



A DIVISION OF ROLLEASE ACMEDA

Pulse 2 Hub | Set up Instructions for Android

The Pulse 2 connects to home networks to unlock the luxury of automated shade control. Experience customization with scene and timer options as well as voice control via Google Assistant, Amazon Alexa

THE APP ALLOWS FOR:

1. Individual and group control – Group Automate shades by room and conveniently control them accordingly.
2. Remote connectivity - Control shades remotely, whether home or away on a local network or an internet connection.
3. Scene control - Personalize shade control and organize how your shades operate by specific daily events.
4. Timer functionality - Set and forget. Lower, raise and activate shade scenes automatically at the optimal time.
5. Sunrise and Sunset - Utilizing time zone and location, the Pulse 2 can automatically raise or lower Automate shades according to the position of the sun.
6. Compatible IoT Integrations:
 - Amazon Alexa
 - Google Home
 - IFTTT
 - Smart Things
 - Apple HomeKit (For iOS Users)

GETTING STARTED:

In order to experience automated shade control through the Automate Pulse 2 app, you will need to have:

- Downloaded the free app Automate Pulse 2 App via the Google Play Store also available for Android Tablets.
- Purchased one or more Hub's depending on the size of the area you would like to cover.
- Familiarized yourself with the app navigation guide below.
- Created a Location then pair hub to that location. Our step by step guide will explain in more detail.

WI-FI HUB TECHNICAL SPECIFICATIONS:

- Radio Frequency range: ~60 feet (no obstructions)
- Radio Frequency: 433 MHz
- Wi-Fi 2.4 GHz or Ethernet Connectivity (CAT 5)
- Power: 5V DC
- For Indoor Use Only

BEST PRACTICES FOR PAIRING THE HUB WITH YOUR WI-FI NETWORK:

- Only pair your hub via 2.4GHZ Wi-Fi (Lan Pairing is not supported) Do not connect ethernet to the hub.
- The Hub must be within signal range of both the automated shades and 2.4GHZ Wi-Fi.
- Ensure 5Ghz are disabled on your Wi-Fi router or disconnected from your mobile device.
- Check your phone and confirm if the Home App has been installed.
- Environments with multiple WAPs (wireless access points) may need all but the main router temporarily disabled.
- Security settings on your router and on phone may need to be temporarily disabled.
- Place the Hub in a horizontal position. (avoid metal enclosures / ceiling or any other locations that may affect the range.
- Before starting the Hub installation, make sure that all your shades are functional and charged. You can test the shade using a remote control or pressing a "P1" Button on the motor head.
- In case of range issues, it is recommended you deploy the antenna or reposition the hub in your installation.
- Add additional repeaters if is required (Only two per Hub).

CAPABILITIES:

- Motors per Hub: 30
- Locations per account: 5
- Hub's per location: 5
- Rooms per Location: 30 per Hub
- Scenes per Hub: 20 (100 per location)
- Timers per Hub: 20 (100 per location)

WHAT'S IN THE BOX?



A.
Automate Pulse 2
Hub



B.
USB Power
Supply



C.
32" (80cm) USB
Power Cord



D.
Ethernet cable

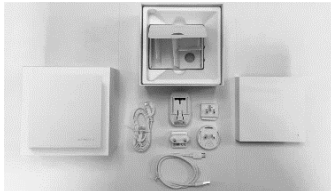


E.
Quick Start Guide

UNPACKING THE HUB 2.0:



1. Unpack the Pulse 2.



2. Check the Box Contents.



3. Plug the USB Cord
into the Power Supply



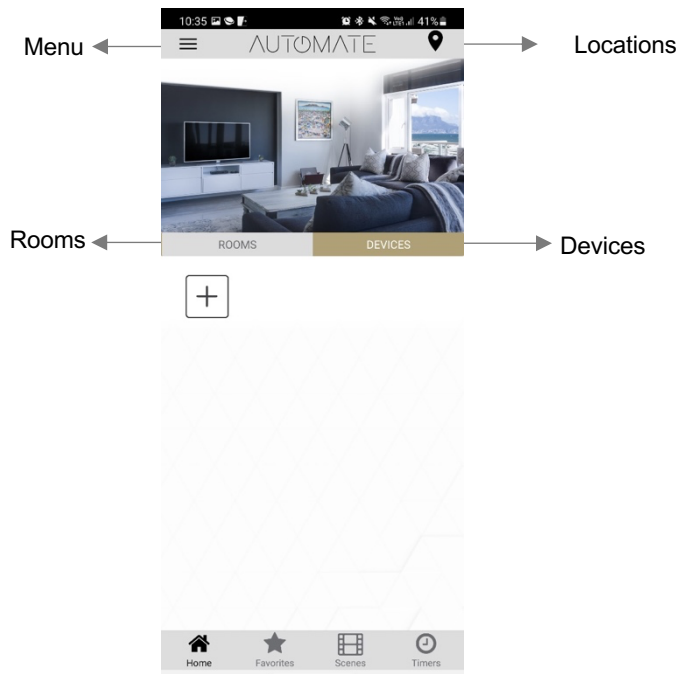
4. Connect the Micro
USB end into the back
of the Pulse 2



5. Plug the Power Supply
into the outlet and place
the Hub in a central
location in your home.

APP NAVIGATION:

Home Page



- Home:** Shows the main control screen with rooms and devices tabs
- Favorites:** Allows you to create a list of your favorite Devices or Scenes
- Scenes:** Show a list of scenes created
- Timers:** Show a list of scene timers
- App Version:** 2.5

STEP 1 – Open the App

Open the Automate Pulse 2 mobile App.

STEP 2 – Sign Up

If required, create a new account. Select Sign Up on the Right tab of the screen.

STEP 3 – Sign Up

Creating an account will require an email address and password

STEP 4 – Sign In

If you already have an account Log in with your account information.

QUICK START SETUP:
 NOTE: You cannot pair the hub via the Ethernet cable connection, Wi-Fi only via a 2.4GHZ connection.
 Refer to troubleshooting for more information.

STEP 1 – Quick Start

Please power up the Hub then follow the Quick Start guide. Select "YES".

STEP 2 – Add Location

You can create a name for your location or select "Next" to use the Default "My Home".

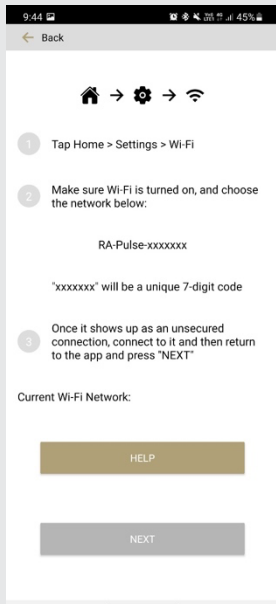
STEP 3 – Time Zone

Scroll Up and down to select the Time Zone for the Hub

STEP 4 – Day light Savings

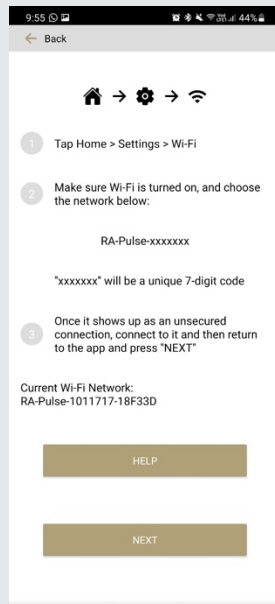
If you want to use Daylight Savings enable/disable it and press Next

STEP 5 – Connect to Hub



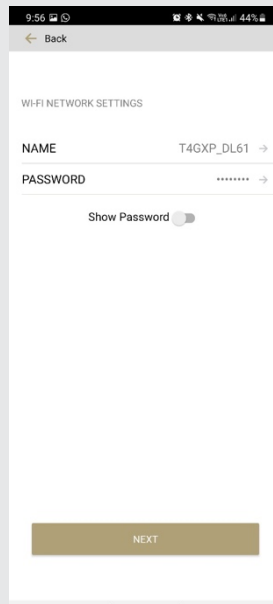
Follow the on screen instruction and connect to hub in your Wifi List

STEP 6 – Connect to Hub



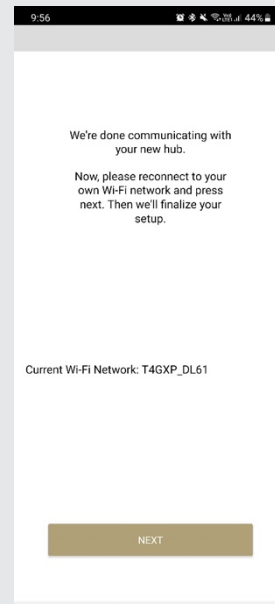
Once connected to the hub return to the Automate app Ensure you're connected to RA-Pulse-XXXXX. Press next

STEP 7 – Enter Credentials



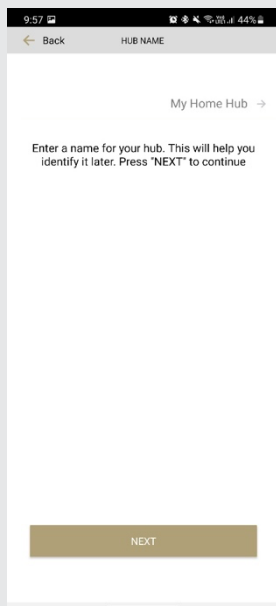
Enter the Wifi Credentials and Press Next
(Ensure 2.4Hz Networks Only)

STEP 8 – Confirm Connection



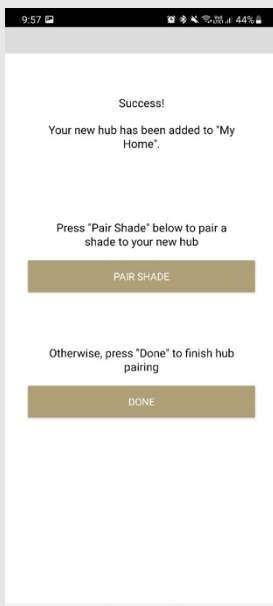
Wait for the hub to be connected to the Wifi and Select Next.

