




HAYWARD®

HLWLAN 802.11b/g/n Transceiver Kit

Wireless Communications for OmniLogic

Owner's Manual

 A photograph of the Hayward HLWLAN 802.11b/g/n Transceiver Kit. It is a tall, rectangular, light-colored device with a small Hayward logo and the word 'HAYWARD' printed near the bottom. It has a small stand at the base.	<p>Contents</p> <p>Introduction.....1</p> <p>Installation.....2</p> <p>Configuration.....6</p> <p>Operation.....8</p> <p>Troubleshooting.....9</p>
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HLWLAN

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FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Hayward could void the user's authority to operate this equipment.

NOTE: This 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.

Radio Information

FCC ID: A8J-ENS610EXT



Introduction

The HLWLAN is a 802.11b/g/n Transceiver kit that can make a wireless connection from the OmniLogic up to 250ft to the home's router/access point preventing the need to run ethernet cable for web access. Connection to the web is necessary for remote access to the OmniLogic using web enabled devices.

Compatibility

IMPORTANT: The HLWLAN included with this manual can only be used with OmniLogic controls operating with MSP version R4.1.1 or greater. To determine OmniLogic's MSP version, select the "config" icon on the home screen and then select "system info" (see diagram on page 8). The firmware version for the MSP will be shown on the right hand side. If a firmware upgrade is required, refer to the OmniLogic manual for those instructions..

Before You Begin

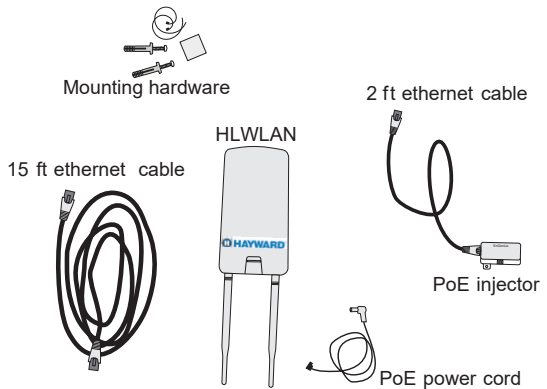
The HLWLAN kit contains the following:

- HLWLAN 802.11b/g/n Transceiver
- Power Injector
- Two 2.4 Ghz antennas
- OmniLogic power supply cable for Power over Ethernet (PoE) Injector
- Two Ethernet Cables
- Miscellaneous mounting hardware

Installation of the HLWLAN requires that you have an existing wireless home network in range of the intended HLWLAN mounting location. The HLWLAN has a radio range of about 250ft. To connect the HLWLAN to the home's network, you can either use WPS or will need to know the home network's SSID, security type and password.

Survey the location near the OmniLogic to locate the best mounting location. The HLWLAN has a 15ft ethernet cable that connects to the OmniLogic. When determining the best mounting location for the HLWLAN, note that it can be mounted on a surface using the two provided screws or strapped to an object using the two included zip ties. To help determine if the mounting location is in range of the router/access point, test the connection of other devices (phone, tablet, laptop, etc.) at that same location.

If a reliable wireless connection can't be made in the intended location, consider moving the router/access point closer to the OmniLogic or using a longer outdoor rated ethernet cable to move the HLWLAN closer to the router/access point.





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Router/Access Point Information

If using WPS

The HLWLAN supports WPS connectivity. WPS stands for Wi-Fi Protected Setup and is a wireless networking standard that tries to make connections between a router and wireless devices faster and easier. It works only for wireless networks that have WPA Personal or WPA2 Personal security. Check the router's manual to determine whether it supports this feature and instructions on how to use it.

If not using WPS

If not using WPS, the HLWLAN cannot be configured without the following information. Fill in the information below.

Router or Access Point's SSID (wireless network name - case sensitive) _____

To find the SSID:

- 1) Ask the homeowner. Each wireless router or access point has a default SSID which may be in use, or has been changed by the network administrator (homeowner).
- 2) If the homeowner doesn't know, have them login to the router/access point and read the information from the device. The SSID should be shown along with other router settings. The router's documentation or manual should show how to access administrative settings and find the SSID.
- 3) If a wireless device is already connected to the home network (phone, tablet, laptop, etc.), the device's connection properties may show the SSID.

