



Symphony™

Aurora WebLink

Installation Guide



IG2001EG 2/18



AFFORDABLE RENEWABLE CLEAN

Aurora WebLink (AWL) Installation and Configuration



ATTENTION!

Symphony is **NOT** intended as a **SAFETY DEVICE**. Instead, Symphony is intended **ONLY** to provide you with convenient notification of the status of your equipment. A Symphony/AWL limited Warranty Certificate was shipped with the device.

The system is not a certified emergency response service and may not be linked to any emergency service contact numbers. The Symphony system has not been designed or programmed as a first response, emergency notification system. The manufacturer expressly disclaims any and all warranties, express, or implied, and including warranties of merchantability or fitness for a particular purpose, that the system will detect or provide any notification of any or all problems and events – of any kind whatsoever- at your residence. Further details of the end user license agreement can be found at [HTTPS://symphony.mygeostar.com](https://symphony.mygeostar.com).

General Information

There will need to be existing internet access and Wi-Fi router in the installed location of the AWL. The AWL is a Wi-Fi device that will use the existing internet and router to send information to a web portal. The AWL must be used in conjunction with the Aurora controls and will provide a Wi-Fi enabled comfort system. The consumer will be able to view and adjust thermostat settings as well as view detailed energy usage graphs and they can receive fault/lockout texts and e-mail via their smart device. The dealer/technician will have access to the Wi-Fi AID tool as well as fault/lockout texts and e-mail via their smart device. The dealer/technician can also have access to historical data of the heat pump which includes refrigerant pressures, temperatures and component energy consumption for troubleshooting (if unit is equipped with AXB).

NOTE: The AWL also requires one of the following thermostats be installed: TPCM32U03AGSR, TPCM32U04AGSR, TPCC32U01GSR, or MasterStat.

Components of the Symphony/AWL System

Symphony Portal	Both Technician and Consumer variations (free)
Symphony Smart Device Application	For Consumers (free)
AWLK01GSR	Aurora Weblink for Symphony WiFi Enabled Comfort System (Refer to the Compatibility Section for list of compatible products.)
APTK01	Aurora Programming ToolKit (Pickit3 x2, Flash Drives x2, Mini USB adaptor, USB cable and USB wall plug) required to update existing ABC/AXB Firmware and TPCC32U01GSR and MasterStat. Includes access to Aurora Toolbox
WA01	Water (Sump) Alarm Sensor for Aurora Controls (Optional)

Aurora WebLink (AWL) Installation and Configuration

Compatibility

The Symphony Aurora WebLink (AWL) system is backward compatible to several Aston and Sycamore Series packaged models that support Aurora ABC and have a communicating thermostat. Before applying the AWL to the heat pump, make sure both the ABC, AXB (if equipped), and communicating thermostats (TPCC32U01GSR, TPCM32U03AGSR, TPCM32U04AGSR, or MasterStat,) have the latest firmware. Using the AID Tool, confirm that the firmware versions meet the requirements in the Compatibility table (Reference the chart below) before installing AWL. Visit www.auroracontrols.com/toolbox to obtain the latest firmware if needed.

Without a communicating thermostat the system is NOT compatible. A communicating thermostat can however replace a 24V thermostat and provide compatibility for relatively low cost to the homeowner. The IntelliZone and IntelliZone2 • 24V are NOT compatible with Symphony since neither are fully communicating systems. For systems with TPCM thermostats, a revision "A" model will need to be used for compatibility. Early Aston Series water to air units with base controls were shipped with ABC Rev1 boards. If you have an ABC Rev1 board it will need to be replaced with p/n 17X553-XX.

Symphony Compatibility Chart

	Control Board	ABC Firmware Version	AXB Firmware Version	Communicating Thermostats			IntelliZone2	Symphony/AWL Compatible
				TPCC	TPCMA*	HydroStat (Not adjustable through Symphony)		
Aston GS/GT - All	Premier2	NA	NA	NA	NA	NA	NA	Not Compatible
Cypress - All	Premier2	NA	NA	NA	NA	NA	NA	Not Compatible
Aston GSW - Vintage A-F	EW	NA	NA	NA	NA	NA	NA	Not Compatible
Aston GTW - All	FX10	NA	NA	NA	NA	NA	NA	Not Compatible
Aston Split GTZ/GTS	Premier2 & ABC	NA	NA	NA	NA	NA	NA	Not Compatible
Magnolia YS - All	Premier2	NA	NA	NA	NA	NA	NA	Not Compatible
Magnolia Plus - LD Intro to Symphony Launch	ABC Rev2	2.02 or less	NA	1.06 or less	2.00 or less	NA	Use IZ2 24V	Yes but needs Software Update
Magnolia Plus -LD - Post Symphony Launch	ABC Rev2	≥ 3.00 (≥2.02 W29)	NA	≥ 3.00 (≥1.07)	≥ 3.00	NA	Use IZ2 24V	Yes no changes
Aston** - 101 or 102 "F" vintage (Intro 3/12-6/12)	ABC Rev1	1.02 or less	NA	1.06 or less	2.00 or less	NA	1.08 or less	Yes but Replace ABC Rev1 with new ABC Rev2 board & maybe software updated
Aston - "G" vintage 101 or 102 (Shipped 6/12 to Symphony Launch)	ABC Rev2	2.02 or less	optional 1.01 or less	1.06 or less	2.00 or less	NA	1.08 or less	Yes but needs Software Update
Aston - 101 or 102 "G" vintage (Post Symphony Launch)	ABC Rev2	≥ 3.00 (≥2.02 W29)	≥ 2.00 (1.01 W09 or greater)	≥ 3.00 (≥1.07)	≥ 3.00	NA	≥ 2.00 (≥1.08 Z20)	Yes no changes
Aston Split 104 or 103 - "H" Vintage	ABC Rev2	≥ 3.00	≥ 2.00	≥ 3.00	≥ 3.00	NA	≥ 2.00	Yes no changes
Aston 105 - "G" Vintage	ABC Rev2	≥ 3.00	≥ 2.00	NA	NA	≥ 2.02	NA	Yes no changes
Sycamore - 141 or 142 (From Introduction to Symphony Launch)	ABC Rev2	2.04 or less	1.01 or less	1.06 or less	2.00 or less	NA	1.08 or less	Yes but needs Software Update
Sycamore - 141 or 142 (Post Symphony Launch)	ABC Rev2	≥ 3.00 (≥2.04 W29)	≥ 2.00 (1.01 W09 or greater)	≥ 3.00 (≥1.07)	≥ 3.00	NA	≥ 2.00 (≥1.08 Z20)	Yes no changes

