

BK-2482/ BK-7082 User Guide - Installation

The Fantasma OWL BK-2482 & BK-7082 Smart Motion-Graphics Animator is a patented unique LED On-Wheel Lighting/ Image Animation System designed for standard steel-spoke wheels of bicycle with pre-stored images for mount-n-play. The kit comes with two OWL units for better lighting image playing effects on a turning wheel at a certain speed (around 16 km/hr. or 10mph), yet installing more units (3 or 4) will create even better visual image effects at lower speeds.

The package includes:

- (1) 2 x OWL Unit
- (2) 1 x CD (containing editing software & user guide etc.)
- (3) 1 x Magnetic Holder, with adjustable magnet-rod
- (4) 1 x Nylon Zip-Tie with Releasable Locking-Pawl
- (5) 1 x Foamed Pad, for Magnetic Holder
- (6) 1 x USB cable (Mini-USB/ Standard-USB)

On the top of the package box, it shows **two models**:

- BK-2482**, for 24"/26"~up Standard Spoke Wheel
- BK-7082**, for 700C~up including Fixie Spoke Wheel of Deep Rim

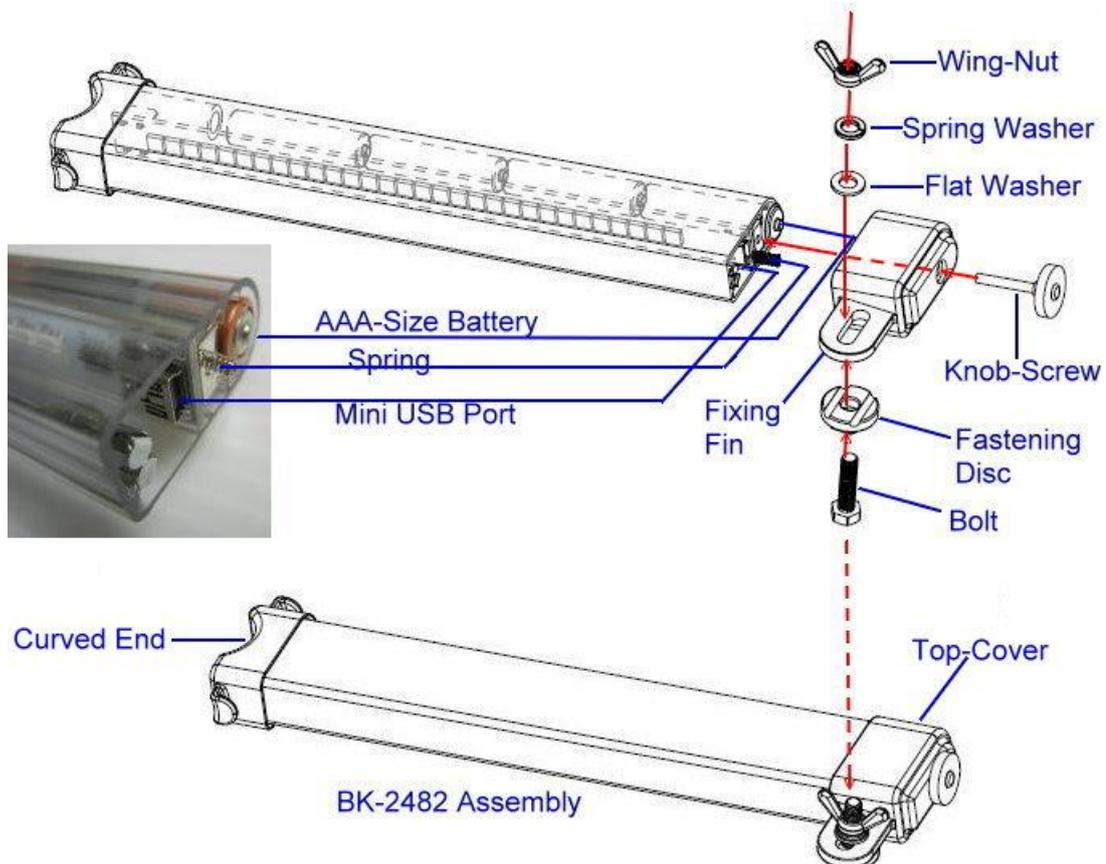
The model contained in the package is ticked in front of the model number.

Follow the steps below for installation:

1) Loading batteries:

Turn the Knob-Screw at top to unscrew and open the cover. Load AAA-size batteries (4 for BK-2482, 5 for BK-7082) of regular dry-cell Alkaline (1.5V) or rechargeable type (1.2V) with flat bottom (negative [-]) side in and raised button (positive [+]) side facing out into the cylindrical battery chamber until they are fully loaded. Put the cover back and tighten the knob-screw. You will see all the LEDs flash indicating that the OWL unit is now power-on and ready for installation. During the daytime, the built-in Light Sensor will keep the system powered-off in standby mode in order to conserve energy.

BK-2482 Complete Kit of 2- Pack (a Pair of 2)



2) Selecting the wheel and position (side of wheel) to install:

It is recommended that you install the OWL units onto the **front wheel** from the **left side** as this is the normal position of most people for handling the bicycle, though this is not a must rule. Some of the pre-stored image files in the OWL units are directional and preset to show images in upright position at the front wheel with the angle set of the Magnetic Holder at the front fork tubing. If you want to install the OWL units from the right side and/or to the rear wheel, you will need to use the "OWL Image Designer" software in the CD provided to edit the image files (pre-stored image files are also included in the CD) in the computer by clicking ReLoad or edit new image files stored in your computer. You will first need to select **Side to Install** and **Place to set Magnet** in the editing window of the software as required, and then re-upload the images to the OWL system via the USB cable provided so the images will be displayed in the upright position.

