

# Content

1. About xiao xiang electric APP

2. Xiao xiang electric APP user guide

2.1 APP operating condition

2.2 Blue tooth connection

2.3 Digital dashboard of battery status

2.4 Read the basic information of battery

2.5 Indication of battery core voltage

2.6 Protecting information of series batteries

2.7 Indication of lithium battery protection parameter

2.8 Parameter setting of lithium battery protection

## 1. About Xiao xiang electric APP

Xiao xiang electric APP was developed for lithium batteries, the main function including: (1) reading the voltage of each lithium battery, (2) charge & discharge current , (3) protection state (4) the parameter setting of lithium battery protection board, so that users can clearly understand the health state of lithium battery, to make sure the users can use the lithium battery safely, we added many functions such as dash board and GPS measurement and battery status etc., so that user can better understand the state of driving,

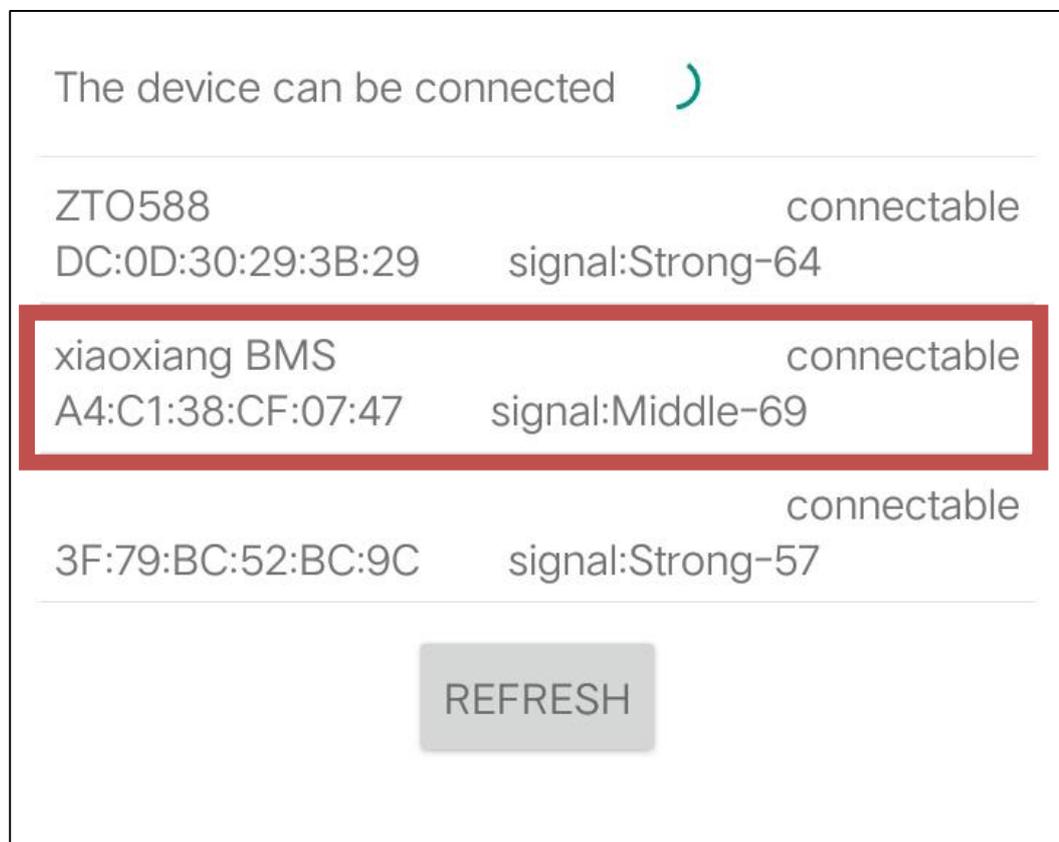
## 2. Xiao xiang electric APP operating instruction

### 2.1 APP operating condition

This APP can be installed in Android version 4.3 or above, which can be connected with blue tooth version 4.0 or above, after getting permission of blue tooth and GPS, it can run,

### 2.2 Blue tooth connection

Open the connection interface to scan blue tooth 4.0 device, then click "connect to device", APP will automatically verify that whether this software support the device, if support the device, it will turn to dashboard interface, if not supported, it will prompt users then disconnect,