All the AHB are compatible.

Rev: 12/12/2017

*The existing TPCM32U03GSR or U04GSR monochrome communicating thermostat is NOT compatible with the Symphony/AWL and will need replaced with the TPCM32U03AGSR or U04AGSR or the TPCC thermostat with appropriate firmware version.

** Early shipments of the Aston Series water to air with base control only (no AXB) included the ABC Rev 1 and will need to be replaced with the ABC Rev 2 for Symphony Compatibility. ABC Rev1 versus Rev2 can be identified per the photos included in this document.

Note: Although the Magnolia Series (and Aston Series without AXB) are compatible and will provide the consumer with wireless thermostat functionality, the limitation remains that very little sensor data can be transmitted without an AXB expansion board. The AXB is not available on the Magnolia Series.

Sensor Kit Options

Sensor kits are all optional but obviously with more sensors, more data can be gathered and transmitted for service use. Without an AXB, energy data cannot be collected. Sensor kits can be added to existing heat pumps. (Aston and Sycamore Series only)

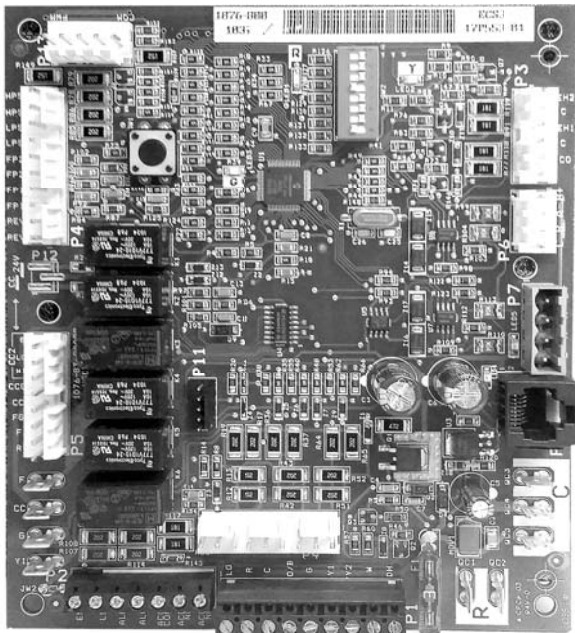
The optional sensor kits are:

- AXB Kit - 5SAK - water to air
- AXB Kit - NSWAK - water to water
- Refrigeration Monitoring Kit (AXB board required) - 5SRK - water to air and water to water
- Performance Monitoring Kit (AXB board required) 5SPKS-HW or 5SPKL-HW water to air
- Performance Monitoring Kit (AXB board required) NSWPKS or NSWPKL - water to water

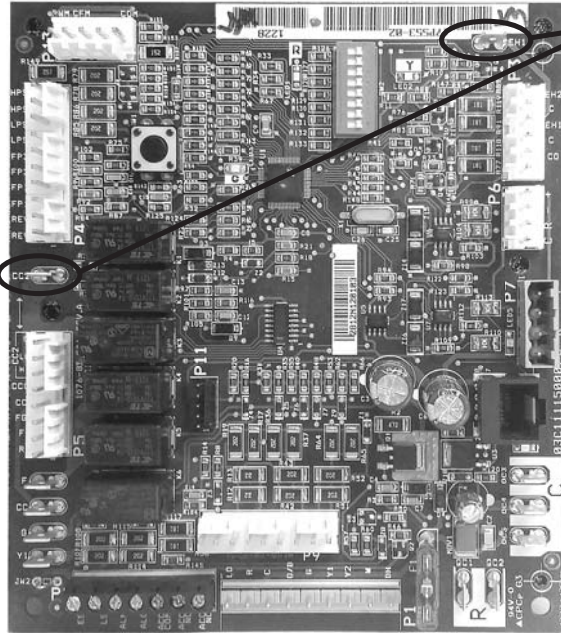
Update a Magnolia, Aston, or Sycamore Series System for Symphony

Controls Board Firmware Upgrade

Refer to the Compatibility Section for a list of Magnolia, Aston and Sycamore Series products that can be updated to be compatible with the Symphony/AWL system. Early water to air Aston Series units with ABC only were shipped with ABC Rev1 boards. These are NOT compatible with Symphony and will need replaced with ABC Rev2 boards as identified in the photos below. ABC Rev2 boards have additional quick connects visible as shown in the photos.



ABC Rev1



ABC Rev2

Added quick connects

Thermostat Firmware Upgrade

Elite thermostats (TPCM32U03GSR and TPCM32U04GSR are NOT compatible with Symphony and will need to be replaced with newer models TPCM32U03AGSR and TPCM32U04AGSR. These can be identified using the photos below. The new TPCM32U03AGSR/04AGSR models have several relays eliminated.

