KAUF

RGBWW Smart Bulb

USER MANUAL

IMPORTANT SAFETY INSTRUCTIONS

- For indoor use only.
- Do not use in a recessed can fixture or a tightly enclosed space.
- Do not position the bulb where it could be subjected to high levels of moisture, temperature, or dust.
- Do not use in bathrooms or other humid locations.
- Do not overload wall outlets or extension cords.
- Ensure there is no power to the socket before installation or removal.
- Do not place the device near a heat source or expose to direct sunlight.

PREREQUISITES

The software included on the KAUF smart bulb requires that the user have an installation of Home Assistant to connect the smart bulb to.

If you need to set up Home Assistant, Kaufman Home Automation recommends that you purchase a Raspberry Pi 4 kit and follow the directions at: https://www.home-assistant.io/installation/

Once Home Assistant is running, proceed to Getting Started - Step 1 below.

You also have the option to reprogram the KAUF smart bulb with an ESP8266 compatible firmware of your choice, which may not require Home Assistant.

GETTING STARTED – STEP 1

Begin by plugging the KAUF smart bulb into a light socket. Multiple new KAUF devices can be plugged in before configuring any of them, but the process may go more smoothly if only a single new device is plugged in and completely set up before plugging in another.

The KAUF smart bulb is configured to automatically turn on when plugged in so that the bulb can be used with a normal light switch if needed.

Proceed to Getting Started - Step 2 once the KAUF smart bulb is on.

GETTING STARTED – STEP 2

After being plugged in for 20-30 seconds, the KAUF smart bulb will recognize that it cannot connect to Wi-Fi and create its own "fallback" Wi-Fi hotspot for you to connect to. The KAUF smart bulb's fallback Wi-Fi hotspot will be called "Kauf Bulb Hotspot".

Using a Wi-Fi enabled device, such as a mobile phone or laptop computer, connect to the fallback Wi-Fi hotspot. Please be patient and refresh the Wi-Fi network list on your device. It can take 1-2 minutes for the hotspot to show up in your system's Wi-Fi menu.

FIG. 1 below shows the fallback Wi-Fi hotspot found by an Android device. Any device with Wi-Fi and a web browser should work. Connect to the Kauf Bulb Hotspot Wi-Fi network and continue to Getting Started - Step 3.

