



**SmartLINK**

wifi controller

## Installation & User Manual



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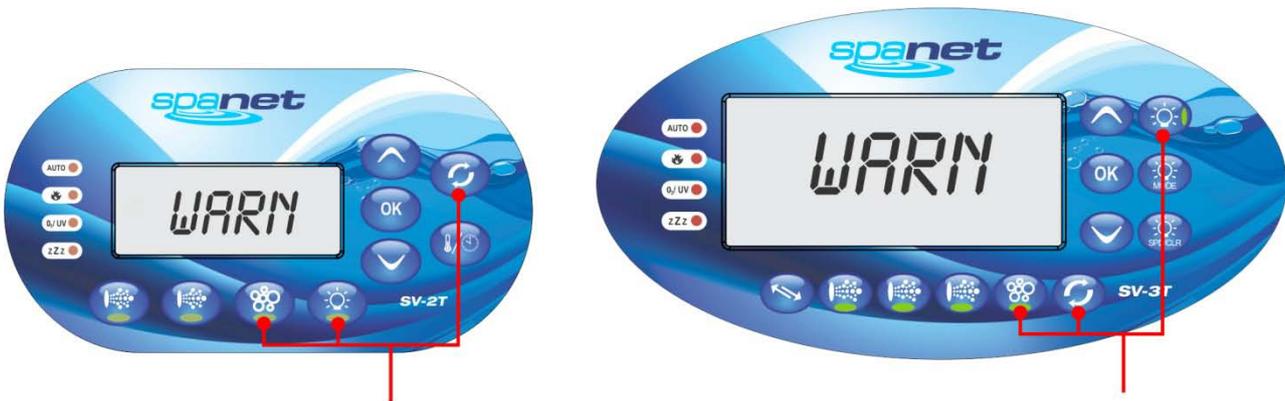
## Overview

The SV SmartLINK is a WiFi module for a SpaNET SV Series spa control that enables remote access control of a spa via the use of the Internet and the SpaNET SpaLink smart device app. Users can use the App on their smart device (phone, tablet) to remotely connect to and control their spa pool. This is ideal for holiday homes or commercial use. The WiFi module is connected to an external 5dB antenna mounted on the SmartLINK enclosure using a SMA connector. Should the user wish to strengthen their WiFi reception a SMA extension cable could be used to enable the antenna to be mounted external to the spa cabinet, or a stronger powered antenna can easily be connected to the SMA connector directly.

## Check SV Controller Software Version

For the SpaNET SpaLink app and WiFi module to work correctly, the SV controller must be loaded with the correct software (firmware) version. All SV software versions are designated by a date code, and the SV software version can be easily checked via the SV diagnostic menu on the SV spa-side keypad. Prior to installing the SV SmartLINK WiFi module the installer/user must check the SV controller software version to ensure it is up to date. If the firmware is an older version it will need to be updated prior to the WiFi module being installed.

### How to check software version



Press & hold: **BLOWER + W.CLN + LIGHT**

### Key Press Operation

- Press and hold the Blower + W.CLN + Light On buttons until the display shows "WARN"
- Press the UP button twice until display shows "S.VER" (software version)
- Press the OK button to activate the software version scroll

The software version will be scrolled across the display in the following format

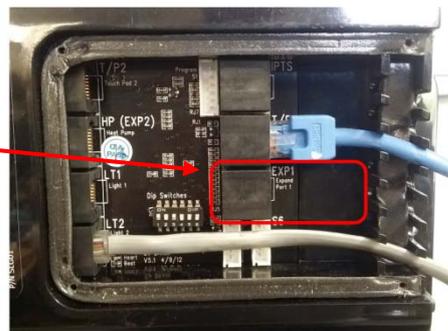
Vx	DD	MM	YY	For example:
Version	Day	Month	Year	V2 29 01 14

For the WiFi module and SpaLink smart device app to function correctly the software version must be **V3 28 07 14** or later. If the software scroll is any date earlier than V3 28 07 14 the software must be updated by a service technician prior to the WiFi module being installed.

## Fitting SmartLINK Module to Spa

The SpaNET SpaLink WiFi module is simple to install. It does not require any power, it just requires the black data cable to be connected to the Expand Port 1 (EXP1) socket on the top right hand corner of the SV controller.

The WiFi module should be installed as close to the front of the spa cabinet as possible, ideally in a corner of the cabinet where the silver foil insulation material is minimal or not present. The silver foil insulation can often shield the WiFi signal coming from the home router and therefore diminish the WiFi signal strength the module will receive. If WiFi strength is poor (low) a SMA antenna extension cable should be used to enable the SMA WiFi antenna to be mounted and installed external to the spa cabinet to improve WiFi reception and online reliability. Alternatively the existing black CAT5 data cable could be removed and replaced with a longer cable to enable the SmartLINK WiFi module to be located in or near the household to ensure good signal strength to the home router.



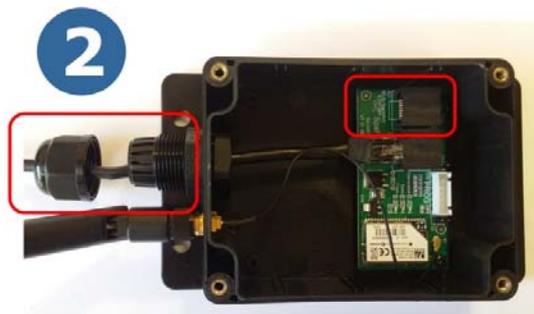
**Install WiFi module in corner of spa on side closest to house**

## Connecting SmartLINK Module when Expand Port 1 (EXP1) is already in use

Certain brand spas have features that use the Expand Port 1 socket. In this case when you attempt to connect the SpaLINK Module the socket you need to connect to will already have a cable connected. In this situation the existing cable gets disconnected from the SV controller and re-connected inside of the SpaLINK WiFi Module, therefore allowing the SpaLINK black data cable to be connected directly to the EXP1 socket on the SV controller as required.



