OmniLogic®

Consumer Network Troubleshooting Guide

Safety Precautions

Warning

High Voltage Electrocution Hazard

Hazardous voltage can shock, burn, cause serious injury and or death. To reduce the risk of electrocution and or electric shock hazards:

- <u>Only qualified technicians should remove the dead front</u>
    - Qualified technicians should: replace damaged wiring immediately
    - Qualified technicians should: Insure panel is properly grounded and bonded

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Table of Contents

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OmniLogic: Overview

- The OmniLogic is an internet and App ready, intuitive, modular automation system.

- This elite automation system features a USB backup and upgrade option. The USB feature allows servicers to back up existing configurations as well as upgrade the system with the latest revision in minutes.

- With touch screen technology the MSP or display allows users to navigate through screens and commands in virtually any lighting condition.

- Each OmniLogic base unit supports up to 10 relays, 8 valves, 8 heaters, and 8 sensors. It also supports up to 25 themes (groups) and 50 favorites.

OmniLogic: Terminology

Term	Description
MSP	Main System Processor (display)
MPP	Main Panel Processor (main board)
MP	Main Panel (enclosure)
PSU	Power Supply Unit (PWR Supply)
I/O	Input / Output Expansion Card
HVR	High Voltage Relay
LVR	Low Voltage Relay
LVA	Low Voltage Actuator
RB	Relay Bank

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OmniLogic: Main System Processor (MSP)
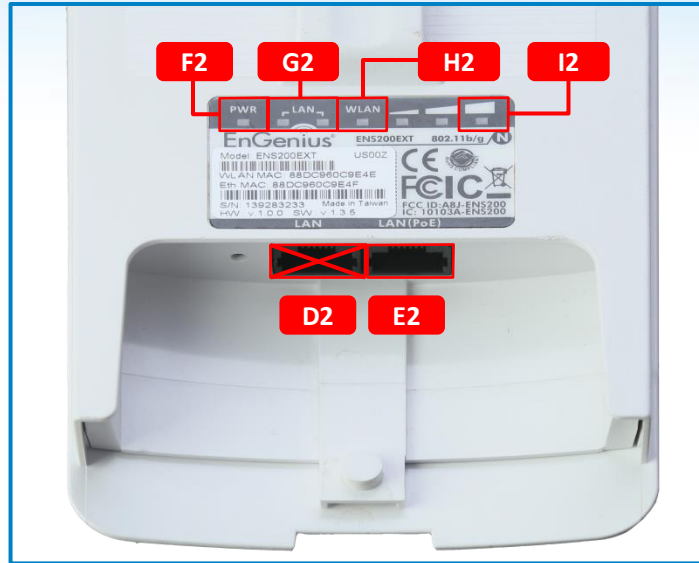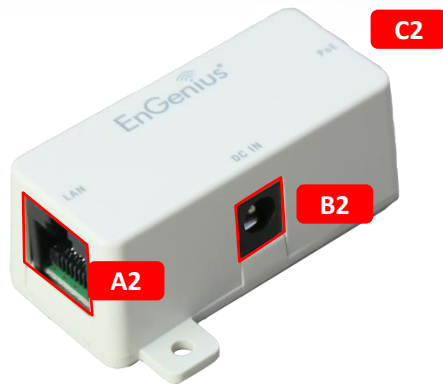

HLX-LOC-DSP

A1	Ethernet Port (used for both Wired & Wi-Fi network operation)
B1	USB Port (uploading firmware & backing up/loading configuration)
C1	MSP Connection (Input/Output)
D1	MSP Ribbon Cable
E1	MPP Connection (Input/Output)

OmniLogic: Wi-Fi Bridge (HLWLAN)

Injector

HLWLAN

A3	LAN Port (Ethernet cable from LAN port to MSP)
B3	Power to Injector (power cable plugs into the MPP)
C3	PoE Port (Ethernet cable from PoE to LAN (PoE) of the HLWLAN)
D3	UNUSED
E3	LAN (PoE) Port (Ethernet cable from the LAN (PoE) to PoE of the injector)
F3	PWR LED (indicates HLWLAN has Power over Ethernet from injector)
G3	LAN LEDs (indicate connection with local area network)
H3	WLAN (should only appear when SSIDs are available)
I 3	Signal LED (should only appear when connected to Wi-Fi network)

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How To:

How To: Download Firmware

*To download the latest firmware to a USB drive go to **www.hayward.com***
Support Center> Automation > OmniLogic > Firmware Updates

Step 1: Right click on the link of the file you wish to download.

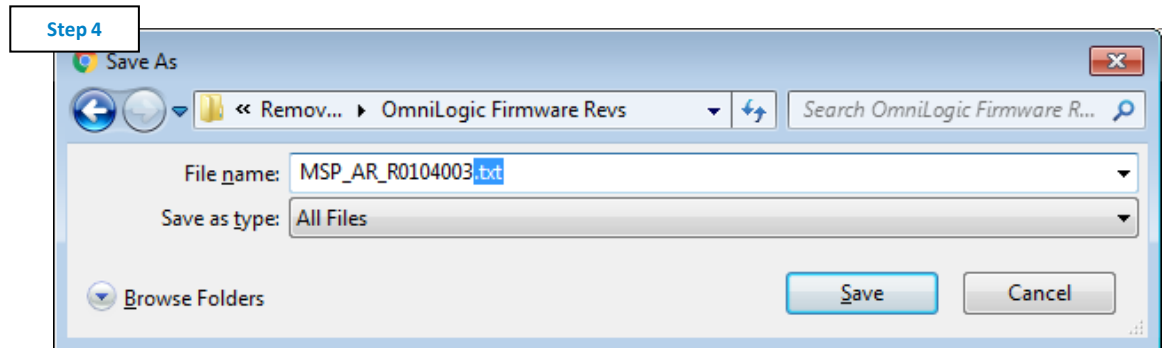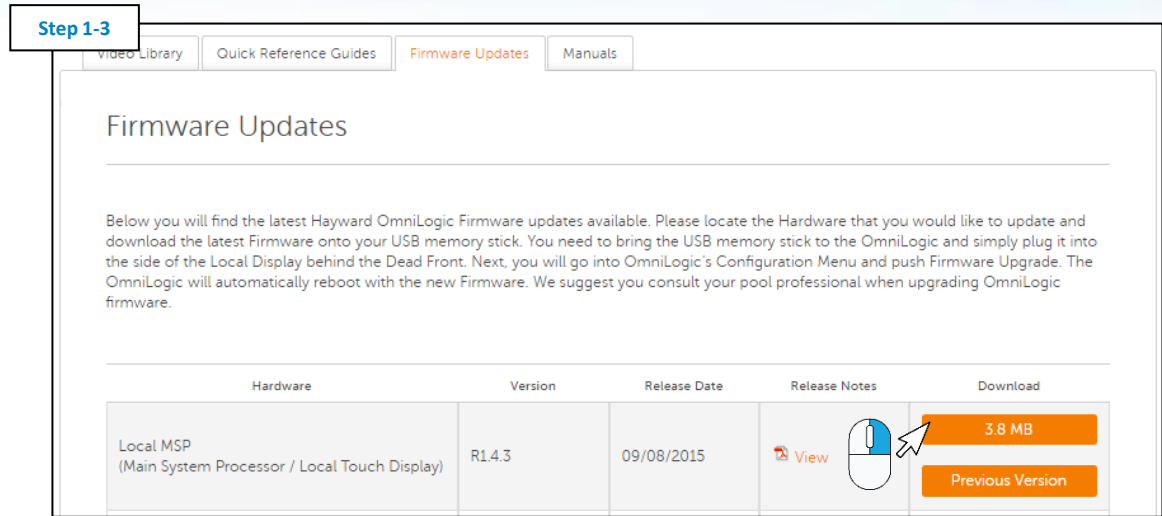**Step 2:** Within the options menu select "Save link as..."
(**Note:** USB drive must already be connected to your computer).