STEP 9 – Edit Hub Name



Edit Hub Name (location) if required

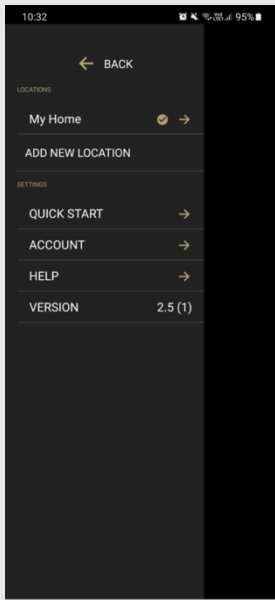
STEP 10 – Complete Setup



Setup is now Complete. Select done or proceed to Pair your first shade

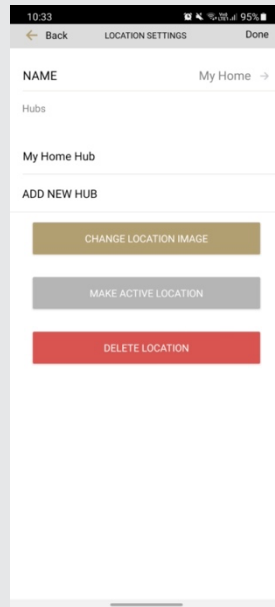
ADDING ADDITIONAL HUB TO EXSITING LOCATION:

STEP 1 - Configure a Hub



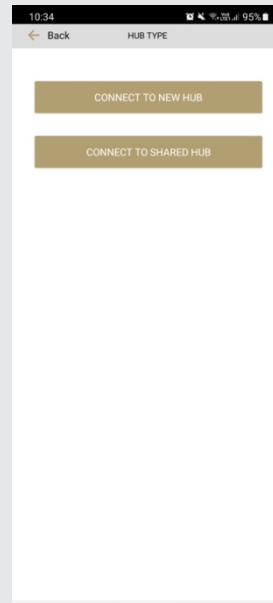
Select menu then the desired location to add a new hub to.

STEP 2 – Add Hub



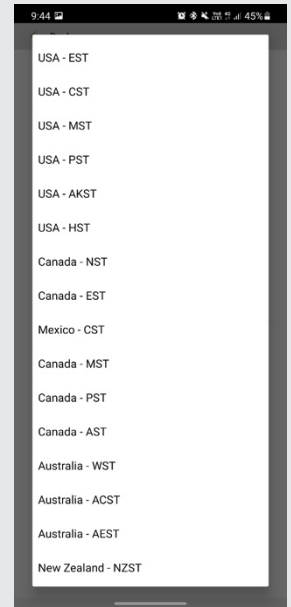
Click on "ADD NEW HUB" to start the process to setting up your HUB on the App.

STEP 3 - New Hub



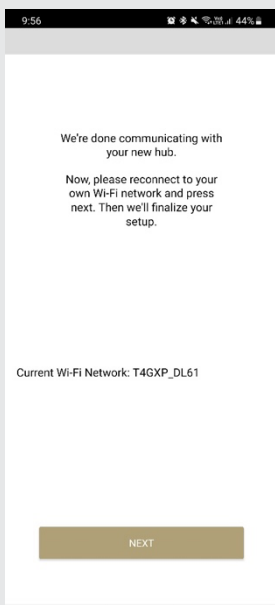
Select "connect to new Hub"

STEP 4 – Select Time Zone



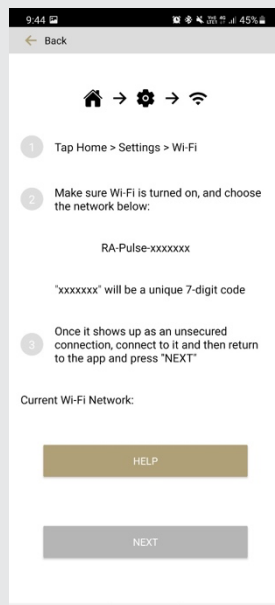
Scroll Up and down to select the Time Zone for the Hub

STEP 5 – Day Light Savings



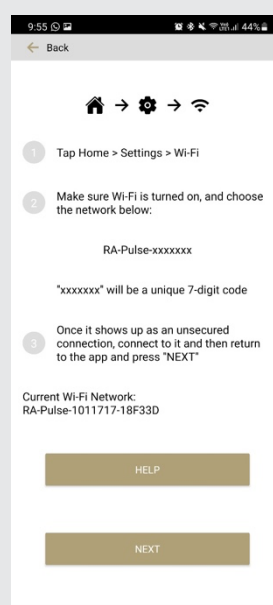
If you want to use Daylight Savings enable/disable it and press Next

STEP 6 – Connect to Hub



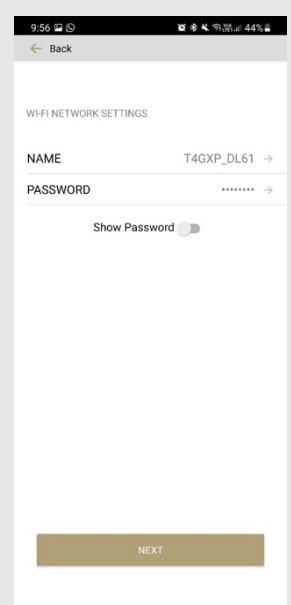
Follow the on screen instruction and connect to hub in your Wifi List

STEP 7 – Connect to Hub



Select the Location where the Hub will be placed. Select Continue

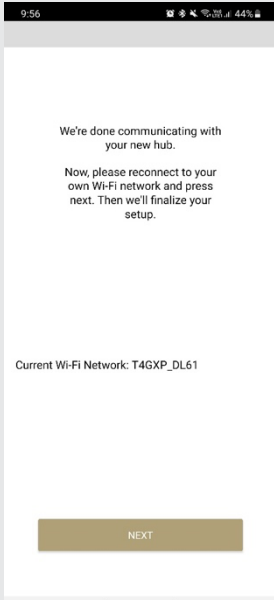
STEP 8 – Enter Credentials



Enter the Wifi Credentials and Press Next

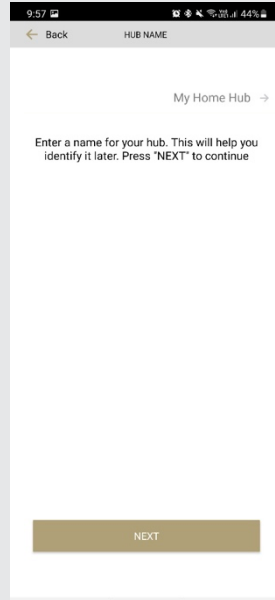
(Ensure 2.4Hz Networks Only)

STEP 9 – Confirm Connection



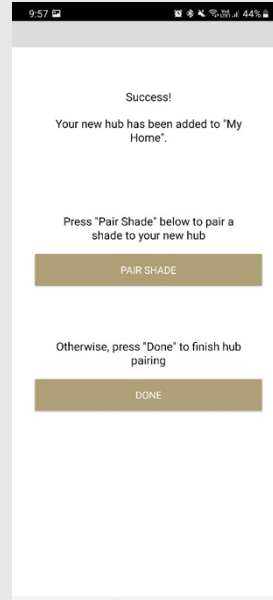
Wait for the hub to be connected to the Wifi and Select Next.

STEP 9 – Edit Hub Name



Edit Hub Name (location) if required

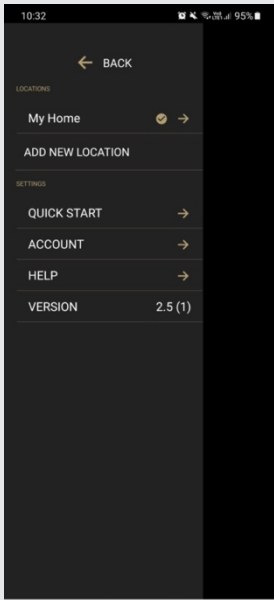
STEP 10 – Setup Complete



Setup is now Complete. Select done or proceed to Pair your first shade

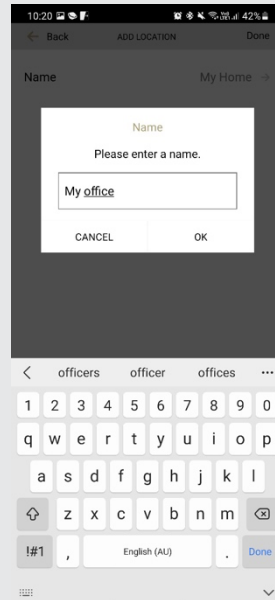
CREATING A LOCATION:

STEP 1 – Add Location



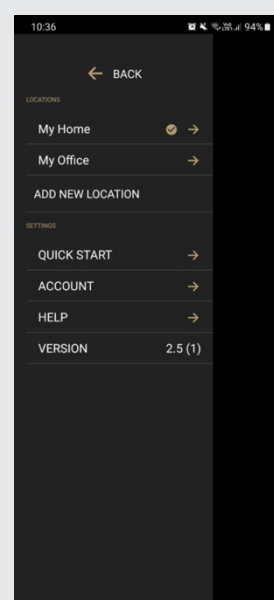
Open the App from the home screen and select the menu button, click "ADD NEW LOCATION".

STEP 2 – Add Location



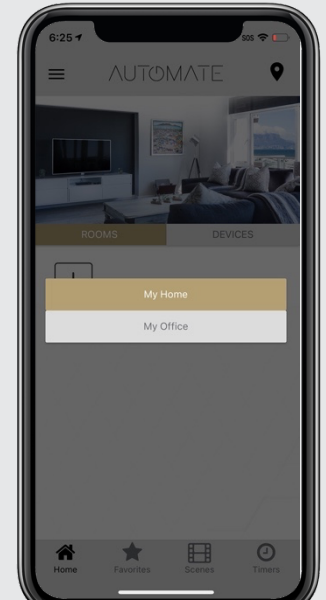
Select the Default My Home Name

STEP 3 – Toggle



Note new location select the new location as required

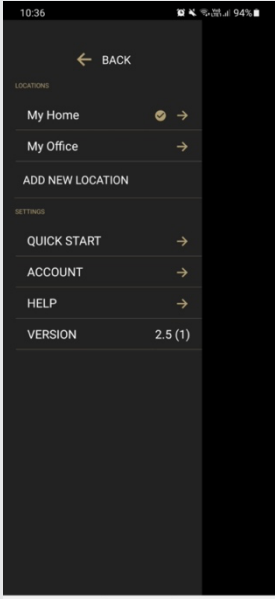
STEP 4 – Toggle



Select the Location Icon in the top right to toggle between locations

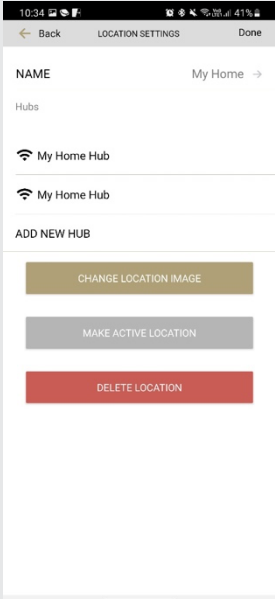
ADDING CUSTOM HOME IMAGE:

STEP 1- Custom Home Image



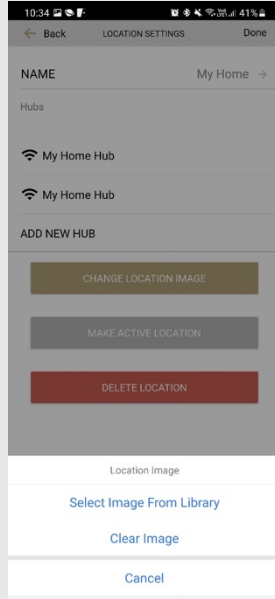
From the main menu select the location you wish to change the home image for.

