



WallWand™ Z-Wave Touch Panel Operating Manual

Version 05



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General

About us

TouchWand is a sister company of I-FEEL, which develops and manufactures control and smart home systems. The company develops and manufactures the products in Petah Tikva, Israel.

The company's systems are based on a stable and robust platform that supports international standards and serves as a link to various third-party systems.

TouchWand 's products are intended for various markets, mainly:

- Integrators dealing with smart home systems
- Integrators interested in office management systems and office buildings
- Integrators dealing with hotels
- Integrators working with construction developers.

The company does not work directly with end customers and does not provide them with services and equipment.

Our products

The company is offering the following products:

- **Wanderfull Hub** or the controller is used to manage wireless systems in the Z-WAVE standard. It supports Wi-Fi-based units and KNX standard used for connecting to wired systems.

The controller has a management system that allows controlling home and building systems in a simple and user-friendly way with a technician, administrator and user role hierarchy. The management system is based on external cloud services (currently AWS) and enables system survivability even during malfunctions.

The client and integrator are equipped with cloud services that enable remote access, backups, information and alerts.

A detailed description and other technical details of the product can be found on the website at the following link <http://www.TouchWand.com/products/TouchWand-Wanderfull-hub/>



- **InWand Double Micro Module Switch** is a Z-Wave smart home micro module, the only micro module that offers dual functionality. It can be used to control either shutters or lights in the Z-WAVE standard. A detailed description and other technical details of the product can be found on the website at the following link <http://www.TouchWand.com/products/double-micro-module/>
- **WallWand Z-Wave Touch Panel LCD** is an intelligent electronic switch with LCD display for control of blinds, lighting and Z-WAVE scenarios. This sleek wall controller offers best in class functionality and design, supporting up to 15 icons that can be selected from a library of over 150 icons, representing various smart home functionalities. A detailed description and other technical details of the product can be found on the website at the following link <http://www.TouchWand.com/products/glass-touch-panel/>
- **InWand Double Micro Module 24V DC** is a small, hidden Z-Wave smart home micro module that offers dual functionality for 24v shutters, enabling control of an in-glass shutter and a scenario. A detailed description and other technical details of the product can be found on the website at the following link <http://www.TouchWand.com/products/double-micro-24v/>
- **TouchWand ACWand** is a smart device that controls air conditioning units and monitors and saves energy. It uses a Wi-Fi connection and is connected and paired to the Wanderfull controller.



Note: Before going through the manual, make sure to use the latest updated document located on the company's website.

Service and support system

Training

The company holds ongoing training. You can register via the website at the following link: <http://www.TouchWand.com/contact/> or contact us for further training whenever additional knowledge is required.

Phone support and on-site support

For telephone support please call +972-3-5089553. Our office hours: Sunday – Thursday 09:00-17:00, ISRAEL time zone. Delivery time is up to 5 working days.

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Mobile applications

All users can access the Wanderfull hub application through mobile phone by downloading the TouchWand mobile applications for iOS and Android. We support the latest Android and iOS versions starting from iOS 11.

The WallWand switch structure and preparations

The WallWand Z-Wave 5" LCD is an innovative touch interface that enables control and management of all home systems such as lighting, blinds, air conditioning, alarm, hot water heaters and floor heating.

This all-in-one wall controller is based on Z-Wave wireless communication and enables adapting to a variety of systems in varying locations, whether at home, in the office or in hotels, as it is adapted and programmed according to the customer's personal preferences. The WallWand wall controller covers up to 16 different scenarios, with 6 direct outputs to control lights and shutters. The wall controller also includes a temperature sensor that can control different stages of the AC system. Also, customers have the option to control and set the unit's background theme from their own photo library for a fully customized and personalized experience.

You can watch the Youtube channel for the installation process at

<https://www.youtube.com/watch?v=qyompUMqcPU>

Power switch connections



Prior to installation the voltage must be removed wherever the installation will be carried out!

The company's products are designed for installation by an electrician.



Warning - When installing the units, the following instructions must be applied.

1. The power of the lighting fixtures and / or the shutters is not more than 5A
2. The voltage should be removed at the home or in the room where the installation will be carried out, prior to installation.
3. Make sure that the connected wires do not touch each other and there is no danger of shortening.
4. If you install an InWand or WallWand unit, make sure there is room behind the switch before you insert the unit.

Connecting the backend unit

MicroSD card



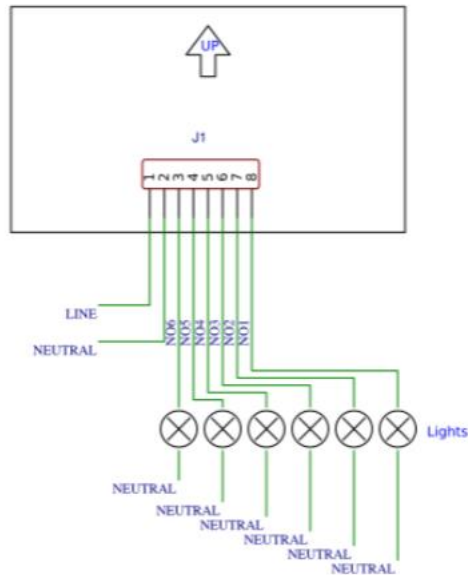
Concrete box recommended



Switch and Frame



Electrical connections to the back connections





Each switch or shutter button will receive the number of the relay and the following should be noted:

