ZOOZ™
bright ideas

DIMMER SWITCH
ZEN22 VER. 4.0

Z-WAVE PLUS · ETL · FC
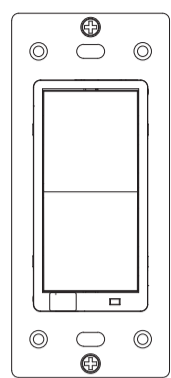
www.getzooz.com
ask@getzooz.com

FIRMWARE VERSION 4.01

FEATURES

- Manual or Z-Wave on/off and brightness control
- **Direct 3-Way:** works with regular on/off or momentary switches in a 3-way (neutral wire required)
- **Scene control:** multi-tap triggers (supported by selected hubs)
- **Smart bulb mode:** disable relay and control the light via Z-Wave only
- **Night light mode:** press down when off to turn lights on to 20%
- Double tap to full brightness feature (now adjustable)
- Built-in Z-Wave Plus signal repeater to extend network range
- Works with LED and incandescent bulbs (don't use with fans)
- Customizable LED indicator and air-gap switch for added safety

SPECIFICATIONS

- Model Number: ZEN22 VER. 4.0
- Z-Wave Signal Frequency: 908.42 MHz
- Power: 120 VAC, 60 Hz
- **Maximum Load:** 150 W LED, 500 W incandescent; **Minimum Load:** 15 W for LED bulbs
- Range: Up to 100 feet line of sight
- Operating Temperature: 32-104° F (0-40° C)
- Installation and Use: Indoor only

⚠ CAUTION

This is an electrical device - please use caution when installing and operating the on/off switch. Remote control of appliances may result in unintentional or automated activation of power.
Do not use this Z-Wave device to control electric heaters or other appliances which produce the risk of fire, burns, or electrical shock when unattended.
To reduce risk of overheating and possible damage to other equipment, do not install this unit to control a receptacle; a motor-operated appliance; a fluorescent lighting fixture; or a transformer-supplied fixture.
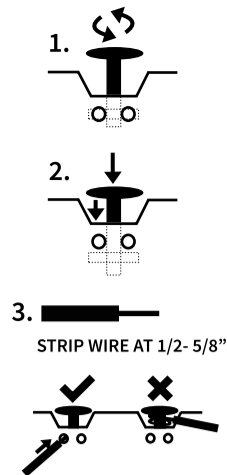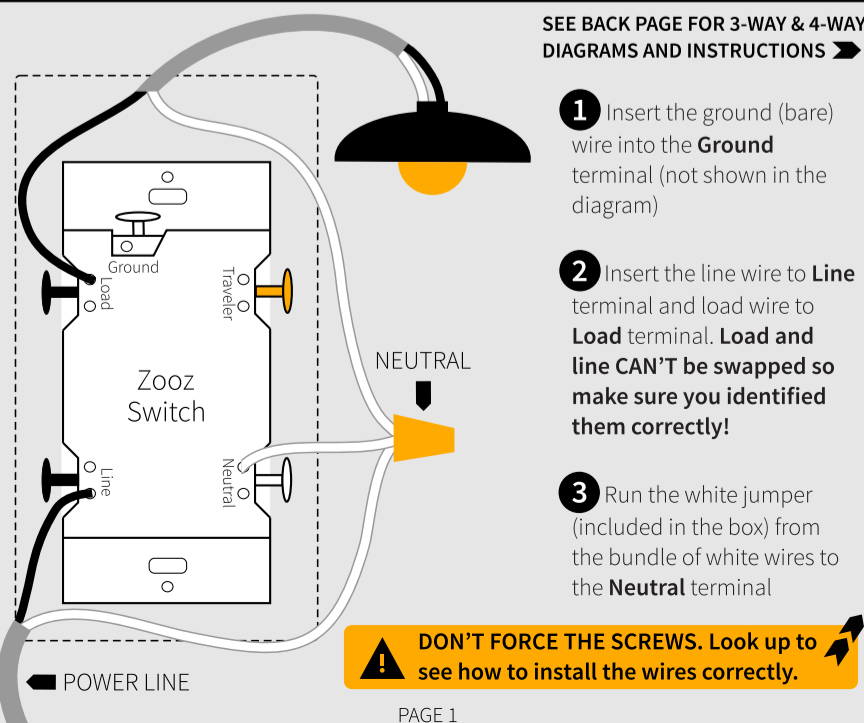
⚡ BEFORE YOU INSTALL