STEP 2- Custom Home Image



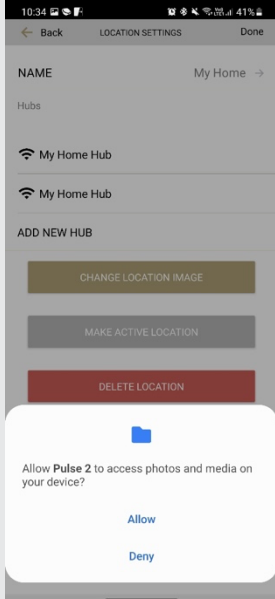
Select "Change Location Image".

STEP 3- Custom Home Image



Choose to "Select Image from Library"

STEP 4- Custom Home Image

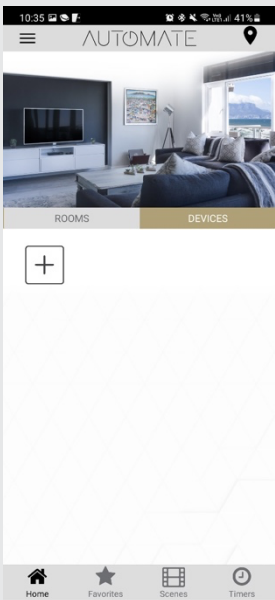


You will need to Allow Pulse 2 access to import your image

HOW TO PAIR A MOTOR TO THE APP:

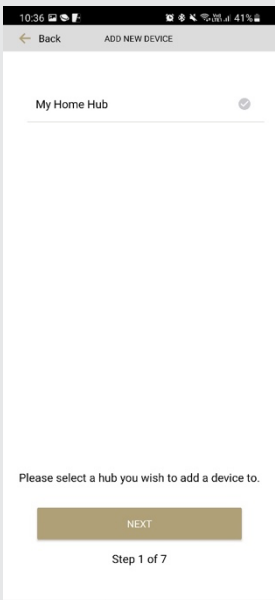
During the setup, the hub may need to be moved room to room during the pairing process. We recommend setting up your motors with a remote prior to syncing with the App.

STEP 1 – Pair a motor



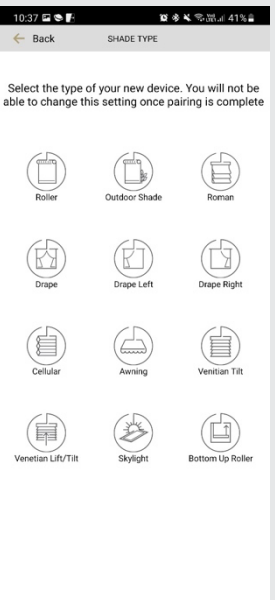
On the home screen select 'DEVICES' then select the 'Plus' icon to add a new shade.

STEP 2 – Pair a motor



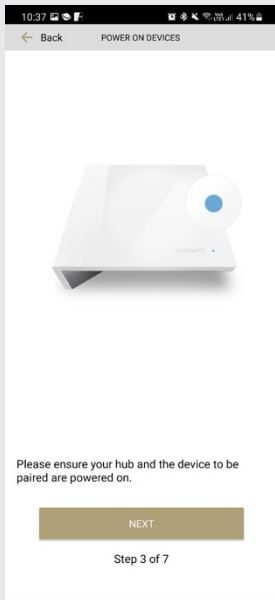
From the list select the HUB you wish to pair the motor too.

STEP 3 – Pair a motor



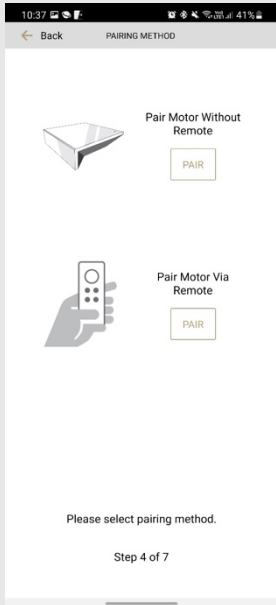
Select which device type best represents your shade.. (NOTE this can't be changed later)

STEP 4 – Pair a motor



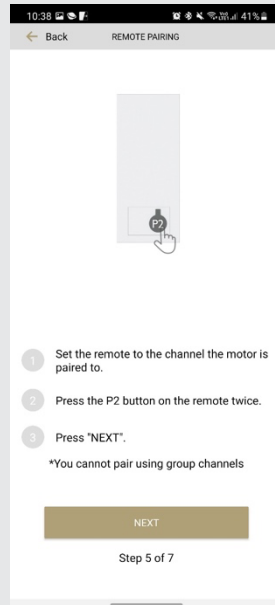
Make sure the shade device is plugged in or ready to be paired and select 'NEXT'

STEP 5 – Pair a motor



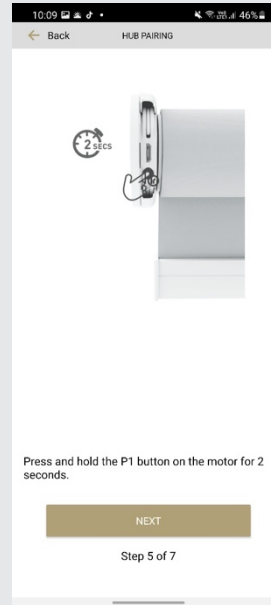
Choose your pairing method: 'PAIR USING A REMOTE' or 'PAIR WITHOUT REMOTE'

STEP 6 – Pair with Remote



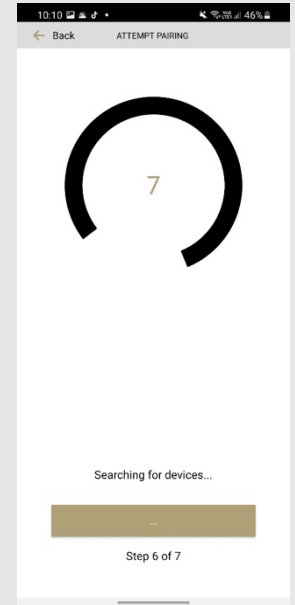
Make sure the remote is tuned to the shade's individual channel (not Ch 0). Remove the remote battery cover and press the upper left P2 button Twice, then "Next".

STEP 7 – Pair without Remote



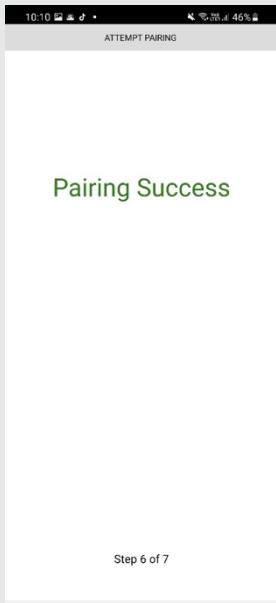
Press and hold the P1 button on the motor head ~2 seconds. The motor will jog up and down once and you will hear one audible beep. Press 'PAIR' on the app screen.

STEP 8 – Pair a motor



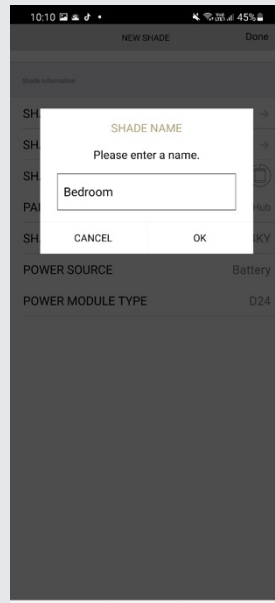
Wait as the app searches for the new device.

STEP 9 – Pair a motor



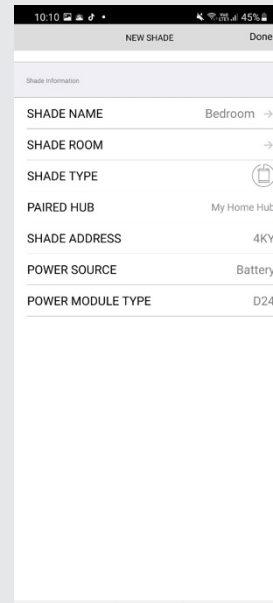
If the pairing process was successful, Press 'NEXT' to finalize pairing. If pairing fails, try the process again.

STEP 10 – Shade Details



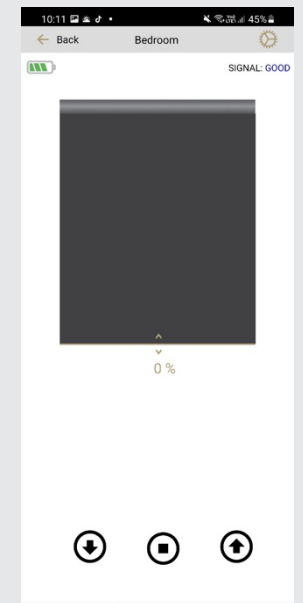
Input a Device Name to customize your shade name. Press "OK"

STEP 11 – Pair a motor



The "New Device" data will be displayed Press done to Test this Shade

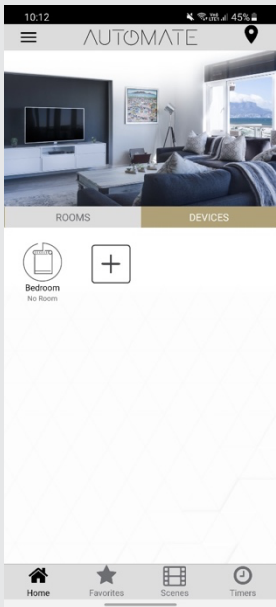
STEP 12 – Shade Ready



Shade that was paired will open ready for testing.

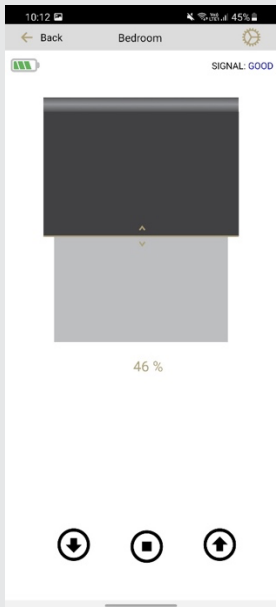
HOW TO OPERATE SHADES:

STEP 1 – Operate Shade




Select the device that you wish to operate.

STEP 2 - Open a shade



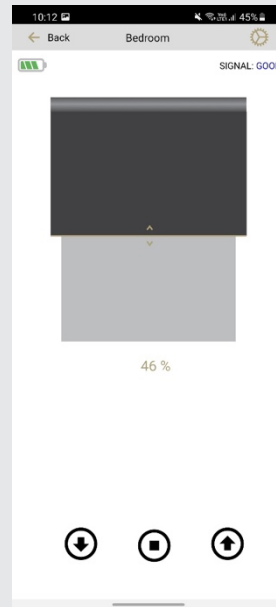
Close or open the shade by pressing the "Arrows" or Stop icon or scrolling the Gold line to the percentage required.

