Aqua Connect
Home Network (ACHN)
Diagnostics Manual

AQ-CO-HOMENET
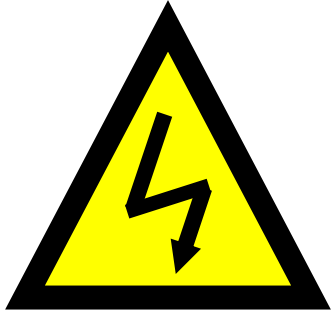
Table of Contents

HAYWARD

Aqua Connect Home Network (ACHN) Diagnostics

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:

- Only qualified technicians should remove the panel
- Replace damaged wiring immediately
- Insure panel is properly grounded and bonded

HAYWARD®

ACHN Minimum Requirements

Family	Model	Firmware
2nd Generation Antenna	AQL2-BASE-RF	v1.10

&

Pro Logic	All Models including PL-P-4	v4.20 & higher

-OR-

Aqua Rite Pro	All Models	v1.20 & higher

HAYWARD

ACHN Operation Status LEDs

| LED	Description
RF	Normal Operation: ON Solid Indicates whether or not the ACHND is communicating with the pool controller.
TX	Normal Operation: Flashing Indicates when the ACHND is sending information through the Ethernet cable.
RX	Normal Operation: Flashing Indicates when the ACHND is receiving information from the Ethernet cable.
LINK	Normal Operation: Flashing 4 times per minute Indicates when communication occurs between the ACHND and the Aqua Connect Website.

HAYWARD

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up
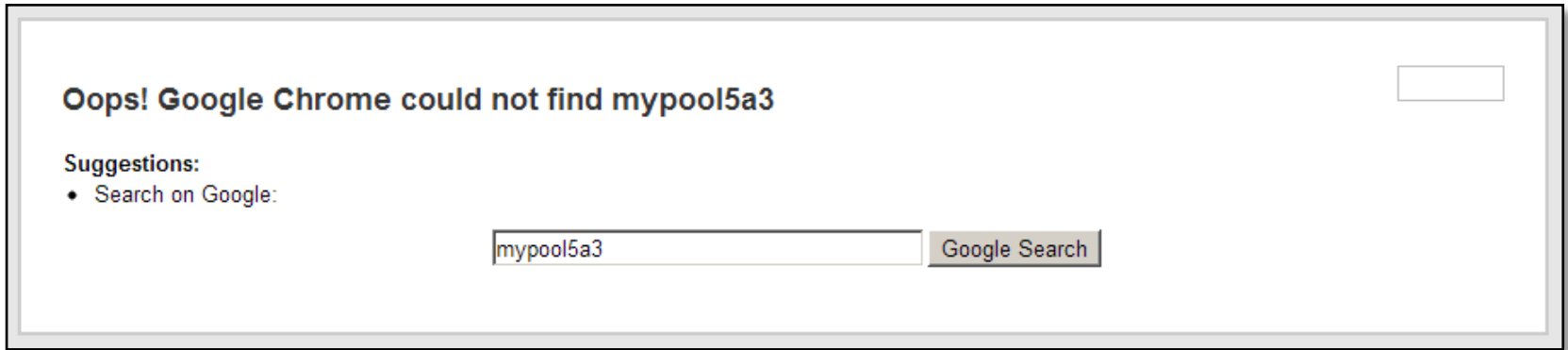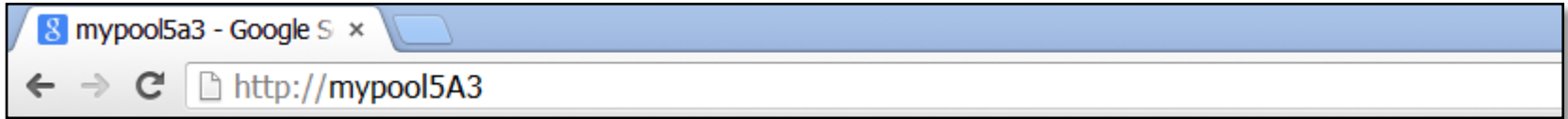
If the Intranet otherwise known as the LAN feature is not working using the last three digits of the MAC address, proceed to step 1A located on page 5.
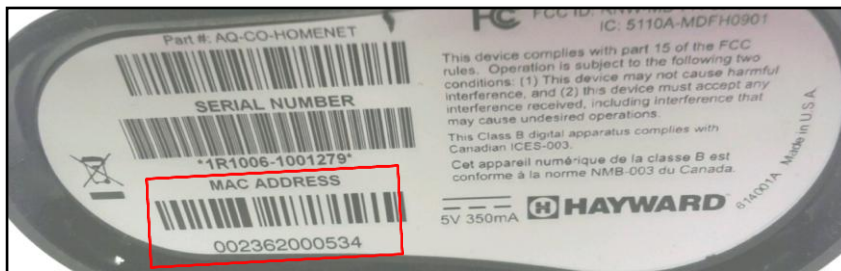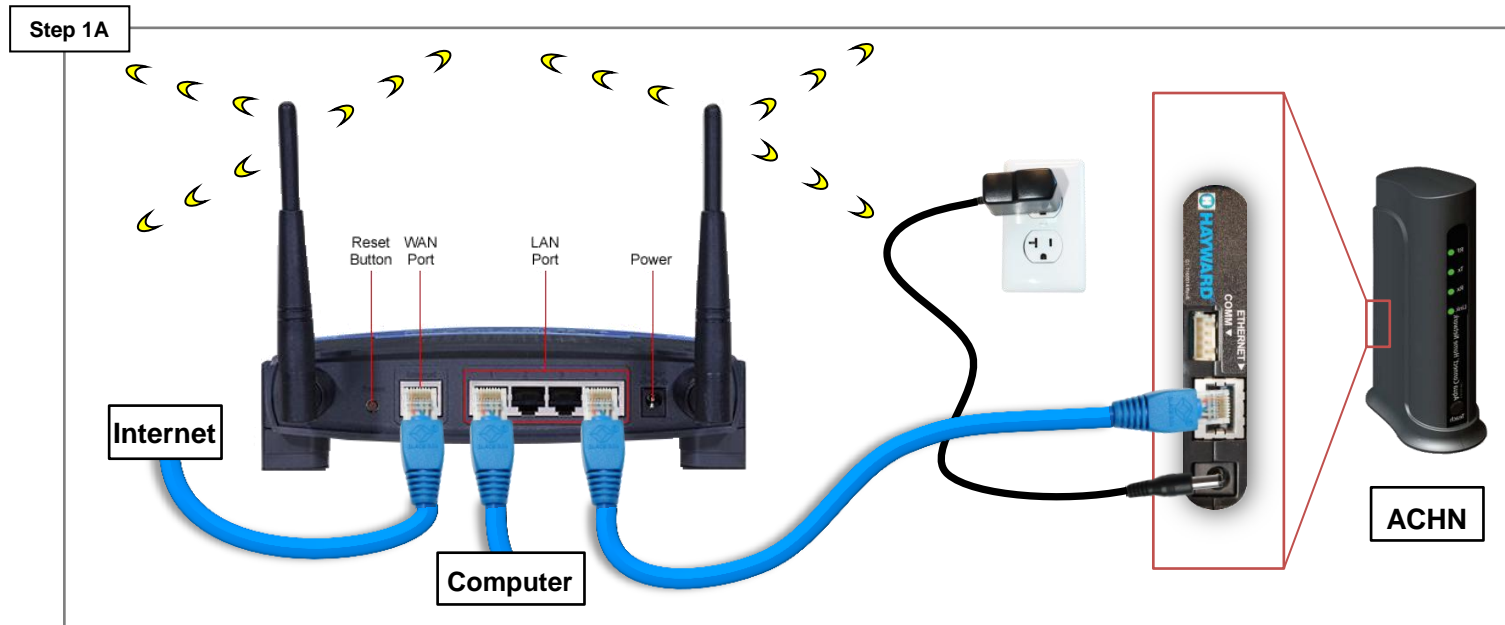

