espin

# OWNERS MANUAL

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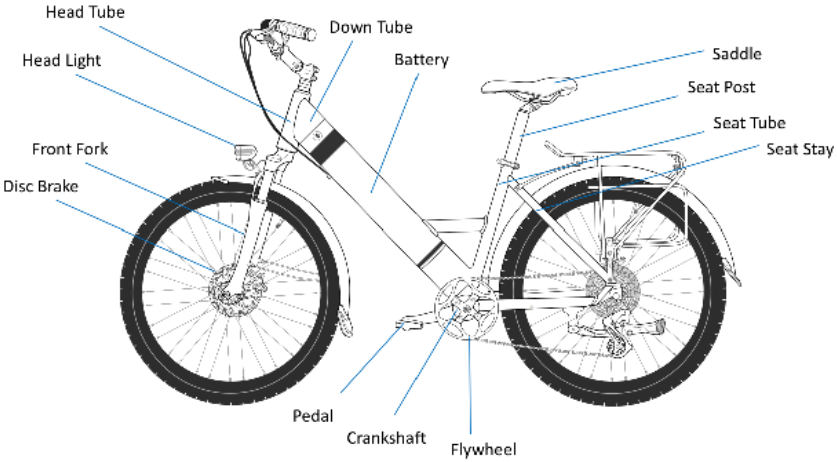
## About your new Espin Electric Bike.

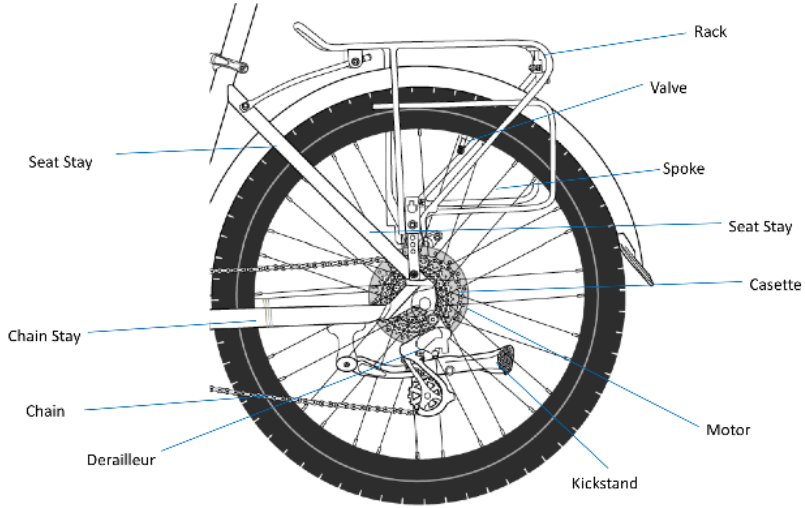
We build Espin eBikes with quality, durability, and affordability in mind. In order to safely enjoy your Espin eBike and to maintain its warranty, be sure to read and follow the user and safety instructions.

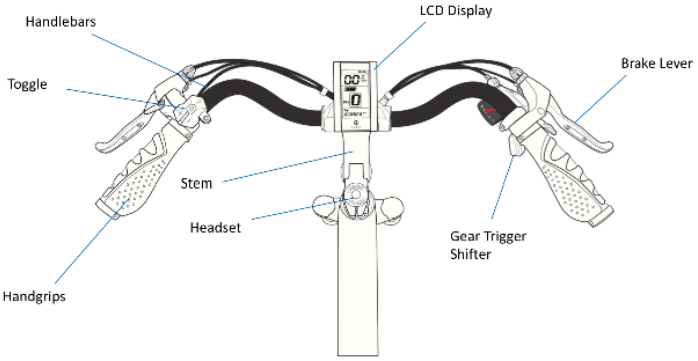
**The use of an electric bike assumes that you are familiar with and comfortable riding a regular bicycle.**

Although an electric bike feels and rides like a regular bike, you should first take the time to get acquainted with it. Espin eBikes are pedelecs, they need to be pedaled in order for the electric motor to kick in. That takes a bit of getting used to.

Electric power for the Espin eBike is provided by a 48 Volt, 14ah lithium-ion battery which weighs just 7 lbs and is integrated into the frame. It is detachable and can be charged at home, in the office, or in a class room. It powers a 500 Watt high torque electric hub motor allowing you to cruise uphill and past traffic at up to 20 mph.