TPCM/TPCMA Identification (Located on the back of Thermostat)



TPCM32U03GSR/04GSR

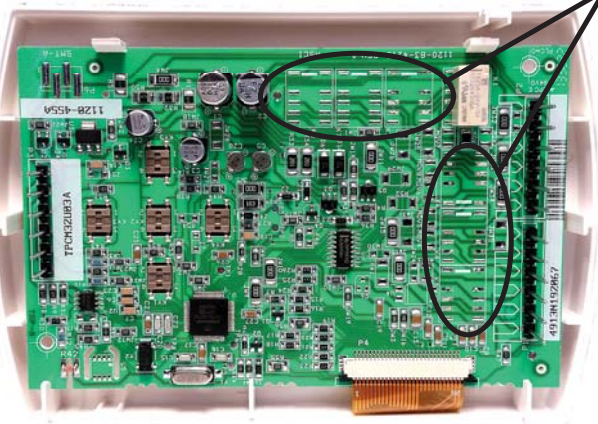
(Also Firmware Version 2.XX or less)



TPCM32U03AGSR/04AGSR

(Also Firmware Version 3.XX or greater)

No relays in "A" version



Update a Magnolia, Aston, or Sycamore Series System for Symphony

The Update Process

We have developed a central webpage (www.auroracontrols.com/toolbox) for all of this information. In addition, the Aurora Update Kit and its accompanying Aurora Toolbox Software package provide all of the tools necessary for updating a system to compatibility. The Aurora Update Kit includes two PICkit3 ABC/AXB control board updaters, flash drives to update the TPCC32U01GSR and MasterStat, and a link to the Aurora Toolbox Software to load them. Here are the general steps to update a system. Please consult latest literature on www.auroracontrols.com/toolbox or in the Aurora Toolbox Software.

1. Purchase Aurora Programming Tool Kit (APTK01)
2. Download Aurora Toolbox Software to load most recent firmware in PICkit3 and flash drives.
3. Visit jobsite
4. Review thermostat/MasterStat, ABC and AXB firmware versions in the AID Tool.
5. Confirm thermostats are communicating style and appropriate firmware versions. If not update using Flash Drives loaded using the Aurora Toolbox Software. TPCM thermostat may need replaced. See compatibility table and notes on pages 2-3.
6. Confirm ABC and AXB firmware versions are appropriate firmware versions. If not update using PICkit3 loaded using the Aurora Toolbox Software.
7. Double check MasterStat and TPCC32U01GSR thermostat configurations. MasterStat (firmware version 1.06 or less) and TPC-C32U01GSR thermostat (firmware version 1.04 or less) will not retain configuration settings. Versions later will retain configuration settings when updated.
8. Turn Off Unit and unpack Aurora Weblink (AWLK01GSR) and plug into front of unit.
9. Install and configure the AWL.

Troubleshooting Aurora AWL Wi-Fi Range

The Wi-Fi Range of the AWL Router is up to 100 ft. from the home router. This range can be reduced depending upon the wall and floor material that the Wi-Fi signal must pass through. For instance metal studs of commercial buildings may attenuate the signal and reduce the transmitting distance. It can be advantageous to move the AWL away from sheet metal ductwork to improve the performance. If a longer cable is desired for this, standard Cat 5e or better internet cable can be substituted to relocate the AWL further away.

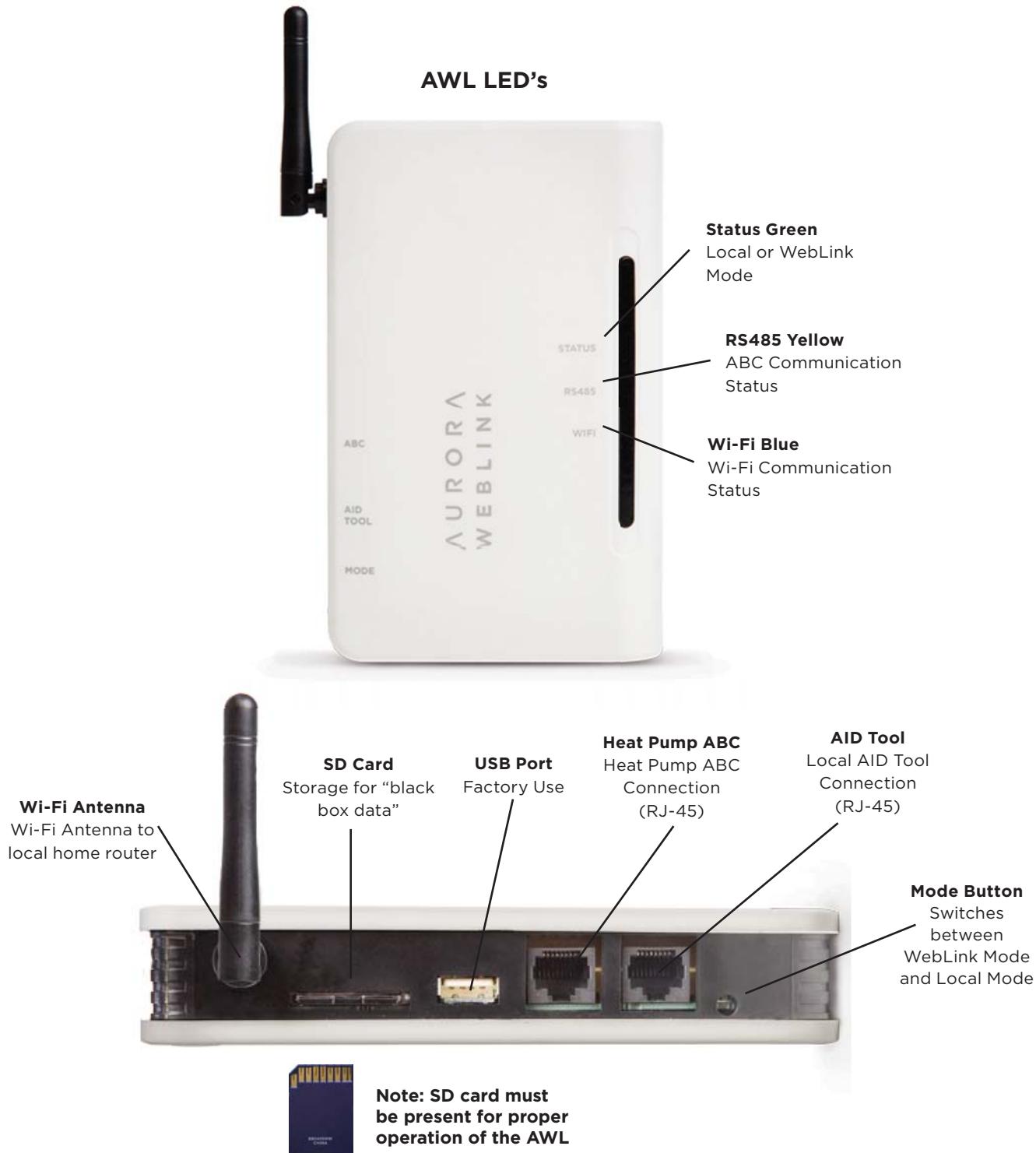
Troubleshooting Aurora AWL Router Connection