Note: the MAC Address is 12 characters long and can be located on the label underneath the ACHN device

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up

Verify that the ACHN is communicating with
the home network

Step 1A

Reset Button | WAN Port | LAN Port | Power

Internet

Computer

ACHN

Verify the ACHN has power and its Ethernet cable is plugged into the same router as the computer. If the Tx and Rx LEDs do not appear replace the Ethernet cable. If Wi-Fi is being used, make sure the Aqua Connect is plugged into the same router as the Wi-Fi signal. If correct go to step 1B (p.6).

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up

Substitute the http://mypoolxxx with the IP address assigned to the ACHN by the home network

I: Locate and click on the App Store, II: Locate the "Search" icon at the bottom and type "Fing" into the search bar III: Click on the "Fing" App

Step 1B

IP Address	MAC Address
192.168.1.4	002362003A16

http://192.168.1.1

Highlighted in blue is an example of an IP address. The IP address will be assigned by the customer's home network, whereas the MAC address is the equivalent of a social security number and is a unique identifier. To obtain the IP address through an Apple product go to step 1C. To obtain the IP address through a PC, go to step 1E. (p.7).
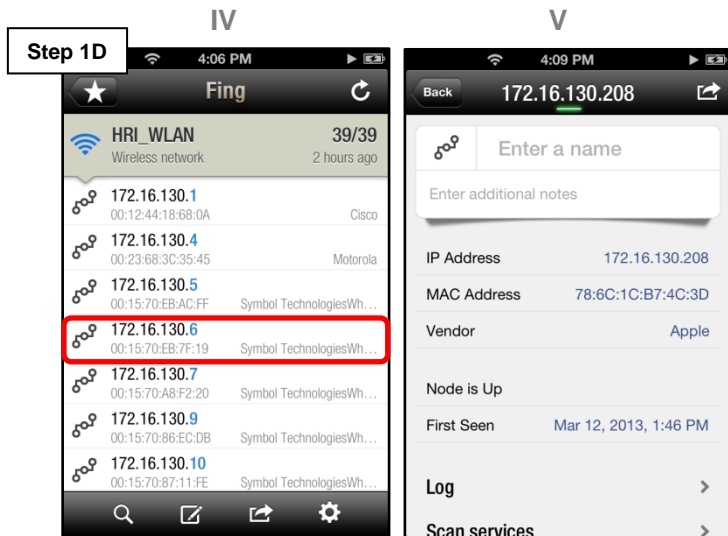
Step 1C

I   II   III

I: Click on the App Store which is located on the dashboard. II: Click on the search option and type "fing" into the search bar. Click on Install (this should be a free app) III: Open the app and proceed to step 1D (p.7).

HAYWARD®

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up

IV: Click on the IP address that matches the MAC address (in light grey font). **V:** Copy the IP address

VI: Click on the start button **VII:** Scroll up to run and select **VIII:** In the "Open" bar, type "cmd" and select the "OK" button

IV

V

VI

VII

VIII

Type http:// in the address bar of the browser followed by the IP address. If this does not correct problem go to step 1H (p.9).
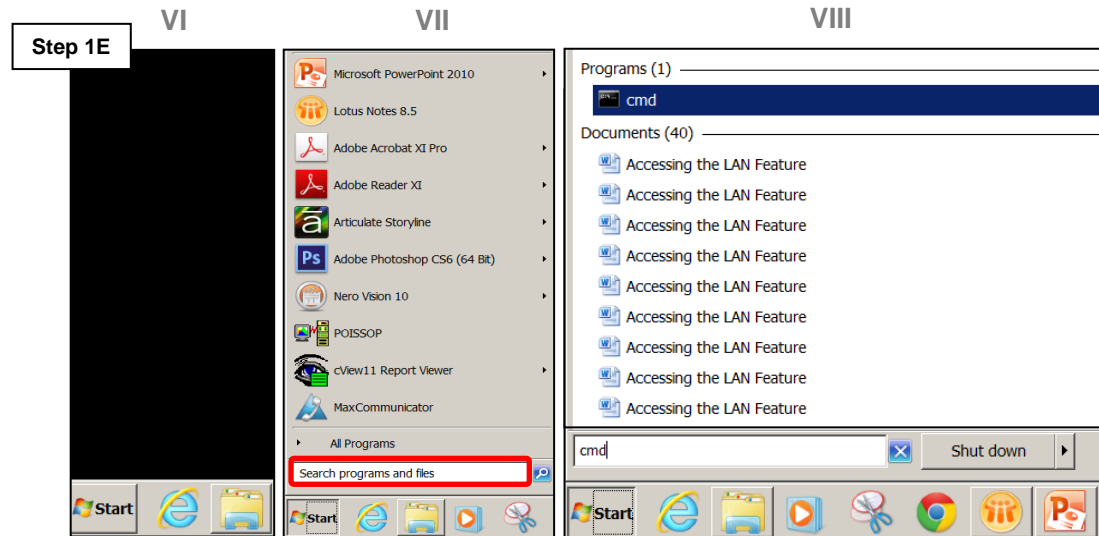
VI: Start by pressing the start button (bottom left of the Windows Task Bar) or click on "Run" if available. VII: Select the "Run" option. VIII: Type "cmd" into the "Open" bar and press the "OK" button. Continue to step 1F (p.8).

