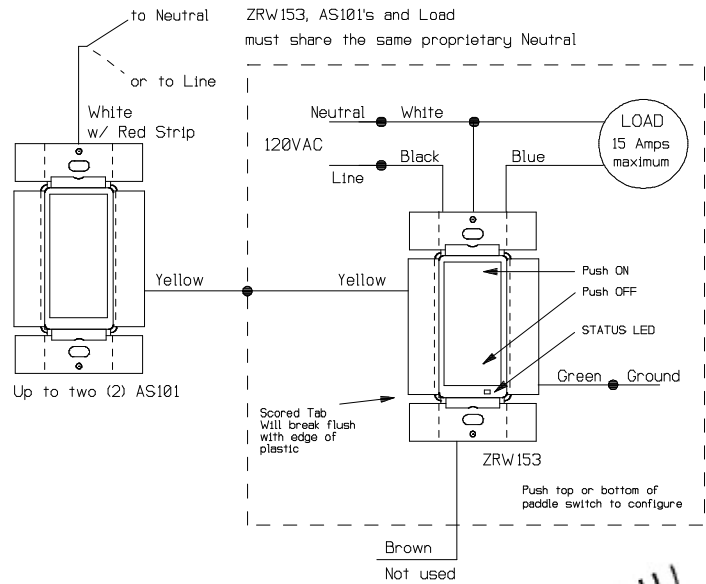


Radio Frequency Controlled, 120 VAC, Wall Mounted 3-Way Switch, Release 1.1



Shown with supplied
Decora™ trim plate



Note: This module must be “Included in the Network” **only where it will be permanently installed.** The proper operation of this node in the mesh network is dependent on it knowing its location with respect to other nodes. You cannot “test bench” configure this module.



ZRW153 WALL MOUNTED SWITCH

The ZRW153 Wall Mounted 3-Way Switch is a component of the HomePro lighting control system. Wire the Wall Mounted Switch in place of the standard wall switch according to the diagram above and program from the Wireless Controller to operate loads. Inclusion of this Switch on the ZTH100 Wireless Controller menu allows remote ON/OFF control of lamps connected.

This Wall Mounted Switch is designed to work with other Z-Wave enabled devices. Z-Wave nodes of other types can be added to the system and will also act as repeaters if they support this function of repeating the signal received to other modules in the system.

As part of a Z-Wave network, the ZRW153 will also act as a wireless repeater to insure that commands intended for another device in the network are received. This is useful when the device would otherwise be out of the radio range of the wireless controller.

There are no field repairable assemblies on this unit.. If service is needed, the unit must be returned where purchased.

DANGER! SHOCK HAZARD. Read and understand these instructions before installing. This device is intended for installation in accordance with the National Electric code and local regulations in the United States, or the Canadian Electrical Code and local regulations in Canada. It is recommended that a qualified electrician perform this installation.

Make sure the load controlled the switch does not exceed 1800 watts. For indoor use only. Retain instructions for future use.

INSTALLATION

With power off, wire this switch in place of a current wall switch according to the diagram above.

AS101's are required to be **wired to the same line (or neutral)** which is also wired to the master unit as well as the load being controlled, and not wired to any other neutral. If multiple neutrals are tied together in one box, separate the neutrals to preserve the integrity of the ZRW153 circuit. **Caution!** Do not wire unit “live” (with power on the circuit) and do not allow the yellow wire to contact line voltage, neutral or ground or you will damage the device.

See the ZTH100 Wireless Controller operating instructions to add this module under the command of the Wireless Controller.

BASIC OPERATION

(Local Control)

The switch paddle on the ZRW153 allows the user to:

- Turn on or off the attached load .
- Include or exclude the module from the Z-Wave system
- Control other Z-Wave enabled devices.

Also, when a controller prompts you to “Send Node ID” or to “Press Button on Unit”, quickly tap the switch on or off once to satisfy those instructions. Also, quickly tapping on or off 4 times will give you the same result without changing the state of the load attached or transmitting to other Z-Wave devices.

