

# ***ZoneScape 1-A*** **module documentation**



\*All specifications are subject to change

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## Version History

Issue No	Date Released	Description of Change	Owner	Notes
1.0	26/2/2016	Initial document release	GB/DO	
1.1	3/3/2016	Pairing multiple units together	GB/DO	
1.2	4/4/2016	Wired connection to a router	GB	
1.3	6/4/2016	Zone naming and Controller naming	GB	
1.4	7/4/2016	Updated Zone 4 / Button 4 default text	GB	
1.5	8/4/2016	Changed ZoneScape icon	GB	
1.6	4/5/2016	Updated Wired Configuration	GB	
1.7	9/5/2016	Default baud rate settings	GB	
1.8	16/6/2016	All on / All Off buttons ; Inputs / outputs	GB	
1.9	27/6/2016	Wiring Diagram update	GB/JC	
1.10	28/6/2016	AP Mode changes	GB/JL	
1.11	4/7/2016	Wiring Diagram update	GB/JC	
1.12	15/8/2016	Update / Pairing 2 or more units	GB	
1.13	25/8/2016	Added Schedule Types	GB	
1.14	25/8/2016	Formatting / Layout	GB	
1.15	2/9/2016	Connecting ZoneScape to a WiFi router	GB/BC	

## Overview

The ZoneScape module is a programmable home automation module that provides four relay outputs for connecting light groups / zones. The user will be able to control independently four light groups / zones / per unit. Furthermore the user can setup Schedules for every zone by connecting to the unit via the ZoneScape App for Android or IOS.

Every single Zone can have Specific date trigger Schedule, Daily repeats schedule and a Weekly repeats schedule. The ZoneScape modules allow connecting multiple units together by setting the modules in a single IP network, and allowing the user to control and setup schedules for all the modules in that network. The module provides Wi-Fi 802.11b/g/n connectivity and it also has a Rj45 Ethernet connector, that would allow connecting multiple ZoneScape modules together via a cable Router or Switch.

## **Default settings**

Every ZoneScape unit is configured by default to serve a 802.11 b/g/n access point. When in AP mode the ZoneScape Ethernet interface is switched off. If the user want to use the interface, the network mode should be changed to either "Default" or "Other" in order for the Ethernet interface to be enabled. The AP mode allows the user to connect to the ZoneScape via WIFI and obtain an IPv4 address via DHCP.

## **WIFI credential defaults**

SSID: ZoneScape\_ xxxx ( where xxxx is a number that identifies every Zonescape unit)  
KEY: 12345678

## **Network Defaults**

Every unit is configured to serve IPv4 addresses via DHCP. Once a device / Smartphone connect to the unit via Wi-Fi the unit assigns an IP address to the connected client via DHCP.

Every ZoneScape unit comes preconfigured with the following IP / PORT settings:

- IP: 192.168.16.254
- PORT: 8080

The above network parameters are needed for the ZoneScape app to communicate with the ZoneScape hardware.

The above defaults can be changed via the unit's web configuration interface which can be accessed by visiting <http://192.168.16.254> .

The web configuration interface is password protected with the following defaults:

- username : admin
- password: admin

The Web configuration interface would allow pairing multiple ZoneScape units together by setting one of the units in Wireless AP mode (default in every unit) and the rest of the units in Client mode Wireless.

## Serial Defaults

\* Every unit has a default serial settings for communication between the onboard microcontroller and the WiFi module. These settings by default are:

- **57600,8,n,1**

There are cases where after factory reset the serial settings are reset to **115200,8,n,1** and this can be seen on the module WEB configuration page @ 192.168.16.254 .

If the user encounters a **115200,8,n,1** setting after a factory reset, these values need to be set to : **57600,8,n,1** in the module's web configuration page, as shown on the screenshot below:

The screenshot displays the web configuration interface for the ZoneScape 1-A module. It features a table with two columns: 'Current' and 'Updated'. The 'Serial Configure' row shows the current value as '57600,8,n,1' and the updated value as '57600,8,n,1', which is circled in red. Other settings include NetMode (Default), SSID (ZoneScape\_8281), Password (12345678), Serial Framing Length (64), Serial Framing Timeout (10 milliseconds), Network Mode (server), Remote Server Domain/IP (192.168.11.245), Locale/Remote Port Number (8080), Network Protocol (tcp), and Network Timeout (0 seconds). The interface includes 'Apply' and 'Cancel' buttons at the bottom.

	Current	Updated
Serial Configure:	57600,8,n,1	57600,8,n,1
Serial Framing Length:	64	64
Serial Framing Timeout:	10 milliseconds	10 milliseconds (< 256, 0 for no timeout)
Network Mode:	server	Server
Remote Server Domain/IP:	192.168.11.245	192.168.11.245
Locale/Remote Port Number:	8080	8080
Network Protocol:	tcp	TCP
Network Timeout:	0 seconds	0 seconds (< 256, 0 for no timeout)

Apply Cancel

### Schedule Defaults

By default the ZoneScape unit / module comes with disabled Schedules. Once the user connect to the unit the following Schedules can be set for every single Zone / Relay for the target ZoneScape unit:

- Specific Date Schedule
- Daily repeats Schedule
- Weekly repeats Schedule

### Schedule Types

ZoneScape allows for configuring three types of schedules per zone. The following schedules can be configured per zone (can be configured and will run simultaneously) :

- 1x Specific Day Schedule (Date / Start time and End time)
- 1x Daily repeat Schedule (Repeat every day / Start time and End time)
- 1x Weekly repeats Schedule (Specify repeats on MON,TUE,WED,THU,FRI,SAT,SUN / Start time and End time)

The table below show how many schedules can be configured in one ZoneScape unit:

Schedule Type	Zone 1	Zone 2	Zone 3	Zone 4
Specific Day Schedule	√	√	√	√
Daily repeat Schedule	√	√	√	√
Weekly repeat Schedule	√	√	√	√

All the above can run simultaneously and in total every ZoneScape unit can have 12 schedules running simultaneously ( 4 Zones \* 3 Schedules)

If the user tries to set a second schedule on top of a schedule type that has already been set. The relevant schedule type will be \*overwritten by the newly set schedule.

\* Currently there is no notification implemented (Android and iOS Apps) that will warn the user that a schedule exists and the user is about to overwrite an existing schedule.

## **Connecting to the ZoneScape unit**

The following pre-requisites are required in order to connect and configure a ZoneScape module / unit :

- A connection via WIFI has to be established between the user's Smartphone and the target ZoneScape unit / module
- Depending on the Smartphone the user needs to have one of the ZoneScape apps installed on his Smartphone either the ZoneScape App for IOS or the ZoneScape Android application.