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up

Type ping mypool followed by the last three digits of the MAC address and press enter

Once the test has run the IP address should appear in brackets as highlighted below

Step 1F

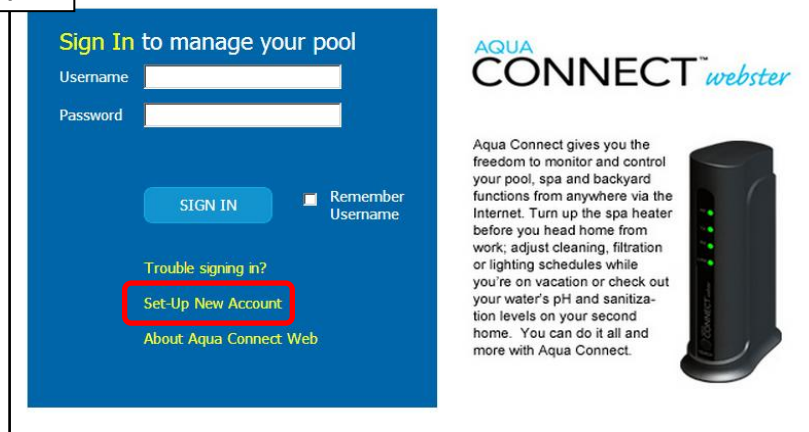**Once entered proceed to step 1G.**

Step 1G

Copy the IP address and use it in the Address Bar (preceded by the http://) If this does not correct go to step 1H (p.9).

1: Aqua Connect Not Functioning
LAN Feature Not Showing Up

Register the unit through the ACHN website. www.aquaconnectweb.com

Check the main software revision in the diagnostics menu.

Sign In to manage your pool

Username

Password

SIGN IN ☐ Remember Username

Trouble signing in?

Set-Up New Account

About Aqua Connect Web

AQUA CONNECT™ webster

Aqua Connect gives you the freedom to monitor and control your pool, spa and backyard functions from anywhere via the Internet. Turn up the spa heater before you head home from work; adjust cleaning, filtration or lighting schedules while you're on vacation or check out your water's pH and sanitization levels on your second home. You can do it all and more with Aqua Connect.

If Set-up New Account does not appear click on Classic option at the bottom of the page. If registration works and adding a pool provides full control from the web, then the problem is in the LAN security (home network – which may require the help of a network professional). If the problem still exists proceed to step 1J.
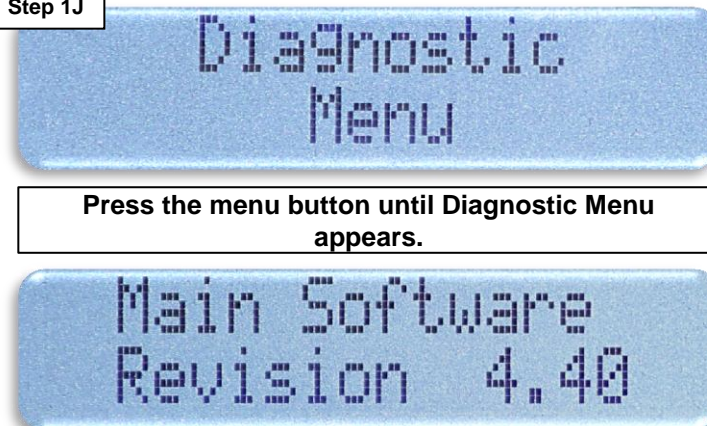
Diagnostic Menu

Press the menu button until Diagnostic Menu appears.

Main Software Revision 4.40

Press the right arrow until main software rev. appears. If the main software revision is 4.20 or higher (1.20 for AQR-PRO) then the problem is likely the network. In some extremely rare cases the Aqua Connect could be the cause of this problem.

HAYWARD

2: Aqua Connect Not Functioning
Unit Not Communicating

Messages	Description & Duration
ON	**ERROR: Unit not communicating for 30 minutes for 9 days, 9 hours, 32 minutes.**

Verify the RF LED is illuminated green

Step 2A
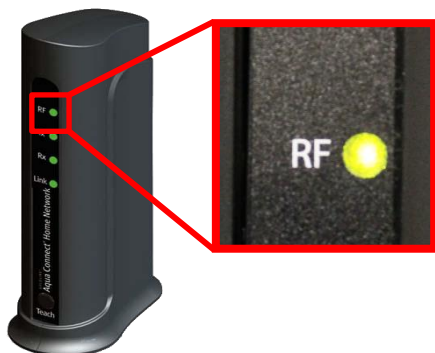
If the RF LED is not lit, go to train the ACHN (p.18). If the RF LED is illuminated perform a range test (p.19). Once all resets are complete go to step 2B.

Verify an internet connection

Step 2B
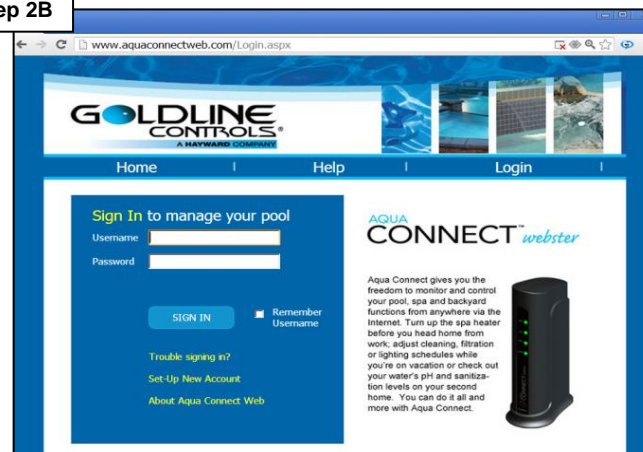
Make sure the internet connection is working on the device you are trying to access the ACHN from. If internet connection is not working check with Internet Service Provider (ISP). If internet is working go to step 2C (p.11).