**1** Unplug existing cable from EXP1 socket



**2** Remove lid and cable gland from SpaLINK Module



**3** Feed existing cable through gland & connect into spare socket labelled RJ1, tighten gland and screw lid back in place



**4** Connect black data cable from SpaLINK module into EXP1 socket

## Indicator LEDs

There are three (3) x indicator LEDs on the SmartLINK module which identify the status of the WiFi module. These LEDs can be seen through the clear window on the front of the unit (refer aside picture). The definition of the LEDs is as follows:



### Connection Status (Green led): TCP/IP status

On - for an active connection

Fast flash - indicates no IP address assigned or is command mode

Slow flash - indicates that the IP address is OK but no TCP connection

### Associated (Red LED): association status

Fast Flash - module is not associated with a network

Off – indicates that it is associated and Internet access is OK

### Data Transfer (Blue LED): On when data is transferred

By default when the SmartLINK module is first connected to the SV controller it should be in hot spot mode ready to be configured by the SpaLINK smart device app. The indicator LEDs will be flashing green and red.

GREEN LED	RED LED	STATUS
Fast Flash	Fast Flash	Not connected to any network and no IP address assigned
Slow Flash	Off	Connected to network and IP address assigned but no Internet access
Fast Flash	Off	No connection to network or connection lost, no IP address assigned
On	Off	Successfully connected to server and online ready for use OR active connection to smart device during app setup process

## WiFi Internet Access Required

**The SmartLINK WiFi module requires an active Internet connection via a wireless router to operate. To be able to access your spa from anywhere, at any time, the Internet connection/router must remain powered on at all times.**

The stronger the WiFi signal to the spa area the faster the app will respond. In some situations, dependant on the location and proximity of the spa pool and wireless router, the WiFi signal may need to be boosted by relocating your wireless router, installing a WiFi range extender close to the spa or connecting a SMA extension cable to the SmartLINK module to enable the WiFi antenna to be installed external to the spa cabinet.

Before running the smart device App setup procedure ensure you are aware of your WiFi routers SSID name and have the router password on hand. Please remember that your router password is case sensitive and MUST be entered 100% correct during the setup process for a successful connection. If the password is entered incorrectly during the setup process, the whole setup process will have to be completed again.



## SpaLINK App Overview

The SpaLINK app allows you to connect to, and take control of your SV Series equipped spa, locally or remotely via a WiFi, 3G or 4G network, providing access to your spa from any location at any time. Your Apple® or Android™ smart device becomes a wireless remote for your spa enabling complete control over all spa accessories including pumps, air blowers, and LED spa lights and lighting effects.

In addition the app provides total control over every possible spa configuration setting. There are no shortened menus or minimal access to limited settings, the SpaLINK app allows complete adjustment of all spa control settings as if you were standing in front of the spa.

### Installing the SpaLINK App on your smart device

Download and install our app from the App Store<sup>SM</sup> for iOS devices.

Download and install our app from the Google Play™ Store for Android devices.

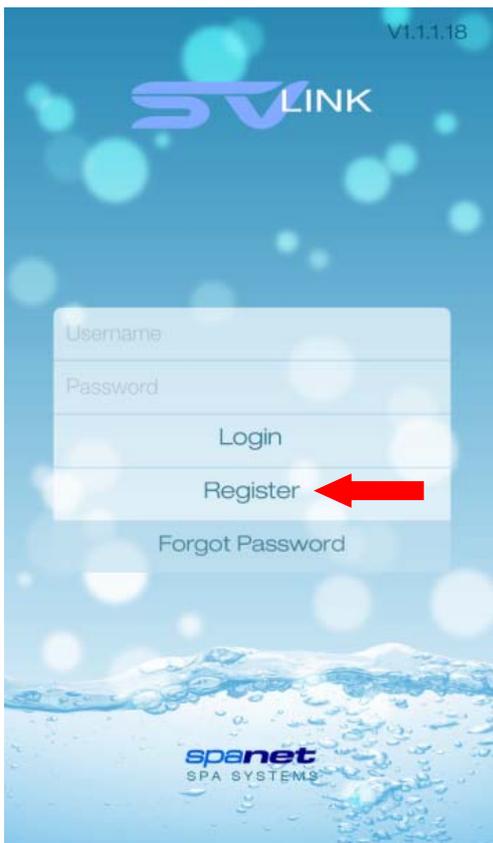
Our app can be found by searching for "Spanet SpaLink"

If you are searching for the app on an iPad the App Store will most likely show "no results found". Simply click on the top left hand corner where it says "iPad only" and change to "iPhone only" and the app will be found. The iPhone app installs and works successfully on the iPad.