Head Tube
Down Tube
Head Light
Battery
Saddle
Seat Post
Seat Tube
Seat Stay
Front Fork
Disc Brake
Pedal
Crankshaft
Flywheel

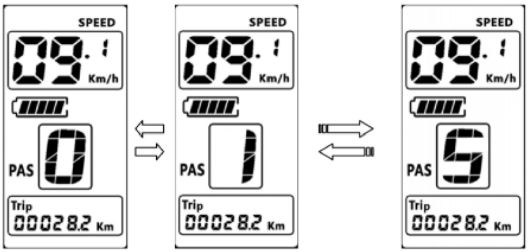

Rack
Valve
Seat Stay
Spoke
Seat Stay
Casette
Chain Stay
Chain
Motor
Derailleur
Kickstand




A toggle switch on the left side of the handle bar controls all electric functions of the Espin eBike; in particular, it allows the user to choose between 5 pedal assist levels or to switch on the LED headlight.

**PAS 1 – Low Assist**
**PAS 2 – Medium Low Assist**
**PAS 3 – Medium Assist**
**PAS 4 – Medium High Assist**
**PAS 5 – High Assist**

The digital LED panel mounted in the center of the handle bar displays the state of all electric functions including speed, battery life, pedal assist level as well as total miles traveled.



## ASSEMBLY

Carefully remove your Espin eBike and all remaining contents from the box. Please check that the following pieces are included in the box and immediately contact Espin eBikes if anything is missing:

- Espin eBike (Sport or Flow)
- Pedals (Left and Right)
- Front wheel and front quick release pin
- Saddle and seat post
- Charger and pouch
- eBike Keys
- multi-purpose tool kit

1. Remove all packing and protective material from frame and components
2. Mount the front wheel by placing the front wheel in the fork and securing it using the quick release pin. Make sure the disc brake is properly aligned.
3. Assemble the front headlight on the bolt above the front fork. Make sure to secure the nut on the back of the bolt while tightening the bolt with the 5 mm alan wrench key
4. Assemble the handle bar with the hand grips and LCD Display facing the rider
5. Attach Pedals. Note that the Left (L) pedal has a left thread meaning it is
6. tightened by turning it counterclockwise. The Right (R) pedal is tightened by turning it clockwise
7. Install seat post. Secure it tightly using the quick release lever after adjusting it to your desired height.
8. Inflate tires to the desired PSI. Recommended PSI is between 40-65
9. Do a quick check of all the components on the bike to make sure no parts have come loose during the transit and shipping of the eBike.
10. Completely charge the battery before your first ride

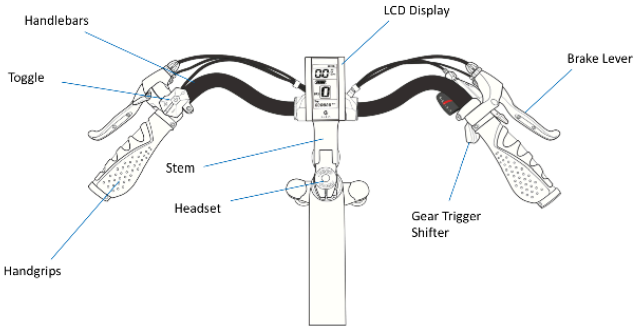
## Your First Espin ride

- Take a short ride without using the electric motor to check your balance, the weight of the Espin eBike, and the ease of pedaling. Try the gear shift and observe that you need to pedal harder as you shift into higher gears.
- Once you feel comfortable on the bike you can switch on the motor with the toggle switch of the power control system. Always start in **PAS 1**, shown on the electronic display, and pedal slowly. Notice how the motor tries to "take over" after about half a rotation of the pedals and how it stops helping you as soon as you stop pedaling. The power control system does not control the speed; your pedaling and the setting of the gear shift do - just like in a normal bike.
- Realize that the electric motor will have to work harder in higher gears. Switch to a higher power level by moving the toggle to a higher PAS level and notice the increased electric power.
- On level ground, a higher gear (and higher speed) usually require a higher power setting to maintain the speed. Be careful to gauge your speed: you will immediately notice that with the help of the electric motor you will get to higher speeds with much less effort. You will have to get used to it.
- You will notice that hills are much easier to climb than with a normal bike. But since the electric motor provides much of the climbing power, you will need to increase the power settings even in low gears.
- Downhill make sure you don't leave the power setting on the level you used uphill: the bike may race uncomfortably fast. Stop pedaling and use the brakes!

