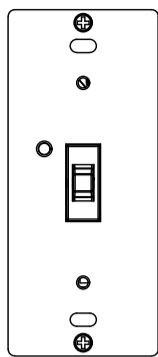## zooZ
bright ideas

TOGGLE DIMMER
ZEN24 VER. 4.0

www.getzooz.com
ask@getzooz.com

FIRMWARE VERSION 4.01

FEATURES

- Manual or Z-Wave on/off and brightness control (neutral wire required)
- **Direct 3-Way:** works with regular on/off switches in a 3-way
- **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%
- Fully adjustable ramp rate for just the right on/off speed
- Double tap to full brightness + advanced settings to customize dimmer
- Built-in Z-Wave Plus signal repeater to extend network range
- Works with LED and incandescent bulbs (don't use with fans or tubes)
- Accepts OTA firmware updates

SPECIFICATIONS

- Model Number: ZEN24 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.
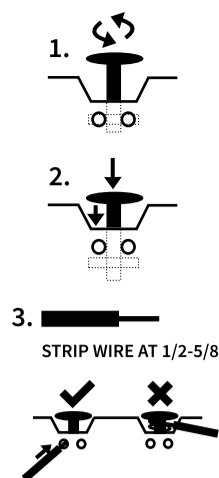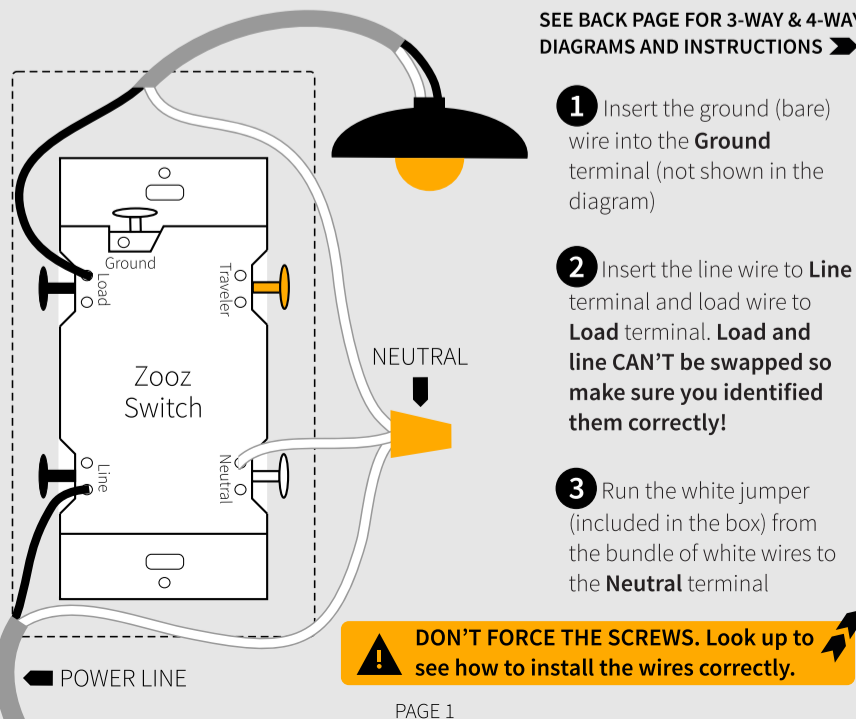
⚡ BEFORE YOU INSTALL

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 TUBE LIGHTS!**
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.

ZEN24 WIRING DIAGRAM FOR SINGLE POLE INSTALLATION

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

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

❷ 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!**

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

Ground
Load
Traveler
Zooz Switch
NEUTRAL
Line
Neutral

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

● POWER LINE

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

Secure your Z-Wave switch in the box with mounting screws, handling the wires with care. Install the wall plate and restore power to the circuit.