Step 3: From the "Save As" window navigate to the desired USB drive.
(**Note:** please make sure to select the root directory of the USB drive).

Step 4: Before saving, change the "Save as type" to "All Files" AND remove the ".txt" file extension that automatically appears. Then click on "Save" button.
(**Note:** failing to remove the .txt file extension will result in an unreadable firmware upgrade file).

Step 1-3

Video Library | Quick Reference Guides | Firmware Updates | Manuals

Firmware Updates

Below you will find the latest Hayward OmniLogic Firmware updates available. Please locate the Hardware that you would like to update and download the latest Firmware onto your USB memory stick. You need to bring the USB memory stick to the OmniLogic and simply plug it into the side of the Local Display behind the Dead Front. Next, you will go into OmniLogic's Configuration Menu and push Firmware Upgrade. The OmniLogic will automatically reboot with the new Firmware. We suggest you consult your pool professional when upgrading OmniLogic firmware.

Hardware	Version	Release Date	Release Notes	Download
Local MSP (Main System Processor / Local Touch Display)	R1.4.3	09/08/2015	View	3.8 MB / Previous Version

Step 4

Save As

« Remov... ▶ OmniLogic Firmware Revs   Search OmniLogic Firmware R...

File name: MSP_AR_R0104003.txt

Save as type: All Files

Browse Folders   Save   Cancel

This process was accomplished through Google's Chrome Browser.

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How To: Connect to a Wi-Fi Network

For best results, make sure the MSP firmware is updated to the latest revision:
www.hayward.com Support Center> Automation > OmniLogic > Firmware Updates

Step 1

On the right of the dashboard locate and tap the "config" icon.

Step 2
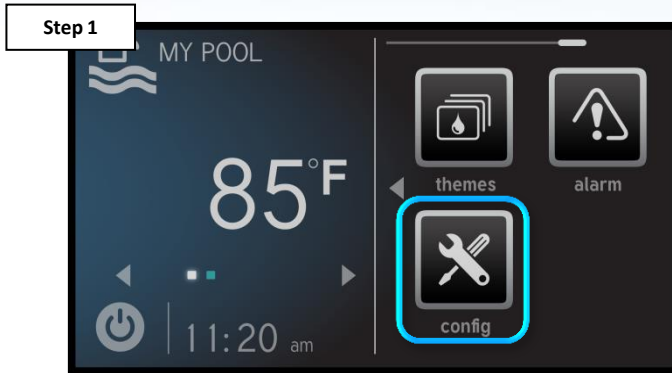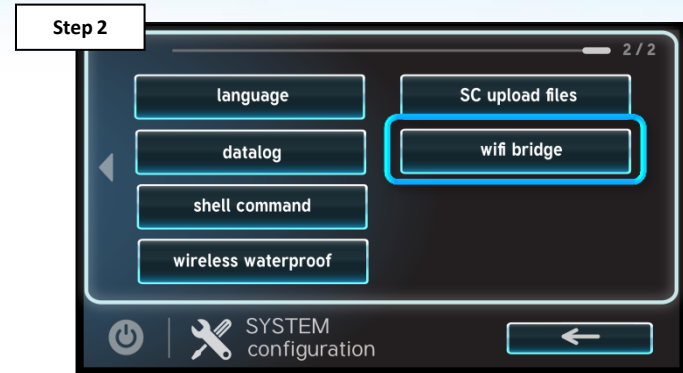
Press the "wifi bridge" option on the right side of the screen.

Step 3

Select the desired network name (SSID) to attempt connection.

Step 4

*Enter the network password, followed by the check mark to complete.

NOTE: The network password IS CASE SENSITIVE. To confirm connection, go to Config>Network and verify an IP address appears under the dynamic tab.

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How To: Create a Web Account

Use the steps provided to set up a web account for both web and app control.

Step 1
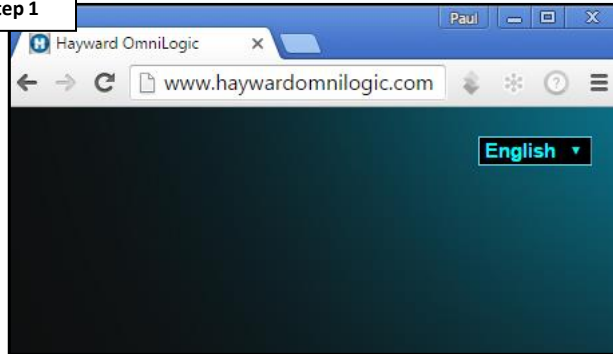
Open a web browser and type:
http://www.haywardomnilogic.com

Step 2

Select: "Register New User", located in the bottom left of the sign-in window.

Step 3

Fill in all the information, including username and password, then press "Save" to continue.

Step 4

Read all listed information, including the privacy policy, check the box & press "Next".

