

Owner's Manual

'Raven'



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This User Manual is written and published according to the latest BZOOMA PTY LTD specifications. We will continue the policy of improvement and may make some changes in the design and specifications without notice. If you have any enquiries, please contact your local dealer or buy directly from this web site bzooma.com.au. Delivery will be via your nearest Bzooma dealer.

This manual is published by Bzooma Pty Ltd.

MANUFACTURING COMPANY PROFILE

Bzooma's partner, Changzhou FUJIANG Vehicle Co., Ltd. China, specialises in manufacturing E-bikes. They qualify for ISO9001 international quality system certification' and ISO14001 environment system certification. This is achieved through having experienced designers, engineers, and employment of advanced testing equipment. It is by this combination that they can deliver innovative high quality products, at such a competitive price.

GENERAL CAUTIONS & MAINTENANCE

- Fully charge batteries before use
- Read manual and check condition of bicycle before riding (brakes, lights, tyre pressure etc)
- Please do not disassemble or repair without technical assistance from an authorized dealer using only original parts. A poorly performed maintenance can cause damage and/or accident.





ASSEMBLY OF RAVEN

Handle Bars

- Tighten handlebar stem using a spanner
- Press the rubber after tightening





CHARGING THE BATTERY

The vehicle battery must be recharged when finished or running low. You can charge the battery either assembled or removed from the bicycle.

- Remove the battery case using the key
- Remove the battery by pulling the battery handle



With the battery removed

1. When the battery is removed, do not touch the '+' and '-' contacts, especially with wet hands or metallic objects
2. Ensure the battery is not in the inverted position while charging
3. Place the charger in a flat, secure place and connect the output plug (24V/36V terminal) to the socket in the battery box
4. Connect the input plug (110v/220v terminal) to the power outlet and the charging will start
5. After the charging has finished, unplug the input plug
6. Then unplug the output plug

When the battery is charging on the bike

1. Switch off the power and remove the key
2. Remove (rotate to open) rubber stopper in the charging hole. Plug in the output plug (24v/36v terminal) of the charger to the socket of battery box.
3. Plug in power input plug (110v/220v terminal) to household power socket to start charging
4. When finished charging, pull out power input plug
5. Then unplug the output plug

Duration of Charging

- **When charging for the FIRST time, the battery will take 8-10 hours**
- **Normal charging will take 2-8 hours**
- Red light indicates the battery is charging
- Green light indicates the battery is full
- This device has protection to avoid overcharging and damaging the battery however, it is recommended that it does not exceed 24hours

IMPORTANT TIPS WHILE RIDING

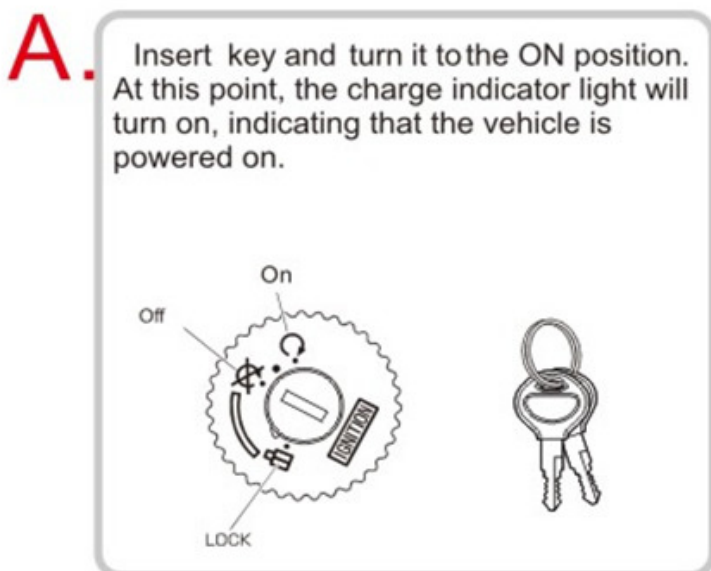
1. In order to reduce consumption, increase autonomy, and extend the motors lifespan, use the pedals during the startups and climbs
2. Do not push the throttle too fast. The bicycle should accelerate slowly, reducing consumption and risk of damage to the electrical system. It is better to use the pedals to help during startups
3. To increase security and reduce power consumption, it is advised to avoid sudden stops and startups
4. The bicycle controller has a charge overload protection. If on overload, energy will be cut automatically and restored when it returns to normal
5. While riding, avoid using the throttle as you brake, as it may damage the motor
6. The maximum load is 90kgs. Avoid riding with excessive loads. Do not ride faster than is safe under the conditions.