After a successful WIFI connection the user can simply start the ZoneScape App and start controlling the ZoneScape Relays / Zones Directly via the App user interface, or configure a Schedule for turning Zones on and off .

## **Setting ZoneScape unit / module Time and Date**

Every time the ZoneScape app is started and if there is a established connection between the user's Smartphone and the target ZoneScape module. The ZoneScape app will send the Current Date and Time as well as the current Day of the Week and those data will be recorded and stored into the ZoneScape unit non-volatile memory and the time / date settings will be set to the on board Real-time clock of the ZoneScape unit.

The above process is executed every time the user connects and starts the ZoneScape app. The Time and Date , taken from the user's Smartphone is considered to be the correct time/date setting as the Smartphone itself is synchronized once by the GSM / 3G / 4G networks and also via NTP.

## **ZoneScape APP Defaults**

The ZoneScape App for IOS and Android is configured by default to connect to a single ZoneScape unit with the following default network parameters:

- IP Address : 192.168.16.254
- PORT: 8080

These parameters can be changed by tapping on the ZoneScape app "Settings" tab. If a change is made in these settings the user will also have to apply the same changes in the target ZoneScape module web configuration interface, so that both the settings in the app and the settings in the module match, which is crucial for establishing a connection between the APP and the module.

## **Configuring Schedules**

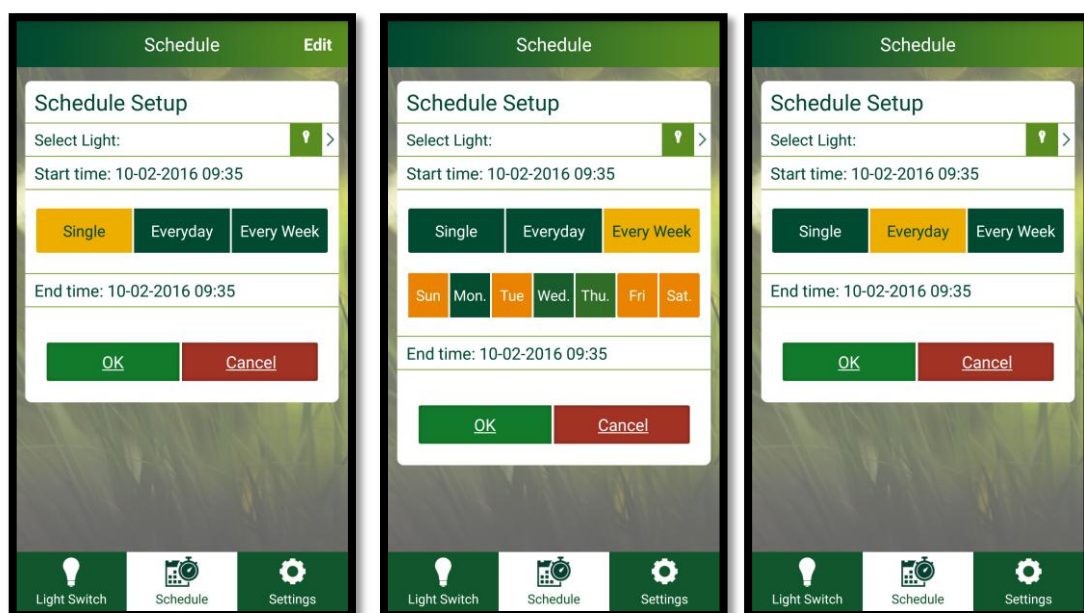
The ZoneScape modules allows the user to setup schedules for the Zones / Relays. The Schedules can be set using the ZoneScape App for Android or IOS depending on the user's Smartphone / Operating System.

The ZoneScape module Support the following type of schedules:

- Specific date Schedule (turn ON and OFF of the relays / zones on a specific date)
- Daily repeat Schedules (turn ON and OFF of the relays / zones on a daily basis / every day repeats)
- Weekly repeats Schedule (turn ON and OFF of the relays / zones on specific Weekdays e.g. MON, TUE, WED)

All of the above schedules are configured in the module via the ZoneScape App for Android and / or IOS.

The App allows configuring of schedules via the "Schedule" tab.



Once the user tap on the "Schedule" tab he will be able to configure a schedule for any of the Zones / Relays.

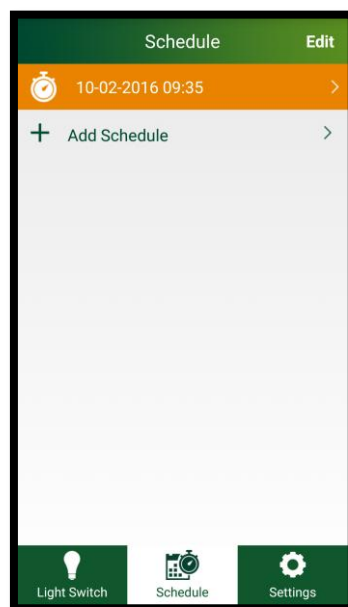
The procedure for configuring a Schedule for a Light / Zone / relay starts with the selection of the target Light to be controlled. That can be done by tapping on the "Select Light" field in the Schedule tab. After the User tap on the "Select Lights" field from the Schedule tab, a new screen pops up where the user can select which lights / zones to configure for this specific schedule. The user can either select just one light / zone , two , three or all the four lights / zones.



### Configuring Specific Date schedules

Configuring a Single / Specific date schedule is when the user want to trigger / turn on and off one or more of the lights / zones on a specific date and time. First the user needs to select a target light / lights for this schedule. Once the light is selected the "Single" submenu tab needs to be selected (default). Then the user needs to select a start date / time for this schedule and end date time for this schedule. Then in order to send and apply the schedule to the ZoneScape board the user needs to tap on the "OK" button. The application will try to establish a connection with the target ZoneScape board and once established the configured schedule will be sent and applied to the target ZoneScape board. Once the user taps on the "OK button" a new progress dialog pops up informing the user that the settings are being sent to the target ZoneScape board. On a successful transmission the dialog should close after a 1 - 2 seconds.

After a successful transmission the newly created schedule will appear in the list of schedules tab as follows:

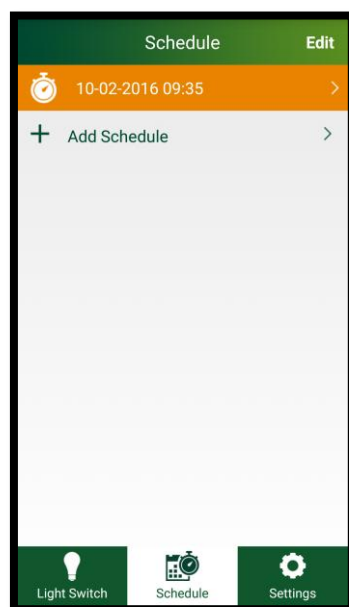


The List of schedules include all the configured schedules for the target ZoneScape unit.