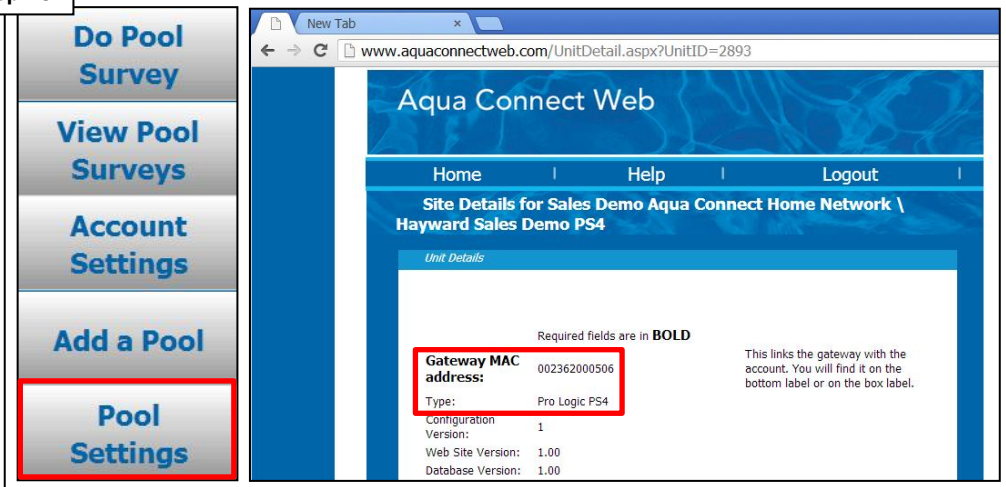# 2: Aqua Connect Not Functioning
Unit Not Communicating

Log in to the web account and check the Pool Settings by clicking on the tab

Check the main software revision in the diagnostics menu.

Step 2C

Step 2D

Press the menu button until Diagnostic Menu appears.

Log in to the ACHN account and on the left side of the dashboard select the "Pool Settings" tab. Scroll down until the Gateway MAC address appears as well as the controller type; if this information does not appear go to step 2D, if it does appear contact tech support (908)355-7995.

Press the right arrow until main software rev. appears. If the main software revision is 4.20 or higher (1.20 AQR-PRO) then the problem is either the network or possibly the Aqua Connect.

3: Aqua Connect Account
Can't Sign into Web Account

Verify Username and retry Password

Step 3A

Sign In to manage your pool

Username: MyPool
Password:

Your user name or password was not recognized...

SIGN IN ☐ Remember Username

Trouble signing in?

Set-Up New Account

About Aqua Connect Web

Double check the user name and retry password. Though the username is not case sensitive the password is. If the account is locked go to step 3B otherwise contact tech support to reset password (908)355-7995.

Wait 15 minutes and retry sign in

Step 3B

Sign In to manage your pool

Username: MyPool
Password:

This account has been disabled and will remain disabled for 15 more minutes.

SIGN IN ☐ Remember Username

Trouble signing in?

Set-Up New Account

About Aqua Connect Web

Though the username is not case sensitive the password is. If the account has been locked, wait 15 minutes and then contact tech support to reset password (908) 355.7995.

Note: The username and email address must be provided in order to reset the password through technical support.

HAYWARD®

4: Aqua Connect Device
No LEDs Illuminated

Verify the 5DC through ACHN power cable

Verify receptacle has power

Step 4A

With the power cable plugged into the wall check the power on the output side of the transformer for 5DC ±.5DC. If no or low voltage, go to step 4B. If correct go to step 4C (p. 14).

Step 4B

If plug is a GFCI verify it is not tripped. Check the plug for power. If no power consult an electrician. If power is present replace the ACHN plug (GLX-HOMENET-PS).

HAYWARD®

4: Aqua Connect Device
No LEDs Illuminated

Plug in Power and Ethernet Cables
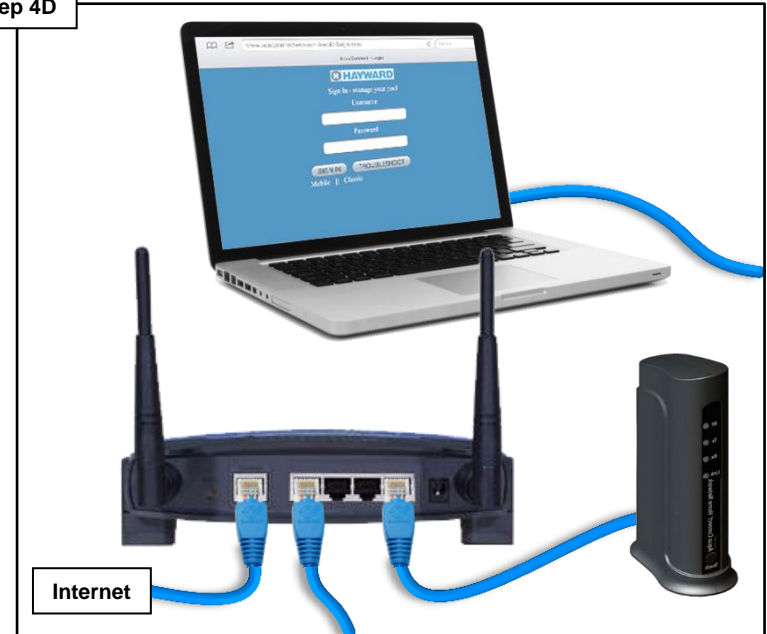
Verify the Internet Connection

Step 4C

Plug the Ethernet into another router port. If the Tx and Rx do not appear replace the cable and if LEDs still do not appear go to Step 4D. If LEDs appear follow instructions on p.18 to train the unit.

Step 4D

Internet

If the internet connection has been verified and the Tx and Rx LEDs do not appear replace the Aqua Connect. If this does not correct the problem consult the Internet Service Provider (ISP).

5: Aqua Connect Device
Constant Screen Refresh or Not Updating

Note the browser being used with the Aqua Connect Website

Unplug the ACHN device for a couple of minutes and then restore power
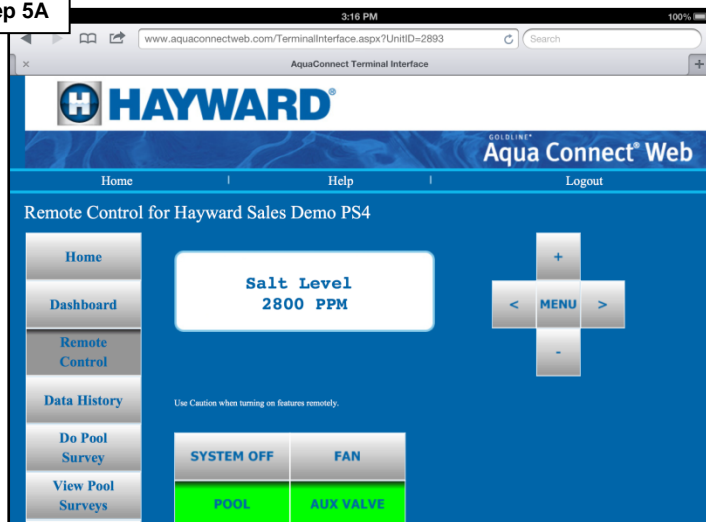
Step 5A

If refreshing the browser does not correct the issue, go to step 5B. If it does problem solved.

