

A Key Fob for an Upside-down Lock, Version 1.2

By R. G. Sparber

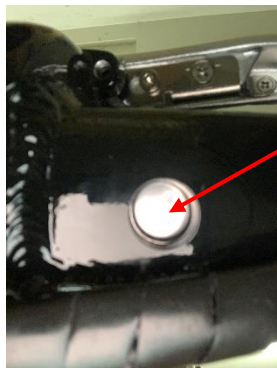
Protected by Creative Commons.¹



I recently bought a folding eBike from LECTRIC eBIKES. Their engineers got so many things right, I have to forgive their one glaring human factors shortcoming² – the position of the key.



This is the view as I look down on the crossbar. Inside is the battery. The key locks the battery in position and turns power on and off. So it makes sense to have the keyhole nearby.



Well, it is nearby, but not where you can see it. The keyhole is under the battery compartment, as shown by pointing my camera up from under the bike.

The challenge is twofold. First, I have to locate the keyhole. Then I have to orient the key correctly for it to go in.

¹ This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

² Given the quality of the bike's design, I suspect this was a trade-off of human factors versus cost.

It isn't hard to feel around under there and locate the keyhole because it is recessed. But getting the orientation of the key right is a bit of a challenge for me.



My solution was to make a key fob. I took a piece of scrap credit card and secured it to the key with a cable clamp. With the key in position, as shown below, I cut the angle.



There is nothing to see from above, so I took a picture looking up from under the bike.

First, I feel around for the keyhole. Then I pivot the fob, so it is horizontal with the red triangle facing up. It is then a matter of aligning the edge of the fob with the side of the battery compartment. The key goes right in.



A turn of the key, and I'm ready to go. Yes, the key hangs down while I ride. Don't worry, it doesn't fall out.

Do remember to remove the key before folding up the bike. While folding, a pedal can hit the key and break it off.

I welcome your comments and questions.

If you want me to contact you each time I publish an article, email me with “Subscribe” in the subject line. In the body of the email, please tell me if you are interested in metalworking, software plus electronics, kayaking, and/or the Lectric XP eBike so I can put you on the right distribution list.

If you are on a list and have had enough, email me “Unsubscribe” in the subject line. No hard feelings.

Rick Sparber

Rgsparber.ha@gmail.com

Rick.Sparber.org