If internet connection issues arise a Wi-Fi 'Repeater/Range Extender' could provide relief. These can be purchased from electronic box stores or online. Also in unusual cases the AWL may have trouble connecting to certain routers with customized firmware such as local cable or satellite companies with unique connections. In these situations a new router, or second standard home router can be purchased at the electronics store and hardwired to the original home router. After installing a new router, the AWL must be reconfigured before reconnecting to the wireless network. After reconfiguration, the AWL is wirelessly connected to the new router utilizing its more standard firmware.

Aurora WebLink (AWL) Installation and Configuration

Orientation

The AWL can be installed either flat, or standing up. The antenna needs to be in an upward position once the final AWL orientation is decided.

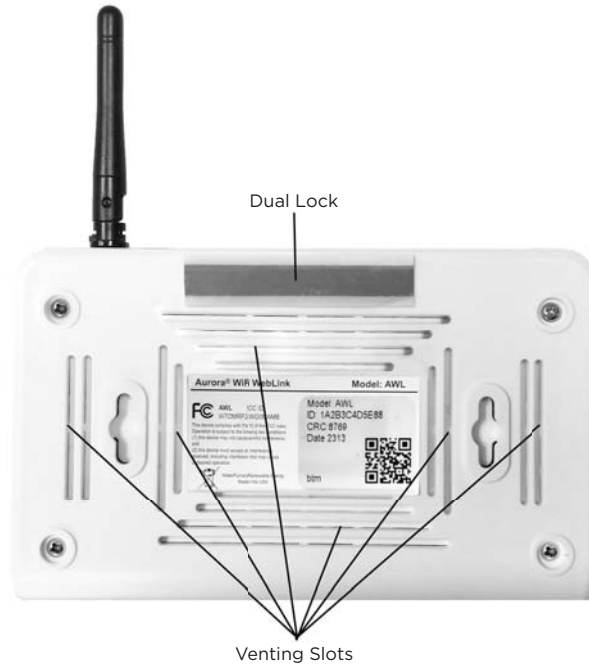


These two RJ-45 connectors are not Ethernet ports. Never connect a laptop or router to the heat pump ABC, or AID Tool ports. Damage to those devices will occur.

Aurora WebLink (AWL) Installation and Configuration

Mounting AWL on a Heat Pump Using Dual Lock

There is a piece of Dual Lock™ (actual product may vary from photo) provided in each box to mount the AWL on the unit. The Dual Lock cannot be placed where it blocks any of the venting slots. Remove the film from one side and place it on the back cover of the AWL as shown below. Remove the film from the other side. Select a location on the top of the heat pump, press and hold for a few seconds.



Mounting AWL on a Wall: Using Screws

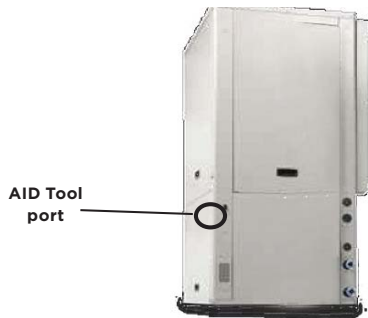
To mount the AWL using screws, use the preformed slots located on the back of the AWL.



(Note: Slots are approximately 3 7/8 inches apart.)

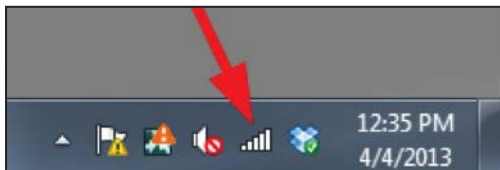
Aurora WebLink (AWL) Installation and Configuration cont.

1. Verify the system has the latest control board and thermostat firmware.
2. Install AWL on any heat pump with the Aurora controls. (Magnolia, Aston, and Sycamore Series packaged units. Refer to Compatibility chart for more information.)
3. Plug the end of the provided cable into the ABC port on the AWL, and the other end into the AID Tool port on the front of the unit. The AID Tool can plug into the AID Tool port of the AWL when needed.
4. AWL is powered by the heat pump and requires no other power supply.
5. Press and hold the AWL Mode button for 5 or more seconds to enter Local Mode. The Green LED will go from mostly solid to a fast flash. The AWL must be in Local Mode to begin the initial configuration.



