

User Guide:

IntelliZone2 MasterStat System
 Communicating with Humidity Control Thermostat

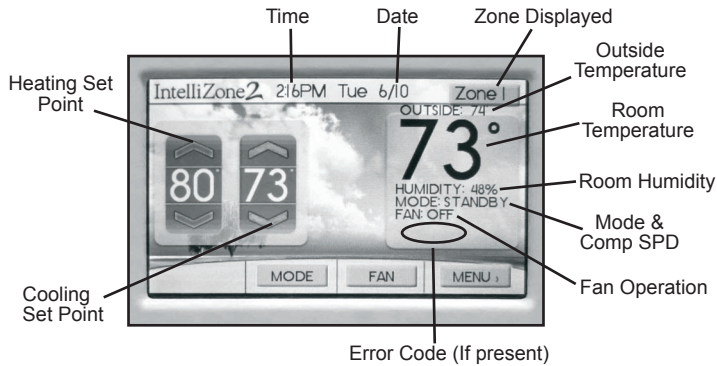


IntelliZone2 MasterStat Communicating with Humidity Control

IntelliZone2 MasterStat Thermostat User Information

This thermostat is a wall mounted, low-voltage thermostat which maintains room temperature by controlling the operation of a heating and air conditioning system. Batteries are not required; temperature and mode settings are preserved with the power off. This communicating thermostat communicates via a 4-wire Modbus protocol and will only operate with the IntelliZone2 and Aurora AXB.

Thermostat Operation



NOTE: Outdoor temperature is only displayed if the outdoor sensor is installed.

To select a MODE, press the screen button MODE, and then press the desired operating mode.

- OFF
- HEAT
- COOL
- AUTO (heat and cool as needed)
- E-HEAT

Adjusting Temperature

(Temporary Override in Programmable models)

Press the blue up or down arrow to increase or decrease the cooling temperature set point. Press the red up or down arrow to increase or decrease the heating temperature set point. Depending on the selected mode one or both sets of the up/down arrows will be selectable.

If a programmed schedule is active, the cancel button will appear in the lower left hand corner of the screen when temperature or mode selections are made. Select this button to cancel any changes that were made.

Menu

Press the Menu button.



NOTE: The humidity function must be enabled by the installer for it to display on this screen. If your system does not use a humidifier this function may not be enabled.

Fan Operation

The thermostat can operate the fan in three ways:
 AUTO (on only during heating and cooling operation) (DEFAULT)
 CONTINUOUS (always on)
 INTERMITTENT (cycles fan)

From the Home screen or Menu Screen, press the Fan button. Select the operation you desire as described above by pressing the up and down arrows ▲▼.



Note: Continuous and Intermittent Fan selections are not recommended when one zone is set for heating mode and another zone is set for cooling mode. This is due to all zones having a common return-air system. Air from the zones will mix and lead to higher amount of run time.



Intermittent Fan

Temperature conditions can vary widely between the thermostat location and the extremities of the space the thermostat serves. This air stratification problem can be especially pronounced during mild outdoor conditions when long periods elapse between space conditioning demands from the thermostat. This intermittent fan operation can also improve the performance of air cleaning or special filtration systems that locate the cleaning or filtration media at the return air side of the fan. If the FAN hasn't been on for an hour, the fan will start cycling based on the times that the user enters in the set up of Intermittent Fan.

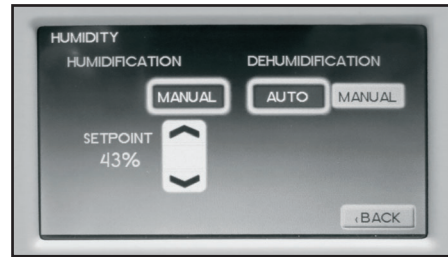
To turn intermittent fan on select FAN on the main screen and then INTERMITTENT, then press OFF next to ON TIME. Press the up and down arrows ▲▼ on the right hand side to adjust the fan on time, this is the amount of time you want the fan to be energized. Default is OFF. Ranges are OFF, or 5-20 minutes in 5 minute increments. Press the box to the right of OFF TIME this is the time the fan will be off. Press the up and down arrows ▲▼ on the right hand side to adjust the fan off time. Ranges are 5-40 in 5 minute increments. Fan ON and OFF cycles will continue until the fan has been energized by a call for heating or cooling.