### Configuring Daily Repeats schedule

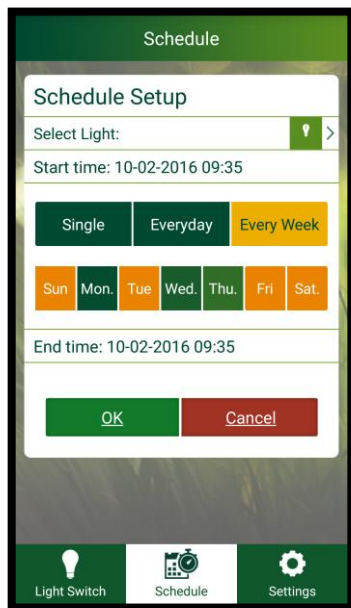
Configuring a Everyday repeats schedule is when the user want to trigger / turn on and off on or more of the lights / zones on a daily basis / every day. First the user needs to select a target light / lights for this schedule. Once the light is selected the "Everyday" submenu tab needs to be selected . Then the user needs to select a start date / time for this schedule and end date time for this schedule. Then in order to send and apply the schedule to the ZoneScape board the user needs to tap on the "OK" button. The application will try to establish a connection with the target ZoneScape board and once established the configured schedule will be sent and applied to the target ZoneScape board. Once the user taps on the "OK button" a new progress dialog pops up informing the user that the settings are being sent to the target ZoneScape board. On a successful transmission the dialog should close after a 1 - 2 seconds.

After a successful transmission the newly created schedule will appear in the list of schedules tab as follows:



The List of schedules include all the configured schedules for the target ZoneScape unit.

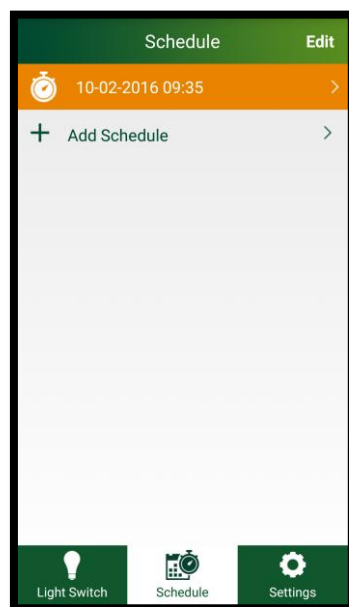
### Configuring Weekly Repeats schedule



Configuring a weekday repeats schedule is when the user wants to trigger / turn on and off one or more of the lights / zones on a weekday basis. First, the user needs to select a target light / lights for this schedule. Once the light is selected, the "Every week" submenu tab needs to be selected. Then the user needs to select a start date / time for this schedule and end date time for this schedule. Then the user selects on which weekdays he needs the schedule triggered. Then, in order to send and apply the schedule to the ZoneScape board, the user needs to tap on the "OK" button. The application will try to establish a connection with the target ZoneScape board and, once established, the configured schedule will be sent and applied to the target ZoneScape board. Once the user taps on the "OK button", a new progress dialog pops up informing

the user that the settings are being sent to the target ZoneScape board. On a successful transmission, the dialog should close after a 1 - 2 seconds.

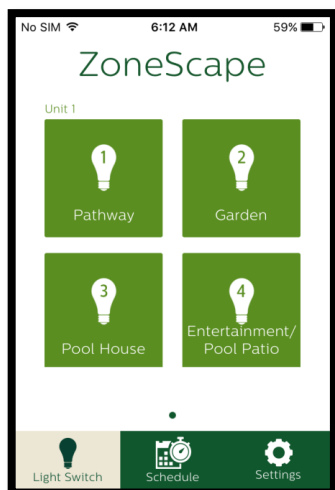
After a successful transmission, the newly created schedule will appear in the list of schedules tab as follows:



The List of schedules includes all the configured schedules for the target ZoneScape unit.

## Controlling the Lights Directly from the App

The ZoneScape App provides a direct control and monitor of the ZoneScape module relays / Light states. Once the user connects to the module via Wi-Fi and starts the app, the user can control the zones / lights by directly tapping on the buttons from the User Interface.



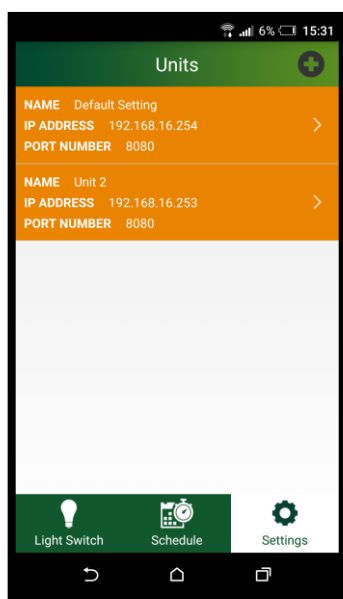
If the user has configured more than one ZoneScape unit in the App, then to access the second ZoneScape unit / module and to be able to control / monitor the state of its Zones / Lights the user needs to slide left in order to access the second configured unit in the ZoneScape Application.

## Pairing two or more ZoneScape units together

The current design of the ZoneScape module allows for pairing two or more units together. The process involves accessing the ZoneScape unit web configuration interface and setting IP addresses, net mask and ports in the respective configuration web pages.

The maximum number of Paired / Connected ZoneScape units in one subnet is 255.

### *Example scenario - two ZoneScape units paired to work together.*



By default the units are shipped in "WiFi Access Point mode". The first unit should remain in Wi-Fi AP (Access point by default) mode and the second unit is to be configured in WIFI client mode (to connect to the first unit in AP mode)

The Second unit has to be configured to connect to the first unit that is in AP mode. The Second unit IP address should be set in the same network as the first unit . By doing this the second unit can be accessed via/through the first unit. The user only needs to connect to the unit that is in AP mode via his Smartphone and the ZoneScape application.

**Example:**

In the example Unit 1 and Unit 2 are names picked in order to provisionally name the two units as one of the unit needs to change its mode from AP (by default) to Client.