Step 5B

If this does not correct the problem on an Apple product, proceed to step 5C (p. 16). For PC based products go to 5D (p. 17).

5: Aqua Connect Device
Constant Screen Refresh or Not Updating

I: Locate and click on the App Store II: Locate the "Search" icon (bottom) and type "Chrome" into the search bar III: Click on "Chrome" App


I: Click on the App Store which is located on the dashboard. **II:** Click on the search option and type "Chrome" into the search bar. Click on Install (this should be a free app) **III:** Open the app and proceed to step 5E (p.17).

5: Aqua Connect Device
Constant Screen Refresh or Not Updating

Install the Google Chrome browser on non-Apple based device

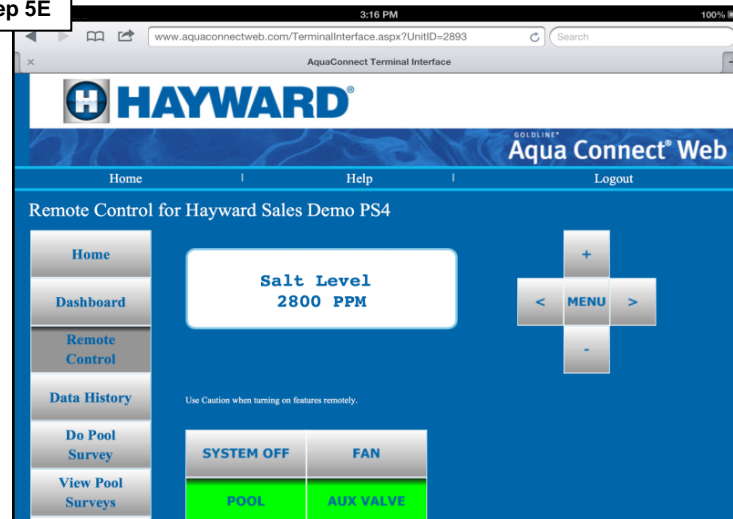Check ACHN functionality by trying the remote control feature
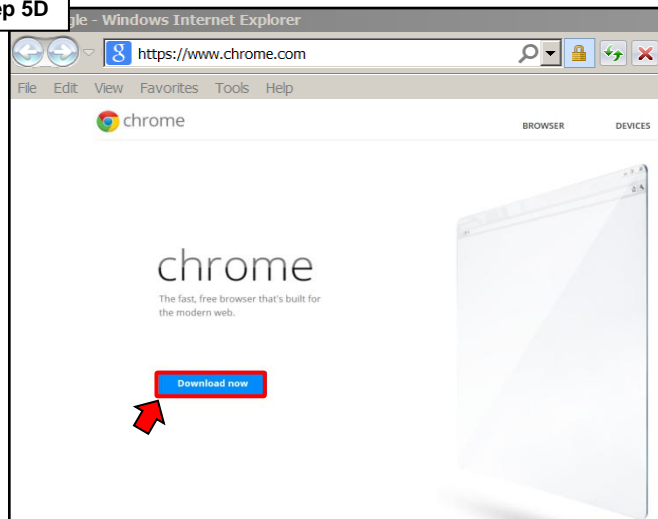
Step 5D

To download the Google Chrome browser on a non-Apple based product. Open the current web browser and type www.chrome.com in the address bar. Click on the Download now option, launch the chrome browser and go to step 5E.

Step 5E

If problem still persists temporarily disable all security software and firewalls associated with the home network and retry. If this corrects the issue speak with a network professional about modifying the network to allow the ACHN device full access.

Aqua Connect: Training the Device

Use the following steps to train the Aqua Connect Home Network Device to the control system. Make sure both units are powered up when conducting this step.

Settings
Menu

Teach Wireless:
+ to start

Press the Menu button on the ProLogic system until the Settings Menu appears, then press the left arrow button until "Teach Wireless: + to start" appears.

Press "Teach" button

Press the "+" button to initiate the sequence on the controller and hold down the teach button on the Aqua Connect Home Network device.

Teach Wireless:
Successful

Training will be complete when the controller reports "Teach Wireless Successful" If unsuccessful, reposition and repeat the training process.

Note: If training the wireless device fails verify that the antenna is generation 2 (AQL2-BASE-RF). A GLX-RF-EXTEND is available if the antenna needs to be moved closer to the Aqua Connect.

Aqua Connect: Performing a Range Test

Use the following steps to perform a range test, verifying the RF signal strength between the ACHN device and the control system. Once complete, clear the test by power cycling the ACHN device.
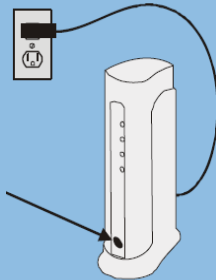
Step 1

Press and hold the "Teach" button. Continue to hold the "Teach" button WHILE plugging in the power cord.
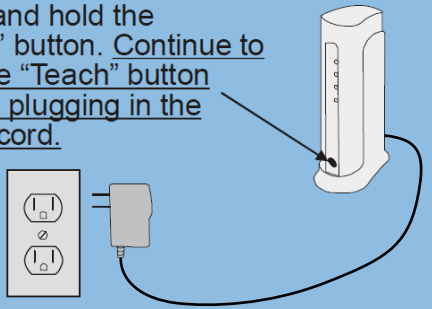
To perform a range test unplug the ACHN and hold down the "Teach" button. While holding down the button plug in the power cable.

Step 2

Keep pressing the "Teach" button until all four LEDs blink in unison, then release button.

Keep holding down the teach button until the LEDs flash in unison; once flashing let go of the teach button and watch the LEDs.

Step 3

The Aqua Connect Home Network will enter range test mode and light its LEDs based on signal strength. More LEDs indicates greater signal strength. **Wait 1 minute for the test to complete and then unplug power to terminate the test.**
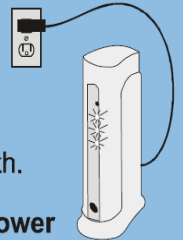
After two minutes the number of LEDs illuminated will indicate signal strength. 3-4 LEDs are desired, if less, reposition the ACHN or antenna and retest.