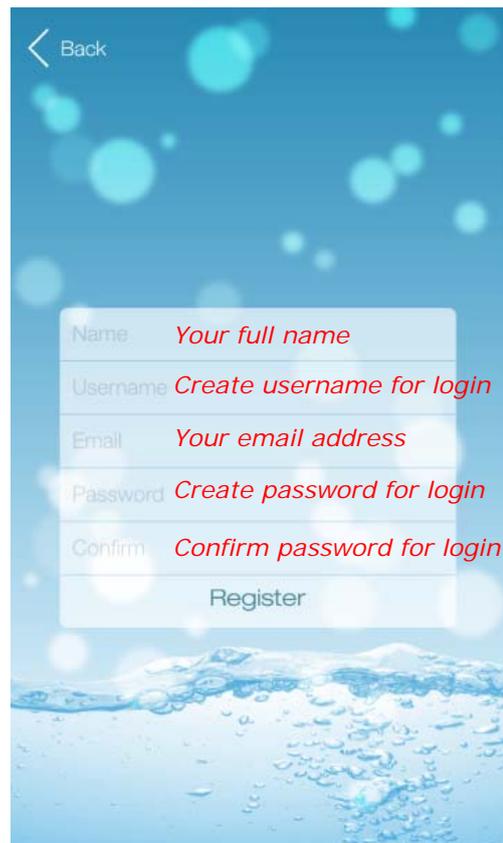
### Register a User Account

Once you have downloaded and installed the SpaLINK app, before your spa and WiFi module can be configured you must first register a user account with SpaNET. Your user account is the portal between the smart device app and your spa. It provides a secure gateway to login and access your spa and allows multiple SV controllers to be configured to the one user account, should you be fortunate enough to own a dual zone swim spa or more than one spa. Your smart device must have a WiFi, 3G or 4G Internet connection to complete the registration.

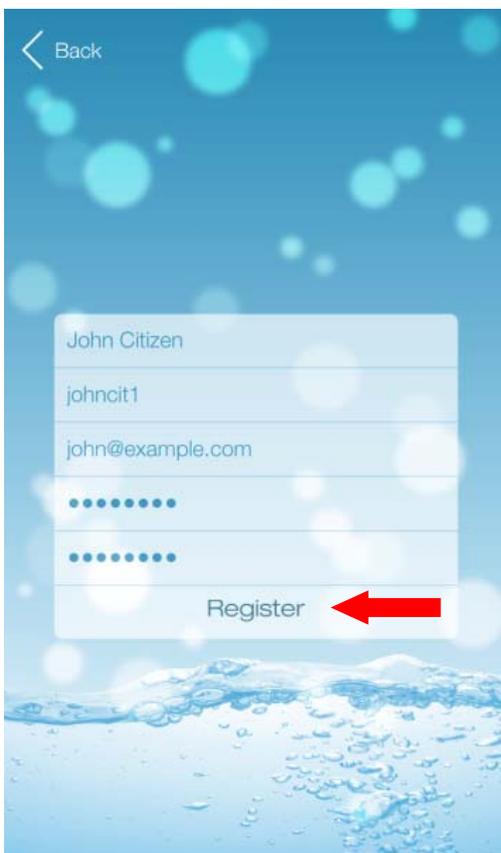
**Step 1:** Open the app and click REGISTER



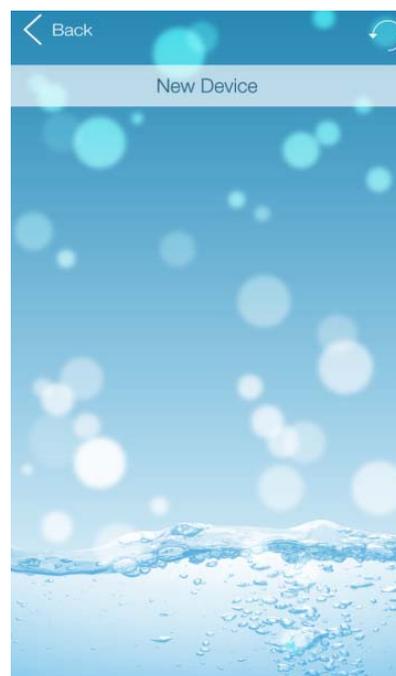
**Step 2:** Enter your details into the registration form



**Step 3:** Review your registration details then click REGISTER to proceed



**Complete:** If your registration was successful the app will automatically login with your details and proceed to the spa list page ready for you to add your spa to your account.



*NOTE: Shortly after completing your registration you will receive an email confirming your login details*

## NOTES FOR REGISTERING A USER ACCOUNT:

- 1) If your chosen username has already been taken a "MEMBER EXISTS" error will appear once you click REGISTER. Enter a different username and try again.
- 2) Only one user account can be registered to an email address. If you attempt to register multiple accounts with the same email address a "MEMBER EXISTS" error will appear.
- 3) The chosen username and email address must not have been used before for successful registration with the SpaNET server.
- 4) If you have made a mistake or are experiencing difficulties with your user account registration, or wish to change your details please email [info@spanet.com.au](mailto:info@spanet.com.au)

## Configure your Spa/WiFi module

Once you have registered a user account with SpaNET you are now ready to configure your spa. The configuration process is a once off setup event that programs the SpaNET WiFi module with your wireless router's login details (SSID and password) to provide Internet access to your spa. Unless your router login details change (i.e. you change ISP) you will never need to run the setup procedure again. The login details will be stored in the SpaNET WiFi module and will be remembered even if power to the spa or router is turned OFF. To complete the process require:

- a) An active WiFi, 3G or 4G Internet connection on your smart device
- b) Your login credentials for your wireless router (SSID name and password)
- c) Router left in default WPA/WPA2 security encryption. DO NOT use WEP encryption.

