

bwa™ CONTROL YOUR TUB AnytimeAnywhereAnyplace



bwa™ WI-FI SETUP GUIDE - HOW TO CONNECT YOUR SPA TO THE INTERNET

CONTROL YOUR SPA

In Your Backyard • In Your House • In Your Office • Any Wi-Fi Hotspot • Any 3G/4G Data Network

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Control Your Hot Tub From Your Smartphone

The Balboa Worldwide App (bwa™), is an app for your smart device (Android™ or iPhone®) that allows you to access your hot tub via a direct connection anywhere in the local proximity of your tub, anywhere in your house that you can connect to your local Wi-Fi network, or anywhere in the World you have an Internet connection to your smart device via 3G, 4G, or Wi-Fi hot spots*.

With the bwa app, you can ensure that your hot tub will be ready whenever you want to take a dip. Instead of going outside and pressing buttons on the topside panel, the app lets you start the tub and change settings from your smartphone or tablet.

The app provides full interface control so you can set the temperature, turn pumps on and off and even set filtration cycles.



You can access your tub from the comfort of inside your home, your office before you leave work, or on your way back from your get-a-way holiday.

You can set your own mood and personal settings, so your tub is set to how you like when you arrive.

* Check with your carrier for Internet charges as the bwa app transmits data to & from a server and depending on your data plan, you may experience additional monthly data charges.

Getting Ready

You're just several easy steps away from connecting your tub to your home network and the Internet.

Before you begin, you might want to record some information for your records and to help troubleshoot your setup if needed.

STOP!

Before you continue on you need to know your wireless name, password and encryption. If you don't please contact your administrator, the person(s) who helped setup your home wireless router, or check your equipment manuals. You will also need to make sure you have wireless internet connection at your tub.

Equipment Configuration

BP System Serial Number (Located on your spa system)

Wi-Fi Module S/N (Located on your bwa™ module)

Smart Device (Is your smart device an iPhone, iPad, Galaxy 4S,...etc?)

Smart Device OS (What is your smart phone operating system?)

Wi-Fi Router Manufacturer

Internet Provider (Time Warner, DSL, Dish, etc)

Cellular Data Provider (Is your smart phone data 3G or 4G?)

Local / Home Network SSID (What is your home wireless network name?)

Key (Password) (What is your home wireless password)

Encryption (None, WEP, WPA) (What is your home wireless security.)

Step 1

Download the app to your smart device from either the Google® Play or the iTunes® store. Once you have it loaded on your phone you are ready to connect to your hot tub.

Scan the QR code below to take you directly to the the download page.



Google® Play Store



iTune® App Store

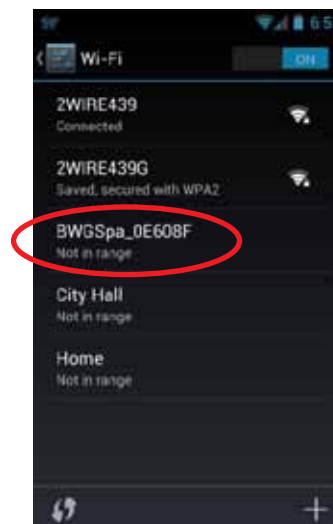
Step 2

Make sure your device's Wi-Fi is turned on.

(Check with your device instructions on how to access your Wi-Fi settings).

For this example we are using an Android™ device, iOS® would be similar.

Make sure you are near your tub. Go to your Wi-Fi settings screen and look for the BWG SPA network (it will be named similar to **BWGSpa_12345**). In our example it is BWGSpa_0E608F and connect to it. No password is needed.



Step 3

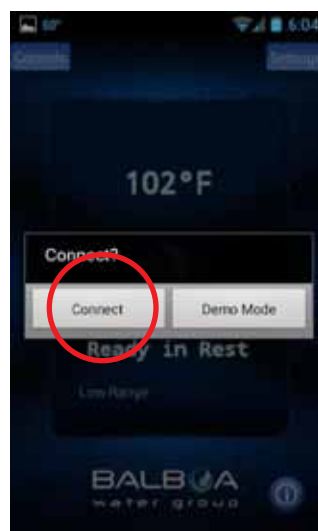
Once you are connected to the BWG Spa network, start the bwa app and follow the prompts on the screen. (Your start screen may be different.)