**Unit 1 (AP mode WiFi SSID Zonescape\_8243 )**

- IP address: 192.168.16.254 (defaults)
- PORT 8080 (defaults)

**Unit 2 (client mode WiFi SSID ZoneScape\_7899 )**

- IP address: 192.168.16.253
- PORT 8080

Unit 2 (**ZoneScape\_7899**) needs to be configured to connect to Unit 1 (**Zonescape\_8243**) over WI-FI, using the WI-FI credentials used with Unit 1 (The SSID and the KEY).

*By default the credentials are:*

**SSID:** ZoneScape\_xxxx (where xxxx is a unique number that identifies the ZoneScape unit. )

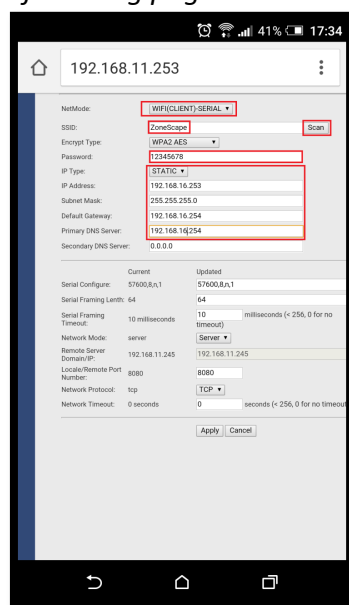
**KEY:** 12345678 ( the default WiFi password )

Once the above procedure is completed, then we can enter the Unit 2 (**ZoneScape\_7899**) IP parameters in the ZoneScape Application settings tab and we will have access to both of the units at the same time.

Configuring Unit 2 (**ZoneScape\_7899**) in our example in Client mode includes:

1. Connecting to Unit 2 (**ZoneScape\_7899**) via WIFI
2. Opening a web browser and pointing to the IP address 192.168.16.254
3. Entering the username and password - admin ; admin

*The following page will be loaded:*



In order to pair unit 2(Client) to unit 1 (AP) in our example you need to change:

1. **Net Mode** - WIFI(CLIENT)-SERIAL should be Selected
2. **SSID**: You need to either enter "ZoneScape" in this field or click "scan" and select ZoneScape from the scan results list.
3. **Password**: You need to enter the ZoneScape unit one key in this field
4. **IP Type**: Choose STATIC from the drop down selector.
5. **IP Address** : You need to enter an IP different to 192.168.16.254. In the example below the IP 192.168.16.253 is selected.
6. **Subnet Mask** : Enter 255.255.255.0
7. **Default Gateway**: 192.168.16.254
8. **Primary DNS Server**: 192.168.16.254

192.168.11.253

NetMode: **WIFI(CLIENT)-SERIAL**

SSID: **ZoneScape** **Scan**

Encrypt Type: **WPA2 AES**

Password: **12345678**

IP Type: **STATIC**

IP Address: **192.168.16.253**

Subnet Mask: **255.255.255.0**

Default Gateway: **192.168.16.254**

Primary DNS Server: **192.168.16.254**

Secondary DNS Server: **0.0.0.0**

	Current	Updated
Serial Configure:	57600,8,n,1	57600,8,n,1
Serial Framing Lenth:	64	64
Serial Framing Timeout:	10 milliseconds	10 milliseconds (< 256, 0 for no timeout)
Network Mode:	server	<b>Server</b>
Remote Server Domain/IP:	192.168.11.245	192.168.11.245
Locale/Remote Port Number:	8080	8080
Network Protocol:	tcp	<b>TCP</b>
Network Timeout:	0 seconds	0 seconds (< 256, 0 for no timeout)

**Apply** **Cancel**

## Connecting ZoneScape to WiFi Router

### 1) Locate Customer's Router Gateway

#### **With Smart Phone**

Download App - IP Location I/O (or similar IP address app)

Connect to CUSTOMERS wifi;

Find wifi gateway via app (ex 192.168.1.1) -- write down/save for later

#### **With PC (Windows)**

Connect to CUSTOMERS wifi;

Search for cmd

Run cmd

Type ipconfig

Write down default gateway (ex 192.168.1.1)

### 2) Adjust ZoneScape Wifi Settings

Connect to ZONESCAPE wifi

Open web browser (ex. Safari, Chrome); Type 192.168.16.254 into the address bar - Hit Enter/Go

Enter user / password = admin / admin

On the logged in webpage: Change netmode to wifi(client)-serial

For ssid hit scan, select the customer's wifi name and press apply

Encrypt type remains (wpa2 aes)

Change the password to the customer's wifi password

Change ip type to static - this will open up more settings.

Change ip address to first 3 sections of gateway, then .200 (xxx.xx.x.200). With our example, it would be 192.168.1.200. Write down/save for use in step 3.

Subnet mask remains 255.255.255.0

Default gateway to xxx.xxx.x.x (gateway obtained in step 1)

Primary dns server to xxx.xxx.x.x (gateway obtained from step 1)

Secondary dns server remains 0.0.0.0

Click apply

You will lose connection to the device

### 3) Adjust ZoneScape App

Reconnect to the CUSTOMERS wifi

Open ZoneScape app on phone and go to Settings

Click on the unit to be connected

Change the ip address to first 3 sections of gateway, followed by .200

(xxx.xx.x.200) This will be the same as entered in step 2 for IP address.

Save settings. Click OK to ZoneScape not being connected.

You are now set up and connected. Test light zones with app.

**\*notes**

The static ip of xxx.xx.x.200 could be anything from 2-253. With our suggestion of 200, Residential properties should not have anything statically assigned to .200 and operate fine. If this is being setup in a commercial setting, their IT/Network team will need to be involved to properly set up a static connection between ZoneScape and internet router that complies with their network system.

### **Configuring ZoneScape for wired connection to a Wireless LAN Router**

Two or more ZoneScape units can be connected together using a standard RJ45 wired Ethernet connection to a 802.11 b/g/n/ac Wireless Router. In this case the ZoneScape units are configured for wired mode, connected to the LAN interfaces of the 802.11 b/g/n/ac Wireless Router . The Wireless Router provides the Wireless access to all the units configured in the network. The Benefit of using a Wireless router is that the router can be connected to the internet, allowing the user to browse the internet and at the same time control and setup schedules for the ZoneScape modules configured in that network.

