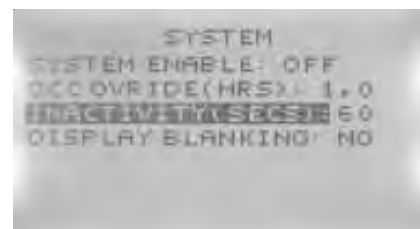


***Note:** After any password is given, the only delay to enabling security programming will be the **Inactivity (Secs)** setting of controller (60 seconds is factory default). Once 60 seconds of button inactivity is realized, security settings will go into effect.

****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:

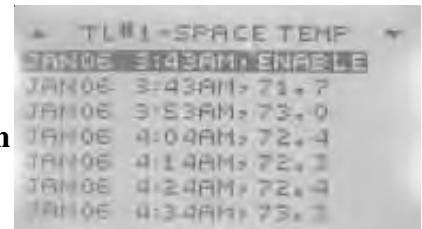
1. **Right** button to access **Main Menu Screen**
2. **Down** button through entries to highlight **System**
3. **Enter** button to select **System** and enter **System Screen**
4. **Down** button through entries to highlight **Inactivity (Secs)**
5. **Enter** button to select **Inactivity** and highlight seconds
6. **Up/Down** button(s) 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 has been set up as a factory default log, with 10 min. samples taken continuously.

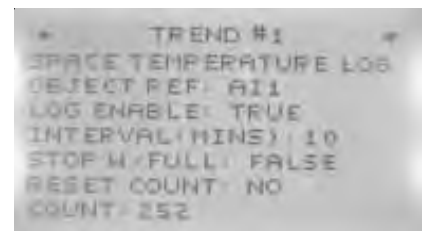
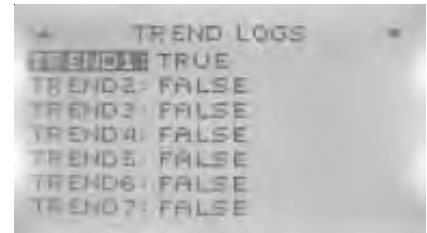
To access Trend Logs from the Home Screen, press:

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** & 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 Trend Logs from the Home Screen, press:

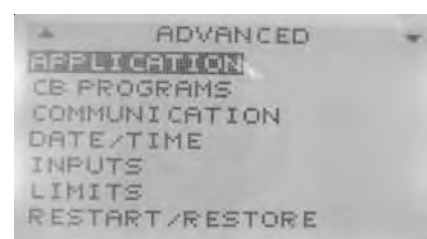
1. **Right** button to access **Main Menu** Screen
2. **Down** button through entries to highlight **Advanced**
3. **Enter** button to select **Advanced** and enter **Advanced Screen**
4. **Down** button through entries to highlight **Trend Logs**
5. **Enter** button to select **Trend Logs** and enter **Logs Screen**
6. **Down** button to highlight chosen Trend Logs
 - **Trend 1** is factory default set-up to trend space temp
 - **Trend 2 - Trend 8** 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:
 - All Space Temperature (Factory Default Trend 1)
 - BV1 Occupancy - BO1 Indoor Fan -AV1 Minimum Deadband
10. **Down** button to highlight **Log Enable**
11. **Enter** button to select **Log Enable**
12. **Up/Down** button(s) 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(s) 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-start” function has been enabled into the programming.

To initiate a Restart from Home Screen, press:

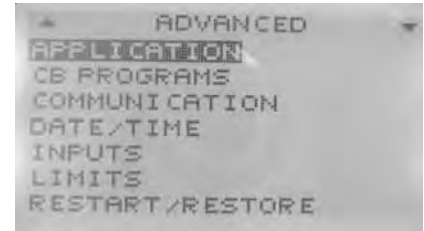
1. **Right** button to access the **Main Menu** Screen
2. **Down** button through entries to highlight **Advanced**
3. **Enter** button to select/enter **Advanced Screen**
4. **Down** button through entries to highlight **Restart/Restore**
5. **Select** button to select/enter **Restart/Restore Screen**
6. Controller will ask for **Admin Level Password**



Factory Default **Admin Level Password: BARD**

Initiating a Restart (continued)

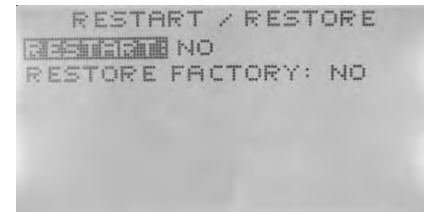
7. **Enter** button to select **Restart**
 8. **Up/Down** button(s) and choose from the following options:
 - Warm Start (least intrusive, quickest response)
 - Cold Start (comprehensive restart)
 - No (no Restart made)
 9. **Enter** button to initiate
- Note: controller will restart to **Home Screen**



Restore Factory: 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**
 9. **Enter** button to select **Restore Factory**
 10. **Up/Down** button(s) to Toggle “**No**” to “**Yes**”
 11. **Enter** button to initiate
- Note: controller will restart to **Home Screen**



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 Company, Inc.