Note: If two LEDs or less appear after conducting a range test, relocate the base antenna or the ACHN device to achieve a stronger RF signal strength.

HAYWARD®

Troubleshooting Charts

LAN feature not showing up → **Verify home network connection (Page 5)** → **Are the Tx and Rx flashing?**
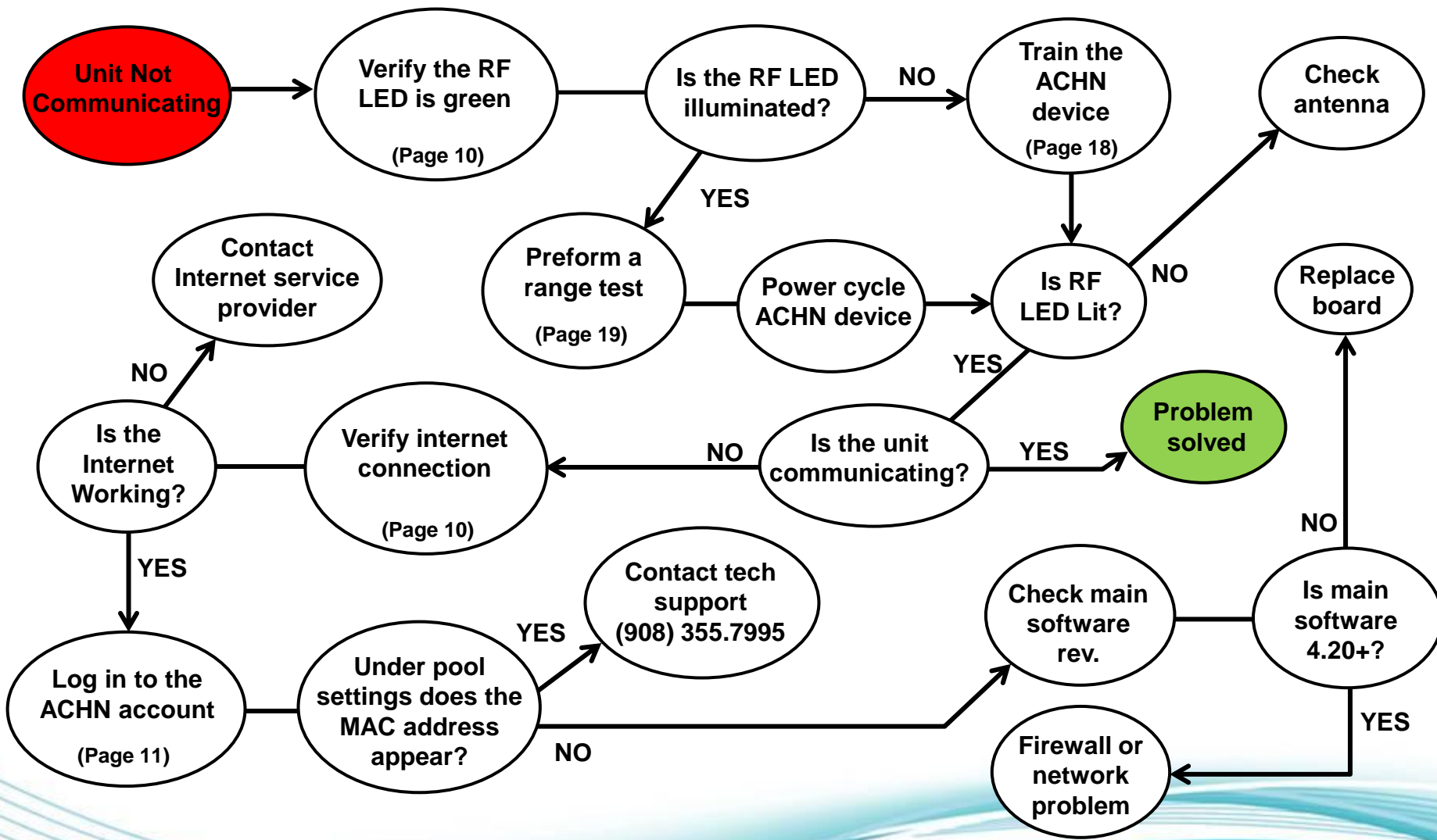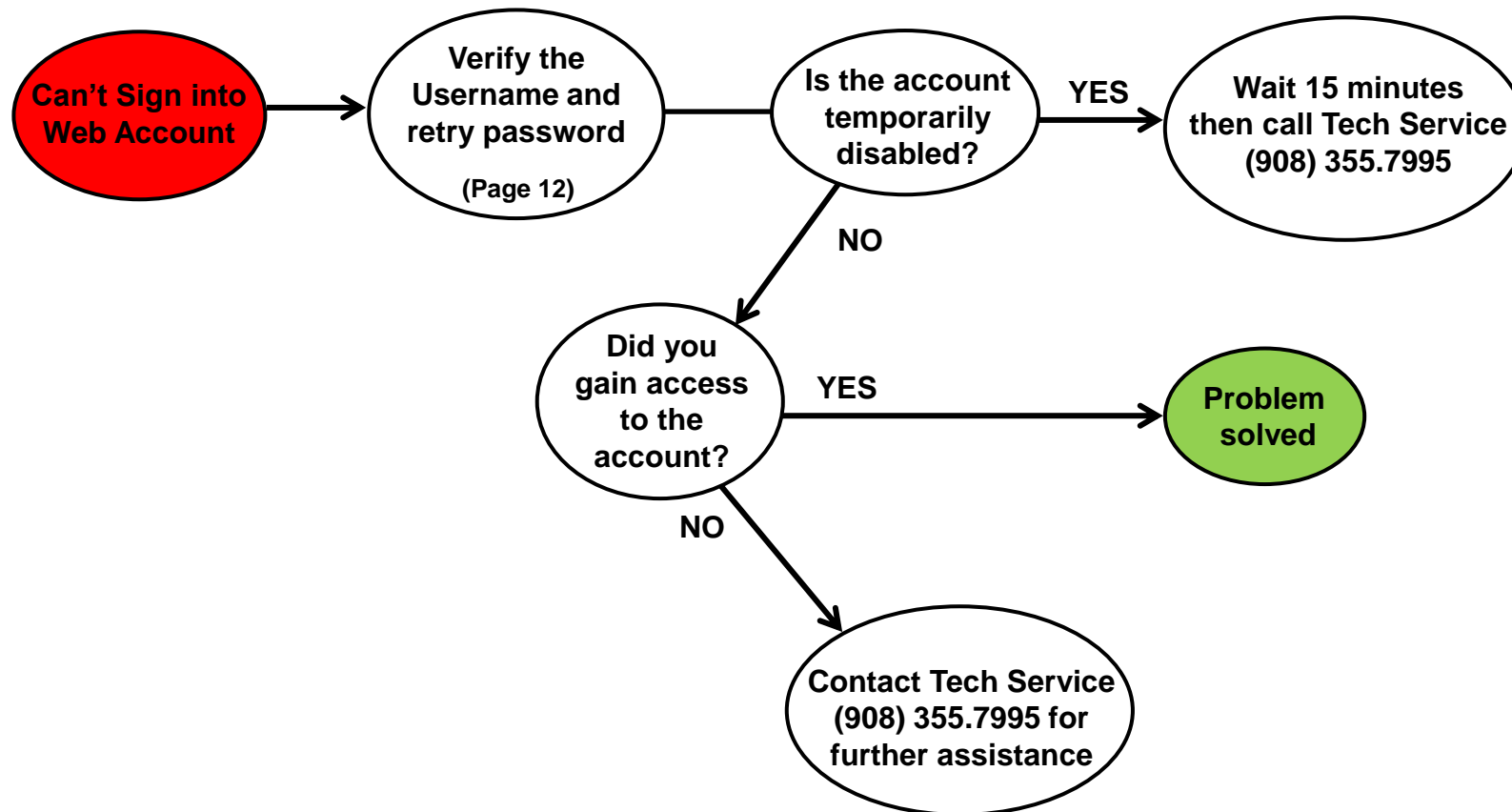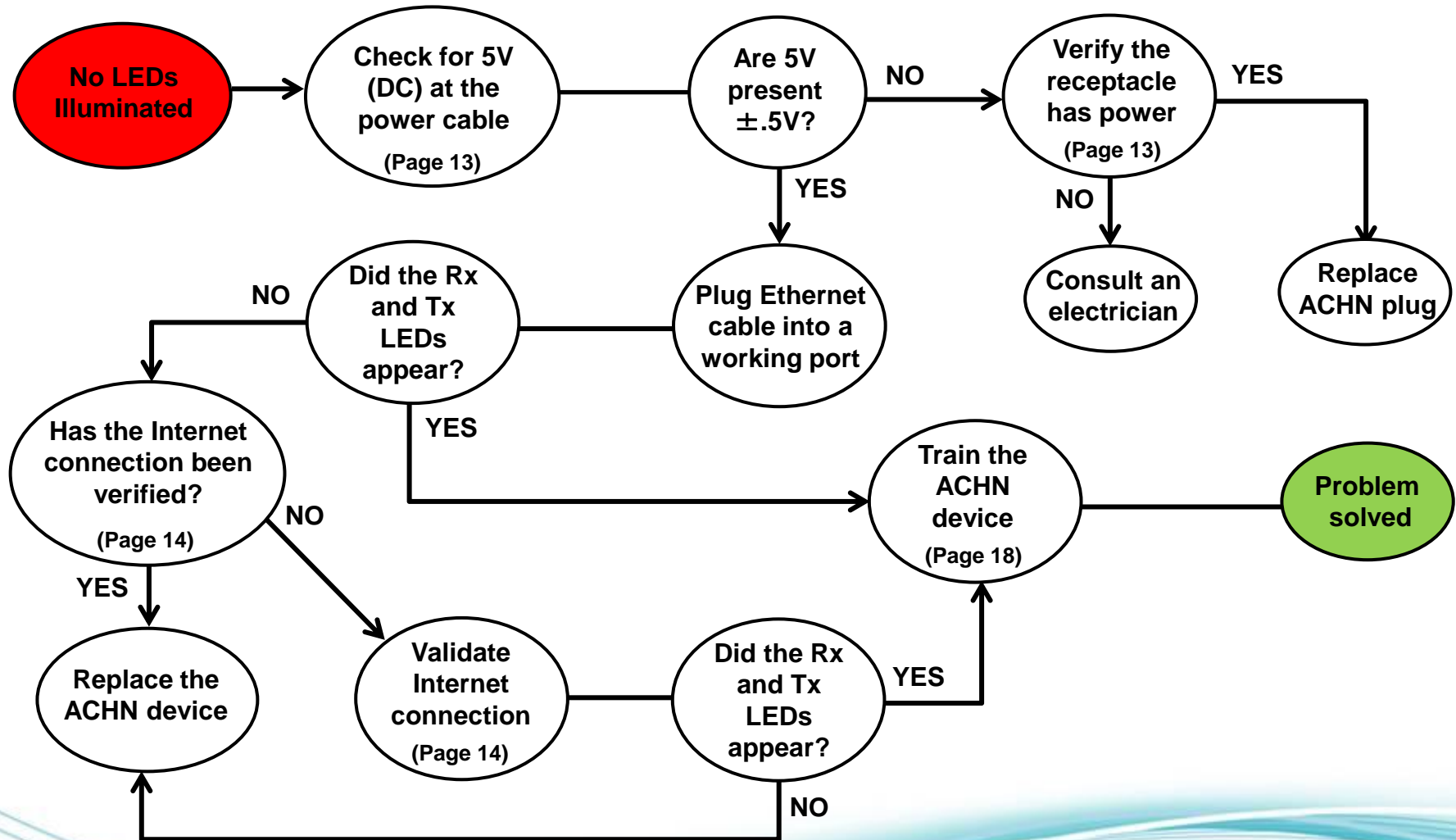
Are the Tx and Rx flashing? — **NO** → **Replace Ethernet cable (Page 5)**