STEP 3 - Close a shade



From the device window if you select "Settings" icon you can see all the motors device settings and the device health information.

Battery Health

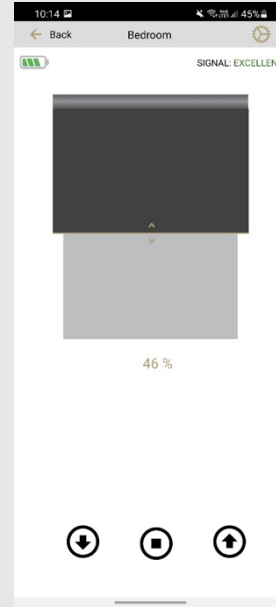


Top left corner, there is a battery icon – This icon has 4 levels. Full, Medium, low empty.



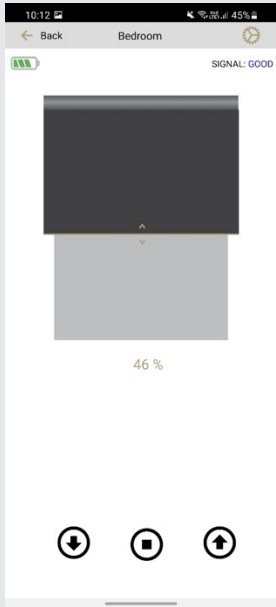
DEVICE SIGNAL / HEALTH INFORMATION:

SIGNAL EXCELLENT



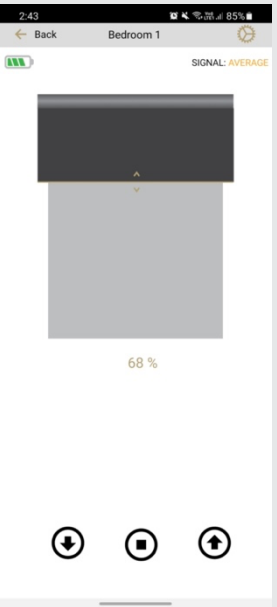
Shades with **EXCELLENT** Status Should perform as Normal without any issues

SIGNAL GOOD



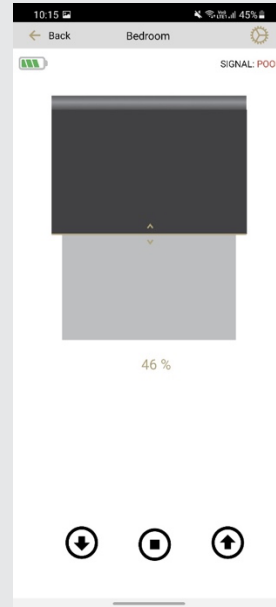
Shades with **GOOD** Status Should perform as Normal without any issues

SIGNAL AVERAGE



Shades with **AVERAGE** Status may not perform as they should, if shades are unresponsive this could be the issue

SIGNAL POOR

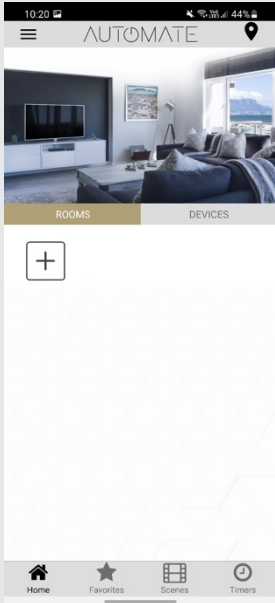


Shades with **POOR** Status will be problematic and its required this is resolved.

For More information how to resolve the Signal Strength Refer to Help Section

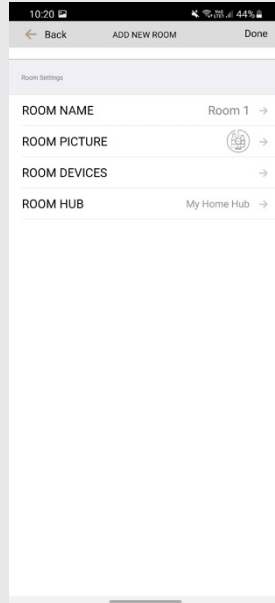
HOW TO CREATE A ROOM:

STEP 1 – Create a Room



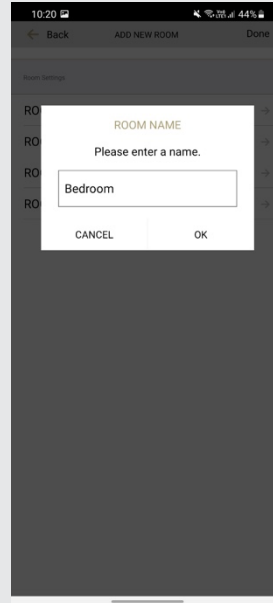
Once the Shade is paired to the App. Click 'ROOMS' tab. Select the "Plus" icon to add a new room.

STEP 2 – Create a Room



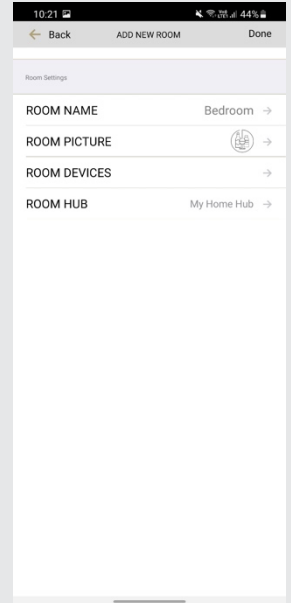
Select the 'ROOM NAME' to enter the desired room name.

STEP 3 – Create a Room



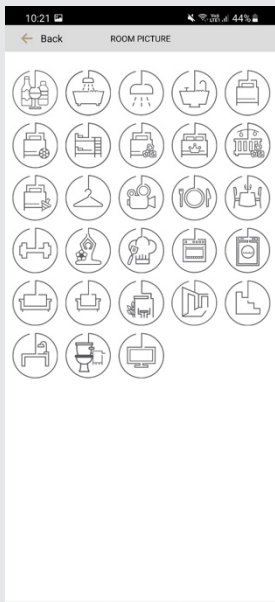
Enter the Room Name and click "OK".

STEP 4 – Create a Room



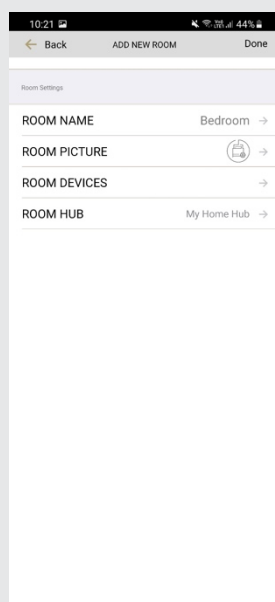
Select 'ROOM PICTURE' to select an icon to represent the room.

STEP 5 – Create a Room



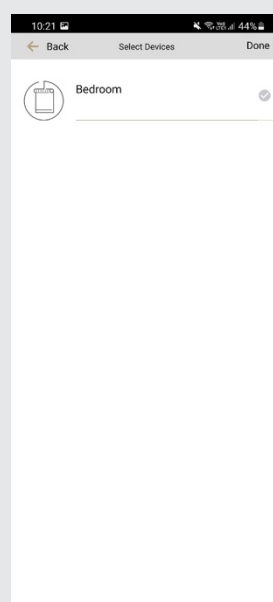
Select the appropriate icon for the Room.

STEP 6 -Add Shades to a Room



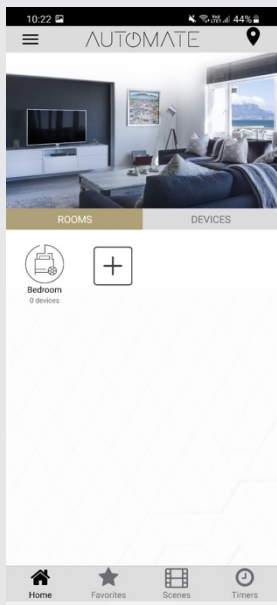
Select 'ROOM DEVICES' to add a new device to the room.

STEP 7 -Add Shades to a Room



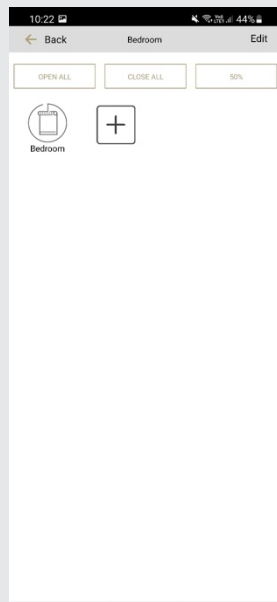
Select the devices you wish to be added to the room.

STEP 9 -Add Shades to a Room



Wait for the App to conclude the process of room set up.

STEP 10 – Operate a Room

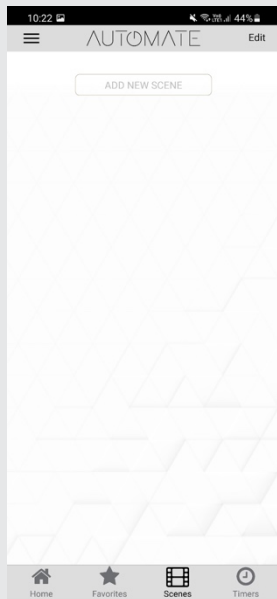


Select the Room to operate All shades that have been added to the room at the same time. Open Close or Custom Percentage

HOW TO CREATE A SCENE:

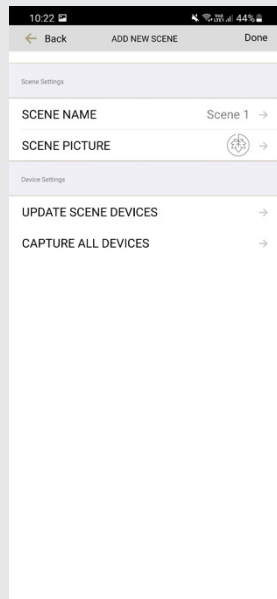
You can create scenes to set a treatment or group of treatments to specific heights or capture all the devices that you previously moved to the desired position even from the App or using a remote.

STEP 1 – Create a Scene



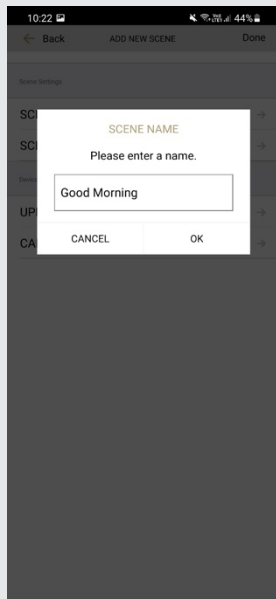
Select Scenes then, 'Add New Scene' to begin programming your desired scene.