FROM YOUR START
SCREEN



Press the bwa app button.

WAIT UNTIL YOU
ARE CONNECTED



Connect to the spa.



When connected, you
will be taken to the
main app screen.

bwa™ APP MAIN
SCREEN



You are now directly connected
to your hot tub and can control
all the hot tub functions via the
bwa™ app.

If you do not have a home Internet network, you can stop here. If you do have a home Internet network, you will be able to control your tub while you are in the near proximity of 65 feet or 20 meters.

The detailed operation of the bwa app is explained in the app user guide which can be found here:
<http://www.balboawater.com/bwa>

If you have a home Internet network the next step is to connect your tub to it.

Before you connect to your home Internet network you must be able to see your home network from your tub.

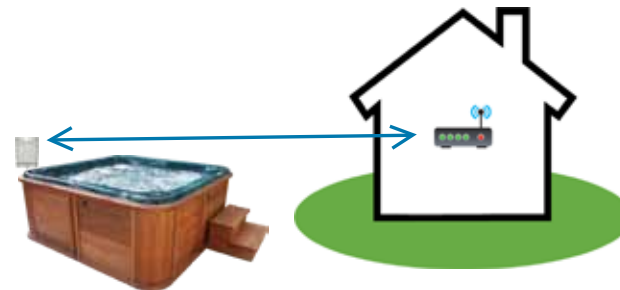


The easiest way to check if you can see your home Internet network from your tub, is to try and connect to it with your smart device next to the tub. Open a browser window and connect to the Internet (or any other app that connects to the Internet).

While standing at your tub, if you can connect your smart device to the Internet through your home network, then the tub bwa Wi-Fi module should be able to connect to your home network also.

If you cannot connect to the Internet through your home network, you may need to move your router or add a repeater or some other signal booster so you can see your network at your tub.

It is not possible to connect to the spa via "the cloud" without a third "device" such as a network router, or device used as a hot spot. If no third device exists the bwa module operates in local direct connect mode only.

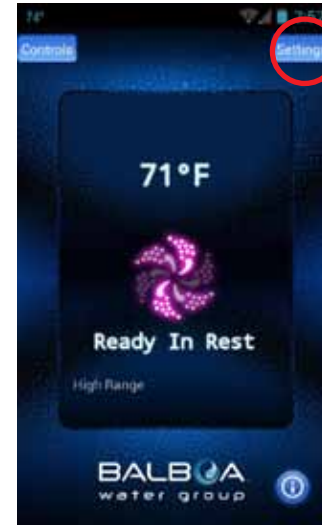


You can also try moving the Wi-Fi module to a different spot where you do have coverage in your yard.

Or hang it on the outside of the tub instead of under the skirt of the tub.



You are now ready to connect your tub to your local / home network. Press the Settings button.



Once you can see your home network you are ready.

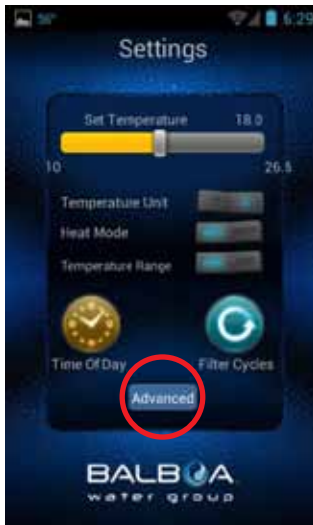
Step 4

Setting up your Local / Home Wi-Fi is a one-time process. Once connected, you will not need to change your settings again unless your network SSID changes.