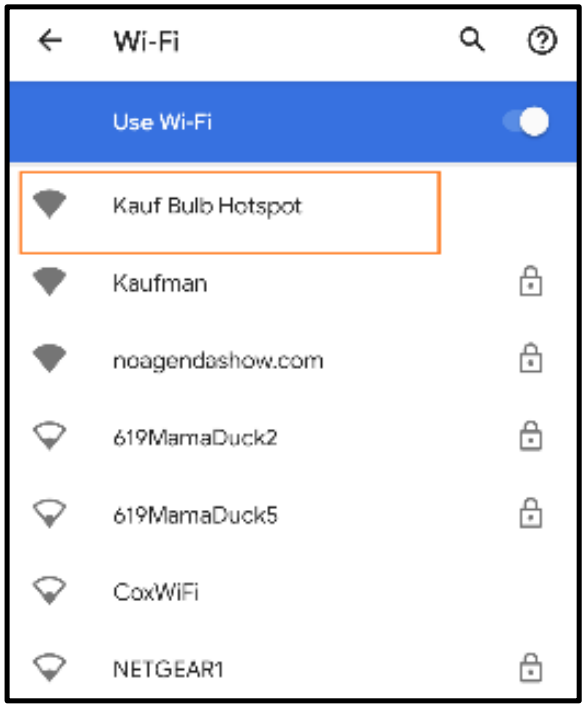

FIG. 1

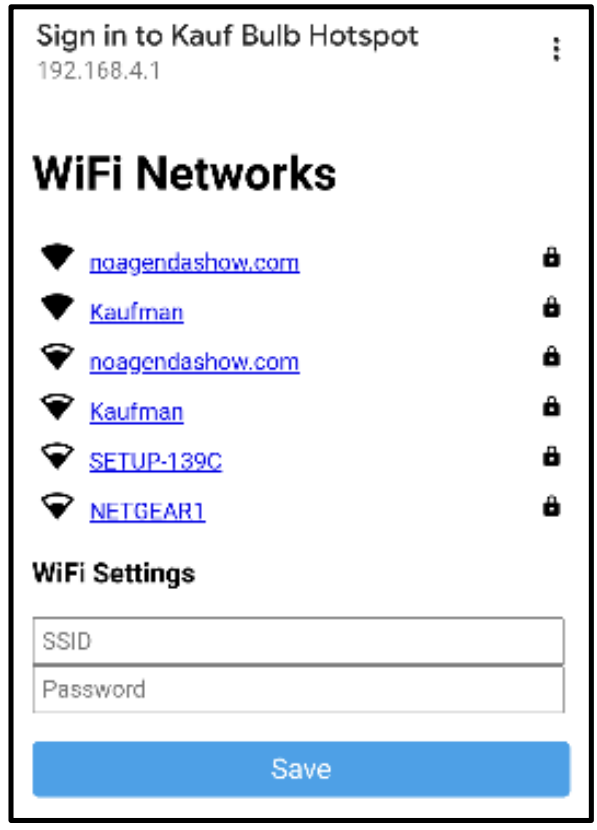

FIG. 2

GETTING STARTED – STEP 3

Once you are connected to the KAUF smart bulb's fallback Wi-Fi hotspot, you should be prompted to "sign in" to the hotspot. Clicking the sign-in prompt will open up the web interface shown in FIG. 2 on the previous page.

If there is no sign-in prompt, or the web interface in FIG. 2 is not automatically opened, you can try going to http://192.168.4.1 in a web browser while connected to the fallback hotspot.

The web interface allows you to select one of the listed Wi-Fi networks that were automatically detected by the KAUF smart bulb or enter any other SSID/password combination to join any 2.4 GHz Wi-Fi network.

Enter your Wi-Fi credentials into the web interface shown in FIG. 2, click save, and then continue on to Getting Started – Step 4.

GETTING STARTED – STEP 4

The KAUF smart bulb will restart itself and connect to the entered Wi-Fi network.

Shortly thereafter, Home Assistant will detect the KAUF smart bulb and provide a notification in Home Assistant's interface. FIG. 3a on the next page shows a notification in Home Assistant's menu for example.

Note: the bulb will also be detected in the ESPHome dashboard. Adding the bulb to ESPHome dashboard first can eliminate the need to rename every entity in Home Assistant.

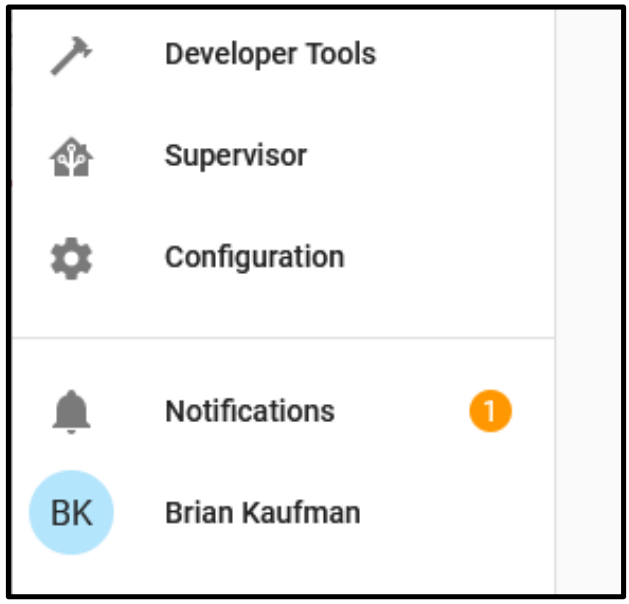

FIG. 3a

Click the “notifications” option in the menu and another menu will appear with the notification as shown in FIG. 3b below. Click “Check it out” in the notification.