STEP 2 – Create a Scene



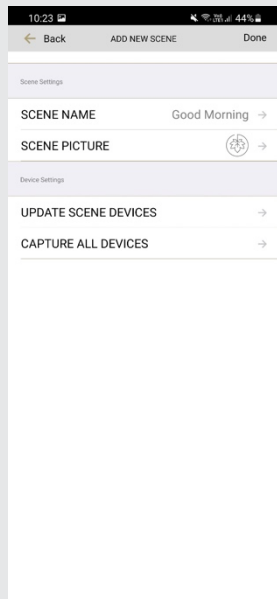
Select the 'SCENE NAME' to customize the name of your scene.

STEP 3 – Create a Scene



Input your scene name.

STEP 4 – Create a Scene



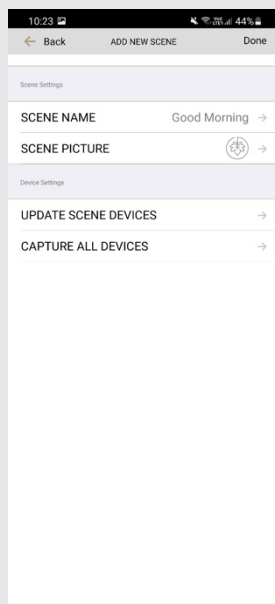
Select 'SCENE PICTURE' to customize the icon for your scene.

STEP 5 – Create a Scene



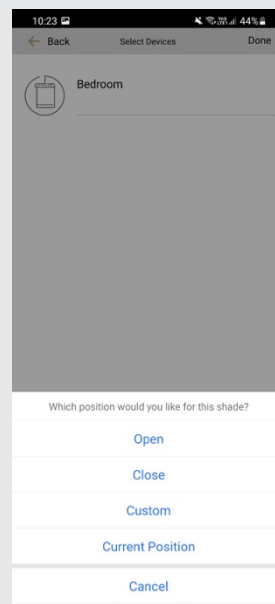
Select the icon that represents your scene.

STEP 6 – Manual Scene Creation



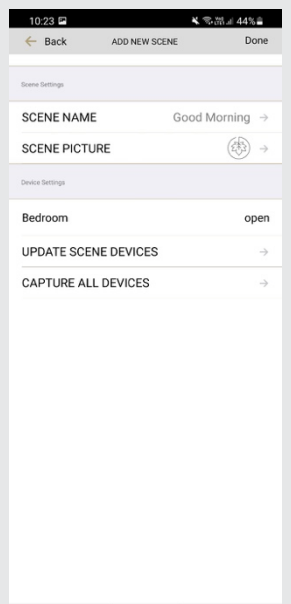
Or Select 'UPDATE SCENE DEVICES' to add devices into the Scene.

STEP 7 – Manual Scene Creation



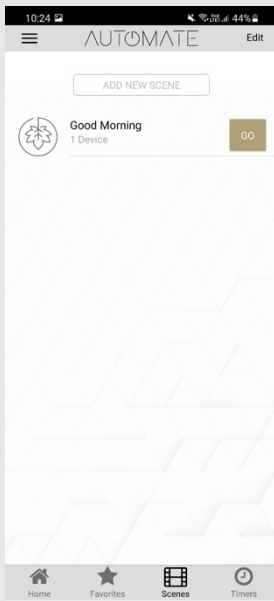
Choose custom heights (by %) or set open/close for all selected window treatments.

STEP 8– Manual Scene Creation



Repeat for all shade in that scene. Set the shade height percentage if necessary. Select 'DONE' to create your scene.

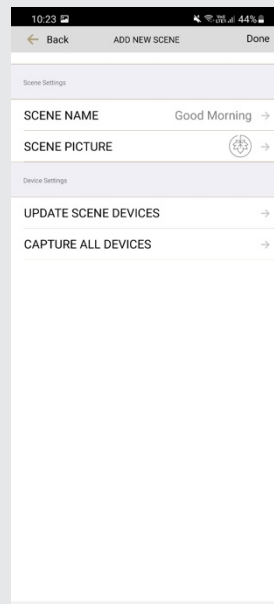
STEP 9– Manual Scene Creation



Your Scene can now be activated by pressing Go or Link that Scene to a Timer

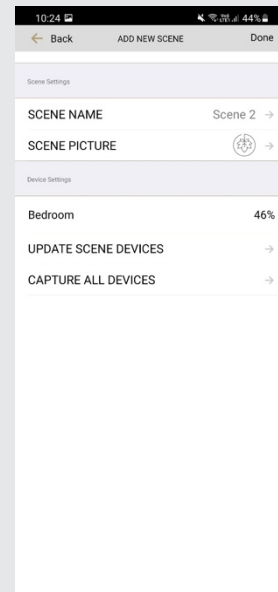
Start from Step 6

STEP 10 – Automatic Scene



Automatic scene creation Set all devices with the remote to desired position. Then use the "Capture All Devices" button to create a scene of all current shades are positions. Select "Done".

STEP 11 – Save Scene

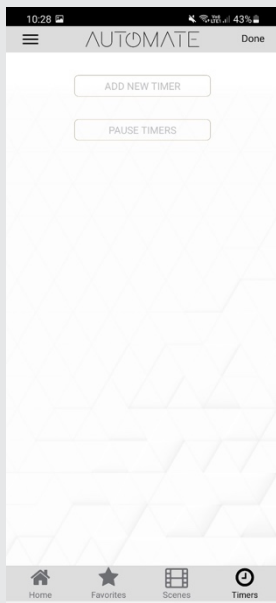


Note the Current positions of the shades and select Done to save that as a scene

PROGRAMMING TIMERS:

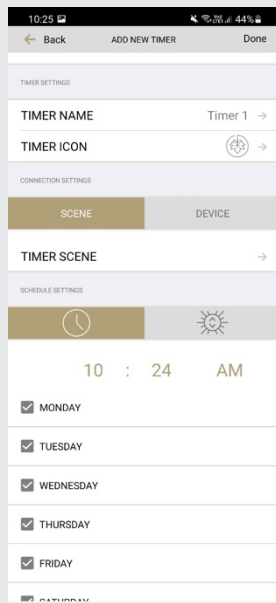
You can program timers to trigger the specific operation of your shades and scenes at your desired times throughout the day.

STEP 1 – Create a Timer



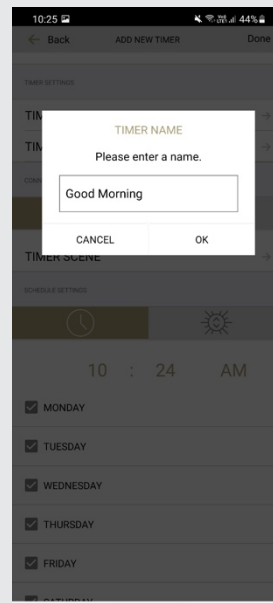
Select 'TIMERS' then, 'ADD NEW TIMER' to program your timer.

STEP 2 – Create a Timer



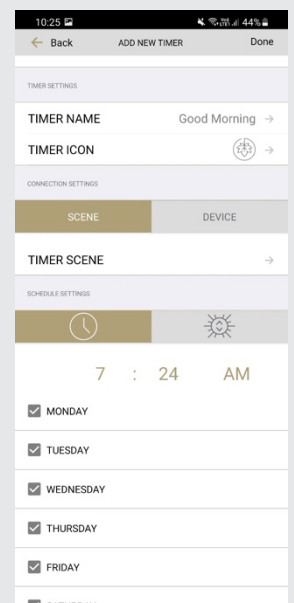
Select 'TIMER NAME'.

STEP 3 – Create a Timer



Input your desired timer name.

STEP 4 – Create a Timer



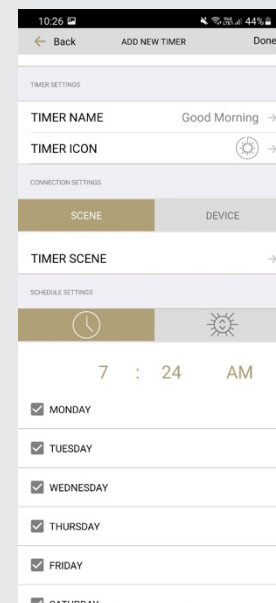
Select 'TIMER ICON' to add an icon for your timer.

STEP 5 – Create a Timer



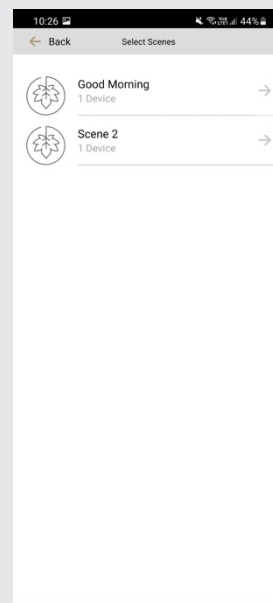
Select the appropriate icon for the Timer.

STEP 6 – Create a Timer



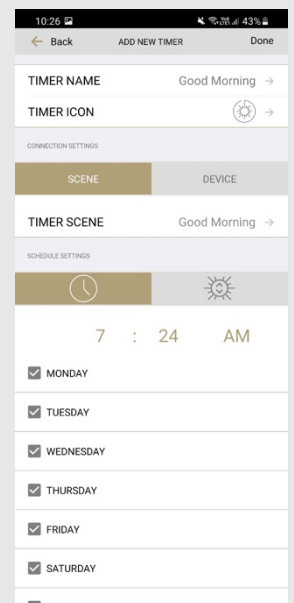
Select the 'TIMER SCENE' to choose the scene you wish the timer to activate.

STEP 7 – Create a Timer



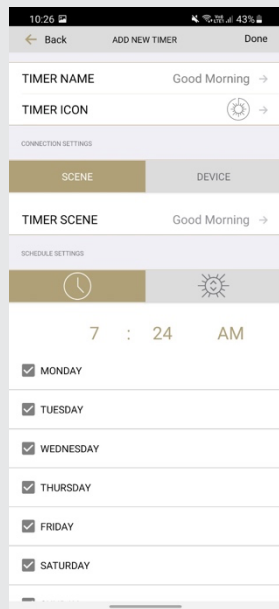
In the Scene list, add the scenes you wish to operate.

STEP 8 – Create a Timer



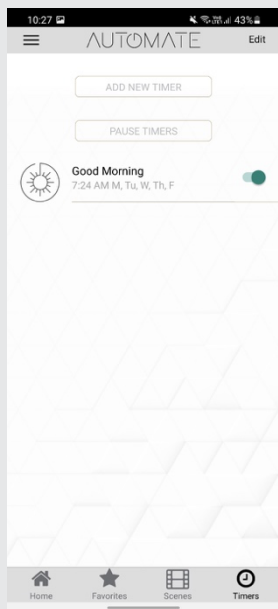
Set the time you wish the timer to trigger shade control.

