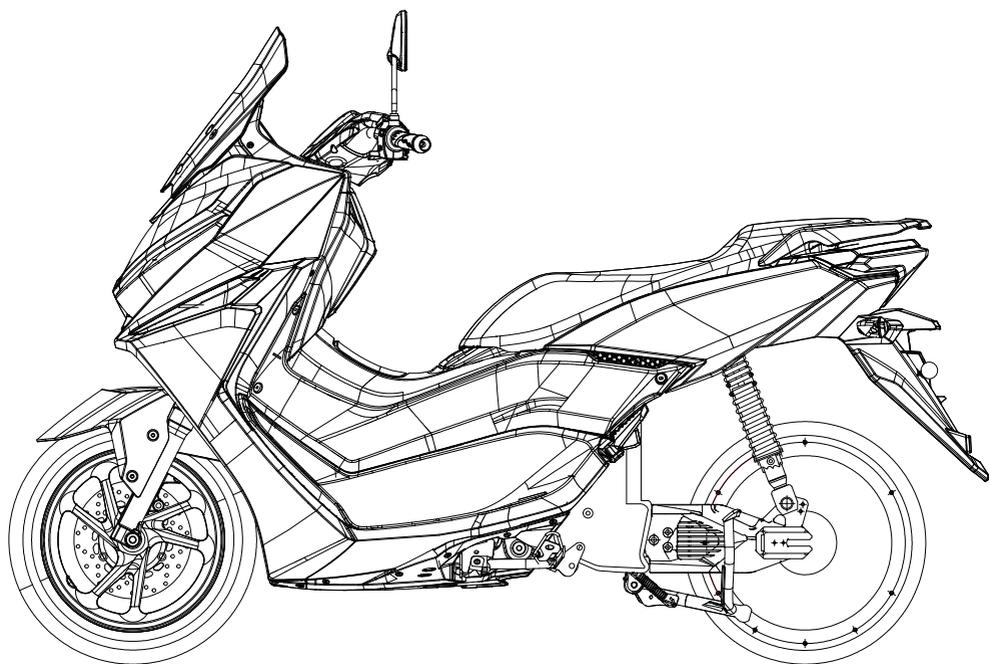


FMDFO2



SERVICE MANUAL

ELECTRIC SCOOTER

v2.0

FMDFO2



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INTRODUCTION

Thanks for your purchasing of this vehicle. This model is designed for safety, built for durability, and perfected for daily street use. The unique vehicle design, enrich of stylish and personality, represents your outstanding taste and favor to pursue the state of the art living attitude.

This manual describes the correct usage of this motorcycle including safety riding, simple inspection methods and so on. For a more comfortable and safety riding, please read this manual carefully. If any questions concerning the operation or maintenance of your vehicle, please consult a dealer.

IMPORTANT MANUAL INFORMATION

In this manual with some important information is distinguished by the following notations:

⚠ WARNING

Is a WARNING which has to be followed. Refusing to follow can lead to severe injury or death to the operator.

CAUTION

A CAUTION indicates a important information to avoid damage to the vehicle.

CAUTION

- **Please always put this manual with vehicle for rider maintenance/ dealer tracking of service records even if vehicle is being sold.**
- **This manual contains the most of the vehicle information, however, the maker will continually improve it's product design and quality that lead to difference between the manual and vehicle . If you have any questions concerning this manual, please consult your dealer.**

⚠ WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATION THIS VEHICLE. ONLY OPERATE THE VEHICLE UNTIL YOU HAVE COMPLETELY AWARE OF ADEQUATE KNOWLEDGE OF CONTROLS AND OPERATION FEATURE AND YOU HAVE BEEN TRAINED IN SAFE AND PROPER RIDING TECHNIQUES. PERIODIC INSPECTIONS, WELL MAINTENANCE AND GOOD RIDING SKILLS, WILL ENSURE YOUR SAFETY RIDING AND INCREASE THE PRODUCT RELIABILITY OF THIS VEHICLE.

SAFETY INFORMATION

THIS VEHICLE ARE TWO WHEEL SINGLE TRACK VEHICLES. THE USE OF SAFETY AND OPERATION MAY IN DIFFERENT RESULT BY THE USE OF PROPER RIDING TECHNIQUES OF THE OPERATOR. TO REMIND OF OPERATOR, WHO SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE RIDING:

HE OR SHE SHOULD:

- WELL TRAINED AND FAMILIAR TO ALL THE ASPECTS OF VEHICLE OPERATION.
- FULLY READ AND AWARE OF MAINTENANCE REQUIREMENTS THAT NOTED IN THIS OWNER'S MANUAL.
- OBTAIN QUALIFIED TRAINING & LEGAL LICENSE FOR OPERATION OF THIS VEHICLE.
- WELL AND PROFESSIONAL MAINTENANCE SERVICE FOR OPERATOR AND CERTIFICATED REPAIR SHOP/DEALER TO ACQUIRE GOOD MECHANICAL CONDITIONS OF VEHICLE.

