

# User Manual

Z-Wave Controller for Smart Home  
Gateway - Andrew



Document Revision 1.2

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# Introduction

The Smart Home Gateway is a multi-radio server for home automation. One of the support radio standards relevant for the modern smart home is Z-Wave. Your entire smart home can be configured and controlled by our user-friendly mobile app.

The Smart Home Gateway can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. The Smart Home Gateway is a security enabled device. This means that it supports secured communication between other security enabled Z-Wave products.

This user manual covers only the general usage and Z-Wave specific topics. Please have a look at our quick start guide, the general user manual and our online community at [www.wibutler.com](http://www.wibutler.com) to get more information about the Smart Home Gateway.

## General Usage

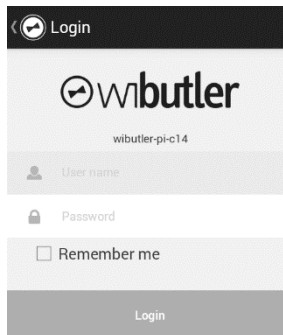
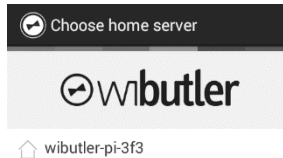
### Installation Guide

To setup your Smart Home Gateway, connect it to the power line and follow the initialization steps from the wibutler App.

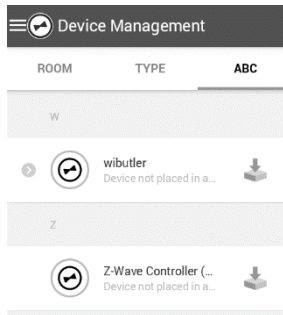
We provide an Android App and iOS App which are both available in the official App stores by Google and Apple. Links to the Apps are available on our website at [www.wibutler.com/downloads](http://www.wibutler.com/downloads).

## Connecting to a Smart Home Gateway and First Orientation

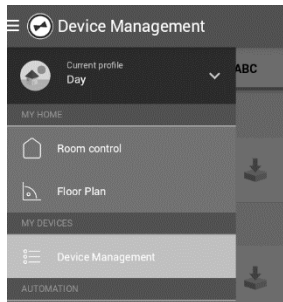
- Start the mobile app and select your Smart Home Gateway from the wibutler list. Most likely you will see only a single device. If no device is listed, make sure that the mobile device is in the same network as the Smart Home Gateway and the router it's connected to.
- Enter your user name and password to login into the selected Smart Home Gateway device.



- After Login, the device manager is shown. If no device has been added to the Smart Home Gateway, only the Smart Home Gateway itself and mobile device are present.



- You can always go back to the Device Manager by tapping on the top left corner until the side scroll menu opens up (see picture on the right) and select "Device Manager" under "My Devices".



# Network Management

All network specific functions are accessible from our mobile app in a special Z-Wave settings menu. You can get to the menu by connecting to your Smart Home Gateway, tapping on the top left corner of the screen and then select [Settings] -> [More...] -> [Radio Networks] -> [Z-Wave].

## Add Device to Network

If you want to add a Z-Wave device to your network, open the Z-Wave menu and select the menu entry “Add Device”. Now the Z-Wave network is in inclusion mode. Please refer to the user manual of the device you are including to perform the correct action on the device. Once the inclusion process is completed, the controller menu is shown again. When you go to the device management view, you see the new device in the Smart Home Gateway device list after 20 sec.

You can stop the inclusion mode by pressing the button “Stop Inclusion-Mode”. If no device is included within 60 seconds the controller stops the inclusion mode automatically.

If the inclusion keeps failing, the device is most likely associated with another Z-Wave network. Please remove the network association as described in section “Remove Device from Network”.

It is possible to add devices from multiple manufacturers to the same Z-Wave network. If the included device is line powered, it can act as a routing slave (range extender). Battery powered devices MUST stay within the network range to be functional.

## Remove Device from Network

If you want to remove a Z-Wave device from either your Z-Wave network or remove the network association of a Z-Wave device, open the Z-Wave menu and select the menu entry “Remove Device”. Now the Z-Wave network is in exclusion mode. Please refer to the user manual of the device you are excluding to perform the correct action on the

device. Once the exclusion process is completed, the controller menu is shown again. If the device was part of your network it is completely removed from the Smart Home Gateway automation network. This includes associations with automation rules and room placements.

You can stop the exclusion mode by pressing the button “Stop Exclusion-Mode”. If no device is excluded within 60 seconds the controller stops the inclusion mode automatically.

## **Reset Network Controller**

If you want to reset your complete Z-Wave Controller, open the Z-Wave menu and select the entry “Reset Controller”. Since a reset removes all Z-Wave devices from the Smart Home Gateway automation network, you have to confirm the controller reset on the next menu screen. Be aware that if your Smart Home Gateway is the only Z-Wave controller in your network you might not be able access your devices without building a new Z-Wave network.

## **Network Replication**

If other controllers are being included to the network the Smart Home Gateway will share routing tables and other information. The process is called network replication.

The other controller can be included as an additional inclusion controller. Therefore put the Smart Home Gateway in inclusion mode (see Add Device to Network). Alternatively the Smart Home Gateway can transfer its role as primary controller of the existing Z-Wave network to a newly introduced controller in which all network information of the Smart Home Gateway is replicated.

If you want to initiate a controller replication, open the Z-Wave menu and select the menu entry “Change Controller”. Now the Z-Wave network is in the controller change mode. Please refer to the user manual of the controller you are about to include to perform the correct action to put the new controller into learn mode. Now the transfer is done automatically. Exchanging the data may take some time.

You can stop a running controller replication by pressing the button “Stop Change-Mode”. If no controller entered the learn mode within 30 seconds the controller automatically stops the replication mode.