The zones can be selected by touching the upper right screen text noting the zone. In this way you can cycle through all the active zones to view and change their configurations. If intermittent fan operation is desired in more than one zone then all zones should use the same ON/OFF times otherwise the last zone that was set will be followed for all zones.

Humidity

The humidity function must be enabled by the installer for this screen to be visible. If your system does not use a humidifier then this option may not be enabled. This allows adjustment of Humidification and Dehumidification settings. Options are Auto and Manual. Factory default setting for Dehumidification is "Auto". Humidification "Auto" is only available if an outdoor sensor is installed. Manual humidity choices range from 15% to 50% in 1% increments. Dehumidification choices range from 35% to 65% in 1% increments. For Variable Speed heat pumps, when "Dehumidification" or "Both" is selected in the Installer Setup, the Active Dehumidification feature will be enabled.

Active dehumidification (Variable Speed Heat Pumps Only) will only activate during cooling operation and is based upon the dehumidification set point of the thermostat being at least 5% below the actual relative humidity. When in active dehumidification the room temperature could be overcooled 1.5°F below set point. In this mode you may see increased energy usage.



Zone

This screen shows the status of the IntelliZone2 system on one screen. Displayed information includes zone size, priority, normalized zone size, zone temperature set points, zone temp, heating or cooling call, and damper open or closed.

ZONE STATUS								
ZN	SIZE	PRIO	NORM	CL	HT	TEMP	CALL	DAMPER
Z1	70	CMF	37%	78	78	Hi	Open	
Z2	45	CMF	24%	72	74	--	Closed	
Z3	45	CMF	24%	72	74	--	Closed	
Z4	25	ECO	13%	60	74	--	Closed	

From the 'Zone' screen, press next. This screen shows the information the IntelliZone2 system is sending to the Aurora controls and what the Aurora controls are responding.

ZONE STATUS 2			
ZONE CALL			
Mode:	Heat		
Comp Spd:	Hi		
Fan:	On		
Unit demand:	48	Aux Heat:	OFF
Fan demand:	63	Damper:	POWER
Dehumid:	50/ 29%	Comp Type:	N/A
Dehumid:	OFF		
Heat Staging:	FASTER I		
Cool Staging:	FASTER I		
Fan Staging:	N/A		



Naming Zones With Masterstat

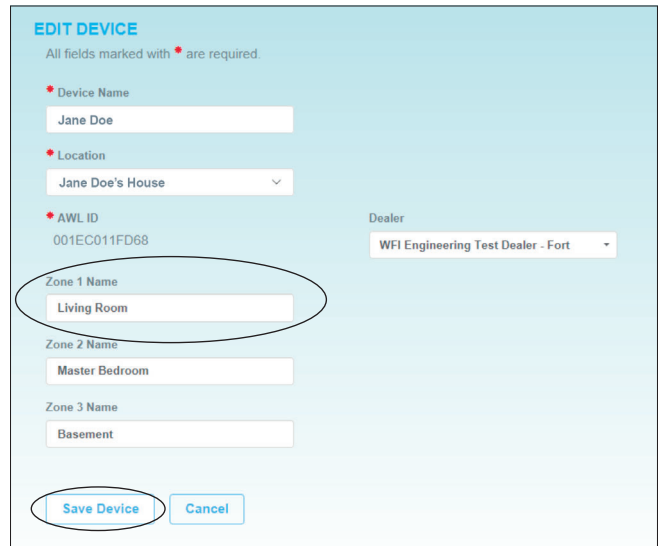
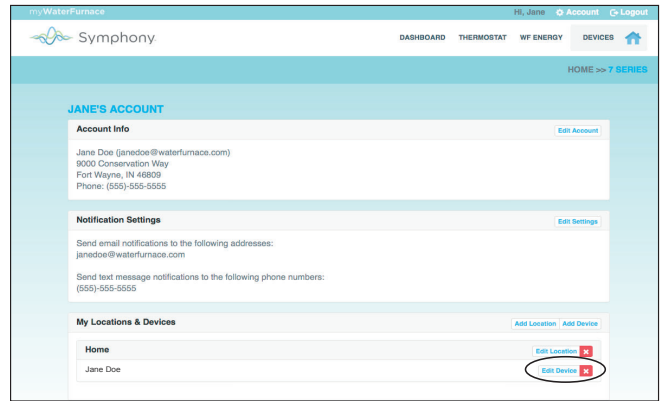
Press and hold the “Zone” button in the upper right hand corner to be able to name the zones. There is limited character size available for the naming. Z* will always be displayed at the beginning. Below are some recommended abbreviations.