**Prerequisites:**

- RJ45 Ethernet cables from each ZoneScape unit to the Wireless WiFi Router.
- A Standard 802.11 b/g/n/ac router with 2 or more Ethernet / RJ45 ports available.
- 2 or more ZoneScape units configured as per the description below

**Setting up a ZoneScape unit in wired mode:**

1. Connect to every ZoneScape unit via WiFi
2. Open a web browser and point to <http://192.168.16.254>
3. Enter the credentials in the popup window (admin:admin)
4. Select Default mode from the Net Mode selector
5. open the URL <http://192.168.16.254/home.asp> in your Web Browser
6. Click on "operation mode" on the left and select "Bridge" mode
7. Click on the Apply button
8. Wait 20 seconds for the unit to reboot and then **visit again the URL <http://192.168.16.254/home.asp>**
9. Then enter the desired IP address as per the target router network in "Internet Settings"->"LAN" settings on the above webpage
10. Click on the Apply button



11. Wait 20 seconds for the unit to reboot. Now if you connect the ZoneScope unit via Ethernet cable to the target WiFi router you should be able to access ZoneScope via a WiFi connection to the router.

If you have entered incorrect settings, you will need to reset to factory defaults the ZoneScope module by holding the "reset" button with a screwdriver for at least 10 seconds. After factory reset , please follow the steps from 1 - 11 and make sure that you set ZoneScope in the same network as the WiFi 802.11 router. Below is a example showing a configuration of ZoneScope in the 192.168.1.\* network and a wired connection to a TP-LINK wireless router.

### **Net Mode: Default**

By default the ZoneScope WEB configuration interface can be accessed by visiting <http://192.168.16.254> and entering the default credentials - username: admin and password: admin

If ZoneScope is not set in "Default" it should be set to "Default" from the Net Mode dropdown menu.

Then the user needs to click on the "Apply Button" and wait for around 20 seconds for the module to save settings and reboot.

The screenshot displays the ZoneScope WEB configuration interface. On the left, a sidebar menu includes 'English', '简体中文', 'Serial2Net Settings', 'Advance Settings', 'Serial2Net UART 2 Settings', and 'Administration' (which is selected). The main content area shows the 'Administration' settings. At the top, there are fields for 'NetMode' (set to 'Default'), 'SSID' (set to 'ZoneScope\_8281'), and 'Password' (set to '12345678'). Below these is a table with two columns: 'Current' and 'Updated'. The table contains settings for 'Serial Configure', 'Serial Framing Lenth', 'Serial Framing Timeout', 'Network Mode', 'Remote Server Domain/IP', 'Locale/Remote Port Number', 'Network Protocol', and 'Network Timeout'. Each row shows the current value and an updated value in a text input field. At the bottom of the settings table are 'Apply' and 'Cancel' buttons.

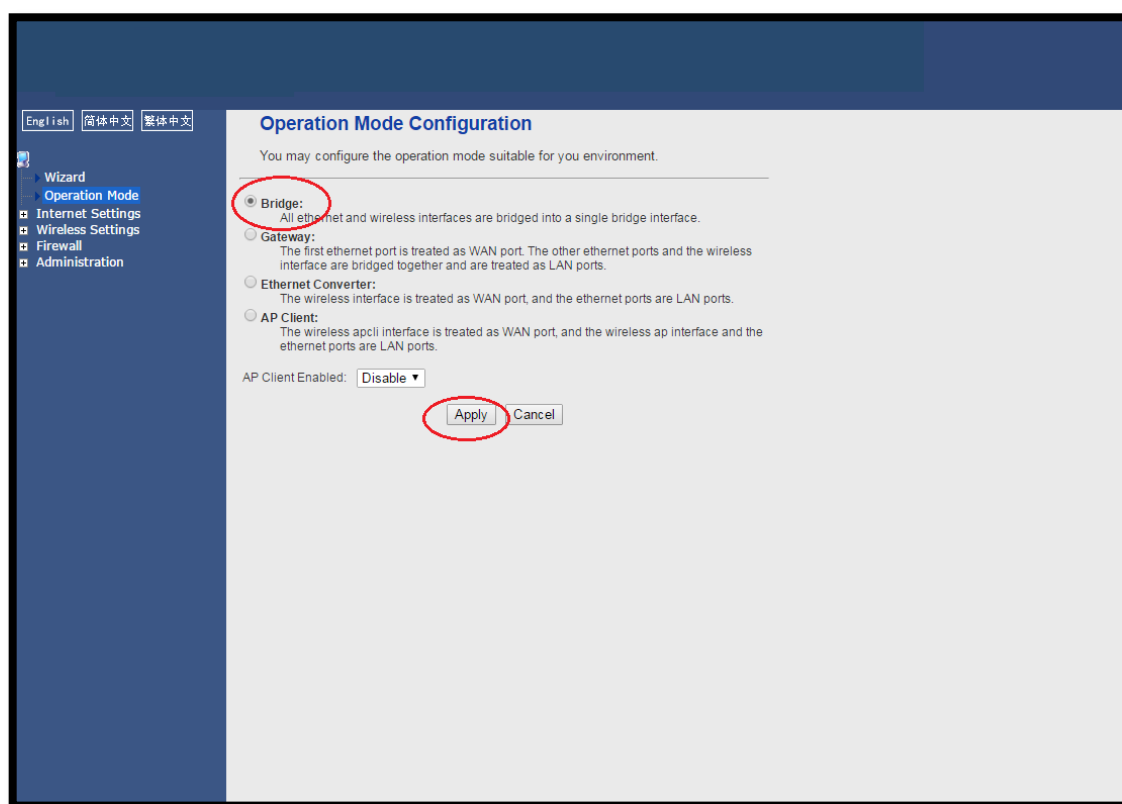
	Current	Updated
Serial Configure:	57600,8,n,1	<input type="text" value="57600,8,n,1"/>
Serial Framing Lenth:	64	<input type="text" value="64"/>
Serial Framing Timeout:	10 milliseconds	<input type="text" value="10"/> milliseconds (< 256, 0 for no timeout)
Network Mode:	server	<input type="text" value="Server"/>
Remote Server Domain/IP:	192.168.11.245	<input type="text" value="192.168.11.245"/>
Locale/Remote Port Number:	8080	<input type="text" value="8080"/>
Network Protocol:	tcp	<input type="text" value="TCP"/>
Network Timeout:	0 seconds	<input type="text" value="0"/> seconds (< 256, 0 for no timeout)

Configuring more units in the wired system includes connecting to every single unit to be configured via WiFi and accessing its Web configuration interface for setting up Network parameters, IP parameters, and Subnet mask.