**Step 1:** On your spa side keypad press and hold the UP + DOWN buttons simultaneously until the display shows [MODE]



**Step 2:** Press the DOWN button multiple times until display shows [WIFI]



**Step 3:** Press the OK button and the display will show [HOT]

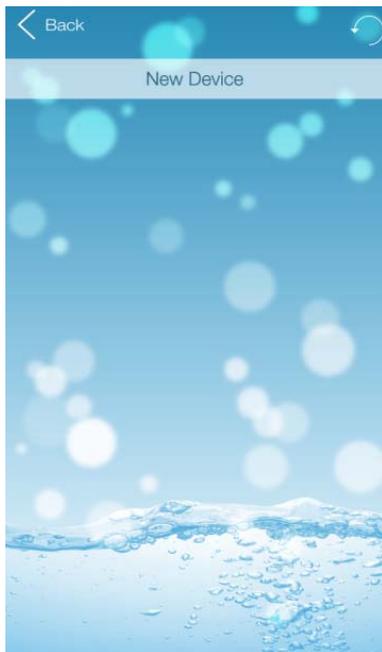


**Step 4:** Press the OK button to activate the Hot Spot mode. The display will briefly show [WAIT]



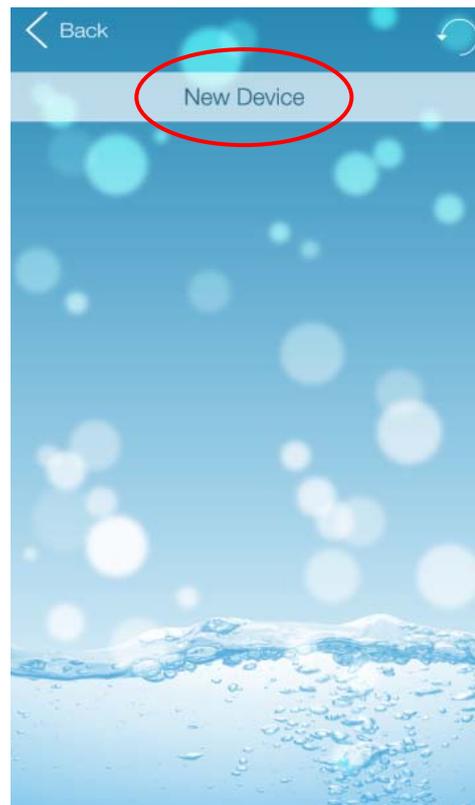
The above steps place the SpaNET WiFi module into Hot Spot Mode (HOT) enabling your smart device to connect directly to the WiFi module for configuration.

**Step 5:** If you have just completed your user account registration your app will already be logged in at the spa list screen (refer below)



*If you do not see the above screen, please open the app and login with your username and password entered during registration.*

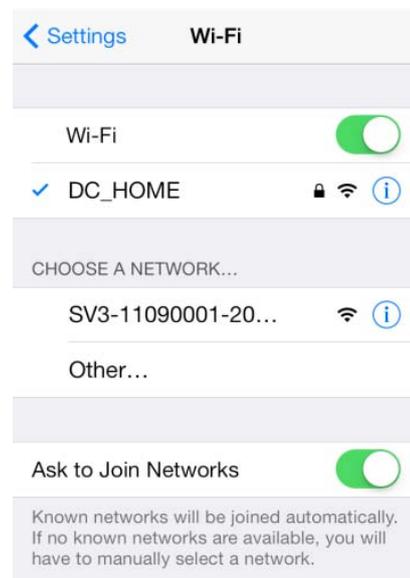
**Step 6:** Press on NEW DEVICE to add your spa to your spa list



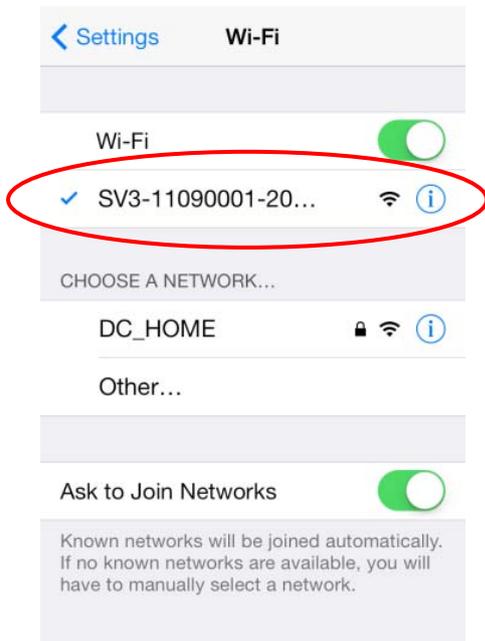
**Step 7:** Your display should change to the following setup screen (refer below).



**Step 7a:** Press your smart device home button to return to your icons, and navigate to your WiFi settings screen.

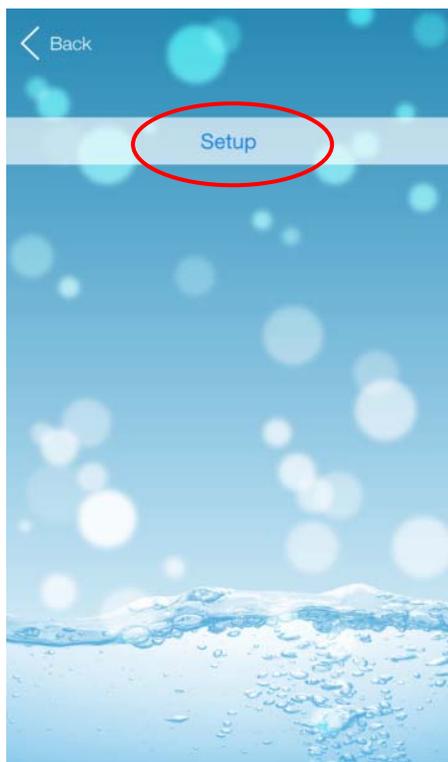


**Step 8:** Select and connect to the SV WiFi network denoted by your SV controller's serial number. No password is required to connect.