## QUICK START

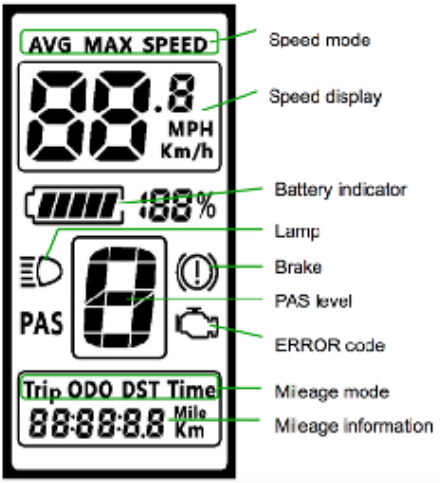
### Before your first Espin eBike ride

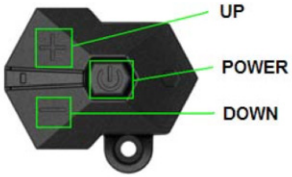
- Identify and familiarize yourself with the functions of various levers, switches, and controls as well as the electronic display




- Adjust the seat to your height so your feet can touch the ground when you don't pedal
- Check the disc brakes by pulling firmly on the two brake levers. The levers should not touch the handle
- Make sure the tires are fully inflated. Low tire pressure will cause the bike to feel unstable while you turn a corner
- Make sure the battery is fully charged and the power switch is "ON."

## Using the display
## LCD display & toggle functions:



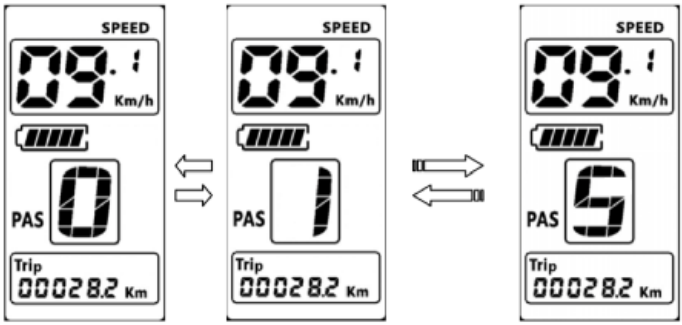




### Display setup

Press and hold the power button for 1 second or longer to turn **ON/OFF** the display. Automatic shut down of display can be configured in setting if you wish to have the display turn off after not operating for a certain amount of time.

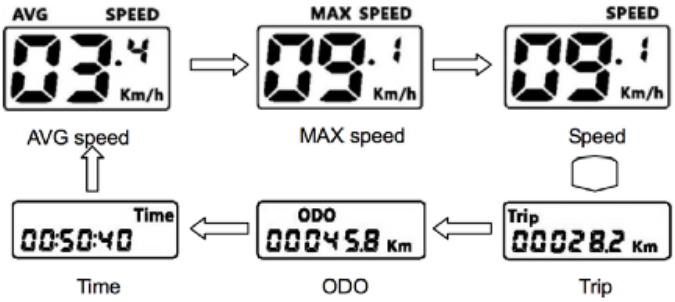
### Changing Assist Levels

Short press **[+/-]** button to change the assist level. In the pre-set option, level 0 is zero assist and level is 5 is maximum assist.




### Speed/Mileage mode switch

Short press **[POWER]** button to change the speed/mileage mode.
Speed →AVG speed→ MAX speed →ODO →Time



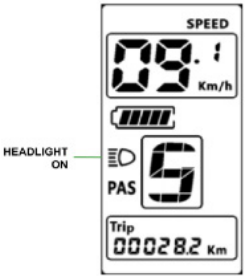

**If nothing is done in 5 seconds, display will return to default setting automatically.*

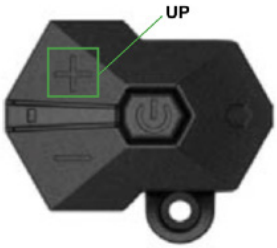
Press and hold **[+/-]** buttons together for one second or longer to reset several temporary data points including; AVG Speed/MAX speed/Trip mode/Time mode.

### Turn ON/OFF headlight

Press and hold **[+]** button for one second to turn **[ON/OFF]** the headlight. When the headlight is **[ON]** the headlight icon will show on the display.