Safe riding

- Always pre-check your vehicle before riding is important to prevent an accident.
- Please follow the maximum loads limited of operator and passenger.
- Many accidents happening to motorists are caused by car drivers who fail to recognize them. Therefore, to will be very effective to reducing the change of this kind of accidents.

Therefore:

- Wear bright colored and protective clothes.
- Operate the turning signals before turning and slow down the speed when approaching and pass through the intersection
- Keep proper distance to other Motorists, and let them be aware of your location
- Know your skills and limits
- Never lend your vehicle to others who are not qualified for riding.

- Always follow the legal speed limits on the vehicle and traffic law.
- The posture of the operator and passenger is important for proper control. A proper riding posture can keep vehicle in balance while riding.
- Operator should sit up-right with two hands on the handle bar and both feet on the footpegs while driving.
- The passenger should make sure or the operator with feet on the footpegs.
- Driving after consuming alcohol or drugs is strictly prohibited.
- This vehicle is designed for onroad use only. It is not suitable for off-road use.
- Make sure that accessories and cargo are securely attached to vehicle before riding.
- Never attach any large or heavy items to the hand lebar, front fork, or front fender. Such items can create unstable handling or a slow steering response.

Accessories

Genuine accessories have been specifically designed for use on this vehicle. If need, please contact with dealer for detail. Since the maker can not test all other accessories, you are personally responsible for the proper selection, installation and use of non OEM accessories.

Keep the following guidelines in mind, when mounting accessories.

- Never install accessories or carry cargo that would influence on the ground clearance, limit suspension travel, steering, or obscure lights or turning lights, reflectors.
- Accessories on the handle bar/front suspension area will cause bad influence on steering the vehicle. If you will install accessories, please keep it as light in weight and not interfere on steering the vehicle. This vehicle is for On-Road transportation purpose only, please do not install any of extended cargo carrier as sully, that will make vehicle unstable in cross winds and vehicle turns.
- While equipped with electrical acstores, please consult qualified stores, to make sure such items will not exceed the capacity of the vehicle's electrical system. Unproper installation of such items may cause a dangerous loss of lights, lower engine power or even damage the vehicle.

Protective clothing

Properly clothing will keep you safe from potential accidents:

- Always wear an approved helmet with face shield to protect your eye from dust and rain drop.
- The wear of a proper jacket, shoes, gloves etc., provides better protection, reducing the degree of injury from unexpected accidents.
- Never wear loose clothes, otherwise they could catch on the control levers or wheels and cause injury or an accident.

Modifications

Modifications made to this vehicle which are not approved by the maker, or the removal of original equipment, may make the vehicle unsafe for use and can cause severe personal injury. Modifications may also make your vehicle illegal to use and the guarantee is void.

Loading and accessories

Adding accessories or cargo to your vehicle will cause a different weight distribution of the vehicle and influence the steering & balance. It may cause the possibility of an accident. Be extremely cautious and follow the limitation below when equipped with accessories / cargo. Below are some guidelines to follow if loading cargo or adding accessories to your vehicle.

Loading

The total weight of the operator, passenger (when allowed), accessories and cargo must not exceed the maximum load limit.

Minimum load (vehicle not included)
150 kg

When loading within this weight limit, keep following points in mind:

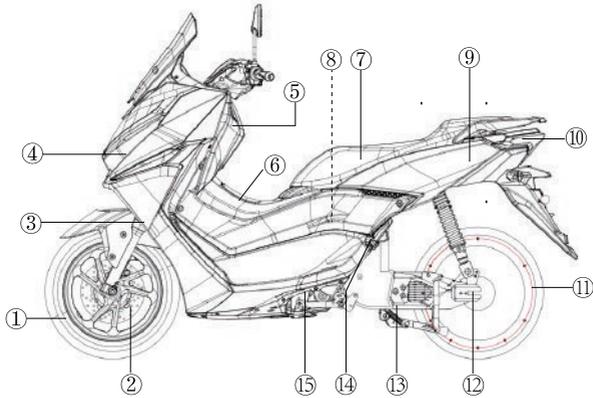
- Cargo and accessory weight should be kept as low and close to the vehicle as possible. Make sure to distribute the weight as evenly as possible on both sides of the vehicle to minimize imbalance or instability.

OTHER SAFE-RIDING POINTS

- Turn the signal before making turns.
- When raining or across on run on the wet road, Iron Plates, keep your speed low, slightly using braking to avoid slipping or even fall down.
- Be careful when passing parked cars. A driver might not see you and open a door in your path.