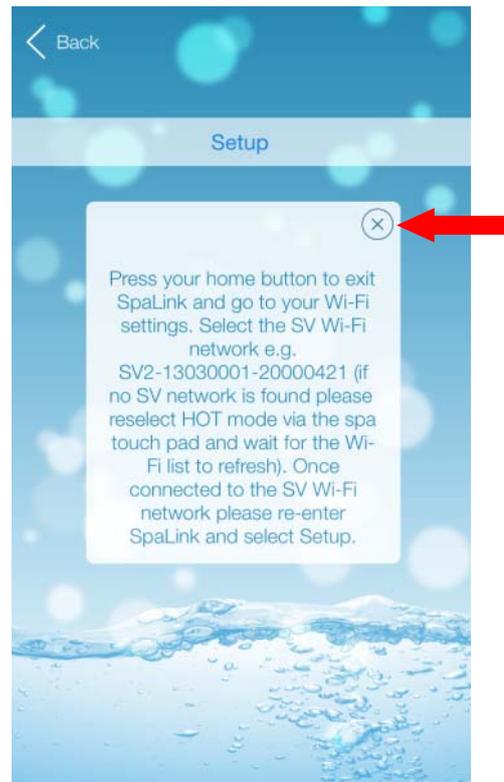


Wait for a moment to ensure the SV network is connected properly. If no SV network is found in the list repeat steps 1 to 4 on the spa side keypad to reactivate HOT mode and try again.

**Step 10:** Press on SETUP to begin a WiFi scan to locate your home wireless network. A spinning wait icon will appear whilst the scan is taking place. Wait for the scan to complete before pressing anything else.



**Step 9:** Once connected to the SV WiFi network go back and re-enter the SpaLINK app. Press on X to close the setup instructions.



**Step 11:** Select your wireless network for the spa to connect to for Internet access (**ensure signal strength is -70db or higher**).



**NOTE:** The WiFi list may display neighboring wireless networks in your area. Select the SSID name that matches your home router.

The wireless network list displays a list of the wireless network SSIDs discovered in proximity to the spa after the WiFi scan. The signal strength of each network is detailed on the right hand side in decibels (db). A basic guide to WiFi signals strengths is as follows:

- 120db is unacceptable
- 100db is poor and unstable
- 80db is weak
- 70db is average
- 60db is good
- 40db is excellent

WiFi signal strength is particularly important for reliable communication and operation of the app. **The signal strength of your wireless network should be no less than -70db for reliable operation.** If the signal strength is not acceptable you may need to relocate your wireless router closer to the spa, install a WiFi range extender to boost the signal, or install a higher powered antenna to the SpaNET SmartSTREAM module underneath your spa.

If your wireless network SSID is not discovered you will need to carry out steps to improve the signal strength and perform another WiFi scan. Simply press the refresh button at the top of the screen to re-scan for WiFi networks.



The screenshot shows a mobile application interface for WiFi network selection. At the top, there is a blue header bar with a white left-pointing arrow and the word "Back". On the right side of the header, there is a circular refresh icon (a circular arrow) which is circled in red. A red arrow points from the text "Refresh WiFi Scan" to this icon. Below the header, there is a list of wireless networks. Each entry consists of the network name (SSID) on the left and its signal strength in decibels (db) on the right. A red arrow points from the text "Wireless SSID" to the first network name, and another red arrow points from the text "Signal Strength" to the first network's signal strength value. The networks listed are: snEXTbelkin (-56 db), Spanet (-84 db), HP-Print-F2-Officejet 6600 (-79 db), NetComm Wireless (-73 db), and Kerway (-81 db). At the bottom of the screenshot, there is a blue box with white text providing instructions and a note about signal strength.

Wireless SSID	Signal Strength
snEXTbelkin	-56 db
Spanet	-84 db
HP-Print-F2-Officejet 6600	-79 db
NetComm Wireless	-73 db
Kerway	-81 db

Please select the Wi-Fi network for the spa to connect to. 0db is a perfect signal and -70db is a weak signal. NOTE: signal strengths below (-70db) are too weak for reliable communication. Relocate router closer to spa unit or boost signal

**Step 12:** Enter the password for your wireless network and press OK.



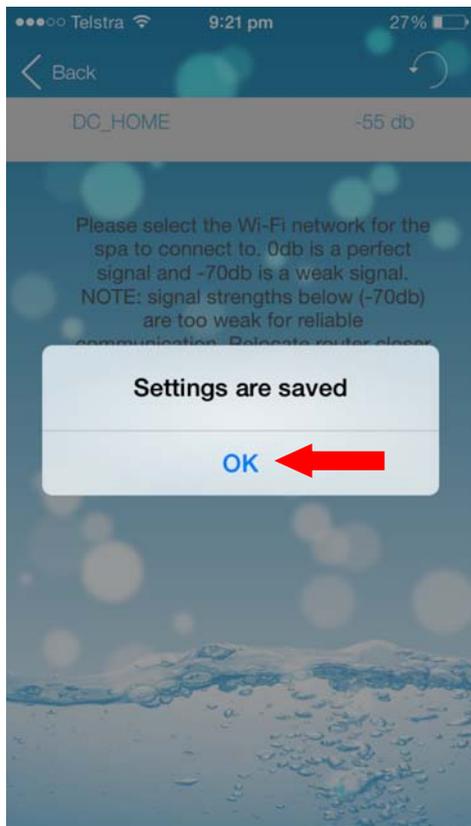
### Notes on Wireless Network Password

Password is case sensitive. You must take particular care when entering the password for your wireless network to ensure it is correct.