STEP 9 – Create a Timer



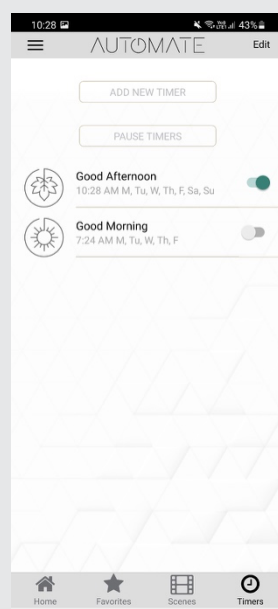
Select the days you wish the timer to operate.

STEP 10 – Create a Timer



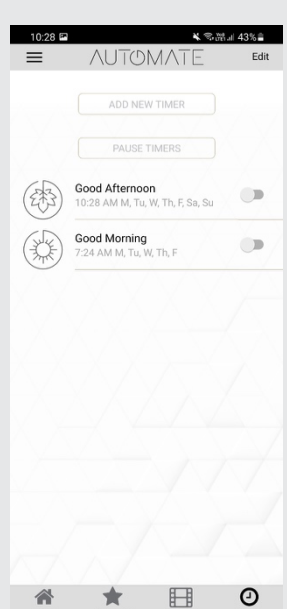
Your timer has now been created and switched on

STEP 11 – Enable /Disable Timer



Your timers can be manually enabled and disabled by toggling the switch for each timer.

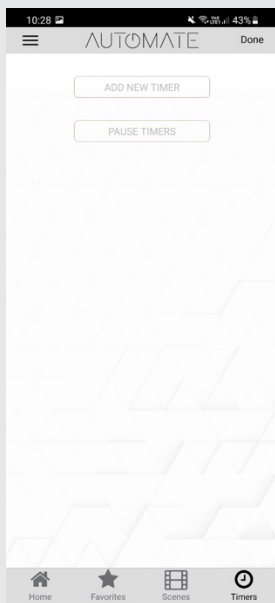
STEP 12 – Pause/Un-Pause Timer



Your timers can be paused and un-paused to switch all timers on and off at the same time.

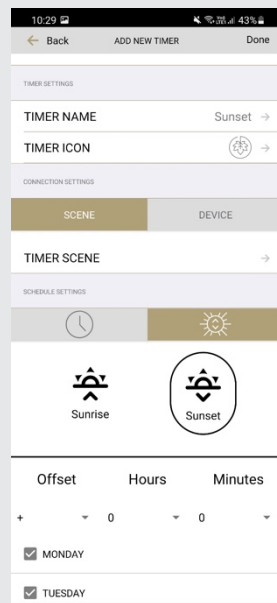
SUNSET & SUNRISE TIMERS:

STEP 1 – Create a Timer



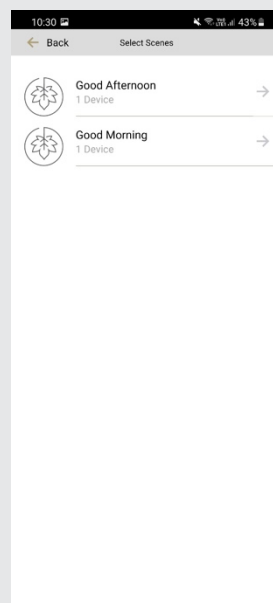
Select "TIMERS" then "ADD NEW TIMER" to program your timer

STEP 2 – Create a Timer



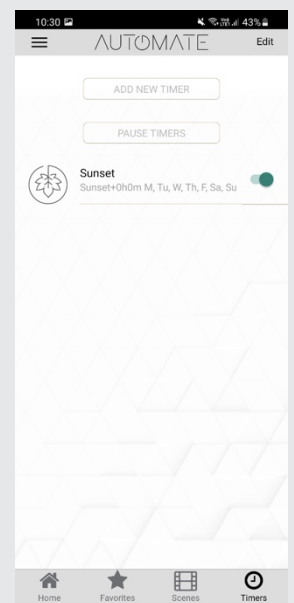
Name Timer as required. Select Sunset/Sunrise Option, choose your icon

STEP 3 – Create a Timer



Select the Scene you would like to activate at Sunset/Sunrise. Select Done

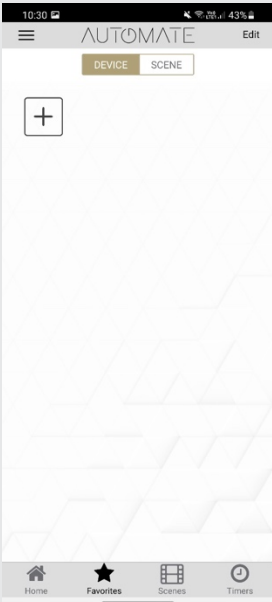
STEP 4 – Create a Timer



Your Sunset timer has been created


HOW TO CREATE FAVORITE:

STEP 1 – Create a Favorite Device




Select the "Plus" icon to add a favorite device to your "Favorite".

STEP 2 – Edit a Favorite Device




Select "EDIT" in the upper right corner to remove the favorite device from your screen.

STEP 3 – Create a Favorite Scene



Select the "Plus" icon to add a favorite scene to your "Favorite".

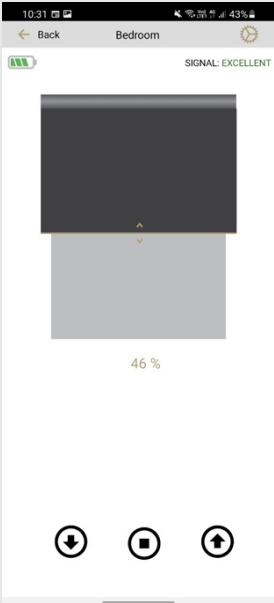
STEP 4 – Create a Favorite Scene



Select "EDIT" in the upper right corner to remove the favorite scenes from your screen.


HOW TO ADJUST LIMITS:

STEP 1 – Adjust Limits



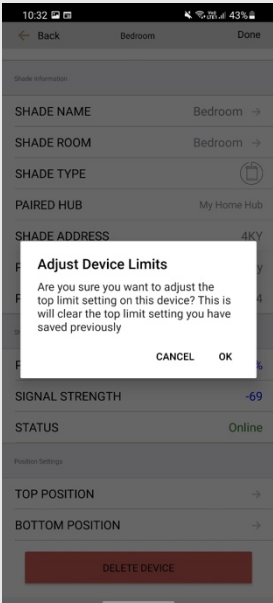
Select Setting icon in the Top Right to open the shade settings Page

STEP 2 – Adjust Limits



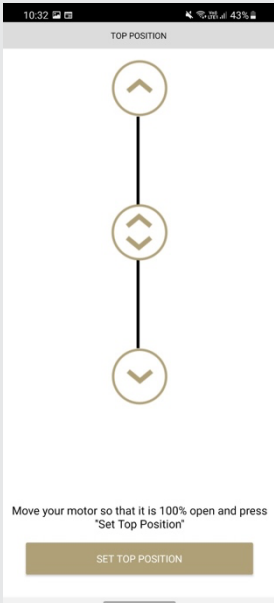
Select Top or Bottom Position of the Device as desired

STEP 3 – Setting Limits



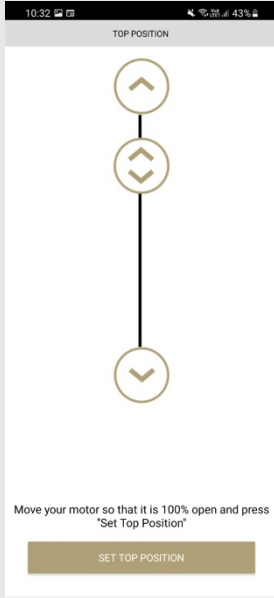
Ensure you are connected to the same Wifi that the Hub is paired to

STEP 4 – Setting Limits



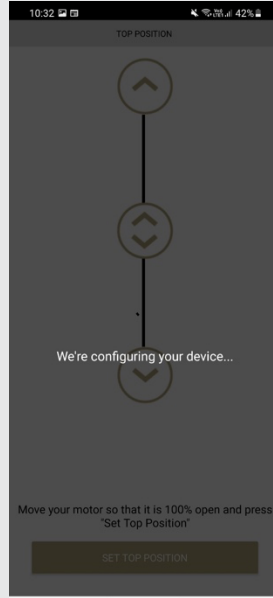
Adjusting the Top Limit Press the arrows up or down to set the desired position

STEP 5 – Setting Limits



Once the desired limit has been set select the "SET TOP POSIOTION"

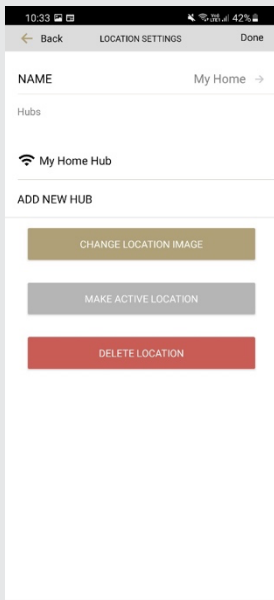
STEP 6 – Setting Limits



The app will configure the new top position. Repeat for the Bottom Limit if required

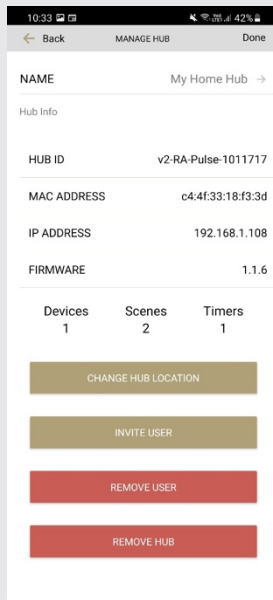
HOW TO ADJUST LIMITS:

STEP 1 – Add user to Hub



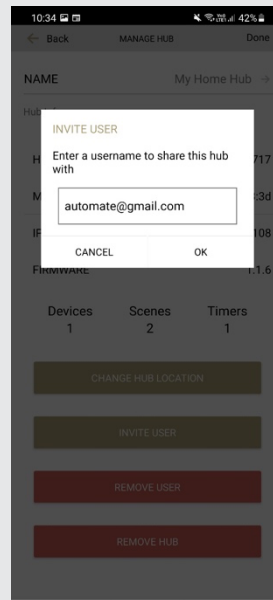
Select the Hub that you want to Share with another User (example "MY HOME HUB")