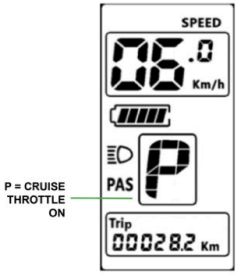
Even when the battery is low, the headlight can still be powered by the display.

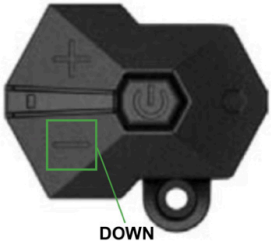



### Push mode

To activate Push mode, press and hold the **[-]** button for two seconds or longer. In Push mode, the eBike is able to achieve a speed of up to 3.7 MPH solely by motor power, which helps you push the bike up steep hills. When the Push mode is on, the display will show letter **"P"** in the travel assist levels. To exit this mode, simply let go of the **[-]** button or apply the break lever for a short period of time.



### Data cleanup

Press and hold **[+/-]** buttons together for one second or longer to reset several temporary data points including; AVG Speed/MAX speed/Trip mode/Time mode.

### parameter Setting

The parameter settings showcase the additional adjustments that can be made to the display.

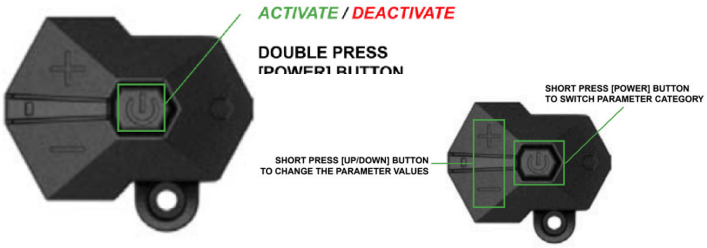
NOTE: The parameters are already set to our default settings. We do not recommend adjusting the parameters for your Espin eBike.

To activate parameter setting, double press the **[POWER]** button (interval press less then 0.3 seconds), when in parameter mode the display twinkles.

When inside the parameter settings, short press **[UP/DOWN]** buttons to change the parameter value, and short press **[POWER]** button to switch to the next paramete

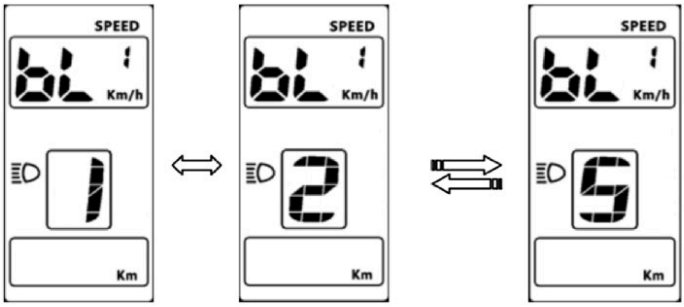
To quit the parameter settings, double press **[POWER]** button (interval press less ten 0.3 seconds).

If nothing is done in 10 seconds, the display will return to default view automatically.



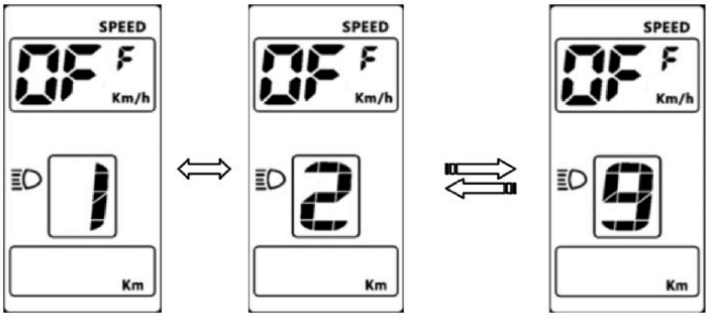
**Display brightness**

The configuration code is **[bL1]**, press **[+/-]** button to change brightness of the display. display brightness level ranges from 1-5.




**Automatic time-off**

The configuration code is **[OFF]**, press **[+/-]** button to change the value from 1-9, the numbers represent delay time (minutes) before display shuts down automatically. Default value is set at 5 minutes.