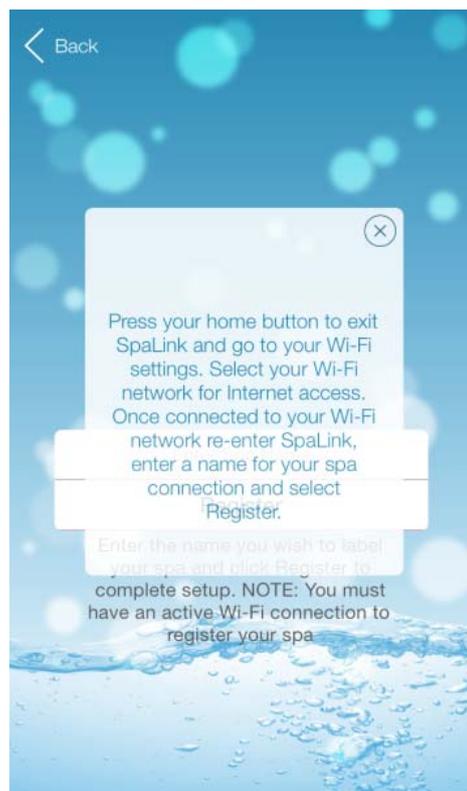
The app is unable to confirm your wireless network password is correct. The password you enter will be programmed directly into the SpaNET WiFi module for connecting to your wireless router.

If you type the password incorrectly the SpaNET WiFi module will be unable to login and connect to your wireless router and the whole setup procedure will need to be run again.

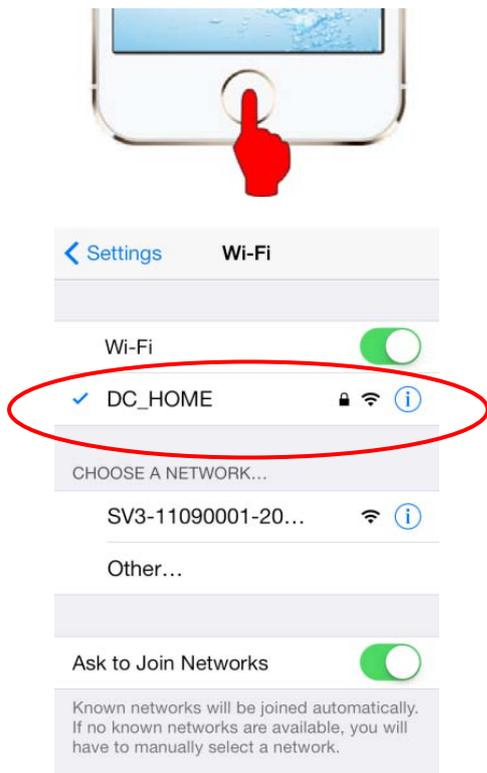
**Step 13:** Press OK to confirm the wireless network settings (SSID & Password) have been saved to the SpaNET WiFi module



**Step 14:** Your display will now show the screen below advising you to exit the app, return to your WiFi Settings and connect to your WiFi network for Internet access, or turn WiFi OFF to return to 3G/4G Internet access.

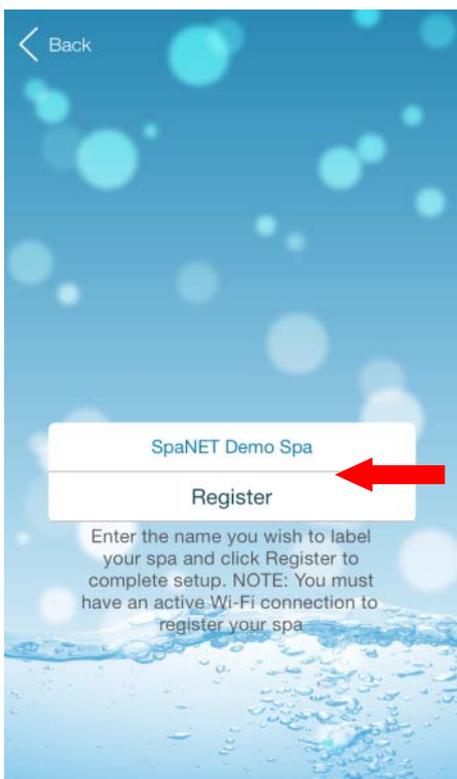


**Step 14a:** Press your smart device home button, navigate to your WiFi settings and select your WiFi network for Internet access.

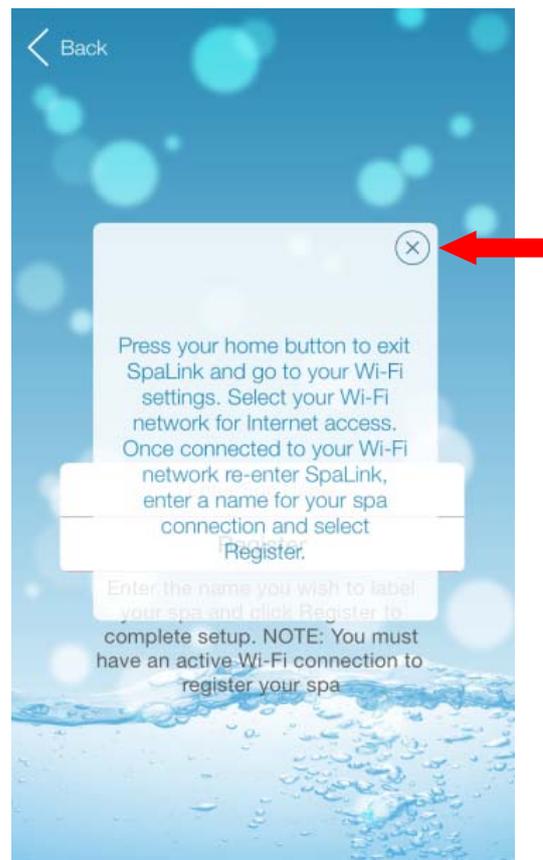


*NOTE: Your smart device may automatically revert to your normal WiFi network by itself.*