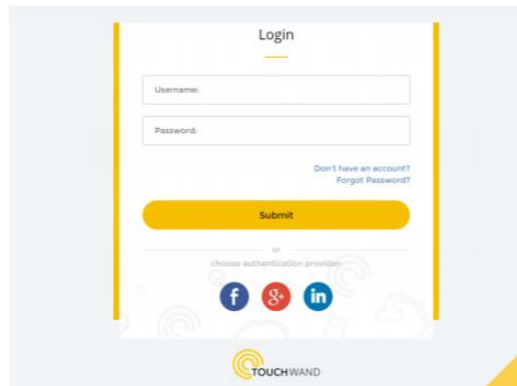
1. The backend wiring will be **always** carried out from relay 1 to 6 in ascending order. Do not skip relays while connecting the wires.
2. If there are shutters wired, their connection will be as follows:
 - a. One Shutter: Relay 1 - UP, Relay 2 - DOWN.
 - b. Two Shutters: Relay 1 – UP shutter #1, Relay 2 – DOWN shutter #1, Relay 3 – UP shutter #2, Relay 4 – DOWN shutter #2.
 - c. Three Shutters: Relay 1 – UP shutter #1, Relay 2 – DOWN shutter #1, Relay 3 – UP shutter #2, Relay 4 – DOWN shutter #2, Relay 5 – UP shutter #3, Relay 6 – DOWN shutter #3.

JSN Editor

The JSN editor is the interface in which you design and customize your WallWand's display.

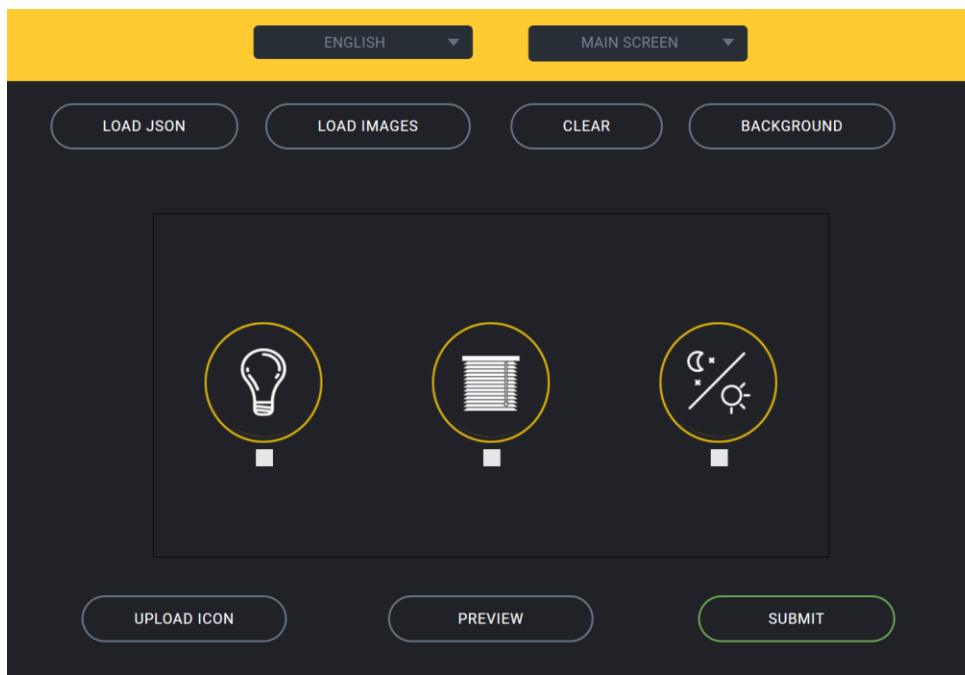
Enter the app at the following link: http://cloud.touchwand.com/tp_json/index_s1.html#

This is the default app screen.



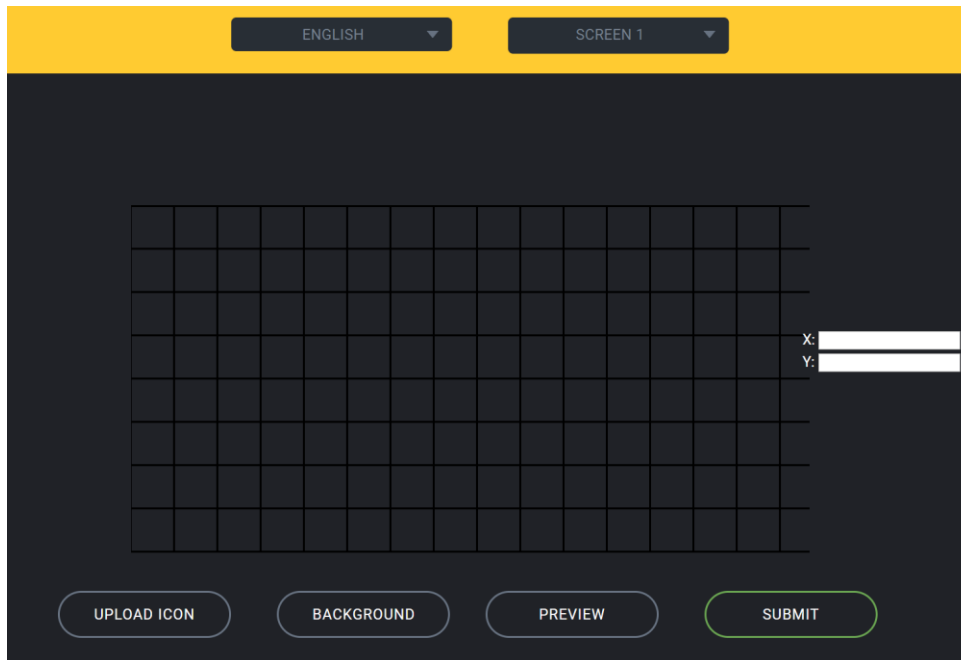
Enter your credentials after initial registration of the controller (see details about the registration process in the Wanderfull user manual).