STEP 2 – Add user to Hub



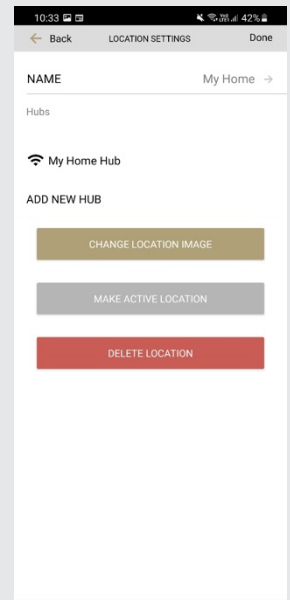
Select "INVITE USER"

STEP 3 – Add User to Hub



Type an active Pulse Account that you want to share this Hub with (case sensitive)

STEP 1 – Join Shared Hub




The User can now select "ADD SHARED HUB"

Step for the Primary Account Holder / Hub Owner

Step for the User

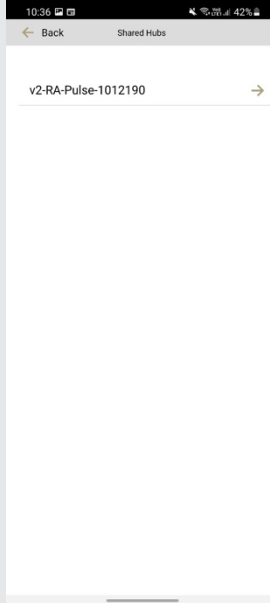
HOW TO SHARE THE HUB:

STEP 2 – Join a Shared Hub



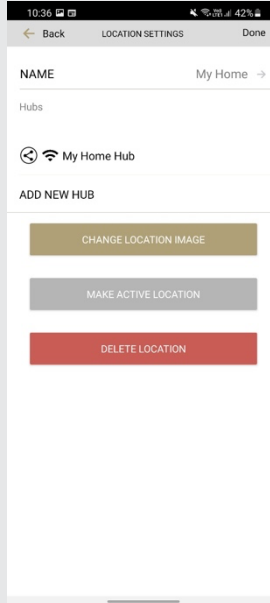
Select Connect to Shared Hub

STEP 2 – Join a Shared Hub



All the available shared Hub will now appear on a list. Select the Hub that you want to add





STEP 2 – Join a Shared Hub








The Shared Hub will be added (note shared hubs will have a shared icon)

HUB LED BEHAVIOUR

The light on your hub indicates a certain status. Below table indicates the colour of LED and what it means.

COLOUR	RESPONSE	STATUS
	Blue LED blinks one time a second:	Ready for Pairing
	Violet LED short blinks five times a second:	Firmware Updating
	Blue and Red LED blinks for 3-5 Seconds	Pulse received configuration via the app while pairing
	Blue LED is Solid	Connected to Internet (Paired)

	Orange LED 1 times per second 10 times	Factory Reset Button Pressed (Paperclip Needed)
	-Red LED short blinks four times a second: (On for 100ms and off for 150ms).	Network Disconnected ISP down or Bumped from Network
	Red LED is solid	Hub not connected to Wifi (check within Range or if Bumped off Wifi)
	Green LED Solid (On for 100ms and off 100ms)	While Pressing P Button on Hub Clear Cache and Ready for Pairing
	LED is Off	Hub is not connected to Power

UNDERSTANDING WIRELESS SIGNAL STRENGTH

If you have seen a Shade Offline pop-up message in the app, thinking about how you can go about resolving this. One common cause may be that the shade is simply out of range, in relation to the hub.




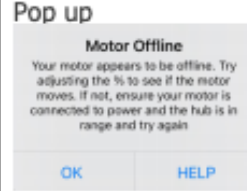


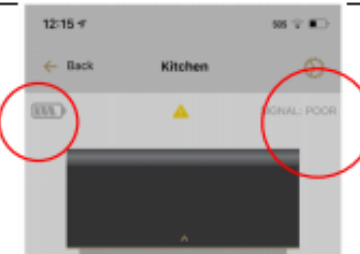

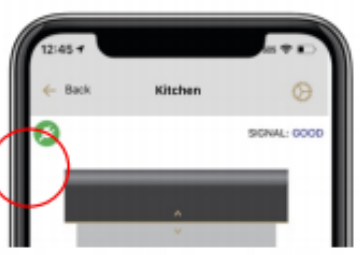

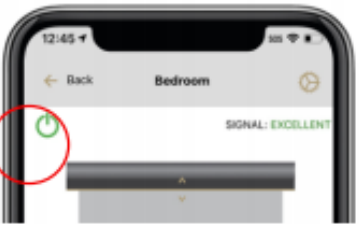

Within our advanced motors, we can record the Received Signal Strength. When the shade communicates with the hub it updates the last known Signal Strength (the raw value will be displayed in the settings menu for that device e.g. -76). If the Signal Strength value is between -50 to -81 the signal strength is excellent or good.

-60dB means it is in a good environment that has little interference while -95db means the signal needs is weak due to distance or interference.

We have made it easy for you to understand by ensuring the signal strength of the shade is shown in the device screen represented by one of these four categories; Excellent, Good, Average or Poor.

This indicator will also change color based on the table below. These values will fluctuate slightly as the hub or motor's environment degrades or gets better. If the signal strength is Average and -90 you may find it can worsen depending on the environment.

EXCELLENT	GOOD	AVERAGE	POOR
Between 30 and -69	Between -69 and -81	Between -82 and -90	Less than -91
Operation of shades can be as expected	Operation of shades can be as expected	Shades close to the -90 value may be intermittent in some cases	Shades higher than -91 will problematic

App Screen	Icon	MEANING	STATUS
		Battery Percentage Icon	3 Levels of Battery Full 100-76% Medium 75-38% Low 37-16% Empty 0-10% (Motor starts beeping)
	<p>Pop up</p> 	Motor Offline Pop up reminder	The motor is offline, and the control device is not on the same network.
		Motor Offline	The motor is offline
		Greyed out Icons	Signal or Battery Icons being greyed out when the motor is offline, it displays the last known values but the motor is offline
		AC Motor Type Icon	AC Powered Motor connected to continuous power
		DC Motor Type Icon	DC Powered Motor connected to continuous power Full 100-70% Medium 69-11% Low 10% or less <i>Note varying voltages may be displayed as above</i>

Troubleshooting Information

Not all Networks are compatible with the Pulse 2 Hub.

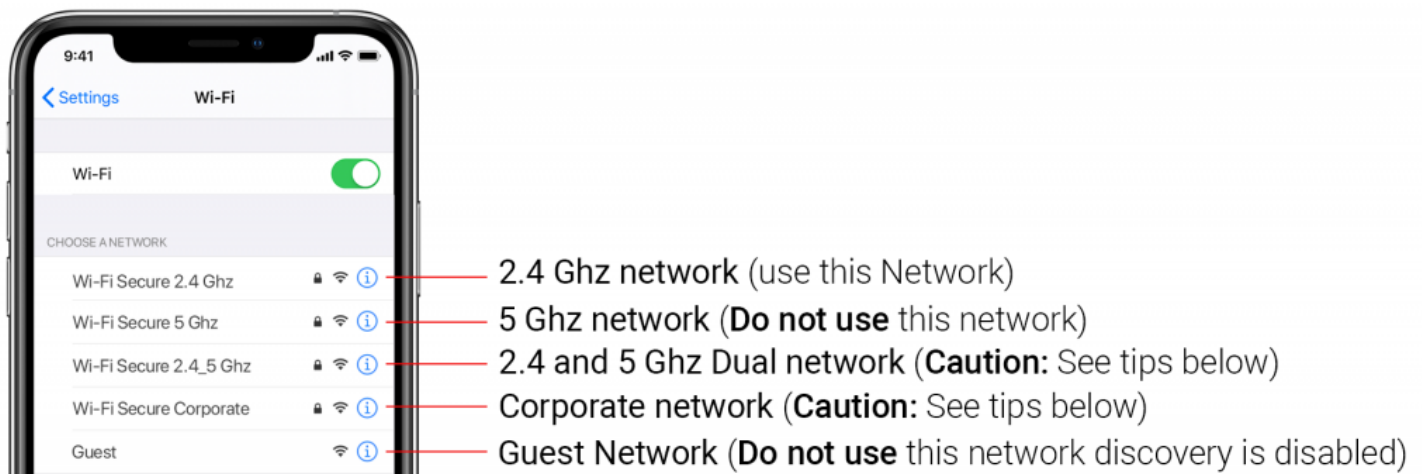
INCOMPATIBLE NETWORKS – WIRED

Do not try pair the hub via the Ethernet Cable. Ethernet can be used to operate it day to day but not pairing.

INCOMPATIBLE NETWORKS – WIRELESS

- 2.4 GHz Networks only!
- The Pulse 2 Hub must be connected to a 2.4 GHz network.
- The Pulse 2 Hub CANNOT connect to a 5 GHz Network

THERE ARE 5 COMMON WIFI SETUPS NOTED BELOW:



5 GHz NETWORKS

The Automate Pulse2 Hub is not compatible with these networks. Turn OFF Autojoin to the 5 GHz network and 'Forget' that network. Connect to the 2.4 GHz network. (Only during the hub pairing process).

DUAL-BAND NETWORKS

A dual-band network means the 2.4 GHz network and 5GHz are combined into one. The phone will automatically switch between the 2.4 GHz and 5 GHz band. If the phone is connected to the 5 GHz band the hub pairing process will fail.

Resolution:

Option 1

You can temporarily disable the 5ghz band in the Modem or Router settings while pairing the hub. Your Internet Service provider can guide you through this process.

Option 2

If you move far enough away from your modem the phone should connect to the 2.4 GHz

band, allowing the pairing process to go through. This may not always work, so ensure you know the location of the router and move as far away as possible. If pairing failure persists, proceed with Option 1.

Option 3

Disable or your modem or router, create a hotspot with another device, name the hotspot and password identical to your dual-band network. Pair the hub to the hotspot. Now turn your modem back on and turn the hotspot off. This will allow you to connect to the Dual WiFi Network.



Current Wi-Fi Network



Temporary Hotspot

MULTIPLE ACCESS POINTS

In larger homes or corporate environments, pairing the hub while multiple access points are active can be troublesome.

- Resolution:
 - Option 1
Disable the access points and pair to the modem only, re-enable the access points after pairing.
 - Option 2
Disable or your modem or router, create a hotspot with another device, name the hotspot and password identical to your network. Pair the hub to the hotspot. Now turn your modem back on and turn the hotspot off. This will allow you to connect to your WiFi Network.

NETWORK SECURITY SETTINGS COULD BE INTERFERING WITH THE SETUP PROCESS.