On the next screen, you will select the Advanced button to set up your Wi-Fi network settings

Balboa Worldwide App

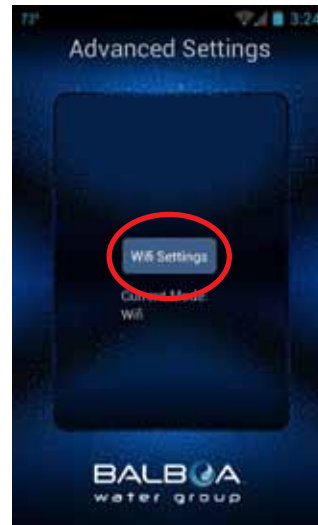
SETTINGS SCREEN



The Settings screen allows you to select the temperature of the spa, change the temperature between F° & C°, set time of day, filter cycles and more.

Press the Advanced button to setup your Wi-Fi.

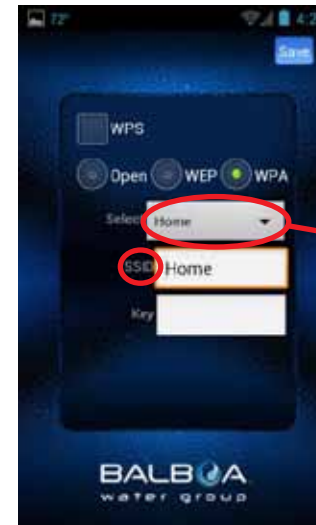
ADVANCED SETTINGS



Now select the Wi-Fi Settings button, to select your home network and enter your password.

For Android™ setup continue on to the next page, for iOS® setup skip to Page 14.

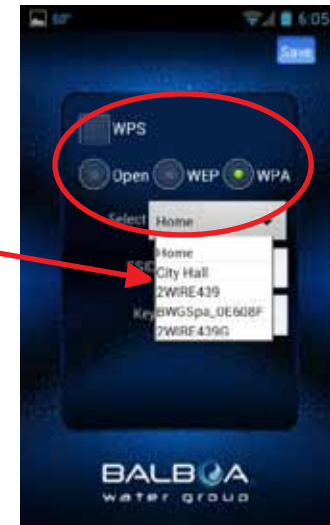
THE WI-FI SCREEN



On the Wi-Fi screen you can use the drop down menu to select your network SSID or you can enter it in the SSID box.

You will also need to choose the type of password encryption you are using: Open, WEP, or WPA.

Note: bwa™ clouds currently only support Open, WEP, and WPA.

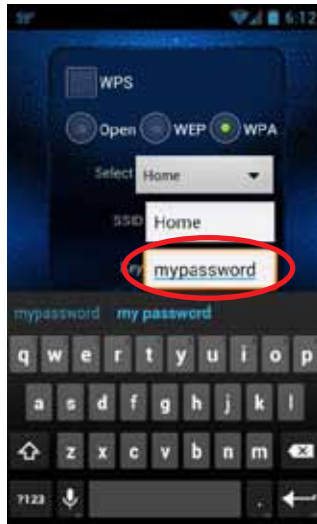


If you have a router that supports WPS provisioning, select that box and press the WPS button on your home router.

Not all routers support the WPS function. Check your router's instructions for more details.

Balboa Worldwide App

ENTER PASSWORD SCREEN



Select the Key text box to enter your password if you have one. Type it in using the keyboard.

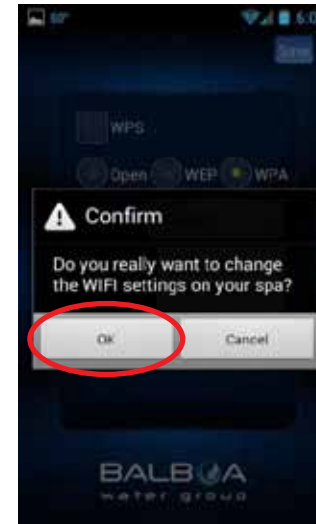
Use the back/return ↩ key when finished entering your password. (Android™ use back key).



Now you will save the password to the hot tub and the tub will be ready to connect to your network.

Press the Save Button.