The access details include the username and password used when entering the controller. In addition, every person who has WallWand, can enter the JSN editor with the following details- username: guest@TouchWand.com, password: guest.



At the top of the page there are two filters: one for choosing the touch panel's display language – English or Hebrew, and the other one for selecting a screen – Main screen, Screen 1, Screen 2 and Screen 3.

The following page will be displayed while editing the internal screens.



Pre-installation

Step 1 - Download Icons and backgrounds zip file from [this page](#) (press on **Download Icons and Backgrounds**), to your computer. Select your favorite theme and put it on the micro SD card. Keep the SD card inside the computer.

Step 2 - Adjust your preferred language in the language filter located at the top left. The selected language will be the language displayed on the touch panel.

Screen Build Process

Once the icons and backgrounds are loaded into the micro SD card the screen can be build. There are two possible ways to do this.

1. Building the screen from scratch – by loading the icons, backgrounds and other images as described in this manual.
2. Load a previously created screen by pressing on the **Load JSON** button and edit it (the process will be described in detail later).

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If you want to add icons - All icons should be prepared in advance in the format big_name.BMP, main_name.BMP, pressed_name.BMP.

Build screen background

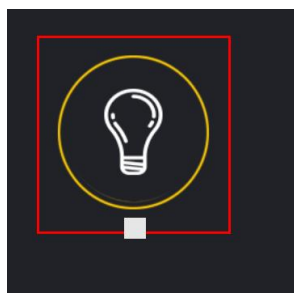
To upload a new background, click on the **Background** button on the top right screen. You can select a background from the system library or choose another image at a bit density of up to 24 and a resolution of 800 pixels width by 480 pixels.

Once you've finished editing the main screen, as described below, there is a possibility to select other backgrounds for the other three screens. To upload a background for the internal screens, press the **Background** button at the bottom of the screen.

The background for all screens should be the same dimensions as the main screen but pay attention when saving backgrounds names. Screen background names must be in the following format – "BackgroundX.BMP" (X stands for any number, but you don't have to add a number to the name).

Build your home screen

In the main screen you must load the names that begin with BIGxxx.BMP, for example Big_Light.BMP. In order to load the file, you must first check the icon. You'll a red square around the icon you chose.



Then click on **upload icon**, open the icon directory and double-click on the icon you want to use.





Three icons must be loaded on the main screen and after loading you can mark or unmark the "V" under each icon depending on the number of internal screens that you want to have. If the "V" under an icon is unmarked, you will not be able to edit or view the internal screen it represents.

Constructing the internal screen

When editing the internal screens, the first step is to select the background (as previously instructed).

Icons and icon types

When designing the internal screens you'll notice some icons have reversed images. These icons represent the two states most units have – **On** and **Off**. In order for the design to work properly, both files have to be on the SD card – the `Main_name.BMP` will stand for the Off state and the `Pressed_name.BMP` for the On state. See the following icons for example:

On – <code>Pressed_name.BMP</code>	Off – <code>Main_name.BMP</code>
	

To upload a new icon, press on the **UPLOAD ICON** button at the bottom of the screen (for both the main and internal screens). You must **always** select the “`Main_name.BMP`” icon.



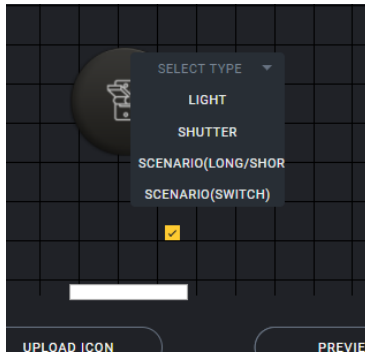
Note: You do not need to select an icon `Pressed_name.BMP`. The image will be selected automatically when selecting the image `Main_name.BMP` that will be provided.

When you upload a new icon, it appears at the top right of the screen. You can place it by dragging anywhere on the screen. To get a uniform and aesthetic look make sure that the X and Y axes are uniformly positioned (see recommendation for X/Y coordinates later in this manual).

After you load the icon and its location, **you must choose** one of the following types for the icon (as seen on the picture below):

1. Light – light switch.
2. Shutter – either up or down for shutters or blinds. You must add two icons for a shutter or blind, one for up and the other for down (**always upload the up button first**).
3. Scenario (long/short) - activate two scenarios with the same button, one with a short press (less than one second) and another with a long press (approx. 2 seconds).