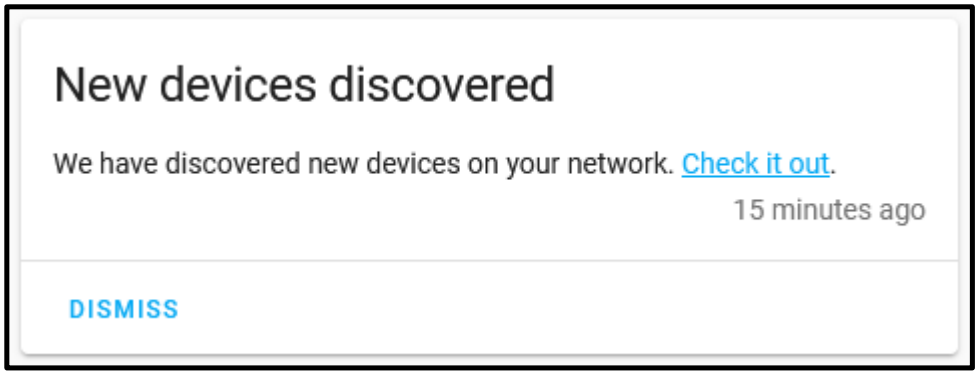

FIG. 3b

Home Assistant will take you to the Integrations configuration page, and you will see a card that shows the KAUF smart bulb as a Discovered device. FIG. 3c on the next page shows the card. The name of the device in Home Assistant will have six random characters added to allow multiple bulbs to be distinguished from each other.

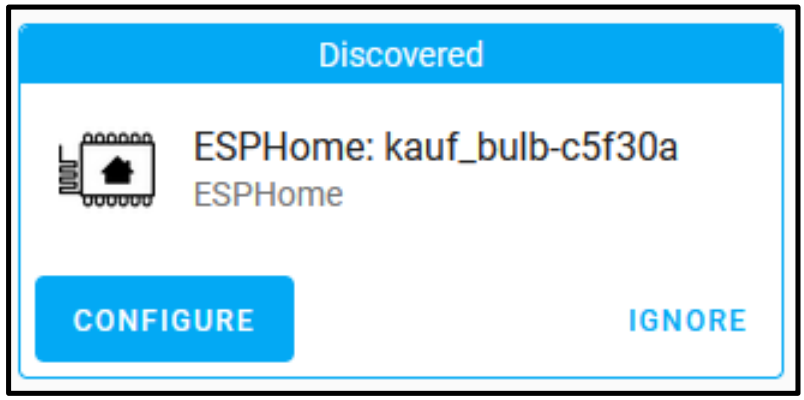

FIG. 3c

Click “CONFIGURE” and follow the prompts to finish adding the KAUF smart bulb to Home Assistant.

FINDING AND RENAMING THE BULB

After following Getting Started Steps 1-4, the KAUF smart bulb can be found in Home Assistant by returning to the Integrations page via the Configuration menu. Look for a card with the heading “ESPHome” as shown in FIG. 4a below.

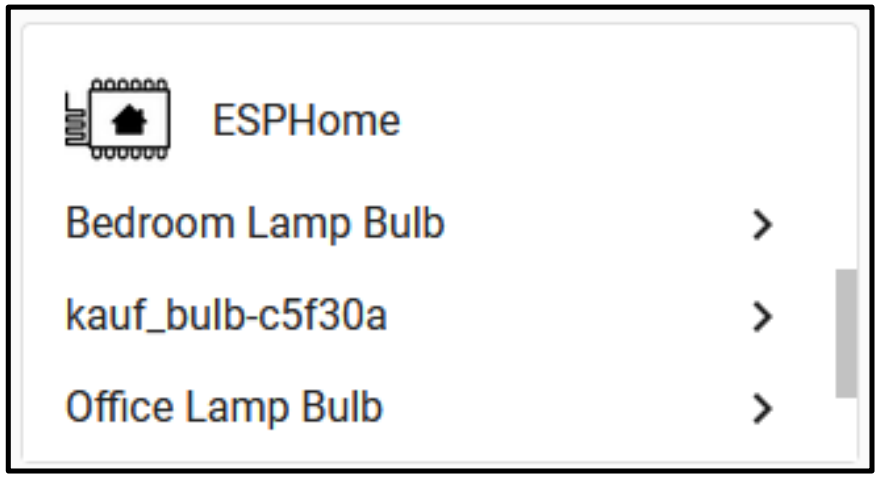

FIG. 4a

The ESPHome card will list all devices added to Home Assistant using the ESPHome native API, including the just-added KAUF smart bulb. The KAUF smart bulb will have the same name as was

displayed in the Discovered box from FIG. 3c. Find and select the KAUF smart bulb and the card in FIG. 4a will change to show information specific to the new bulb. If the KAUF smart bulb is the only ESPHome device you have added, the information specific to the new bulb will be displayed initially without having to click.

