

BK-2082 User Guide - Installation

The BK-2082 (OWL) is a patented unique LED light/ image animation system designed for bike wheels with pre-stored images for mount-n-play capability. Each OWL unit can be mounted to play individual images stored on it while the wheel turns at a certain speed. However, it is optimal to use two units, as in the package, mounted symmetrically in equal space on one wheel. This will allow visible image quality at normal riding speed (around 15 km/hr. or 9mph) while installing more units (3 or 4) will create a better visual image at lower speeds.

The package comes with 2 LED units each containing a built-in CPU, mini USB port and a CD containing image editing software which will allow you to pick any supported image file (.bmp, .jpeg, .png), edit them on your computer, and upload them to the OWL through the USB cable provided. While riding your bike at night with the OWL mounted on the wheel you will produce vivid color images that play in series making you the eye-catching focus on the evening street.

BK-2082 Complete Kit of 2-Unit Pack



IMPORTANT:

- This product is designed to fit a standard 20" steel-spoke bike wheel

Follow the steps below for installation:

1) **Loading batteries:**

Push the flexible end-cap open from the flange and load 3 x AAA-size regular dry-cell Alkaline or rechargeable batteries carefully following the directions as indicated on the plastic housing. All of the LEDs will flash one time when the batteries are loaded and the end-cap is closed correctly in order to confirm that the OWL unit is now on and in working condition. During the day, the built-in Light Sensor will keep the system powered-off in order to conserve energy.

2) **Assembling the Wing-Nut Fastener and Wing slot:**

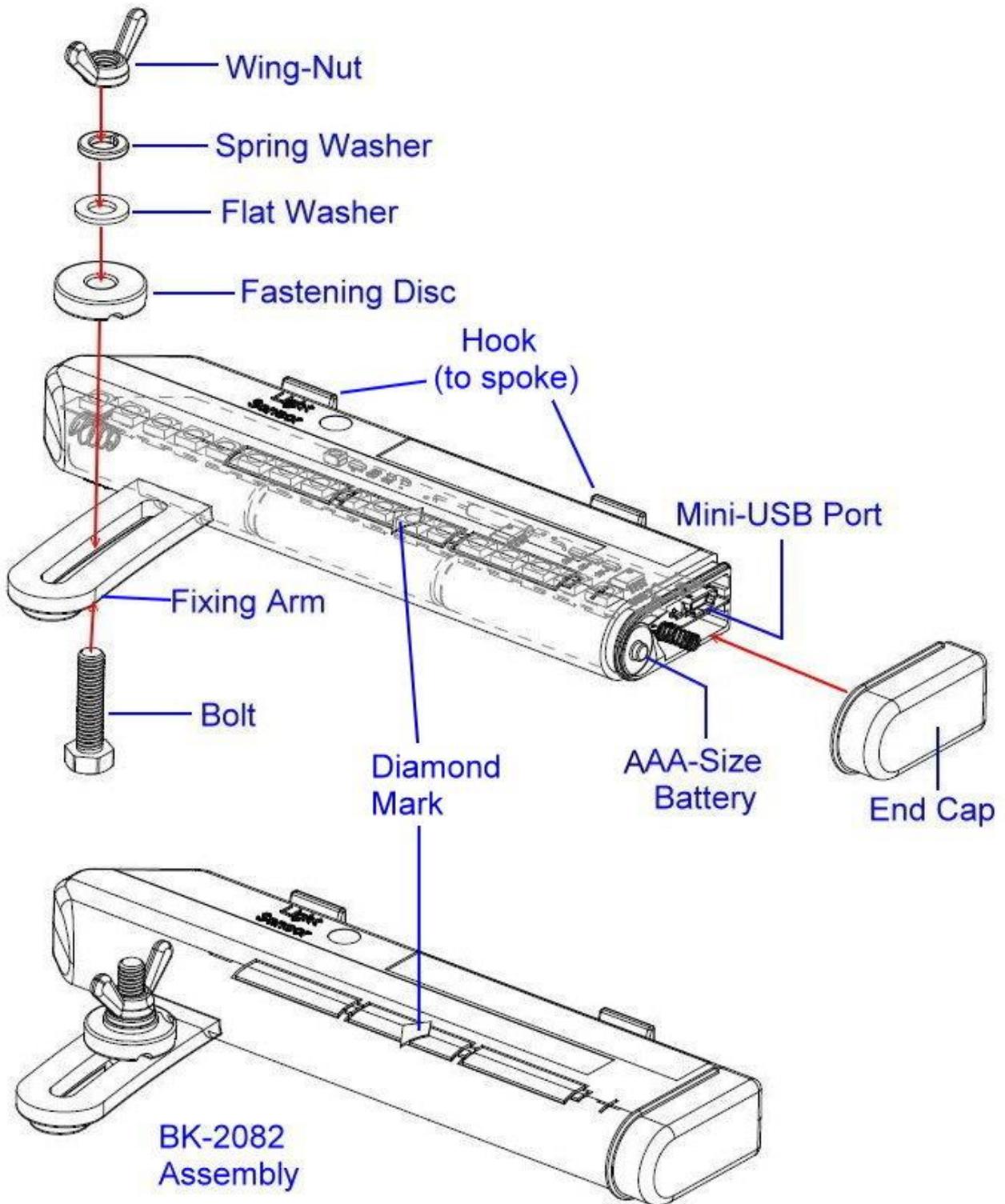
The Wing-Nut, Fastening Disc, Washers & Bolt are supplied unassembled in the parts bag to save space in the original package. Hold the OWL unit with the white label facing you and Fixing Arm to the right, insert the Bolt from the underside of the Fixing Arm through its slot while placing the Fastening Disc, Flat Washer, Spring Washer & Wing-Nut one by one onto the threaded part of the Bolt. Finally turn the Wing-Nut a few turns to keep the fastening parts on the Fixing Arm in place.