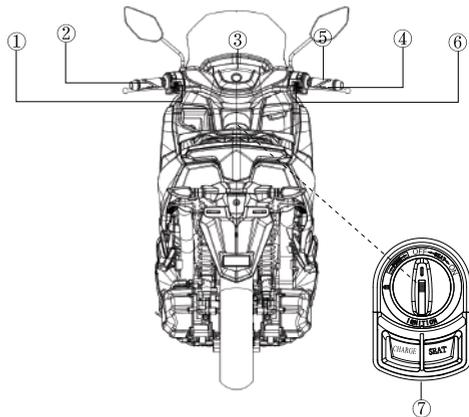
DESCRIPTION OF THE VEHICLE

No.	Name	No.	Name
1.	Front wheel	9.	Controller (inside)
2.	Front disc brake	10.	Tail/brake light
3.	Front turn signal light	11.	Rear wheel
4.	Headlight	12.	Rear disc brake
5.	Electric door lock	13.	Mainstand
6.	Charging socket	14.	Passenger footrest
7.	Seat	15.	Sw flameout side stand
8.	Battery (inside)		



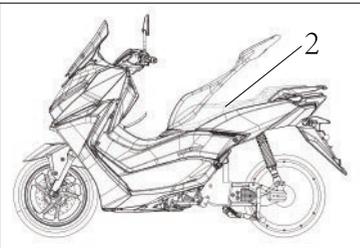
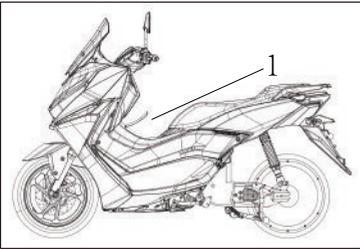
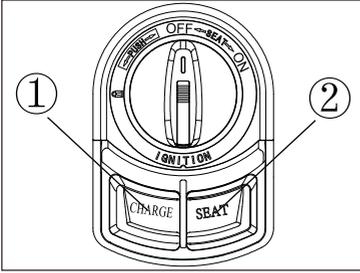
CONTROLS AND INSTRUMENTS

No.	Name
1.	Left handlebar switches
2.	Rear brake lever
3.	Dashboard unit
4.	Front brake lever
5.	Throttle grip
6.	Right handlebar switches
7.	Main switch



INSTRUMENT AND CONTROL FUNCTIONS

MAIN SWITCH



The main switch controls the ignition and lighting systems, and also used to lock the steering. The various positions are described as below.

On

All electrical circuits are supplied with power, the engine can be started. The key cannot be removed.

Off

All electrical systems are off. The key can be removed.

Steering lock

The steering is locked, and all electrical systems are off. The key can be removed.

Lock the steering

1. Turn the handlebar fully to the left.
2. Insert the key into the main switch.

3. Turn the key while you apply pressure to it, counterclockwise in the  position. If the lock does not engage immediately, move the handlebars back and forth slightly.
4. Remove the key.

Unlock the steering

1. Insert the key into the main switch.
2. Turn the key clockwise to the  position. If the lock does not engage immediately, move the handlebars back and forth slightly.

WARNING

Never turn the key to  or , while the vehicle is moving, otherwise the electrical systems will be switched off, which may result in loss of control or an accident. Make sure that the vehicle is stopped before turning the key.

Charging Port

To open the charging port

1. Press CHARGE () to open the charging port

SEAT

To open the seat

1. Press SEAT () to open the seat
2. Fold the seat up (1).

To close the seat

1. Fold the seat down, and then push it down to lock it in place.

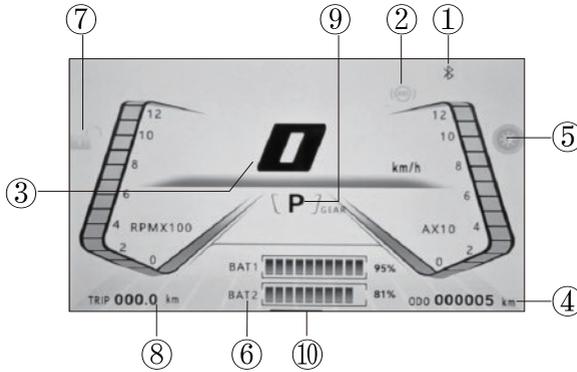
CAUTION

- **When you close the seat by force or strike, parts can be damaged.**
- **Make sure that the seat is locked before driving or when you park the vehicle.**

DASHBOARD UNIT (CARPLAY)

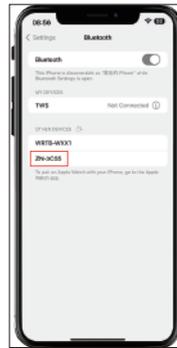
No.	Name	No.	Name
1.	Bluetooth	9.	Battery 1/Battery 2 SOC
2.	ABS	10.	Screen anti-mis-touch lock
3.	Speed	11.	TRIP
4.	ODO	12.	Gear
5.	Background Light	13.	Menu

(Press the high/low beam switch button five times within five seconds to reset the trip mileage.)