This switch is intended for installation in accordance with the National Electric Code and local regulations. It is recommended that a licensed electrician perform this installation.

WIRING: READ IT!

1. CHECK THE LOAD: lights only (150W for LED's, 500W for incandescent), DON'T CONNECT THIS SWITCH TO FANS OR TUBES.
2. POWER OFF: turn the circuit power off in the breaker panel before you start. If installing in a multi-switch box with multiple circuits, turn power off at all of the circuits.
3. CHECK THE WIRES: mark load (most often black), line (most often black), neutral (most often white), and ground (most often bare). 14AWG wires only! Don't rely exclusively on your multimeter to identify the wires!

NOT SURE WHAT YOU'RE SEEING? WE'LL HELP! **SUPPORT.GETZOOZ.COM** SEND US PICTURES OF YOUR SET-UP, BEFORE YOU DISCONNECT WIRES.

4. REMOVE THE OLD SWITCH: disconnect the wires and label them.
5. CONNECT THE Z-WAVE SWITCH: follow all installation steps carefully. Wire the switch EXACTLY like in the diagram.

ZEN22 WIRING DIAGRAM FOR SINGLE POLE INSTALLATION

SEE BACK PAGE FOR 3-WAY & 4-WAY DIAGRAMS AND INSTRUCTIONS ➤

Ground
Load
Traveler
Zooz Switch
NEUTRAL
Line
Neutral
POWER LINE

1 Insert the ground (bare) wire into the **Ground** terminal (not shown in the diagram)

2 Insert the line wire to **Line** terminal and load wire to **Load** terminal. **Load and line CAN'T be swapped** so make sure you identified them correctly!

3 Run the white jumper (included in the box) from the bundle of white wires to the **Neutral** terminal

⚠ **DON'T FORCE THE SCREWS.** Look up to see how to install the wires correctly.

HOW TO INSTALL THE WIRES

1.
2.
3. STRIP WIRE AT 1/2- 5/8"

1. UNSCREW: carefully turn the screw counter clockwise to make space for the wire. DO NOT unscrew completely.
2. PRESS DOWN: once it's loose, press the screw down with your finger so it catches the thread.
3. INSERT WIRE: make sure the wire is perfectly straight, then insert it into the terminal while holding the screw down. DO NOT wrap wires around the terminal screws!
4. TIGHTEN: turn the screw clockwise to tighten the wire. DO NOT OVERTIGHTEN!

COMPLETE INSTALLATION

With power still off, secure your Z-Wave switch in the box with mounting screws, handling the wires with care. Install the wall plate and ONLY THEN restore power to the circuit.

TEST THE SWITCH

The LED indicator should light up as soon as you turn the power back on if the dimmer (light) is OFF. Tap the upper paddle for ON and lower paddle for OFF. **If the test fails, please check that:**
- power is fully restored to the circuit
- wiring matches the instructions **exactly**
- the load isn't too large, overheating the switch and causing it to shut off

⚠WARNING

- This product should be installed indoors upon completion of any building renovations.
- Prior to installation, the device should be stored in a dry, dust-and-mold-proof place.
- Do not install the switch in a place with direct sun exposure, high temperature, or humidity.
- Keep away from chemicals, water, and dust.
- Ensure the device is never close to any heat source or open flame to prevent fire.
- Ensure the device is connected to an electric power source that does not exceed the maximum load power.
- No part of the device may be replaced or repaired by the user.