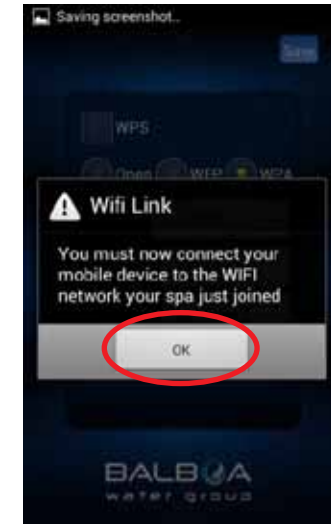
CONFIRM SCREEN



You will be asked to confirm that you want to update your password to the spa.

The BWG Spa network will now disconnect and you will be controlling your tub via your home network.

Wi-Fi LINK SCREEN

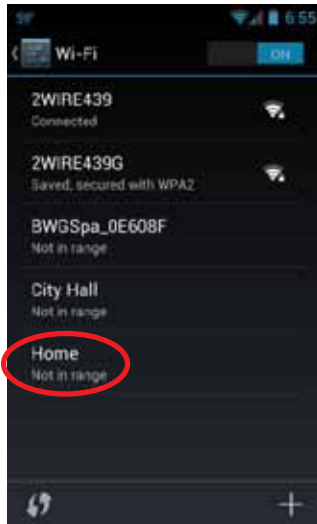


You may need to connect to your home network after you save the password.

Exit the app and make sure you are connected to your home network.

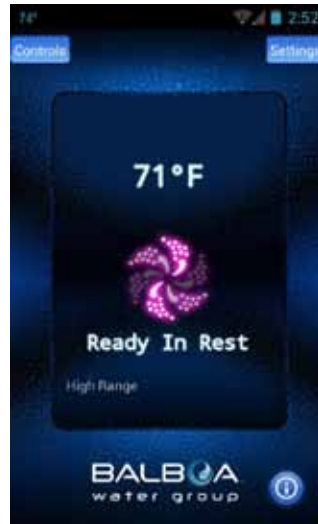
Balboa Worldwide App

YOUR SMARTPHONE Wi-Fi SCREEN



If you have your home network setup to automatically connect, the bwa app will re-connect.

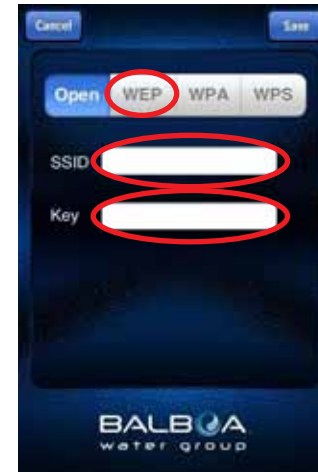
You may need to manually connect to your local/ home network.



Restart the app and connect to the tub which will now be connected to your local/ home network.

You can now control your tub anywhere you can connect to your local / home network. To continue the setup, go to Page 14.

bwa™ WEP SETUP

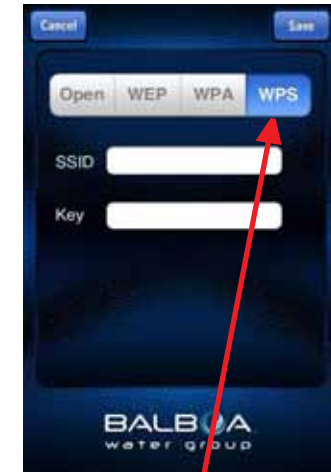


iOS setup is similar to Android except you will need to type in your SSID and Key (Password) using your keyboard.

You will also need to choose the type of password encryption you are using: Open, WEP, or WPA.

Note: bwa™ clouds currently only support Open, WEP, and WPA.

bwa™ WSP SETUP



If you have a router that supports WPS provisioning, select that button and press the WPS button on your home router.

Not all routers support the WPS function. Check your router's instructions for more details.

Balboa Worldwide App

bwa™ WEP SETUP



Type in the Service Set Identifier (SSID) this is the name of your wireless network.



Then select the Key text box to enter your password if you have one. Type it in using the keyboard.



Now you will save the SSID & password to the hot tub and the tub will be ready to connect to your network.

The BWG Spa network will now disconnect and you will be controlling your tub via your local/home network.