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How To: Register an OmniLogic

Use the steps provided to register an OmniLogic for web/app control. NOTE: the OmniLogic MUST be configured AND MUST have access to the internet.
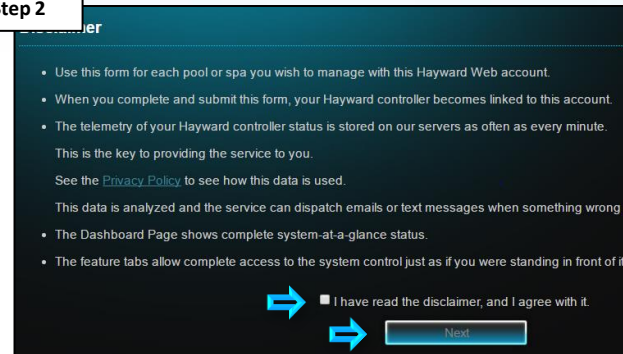
Step 1

Enter the username and password of your account, then select "SIGN IN".

Step 2

Read all listed information, including the privacy policy, check the box & press "Next".

Step 3

Read the reminder information and select "Yes" to start MSP registration.

Step 4

**Fill out all required fields, including the "MSP System ID" *, then press "Save".**

NOTE: The MSP System ID can be found under config>system info (in the top banner of the screen).

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How To: Register an OmniLogic (cont.)

*IF registering the OmniLogic system is not successful, please go to: **Section 1, pg.18** to troubleshoot a Wired Network connection OR **Section 2, pg. 24** for Wi-Fi.*

Step 5

When successful, a confirmation screen will appear. IF unsuccessful, go to Section 1 if troubleshooting a wired network, or Section 2 if troubleshooting for Wi-Fi.

Step 6
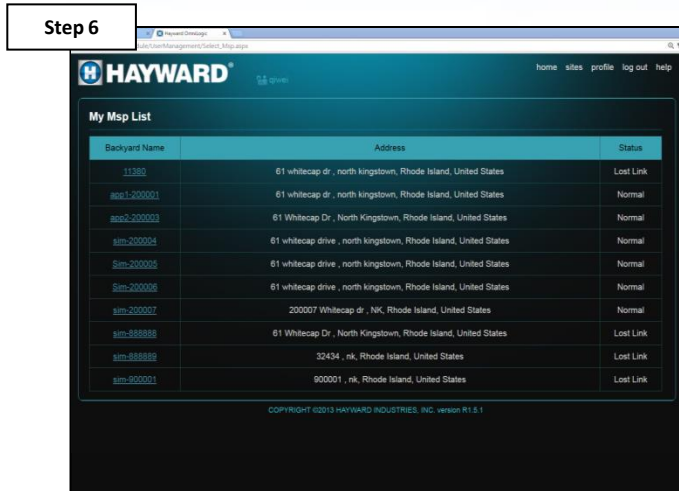
Once a unit is registered, either the dashboard will appear (bottom image of step 5) OR a table will appear (only applicable if multiple MSPs are registered to a single account).

NOTE: If the web server is unable to locate the OmniLogic system, the following message will likely appear: "Msp System ID you have input was not found, please input a valid MSP ID". IF message appears, verify that the OmniLogic is powered up, the MSP is configured, and connected the home network.

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How To: Check for an IP Address

Follow the steps provided to verify whether or not the OmniLogic has an IP address issued by the network router (Dynamic IP Configuration).

Step 1
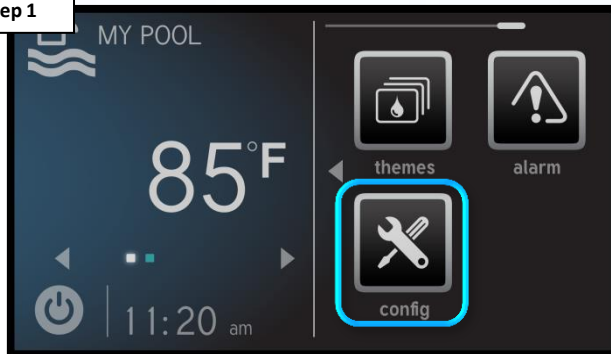
On the right of the dashboard locate and tap the "config" icon.

Step 2

Select the "network" icon, which is located in the right hand column.

Step 3

With *dynamic selected, verify 'Local IP address, Netmask, and Gateway appear.

Step 4

Once verified, select the check mark in the lower right to return.

If the Wi-Fi network is setup for Static IP configuration, then the network toggle should be moved to static and the IP address will have to be inputted.

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How To: Safely Reboot MSP

When rebooting the OmniLogic, it is advisable to do so through the MSP and <u>NOT</u> directly through the breaker. This reboot procedure covers a safe restart.

Step 1
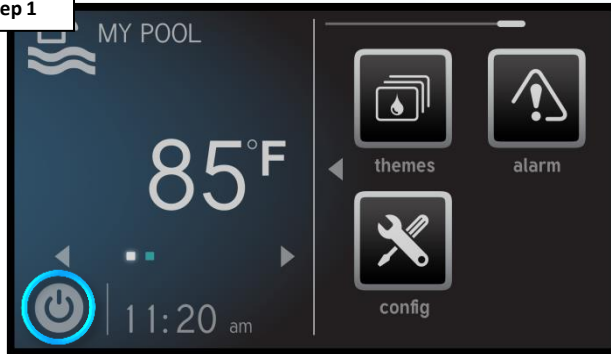
Press the power button.

Step 2
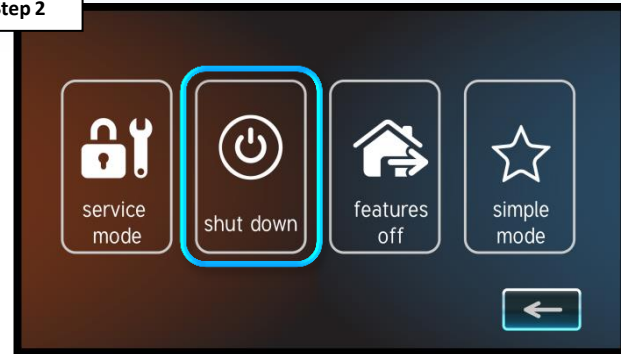
Select 'shut down'.

Step 3

Once it is safe to reboot, a confirmation screen will appear. Press the check mark to proceed in shutting the system down.