4. Scenario (switch) – activate a scenario with a regular press. Most common use is for two-way switching.
5. Scenario (multilevel) – a virtual shutter. Like the regular shutter, you have to add two of these icons one after another.



It is important to have a match between the number of light units and shutter units that are connected, and the number of icons you define. For instance, if there are two lights connected to the panel define exactly two icons with the type **Light**.

After you ensured that the number of the connected units is equal to the number of icons, you can add Scenario Icons.

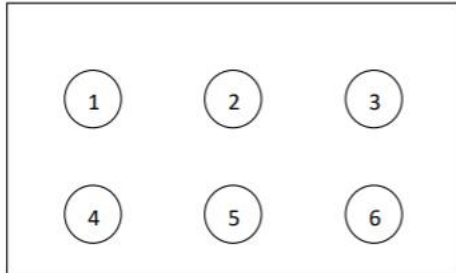
Attention! Remember the order you add the icons to the screen:

1. **Unit icons – the relays' numbers will be set according to the icon loading chronology.**
2. **Scenario icons – when pairing the Wallwand to your controller, the scenarios will pair in the order you've added the icons.**

To delete an icon that has already been inserted double-click it and a window will pop up to make sure you want to delete the icon. Confirm and the icon will be deleted from the screen.

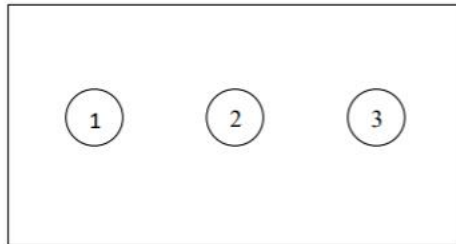
Icon positions

The number of icons per one screen is 6, and the total number of icons on all screens is 12. When adding icons on screen it is advisable to set following x and y axes:



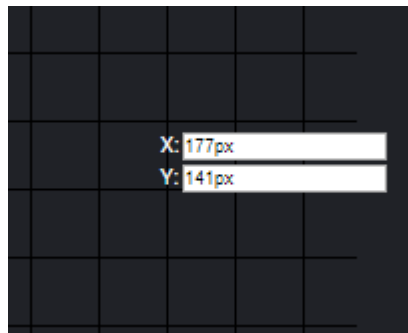
Two rows icon configuration:

1. [X, Y] = [110, 10]
2. [X, Y] = [330,10]
3. [X, Y] = [550,10]
4. [X, Y] = [110, 200]
5. [X, Y] = [330,200]
6. [X, Y] = [550,200]



One row icon configuration:

1. [X, Y] = [110, 100]
2. [X, Y] = [330,100]
3. [X, Y] = [550,100]



NOTE: Installation Reminder!

1. Always connect the relays from the first relay. Don't skip relays. Sometimes it is more convenient to install but you will need to set icons for the empty relays, and in the controller they will appear as dummy switches and interfere with the clean visualization of the end units in the controller.
2. When icons are loaded for shutters, always choose the first icon for the Shutter UP and the second icon for the Shutter DOWN.
3. After selecting the type, the numbers of the relays will be determined according to the chronology of the loading of the icons.

Text

You should name your icons for the convenience and understanding of the end users. Write the wanted name for each icon in the text box located below the icon.



There should always be a match between the language of the text you write, and the language selected in the filter at the top of the page.

The system supports English and Hebrew! Also, the system supports only white fonts.

It is important to be as accurate as possible to avoid mismatch between units. For example, naming a shutter “bedroom shutter” when there is more than one shutter in the bedroom can be confusing, use specific names like “left bedroom shutter”.

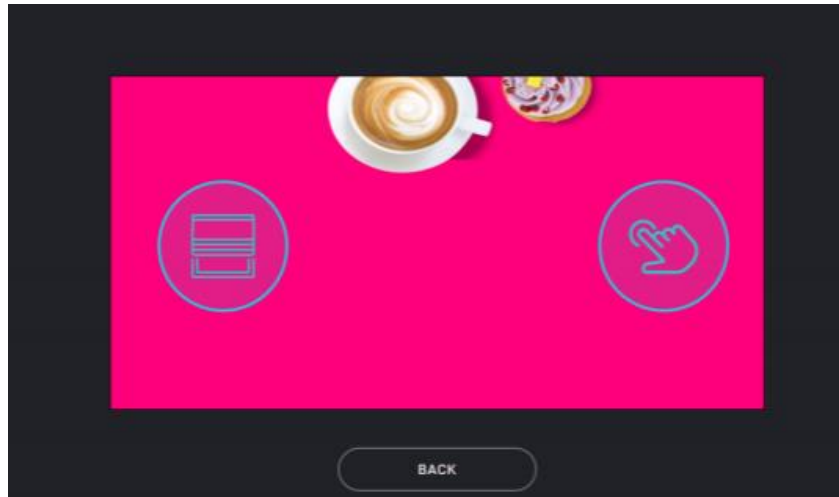
Examples

In the following examples you can see that three icons have been created on the Home screen, while the the “V” for the middle icon has been checked off, and thus there will be only two internal screens.