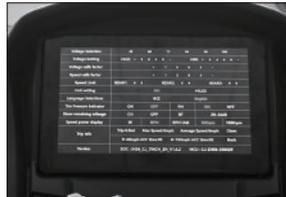


Carplay Operating Instructions

1. Press the menu button to access the CarPlay screen. (10)
2. Turn on the phone Bluetooth and select your car's device.
3. Pairing successful. CarPlay is connected.



Operating Instructions

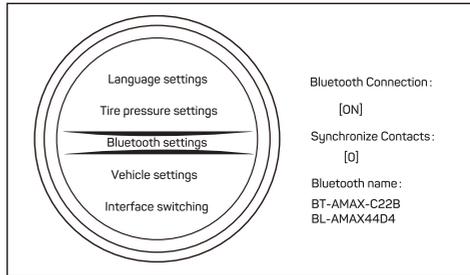
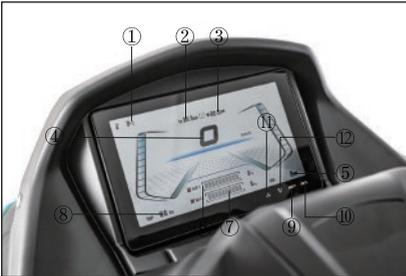


After the instrument panel lights up, press and hold the top-right corner of the screen(1) for about five seconds to enter the settings menu.

DASHBOARD UNIT (TFT)

No.	Name	No.	Name
1.	Temperature	7.	Battery 2 SOC
2.	Tire Pressure(F)	8.	TRIP
3.	Tire Pressure(R)	9.	Meter setup key
4.	Speed	10.	Select Key
5.	ODO	11.	Up key
6.	Battery 1 SOC	12.	Down key

(Press the high/low beam switch button five times within five seconds to reset the trip mileage.)

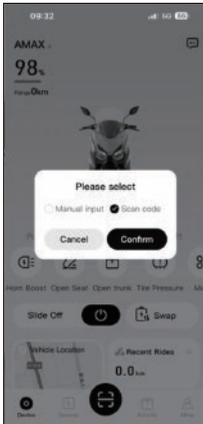


Operating Instructions

1. Long press the **SET** key to enter the setting page.
2. Press the up and down arrows to select the settings.
3. Then press the **SET** key to set the selection.
4. Finally, press **SEL** key to confirm.
5. Setting for clearing subtotal mileage: long press the return key to clear subtotal mileage.

IOT APP OPERATING INSTRUCTIONS

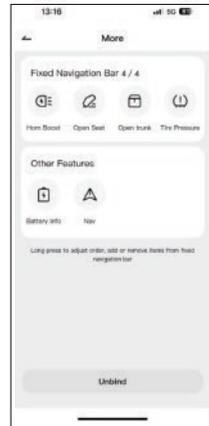
1. Install the APP through the download address of Android mobile phone (the APP is currently on the shelves and is still under review. Android system can only be downloaded through the installation package. After searching for FR ANK MORIN on the Apple Store in the IOS system, you can download it only after searching for FRANK MORIN in A pple Store). download address of Android mobile phone(<https://www.pguyer.com/d80wD1a6>)
2. Register and log in to your account.
3. Purchase package binding devices
 - 3.1 Enter (Service) Click on the model package on the page to enter the details page, Click "I want to use the vehicle" Confirm the rental package order
 - 3.2 After the backend order review is approved, you can enter the order details page to bind the vehicle
 - 3.3 scanning **【Device management > Device list】** The vehicle QR code on the page enters the vehicle activation page, Click after uploading the vehicle photo "Activate Vehicle" "Activate the vehicle(1,2)
4. Enter your login password and click Unbind(3).
5. Homepage (4)
6. Battery Information Page (5)
7. User center (6)



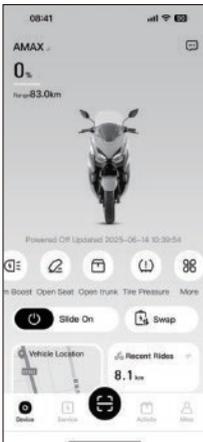
(1)



(2)



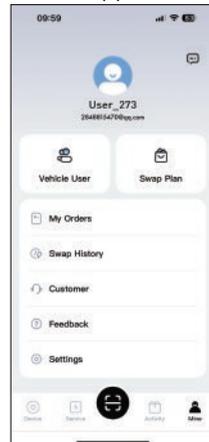
(3)



(4)



(5)



(6)