Abbreviation	Definition
bed	bedroom
dinrm	dining room
gbed	guest bedroom
ils	in-law suite
grge	garage
kit	kitchen
liv	living
mbed	master bedroom
famrm	family room
stry	story
upstrs	upstairs
sunrm	sun room
bsmnt	basement
lowlv	lower level
thrm	theater room
exrm	exercise room
grtrm	great room
recrm	recreation room
bonrm	bonus room
off	office

Zone names will only be displayed on the MasterStat.

Naming Zones Using Symphony

The zone names on the Symphony Dashboard and app can be added/changed using Symphony. When using Symphony to name the zones it does not populate or change the names shown on the MasterStat. To add zone names log into your Symphony Dashboard, click on “Account” at the top of the dashboard. Click on “Edit Device”. The number of zones that the IntelliZone2 is configured for will be shown. Click on the zone and input the desired zone name. Repeat this for all the zones. Once completed click “Save Device”



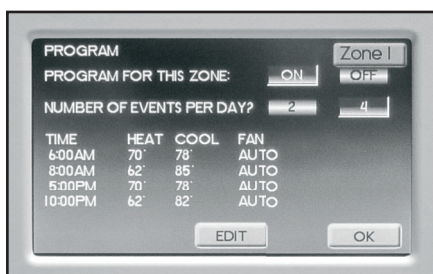
Zones can also be named using the mobile Symphony app. Go to the Symphony app. Select the three dots “:” in the upper right-hand corner. Select “Edit Friendly Name”, input the zone name and select save. To name the next zone select the next zone by swiping right to left. Repeat this process for all the zones.

By naming the thermostat you can use Alexa to make changes to the thermostats. For more information on Alexa refer to the WaterFurnace Symphony for Alexa user guide.

Programming Your Thermostat

Preset Programming

Preset options will step you through the programming. Simply select the temperatures and then view the completed program.



Programming a Day or a Series Of Days

After selecting the programming screen, you have the option of programming everyday, weekdays, weekends, or individual days. Once you've selected a certain day to program, a screen appears that allows you to set the time, heat setting, cool setting, and fan operation for each event.

1. From the Program menu, select program ON.
2. Select the number of events each day, 2 or 4.
3. You can program each day differently, or every day the same or the weekdays or weekends the same.
4. Select Zone in upper right hand corner to change zones. Steps 2 and 3 will need to be completed for each zone.

Copying a Program From One Day to Another

In the PROGRAM menu, there is an option to COPY. The option can be used to copy the program from one day to another day. After COPY is selected, the thermostat will prompt you for which day to copy from. Next, it will prompt you for which day to copy the program to. After these selections, it will then confirm what is being copied to where.



Settings

Set Date and Time

NOTE: If this thermostat is installed with an AWL and AWL Time Synchronization is enabled then Date and Time will be updated via the internet and can't be manually adjusted, only the Time Format can be changed. If AWL Time Synchronization is disabled and no AWL is installed then follow the steps below for setting Date and Time.

1. From the home screen, press Menu, then press Settings, then press Date/Time
2. Set month/ day/year, by pressing the up and down arrows ▲▼.
3. Set hour: minute, by pressing the up and down arrows ▲▼.
4. Within this menu option, you can change the time displayed by your thermostat to 24 Hour time (Military Time).
5. If your area observes daylight savings time, select D.S.T. to ON.
6. Date and Time are now set. You can return to the Main Menu by pressing the BACK to return to the previous menu.



Security Lockout

This thermostat has the option to set security features to lockout all MasterStat features.