You may need to go to your settings and connect to your local / home network after you save the password and restart the app.

Exit the app and make sure you are connected to your home network.

Balboa Worldwide App

CONTROLS MENU



If you have your home network setup to automatically connect, the bwa app will re-connect.

You may need to manually connect to your local/home network.

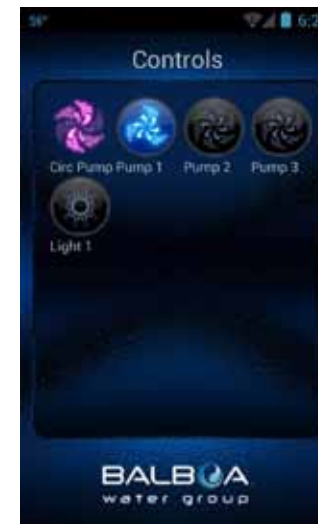


Restart the app and connect to the tub which will now be connected to your local / home network.

You can now control your tub anywhere you can connect to your local / home network.

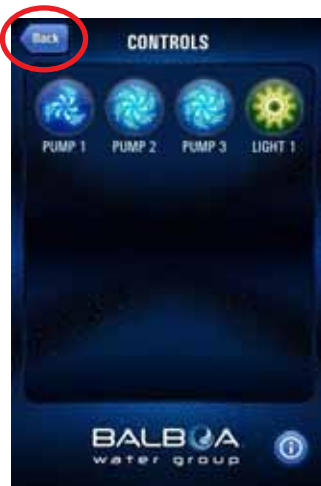


You should now be connected to your local/home network.

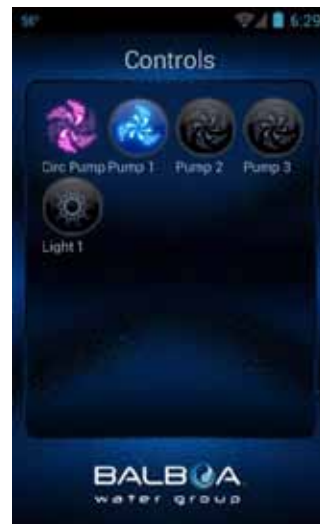


You can now turn on your pumps & lights by pressing the Controls button.

On Android™, use the back/return key to return to the main app screen.

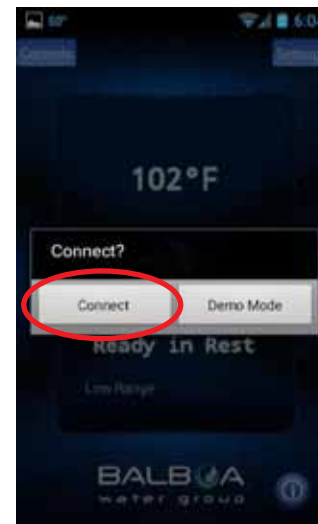


On iOS devices, you will see a Back Button that you will use for navigating between screens.



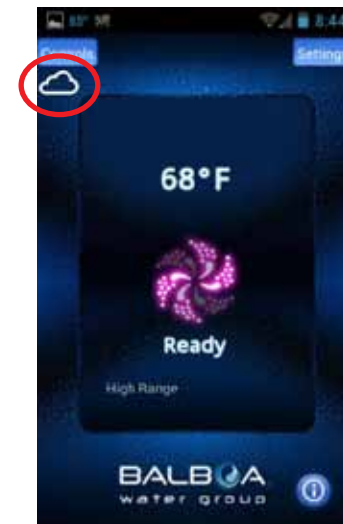
You can now turn on your pumps & lights by pressing the Controls button.

The equipment for your tub will automatically show up on this screen. You can turn the devices on/off by pressing the buttons.



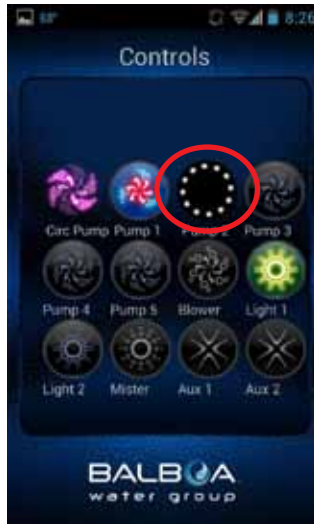
If you want to control your tub away from your local / home network, make sure you have an Internet connection on your device (3G / 4G / Hotspot).