QR CODE LOCATION



- ① Dash cam download code ② Vehicle pairing code

Operating Instructions(Dash cam download code)

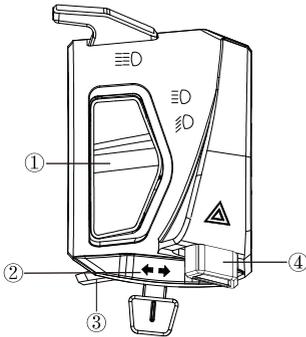
1. Scan QR code to get our app
2. Turn on the mobile phone and set up a wireless local area network (WLAN). Find the WiFi starting with TCDVR_wifi_XXXX in the network list to connect. The initial password is 12345678 (only the password is required for the first connection).
3. Open the (PoadCam)APP and you can view the connected WiFi page(as shown in the figure 1).
4. Click the circular button in the middle to jump to the recorder management interface.
5. Brief introduction to the functions of the driving recorder APP (as shown in the figure 2)
6. Setup page (as shown 3)



INSTRUCTIONS FOR THE REMOTE CONTROL

	Key-press Icon	Function Description		
	<p>ON/OFF</p>	<p>1.Unlock the vehicle:Press the symbol key ON/OFF on the remote to turn on ACC. 2.Unlocked State:Press the ON/OFF button on the remote control to shut down the entire vehicle's power system.</p>		
	<p></p>	<p>1.One-touch vehicle locator:Press the vehicle locator button once – the hazard lights will flash four times with 2-3 second intervals between flashes.The IoT speaker emits a pulsed beep and stops simultaneously with the hazard lights.</p>		
	<p></p>	<p>1.In vehicle ON mode: Press the seat unlock button once to release the seat lock. 2.Press and hold twice within 5 seconds to open the trunk lock.</p>		
	<p>SET</p>	<p>Anti-theft system setup procedure: (Operation must be performed with the vehicle fully powered off) Factory default is manual lock mode</p>		
	<p>ON/OFF + </p>	<p>1.Press and hold both buttons simultaneously until the IoT speaker beeps three times to activate manual anti-theft mode. 2.In manual anti-theft mode: After powering off the vehicle completely, press the seat unlock button  to engage the anti-theft lock.</p>		
<p>ON/OFF + </p>	<p>Press and hold both buttons simultaneously: The IoT speaker beeps three times to activate Auto Anti-Theft Mode upon power-off.</p>			

HANDLEBAR SWITCHES(Left)



1. High / Low beam switch
2. Turn signal switch
3. Horn switch
4. Double flash

1. High / Low beam switch

Set this switch to for the high beam and for the low beam.

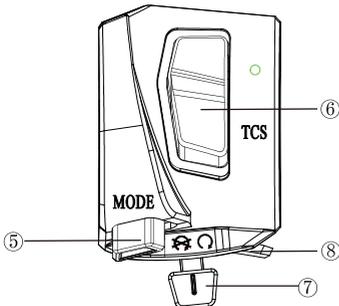
2. Turn signal switch

To signal a righthand turn, push this switch to
To signal a lefthand turn, push this switch to
When released the switch returns to the center position. To cancel the turn signal lights, push the switch in after it has returned to the center position.

3. Horn switch

Press this switch to sound the horn.

HANDLEBAR SWITCHES(RIGHT)

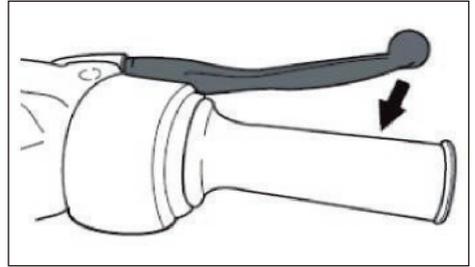


5. Gear switch
6. Traction Control System
7. Ignition Switch
8. P-file

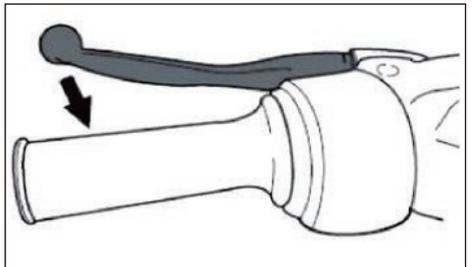
Caution:

Before starting the vehicle check the notes in the user manual. If you hold this switch and turn the throttle grip, the reverse will be activated and the vehicle will slowly start to roll backwards.

BRAKE LEVER



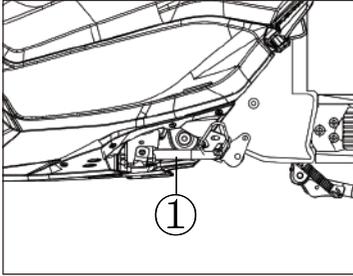
The front brake lever is located on the right handlebar grip. To apply the front brake, pull this lever toward the handlebar grip.