⚠ **ALWAYS USE THE SHORT WALL PLATE SCREWS SUPPLIED BY ZOOZ INSTEAD OF THE ORIGINAL LONG WALL PLATE SCREWS!**

TEST THE SWITCH

Toggle the switch up for ON and toggle it down for OFF.
If the test fails, please check that:
- power is fully restored to the circuit
- wiring matches the instructions **exactly** (don't follow color code blindly but rather identify all connections using appropriate tools if needed)
- 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.
A new dimmer switch will show up on your hub's device list.

TOGGLE UP 3 TIMES ➤➤ VERY QUICKLY

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 toggle the switch down 3 times quickly.
2. Toggle the switch **up 6-7 times** very 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. Toggle the switch **down 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, **toggle-toggle-toggle'n'hold down** for at least 10 seconds.

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

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 toggle up.
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.

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

Learn more about scene control and access all advanced settings at www.support.getzooz.com

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

This device requires the following **command classes** to be supported and recognized by your Z-Wave controller:

COMMAND_CLASS_ZWAVEPLUS_INFO
COMMAND_CLASS_BASIC
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

SCENE CONTROL

You can trigger up to 10 scenes or control up to 10 independent Z-Wave devices in your network using this dimmer. 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 to press-and-hold for toggle up and toggle down.

Questions?
ask@getzooz.com

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 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)

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!

Regular 3-way switch

LOAD (USUALLY BLACK)
NEUTRAL (USUALLY WHITE)
LINE / HOT
Zooz Z-Wave Switch
Ground
Load
Traveler
Line
Neutral
TRAVELER
COMMON
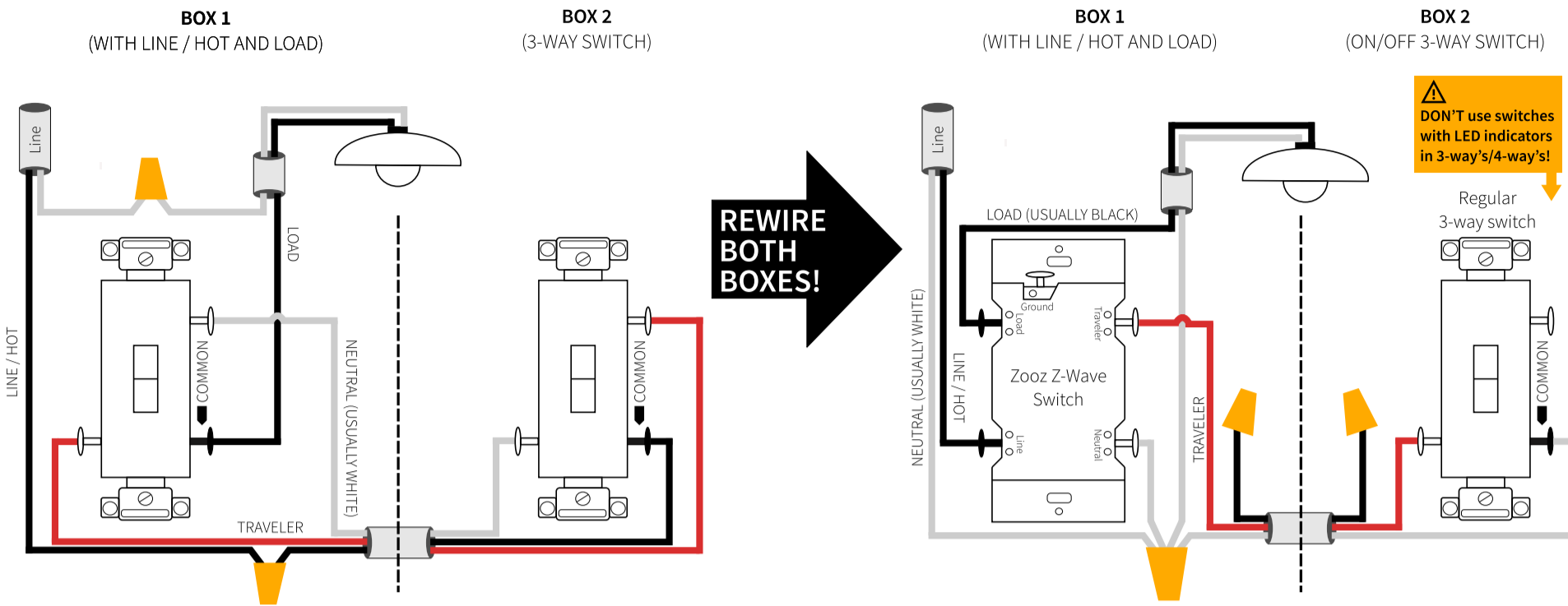
STOP!