Replace Ethernet cable — **YES** → **Problem solved**

Replace Ethernet cable — **NO** → **Possible router problem**

Are the Tx and Rx flashing? — **YES** → **Substitute the "friendly name with the IP address (Page 6)** → **Is this an Apple device?**

Is this an Apple device? — **YES** → **Download the "Fing" app and find IP address (Page 6-7)** → **Use IP address in the web address bar** → **Did that correct the problem?**

Is this an Apple device? — **NO** → **Ping the IP address and use in the web address bar (Page 7-8)** → **Did that correct the problem?**

Did that correct the problem? — **YES** → **Problem solved**

Did that correct the problem? — **NO** → **Register the unit online and use remote option (Page 9)**

Did that correct the problem? (bottom) — **YES** → **Problem solved**

Did that correct the problem? (bottom) — **NO** → **Register the unit online and use remote option (Page 9)**

Local network problem — **YES** → **Can we control online?**

Register the unit online and use remote option → **Can we control online?**

Can we control online? — **NO** → **Is main software 4.20+? (Page 9)**

Is main software 4.20+? — **NO** → **Replace board**

Is main software 4.20+? — **YES** → **Firewall or network problem**

HAYWARD

Page 20

Troubleshooting Charts

Unit Not Communicating → Verify the RF LED is green (Page 10) → Is the RF LED illuminated? — NO → Train the ACHN device (Page 18)

Is the RF LED illuminated? — YES → Preform a range test (Page 19) → Power cycle ACHN device → Is RF LED Lit?