Start the app and press the Connect button. Now you can control your tube via the Internet and can control your tub via your local/home network.



When connected via the Internet a small cloud icon will appear under the Controls button letting you know that you are remotely connected.

Operate your spa by going to the Controls screen.



Depending on your coverage and data speed, the response time for acknowledging a device press may vary. You will know the app is waiting by the small spinning dots.

ENJOY YOUR TUB!

Helpful Tips

Here are some tips that will help you get your bwa™ app installed and operational so you can...

Control your spa anytime, anywhere, anyplace...

Make sure the Wi-Fi Module was installed properly

Power off the tub. The tub must be powered off for the Wi-Fi module to initialize properly.

Plug the Wi-Fi module into a spare panel jack within your Control System. If you do not have a spare panel jack, use the y-adaptor cable (# 25657). Remove the panel connector and replace it with the y-adaptor. Then plug the panel & Wi-Fi module into the y-adaptor cable. Power the tub back on.

Make sure the Wi-Fi Module can connect to your home network

Before you connect to your home network you must be able to see your home network from your tub.



The easiest way to check if you can see your home network from your tub is to try and connect to it with your smart device next to the tub. Open a browser window and connect to the Internet (or any other app that connects to the Internet).

While standing at your tub, if you can connect your smart device to the Internet through your home network, then the tub bwa Wi-Fi module can connect to your home network too.

If you cannot connect to the Internet through your home network, you may need to move your router or add a repeater or some other signal booster so you can see your network at your tub.

You can also try moving the Wi-Fi module to a different spot where you do have coverage in your yard.

Or hang it on the outside of the tub instead of under the skirt of the tub.



Once you can see your home network you are ready.

Some other things we have seen and learned during initial setup and some ways for you to confirm things are working properly:

1. Make sure you have connected the new Wi-Fi module to the tub with the power off. The Wi-Fi module talks to the spa upon power up to get the spa configurations. If you did not do this, power down the spa and then restart it.
2. Upon first startup, the Wi-Fi module is initialized and will show BWG_SPAXXXX on your Android™ or iPhone® device. Once this occurs, keep in mind that:
 - a. This is talking to the tub via direct connect and can reach about 65 feet or 20 meters.
 - b. You should now test all the functions of the app in this mode to determine they are all operational.

We suggest you check the control functions via this mode 1st before going on.

If you can control all the functions via this direct connect, you should now be able to connect the spa to your local home network.

3. Go to the Settings, Advanced, Wi-Fi settings and connect to your local home network.
 - a. Make sure you select the proper password & encryption (Open, WEP, WPA)
 - b. If you don't, it looks like the Wi-Fi module connects to the new network, but since the password is wrong it will not connect – you will know this because in couple of minutes the BWG_SPAXXXX will show back up in your Wi-Fi settings

4. Once you connect the app to the local Wi-Fi network, you should reconnect your phone to the same network using your phone settings.

You will now be able to control the tub from anywhere that you can connect to your local / home network.

Restart the app. You should be communicating to the spa via your local network. Check to see if all the controls function as they did in direct connect mode.

If they do you are all set up.

Once connected to the local network, the Wi-Fi module will always look for that network only.

Now you are ready to test the Internet cloud function. You can do this 1 of 2 ways –

1. Disconnect your device from the local Wi-Fi network that the spa is on.
2. Reconnect to another Wi-Fi hot spot (network like STARBUCKS®) that has Internet access or via the device's cellular data connection.

Restart the app and connect. Since you are not on the local network, the app will attempt to connect via the Internet cloud.

- a. If successful, you will see a little cloud and you should be able to control the spa functions
- b. Depending on your connection speeds, it may take up to 5 seconds for a function to acknowledge you pressed a device icon (i.e. If you press the light icon, you should see little spinning dots while the app talks via the Internet to the spa and the spa sends back a message that it changed the light)

You will now be able to control the tub anywhere you can connect to the Internet.