Router or Access Point's Security Type _____

To find the Security Type:

- 1) Ask the homeowner. The network administrator (homeowner) would have set up the security type based on the desired security level and the type of devices that will be connecting to the wireless network.
- 2) If the homeowner doesn't know, have them login to the router/access point and read the security type from the device. This information should be shown along with other router settings. The router's documentation or manual will show how to access administrative settings and find the security type.
- 3) If a wireless device is already connected to the home network (phone, tablet, laptop, etc.), the device's connection properties may show the security type that is in use.

Wireless Network Password (case sensitive) _____

The wireless network password is not broadcast or typically saved in the router/access point's administrative settings. The network administrator (homeowner) would have set up a password when initially setting up the wireless security type. If no security was selected, the network is Open and there is no password.

Installation

DANGER of Death, Injury or Property Damage if procedure not followed. This accessory connects to the OmniLogic beneath the dead front panel. Dead front removal is required for this installation. Power to the OmniLogic panel **MUST** be shut off before the dead front is removed. This means a complete shutdown of power to the entire OmniLogic unit.



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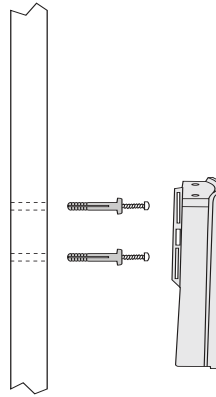
- 1) Locate the two included antennas and screw them to the HLWLAN antenna terminals labeled "2.4 Ghz". Note that the 5 Ghz antenna terminals will not be used.



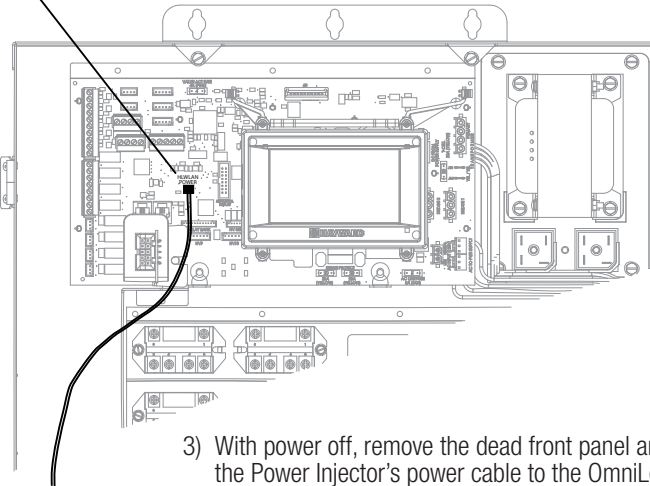
Attached antennas to 2.4 Ghz antenna screws.

- 2) Depending on the mounting surface, use either the included screws/anchors or tie straps. Be sure that there are no major obstacles between the HLWLAN and the home's router/access point.

Loosely mount the HLWLAN so that you have visible access to the LED indicators on the bottom back of the unit. You will need to refer to these indicators before permanently fastening the HLWLAN.



Attach PoE injector power cable to connector labeled "HLWLAN Power"

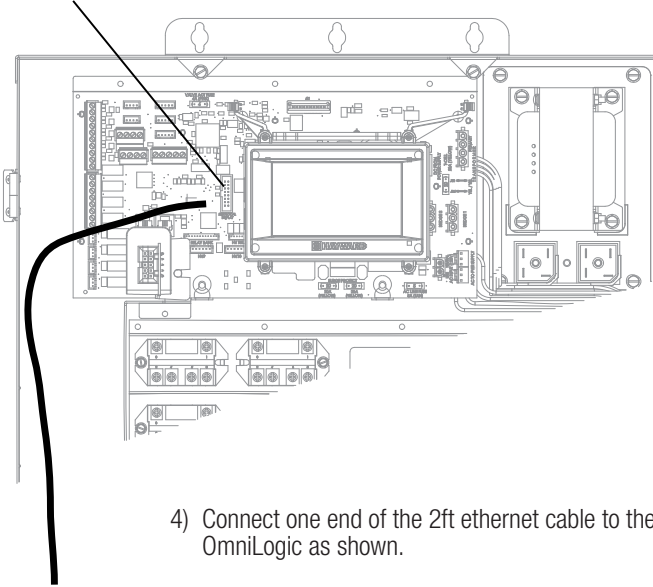


- 3) With power off, remove the dead front panel and connect the Power Injector's power cable to the OmniLogic as shown above.