3) **Selecting the wheel to install:**

To start the installation of the OWL onto the front wheel it is recommended that you start from the left side as it is the normal position in handling the bicycle; though this is not a necessary rule. Some of the pre-stored image files in the OWL units are directional and preset to show upright at the front wheel. If you are installing the OWL unit onto the rear wheel then you will need to use the dedicated "OWL Image Designer" software in the CD provided to edit the image files in the computer and setting the corresponding angle of the Magnet for the rear wheel then re-upload the images to the OWL system so the images will be displayed in the upright position.

- BK-2082 Exploded View & Assembly



4) Installing the OWL units onto the wheel:

Select two spokes that are apart from each other with a wide space in between. Take one OWL unit with its End-Cap at top and Fixing Arm to the right. Insert the unit in-between these two spokes so that the Fixing Arm is behind the right spoke (spoke must cross the slot of Fixing Arm as the fixing range). With the Top-Cap pressed tightly against the wheel rim, place the two Hooks onto the left spoke and push them back toward you to click in to lock in position. Loosen the Wing-Nut and place

the Round Fastening Disc with one of the two grooves at the underside straddled on the spoke. Then tighten the Wing-Nut until the OWL unit is held securely among the spokes and the wheel rim.

Select another two spokes in the opposite side of the wheel where the first OWL unit was just installed and follow the steps above to finish installing a second OWL unit.



5) **Installing the Adjustable Magnet Holder:**

Locate the raised Diamond mark on the middle of the engraved 3 battery signs on the OWL housing, where the Reed Magnetic Sensor is built inside at the corresponding spot on the P.C. board.

Find a secure spot for the Magnet Holder on the bicycle front fork tubing so that the Magnet Rod can reach out pointing at the Diamond mark on the OWL housing. Wrap the Black Foam Pad around that spot. Insert the long Zip-tie strap through the slots of the arch base. Place the arch fitting base on the Foam Pad and insert the strap tip through the locking slot of the Zip-tie head, pull the strap tight to lock it in place. Insert the excessive part of strap into the gap of the arch fitting base to fix it in place or cut it off. There is a locking pawl lever at the Zip-tie head that can be pressed to release the Zip-tie in case it needs to be removed.

Adjust the Magnet Rod so that the Magnet points straight at the Diamond Mark on the OWL shell and try to get the magnet within 1cm (3/8") or less in between the Magnet and Magnetic Sensor.

Lift up and spin the front wheel with the two OWL units passing from front of the Magnet and you shall see the OWL units flash when its Reed Switch sensed the magnetic field representing they are ready to play the images as you ride.

In case you want to turn the OWL system off while keeping the OWL units on the wheel, you can

turn the pivoted Magnet Rod up or down to move the Magnet away from OWL units and the OWL system will enter into standby mode in 30 seconds if its Reed Switch does not sense the magnetic field.

6) Synchronizing OWL units for same image timing when placing of two or more OWL units on one wheel:

The synchronizing process must be done first on all OWL units installed on one wheel to ensure the light images generated from different OWL units on the same spinning wheel will display at the same time and same pace so as to enhance the image effect. If done improperly the generated images will interfere with each other. When there are 2+ OWL units installed on one wheel and the Magnet Holder is on the fork arm, lift up and spin the wheel swiftly one turn and then hold it still, You should see both OWL units flash all LEDs twice in blue after a few seconds to confirm the system sensed the Magnetic source and set to play the pre-stored images as per the program and relative angle set.

7) Replacing batteries & changing images to play new:

With 3 new AAA-size Alkaline batteries loaded, the OWL unit can run for 12 hours continuously. When you see the images becoming unstable, disrupted, or incomplete, it indicates that the OWL units are running out of power. If this occurs, stop riding and remove the OWL units from the wheel by reversing the processes in Step 3. Open the end-cap to remove the used batteries and replace with new batteries. Then put the end-cap on and install them back onto the wheel following the instructions in Step-3 to get ready for next round of showing off.

In case you want to replace the pre-stored images with your own favorite pictures, insert the CD provided and click "OWL Image Designer" software (BKLED Icon). From there pick the desired image files to edit into the OWL image format and upload them to the OWL unit using the USB cable provided with standard USB-end plugs to the computer and mini-USB-end plugs to the mini-USB port at the OWL unit located inside the end-cap. When the USB cable is connected between the computer and the OWL unit the first two LEDs will light up and blink in blue alternately indicating the formatted image files are being uploaded from the computer onto the OWL unit. When the LEDs become steady-on this means that the file transfer is completed and the old files have been covered by the new files. Finally, re-install the OWL units back to the wheel and you can now run the chosen unique OWL images of your own.