Z-WAVE CONTROL

1. ADD DEVICE to your hub
Initiate inclusion (pairing) in the app (or web interface).
Not sure how? Scan one of the QR codes below for step-by-step instructions or get in touch:
www.support.getzooz.com

2. Finalize inclusion at the switch. **TAP 3 TIMES QUICKLY** ➤➤
The LED indicator will blink to signal communication and stay on/off when communication is concluded.

NEED SOME HELP? ask@getzooz.com

Choose your hub and scan the QR code with your phone's camera. Then click on the link to access the step-by-step pairing instructions.

SmartThings   Hubitat   Wink   Vera

Get more tutorials and helpful tips at www.support.getzooz.com

TROUBLESHOOTING

The switch won't add to your system? Try this:
1. Initiate **EXCLUSION** and tap the lower paddle 3 times quickly.
2. Tap the upper paddle **4-5 times quickly** when adding it.
3. Bring the gateway controller (hub) **closer** to the switch, it may be out of range.
4. Get troubleshooting tips for your hub at **www.support.getzooz.com**

The switch won't control the lights manually anymore? Try this:
1. Turn the power off at the breaker and check if a wire didn't get loose.
2. Exclude the switch from the hub or **reset** it in case manual control was accidentally disabled.
3. The load may be incompatible so try it with a single regular bulb.

EXCLUSION (REMOVING / UNPAIRING DEVICE)

1. Bring your Z-Wave gateway (hub) close to the switch if possible
2. Put the Z-Wave hub into **exclusion mode** (not sure how to do that? ask@getzooz.com)
3. Tap the **lower paddle** on the switch **3 times quickly**
4. Your hub will confirm exclusion and the device will disappear from your controller's device list

FACTORY RESET

If your primary controller is missing or inoperable, you may need to reset the device to factory settings. To complete the reset process manually, **tap-tap-tap'n'hold the upper paddle** (so tap twice quickly and hold the third time) for at least 10 seconds. The LED indicator will flash to confirm successful reset.

NOTE: All previously recorded activity and custom settings will be erased from the device's memory.

ADVANCED SETTINGS

Please refer to your controller's user guide for advanced programming instructions as they are a little different for every software.
Not sure where to start? Go to www.support.getzooz.com for detailed instructions on how to change the settings on SmartThings, Vera, and more. Or just email us: ask@getzooz.com

ASSOCIATION

This dimmer switch supports Group 1 with up to 1 devices for lifeline communication and Group 2 and 3 with up to 5 devices. This device will send BASIC REPORT to Group 1 and BASIC SET to group 2 and 3 when operated manually.

CUSTOMIZE YOUR SWITCH

LED Indicator Control
Parameter 2: Choose if you want the LED indicator to turn on when the switch (light) is on or off, or if you want it to remain on or off at all times
Values: 0 – LED indicator is on when switch is off, LED indicator is off when switch is on (default); 1 – LED indicator is on when switch is on, LED indicator is off when switch is off; 2 – LED indicator is always OFF; 3 – LED indicator is always ON
Size: 1 byte dec.   **OR:**

6 x TAP PADDLE to change LED mode

On Off Status After Power Failure
Parameter 8: Set the on off status for the switch after power failure.
Values: 0 – forced to OFF (regardless of state prior to power outage); 1 – forced to ON (regardless of state prior to power outage); 2 – remembers and restores on/off status after power failure (default)
Size: 1 byte dec.

Ramp Rate Control
Parameter 9: Adjust the ramp rate for your dimmer (fade-in / fade-out effect for on / off operation). Values correspond to the number of seconds it take for the dimmer to reach full brightness or turn off when operated manually.
Values: 1 – 99 (seconds). Default: 1.
Size: 1 byte dec.