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!**
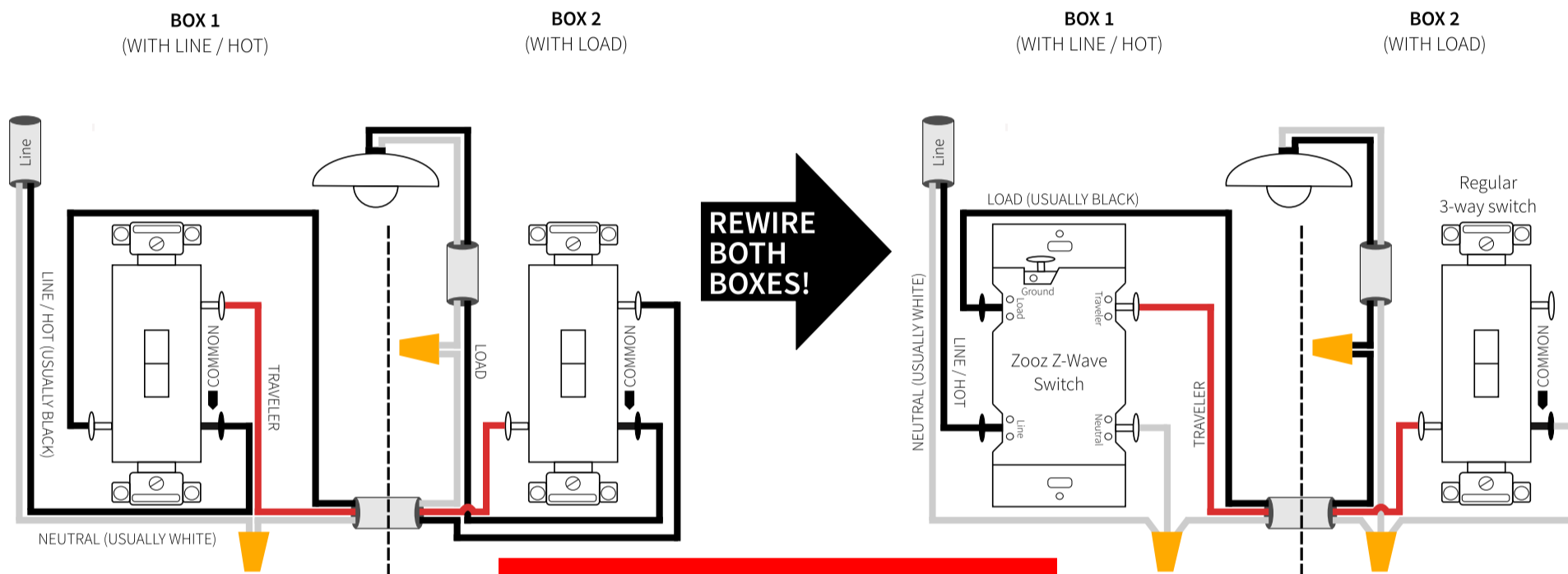
NOTE!

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

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)

REWIRE BOTH BOXES!

BOX 1 (WITH LINE / HOT)
BOX 2 (WITH LOAD)

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

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

USE SHORT SCREWS FROM THE BOX FOR YOUR TOGGLE SWITCH WALL PLATE!

⚠️ 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 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!