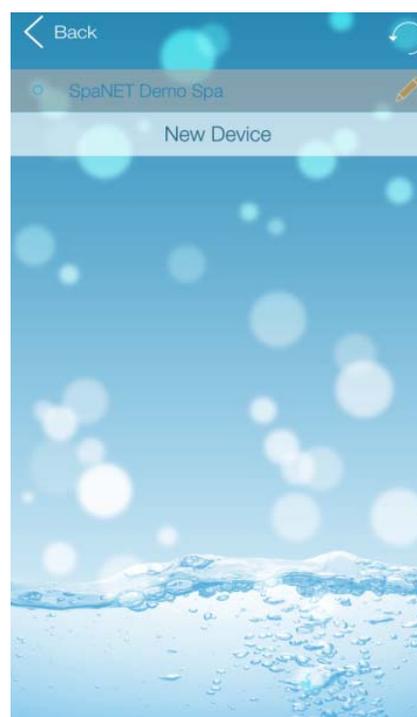
**Step 16:** Enter a name for your spa and press REGISTER



**Step 15:** Once connected to your usual WiFi network re-enter the SpaLINK app. Press on the X to close the setup instructions.

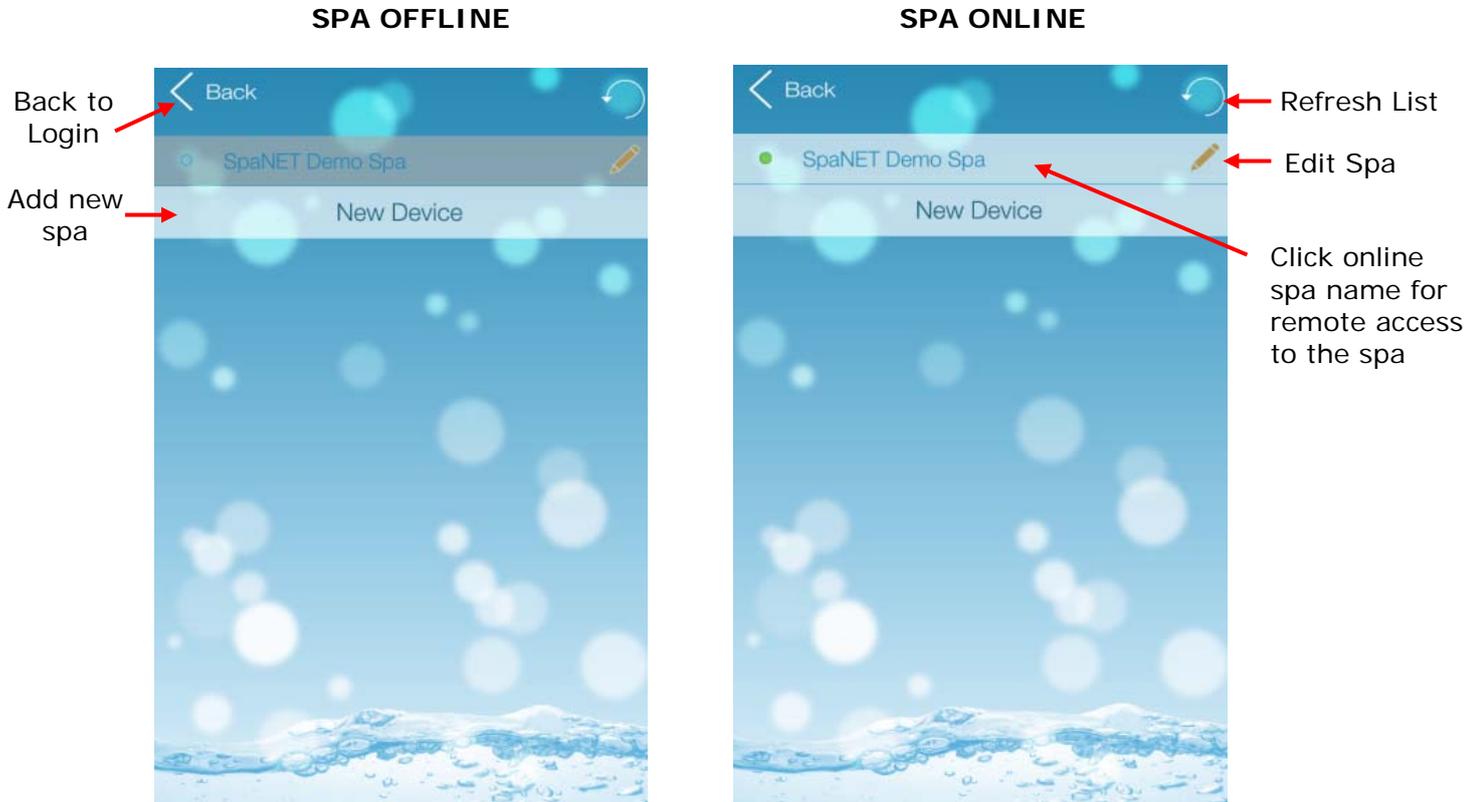


**Complete:** Your WiFi module is configured and will attempt to connect to the Internet. The app will return to your spa list showing your spa as offline (greyed out).