1. From the home screen, press Menu, then press Settings.
2. Select Security, press ON.
3. Enter Pin Number screen.
4. Select a pin number to lock out the thermostat. Once you've entered the 4-digit pin number, press the OK button to save the pin.
5. In the event pin number is lost default is 9999

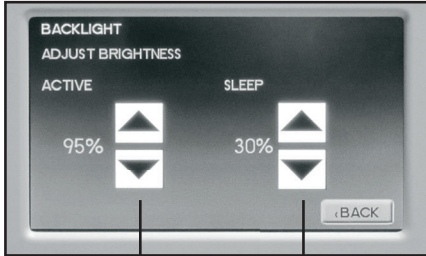
The security lockout settings do not take effect until the MasterStat goes into sleep mode.

When the MasterStat security lockout is on it does not lockout the ZoneStat(s) or TPCC32U01. To lockout the TPCC32U01 you must go through the same Security Lockout procedure as above for each thermostat.



Backlight

Press the up and down arrows ▲▼ to adjust desired backlight brightness when the thermostat is in active display or in the sleep display mode. (Default setting is 55% ACTIVE, 10% SLEEP)



Range 30-100% Range 1-100%

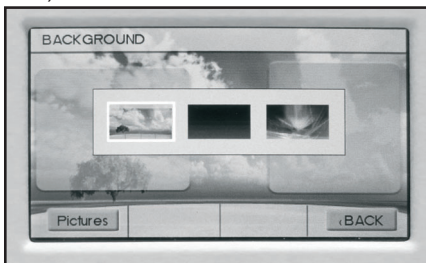
Sound

Adjust the desired sound level of screen buttons when pressed and the desired sound, either beep, one click, or two clicks.



Background

Select the desired background. This will only change the home screen background. The Pictures icon button allows loading or replacing personal photos to the MasterStat, once they have been formatted, using the photo converter software. The photo converter software and instructions are available online at www.auroracontrols.com. Once the photos have been converted to the correct format and uploaded to the MasterStat they will run as a slide show after 5 minutes of inactivity (no screen touches).



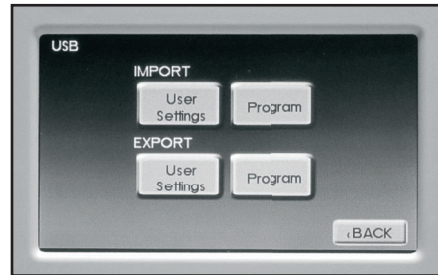
Vacation

From the MENU, press the Vacation button to set vacation starting date, time, and desired temperature, return date, time. To cancel this setting, press the CANCEL button. Press the OK to return to the previous menu.



USB

This screen allows you to import or export the User setting or Program. Mini USB Adaptor and Flash Drive required.

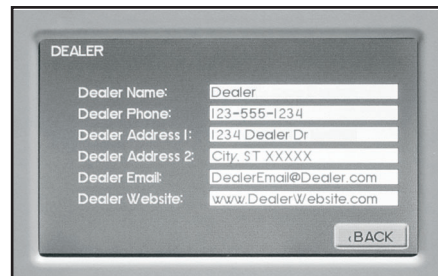


SuperBoost (Variable Speed Heat Pumps Only)

SuperBoost can be found by pressing menu/settings on the thermostat. The SuperBoost option temporarily enables a larger cooling capacity range. Normal cooling mode is limited to compressor speeds 1-9 and SuperBoost allows compressor speeds 10-12 if needed. This screen will allow the homeowner to turn on or off the SuperBoost option. The SuperBoost option will be enabled, by default, for a 24-hour period of time and then will automatically be disabled. **NOTE: Continuous use of the SuperBoost could result in overheating the ground loop.**

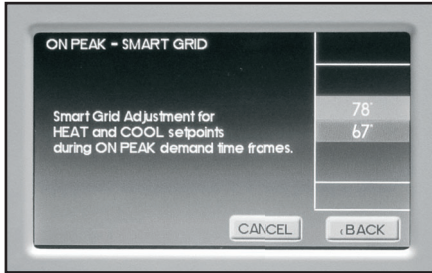
Dealer

The installing dealer's contact information can be displayed on this screen. From the main screen, press Menu and then press Dealer. The dealer will enter this information during system installation.



On Peak (If Installed)

The 'On Peak' input is designed to allow utilities to utilize simple radio controlled switches to control the On Electric Peak behavior of the Geothermal Heat Pump by changing the thermostat heating and cooling set points.