TIPS FOR PARKING

1. When pushing the bicycle manually, turn off the power, to avoid accidental acceleration and accident
2. It is recommended to park indoors. Do not forget to switch off the power and remove the key
3. Do not forget to switch off the power and remove the key.

OPERATING BICYCLE

How to start:



B.



Press ON/FF to start the power:
*Press 6km/h to start 6km/h speed automatic riding without pedals
*Press mode to select the pedal assistant power with pedals(Low-Med-High)
Low=60% of max speed;
Med=80% of max speed;
High=100% of mex speed
L-H is indicating the battery power



Option: Please check the LCD display manual for details.

CONTINUAL MILEAGE

Continual mileage on one time charging: 25-40km (active state)

Conditions of the testing: wind speed: level 2-3, normal atmosphere temperature: 25 degree, load: 90kg, atmospheric pressure: 3.5kg/cm, flat bitumen concrete surface; battery: full and leave factory with the bike.

Surface	Range				Driving condition
	10km	20km	30km	40km	
Flat					wind level: 2-3 normal temperature: 25°C normal load
Flat					against wind level: 2-3 normal temperature: 25°C normal load
upslope/downslope					degree of slope ≤ 2 degree wind level: 2-3 normal temperature: 25°C normal load

Max speed (25km/h) miles of journey Economy speed (10km/h) miles of journey

Power consumption of one time charge: ≤ 0.5kw.h rated load: 90kg

Economical speed: 18km/h Dead load: ≤ 30kg

The load haul is related with road, road surface, times of start-up, times of braking, wind direction, atmospheric temperature, air pressure in the tyre and correct way of charging, please note this during driving.

BASIC MAINTENANCE

- Ensure correct tyre pressure
- Tighten and correct operation of both wheels, frame and front fork
- Check bell, brakes, reflectors and gear shift operation
- If not using the bicycle for a long period of time, charge the battery at least once a month to avoid reducing its lifespan
- Avoid use of abrasive cleaners, clean with soap and water and dry with a cloth
- Do not apply lubricant on brakes, brake levers, rims, battery or controller

DIAGNOSE AND TROUBLESHOOTING

	Symptoms	Possible causes	Most common solutions
1	It doesn't work	<ol style="list-style-type: none"> 1. Insufficient battery power 2. Faulty connections 3. Key in wrong position 	<ol style="list-style-type: none"> I. Charge the battery II. Clean the connections III. Turn the key into the correct position
2	Irregular acceleration and/or reduced top speed	<ol style="list-style-type: none"> 1. Insufficient battery power 2. Loose throttle magneto 3. Damaged throttle spring 	<ol style="list-style-type: none"> I. Charge the battery II. Weld and adjust III. Contact an authorized service center
3	When powered on, the motor doesn't respond	<ol style="list-style-type: none"> 1. Loose wiring 2. Loose throttle magneto 3. Loose or damaged motor wiring plugs 	<ol style="list-style-type: none"> I. Repair and/or connect II. Weld and adjust III. Contact an authorized service centre
4	Reduced range	<ol style="list-style-type: none"> 1. Low tire pressure 2. Low or faulty battery charge 3. Driving with too many hills, headwind, braking, departures and or excessive load 4. Battery discharged for long period of time, without regular charges, aged or damaged 	<ol style="list-style-type: none"> I. Adjust the tire pressure II. Check the connections and/or fully charge the battery III. Help with the pedals IV. Replace the battery V. Make a prolonged battery charge
5	The battery won't charge	<ol style="list-style-type: none"> 1. Charger not well connected 2. Battery cases fuse blown 3. Battery wiring disconnected or with a bad contact 	<ol style="list-style-type: none"> I. Adjust the connections II. Replace the fuse III. Reconnect/repair the wiring
6	Driving wheel makes unusual noise	<ol style="list-style-type: none"> 1. Damaged 	<ol style="list-style-type: none"> I. Replace the bearing II. Adjust/replace the