Step 4
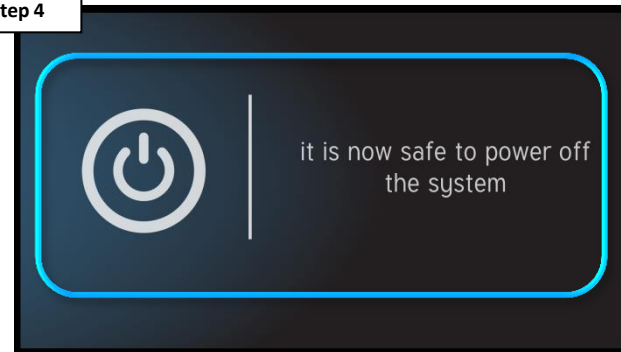
When this confirmation screen appears, tap the icon to reboot OR turn off the system breaker to power down.

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How To: Connect an MSP to a Hotspot

NOTE: This process is for <u>TESTING PURPOSES ONLY</u>. Use the steps provided to connect the MSP to a mobile Hotspot (bypasses the home network).

Step 1
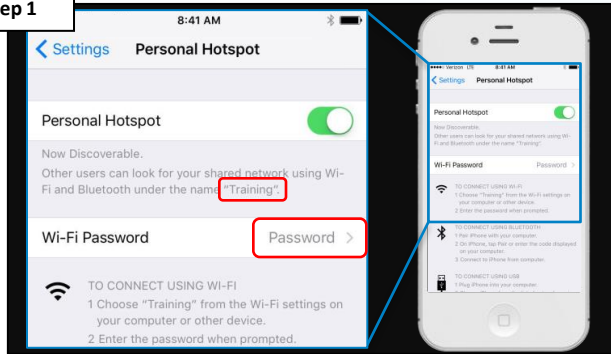
On hotspot or mobile device, identify the network name and record the password.
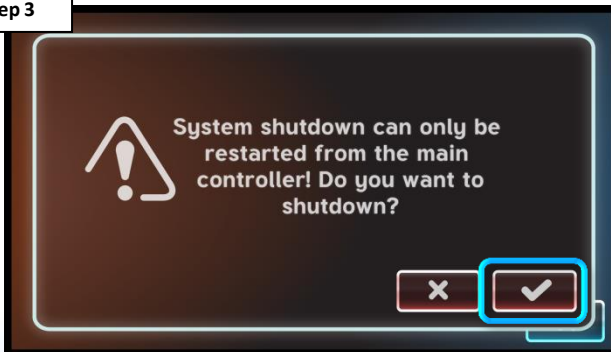
Step 2
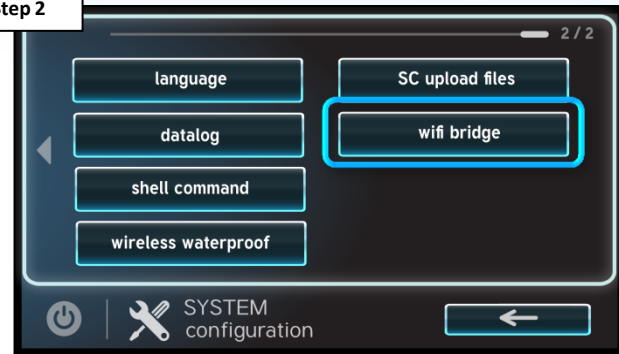
Navigate to: config, then select the 'wifi bridge' to advance.

Step 3

Select the desired network name or SSID to attempt connection.

Step 4

*Enter the network password, followed by the check mark to complete.

*NOTE: The network password <u>IS CASE SENSITIVE</u>. To confirm connection, go to Config>Network and verify an IP address appears under the dynamic tab.

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1. Wired Ethernet: "MSP Not Found"

If the OmniLogic system has not been configured, web registration will not be successful. If not configured, load a backed-up file or complete the configuration process before continuing.

Verify MSP is Configured
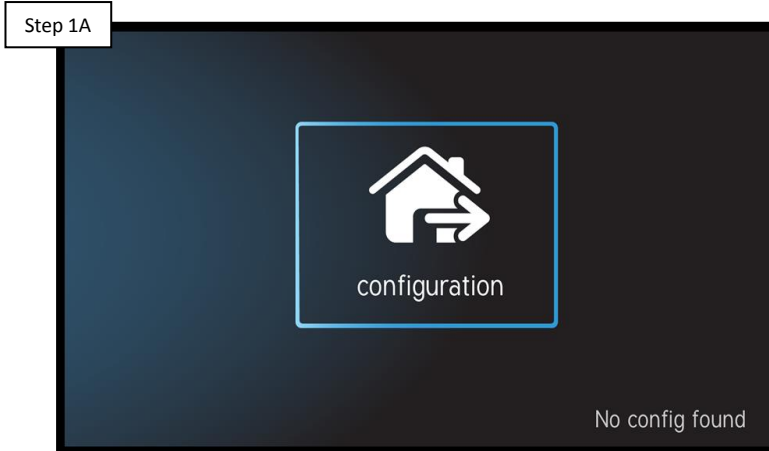
Step 1A

When configured, system dashboard will appear. When not configured or it has been removed, the configuration icon will default in the center of the screen (as shown above). IF configured, go to step 1B. IF not, contact a pool professional:
https://www.hayward-pool.com/shop/en/pools/Dealer-Locator
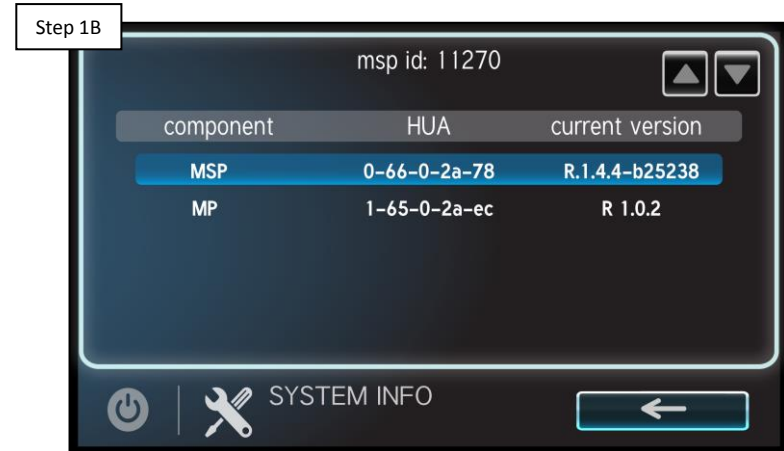
Verify the Firmware is up-to-date

Step 1B

Locate the 'config' icon & go to system info. Verify the MSP rev. matches the latest found at
www.hayward.com under: Support Center> Automation > OmniLogic > Firmware Updates (under MSP). IF the MSP rev. is up-to-date, proceed to step 1C. IF NOT, contacting a pool professional is advised*, updates to firmware may resolve the problem.