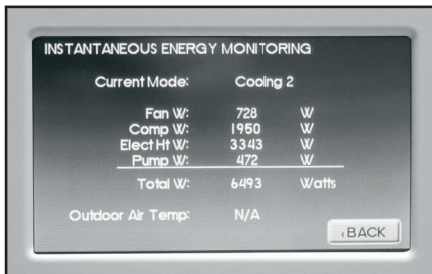


Energy Monitor (If installed)

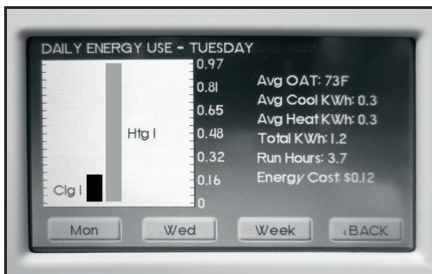
If your heat pump has energy monitoring installed, the energy consumed can be viewed by pressing the Energy button. There are three choices to view the energy consumed: Instant, Daily, and Monthly.



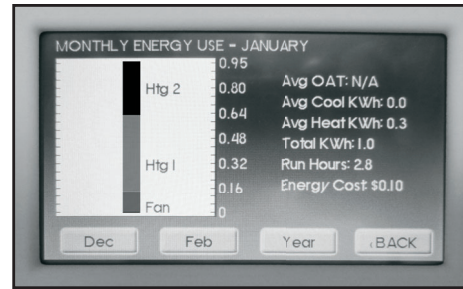
Instantaneous Energy Use screen



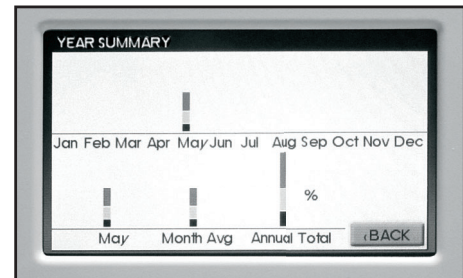
Daily Energy Use screen



Monthly Energy Use screen



Yearly Summary screen



Energy Monitoring (If Installed)

To enter your electric utility rate, select KWH cost. The cost can be set from \$0.01 to \$2.00. The default cost is \$0.10. The total energy cost for the system will be displayed on the daily and monthly summary screens



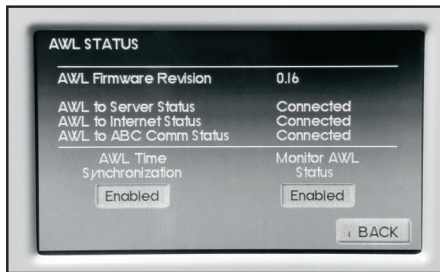
AWL Status (If Installed)

Note: If AWL is installed, it is recommended that you enable both the AWL Time Synchronization and Monitor AWL Status.

This screen displays the AWL firmware revision and provides the current AWL communication status relating to an Aurora WebLink (AWL) device. This screen is available whether an AWL is installed on the system or not.

AWL Time Synchronization - When enabled the AWL will synchronize the thermostat's date and time with internet time servers. This option by default is disabled. **NOTE: setting the proper time zone in the Symphony Portal is necessary for correct operation.**

Monitor AWL Status - When enabled, the thermostat will monitor the AWL's RS485, INTERNET, and SERVER status. The thermostat will display "AWL Comm Err" when the AWL is not communicating properly with the Aurora Modbus Network, "AWL Internet Err" when the AWL is unable to communicate to the symphony Servers. This option by default is disabled.



CAUTION: To clean the thermostat display, lightly dampen a clean non-abrasive cloth with water or any non-abrasive household cleaner. To clean, gently wipe the surface of the thermostat.

NOTE: Do not spray liquids directly on the thermostat.

Dual Fuel (Single Speed/Dual Capacity) - When Dual Fuel is selected for 'Thermostat Type' and a 'W' call is present operation will be as follows:

1. The temperature will be controlled by the MasterStat while other zones are ignored.
2. All zone dampers will open, Y1, Y2, G, W outputs shall run for 60 seconds. After 60 seconds Y1 and Y2 will be dropped and output only W and G (if Fan with Heat Option is selected otherwise G will be dropped).
3. There will be a two minute minimum run time once Dual Fuel operation has been entered, regardless if MasterStat heat call has been satisfied.
4. Once the two minute minimum run time expires and the 'W' call is satisfied at the MasterStat then Dual Fuel operation will be terminated. There will be no down staging.
5. Once Dual Fuel operation is terminated all zone dampers will close.
6. There will be a 4 minute time delay once Dual Fuel operation is terminated before compressor operation for cooling or heating may begin.