The rear brake lever is located on the left handlebar grip. To apply the rear brake, pull this lever toward the handlebar grip.

SW FLAMEOUT SIDE STAND

The side stand (1) is located on the left side of the vehicle. Release the sidestand by using your feet to step on the bracket of side stand to up-right position to stand the vehicle.



CHARGER AND CHARGING PORT

The charging port is located at the the seat front (1).



220V AC charging pile

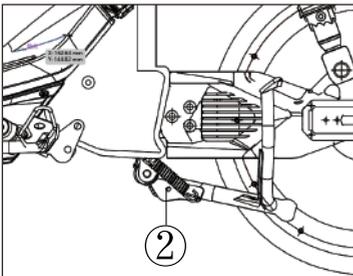


CAUTION

1. Once put flameout down with signal on, the vehicle cannot run;
2. Once turn back the flameout with signal off, the vehicle can run

MAIN STAND

The main stand (2) is located under the vehicle. Release the main stand by using your feet to step on the bracket and pull the vehicle backwards of side stand to upright position to stand the vehicle.



CHARGE THE BATTERY

1. Turn the ignition off.
2. Plug the charger into the vehicle's charging port (1).
3. Plug the power plug into an AC outlet.

CAUTION

- **If you do not want to use the vehicle for a longer period of time, the power supply should be interrupted and the battery unplugged. The battery must be charged regularly during this period.**
- **Regular charging keeps the battery from deep discharge. Please note that a deeply discharged battery is irreparably damaged and must be replaced, so the battery should never be fully discharged.**
- Charge the battery 3 to 5 hours, depending on the previous operating time of the vehicle.
- Charge after each trip is recommended to ensure the full availability of your vehicle at all times.
- Charge the battery only in a dry and clean environment.
- Do not charge if the charging port is wet.
- Do not cover the scooter and/ or charger when charging.
- The life and performance of a battery depends on its age, the care and how often it was in use.

CAUTION

The main stand with auto-rebound system. Make sure your vehicle have been park well are stable enough to stand the vehicle.

- The batteries have a very low selfdischarge and a very low memory effect so they can be part charged.
- The best way to store the battery is at 7 - 15° C room temperature and dry environment, this reduces the self-discharge.
-
- Never dispose of accumulators over household waste.
- Never touch the battery contacts with moisture.
- The best operating temperature is between 5° C and 30° C.
- The driving behavior and various external factors have an influence on the range.

IDEAL CONDITIONS

Flat terrain, constant speed - no full load, no head wind, correct tire pressure, driver weight <70 kg, no payload, approx. 20° C ambient temperature.

BATTERY CONSERVATION

Lithium batteries have a freezing point of approx. -20° C to -25° C, depending on the state of charge. As with conventional batteries, a lithium battery loses up to 40% of its capacity starting at approx. 0° C. At approx. 20° C and 100% charge, a lithium battery loses approx. 30% of capacity per month (poor storage) At approx. 7° C and 70% charge, however, a lithium battery loses only approx. 5% of capacity per month (optimal Storage).

CAUTION

If a BMS (Battery Management System) is installed in a Lithium battery pack, the selfdischarge is comparable to a conventional battery in storage condition (Caution: Overcharging). The BMS system reduces the battery capacity but is necessary and mandatory for cell balancing. (uniform cell discharge).

disconnecting the battery

- To unplug the battery, Move the botton from ① to ② and lift up.



OPERATION AND IMPORTANT RIDING POINTS

⚠ WARNING

Before riding the vehicle, please make sure that you are fully familiar with all operating controls & their functions before riding. To consult a dealer shop if you not thoroughly understand.

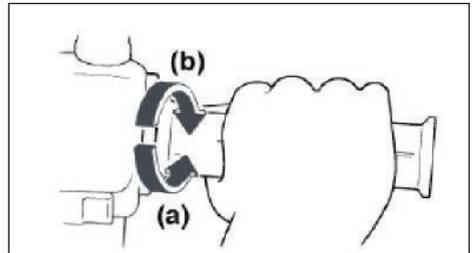
STARTING THE ENGINE

To start the engine you have to turn the main switch to  and press the starting switch.