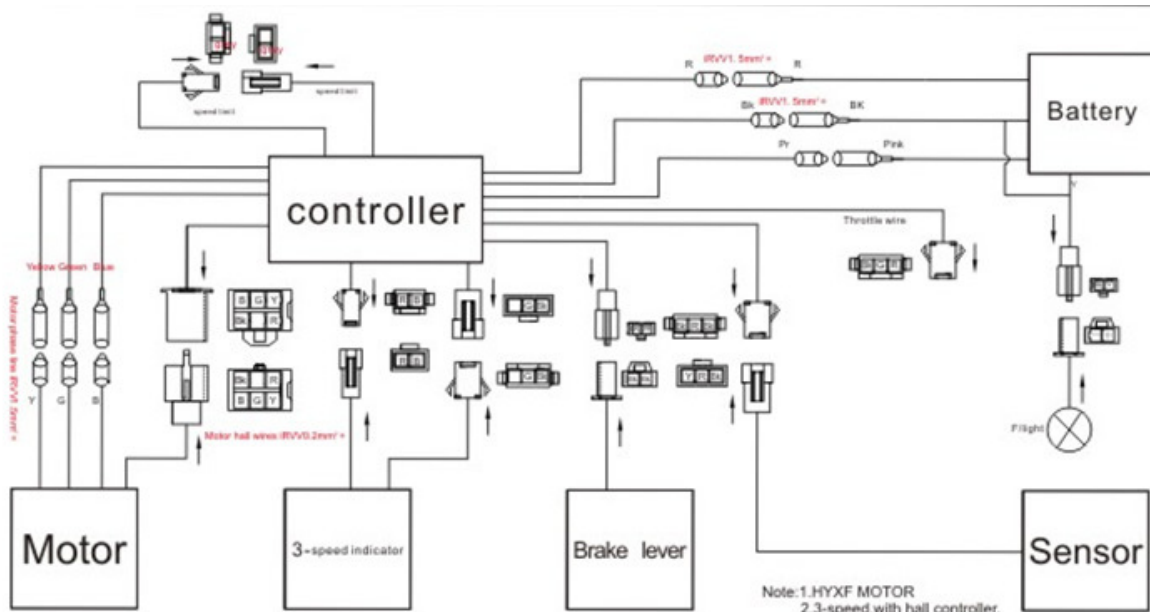
		motor bearing 2. Bent or misaligned rim	rim
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For your safety, do regular maintenance and tightening checks. If you find any abnormalities, repair immediately

RECOMMENDED TORQUE VALUES FOR THREADED FASTENERS

No	Parts	Torque required (N.M)
1	Handlebar	18-20
2	Handlebar-stem	18-20
3	Saddle	18-20
4	Seat-pillar	18-20
5	Front wheel	16-25
6	Rear wheel	25-35
7	B.B Parts	35-55