## 2.3 2.3 Digital dashboard of battery status

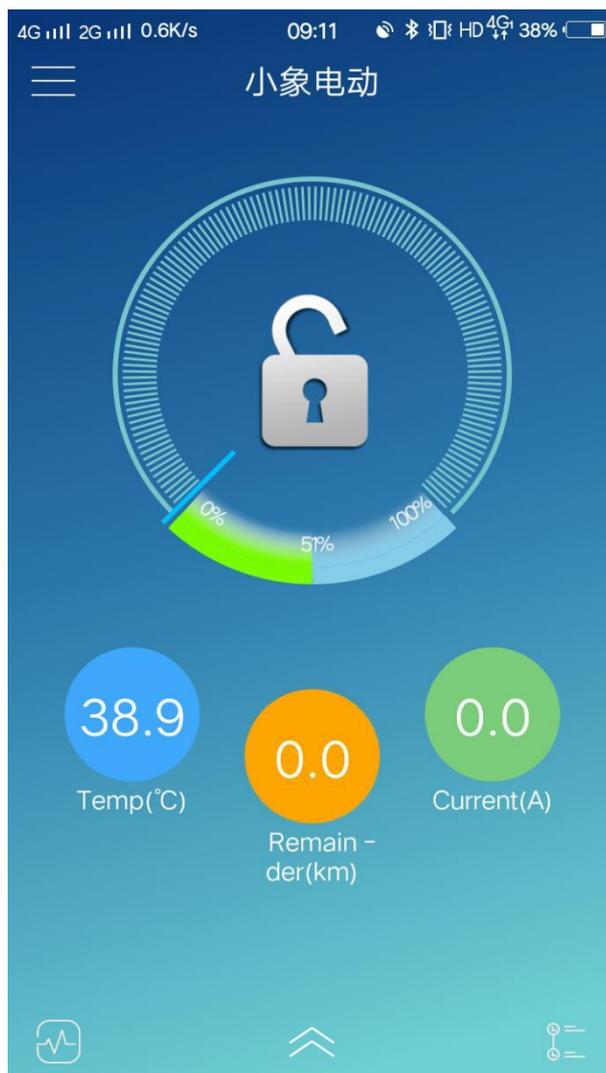
2.3.1 Display the percentage of battery power so that users can better master the driving distance

2.3.2 Calculate the current driving speed through the function of GPS speed measurement

2.3.3 Display the information of current when driving

2.3.4 Display the total voltage of battery

2.3.5 Display the voltage range of each series of batteries



## 2.4 Read the basic information of battery

### 2.4.1 Read the basic information of the battery, and display the temperature

of current battery, and the cycle times of battery

小象电动	
Basic Information	battery ve
Total voltage	48.16V
Current	0.00A
Serial number	13s
Average voltage	3.70V
Charging switch	on
Discharge switch	on
Temperature number	2
Temperature-1	37.9
Temperature-2	31.6
Date of manufacture	2018-3-21
Cycles	0times

## 2.4.2 Read the battery protection information, so that users can better understand

the reason of power failure, then timely take actions



Basic Information	battery vc
Pack undervoltage	no
Charging over-temperature	no
Charging low-temperature	no
Discharge over-temperature	no
Discharge low-temperature	no
Charging over-current	no
Discharge over-current	no
Short circuit	no
IC front-end error	no
Software locking MOS	no
Charge timeout Close	no

## 2.5 Indication of battery core voltage

2.5.1 Display the voltage of series batteries in real time, so that users can quickly master the status of battery

2.5.2 Show the state of equilibrium



## 2.6 Protecting information of series batteries

Record the protecting information of series batteries, so that repairman can fix it quickly



oltage	Protection of information
Short circuit times	0
Charging over-current times	0
Discharge over-current times	0
Cell overvoltage times	0
Cell undervoltage times	0
Charging over-temperature times	0
Charging low-temperature times	0
Discharge over-temperature times	0
Discharge low-temperature times	0
Pack overvoltage times	0
Pack undervoltage times	0

## 2.7 Indication of lithium battery protection parameter

2.7.1 The users can view all the parameters of the protection board, to clearly understand the protection action of the battery, and the requirement of discharge



Overvoltage	4.25V
Overvoltage release	4.15V
Overvoltage release delay	1.0S
Undervoltage	2.7V
Undervoltage release	3.0V
Undervoltage release delay	1.0S
Pack overvoltage	55.25V
Pack overvoltage release	53.95V
Pack overvoltage release delay	5.0S
Pack Undervoltage	35.1V
Pack Undervoltage release	39.0V
Pack Undervoltage	

## 2.8 Parameter setting of lithium battery protection

The user adjusts the parameters according to the state of the electric core and the characteristics of the electric equipment, to make sure the protection board, battery and electric equipment work more harmoniously and achieve the optimal working state

4G 2G 0K/s 14:07 HD 4G+ 65%		
小象电动		
Overvoltage	<u>4.25</u>	V
Overvoltage release	<u>4.15</u>	V
Undervoltage	<u>2.7</u>	V
Undervoltage release	<u>3.0</u>	V
Discharge overcurrent	<u>75.0</u>	A
Cycle capacity	<u>40.0</u>	AH
Nominal capacity	<u>50.0</u>	AH
Open Balance		open ▼
Balance Mode		charge balance ▼
Balanced turn-on voltage	<u>3.6</u>	V
Balancing precision	<u>0.01</u>	V
Advanced protection parameters		
Hardware overcurrent	- <u>500.00</u> +	A
Hardware short circuit protection	- <u>1000.00</u> +	A