In order to configure ZoneScope for Wired connection the user needs to access the following URL in your browser, while connected to the ZoneScope module:

- <http://192.168.16.254/home.asp>

Once the webpage loads the user needs to select "Operation mode" from the list of available options as shown in the screenshot below:



The user needs to select "Bridge" mode and click on the "Apply Button" and wait for around 20 seconds for the module to save settings and reboot. Once done the user needs to reconnect to the ZoneScope unit and access once again the web configuration page:

- <http://192.168.16.254/home.asp>

From the web configuration the user needs to click on "**Internet Settings**" and then on "**LAN**" as shown on the screenshot below:

In our particular configuration we will set ZoneScope with an IP address 192.168.1.254 . This IP address needs to be added in the IP Address field of the LAN Settings page.

Once added the user then needs to click "**Apply Button**" and wait for around 20 seconds for the module to save settings and reboot.

The screenshot displays the 'Local Area Network (LAN) Settings' interface. On the left is a navigation menu with options like Wizard, Operation Mode, Internet Settings (selected), LAN (selected), DHCP clients, VPN Passthrough, Wireless Settings, and Administration. The main area is titled 'Local Area Network (LAN) Settings' and includes a sub-header 'LAN Setup'. Below this, there are several configuration sections: 'LAN Setup' with fields for IP Address (192.168.1.254), Subnet Mask (255.255.255.0), LAN 2 (disabled), LAN2 IP Address, LAN2 Subnet Mask, Default Gateway, Primary DNS Server (168.95.1.1), Secondary DNS Server (8.8.8.8), MAC Address (44:33:4C:BA:F6:E0), and DHCP Type (Server); 'DHCP' settings for Start IP Address (192.168.1.100), End IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Primary DNS Server (192.168.16.254), Secondary DNS Server (8.8.8.8), Default Gateway (192.168.16.254), and Lease Time (86400); 'Statically Assigned' MAC and IP addresses; and various protocol settings like 802.1d Spanning Tree, LLTD, IGMP Proxy, UPNP, PPPoE Relay, and DNS Proxy (all disabled except DNS Proxy which is enabled). At the bottom, there are 'Apply' and 'Cancel' buttons, with the 'Apply' button highlighted by a red circle.

After configuring the target units the user has to physically connect the units via RJ45 Ethernet cable to the Wireless/LAN Router in the system and also set the unit's IP parameters and ports in the ZoneScape App. Depending on the router the user may need to configure its LAN settings. Below is a sample configuration for a TP-LINK Wireless 802.11 b/g/n router.

The user has to access the Wireless router network configuration parameters, and set the LAN settings as follows:

IP Address : 192.168.1.2

Network Mask: 255.255.255.0

The screenshot shows the TP-LINK router's web interface. The left sidebar contains a menu with options: Status, Quick Setup, QSS, Network (highlighted), - WAN, - LAN (highlighted), - MAC Clone, Wireless, DHCP, USB Settings, Forwarding, Security, Parental Control, Access Control, Advanced Routing, Bandwidth Control, IP & MAC Binding, Dynamic DNS, and System Tools. The main content area is titled 'LAN' and displays the following configuration: MAC Address: F8-D1-11-88-4F-38, IP Address: 192.168.1.2, and Subnet Mask: 255.255.255.0. A 'Save' button is located at the bottom of the configuration area.

Then the user should configure a DHCP Server on the wireless interface to serve IP addresses in the same network as the LAN interfaces, so that when connecting via a Smartphone with Android or iOS the units are reachable.

The screenshot shows the TP-LINK router's web interface with the 'DHCP Settings' page selected. The left sidebar menu is the same as in the previous screenshot, but 'DHCP' is highlighted. The main content area is titled 'DHCP Settings' and displays the following configuration: DHCP Server: ☒ Enable, Start IP Address: 192.168.1.3, End IP Address: 192.168.1.199, Address Lease Time: 120 minutes (1~2880 minutes, the default value is 120), Default Gateway: 192.168.1.2 (optional), Default Domain: (optional), Primary DNS: 0.0.0.0 (optional), and Secondary DNS: 0.0.0.0 (optional). A 'Save' button is located at the bottom of the configuration area.

The above setup requires all the ZoneScape modules and the Wireless router to be configured in the same TCP/IP network.

**Limitations:**

- The cable length between every ZoneScape unit and the router can't be more than 150 meters without an active repeater / hub

## **ZoneScape Customizations**

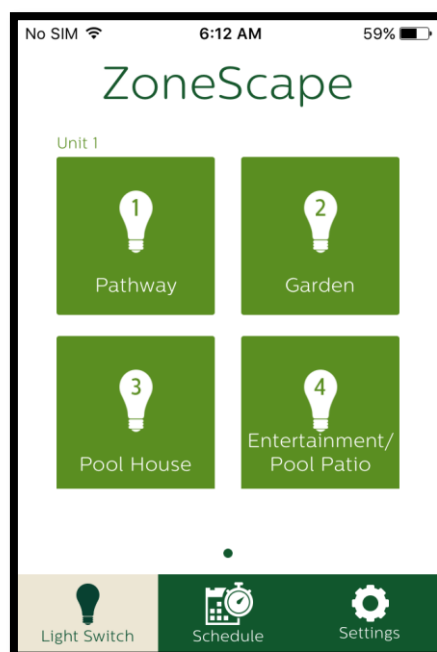
The ZoneScape application provides a possibility to edit and add custom zone naming for every single controller configured in the ZoneScape application. Furthermore the application provides the possibility to change the name of every controller configured in the system, allowing the user to add customized references for the target areas / zones to be controlled.

### ***Naming custom Zones / defining button names***

By default the ZoneScape application comes with a default Zone / button naming for every single controller , configured in the system.

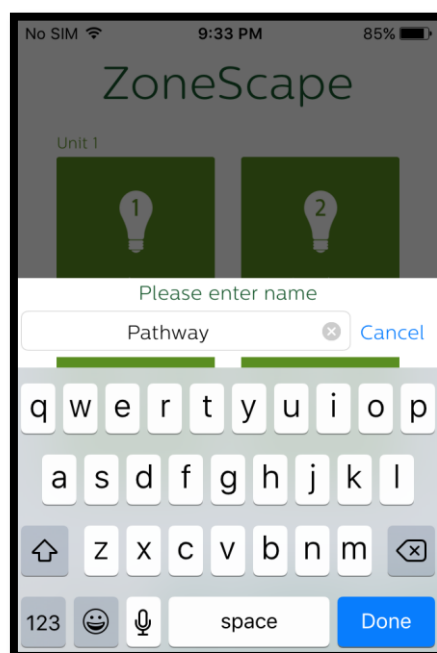
The default zones are :

- Pathway
- Garden
- Pool House
- Entertainment / Pool Patio



ZoneScape Screenshot , showing the default zones for Unit 1 , configured in the System.