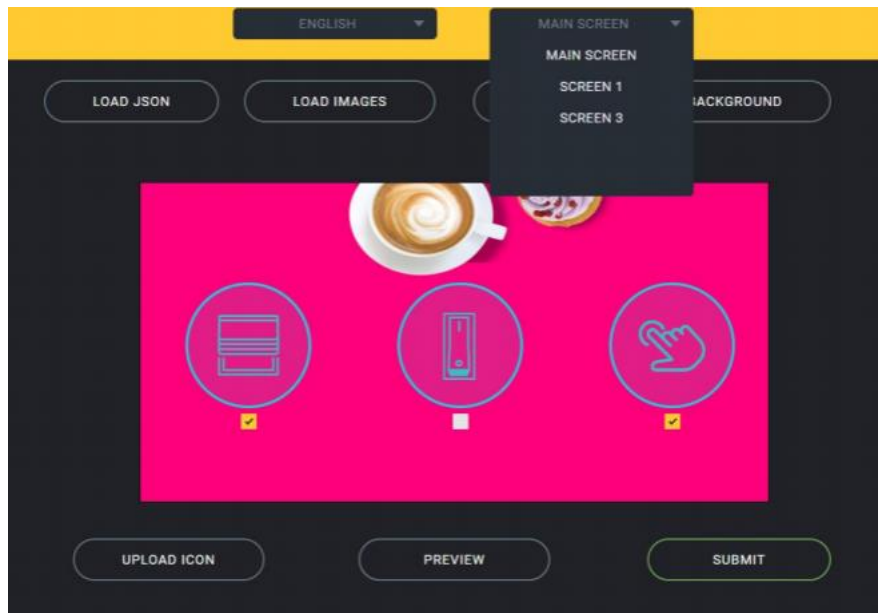
The location of the icons on the Home screen from left to right determines which screen each button represents. In the example below the the “blinds” button will represent Screen 1 and the “scenarios” button will represent Screen 3. The “switch” button will represent Screen 2, but since it is marked off, Screen 2 will not be available.



At any moment you can press the **Preview** button and see how the actual screen will look on the touch panel.



After clicking on screen filter next to the language filter, you can see all three screens - main screen, Screen 1 for the blinds and Screen 3 for the scenarios. To proceed with customizing the following screen with desired icons and background select Screen 1.



It is possible at any stage to re-edit the icons, text and background images simply and without any special effort.

Save the file to the SD card

After you've finished designing and customizing your screens the file must be saved under the name **config.json**. To save your design press on the **Submit** button at the bottom left of the screen.



It is important to keep this name precisely because the Wallwand cannot identify the data file with another name. The file, along with the images you've used for your design must be saved on the WallWand's SD card.



Remember to properly eject the SD card from your computer when you finish your work.



Please do not save the file with another name because the program is programmed to access a named file config.jsn only.



Tips for the expert user

Recommendations for easy end-user use:

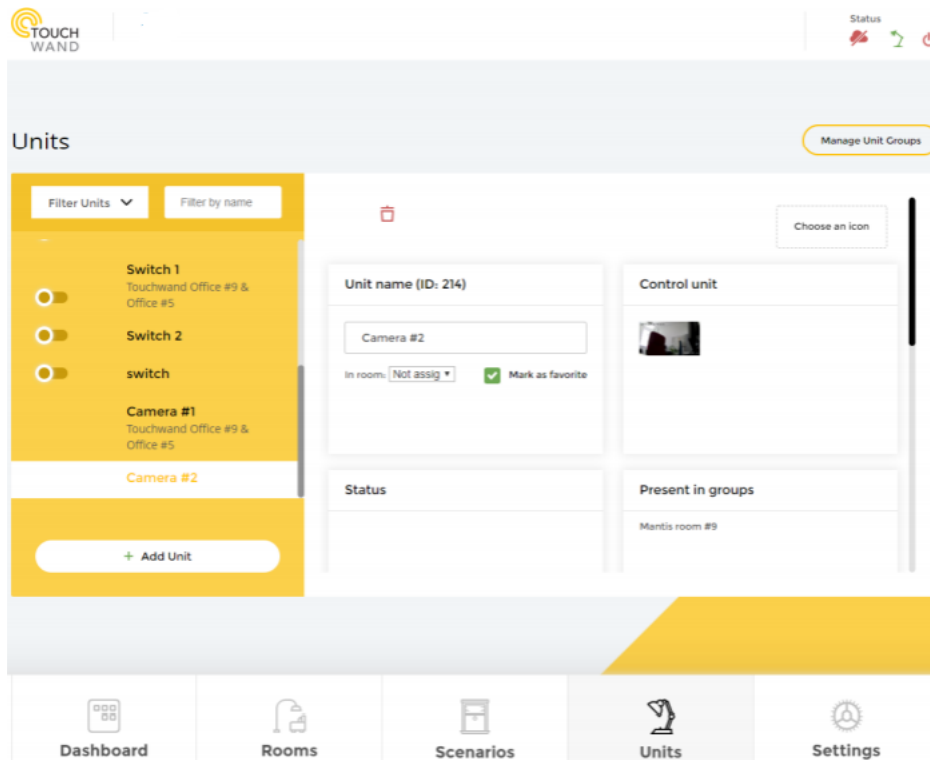
1. When there are up to 6 buttons designed in the touch panel (6 direct outputs), it is recommended to place them on one screen and simply select the button type.
2. It is advisable to place all the wanted scenarios buttons in one screen, to distinguish between the scenarios and the direct outputs.
3. for scenarios, other than two/three-way switching, it is recommended to use long/short type.
4. When there is already a Config.Jsn file and you only want to modify or duplicate it, follow these steps:
 - a. Click on the **Clear** button on the main screen.
 - b. Click on the **Load Images** button and load the relevant icons and images (including backgrounds) from an existing icon library.
 - c. Click on the **Load JSN** button and loads the wanted file for editing or replication to define a touch panel with the same data.
 - d. After loading the JSN, you can switch between the screens and edit the screens as you like.