ZEN24 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.
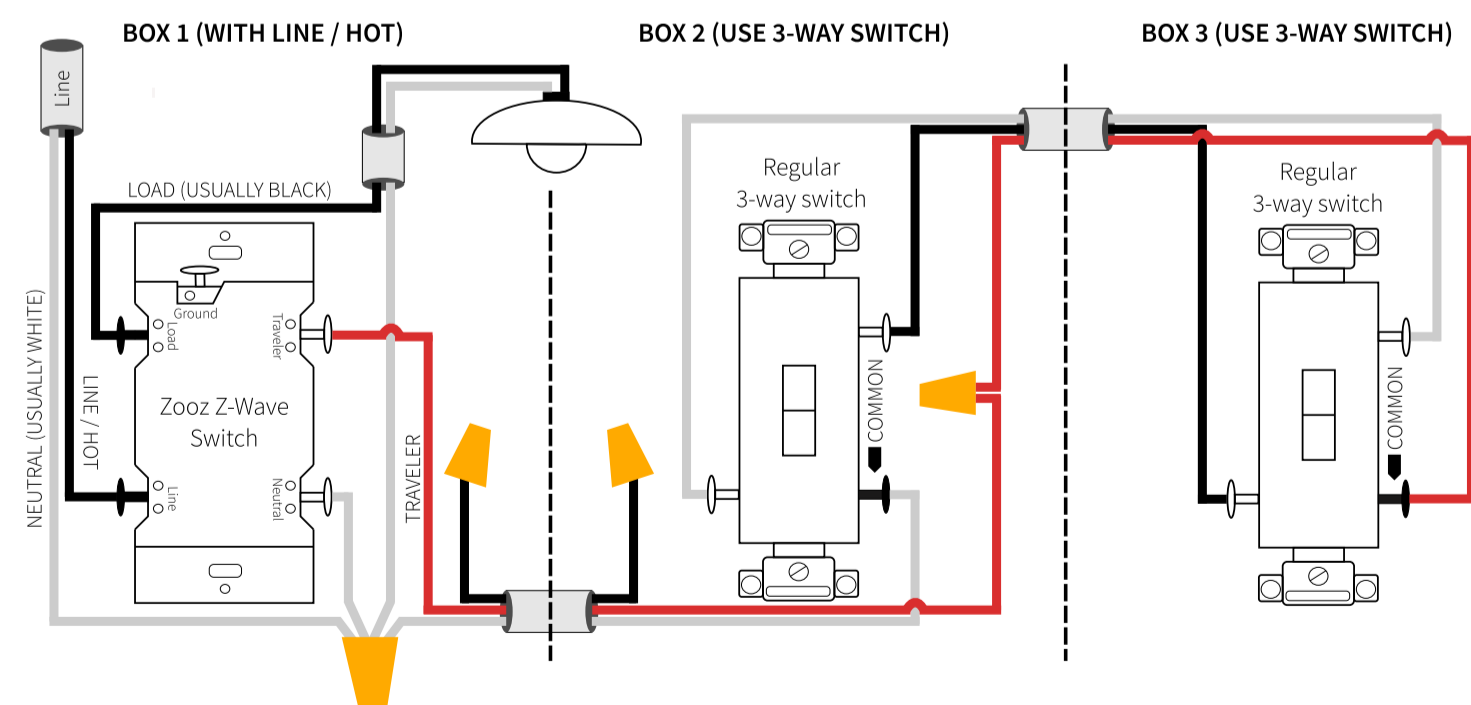

BOX 1 (WITH LINE / HOT)
BOX 2 (USE 3-WAY SWITCH)
BOX 3 (USE 3-WAY SWITCH)

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

MANUAL CONTROL

1 CLICK UP: turn 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.
TOGGLE UP AND HOLD: add brightness.
2 x UP: go to full brightness.
UP-UP-UP'N'HOLD: factory reset.

1 CLICK DOWN: turn the light off.
TOGGLE DOWN AND HOLD: reduce brightness or turn on to 20% (night light mode) when dimmer is off.
3 x DOWN + 1 x HOLD DOWN: disable manual control.

Slide the **AIR-GAP SWITCH** to the left 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.
If you have power or load coming into the box with the 4-way switch, contact us for custom instructions: 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!

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