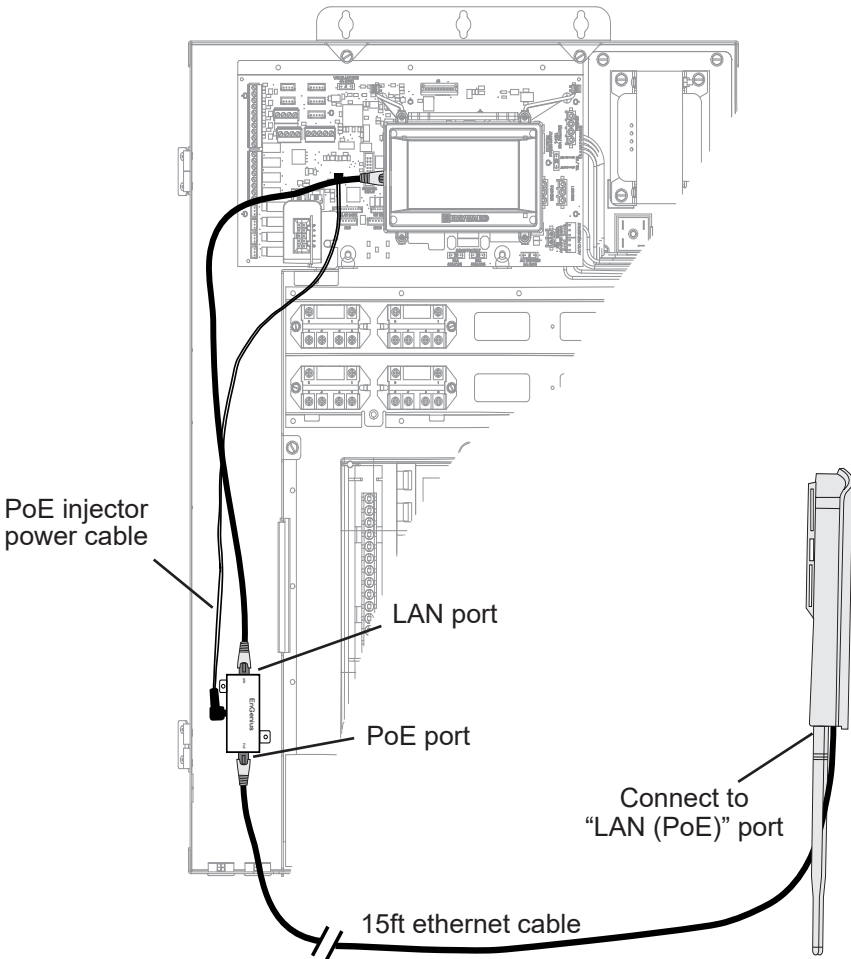


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Connect .6m ethernet cable here



- 4) Connect one end of the 2ft ethernet cable to the OmniLogic as shown.



- 5) Position the Power Injector in a convenient location within the low voltage wiring compartment of the OmniLogic. You can fasten the Power Injector with double sided tape or Velcro, if desired. Connect the opposite end of the power supply cable. Connect the 2ft ethernet cable to the Power Injector's LAN port.

Connect one end of the 15ft outdoor ethernet cable to the Power Injector's PoE port and the other end to the port on the HLWLAN marked "LAN PoE" (shown on page 6). To access this port, remove the HLWLAN's bottom cover. Be sure to replace the cover when done.

After all connections are made, replace the OmniLogic dead front panel taking care that no wires are pinched.



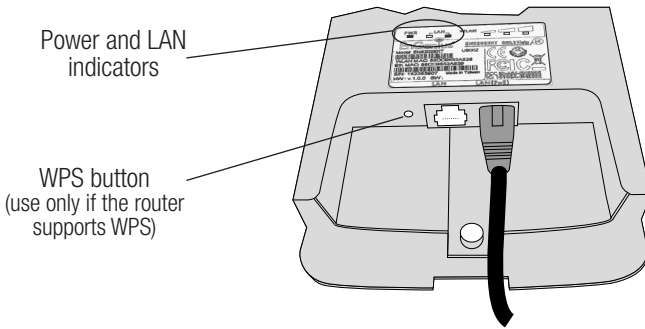
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Configuration

With the HLWLAN now connected, power up the OmniLogic. Wait about 3-4 minutes for the OmniLogic to fully start. Verify that the HLWLAN is being powered and is connected to the OmniLogic by looking at the PWR and LAN LED indicators on the backside near the ethernet connection. Both LEDs should be lit. After verifying that the HLWLAN is powered, it must now be configured to connect to the wireless home network.