3) Installing the OWL units onto the wheel:

Start installing the OWL units from the left side of the front wheel. Place an OWL unit into the wheel with its **label side facing you** and **curved end onto the wheel axle**. Loosen the Wing-Nut at the top cover just enough to allow a gap for spoke between the Fixing Fin and the round Fastening Disc while squeeze a wheel-spoke into the gap to rest on one of the two grooves on the Fastening Disc. Then tighten the Wing-Nut while pressing the OWL unit from top for tight fit of its curved end onto the wheel-axle until the OWL unit is securely mounted on the wheel against wheel-axle.

Follow same steps of installation as stated at the above to install another OWL unit at the opposite side of wheel symmetrical to the one just installed.

Front-Wheel Mounting

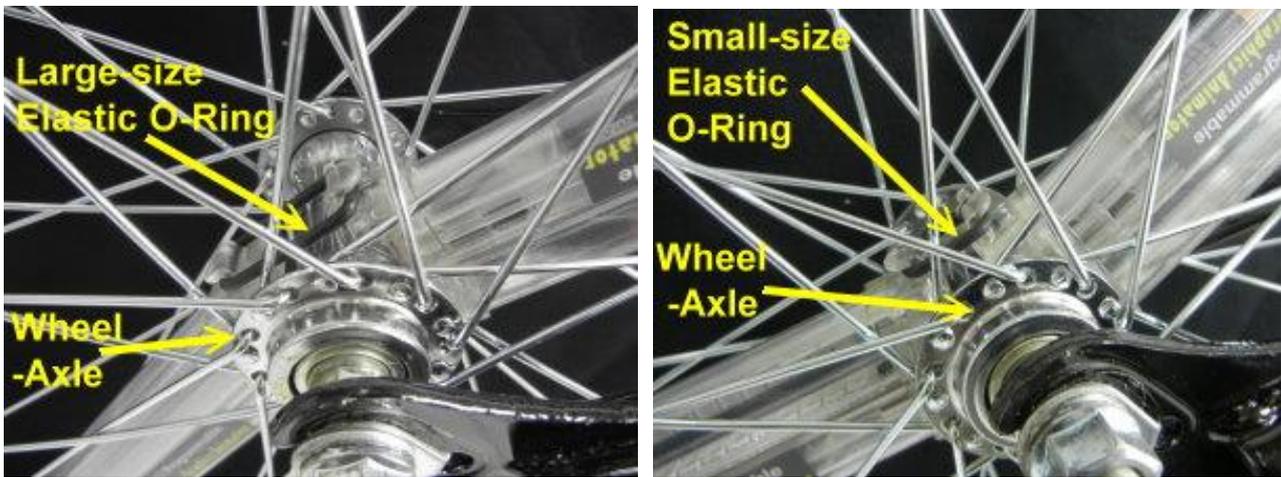


Rear-Wheel Mounting



4) Binding of the 2 OWL units onto Wheel-Axle with Elastic O-Rings

There are two hooks at both sides of the bottom Curved-end of the OWL unit. When both OWL units are properly installed on the wheel symmetrically at opposite side against the wheel axle, usually they won't be on a straight line and are liable to have slight angle between them due to the arrangement of the wheel spoke numbers/pattern. Select the right size among the 3 sizes of Elastic O-Ring provided with proper tightness and put the smaller O-Ring in around the two hooks of the opposite OWL unit that are tilted closer with each other cross the wheel-axle and then put the larger O-Ring in around the two opposite hooks that are farther apart. Choose the O-Ring size that is tight enough to provide good tension pulling the two OWL units tightly together against the wheel-axle to ensure secure installation; use a flat-tip screwdriver or similar tool to help in setting the O-ring into hooks with tension if necessary.



5) Installing the Adjustable Magnet Holder:

Locate the **Red Line** on the label of the OWL unit where the Reed Magnetic Sensor is built inside at the corresponding spot on the PC board where its two long sensitive bronze legs can be seen.

Find an optimal spot for the Magnet Holder on the bicycle front fork tubing so that the Magnet Rod can reach out pointing at the Red Line on the label of 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 excess part of the 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 bronze leg of the sensor at the Red Line on the OWL label and try to get the magnet as close as possible (within 1cm [3/8"] or less) to the Red Line to ensure sensing effect while making sure there's nothing to hit the magnet when the wheel turns.

With the two OWL units and Magnet Holder properly installed, lift up and spin the wheel one turn fast and then hold it still to test and see if they are within the effective magnetic field to activate the system to work. If both OWL units flash twice in blue, it indicates the sensors in OWL units do work and 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 with all lights OFF then.

6) Synchronizing 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 lighting images generated from different OWL units on the same spinning wheel will be displayed at the same time and same pace so clear vivid pictures can continue to produce without interfering with each other. When there are 2 or more OWL units installed on one wheel with Magnet Holder installed properly, lift up and spin the wheel swiftly one turn and then hold it still, You should see all OWL units flash all LEDs twice in blue one by one after a few seconds to represent the system returns to zero to start again at the same pace. This synchronizing step is essential to do before each riding is started so as to ensure brilliant pictures to show on the wheel. In case there's trouble with pictures display, stop and do the Synchronizing one more time and it should bring everything back to normal.

7) Replacing batteries & changing images to play new:

With new AAA-size Alkaline batteries loaded, the BK-2482 (4 batteries loaded) can run for 12 hours and BK-7082 (5 batteries loaded) can run for 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 top-cover to remove the used batteries and replace with new batteries. Then tighten the top-cover back 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 in the computer and click "OWL Image Designer" software (OWL V3-C7.2T Icon will appear on desktop). 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 top-cover. 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 on your bike wheel.