Double Tap Function
Parameter 12: Choose if you want the dimmer to turn on to full brightness or custom brightness level after you double-tap the upper paddle.
Values: 0 – the light will turn on to full brightness with double tap (default). 1 – the light will turn on to the maximum brightness level set in Parameter 11 with double tap.
Size: 1 byte dec.

Parameter 14: Enable or disable the double-tap function and assign brightness level to single tap.
Values: 0 – double tap to full / maximum brightness level enabled (default).
1 – double tap to full / maximum brightness level disabled, single tap turns light on to last brightness level. 2 – double tap to full / maximum brightness level disabled, single tap turns light on to full / maximum brightness level.
Size: 1 byte dec.

Smart Bulb Mode
Parameter 15: Enable or disable paddle on/off control not to cut power off to your smart bulbs. If paddle control is disabled, you'll only be able to control the connected light via Z-Wave. Scenes and other functionality will still be available through paddles.
Values: 0 – paddle control disabled. 1 – paddle control enabled (default). 2 – paddle and Z-Wave control disabled.
Size: 1 byte dec.   **OR:**

3 x TAP + HOLD lower paddle to change the mode.

Paddle Dimming Speed
Parameter 16: Set the time it takes to get from 0% to 100% brightness when pressing and holding the paddle (physical dimming).
Values: 1 – 99 (seconds). Default: 4.
Size: 1 byte dec.

THERE'S MORE!
Scan to access all of the advanced settings available for the ZEN22 dimmer:

Not sure where to find the parameter settings? Find out how to adjust advanced settings on your hub at
www.support.getzooz.com

SCENE CONTROL

You can trigger up to 10 scenes or control up to 10 independent Z-Wave devices in your network using this switch. Just enable the setting in Parameter 13 and make sure your hub supports scene control.
You can assign scenes to 1-tap, 2-tap, 3-tap, 4-tap, and 5-tap, as well as held and released for any of the paddles.

Enable/Disable Scene Control
Parameter 13: Enable or disable scene control functionality for quick double tap triggers.
Values: 0 – scene control disabled (default). 1 – scene control enabled.
Size: 1 byte dec.

Find out how to make scene control work on your hub and access all advanced settings at www.support.getzooz.com

This device requires the following **command classes** to be supported and recognized by your Z-Wave controller:
COMMAND_CLASS_ZWAVEPLUS_INFO
COMMAND_CLASS_SWITCH_MULTILEVEL
COMMAND_CLASS_ASSOCIATION
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_TRANSPORT_SERVICE
COMMAND_CLASS_VERSION
COMMAND_CLASS_MANUFACTURER_SPECIFIC
COMMAND_CLASS_DEVICE_RESET_LOCALLY
COMMAND_CLASS_POWERLEVEL
COMMAND_CLASS_CONFIGURATION
COMMAND_CLASS_SECURITY_2
COMMAND_CLASS_SUPERVISION
COMMAND_CLASS_FIRMWARE_UPDATE_MD

Z-WAVE PLUS · S2 · ETL

This product 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.
This product features the latest Security 2 (S2) framework to remove smart home network hacking risks. This device is equipped with a unique authentication code for trusted wireless communication.
This is an ETL certified device. ETL, just like UL, is a Nationally Recognized Testing Laboratory. The ETL mark is proof of product compliance with North American safety standards.

WARRANTY

This product is covered under a 12-month limited warranty. To read the full warranty policy or file a warranty claim, please go to www.getzooz.com/warranty

3-WAY DIAGRAM FOR 2-POINT CONTROL OF ZOOZ SWITCHES: OPTION 1

ZEN21, ZEN22, ZEN23, ZEN24 VER. 2.0 / 3.0 / 4.0
Use the diagram on the right if your wiring looks like this

BOX 1
(WITH LINE / HOT AND LOAD)

BOX 2
(3-WAY SWITCH)

Line
LOAD
LINE / HOT
NEUTRAL (USUALLY WHITE)
COMMON
COMMON
TRAVELER

REWIRE BOTH BOXES!