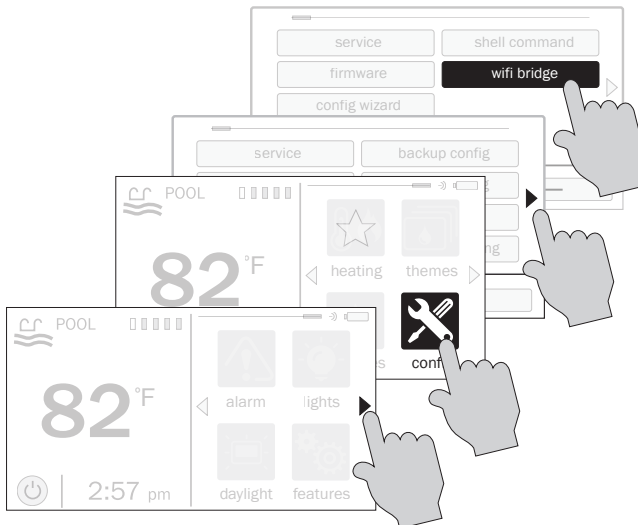
If using WPS

If using WPS (see page 2), note the location of the HLWLAN's WPS button in the diagram below. Follow the router's instructions to start the WPS connection procedure. When the instructions call for the HLWLAN's WPS button to be pushed, hold the button in for 3-5 seconds using a paper clip or some other small tool. The WLAN indicator will blink rapidly confirming that the HLWLAN is starting to connect with the router.



If not using WPS

The following procedure assumes that DHCP is enabled on the home's router. From the OmniLogic's Local Terminal touchscreen (this cannot be performed from Remote Terminals), select the "Wifi Bridge".





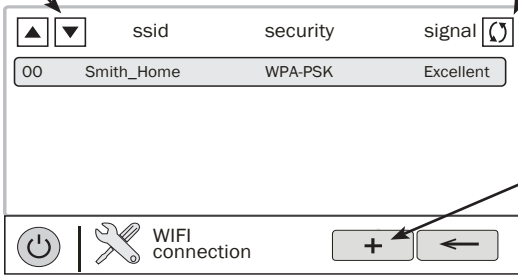
Wireless Bridge Configuration

Dynamic IP

The HLWLAN will now scan for available access points. Once it has finished, the SSID of all available access points will be displayed on the screen as shown below. Touching the desired SSID will begin the connection process. Depending on the security used by the router or access point, you may be prompted for a password.

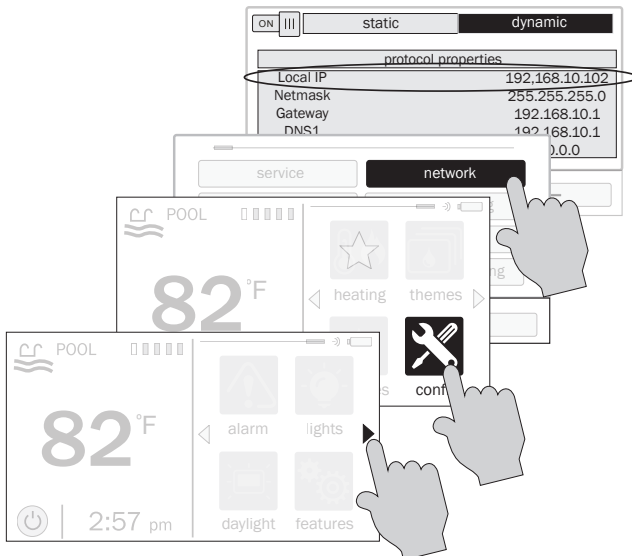
Use to scroll through available access points

Use to refresh the list of available access points



Use to manually configure an access point that does not appear in the list

If prompted for a password, the keypad will automatically appear. Enter the password and touch the check mark to move on. The HLWLAN will begin to automatically connect to the selected access point. Be patient -- this may take a few minutes to complete. Once complete, verify that you have connected to the home network by making sure that you have an entry next to "Local IP" in Protocol Properties, as shown below. Note that your Local IP address will likely be different than the one shown below. If any IP address is shown, the OmniLogic is connected to the home network. If "Not assigned" is shown, the OmniLogic is not connected to the home network and you should refer to Troubleshooting.