Changing a zone name / button name is a matter of tapping and holding the relevant zone button for at least two seconds. After that a textbox appears and provides the user to edit and save the Zone name / button name. The above option is available for every single ZoneScape controller / unit configured in the ZoneScape application. The image below shows a screenshot showing the edit text textbox that gives the ability to change zone names.



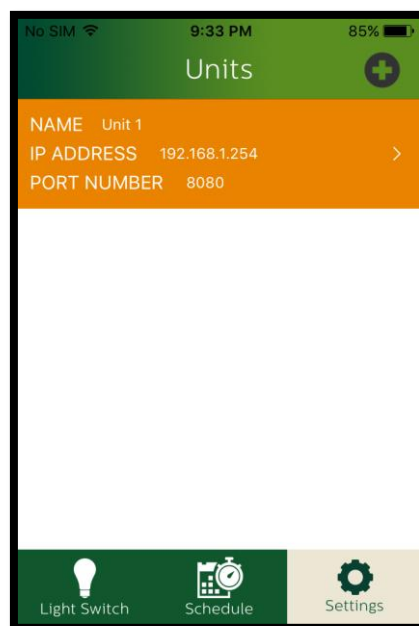
After entering the Zone name / button name , the user taps on "Done" and the entered value is updated in the user interface and in the app database.

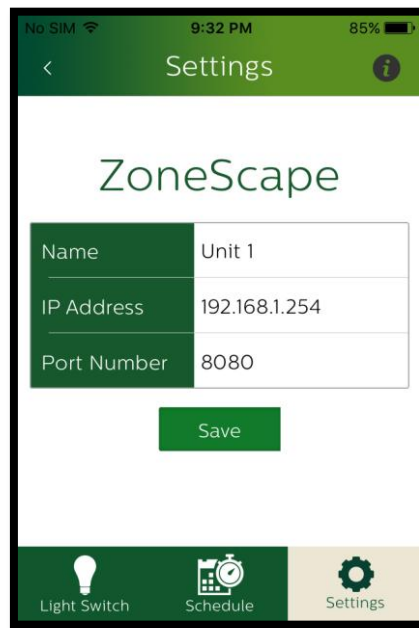
### ***Naming controllers / Units configured in the ZoneScape applications***

The ZoneScape Application provides controller naming / editing controller name for every single controller configured in the system. The controller name is displayed in ZoneScape Light Switch tab in the top left corner (see the image below). It gives the user a reference for the target controller to be controlled.



ZoneScape app screenshot showing where unit names are displayed  
In order to edit the unit name , the user needs to tap on the **Settings tab** and select the relevant controller from the list by tapping on it.





By tapping on the "Name" text field the user is able to change / edit the unit name and the module TCPIP parameters. By tapping on "Save" button the settings are saved in the Database, and the UI is updated with the new settings and the newly entered Unit name.

## Specifications

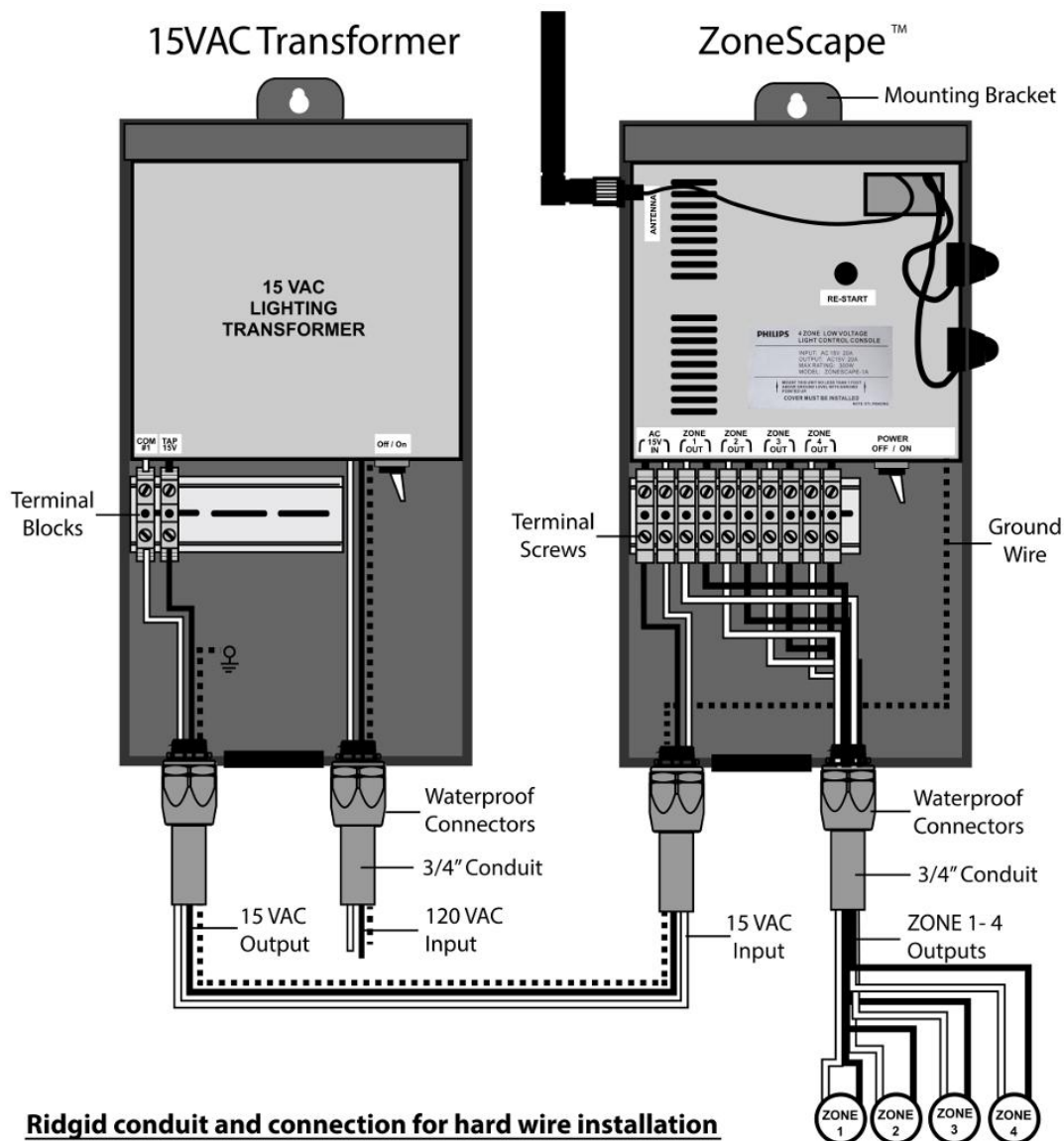
This section contains technical specifications regarding the ZoneScape module , inputs, outputs and physical control options.