STARTING OFF

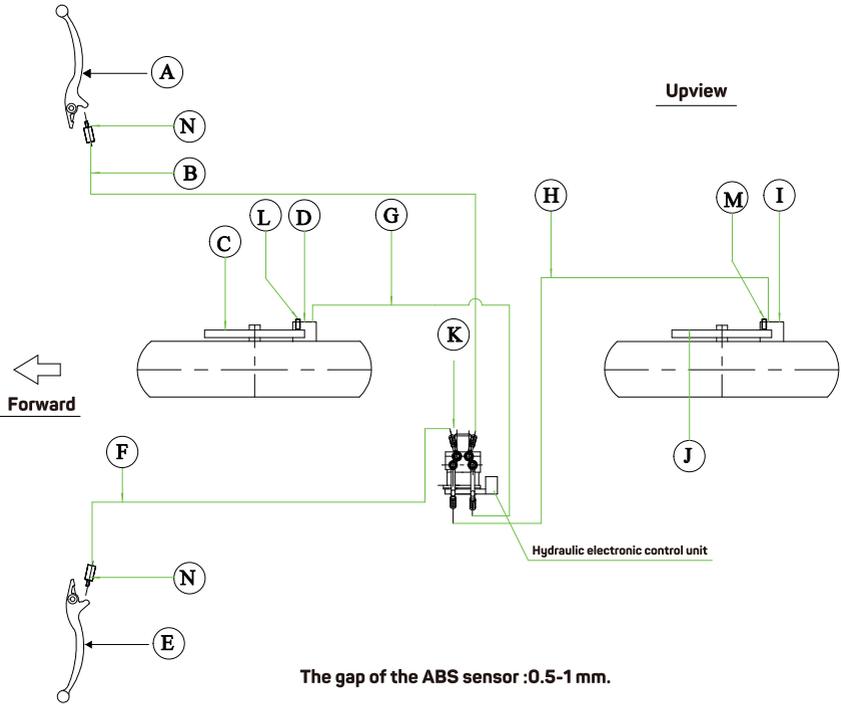
1. Sit astride the seat, and then adjust the rear view mirrors.
2. Switch the turn signal on to the direction you wish to turn.
3. Check for oncoming traffic.
4. Slowly open the throttle to accelerate.
5. Switch the turn signal off.

ACCELERATION / DECELERATION



The speed can be adjusted by opening and closing the throttle. To increase the speed, turn the throttle grip in direction (a). To reduce the speed, turn the throttle grip in direction (b).

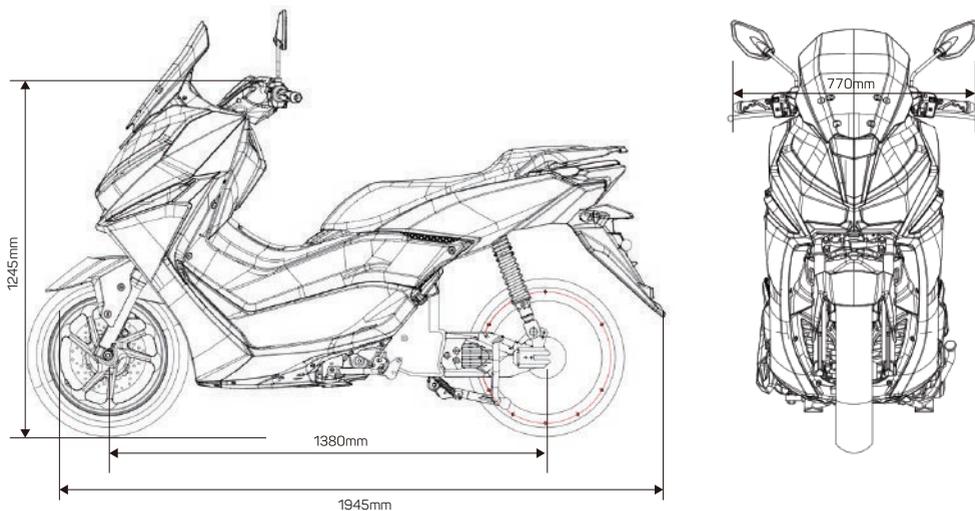
ABS SCHEMATIC DIAGRAM



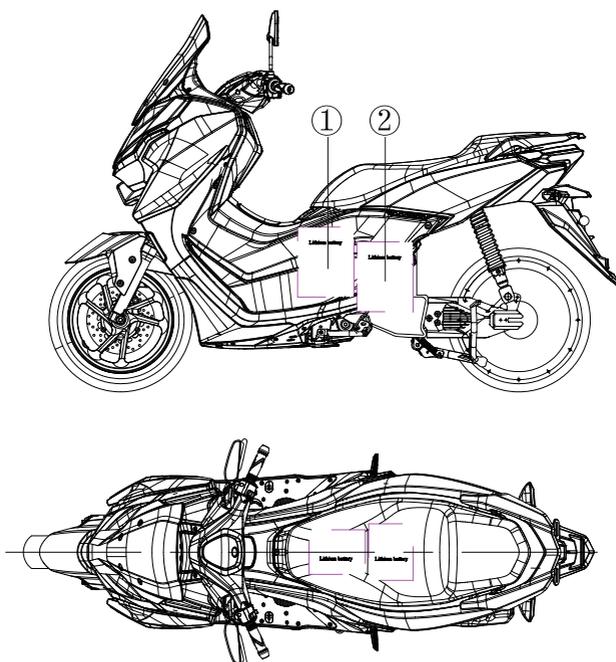
POS	Description	POS	Description
A	Front brake Lever	H	Rear brake oil pipe
B	Front brake oil pipe	I	Rear brake caliper
C	Front brake disc	J	Rear brake disc
D	Front brake caliper	K	Hydraulic electronic control unit
E	Rear brake Lever	L	Front wheel speed sensor for ABS
F	Rear brake oil pipe	M	Rear wheel speed sensor for ABS
G	Front brake oil pipe	N	Brake power-off switch