BOX 1
(WITH LINE / HOT AND LOAD)

BOX 2
(ON/OFF 3-WAY SWITCH)

⚠ DON'T use switches with LED indicators in 3-way's/4-way's!

LOAD (USUALLY BLACK)
Regular 3-way switch
Line
NEUTRAL (USUALLY WHITE)
LINE / HOT
Ground
Load
Traveler
Zooz Z-Wave Switch
Line
Neutral
TRAVELER
COMMON

3-WAY DIAGRAM FOR 2-POINT CONTROL OF ZOOZ SWITCHES: OPTION 2

ZEN21, ZEN22, ZEN23, ZEN24 VER. 2.0 / 3.0 / 4.0
Use the diagram on the right if your wiring looks like this

BOX 1
(WITH LINE / HOT)

BOX 2
(WITH LOAD)

Line
LINE / HOT (USUALLY BLACK)
COMMON
TRAVELER
LOAD
COMMON
NEUTRAL (USUALLY WHITE)

REWIRE BOTH BOXES!

BOX 1
(WITH LINE / HOT)

BOX 2
(WITH LOAD)

LOAD (USUALLY BLACK)
Regular 3-way switch
Line
NEUTRAL (USUALLY WHITE)
LINE / HOT
Ground
Load
Traveler
Zooz Z-Wave Switch
Line
Neutral
TRAVELER
COMMON

STOP!

Wire and screw position, as well as color codes are for illustration only. You should not follow the colors and positioning in the illustration blindly. Always identify all wires prior to installing Zooz switches and make sure you can match the diagrams to your set-up exactly. Don't experiment or attempt a "trial-and-error" installation for your own safety. **Don't disconnect any wires before documenting your set-up in each box with detailed images!**
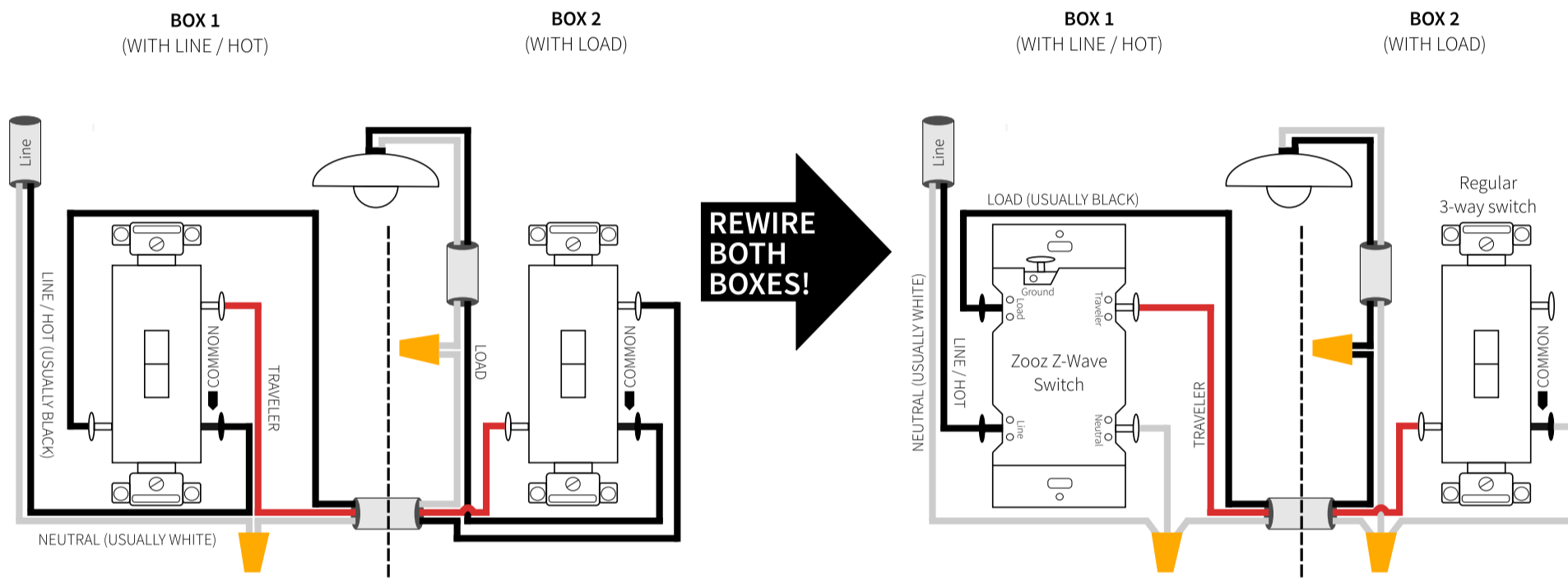
NOTE!