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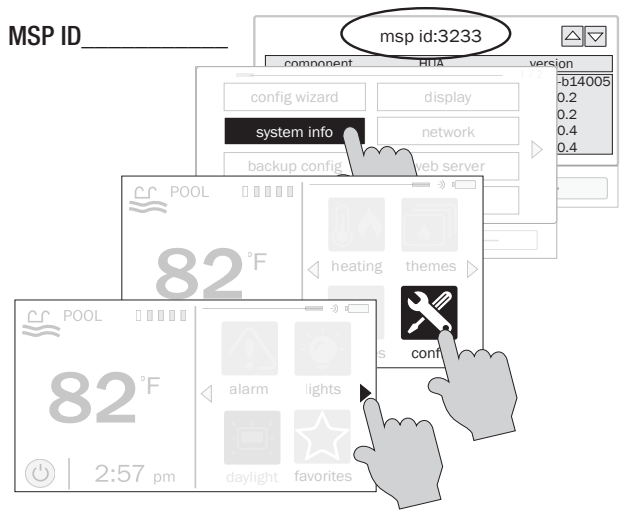
Static IP

In certain cases, a static IP may be desired. Consult with a trained authorized individual who has access to the router's configuration settings to determine if the router supports that feature. Touching the "Static" tab will allow you to manually input network settings.

Operation

After successfully installing the HLWLAN, you will need to setup a Hayward OmniLogic user account in order to remotely access the OmniLogic through the web using a standard internet browser or the Hayward mobile app. Follow instructions below.

- 1) Using an ordinary web browser, go to www.haywardomnilogic.com. If you don't already have an account, select "Register New User" and set up a new account.
- 2) Log in to your account.
- 3) Register your OmniLogic. While filling out the form to register your OmniLogic, you'll be asked for an MSP System ID. This number can be found directly from the OmniLogic using the method shown.



After the MSP is accepted, the OmniLogic will be linked to your account. You'll be able to access the OmniLogic at any time from your browser by logging into your account at haywardomnilogic.com. For mobile devices, the Hayward "OmniLogic" app must be downloaded from your device's app store. Go to www.hayward.com for more information on the availability and function of mobile apps.



Troubleshooting

1. The PWR and LAN LEDs are not lit.

This is an indication that the HLWLAN is not connected to the OmniLogic. Perform the following:

- Make sure that both ends of the ethernet cable are firmly connected; one side in the HLWLAN and the other in the PoE Injector (see Installation Steps 3 and 4).
- Make sure that the PoE Injector power cable is firmly inserted in the HLBASE Main Board (Installation Step 2).
- Verify that the OmniLogic has power and that there is no break in the ethernet cable.

2. There is no “Local IP” address (page 7)

This is an indication that the HLWLAN is not connected to the home network.

- The HLWLAN may be mounted too far away from the home’s router/access point or there may be too many obstructions between them. Using a Wifi capable phone, tablet or laptop, verify that other mobile devices can connect from that same location as the HLWLAN.
- If other devices can connect, the most likely cause is an error in the configuration settings. Reconnect the HLWLAN to the home’s access point by following the procedure on page 7.
- If other devices cannot connect to the wireless network, consider relocating the router/access point or moving the HLWLAN closer using a longer outdoor rated ethernet cable.

3. Web enabled devices cannot connect to the OmniLogic

- Verify that you have an internet connection at the router/access point. Temporary outages with Internet Service Providers (ISPs) are not uncommon and the OmniLogic will be offline until service is restored.
- Have any changes been made to the home network? Any changes to the home network (router replacement, SSID name change, changes in security settings, IP reservation, etc.) may require you to repeat the configuration steps on page 7.
- Have you removed power from the OmniLogic or made changes that require it to reboot? If so, give the HLWLAN some additional time to reconnect to the home network.

For further information or technical support, visit our website at www.hayward.com.

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