OPERATING MANUAL
RGB BULB
HKZW-RGB01-V1.0

RGB BULB is a smart bulb enables Z-Wave remote command and control (on/off/dim). It has over 16,000,000 colors, you can choose its color according to your favour.

The features list:
(1) Z-Wave Plus certified for wide compatibility (500 serials products).
(2) Support remote control, at anywhere and anytime.
(3) Support multicolor switch, over 16,000,000 colors.
(4) Support warm white and cold white.
(5) Support multi-level of color brightness, every color is dimmable.
(6) Support firmware OTA

Ⅰ. GENERAL INFORMATION ABOUT RGB BULB

1. Product layout

2. Specifications

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Power supply:	100-240VAC +/-10%, 50/60Hz
Standby power:	<1W
Rate power:	7W
Bulb holder type:	E26 (USA) E27 (EU)
Max brightness:	600lm
Storage environment:	-10~50℃ 0%~80%
Operating temperature:	-10~40℃
Radio protocol:	Z-Wave
Radio frequency:	868.42MHz (EU) 908.42MHz (US) 921.42MHz (AU)
Range:	More than 100m outdoors About 30m indoors (depending on building materials)
Dimensions:	65mm (Φ) x 118mm (L)

NOTE:
Danger of electrocution! Any work on device regarding electrical connections may be performed only after the power supply has been disconnected.

Ⅱ.INSTALLATION

RGB BULB is simple to install and use.
(1) Before installation make sure the power supply is disconnected.
(2) Screw in the RGB BULB.
(3) Power it on.
(4) Include the RGB BULB into your Z-Wave network (follow the procedure Z-Wave network inclusion).
(5) Select a color if necessary.

100-240VAC 50/60HZ
N L
switch
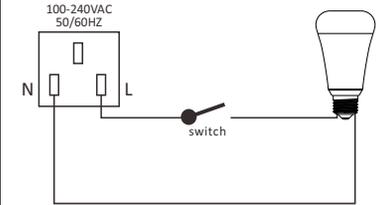
Ⅲ. Z-WAVE NETWORK INCLUSION

RGB BULB 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.

To include RGB BULB into a Z-Wave network as a non-security device:
(1) Make sure the power supply is disconnected and the RGB BULB is located within a direct Z-Wave network's main controller communication range.
(2) Set the Z-Wave network main controller into learning mode (see Z-Wave network controller operating manual).
(3) Insert the RGB BULB into a lamp-socket and then power on.

(4) Auto-inclusion will be activated. If the inclusion is successful, the RGB BULB will blink fast in blue for less than 5 seconds and then keep on for 3 seconds. RGB BULB will keep on in the color before it is included into the Z-Wave network after the inclusion procedure is finished.

To include RGB BULB into a Z-Wave network as a security device:
(1) Screw in the RGB BULB.
(2) Set the Z-Wave network main controller into learning mode (see Z-Wave network controller operating manual).
(3) Toggle the wall switch off and on 3 times quickly (within 3 seconds and the final ending position of the wall switch must be on).
(4) If the inclusion is successful, the RGB BULB will blink fast in green for less than 5 seconds and then keep on 3 seconds. RGB BULB will keep on in the color before it is included into the Z-Wave network after the inclusion procedure is finished.

TIP:
If you want your RGB BULB to be a security device that use secure/encrypted message to communicate in a Z-Wave network, then a security enabled Z-Wave controller is needed.

Ⅳ. REMOVING FROM Z-WAVE NETWORK

To remove the RGB BULB from the Z-Wave network:
(1) Screw in the RGB BULB.
(2) Set the Z-Wave network main controller into excluding mode (see Z-Wave controller operating manual).
(3) Toggle the wall switch off and on 3 times quickly(within 3 and the final ending position of the wall switch must be on), if the exclusion is successful, the RGB BULB will blink fast in orange for less than 5 seconds and then keep on for 3 seconds. RGB BULB will keep on warm white after the exclusion procedure is finished.

NOTE:
Remove procedure will clear the RGB BULB's memory which means it will erase all information about Z-Wave network and advanced configuration.

Ⅴ. RESET RGB BULB

There are two ways to reset the RGB BULB. One is that removing RGB BULB from the Z-Wave network, the other is that using the configuration command class shows in the section of the "Ⅶ. ADVANCED CONFIGURATION".

Ⅵ. SELECT A LIGHT COLOR

(1) Screw in the RGB BULB.
(2) Toggle the wall switch off and on 2 times quickly(within 2 seconds and the final ending position of the wall switch must be on), the RGB BULB will blink fast in purple for 1 second, which indicate the RGB BULB is successfully set into color switch mode. Light color will cyclic change in order of: warm white, cool white, red, green, blue, warm white.
(3) Toggle the wall switch off and on quickly (within 1 second), the light will maintain the color at the moment the action takes place.

TIP:
You can repeat step 2 to select another color.
Quitting from the select mode: Power off for more than 2 seconds after finish step 2.

Ⅶ. ASSOCIATION

Association allows RGB BULB to report its status to the associated nodes.

RGB BULB supports only one association groupings:
RGB BULB will send the follow notification to the associated nodes when the status of the RGB BULB is changed.
1. Set Configuration parameter 24 to 0: Reserved
2. Set Configuration parameter 24 to 1: Send Basic Report
3. Set Configuration parameter 24 to 2: Send Basic Report only when the status of the RGB BULB is not changed by Z-WAVE Command.

Ⅷ. ADVANCED CONFIGURATION

RGB BULB offers a wide variety of advanced configuration settings. Below parameters can be accessed from main controllers configuration interface.

Parameter No. 21 Setting device status after power failure
Define how the RGB BULB will react after the power supply is back on.

0 - RGB BULB memorizes its state after a power failure.
1 - RGB BULB does not memorize its state after a power failure. Connected device will be on after the power supply is reconnected.
2 - RGB bulb does not memorize its state after a power failure. Connected device will be off after the power supply is reconnected.

Default setting: **0**
Parameter size: **1 [byte]**

Parameter No. 24 Notification when Load status change
RGB BULB can send notifications to associated device (Group Lifeline) when the status of the RGB BULB is changed.
0 - The function is disabled.
1 - Send BASIC REPORT.
2 - Send BASIC REPORT only when the status of the RGB BULB is not changed by Z-WAVE Command.

Default setting: **1**
Parameter size: **1 [byte**

Parameter No. 255 Resetting to factory default.
RGB BULB will exclude from the Z-Wave network with this particular command.

Value: **1431655765** – Resetting to the factory default.
Default: **1**
Parameter size: **4 [byte]**

Ⅸ.FCC NOTICE (for USA)

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.