If you are not comfortable identifying the wiring and completing the installation, please consult a licensed electrician.
Make sure you have identified all wiring correctly before connecting the switch. If your wiring doesn't match any of the below diagrams, contact our support: ask@getzooz.com
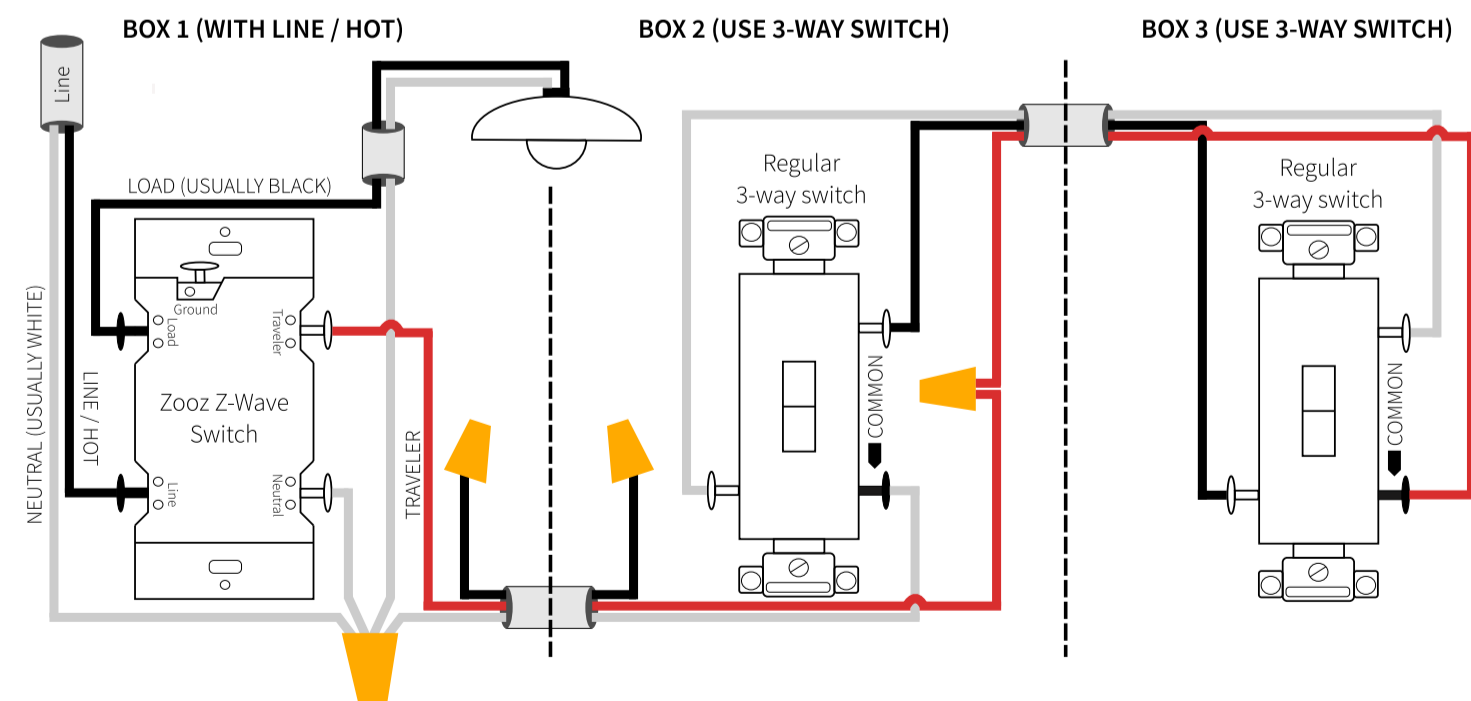
⚠ ON/OFF SWITCHES ONLY