Go to the following address to locate a pool professional:
https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

1. Wired Ethernet: "MSP Not Found" (cont.)

PoE or Power over Ethernet typically only appears in switches or sophisticated routers. The WAN port should be reserved for internet feed into the router <u>ONLY</u>. <u>DO NOT</u> plug the MSP's Ethernet cable into a PoE or WAN port

Verify Ethernet connection

Step 1C
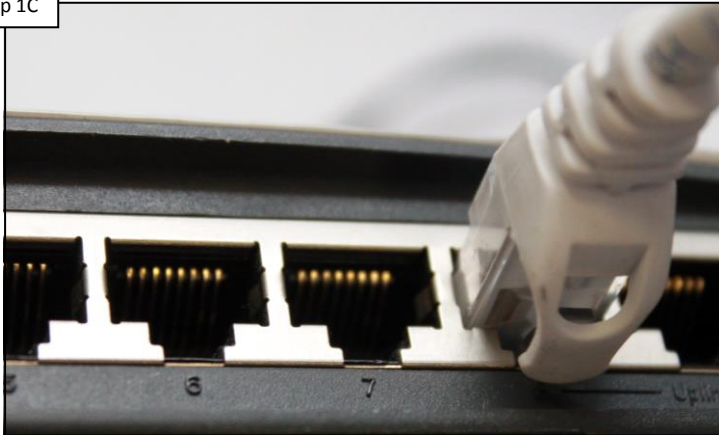
Verify the Ethernet cable is securely connected to the Router/modem. IF correct, go to step 1D. IF not, secure any loose connections.

Verify router port type

Step 1D

Verify the Ethernet cable that runs between the MSP and router/modem is <u>NOT</u> plugged into a PoE or WAN port. IF correct, go to step 1E. IF not, correct & retest.

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1. Wired Ethernet: "MSP Not Found" (cont.)

CAT5e and CAT6 cables are rated for 328 feet to maintain 1Gbps; however, CAT6 has more shielding which makes it less susceptible to data losses over distance.
If run exceeds 328 feet, contacting a network professional is advised.

Test Ethernet cable

Step 1E

Using a LAN tester, verify the Ethernet cable passes for continuity and wire configuration. IF the cable passes, OR you do not have access to a LAN tester, go to step 1F. IF the cable fails, contact a network professional.

Inspect router/modem port
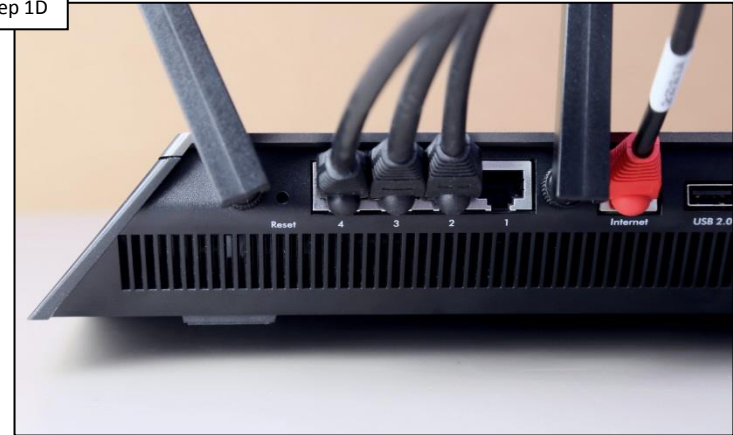

Step 1F

Verify LEDs appear, where the Ethernet cable plugs into the router/modem port. IF LEDs are NOT active, go to step 1G. IF correct OR router does not have status LEDs, go to step 1H.

*NOTE: Ethernet wires that are kinked, damaged, miss-wired, or extend a distance greater than 328 feet typically fail a LAN test. Running a replacement cable, above ground, from the router to the MSP, an easy way to determine whether the cable is the sole culprit of the problem.

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1. Wired Ethernet: "MSP Not Found" (cont.)

NOTE: It is advisable, for testing purposes, to temporarily run a new Ethernet cable above ground directly from the router to the MSP (THIS IS FOR TESTING PURPOSES ONLY). Use an off-the-shelf cable OR a fully verified cable.

Plug into an active router port

Step 1G

First, identify a port on the router that remains active, temporarily disconnect the Ethernet cable*, and switch it with the cable that runs back to the OmniLogic. IF the router's LED is active go to step 1H, IF inactive, contact a pool professional: **https://www.hayward-pool.com/shop/en/pools/Dealer-Locator**

Check for IP address

Step 1H

On the MSP, go to config>network. Verify the Network is set to Dynamic AND that an IP address appears under 'local IP', 'netmask, & 'gateway'*. IF IP DOES NOT appear, go to 1I. IF an address appears AND registration is still unsuccessful, jump ahead to step 1L to log into your account.

WARNING: Prior to disconnecting any other cables from the router, first note the cable and its position. ALWAYS get permission to disconnect cables as this can affect the devices' operation.

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1. Wired Ethernet: "MSP Not Found" (cont.)

Most networks run Dynamic (DHCP); this means the router issues IP addresses to connected devices. Static networks, although rare in residential applications, require programmed IP credentials to make full connection with the router.

Verify the router is set to DHCP

Step 1I
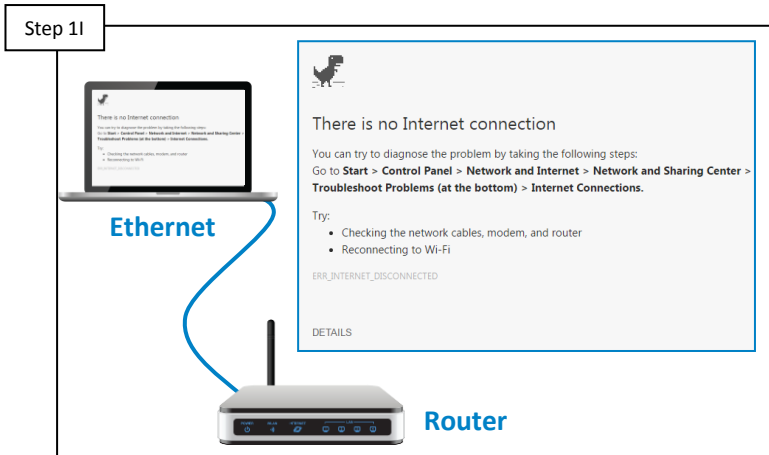
Ethernet

Router

Verify the router is issuing IP addresses based off DHCP. To get out to the internet, if owner simply plugs into the router then it is DHCP. IF DHCP, go to step 1J. IF static, IP credentials must be provided to continue, contact the network administrator for this information.