Frequently Asked Questions (FAQ)

Q. When I connect via the local home router with one (1) device, then I try to connect with another smart device at the same time, the next device connects via the cloud. Why?

A. There is only one (1) local router port available for connection. So if you have more than one (1) device trying to connect via the local router, the others connect via the cloud.

Q. Sometimes when trying to connect to the spa via local home router, I get connected via the cloud instead. Why?

A. This can happen when another device was already connected via the local router and did not disconnect. This seems to happen more often with Android devices, but it can occur with iOS devices also. You should kill the app on the Android or iOS to make sure it drops the local connection properly; otherwise the local router connection is taken by the previous running version of the app. This is just how apps sit in the background in Android devices. For iOS devices, make sure you are out of the app.

Q. I am able to connect to my new wifi module directly (same as the previous version) no problem. I then change the wifi settings to connect to my home network, no problem. It then instructs me on my iPhone to connect to my home network to connect to my spa. This is where I am running into trouble. Once I change back to my home network on my iPhone and try to connect to my spa it keeps telling me "connection failed." Why?

A. This maybe due to two different things:

1. You may have mistyped your password, SSID or set your encryption wrong. The bwa module tries to connect to the router using the information you entered. It will keep trying for 3-5 minutes. If after that time it cannot connect, the bwa module will show up again as networks on your Wi-Fi settings screen. If it does, repeat the process to connect to the router making sure you type the SSID & password correctly and select the proper encryption (Open, WEP, WPA).
2. You do not have local Wi-Fi coverage or very weak signal from your wireless router at your tub. If you cannot connect to the internet using iPhone and your local wireless router, the bwa module cannot connect to your home router either. You will need to add a repeater or network extender to make sure you have local Wi-Fi coverage at your tub.

If you like to read more FAQ please visit. www.balboawater.com/bwa-faq

Wireless Troubleshooting Issues

Check the wires and wireless network adapter

Checking that all your wires are plugged in at the router and from the plug is one of the first things you should do – provided of course that you have access to them. Verify that the power cord is connected and that all the lights of the router and cable/DSL modem are on.

Low Signal Strength

There are a number of factors that can cause the signal of your access point to deteriorate and the performance of your network to fall under par. Practically any appliance that operates on the same frequency level (2.4 GHz) as 802.11b or 802.11g can cause interference with your wireless network. Be sure to keep cordless phones, microwaves and other electrical equipment at least 1m away from the access point. This will ensure you get the best signal from your router.

Installing a repeater for a performance boost

If you're looking for a boost you can always choose to install a repeater. The job of a repeater is to receive the signal, regenerate it and rebroadcast it therefore extending the range of your wireless network. This would sit somewhere between your Access Point and your wireless client.

Positioning the wireless router

You'll want to put your wireless router somewhere where it will receive the strongest signal with the least amount of interference. For the best results, follow these tips:

- Position your wireless router in a central location. Place the router as close to the center of your home as possible to increase the strength of the wireless signal throughout your home.
- Position the wireless router off of the floor and away from walls and metal objects, such as metal file cabinets. The fewer physical obstructions between your computer and the router's signal, the more likely that you'll be using the router's full signal strength.
- Reduce interference. 802.11g networking equipment uses a 2.4 gigahertz (GHz) radio frequency. This is the same frequency as most microwaves and many cordless phones. If you turn on the microwave or get a call on a cordless phone, your wireless signal might be temporarily interrupted. You can avoid most of these issues by using a cordless phone with a higher frequency, such as 5.8 GHz.

Wireless Troubleshooting Issues Continues

Know Your Wireless Security

SSID (Service Set Identifier)

All wireless devices in your network must specify a password or SSID. Our agents strongly recommend a unique, obscure combination of letters and numbers that you can recall easily.

WEP Security (Wired Equivalent Privacy)

A security protocol for wireless networks designed to provide the same security as a wired network, WEP encrypts data as it's transmitted radio waves.