Do not connect Zooz Z-Wave switches to an existing 3-way dimmer, illuminated switch, or an electronic add-on switch. Zooz switches can only be wired with mechanical on/off or momentary switches in a 3-way or 4-way setting!
To simplify the diagrams, we did not include connections for the ground wire. Remember that all Zooz switches need to be wired according to the electrical code, with ground wire connected to the ground terminal.

POWER OFF!
Cut power to the circuit before handling the wiring.
Always install your Zooz switch in the box with direct connection to power line.
Diagrams and instructions in this manual are for ZEN21, ZEN22, ZEN23, and ZEN24 VER. 2.0 / 3.0 / 4.0 models ONLY!

ZEN22 4-WAY INSTALLATION WIRING DIAGRAM (LINE AND LOAD MUST BE IN THE SAME BOX)

NOTE: Use regular 3-way on/off switches ONLY in this set-up (replace any 4-way switches or 3-way dimmers if needed). To simplify the diagrams, we did not include connections for the ground wire. Remember that all Zooz switches need to be wired according to the electrical code, with ground wire connected to the ground terminal.

BOX 1 (WITH LINE / HOT)

BOX 2 (USE 3-WAY SWITCH)

BOX 3 (USE 3-WAY SWITCH)

Line
LOAD (USUALLY BLACK)
Regular 3-way switch
Regular 3-way switch
NEUTRAL (USUALLY WHITE)
LINE / HOT
Ground
Load
Traveler
Zooz Z-Wave Switch
Line
Neutral
TRAVELER
COMMON
COMMON

MANUAL CONTROL
1 TAP: turns the light on to the last brightness level. It takes around a second for the dimmer to reach full brightness. See advanced settings to change the ramp rate and single/double tap behavior.
PRESS AND HOLD: add brightness.
2 x TAP: light turns on to full brightness.
TAP TAP TAP'N'HOLD: factory reset

1 TAP: turns the light off
PRESS AND HOLD: reduce brightness or turn on to 20% (night light mode) when dimmer is off

Pull the **AIR-GAP SWITCH** out when changing bulbs to cut off power to the switch for your safety and shock prevention.

EACH BOX NEEDS TO BE REWIRED ACCORDING TO THE ABOVE DIAGRAM.
Follow this diagram ONLY if you confirmed you have direct connection to power and light in the same box. If they're in separate boxes, use the ZEN27 model instead or ask us about using the ZEN22 switch with ZAC99 momentary switches in 4-way and 5-way installations.
If you have power or load coming into the box with the 4-way switch, contact us for custom instructions: ask@getzooz.com

NEED HELP?
If you're having trouble reading the diagrams or don't see your wiring set-up here, get in touch! We have **more 3-way, 4-way, and 5-way diagrams** and instructions. There are many ways to wire multi-point control set-ups so unless you can match your wiring to the diagrams here, please don't attempt the installation for your own safety.

www.support.getzooz.com
ask@getzooz.com

💡 HOW TO USE WITH SMART BULBS?
DON'T CONNECT the dimmer directly to your smart bulb. Ask us for wiring and programming instructions for on/off and brightness control of your smart bulb!