Summary steps to setting up the screen

1. Choose a background for the main screen.
2. Upload icons to the home screen by pressing on Upload Icon.
3. Once you've finished setting up the main screen you can move on to the internal screens.
4. Edit the main screens to suit your needs.
5. When finished, save the config.json file to the micro SD card and insert it into the device.

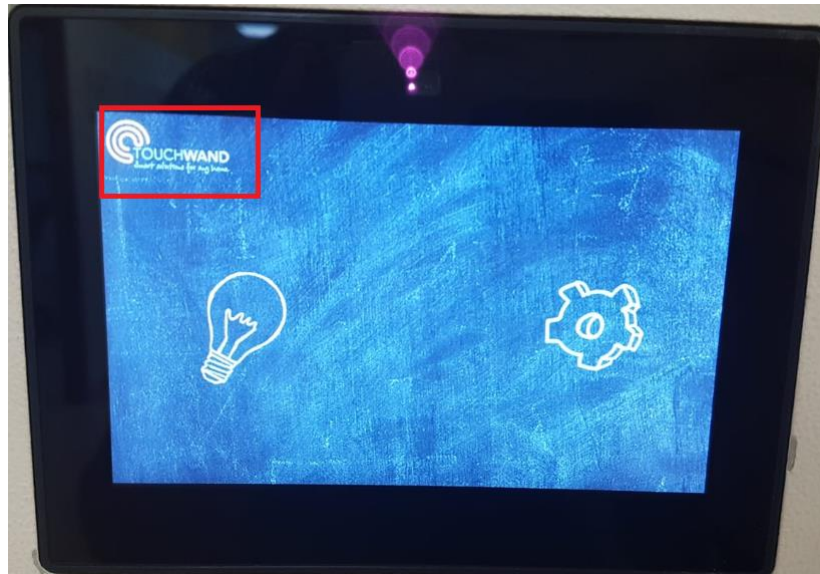
Pairing the unit to the controller

After setting the touchpanel screens in the "JSN" interface, the panel must be connected with the controller through a process called "PAIRING". After installing the unit and putting the voltage while making sure that the SD card with the content is displayed properly on the physical screen, you must add a Z-Wave unit through the **Units** menu in the TouchWand app:



Select the **Add Unit** button and then select the relevant protocol for the unit, in this case Z-wave. Then press the **Pair** button and simultaneously press 3 times on the TOUCHWAND logo located at the top left corner of the touch panel (marked in red in the picture below).





Once the controller identifies the unit, you must define the end points; define a name and an icon for each button you configured in the JSON editor (you need to define both the direct outputs and the scenario buttons, the scenarios will be loaded in the order you added them to the screen). At the end of the process, assign the unit to the relevant room and choose **Done**.