WPA Security (Wireless Protected Access)

A security protocol designed with stronger data encryption and user authentication, WPA is relatively new and more secure than WEP.

Here Are Some Reasons Why You Can't Get A Signal From Your Router

1. Distance Between the Router and Connection Points

Solutions: The easiest solution would be to move the router to an area where it is unobstructed or move the devices closer to the router when in use. However, it is also possible to increase the range of Wi-Fi signals with Wi - Fi boosters, Wi - Fi repeaters, or by upgrading the router antenna.

2. ISP Speed

Solutions: First, determine the speed of the ISP provider. If it's not very fast, then it may be time to upgrade to a better plan or a faster router. Also, it may be wise to give the ISP a call to see if any configurations have changed. If the problem is an unreliable ISP, it may be time to switch companies.

3. Walls and Other Interference

Solutions. Moving the wireless router to a different area can definitely help prevent the signals from being blocked or interfered with by walls or other devices. Additional signal boosters or repeaters can help extend the Wi-Fi range, but it may be better to look at different Wi - Fi directional antennas to aim the router directly at devices, windows, thinner walls, or doors to allow the signal to move through the home unencumbered.

Wireless Troubleshooting Issues Continues

4. Number of Devices Online

Solutions: If there are just too many people using the Internet at the same time, an additional Internet connection may be needed. It's also possible to limit the number of devices connected to the Internet at the same time. In many cases, there may be outsiders accessing the router and slowing down speeds. A strong Wi-Fi password should be installed at all times.

5. Outdated Wireless Router

Solutions: Outdated routers simply need to be replaced with newer wireless routers that comply with current Wi-Fi standards. Damaged routers can be repaired; however, in many cases, buying a new router will save the user time and effort.

bwa™ Prior Wi-Fi Module Support

The iOS® app version is backward compatible with prior Wi-Fi modules and will continue to operate as it has.

Prior Wi-Fi modules only support local direct connections and cannot be linked into a home network. They only work in the local proximity of your backyard spa.

The Android™ app is not compatible with prior Wi-Fi modules as it does not support adhoc connections.

System Requirements

The bwa™ Wi-Fi Module supports all BP systems.

<http://www.balboawatergroup.com/bwa>

Trademark & Patent Notices

The iPhone®, iOS®, iPod® touch and iPad® are a registered trademarks of Apple Inc.

The iPhone®, iOS®, iPod® touch and iPad® are a trademarks of Apple Inc., registered in the U.S. and other countries.

Android is a trademark of Google Inc.

bwa™, BALBOA WATER GROUP and the Stylized Balboa Logo are registered trademarks or applications applied for in the US Patent & Trademark Office. All Rights reserved. All other product or service names are the property of their respective owners

Products are covered under one of more of the following US Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6282370, 6590188, 7030343, 7, 417, 834 B2 & Canadian Pat 2342614 plus others. Other patents both foreign and domestic applied for and pending.

Regulatory Compliance Information

United States

Contains FCC ID: W7OMRF24WG0MAMB

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.

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.

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation.

To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada

Contains IC: 7693A-24WG0MAMB

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following 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 of this device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

Regulatory Compliance Information

L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Europe

The MRF24WB0MA/MB module conforms to the emission standards below.

Test standards ETSI EN 300 328 V1.7.1 (2006-010)

- Maximum Transmit Power
- Maximum EIRP Spectral Density
- Frequency Range
- Transmitter Spurious Emissions
- Receiver Spurious Emissions

The modules are fully compliant with:

- Radiated Emissions EN 55022
- Electrostatic Discharge EN 61000-4-2
- Radiated Immunity EN 61000-4-3
- EN 60950-1
- CE-Mark
- RoHS

The product must be disposed of separately in accordance with the local waste disposal legislation in force.

Specifications

Environmental ratings:

Humidity: Up to 85% non-condensing

Operating temp.: -20°C (-4°F) to +60°C (140°F)

Storage temp.: -30°C (-22°F) to + 85°C (185 °F)

Specifications are subject to change without prior notification.



Intellectual Property Advisement

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