If the transfer was not performed make sure, that both controllers are in reach and you followed the instructions of the other new controller accordingly.

*Remark: If the inclusion or secondary controller is not automatically updated after the Smart Home Gateway added a new device to the network, you can re-include the other controller without previously excluding it from the network. Now the device information is synchronized again.*

## **Controller Learning**

With controller learning you can include the Smart Home Gateway into an existing Z-Wave network. This transfers the network ID and all available device information from the other controller into the Smart Home Gateway (see Network Replication). The controller role of the Smart Home Gateway depends on the way it is included by the other network controller. It can be either work as a secondary or inclusion controller or it can become the primary controller of the Z-Wave network.

If you want to start the learn mode, open the Z-Wave menu and select the entry “Learn Mode” on the “Control Page”. Now the Z-Wave network is in learn mode. Please refer to the user manual of the other controller to either include the Smart Home Gateway as another controller or to perform a controller change. Once the Smart Home Gateway controller receives the expected data from the other controller, the controller returns to its normal operation mode.

## **Device Management**

The Z-Wave functions described in this section are device specific and accessible from the device representation in the mobile app. You can get to any device by connecting to your Smart Home Gateway, tapping on the top left corner of the screen and then select [Device Management].

## Remove Failing Device

The Smart Home Gateway Z-Wave controller marks a device as failed when the device is not acknowledging any commands. Without any communication it is not possible to remove the devices with the controllers exclude mode.

The “Control Page” of a failing device changes and offers the option “Remove Failing Device”. When choosing this option, the controller tries to reach the device and if it still fails it is removed from the Smart Home Gateway automation network.

If the controller can reach the device the “Control Page” shows the default elements of this device

## Replace Failing Device

The Smart Home Gateway Z-Wave controller marks a device as failed when the device is not acknowledging any commands. Without any communication, it is not possible to remove the devices with the controllers exclude mode.

The “Control Page” of a failing device changes and offers the option “Replace Failing Device”. When choosing this option, the controller tries to reach the device and if it still fails, it is ready to including another device. Please refer to the user manual of the device you are about to include to perform the correct action on the device.

*Remark: Only replace a failing device with the same product type. In this case all the configuration remains. If you want to replace the device with another product, we highly recommend to first remove the failing device and then include the new device as described in the section “Add Device to Network”*

## Basic Device Operation

If the device type of an included device is unknown to the Smart Home Gateway, a minimal operation is guaranteed by the use of basic commands. Z-Wave allows to send a basic get and basic set command.

The basic get command allows to read back a devices specific value in the range of 0x00 to 0xFF. The meaning of this value must be given in the device’s user manual. To execute the basic get operation, open the device representation in the mobile App and press the button “Basic GET”.

The basic set operation allows to write a value in the range of 0x00 to 0xFF. Reserved values (e.g. between 0x64 and 0xFE) are not sent. The meaning of this value must be given in the device’s user manual. To execute a basic set operation, open the device representation in the mobile App and move the slider to the value you want to write. Once you release the slider, the value is written.

When receiving a basic GET command, the Smart Home Gatetway reports the value of the latest basic SET command or zero as default value.

## Association Groups

| Group | Group Name | Max. Group | Nodes in |
|-------|------------|------------|----------|
| 1     | Lifeline   | 3          |          |

## Command Classes

| COMMAND CLASS                 | VERSION | ROLE |
|-------------------------------|---------|------|
| ALARM/NOTIFICATION            | 5       | C    |
| ALARM SENSOR                  | 1       | C    |
| APPLICATION STATUS            | 1       | S+C  |
| ASSOCIATION                   | 2       | S+C  |
| ASSOCIATION GROUP INFORMATION | 1       | S+C  |
| BASIC                         | 1       | S+C  |
| BATTERY                       | 1       | C    |
| BINARY SENSOR                 | 2       | C    |
| BINARY SWITCH                 | 1       | C    |
| CENTRAL SCENE                 | 3       | C    |
| CONFIGURATION                 | 1       | C    |
| CRC-16 ENCAPSULATION          | 1       | S+C  |

|                                   |   |     |
|-----------------------------------|---|-----|
| <b>DEVICE RESET LOCALLY</b>       | 1 | S+C |
| <b>DOOR LOCK</b>                  | 2 | C   |
| <b>FIRMWARE UPDATE META DATA</b>  | 4 | C   |
| <b>INDICATOR</b>                  | 1 | C   |
| <b>MANUFACTURER SPECIFIC</b>      | 2 | S+C |
| <b>METER</b>                      | 4 | C   |
| <b>MULTI CHANNEL</b>              | 4 | C   |
| <b>MULTI CHANNEL ASSOCIATION</b>  | 3 | S+C |
| <b>MULTI COMMAND</b>              | 1 | S+C |
| <b>MULTILEVEL SENSOR</b>          | 9 | C   |
| <b>MULTILEVEL SWITCH</b>          | 3 | C   |
| <b>POWERLEVEL</b>                 | 1 | S+C |
| <b>PROTECTION</b>                 | 2 | C   |
| <b>SECURITY</b>                   | 1 | S+C |
| <b>THERMOSTAT FAN MODE</b>        | 4 | C   |
| <b>THERMOSTAT FAN STATE</b>       | 2 | C   |
| <b>THERMOSTAT MODE</b>            | 3 | C   |
| <b>THERMOSTAT OPERATING STATE</b> | 2 | C   |
| <b>THERMOSTAT SETPOINT</b>        | 3 | C   |
| <b>USER CODE</b>                  | 1 | C   |
| <b>VERSION</b>                    | 2 | S+C |
| <b>WAKE UP</b>                    | 2 | C   |
| <b>ZWAVE PLUS INFO</b>            | 2 | S   |

S = Supported

C = Controlled