Ensure you are NOT on the Guest network. Guest networks have discovery mode switch off and is troublesome

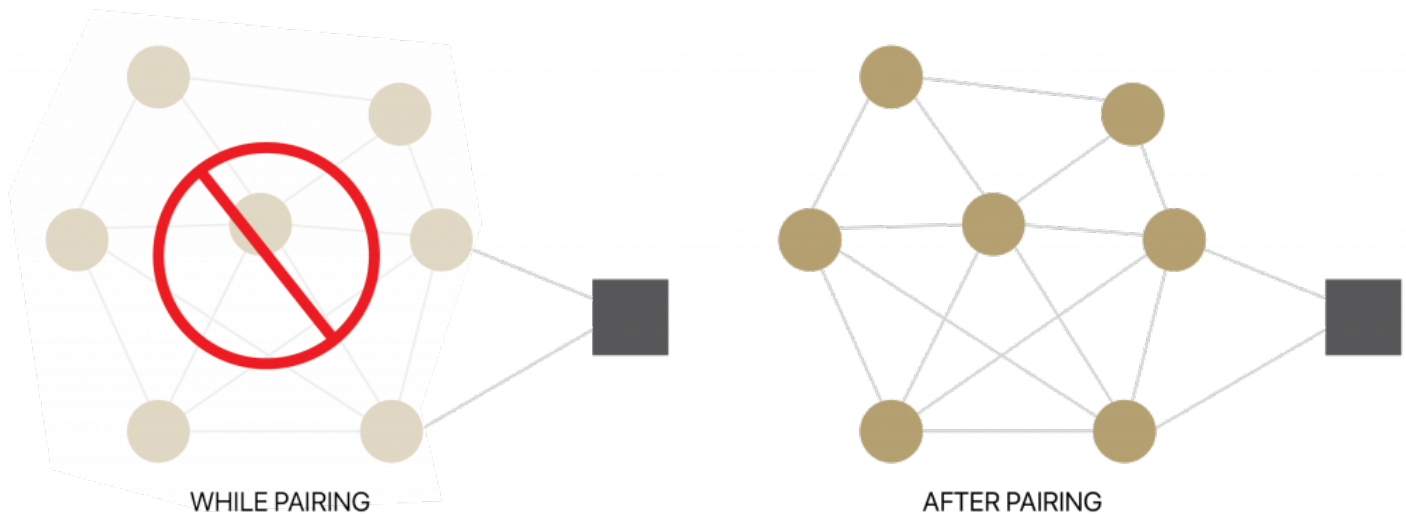
GUEST NETWORK.

Some companies or homes have network security settings more advanced than the typical homeowner. If you are setting up in this environment, please consult your network

administrator. Ensure you remove firewall during the pairing process or create a DHCP reservation. This is a permanent IP address assignment that is reserved. Using the Mac ID listed in under the Hub info, create a DHCP reservation to ensure that every time your hubs connects to your router, it will be given the same address.

SMART MESH NETWORKS

Mesh networks are becoming more common, which means you have a central router with Wireless Access Points (WAPs) around the home. Normally there are no issues, however on occasion it is required to deactivate all WAPs but the main router during the Pulse 2 pairing process.



For Mesh networks, you can often control the 2.4 GHz/5 GHz capabilities in the router app for your system and potentially disable access points if necessary. Ensure you find the manufactures instructions on how to do this, which will allow you to pair the hub. Then go ahead and return settings as normal

Common Mesh Systems:

1. Google Nest WiFi
2. Asus ZenWiFi AX (XT8)
3. Netgear Orbi
4. Netgear Orbi WiFi 6
5. Netgear Nighthawk MK63
6. Netgear Orbi AC1200
7. TP-Link Deco M5
8. Ubiquiti Amplifi HD
9. Linksys Velop

Shade Issues

UNDERSTANDING WIRELESS SIGNAL STRENGTH

This article will help you understand your signal strength and offer solutions on how to improve it.

If you have seen a pop-up message in the app, you may find yourself on this page, thinking about how you can go about resolving this. One common cause may be that the shade is simply out of range, in relation to the hub.

To explain signal strength in simple terms, talking to a friend at 50db in a library will mean your friend will have no problem hearing you even if he/she is several feet away. However, talking to your friend at the same noise level in a sports arena may mean they won't hear you at all, and the sound won't travel that far. In order for your friend to hear you, you need to take away the noise (interference), stand closer or talk louder. This methodology can be applied to wireless devices; take the hub closer to the shade and remove the interference or boost the signal.

Within our advanced motors, we can record the Received Signal Strength. When the shade communicates with the hub it updates the last known Signal Strength (the raw value will be displayed in the settings menu for that device e.g. -76). If the Signal Strength value is between -50 to -81 the signal strength is excellent or good.

-60dB means it is in a good environment that has little interference while -95db means the signal needs is weak due to distance or interference.

We have made it easy for you to understand by ensuring the signal strength of the shade is shown in the device screen represented by one of these four categories; Excellent, Good, Average or Poor.

This indicator will also change color based on the table below. These values will fluctuate slightly as the hub or motor's environment degrades or gets better. If the signal strength is Average and 90 you may find it can worsen depending on the environment.

some cases, shades with Poor signal strength may seem to operate just fine, but it may not always report an accurate position due to a poor signal.

Shades higher than 97 are known to be inoperable, and should be addressed.

So now that you understand what this means, what contributes to low signal strength you ask?

Interference or low signal can be attributed to the following;

1. Physical obstructions in the home like concrete floors and walls
2. Metal infrastructure in home that absorbs the signal
3. Competing systems on the same radio frequency
4. Mirrors and (Windows Made from Low-E glass)
5. Baby monitors, Alarms, and doorbells
6. Other home appliances and devices.

SO, HOW DO YOU MAKE THE HUB OR SHADES PERFORM BETTER?

You have two options; you can move the hub closer but remember that can impact other shades, so before we do that let's adjust / check the antenna on the shade itself.

ADJUSTING THE MOTOR ANTENNA

The Automate Pulse2 Hub is not compatible with these networks. Turn OFF Autojoin to the 5 GHz network and 'Forget' that network. Connect to the 2.4 GHz network. (Only during the hub pairing process).

Our motors can send and receive signals, it may be the hub sends the signal without any issues but it may be when the motor sends the hub a signal, it gets lost.

Adjusting the antenna on the motor will certainly help, and we found even a minor adjustment can improve or degrade the strength by 25%.

Some motors allow you to wrap the antenna around the head of the motor, in which you can still keep it wrapped but you may need to slightly expose the antenna. See some illustrations and tips on how this can be done.

NOTE: In some instances the antenna may get caught up in the fabric, so ensure it is free when moving the shade up and down.

QUESTION: I'VE ADJUSTED THE ANTENNA AND IT'S IMPROVED, BUT IT'S STILL NOT SATISFACTORY;

MOVE THE HUB

The simple thing to do is invest in a second or even a third hub, allowing the system to operate as one.

But before you invest in a second hub, let's try some of the options listed below.

In some cases, moving the hub improves some shades but degrades others. After you adjusted or tried any of these options, be sure you check the signal strength of all the shades, as it may have improved one but degrade another. *Tip: Connect the hub into a power bank that allows you to place the hub anywhere while testing.*

Tips	Potential Result
Always deploy the hub in a horizontal position. The hub antenna was designed to have a better performance to spread the signal when the hub is placed horizontally.	could add +/- 5- 15% strength
Ensure the hub is in the open environment and not covered	could add +/- 5- 15% strength
Simply rotating the hub 90 degrees while still flat on the surface could have a small impact and make the difference required.	could add +/- 2- 5% strength
Move the hub a foot or two higher and check again. If the hub is too high, maybe move it lower. We recommend placing the hub no lower than 20 inches or 50cm from the floor. You may want to try a few options here and test the performance.	could add +/- 10- 20% strength

Then more drastic things you can do is move the hub closer to the affected shade. Often problematic shades (a lot of interference) need to be a lot closer than others. Move the hub and check the affected shade to see if the performance has improved.	could add +/- 10- 20% strength
Check the path of the signal from the hub to check the motor. If there are any items made of metal e.g. TV or microwaves or even an aquarium), try to move the hub to avoid these paths	could add +/- 2- 5% strength
You could have other radio frequency interference, and you have 20-30 shades connected to one hub which may mean you may need an additional hub, to allow a stronger signal strength per hub and ultimately spread the load.	could add +/- 10- 20% strength

REPEATERS

Repeaters are great if you have 1 or 2 problematic shades, they will assist to boost the signal. However when there are more than 2 problematic shades, and you tried all of the above with no success, need to install a second hub.

In some rare cases, it's found repeaters degrade the overall performance as it makes the signal path of some shades longer and creates additional unnecessary interference.

Tips

- Change the orientation of the repeater. Some environments require you to point the repeater vertically while others need horizontal orientations.
- Try putting the repeaters in other rooms
- Never use more than 2 repeaters per home.

CHARGE YOUR MOTOR

If you see the low battery icon, it may mean it is time to charge your motor. A depleted battery may also impact the signal strength, so ensure your shades are fully charged.

Hub Offline Assistance

Your hub should always be connected to the internet.

- A blinking red light means there is no internet connection. This can happen when your Internet Service Provider (ISP) has an interruption of service. Check other internet devices connected to your Wifi network. If they have lost internet access as well, then contact your ISP. Sometimes a simple power cycle of your router can fix this issue for all devices on your network.
- If the Red light is solid, it means the hub is not able to detect the Wifi network it was configured to. This often happens because the hub is placed too far away from your Wifi router. Try reconnecting your hub closer to your Wifi router with as few obstructions as possible. Be mindful that moving your hub can reduce the signal strength to some of your paired shades. RF repeaters or an additional hub may be required if you notice reduced performance from your shades after moving your hub.
- No light illuminated on your hub means the hub is not getting adequate power. Ensure you are powering the hub with the included Micro USB cable and power brick. Ensure the hub is connected to a power outlet in your home and not devices that could provide intermittent power like computers or televisions. Test the power outlet with a different

electrical device to ensure the outlet is providing adequate power. Certain router configurations can interfere with the hub's internet connection. These include:

- Router IP limits. Some Wifi routers limit the number of devices that may be connected to it at one time. Check your router settings. You can create a permanent DHCP reservation to ensure your hub never gets kicked off your router due to limits. Review your router's manual or contact their support for more info.
- Newly placed Firewalls or other security measures can block the hub from properly connecting to the internet. Try whitelisting your hub's IP address within your router settings and see if the behaviour improves. Review your router's manual or contact their support for more info.
- If your hub is connected to your Wifi router via an ethernet cable, ensure you have a solid connection. Try connecting to a different ethernet port on your Wifi router if available. If you are connecting your hub to a third-party integration (BEMO, Control4) via ethernet, ensure that third-party device is connected to your router and provides internet access via its ethernet port. Be aware that hub pairing via an ethernet connection is not currently supported.

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.

Caution: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC&IC RF exposure requirements, a separation distance of 20cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

Les antennes installées doivent être situées de façon à ce que la population ne puisse y être exposée à une distance de moins de 20 cm. Installer les antennes de façon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l'antenne.

Limited by local law regulations, version for North America does not have region selection option.