Laptop/PC test

Step 1J

On a computer or laptop connected to the same router, verify whether or not the device has internet access. IF NO internet, go to step 1K. IF internet access is available please contact a network professional for more assistance.

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1. Wired Ethernet: "MSP Not Found" (cont.)

Routers may take as long as 3 minutes to fully reboot after power is returned. To power cycle, it is recommended to unplug the router from its power source as apposed to pressing any reset buttons (reset buttons can reset some routers to factory default).

Reboot router/modem

Step 1K

Reboot the router and modem (if applicable), wait three minutes & retest. Verify whether internet access is available. IF Internet access is available, reattempt registration. Contact a network professional IF registration fails OR no internet access is available.

Laptop/PC test

Step 1L

On a computer or laptop connected to the same router, Go to www.haywardomnilogic.com & log into your account. IF you are unable to get in, contact tech support (908) 355.7995. IF able to access the account, please call a network professional for more assistance*.

*Access to the account may imply one of the following: Internet speeds are slow, a firewall is prohibiting MSP to Web interaction, there is an IP conflict on the network, port prioritization is affecting traffic, or parental controls within the router are disrupting communication.

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2. Wi-Fi Connection: "MSP Not Found"

If the OmniLogic system has not been configured, web registration will not be successful. If not configured, load a backed-up file or complete the configuration process before continuing.

Verify the Firmware is up-to-date

Step 2A

Locate the 'config' icon & go to system info. Verify the MSP rev. matches the latest found at www.hayward.com Support Center> Automation > OmniLogic > Firmware Updates. IF correct, go to step 1B. IF NOT, contacting a pool professional is advised*, updates to firmware may resolve the problem.

Verify MSP is Configured
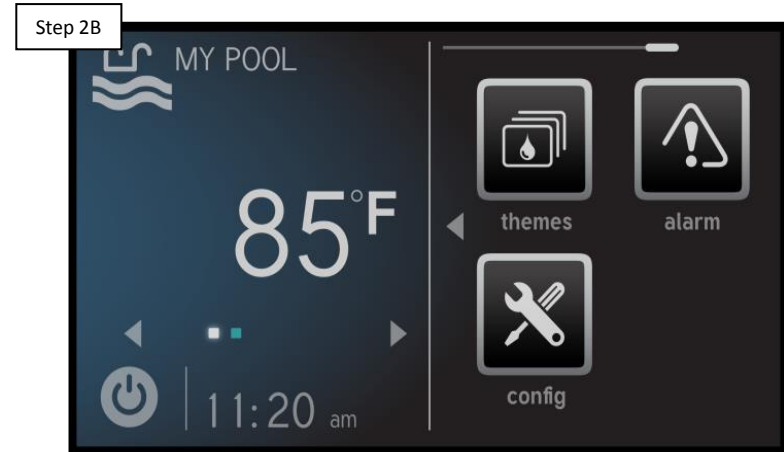
Step 2B

**When configured, system dashboard will appear (as shown above). When not configured, the Config. Icon will default in the center of the screen. IF configured, go to step 2C. IF the configuration is not present, contact a pool professional*. Web registration requires a configuration to be present.**

*Go to the following address to locate a pool professional:
https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

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2. Wi-Fi Connection: "MSP Not Found" (cont.)

NOTE: DO NOT hold down the reset button (back of the HLWLAN) for more than 10 seconds.

Verify HLWLAN connections

Step 2C
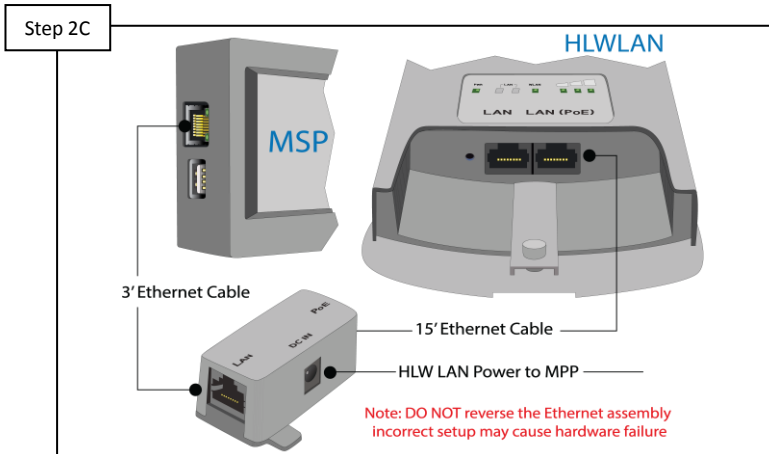
Verify the cable from the MSP is plugged into the LAN port on the injector. Then verify the cable plugged into the HLWLAN's LAN (POE) port plugs into the injectors POE port. Finally, verify the injectors power cable is plugged firmly into the OmniLogic MPP. IF correct, go to step 2D. IF incorrect, contact a pool professional*.

On HLWLAN, inspect LEDs

Step 2D

On the back of the HLWLAN, verify both the Power LED & at least one of the LAN LEDs is ON or Flashing. This will indicate whether or not power has been supplied to the HLWLAN and if communication has been established with the local area network. IF LEDs are not ON, go to 2E. IF correct, jump to step 2F.

*Go to the following address to locate a pool professional:
https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

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2. Wi-Fi Connection: "MSP Not Found" (cont.)

LAN testers are crucial tools for testing the integrity AND proper configuration of network cabling. They are readily available through Network Supply Stores.

Conduct LAN test on cables

Step 2E

Unplug both Wi-Fi cables and conduct a LAN test on each cable, using a LAN tester. IF cable(s) fail the LAN test, replace all failed cables. IF both cables pass <u>OR</u> you do not have access to a LAN Tester, go to step 2F.

Network name & password

Step 2F

Verify the network name & password are both correct. NOTE: passwords <u>ARE</u> case sensitive, should not include the '&' symbol, <u>AND</u> no spaces. IF correct go to step 2G, otherwise correct through the network router.

Unless changed by the network installer, the SSID (network name) and the default password are often published on the router.