Use the kebab menu (three dots) and select rename to change the name to something more descriptive, e.g., Pantry Bulb or Office Lamp Bulb.

ADDITIONAL RENAMING

The card with information about the KAUF bulb will indicate that the bulb has 1 device and 2 entities. Click the link "1 device", then click the device listed on the next page.

The Home Assistant device page will show detailed information about the device including all associated entities. The information is shown in FIG. 4b. At the top is the device's name in Home Assistant, kauf_bulb-c5f30a. Click the pencil by the device name to change it to the same name previously used within the ESPHome card.

Below the device name is a list of entities. "Kauf Bulb" is the main light entity that toggles the KAUF smart bulb and controls its color. "Kauf Bulb IP Address" shows the IP address that the KAUF smart bulb has been assigned.

Click "Kauf Bulb" will pop up a configuration screen allowing you to rename individual entities. Be sure to change both the name and entity ID of at least Kauf Bulb to something more descriptive.

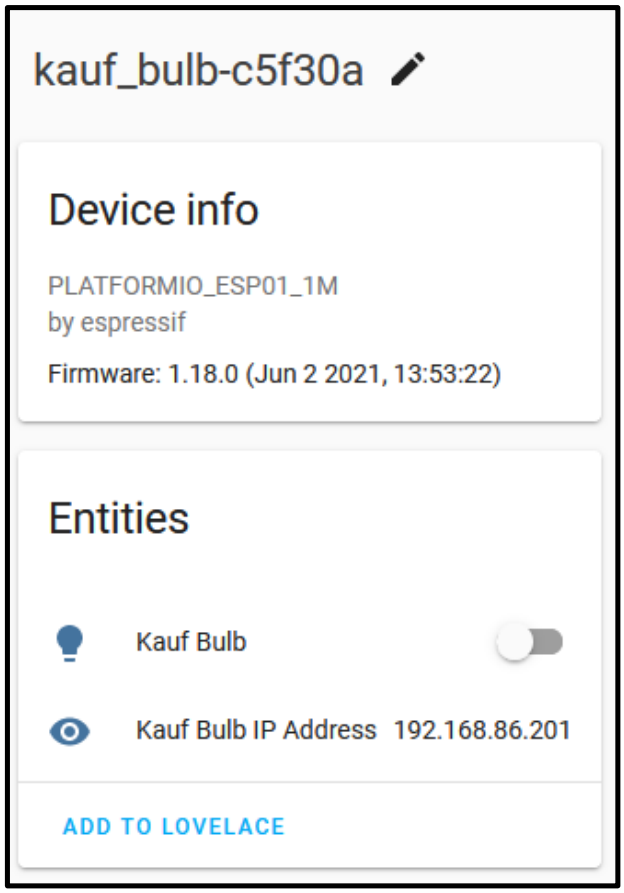

FIG. 4b

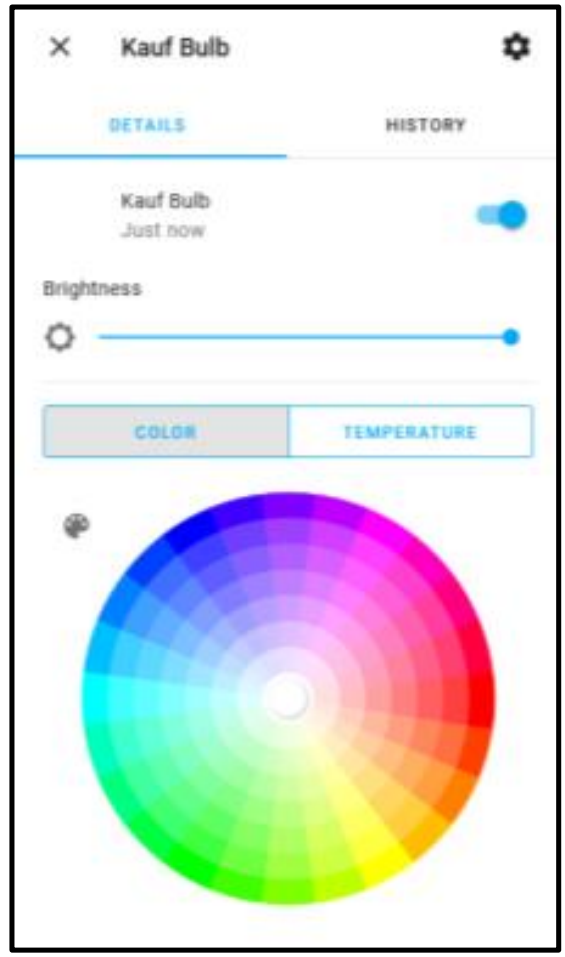

FIG. 5

GENERAL USAGE

Clicking on the light entity “Kauf Bulb” anywhere in the Lovelace dashboard will cause the popup in FIG. 5 to be displayed. The bulb can be turned on and off with the toggle, and brightness is controlled by the slider.

Clicking “COLOR” displays the color wheel in FIG. 5 where the RGB color can be selected. The RGB color will be converted to RGBW by the KAUF smart bulb. The white channel will be set to the lowest common value of the RGB channels, and the RGB channels will each be reduced by the same amount. The white channel will be distributed between the cold and warm white LEDs based on the most recent color temperature setting.

Clicking “TEMPERATURE” will replace the color wheel with a color temperature slider. Modifying color temperature will cause the RGB color to reset to white.

PRO TIPS