Initial Configuration (For Windows Systems)

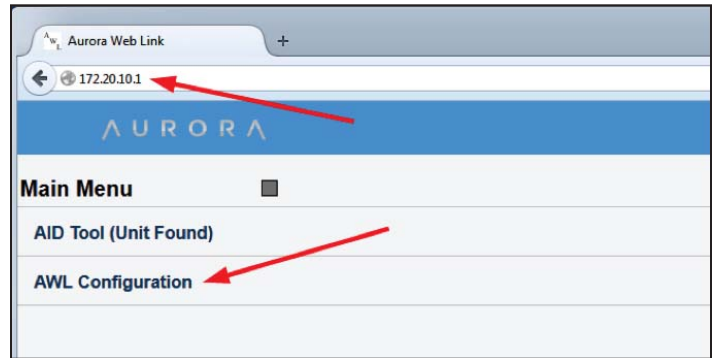
Follow these steps for the initial configuration. On your laptop, click on the Wi-Fi bars in the system tray: Or on your smart device, using Settings -> Wi-Fi:



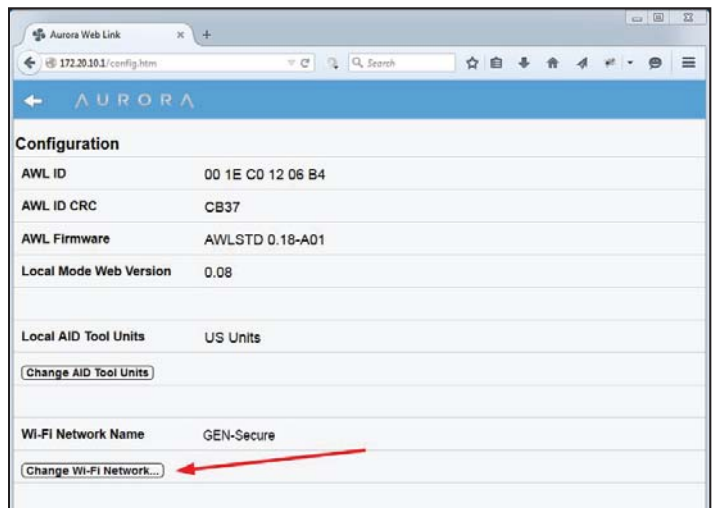
Select the AWL-XX-XX-XX Wireless Network and select Connect:



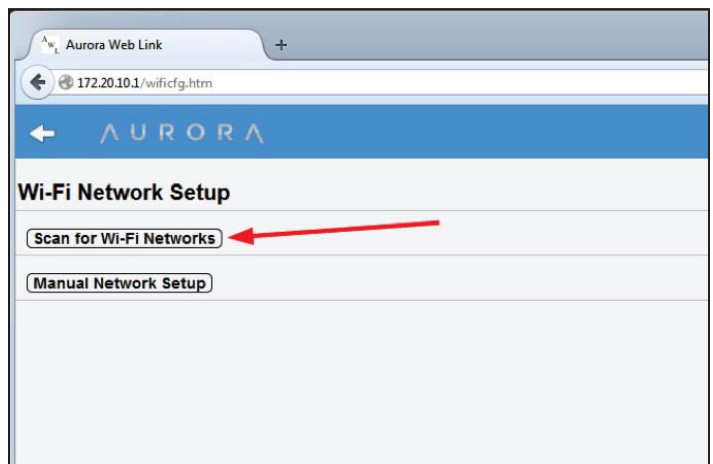
Open your web browser (Internet Explorer, FireFox, Chrome, Etc) and enter 172.20.10.1 in your browser and press return. Select AWL Configuration from the Aurora Main Menu. Or click "Launch Browser with Local Aid Tool" button on the "Local AID Tool" tab of the Aurora Toolbox Software.



Click on the change Wi-Fi Network button:

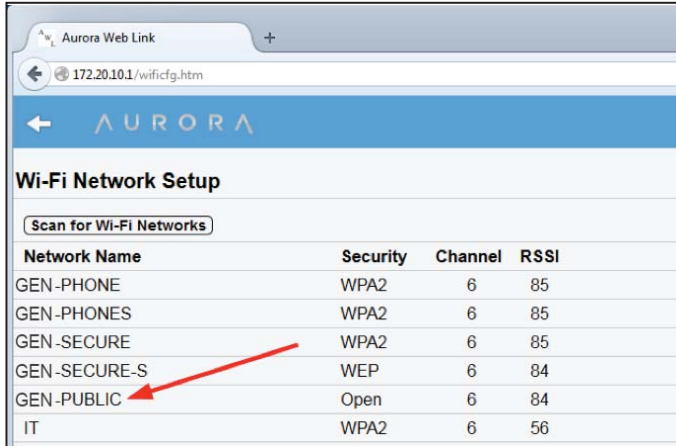


Click on the Scan for Wi-Fi Networks button:

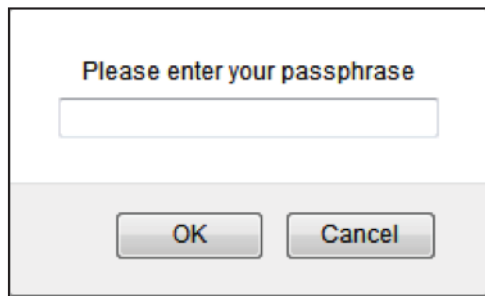


Aurora WebLink (AWL) Installation and Configuration cont.