2. Wi-Fi Connection: "MSP Not Found" (cont.)

NOTE: When connecting to a your network from a Wi-Fi enabled device (such as a smart phone) <u>DO NOT</u> connect to any 5Ghz networks as these are not supported by the HLWLAN.

Connect a Wi-Fi enabled device

Step 2G

On a Wi-Fi enabled device, connect to your network. Run the Ookla app (speed test). IF speed is/above 3Mb for download & upload, go to 2H. IF lower than 3Mb/3Mb, identify a location where speeds consistently exceed 3Mb/3Mb & relocate the HLWLAN to this location; then rescan & attempt registration.
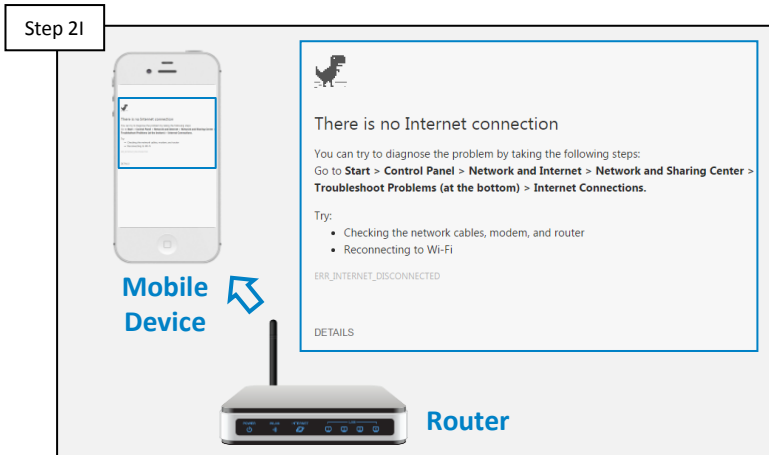
Check for IP address

Step 2H

On the MSP, go to config>network. Verify the network is set to Dynamic AND that an IP address appears under 'local IP', 'netmask, & 'gateway'*. IF IP address DOES NOT appear, go to 1I. IF IP address appears AND registration is still unsuccessful, jump to step 2N to determine why registration is still unsuccessful.

*NOTE: When the MSP is in Daylight mode and dynamic is selected it should have a grey background.
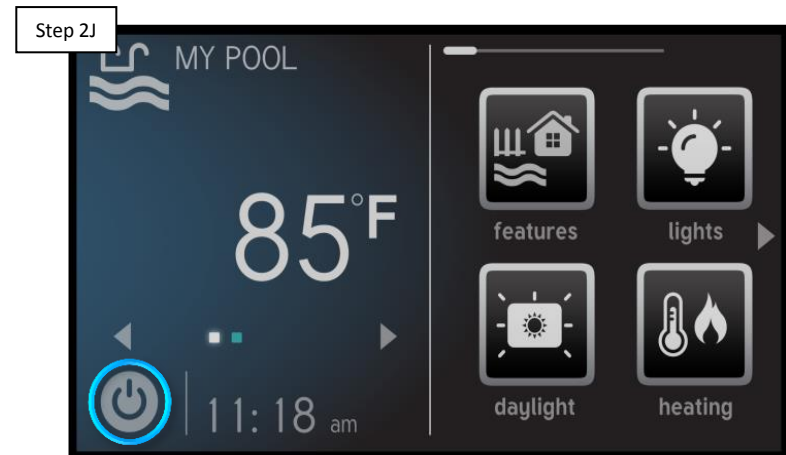
2. Wi-Fi Connection: "MSP Not Found" (cont.)

Most networks run Dynamic (DHCP); this means the router issues the IP addresses to connected devices. Static networks, although rare in residential applications, require programmed IP credentials in order to connect to the router.

Verify the router is set to DHCP

Step 2I

Mobile Device

There is no Internet connection

You can try to diagnose the problem by taking the following steps:
Go to **Start > Control Panel > Network and Internet > Network and Sharing Center > Troubleshoot Problems (at the bottom) > Internet Connections.**

Try:
- Checking the network cables, modem, and router
- Reconnecting to Wi-Fi

ERR_INTERNET_DISCONNECTED

DETAILS

Router

Verify the router is issuing IP addresses. To get out to the internet, if owner simply connects to the router, then it is DHCP. IF DHCP, go to step 2J. IF static, IP credentials must be provided to continue, contact the network administrator for this information.

Power cycle MSP and rescan

Step 2J

MY POOL

85°F

features   lights
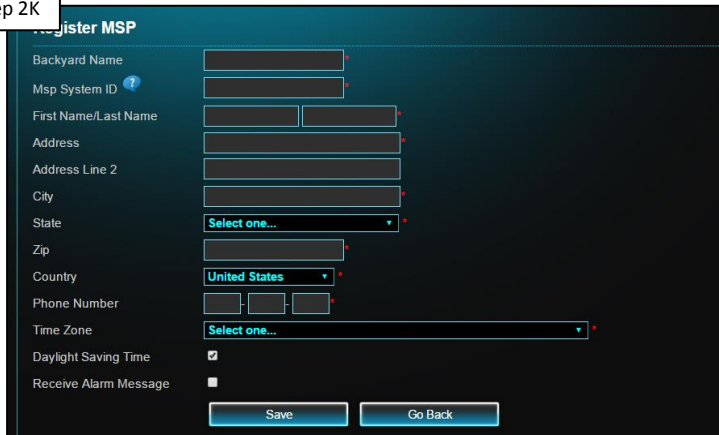
daylight   heating

11:18 am

On the MSP, power cycle the MSP (steps on pg. 15). When the OmniLogic boots back up, wait 3 minutes & rescan the network, entering the password. After 5 minutes, IF an IP address appears go to step 2K. IF no IP address, go to 2L.

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2. Wi-Fi Connection: "MSP Not Found" (cont.)

Some routers may have a power button and others have a reset button. Unplugging the power cable at the router will ensure it is not reset to factory default.