- Tapping top of switch turns the load attached ON.
- Tapping bottom of switch turns the load attached OFF.
- Pressing and holding switch does not effect the load attached but will allow dimming and brightening of Z-Wave dimmers if associated (see below for details).

LED indication

The LED on the ZRW153 will turn on when the load attached is ON. The LED is user configured however to turn ON when the load attached is OFF, if so desired, to act as a night light.

The ZDW103 will flicker its LED when it is transmitting to any of its 4 groups. This can be changed if desired.

Auxiliary Switch

The ZRW153 supports the AS101 auxiliary switch

Remote Control

The ZRW153 will respond to BASIC and BINARY commands that are part of the Z-Wave system. Refer to your controller’s instructions as to whether your controller can transmit those commands.

See the information in the section titled **Version** for a complete list of commands the ZRW153 will support.

ADVANCED OPERATION

All On/All Off

The ZRW153 supports the ALL ON/ ALL OFF commands.

The ZRW153 can be set to respond to ALL ON and ALL OFF commands 4 different ways.

Refer to your controller for information on how to set the ZRW153 to operate in the manner you desire. Some controllers may be only able to set certain settings of ALL ON/ALL OFF response.

The 4 different ways the ZRW153 can be setup to respond to ALL ON and ALL OFF commands are:

- 1. ZRW153 will not respond to ALL ON or the ALL OFF command.**
- 2. ZRW153 will respond to ALL OFF command but will not respond to ALL ON command.**
- 3. ZRW153 will respond to ALL ON command but will not respond to ALL OFF command.**
- 4. ZRW153 will respond to ALL ON and the ALL OFF command.**

Association

The ZRW153 supports the Association command.

The ZRW153 can be set to control other Z-Wave devices. You can turn on and off, and even dim other Z-Wave devices once they are “**associated**” into 1 of 4 groups within the ZRW153.

Each group is turned on or off (or dimmed) by tapping or holding the switch a differing amount of times.

If you **associate** a Z-Wave device into Group 1, you can turn that device on and off by tapping the switch on or off once. You can brighten or dim devices by holding down the switch in the on or off position. The load attached to the ZRW153 will also turn on or off. Associating nodes into group 2 or 3 will cause a very slight delay before the command is transmitted to group 1 nodes.

If you **associate** a Z-Wave device into Group 2, you can turn that device on and off by tapping the switch on or off twice. You can brighten or dim devices by tapping the switch on or off once and then holding the switch down.

The load attached to the ZRW153 is not affected.

If you associate a Z-Wave device into Group 3, you can turn that device on and off by tapping the switch on or off *three times*. You can brighten or dim devices by tapping the switch on or off twice and then holding the switch down. The load attached to the ZRW153 is not affected.

If you associate a Z-Wave device into Group 4, that device will be commanded to turn on or off when the ZRW153 is commanded to turn on or off. Caution: The ZRW153 will not transmit to Z-Wave devices in Group 4 if it is already in the state that the Z-Wave command commanded it to.

You can associate up to **5** Z-Wave devices into *each* of these groups.

For instructions on how to “associate” a Z-Wave device into one of these groups, refer to your wireless controller instructions. (If you are using the ZTH100 controller, refer to the Setup Menu, Association section).

A note about dimming, if you combine Z-Wave enabled dimmers and other types of Z-Wave devices in a group, place a Z-Wave enabled dimmer into the empty group 1st to ensure that the dimming operates correctly.

Configuration

The ZRW153 supports the Configuration command.

The ZRW153 can be configured to operate slightly differently than how it works when you first install it. Using the Configuration command you can configure the following:

You can use a ZTH100 to send Configuration commands. (Refer to the Setup Menu, Configuration section)

Set Ignore Start Level Bit When Transmitting Dim Commands

- **Parameter No: 1**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 1)**

The ZRW153 can send Dim commands to Z-Wave enabled dimmers. The Dim command has a start level embedded in it. A dimmer receiving this command will start dimming from that start level if this bit is set to 0. If the bit is set to 1, the dimmer will ignore the start level and instead start dimming from its current level.