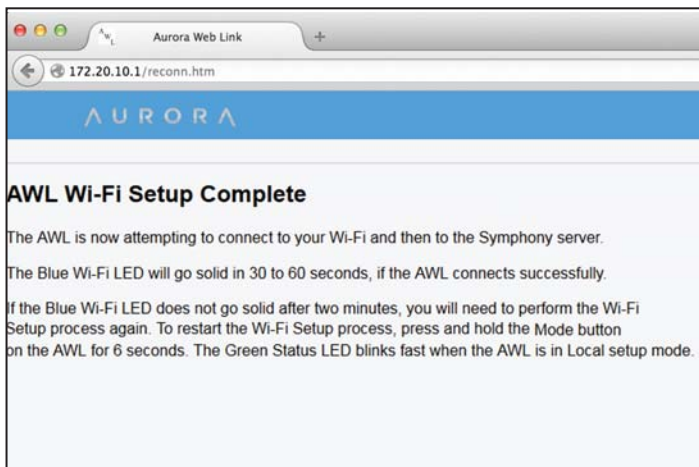
Select your home network from the list that appears. Your available networks will be different than the example shows.



Once you have selected your home network from the list, enter your Home network password or passphrase and click OK



You should see an AWL Wi-Fi Setup Complete screen:



After 30 to 60 seconds, you should see the BLUE LED on the AWL go to a solid ON state, indicating that the AWL successfully connected to the AWL Host Server.

After configuration is complete, if ever the SD card is removed the AWL will still communicate with the web portal until there is a power outage. Upon power restoration the AWL will go directly to Local Mode and will not be able to access the internet until the original SD card has been reinstalled in the AWL. After

reinstalling the original SD card there are 3 options to return to WebLink Mode, press and hold the mode button for 5 or more seconds, cycle power to the AWL, or wait for the 30 minute Local Mode timeout. Anytime the SD card is removed from the AWL the system data will not be saved to the SD card although it will be sent to the web portal. If a SD card other than the original SD card supplied with the AWL is installed it will save data but it will be missing necessary files to allow access to the web portal.

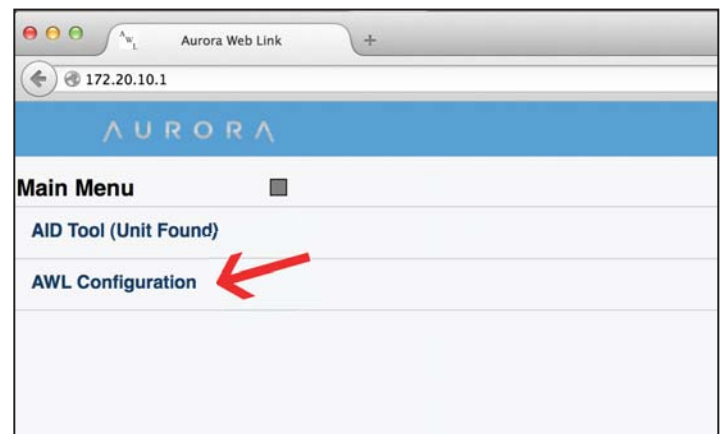
Initial Configuration (Apple Operating Systems)

Follow these steps for the initial configuration. On your laptop, click on the Wi-Fi bars in the system tray: Or on your smartphone, using Settings -> Wi-Fi: Select the AWL-XX-XX-XX Wireless Network and select Connect:



NOTE: You may need to turn your Wi-Fi off, and then on to detect the AWL.

Open your web browser (Safari, FireFox, Chrome, Etc) and enter 172.20.10.1 in your browser and press return. Select AWL Configuration from the Aurora Main Menu.

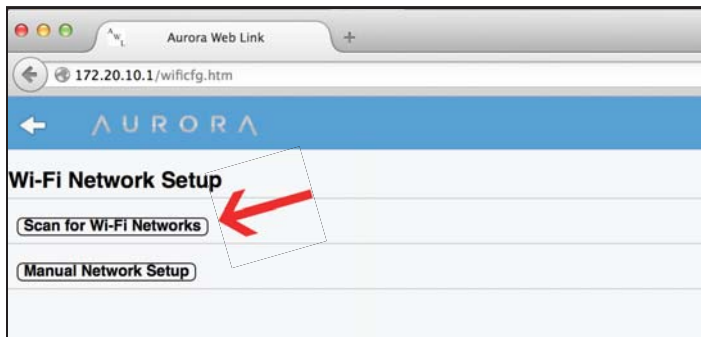


Aurora WebLink (AWL) Installation and Configuration cont.

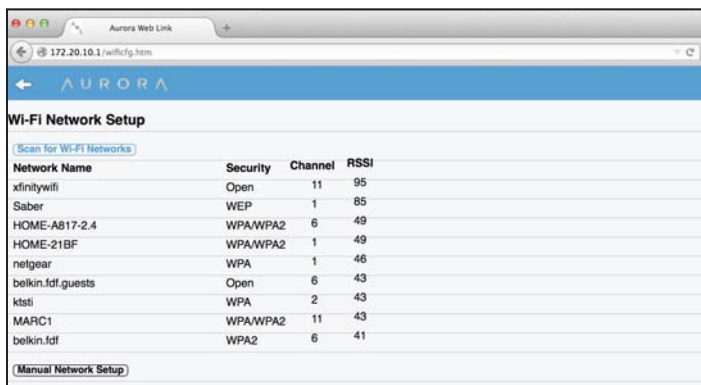
Click on the change Wi-Fi Network button:



Click on the Scan for Wi-Fi Networks button



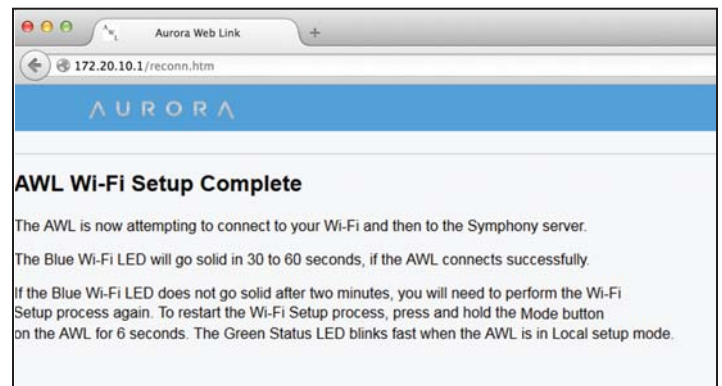
Select your home network from the list that appears. Your available networks will be different than the example shows.