Configure unit 1/6
✕

Unit type

shutter

Choose an icon

Assign to group

+ New group

Unit name

shutter

Assign to room

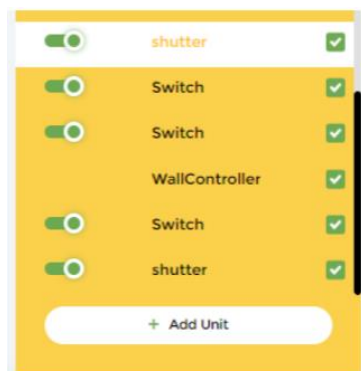
Rooms not assigned
▼

Cancel

Done

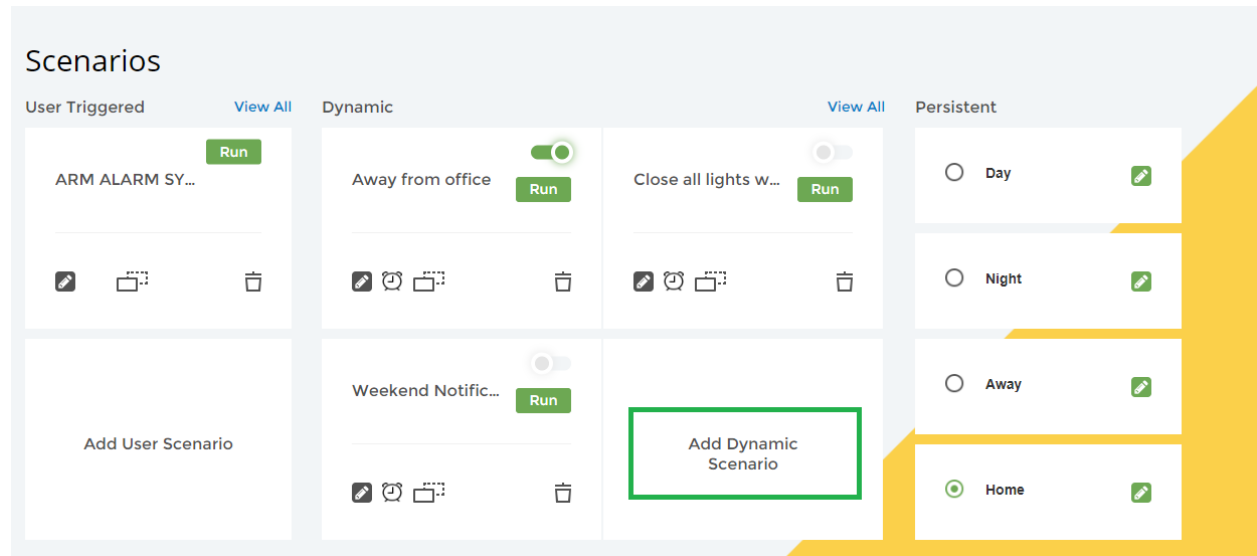
Next unit

At the end of the process you will see the touch panel and its end points appear in the Units list:

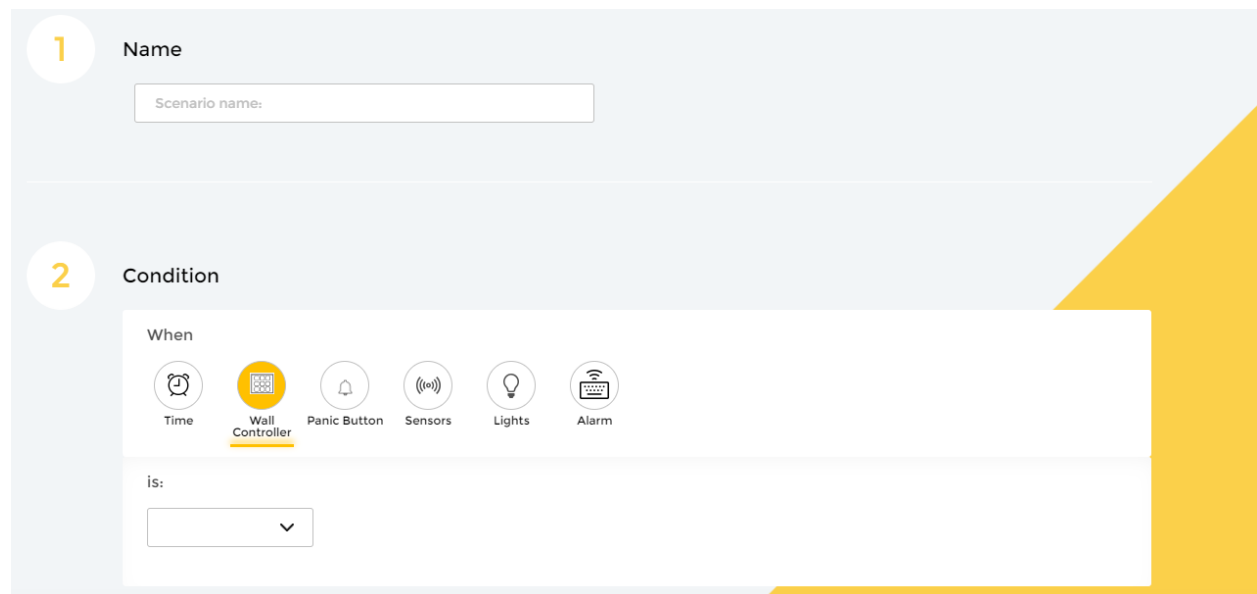


Programming of scenarios

1. Select Scenarios → Add Dynamic Scenario



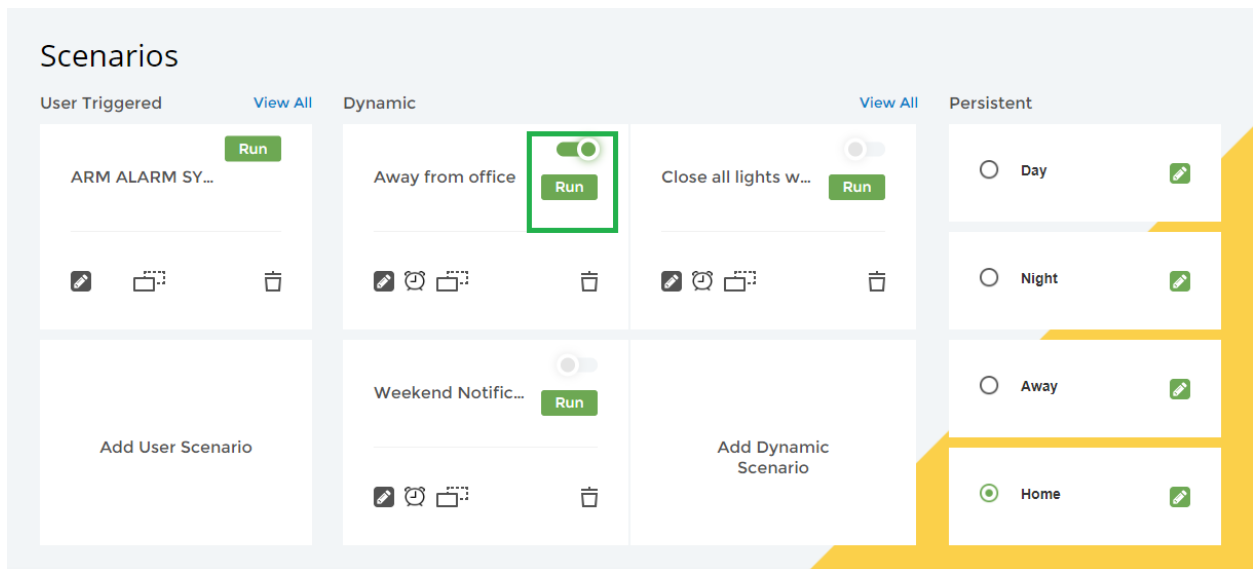
2. Enter the name of the scenario and select **Wall Controller** in **Condition**.