Suspend Group 4

- **Parameter No: 2**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 0)**

You may wish to disable transmitting commands to Z-Wave devices that are in Group 4 without “disassociating” those devices from the group. Setting parameter 2 to the value of 1 will stop the ZRW153 from transmitting to devices that are “associated” into Group 4.

Night Light

- **Parameter No: 3**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 0)**

The LED on the ZRW153 will by default, turn ON when the load attached is turned ON. To make the LED turn ON when the load attached is turned OFF instead, set parameter 3 to a value of 1.

Invert Switch

- **Parameter No: 4**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 0)**

To change the top of the switch to OFF and the bottom of the switch ON , set parameter 4 to 1.

Ignore Start Level When Receiving Dim Commands

- **Parameter No: 5**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default 1)**

The ZRW153 can be set to ignore the start level that is part of the dim command, regardless of whether the command itself is telling the dimmer to ignore the start level or not ignore the start level embedded in the command (see

Parameter 1). Setting parameter 5 to a value of 0 will cause the ZDW153 to stop ignoring the start level and cause it to dim based on the command sent.

LED Transmission Indication

- **Parameter No: 19**
- **Length: 1 Byte**
- **Valid Values = 0, 1 or 2 (default 2)**

The ZRW103 will flicker its LED when it is transmitting to any of its 4 groups. This flickering can be set to not flicker at all (set to 0), to flicker the entire time it is transmitting (set to 1), or to flicker for only 1 second when it begins transmitting (set to 2). By default, the ZRW103 is set to flicker for only 1 second.

Each Configuration Parameter can be set to its default setting by setting the default bit in the Configuration Set command. See your controller's instructions on how to do this (and if it supports it).

All Configuration commands will be reset to their default state when the ZRW153 is reset from the Z-Wave system.

Powerlevel

The ZRW153 supports the Powerlevel command.

The Powerlevel command allows controllers to set and get the RF transmit power level of a node and test specific links between nodes with specific RF transmit power. Refer to your controller's instructions, if it supports this command, for more information. This command is typically used by professional installers.

SUC Support

There must be a **Static Update Controller** in your Z-Wave system for this feature to work. The Static Controller can act as a gateway in the system, since other nodes always know its position (not moved after addition to the network). The "always listening" advantage of the Static Controller is that other nodes can transmit information frames to it whenever needed.

You can assign an "SUC Route" to the ZRW153. Refer to your controller's instructions on how to do this (if it supports it). Assigning an SUC Route to the ZRW153 allows the ZRW153 to request an update of the Z-Wave devices that are in between it and the Z-Wave device it was trying to transmit to. The ZRW153 will only request an update when a transmission fails.

SPECIFICATIONS

Power: 120 VAC, 50/60 Hz

Signal (Frequency): 908.42 MHz

Maximum Load - Resistive: 15 amps (1800 watts) maximum, 120 VAC

Motor: 1 H.P. maximum, 120 VAC

Incandescent: 960W maximum, 120 VAC

Range: Up to 100 feet line of sight between the Wireless Controller and /or the closest HomePro Receiver Module

INTEROPERABILITY WITH Z-WAVE™ DEVICES

A Z-Wave™ network can integrate devices of various classes, and these devices can be made by different manufacturers. The ZRW153 can be incorporated into existing Z-Wave™ networks.

The top or bottom of the paddle switch on the face of the ZRW153 can be used to carry out inclusion, association, or exclusion.

WARRANTY

For warranty and general product information visit our web site at www.act-solutions.com

ABOUT ZRW153'S CERTIFICATION

The ZRW153 has been thoroughly tested by the ETL SEMCO division of Intertek, a nationally recognized testing laboratory. This product was found to be in compliance with safety standards ANSI/UL STD 244A and CAN/CSA C22.2 No. 177.

In addition to compliance with product safety standards, the ZRW153 is also certified to comply with applicable FCC and IC rules and regulations governing RF and EMI emissions.



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.

FCC NOTICE

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:

- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

IC NOTICE

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.