## Control Buttons

ZoneScape is equipped with a "All On" and "All Off" physical switch positioned on the right side of the module next to the door lock. The "All On" and "All Off" buttons are push buttons. With these buttons the user can turn ON and OFF all of the four zone Relays simultaneously for testing. After pushing the "All On" pushbutton all the Zone Relays will be turned on and respectively if there are any lights wired to the ZoneScape outputs , the lights will lit. When the "All Off" pushbutton is pushed all the zone relays will be switched off. If there is a schedule set, this schedule will be executed and the respective output will be turned off even if the user has previously pushed the "All off" buttons. These buttons **will not cancel any schedules set**. For Safety Maintenance the user should disconnect the power from the power transformer before the relevant ZoneScape module.



**Ridgid conduit and connection for hard wire installation**



**Ridgid conduit and connection for hard wire installation**

1. Mount the ZoneScope enclosure to a solid surface, utilizing the keyhole slot in the mounting bracket.  
THE ZONESCAPE MUST BE MOUNTED AT LEAST ONE FOOT ABOVE GROUND LEVEL.
2. Before any connections, make sure the transformer is not plugged into an electrical outlet and that the power switch is in the OFF position.
3. Attach waterproof connectors and conduit using the 7/8" knockouts located on the bottom of the enclosure.  
(All connections to be waterproof. May use waterproof sealant or silicone)
4. Strip approximately 3/8" to 1/2" of the insulation of each low voltage wire.
5. Push the bare wires under the terminal screws on the terminal blocks and tighten the screws securely.

6. Connect the output of the 15VAC transformer to the 15VAC input of the ZoneScape using three (3) wires (*Com #1, 15V and Ground*).

CAUTION: WIRING MUST COMPLY WITH THE NATIONAL ELECTRICAL AND LOCAL CODES.

7. Connect the outputs from the ZoneScape (*ZONES 1 - 4*) to the appropriate lighting fixtures.

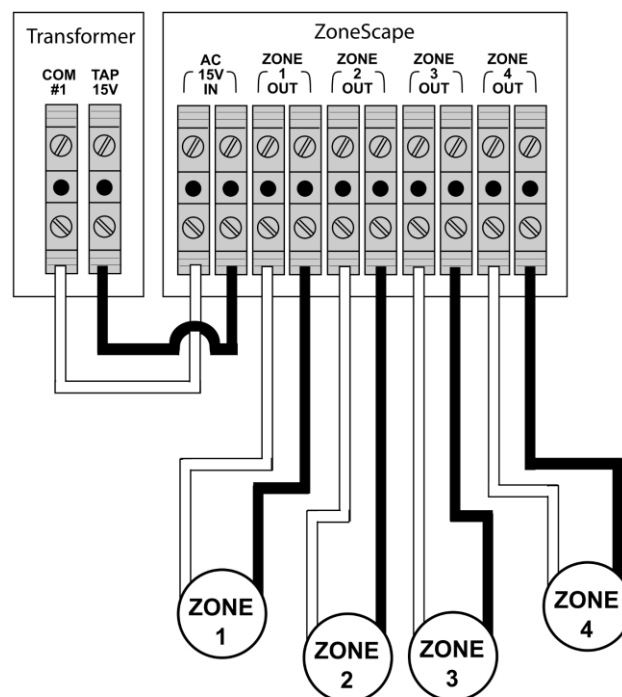
8. Plug the 15VAC transformer into 120VAC electrical outlet and turn the power switch to the ON position.

Below is an example wiring diagram showing the ZoneScape module terminals. On the left the first terminal pair is the 15V power input.

### ZoneScape Wiring Diagram

ZoneScape has one low voltage AC power input (refer to the module specifications sheet for absolute maximum ratings), for connecting to a standard low voltage garden lighting transformer. Every unit also has four outputs which provide power for every single relay Zone. The outputs are named Zone "1", "2", "3" and "4".

The ZoneScape input voltage as per the specifications sheet is 15,5V AC. Maximum load per zone is 8A @ 15.5V. The ZoneScape input voltage **shall not exceed 24V AC max**. ZoneScape is equipped with a terminal bar for connecting the transformer input and terminals for zone outputs. The transformer input shall be connected to the terminals labelled AC / 15V IN. The outputs for the four zone relays shall be connected to terminals ZONE 1 / OUT, ZONE 2 / OUT, ZONE 3 / OUT and ZONE 4 / OUT.



## FAQ / Troubleshooting

<p>I can't connect to ZoneScape via WiFi</p>	<ul style="list-style-type: none"><li>• Check whether the ZoneScape module is turned on and powered</li><li>• Check whether the ZoneScape module Antenna is attached</li><li>• Check whether you have entered correctly the default key for establishing a WIFI connection to ZoneScape - "12345678"</li><li>• Check whether you have enabled your WIFI interface from your Smartphone "Settings"</li><li>• If you still can't connect to the module, please press and hold the module "reset" button for at least 10 seconds. This will cause the module to be set in <b>actory defaults mode</b>. Then try to access ZoneScape and connect via WiFi to the module and use the default key "12345678"</li><li>• <b>After Applying factory defaults</b>, please make sure that you have edited and applied the settings written on page 5 of this Manual</li></ul>
<p>I am connected to ZoneScape, I can't control the ZoneScape Zones from the App, I can't set schedules.</p>	<ul style="list-style-type: none"><li>• Check whether you have set the ZoneScape IP address in the ZoneScape APP "Settings" tab. If the IP address in that tab is different from the ZoneScape IP , set in the WEB configuration interface , you need to make sure that the IP address set in the WEB configuration page matches the IP Address in the APP "settings" page.</li><li>• If you still can't control the module from the App, please press and hold the module "reset" button for at least 10 seconds. This will cause the module to be set in <b>actory</b></li></ul>

	<p><b>defaults mode.</b> Then try to access ZoneScape and connect via WiFi to the module and use the default key "12345678"</p> <ul style="list-style-type: none"><li>• After <b>Applying factory defaults</b>, please make sure that you have edited and applied the settings written on page 5 of this Manual</li></ul>
I have reinstalled the ZoneScape App and I cannot see the schedules that I have previously configured.	<ul style="list-style-type: none"><li>• The current implementation saves the schedules both in ZoneScape App database and also saves the schedule in the Actual unit, however there is no read schedules feature implemented currently that will read the existing schedules set in ZoneScape.</li></ul>