Remember the name you've given to each scenario when pairing the panel with the controller. The naming process was in the same order you've added the buttons to the screen.

3. Choose the name of the end unit defined on the screen – each end unit represents a virtual point that we defined in JSN at the preliminary stage.

4. Define whether the condition exists in a short or long press on the relevant endpoint if you've chosen the long/short option. Each scenario long/short icon can activate two different scenarios. One of them by short pressing on the icon, and the other by long pressing. The condition is the direct result that will lead to the operation of the actual unit that we want, for example: Long press on the icon called "Light Salon" will turn off the lighting of the living room.
5. After saving the scenario, activate it by pressing on the slider next to it. Make sure the slider is green. In addition, in order to check the scenario, click on the "Run" button in the square of the scenario and check that the scenario is working. After the test has been performed, repeat the procedure while performing the test directly from the touch screen itself.



Configuration Parameters (Decimal Values)

No.	Function	Size	Value	Default	Description
1	Disable Lifeline	1 Byte	0-1	0	send 0 to enable lifeline, send 1 to disable lifeline to controller
5	Shutter 1 up time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go up from the moment it lifts from the ground until it reaches maximum height
6	Shutter 1 down time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go down from maximum height until it touches ground
7	Shutter 1 light up time	1 Byte	0-255	5	Measure the time (sec.) it takes to close light slots
8	Shutter 1 light down time	1 Byte	0-255	5	Measure the time (sec.) it takes to open light slots
9	Shutter 2 up time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go up from the moment it lifts from the ground until it reaches maximum height
10	Shutter 2 down time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go down from maximum height until it touches ground
11	Shutter 2 light up time	1 Byte	0-255	5	Measure the time (sec.) it takes to close light slots
12	Shutter 2 light down time	1 Byte	0-255	5	Measure the time (sec.) it takes to open light slots
13	Shutter 3 up time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go up from the moment it lifts from the ground until it reaches maximum height
14	Shutter 3 down time	1 Byte	0-255	30	Measure the time (sec.) it takes the shutter to go down from maximum height until it touches ground
15	Shutter 3 light up time	1 Byte	0-255	5	Measure the time (sec.) it takes to close light slots
16	Shutter 3 light down time	1 Byte	0-255	5	Measure the time (sec.) it takes to open light slots
17	Shutter Auto Stop	1 Byte	0-1	1	Send 1 to activate meter Send 0 to deactivate meter

18	Calibration	1 Byte	0-3	0	Send 1/2/3 according to the desirable shutter, to start calibration. Press up, wait for the shutter to stop, press down, wait for the shutter to stop, press up, wait for shutter to stop. Send 0 to end calibration.
19	Threshold Shutter 1	1 Byte	0-240	100	A lower value will increase shutter 1 sensitivity.
20	Threshold Shutter 2	1 Byte	0-240	100	A lower value will increase shutter 2 sensitivity.
21	Threshold Shutter 3	1 Byte	0-240	100	A lower value will increase shutter 3 sensitivity.
22	Beep	1 Byte	0-1	1	send 0 to disable beep, send 1 to enable beep
85	Reset Frontend	1 Byte	0-1	0	Send 1 to Reset
86	Reset Backend	1 Byte	0-1	0	Send 1 to Reset

Troubleshooting

Symptom 1

1. No display on the TOUCH screen

A possible cause

1. There is no power supply
2. There is no electricity at the power point

Recommendations for solving the problem

1. Re-testing the backend unit wiring is dedicated to the screen provided by TouchWand only
2. Testing and connecting to an additional backend unit on site
3. Sending for inspection to TouchWand, you can contact us through our [homepage](#)

Symptom 2

1. There is a display, but the icons do not appear on the screen

A possible cause

1. Defective icon definition in JSN icon definition interface
2. The SD card is not loaded on the TOUCH screen
3. The SD card does not contain the relevant content including:
 - a. Icons
 - b. JSN Programming

Recommendations for solving the problem

1. Load the JSN file in the application and switch from screen to screen in the interface and make sure that all the settings match the usage guidelines of the interface found in this manual.
2. The SD card must be properly charged to the screen
3. Make sure that the contents of the SD match the ones supplied with the card. You can download the contents from the [TouchWand website](#)

Symptom 3

1. There is a display with background pixel interference

A possible cause

1. The front part - touchpanel is not fastened with the back-end unit

Recommendations for solving the problem

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1. Remove the front unit touchpanel and reconnect to the rear unit back-end

Symptom 4

1. Operating one unit in a controller operates a separate unit through the touchpanel

A possible cause

1. Defective setting in the JSN interface

Recommendations for solving the problem

1. Make sure that all settings are in compliance with the user interface guidelines in this manual