Train the ACHN device → Is RF LED Lit?

Is RF LED Lit? — NO → Check antenna

Is RF LED Lit? — YES → Is the unit communicating?

Is the unit communicating? — YES → Problem solved

Is the unit communicating? — NO → Verify internet connection (Page 10) → Is the Internet Working?

Is the Internet Working? — NO → Contact Internet service provider

Is the Internet Working? — YES → Log in to the ACHN account (Page 11) → Under pool settings does the MAC address appear?

Under pool settings does the MAC address appear? — YES → Contact tech support (908) 355.7995

Under pool settings does the MAC address appear? — NO → Check main software rev. → Is main software 4.20+?

Is main software 4.20+? — NO → Replace board

Is main software 4.20+? — YES → Firewall or network problem

HAYWARD

Troubleshooting Charts

Can't Sign into Web Account

→

Verify the Username and retry password

(Page 12)

Is the account temporarily disabled?

— **YES** →

Wait 15 minutes then call Tech Service (908) 355.7995

NO ↓

Did you gain access to the account?

— **YES** → **Problem solved**

NO ↓

Contact Tech Service (908) 355.7995 for further assistance

Note: If contacting technical support please have the username and email associated with the account available prior to calling.

HAYWARD

Troubleshooting Charts

No LEDs Illuminated → Check for 5V (DC) at the power cable (Page 13) → Are 5V present ±.5V?

NO → Verify the receptacle has power (Page 13)
- **YES** → Replace ACHN plug
- **NO** → Consult an electrician

YES → Plug Ethernet cable into a working port → Did the Rx and Tx LEDs appear?
- **NO** → Has the Internet connection been verified? (Page 14)
  - **YES** → Replace the ACHN device
  - **NO** → Validate Internet connection (Page 14)
- **YES** → Train the ACHN device (Page 18)

Validate Internet connection (Page 14) → Did the Rx and Tx LEDs appear?
- **YES** → Train the ACHN device (Page 18)
- **NO** → Replace the ACHN device

Train the ACHN device (Page 18) → Problem solved

Troubleshooting Charts

Aqua Connect: Quick Tips
Setting up a Sub Account

1. Log in to main account (www.aquaconnectweb.com)

2. Click on Account Settings to create the Sub Account

Note: If accessing from a tablet or mobile device select the classic option at the bottom of the page.

Aqua Connect: Quick Tips
Setting up a Sub Account

3. Scroll to the bottom and click on "Create Sub Account"

4. Populate all required info. including username and password

5. Once Populated scroll to the bottom and select the "Add" button

6. Select the pool you wish to have access to via the site list (Note: step 6 and 7 will have to be done for every pool desired)

Account Details

Required fields are in **BOLD**

Account Description:	Paul's Sub Account	Used for accounts with more than one location.
User Name:Password:	username •••••••	Must be 6 or more characters without spaces.
First / Last Name:	Paul Poisson	
Phone Number:	(xxx)xxx-xxxx	Your contact information is never sold or traded.
Street Address:	xxxxxxxxx	
Address Line 2:		
City:	North Kingstown	
State:	RHODE ISLAND	
Zip Code:	02852	
Country:	Select one...	
Email Address*:	techservice@aquaconnectweb.com	

*Important Note: This email address can be used to reset a lost account password. Use a unique address for each account or sub account, and be sure the recipient is authorized to gain access to the account in the case of a lost password.

Select additional information you would like to receive via E-mail:
☑ Service and urgent administrative messages.
☑ Helpful equipment newsletters and technical bulletins.
☑ Special offers from Hayward Pool Products.

Add   Cancel

Aqua Connect Web

Home | Help | Logout |

Site Listing for Sales Demo Aqua Connect Home Network 506

Pool Name	Notes	Last Alarm Date	Status
Hayward Sales Demo PS-8	Demo purposes ONLY	3/9/2013 10:20:55 AM	lost link
Hayward Sales Demo PS16	Demo purposes ONLY	6/12/2012 6:46:08 AM	lost link
Hayward Sales Demo PS4	Demo purposes ONLY PS4 506	3/8/2013 1:45:56 PM	OK
Sales Demo Aqua Plus	Aqua Plus 1119	4/3/2013 4:45:55 PM	OK

Rows 50

Click a POOL NAME to go to the Site Dashboard.

Account Settings   Add a Pool   Logout

HAYWARD

Aqua Connect: Quick Tips
Setting up a Sub Account

7. Go to Pool Settings > Manage Access and change the level of access desired for each sub account created

Unit Access

Account Description	Last Name	First Name	User Name	Account Unit Access Level	
a	a	a	agnerc	No Access ▼	☐ Notifications
paul sub	poisson	paul	ppoisson	Read Only ▼	☐ Notifications
paul's sub	poisson	paul	ppoisson1	Read/Write ▼	☐ Notifications
Test Account	service	tech	tservice	No Access ▼	☐ Notifications
test	service	tech	t2service	No Access ▼	☐ Notifications
Johnny	Smith	Johnny	Johnny	No Access ▼	☐ Notifications

Rows 50

Create RO Account   Update   Cancel

Aqua Connect: Quick Tips
Disabling a Sub Account

1. Log in to main account (www.aquaconnectweb.com)

2. Click on the Account Settings button (bottom left)

Note: If accessing from a tablet or mobile device select the classic option at the bottom of the page.

Aqua Connect: Quick Tips
Disabling a Sub Account

3. Scroll to the bottom and click on "Create Sub Account"

4. Click on the Sub Account we wish to disable

Account Description	Last Name	First Name	User Name
a	a	a	agnerc
paul sub	poisson	paul	ppoisson
paul's sub	poisson	paul	ppoisson1
all pools	poisson	paul	allpools
Test Account	service	tech	tservice
test	service	tech	t2service
Johnny	Smith	Johnny	Johnny
John's sub	Sub	John	johnsub

Rows 50

HAYWARD®

Aqua Connect: Quick Tips
Disabling a Sub Account

5. Change access to "Disabled"

6. Scroll to the bottom and click "Save and Return" to finalize