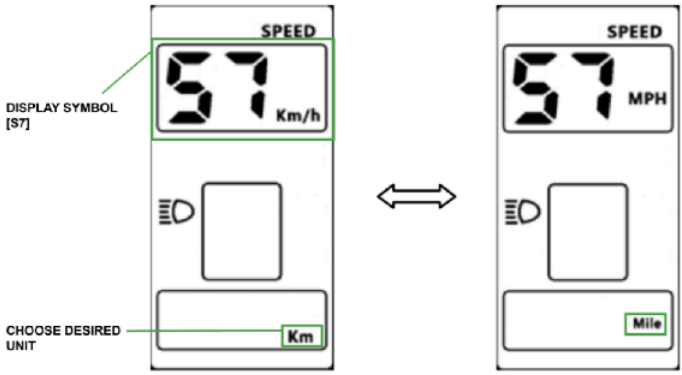


**The order of parameters category is as follows;**

- Set speed unit (km/h or mph)
- Display brightness
- Automatic time-off
- Password
- Speed limit settings (do not adjust the pre-set configurations)

## Set Speed Unit (km/h or mph)

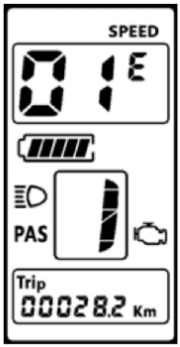
The configuration code is **[S7]**, press **[+/-]** button to choose the desired unit (km/h or mph).

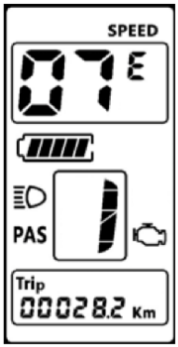


## Error codes

When your Espin detects an error, the corresponding error code will display on the screen. Based on the code display please read the error description and follow the solution provided.

| Code display | Error description | Solution |
|---|---|---|
| 01-03E | Communication error | Check wire connections |
| 04E | Battery | Battery empty, immediately re-charge |
| 05E | Brake Error | Check break cable connection |
| 06E | Throttle communication error | Check wire connections |
| 07E | Motor Error | Check the wire connection for motor |
| 08-09E | Service settings | Please contact espin eBikes |




## Service Setting

These adjustments must be performed by a technician (password needed) Please contact espin eBikes on how to proceed.

## Battery

Espin battery frames are made with customized aluminum tubes tailored for the integrated frame. Powered by LG lithium ion (Li-ion) batteries, for their light weight and high energy power density to optimize riding range.

This Espin battery can be used in both the Sport and Flow models and is also available for purchase as an additional spare part..

When the eBike is not in use, it is always a good idea to charge the battery. There is no advantage in waiting until the battery level is low before charging. In fact, the battery performs best when charged often.

**Charging time**

The charging time from a completely empty battery to fully charged is 4.5 hours.

**Battery Removal**

To remove the battery, turn the key counter clockwise until the spring loaded battery pops out of the frame.

**Charger Features**

The built-in safety features of the "smart" charger prevent the following:

- Reverse polarity
- Current flow reversal
- Current and voltage fluctuations while charging
- Over charging
- Short circuit

## Charging instructions

- Prior to connecting the charger to the battery and to an AC outlet, inspect the plugs and ports for damage.
- Locate and remove the rubber cover to the charging socket
- Always charge the battery in a dry location and indoors, away from direct
- sunlight or rain
- Charging time is approximately 4.5 hours from a completely empty battery until full
- At the end of the charging cycle, or in case of charge interruption, unplug the AC power plug first, then the DC plug from the charger.

### LED Functions

**Green light:** No battery connected or charge complete

**Red light:** Charging

# Maintenance and Warnings

- Prior to using the charger, please read these instructions completely.
- This Lithium Ion battery charger is to be used only with the original Espin rechargeable battery. Using it with other batteries may damage it or cause injury.
- If the charger is damaged or does not function properly, please contact your authorized Espin dealer. Do not attempt to open or repair it.
- The charger is designed for indoor use only. Do not expose it to high temperatures, high moisture, flammable liquids, or explosive substances.
- Any use of the charger other than described herein may cause damage or injury and will void the warranty.

## Maintenance

Regular maintenance is the key to ensuring maximum performance on your Espin. Keep your bike indoors as much as you can, maintain tire pressure, and have your Espin eBike checked by a qualified professional at your local bike shop each year. It is also important to perform daily and monthly checks. Most simple adjustments can be performed using the tool kit provided in the box.

The electrical components on Espin eBikes are built to last and come with an extensive warranty. Always refer to the Error code table to identify the error shown on the LCD display and make sure all powerlines are properly connected.

Other than the four electrical components, it's like any regular bicycle. Meaning you can get maintenance performed at any bike shop.

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