Attempt registration

Step 2K

Go to www.haywardomnilogic.com, log in to the account & reattempt registration. IF registration is successful, then the problem is solved. IF unsuccessful, jump to step 2L.
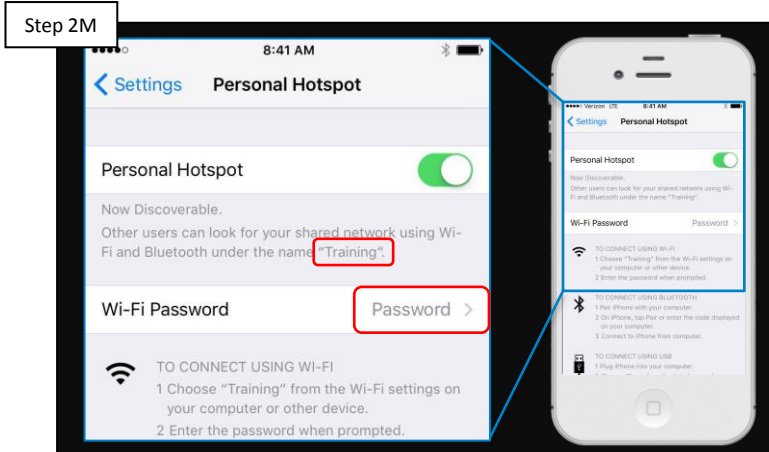
Power cycle the router

Step 2L

Unplug the power to the router. Once completely down, plug the power back in an wait 5 minutes, then rescan. IF an IP address appears back-up to step 2K. IF NO IP address, go to step 2M.

2. Wi-Fi Connection: "MSP Not Found" (cont.)

NOTE: Mobile hotspots generally rely on cellular service. For best results, make sure cellular service is 3G or better when conducting a mobile hotspot test.
Unplugging the power cable at the router will ensure it is not reset to factory default.

Connect to a Hotspot

Step 2M

Setup a mobile hotspot and connect the MSP to that hotspot (pg. 16). Check for an IP address in the MSP. IF still NO IP address, then replace the HLWLAN. IF IP address appears, contact a network professional*.
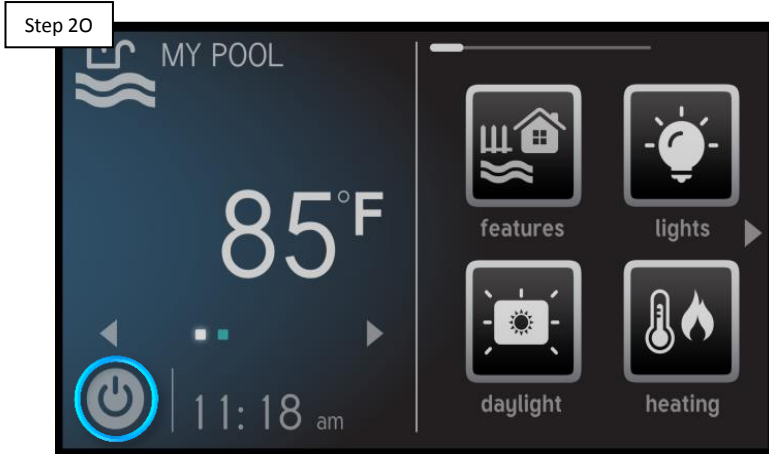
Power cycle the router

Step 2N

Unplug the power to the router, once completely down, plug the power back in an wait 5 minutes, then attempt registration. IF successful, problem is solved. IF unsuccessful go to 2O.

*IF an IP address appears after connecting to a hotspot then the problem is likely related to: internet service is down, incorrect network password, Wi-Fi signal is unreliable, OR incompatibility between the MSP & Router. NOTE: There have been reported compatibility problems with Pace/ U-verse, modem/router combos; adding a third party router may resolve the issue.
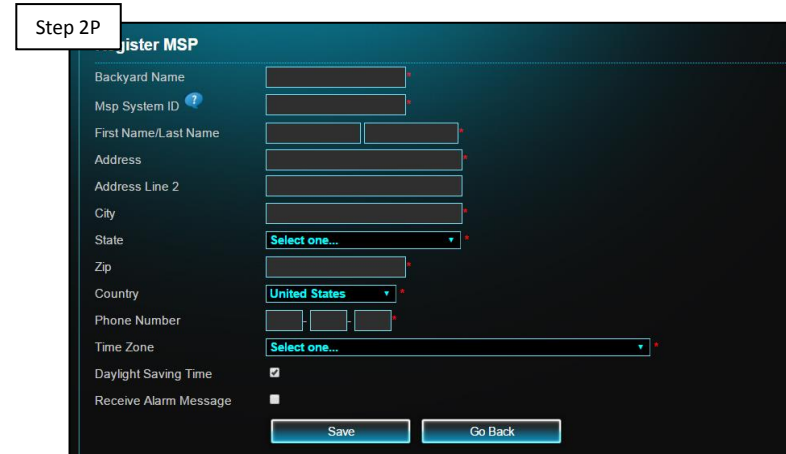
30

2. Wi-Fi Connection: "MSP Not Found" (cont.)

NOTE: Mobile hotspot generally rely on cellular service. For best results, make sure cellular service is 3G or better when conducting a mobile hotspot test.

Power cycle MSP

Step 2O

MY POOL

85°F

features · lights

daylight · heating

11:18 am

On the MSP, power cycle the MSP (pg. 15). When the OmniLogic boots back up wait 3 minutes & attempt registration. IF successful, problem is solved. IF unsuccessful go to 2P.

Register while connected (Hotspot)

Step 2P

Register MSP

Backyard Name
Msp System ID
First Name/Last Name
Address
Address Line 2
City
State — Select one...
Zip
Country — United States
Phone Number
Time Zone — Select one...
Daylight Saving Time ☑
Receive Alarm Message ☐

Save · Go Back

Setup a mobile hotspot and connect the MSP to that hotspot (pg. 16). Attempt registration. IF still NO IP address, then go to 2Q. IF Registration is successful, contact a network professional*.

*IF an IP address appears after connecting to a hotspot then the problem is likely related to:
Internet is down, slow Internet speeds, firewall, IP conflict, port prioritization, or parental controls.

HAYWARD

2. Wi-Fi Connection: "MSP Not Found" (cont.)

NOTE: If experiencing trouble logging into the web account, verify the username and password are correct (the password <u>IS CASE SENSATIVE</u>).

Log into OmniLogic account

Step 2Q

User Name: trainingdocs

Password: •••••••••••

☐ Remember Login Name

SIGN IN

Register New User   Forgot Password?

Go to www.haywardomnilogic.com and complete login. IF login was unsuccessful, verify the your internet is not down and contact tech support (908) 355-7995. IF login was successful, please contact a network professional for more assistance*.

*IF an IP address appears after connecting to a hotspot then the problem is likely related to: Firewall, IP conflict, port prioritization, parental controls, corrupt config., or Wi-Fi signal is unreliable.

HAYWARD