Once you have selected your home network from the list, enter your Home network password or passphrase and click OK



You should see an AWL Wi-Fi Setup Complete screen:



After 30 to 60 seconds, you should see the BLUE LED on the AWL go to a solid ON state, indicating that the AWL successfully connected to the AWL Host Server.

After configuration is complete, if ever the SD card is removed the AWL will still communicate with the web portal until there is a power outage. Upon power restoration the AWL will go directly to Local Mode and will not be able to access the internet until the original SD card has been reinstalled in the AWL. After reinstalling the original SD card there are 3 options to return to WebLink Mode, press and hold the mode button for 5 or more seconds, cycle power to the AWL, or wait for the 30 minute Local Mode timeout. Anytime the SD card is removed from the AWL the system data will not be saved to the SD card although it will be sent to the web portal. If a SD card other than the original SD card supplied with the AWL is installed it will save data but it will be missing necessary files to allow access to the web portal.

Aurora WebLink (AWL) Installation and Configuration cont.

AWL LED Status Lights and Mode Button

In WebLink Mode, the Green LED will mostly be solid (10 seconds ON / 1/2 second OFF). During Local Configuration mode it will blink fast (1/4 second ON / 1/4 second OFF).

To switch between WebLink Mode and Local Configuration Mode press and hold the AWL Mode button for 5 or more seconds. You should see the Green LED blink at the new mode rate.

The Yellow LED will stay on if the AWL is communicating to the ABC. If communications are lost, it will blink 2 times.

The Blue LED will stay on if the AWL is connected to and communicating with the AWL Host Server. If communications are lost, it will blink different blink counts, depending on the error.

Blue LED Blink Codes	Description	Action
2	No Wi-Fi Connectivity	Make sure pass phrase is correct
3	DNS Begin Usage Timeout	Check internet provider to make sure the internet service is good
4	DNS Resolving Host Timeout	
5	DNS Name Resolving Failed	
6	Socket Connect Error	
7	Socket Connect Timeout	
8	Start SSL Timeout	
9	SSL Handshake Timeout	Symphony server is temporarily out for service. Try again later.
10	Start WebSocket Timeout	
11	WebSocket Handshake Timeout	
Solid	WebSocket Communications are Good	None

Yellow LED Blink Codes	Description	Action
2	ABC Communications Timeout	Make sure the connection to the heat pump is good.
3	ABC to AWL Communication Not Supported	ABC/AXB firmware needs updated for AWL Support
Solid	ABC Communications are Good	None

Green LED Blink Codes	Description
2	SD Card not Present
3	SD Card Invalid File System
4	SD Card Write Protect is On
Mostly Solid	WebLink Mode (10 seconds on / 1/2 second off)
Fast	Local Mode (1/4 second on / 1/4 second off)

WebLink Mode and Local Mode

In WebLink Mode, the AWL passes the heat pump system information (data, request) back and forth between the Aurora system and Symphony Server through the customer's personal router and internet.

In Local Mode, the AWL passes the heat pump system information (data, request) back and forth between the Aurora system and your local devices (smartphone, tablet, or laptop computer). There is a maximum of 4 local devices that can be connected to an AWL at a given time. The AWL will only stay in Local Mode for 30 minutes, and will automatically switch to WebLink Mode if WebLink Mode has been pre-configured. If the AWL was never configured for WebLink Mode, it will stay in Local Mode continually.

Powering up the AWL

Power Up	Mode	Notes
<i>Before</i> Configuration	Local Mode	Complete the configuration to enter WebLink Mode
<i>After</i> Configuration	WebLink Mode	Allows internet access to the web portal
<i>Without</i> SD Card	Local Mode	Install original SD card and re-enter WebLink Mode
Using a <i>different</i> SD Card	Local Mode	System data will be saved to the SD card but it will not be possible to enter WebLink Mode due to missing files on the SD card. Install the original SD card or contact your manufacturers Technical Service department

Using Local AID Tool Web Pages on a Phone

Enter Local Mode by pressing the AWL Mode button for 5 seconds. On your phone, select the AWL-XX-XX-XX Wireless Network in the phone's Wi-Fi Settings.



Android



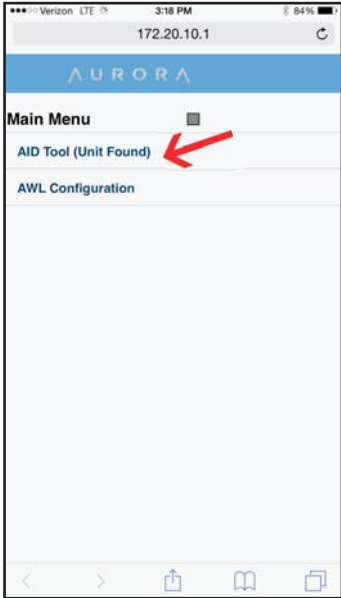
iPhone

Aurora WebLink (AWL) Installation and Configuration cont.