SPECIFICATIONS

DIMENSIONS



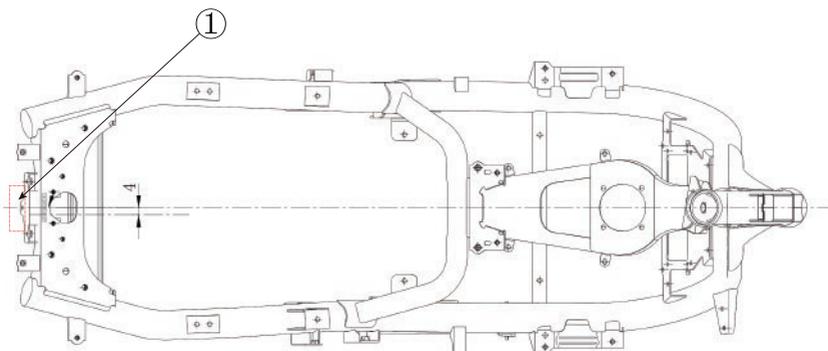
BATTERY INSTALLATION POSITION



VEHICLE IDENTIFICATION NUMBER(VIN)

Location Of Vehicle Identification No.

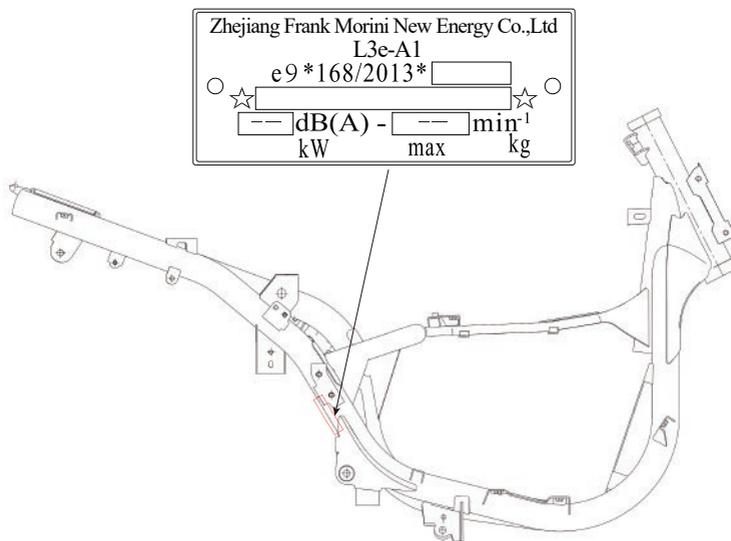
Hammered on the rear side of the Chassis (①)



Location Of Vehicle Identification No.

R-Right side of the vehicle

Riveted on the right side of the Chassis



PARAMETER

MOTOR	
Type	HUB Motor
Voltage	72 V
Maximum power	6KW
Maximum torque	230N.m
Maximum speed	120 km/h
BATTERY	
Type	Lithium
Voltage Capacity	74 V / 45 Ah*2
TRANSMISSION	
Type	HUB Motor
CHASSIS	
Type	Steel tube
TIRE	
Front tire	
Rim	MT 2,75×12
Tyre	110/70-13
Tyre air pressure	2.2 bar-2.3 bar
Rear tire	
Rim	2,75×12
Tyre	130/70-13
Tyre air pressure	2.2 bar-2.3 bar
The selected tired pressure depends on the load	

PARAMETER

BRAKE SYSTEM	
Type	ABS
Size front	230 mm
Operation front	Right hand
Size rear	220 mm
Operation rear	Left hand
Charger	
Parameters	84V10Aplug , 220V
SUSPENSION	
Front SUSPENSION	
Type	Telescopic fork
Spring / Shock absorber type	Hydraumatic
Rear SUSPENSION	
Type	Unit swing
Spring / Shock absorber	Hydraumatic(5-stage regulation)
LAMPS	
Headlight	12 V, 35 W / 35 W
Parking light in front	Glass base W5W
Tail light / Brake light	LED
Front turn signal light	
Rear turn signal light	
License plate light	

FMDFO2