## Spa List Screen

If you have just completed setup or have just logged into the SpaLINK app you will be presented with your spa list page. The spa list page allows you to access your spa, rename your spa, delete your spa, or add a new spa to the list. It also shows if your spa is currently online or offline.



When you first complete the setup process of adding a spa it will take a few minutes for the SpaNET WiFi module to login to your wireless router, obtain an IP address and register itself on the Internet and show the spa as online. Please just wait and press the refresh button every now and then until the spa shows as online. If the spa fails to show as online after 5 minutes refer to the Troubleshooting Spa/WiFi Module Configuration on the following page.

### Online/Offline Spas

Once your SpaNET WiFi module has been configured, so long as there is power to your spa and your wireless router is available for Internet access your spa should show online in your spa list ready for remote access at anytime. However to ensure your spa connection remains stable and to ensure your spa automatically reconnects to the Internet if there is a power outage or your wireless router resets, your WiFi module will periodically refresh its Internet connection. Therefore occasionally you may find your spa appears offline in your spa list. Simply press the refresh button in the top right hand corner to refresh your spa list. Your spa will soon return online.

Furthermore if you happen to press on an online spa to launch the remote access part of the app at the exact moment the WiFi module begins refreshing its Internet connection you may receive a "Communication with the spa has timed out" error. Just return to the spa list, wait a moment and press refresh until the spa returns online.

## Edit Spa List

Press on the pencil to edit your spa. You can rename the spa or delete it. To rename your spa just click on the spa name and edit it as required. Press on SAVE to save the new name, or press CANCEL to exit the edit box without saving. Press on DELETE to delete your spa from the list (you may do this if the configuration process was unsuccessful and you need to setup your spa again).



## Troubleshooting Spa/WiFi Module Configuration

If you have completed the configuration process of adding a spa but it has failed to show online after 5 minutes you should follow these steps to help overcome the problem.

### Method 1: Ensure WiFi module has entered Infrastructure Mode

Once you have entered your wireless network password during the setup process the SpaNET WiFi module should automatically change from hot spot mode (HOT) to infrastructure mode (INFR). Occasionally something may occur during the setup process which will prevent this. To ensure your WiFi module is in infrastructure mode follow these steps:

- 1) On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 2) Press the [DOWN] button until display shows "WIFI"
- 3) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 4) Press the [UP] button to change display to "INFR"
- 5) Press the [OK] button to confirm INFR (infrastructure) mode (*display will briefly show "WAIT" and then return to the default temperature display*)

After these steps allow the WiFi module another 5 minutes to login to your wireless router and obtain Internet access, then login to the SpaLINK app again and check your spa list. Refresh your list several times until spa appears online.

### Method 2: Delete the spa and run the setup process again

The WiFi module requires reasonable WiFi signal strength (-80db or above) from your wireless router as well as a correct password to login to your router and obtain Internet access. During the setup process it is easy to skip past the signal strength without checking it in detail, and it is also easy to make a typing mistake with the network password. To correct these items the spa should be deleted from your spa list and the configuration process carried out again.

- 1) Open the app and login to your spa list page. Press on the edit pencil, press DELETE and confirm OK to delete your spa from your spa list.

- 2) Follow the instructions for "Configuring your Spa/WiFi Module" on pages 11-16 to complete the setup process again.

#### IMPORTANT NOTES:

- a) **Before starting the configuration process again the WiFi module should be reset (RSET) to clear any previous settings and then the WiFi module should be put back into Hot Spot mode (HOT). To do this please follow the "(Master Reset)" instructions listed below.**
- b) Take care to note the signal strength of your wireless network once the WiFi scan is complete and network list is displayed. If your signal strength is not -80db or higher, take steps to improve the signal strength and refresh the network list before continuing.
- c) Take particular care to ensure your wireless network password is entered correctly. Remember the password is case sensitive so you must pay attention to capital and lower case letters. The password characters disappear as you enter them so watch as you are typing to ensure the number or letter is correct and in the correct case.

#### SV WiFi network not showing in smart device WiFi List (Master Reset)

In some rare situations you may find that you are unable to locate the SV WiFi network in your smart device WiFi network list and therefore are unable to complete the configuration process. If this scenario occurs please carry out the following steps:

- 1) Turn the mains power to the spa OFF and leave powered OFF for 2 minutes
- 2) Turn the mains power back ON and wait for the priming sequence to complete and default temperature display to appear
- 3) On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 4) Press the [DOWN] button until display shows "WIFI"
- 5) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 6) Press the [DOWN] button to change display to "RSET" (reset)
- 7) Press the [OK] button to confirm and reset the WiFi module to factory default values (*display will briefly show "WAIT" and then return to the default temperature display*)
- 8) Once the keypad has returned to its default temperature display wait a further 2 minutes before continuing to step 9 (*this allows sufficient time for the WiFi module to properly reboot after the factory reset*)
- 9) On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 10) Press the [DOWN] button until display shows "WIFI"
- 11) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 12) Press the [OK] button to confirm HOT (hot spot) mode (*display will briefly show "WAIT" and then return to the default temperature display*)
- 13) Now the above steps have been completed go back to your smart device WiFi settings and the SV WiFi network should be available in the list. If not, perform a rescan and it should soon appear in the list.

## Legal Information

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*Android*<sup>®</sup> and *Google Play*<sup>TM</sup> are trademarks of Google Inc.

Contains Transmitter Module FCC ID: T9J-RN52

Contains Transmitter Module FCC ID: T9J-RN131,171

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.

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