Enter 172.20.10.1 in the phone's browser, and then select the AID Tool (Unit Found) option:

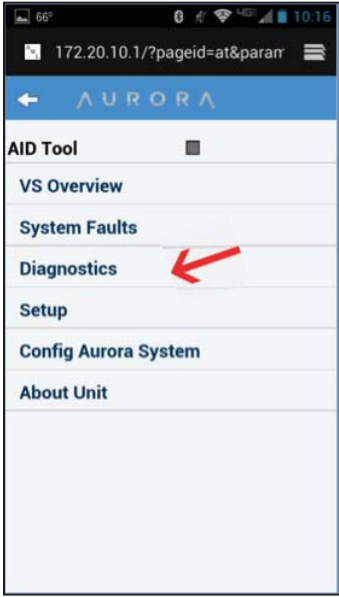


Android



iPhone

The menus are similar to the actual AID Tool. For example, to see the sensor inputs, select the Diagnostics menu option:



Android



iPhone

The AID Tool data screens require a Passcode. Enter 9999 for the Passcode, and press the Submit Passcode button.



Android



iPhone

Then select the Sensor Inputs:



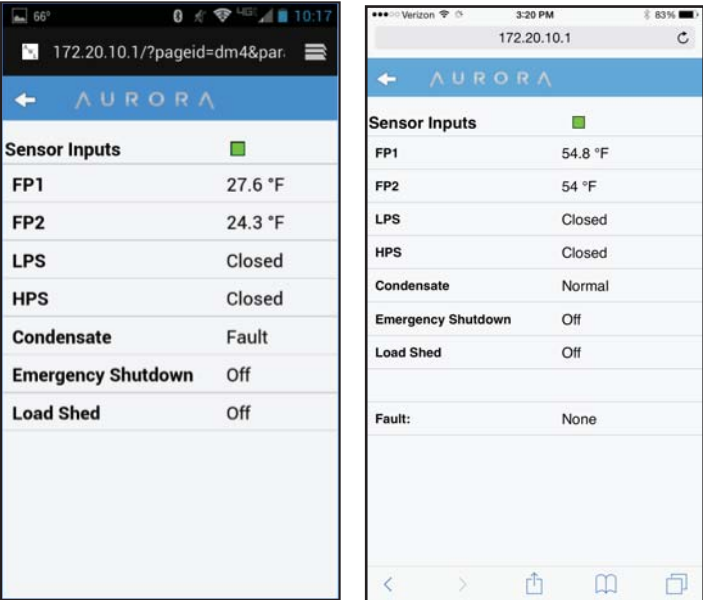
Android



iPhone

Aurora WebLink (AWL) Installation and Configuration cont.

The Sensor Input screen is shown below:



Android

iPhone

Accessing the Symphony Tech Portal

For more details on the features of the Symphony Tech Portal, please reference the Tech Portal Quick Start Guide section of Instruction Guide IG2012EG “Tech Portal Registration” located in the documents tab in the Aurora Toolbox and on the GeoStar Dealer Portal.

Aurora WebLink (AWL) Installation and Configuration

External Sump Alarm Sensor for Aurora Controls

The Symphony/AWL System provides the infrastructure not only for status and fault notification of the geothermal unit but also sensors external to the heat pump. This is accomplished by using the exclusive Home Automation Inputs of the Aurora AXB board and external sensors to provide the same e-mail/text notification for technicians and consumers. This provides a powerful extension of the Symphony system to include monitoring of other critical home systems. One of these other sensors can be:

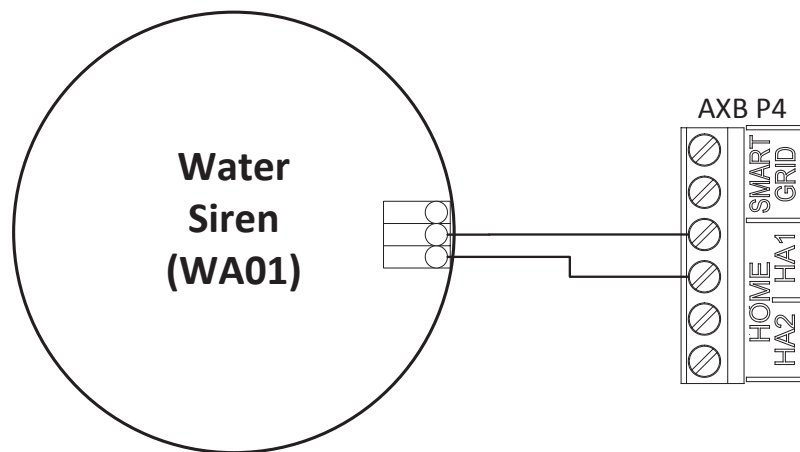
- **Sump Alarm WA01-Water (Sump) Alarm Sensor for Aurora Controls**

This sensor provides a relay closure that can be used to trip a fault when moisture is present. This can be used as a primary sump alarm or simply a wet basement or signal a blown washing machine hose.

**WA01-Water
(Sump) Alarm Sensor**



The sensor can be added to any Aurora Advanced Control System (including both ABC and AXB) to monitor a sump pump. The sensor can be connected to the Aurora Home Automation inputs (HA-1 or HA-2) of the AXB board. These will each display an E23 and E24 code respectively when the alarm is active and when Symphony/AWL is installed will also produce text/e-mail notifications for E23 or E24. The inputs should be configured for “Normally open” and the fault text for the E23 or E24 can be selected by the technician using the AID Setup screens for the appropriate sensor installed. The “Fault description text” is selectable so the users are aware of exactly which sensor is installed and faulting. These faults DO NOT affect the operation of the heat pump and are simply passed through the Aurora controls to display on the thermostat and pass through Symphony to the e-mail/text message notification system for remote monitoring. This provides a powerful extension of the Symphony system to include monitoring of other critical home systems. The following diagram shows proper wiring.



Notes: _____

Account Name: _____
Location Address/City/State: _____
Unit Name: _____
AWL ID: _____

FCC Compliance Statement

The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For further information or help contact your distributor.



IG2001EG 2/18

Product: **Aurora WebLink (AWL) Installation Guide**
Document: Installation Guide IG2001EG