Dual Fuel (Variable Speed) - When Dual Fuel is selected for 'Thermostat Type' and a 'W' call is present operation will be as follows.

1. The temperature will be controlled by the MasterStat while other zones are ignored.
2. All zone dampers will open, the current compressor speed, G and W outputs shall run for 60 seconds. After 60 seconds the compressor will be stopped and output only W and G (if Fan with Heat Option is selected otherwise G will be dropped).
3. There will be a two minute minimum run time once Dual Fuel operation has been entered, regardless if MasterStat heat call has been satisfied.
4. Once the two minute minimum run time expires and the 'W' call is satisfied at the MasterStat then Dual Fuel operation will be terminated. There will be no down staging.
5. Once Dual Fuel operation is terminated all zone dampers will close.
6. There will be a 4 minute time delay once Dual Fuel operation is terminated before compressor operation for cooling or heating may begin.



ZoneStat User Information



IntelliZone2 ZoneStat

Backlight – Backlighting is activated whenever a key is pressed and remains on for 5 seconds.

Mode Button – Allows selection of modes: Off, Auto, Heat and Cool. Pressing the mode button moves selection between the available modes for the zone.

Fan Button - Pressing the FAN button will toggle the fan mode from auto mode, which runs the fan when a call for heat or cool occurs, continuous mode, or intermittent fan mode. Continuous Fan runs the fan continuously in the zone. Intermittent fan mode allows selection of fan on and off time in the zone.

Pressing the RIGHT and LEFT ARROW buttons toggles between adjustment of the fan on and fan off times in intermittent fan mode. In fan on (LEFT ARROW buttons) time adjustment, “on” will be displayed in the smaller 7-segment area to the right of the SET icon. In fan off time (RIGHT ARROW buttons) adjustment, “off” will be displayed in the smaller 7-segment area. Pressing the UP ARROW or DOWN ARROW buttons in intermittent mode shall adjust the on and off fan times by 5 minutes at a time. The fan mode may be adjusted for each zone at the MasterStat as well.

If in programmable mode, adjusting the fan mode or interval from the current schedule settings will cause the control to enter a “hold”.

Set Point Display - The set point that can be adjusted with the up or down buttons is located in the larger segments under the SET TEMP segment. In AUTO mode, the Set point screen will display two set points for HEAT and COOL. The set point that can be adjusted is displayed on the left in larger digits and the other set point is displayed on the right side in smaller digits. To switch between the two set points, press the right arrow button.

Auto Mode Display - When Heating mode is active the HEAT icon and the triangle next to the HEAT icon are flashing. When Cooling mode is active the COOL icon and the triangle next to the COOL icon are flashing.

Heat Mode Display - When Heating mode is active the triangle next to the HEAT icon is flashing. The HOLD icon is energized if a temperature override or a fan override is active. A temperature override is set if the set point is adjusted from the schedule set point in programmable mode. A fan override is set if the fan setting is adjusted from the schedule setting in programmable mode. When Emergency Heat or Auxiliary Heat are active, the triangle next to the HEAT icon is flashed ON and OFF.

Cool Mode Display - When Cooling mode is active the triangle next to the COOL icon is flashing. The HOLD icon is energized if a temperature override or a fan override is active. A temperature override is set if the set point is adjusted from the schedule set point in programmable mode. A fan override is set if the fan setting is adjusted from the schedule setting in programmable mode.

NOTE: Zone ID can be confirmed on the ZoneStat by pressing the cancel button for 5 seconds.

NOTE: There is no time adjustment on the ZoneStat. The time displayed is from the MasterStat setting.

IntelliZone2 SensorStat & SensorStat Remote-Kit User Information



IntelliZone2 SensorStat

The SensorStat & SensorStat Remote-Kit is just a temperature sensor and does not have any adjustment capability. Adjustments of zones with SensorStat or SensorStar Remote-Kit will need to be made at the MasterStat. Click in the upper right hand corner of the MasterStat to access the zone with the SensorStat or SensorStat Remote-Kit to make adjustments.