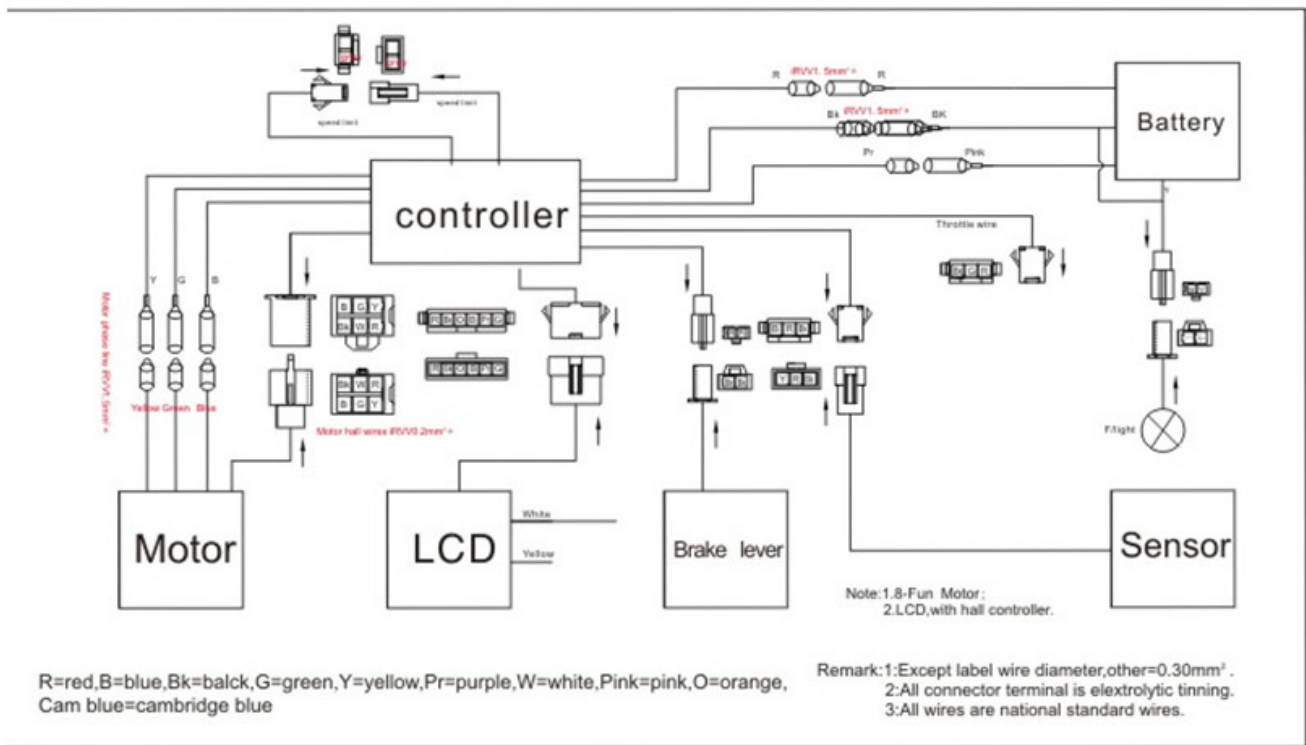
WIRING DIAGRAM FOR RAVEN WITH 3 SPEED DISPLAY



R=red,B=blue,Bk=balck,G=green,Y=yellow,Pr=purple,W=white,Pink=pink,O=orange,
Cam blue=cambridge blue

Remark: 1:Except label wire diameter,other=0.30mm².
2:All connector terminal is electolytic tinning.
3:All wires are national standard wires.

WIRING DIAGRAM FOR RAVEN WITH LCD DISPLAY



BATTERY MAINTENANCE

Frequent braking and starting, riding up hill, travelling against a strong wind, starting from a standstill and riding on rough or muddy roads and carrying more than one person, or heavy loads will consume extra battery power and shorten the range.

Tips to prolong the battery life:

1. Frequent braking-try to look ahead and coast rather than stopping and starting frequently.
2. Riding uphill or against a wind, you should pedal to supplement the battery power.
3. When starting from a standstill, use the pedals to help bring you up to speed.
4. When the monitor indicates the battery voltage is low, switch to manual power and avoid using the battery, so you don't shorten the battery life.
5. If the battery is being stored, remove the battery from the bicycle and recharge it every month.

USEFUL TIPS

This manual only explains the bicycle's use and functions and should not be used as reference for its inspection. The images shown may differ from the actual model presented in the shops. We reserve the right to change the model without prior notice due to technical improvements. This vehicle has a top speed limiter. For security reasons, its removal is strictly prohibited.

WARRANTY

Bzooma Pty Ltd Limited Warranty

Bzooma Pty Ltd provides this Limited Warranty to the original purchasers of new Bzooma machines in Australia and New Zealand.

Bzooma Pty Ltd guarantees the machine, power base including Motor, Battery and charger, against defects in materials and workmanship for a period of one (1) year, from date of delivery to the original purchaser. Damage caused by accident or obvious abuse is not covered by this warranty. Warranty does not include the batteries or tyres as subject to rider taking care and maintenance of the vehicle.

To make a claim covered by this warranty the purchaser must contact an authorised BZOOMA Pty Ltd Dealer for inspection and service. Indications of abuse, accident, or unauthorised tampering with the machine power base mechanical, or electrical equipment, will void any claim. Bzooma Pty Ltd is not responsible for transport costs associated with obtaining service or repairs under this warranty.



TECHNICAL SPECIFICATIONS

Motor Power	250 Watt Brushless hub motor
Battery	36 Volt 10 Amp Lithium
Derailleur	Outer 6 speed Shimano
Charging Time	From 4 - 6 hours
Life of Battery	Over 1000 charge cycles
Wheel	26" Magnesium
Saddle	Sport type
Top Speed	50 KPH
Range on single charge	Up to 60 Klm
Max. Weight Capacity	90 kilograms
Tyre	Kenda 125
Brake System	Hydraulic disk front and rear