ESPHome can have issues if your network changes the IP address of the KAUF smart bulb. We recommend that you give your KAUF smart bulb a static IP address on your local network to prevent potential issues. If you aren’t sure how, perform a web search for the name of your router and DHCP reservation or static IP address.

If the IP address of your KAUF smart bulb does happen to change, the bulb will likely show up as unavailable in Home Assistant temporarily. Restarting Home Assistant should cause the bulb to be found at its new IP address.

You can reprogram the KAUF smart bulb in the ESPHome dashboard using the template yaml file downloadable at https://kaufha.com/BLF10, or by importing into the dashboard if detected. You can set a static IP address in the yaml file.

FLASHING A DIFFERENT FIRMWARE

The KAUF smart bulb’s web interface allows its firmware to be reprogrammed by uploading a .bin or .bin.gz file. A replacement firmware can be uploaded at the bottom of the page shown in FIG. 2 or by browsing to the KAUF smart bulb’s IP address.

Any ESP8266 compatible firmware can be used. Please ensure that the firmware you select allows for over-the-air (OTA) updates, or you may have to open up the KAUF smart bulb and do some soldering if you ever want to flash another firmware.

TASMOTA NOTES

The flash memory of the KAUF smart bulb has enough free space to flash the full default Tasmota firmware as long as the gzip file is used. Download the file called "tasmota.bin.gz" and flash it to install Tasmota. You can also try tasmota-lite.bin or .bin.gz

IMPORTANT: DO NOT flash the KAUF smart bulb with tasmota-minimal.bin or tasmota-minimal.bin.gz

The minimal version of Tasmota does not include the captive portal that is required to connect the bulb to your Wi-Fi network. If you go straight from the included ESPHome-based firmware to tasmota-minimal, your KAUF smart bulb will be bricked, requiring the bulb to be taken apart and soldered to reflash.

ESP8266 PINOUT

GPIO 4	PWM Red
GPIO 12	PWM Green
GPIO 14	PWM Blue
GPIO 5	PWM Cold White
GPIO 13	PWM Warm White

ADDITIONAL HELP

Visit our webpage for additional details and help: `kaufha.com`

Feel free to email us specific questions not covered in this manual or on our website: `help@kaufha.com`