Android Application Instruction

--- Software will change the language automatically when you changed the cell phone's language.
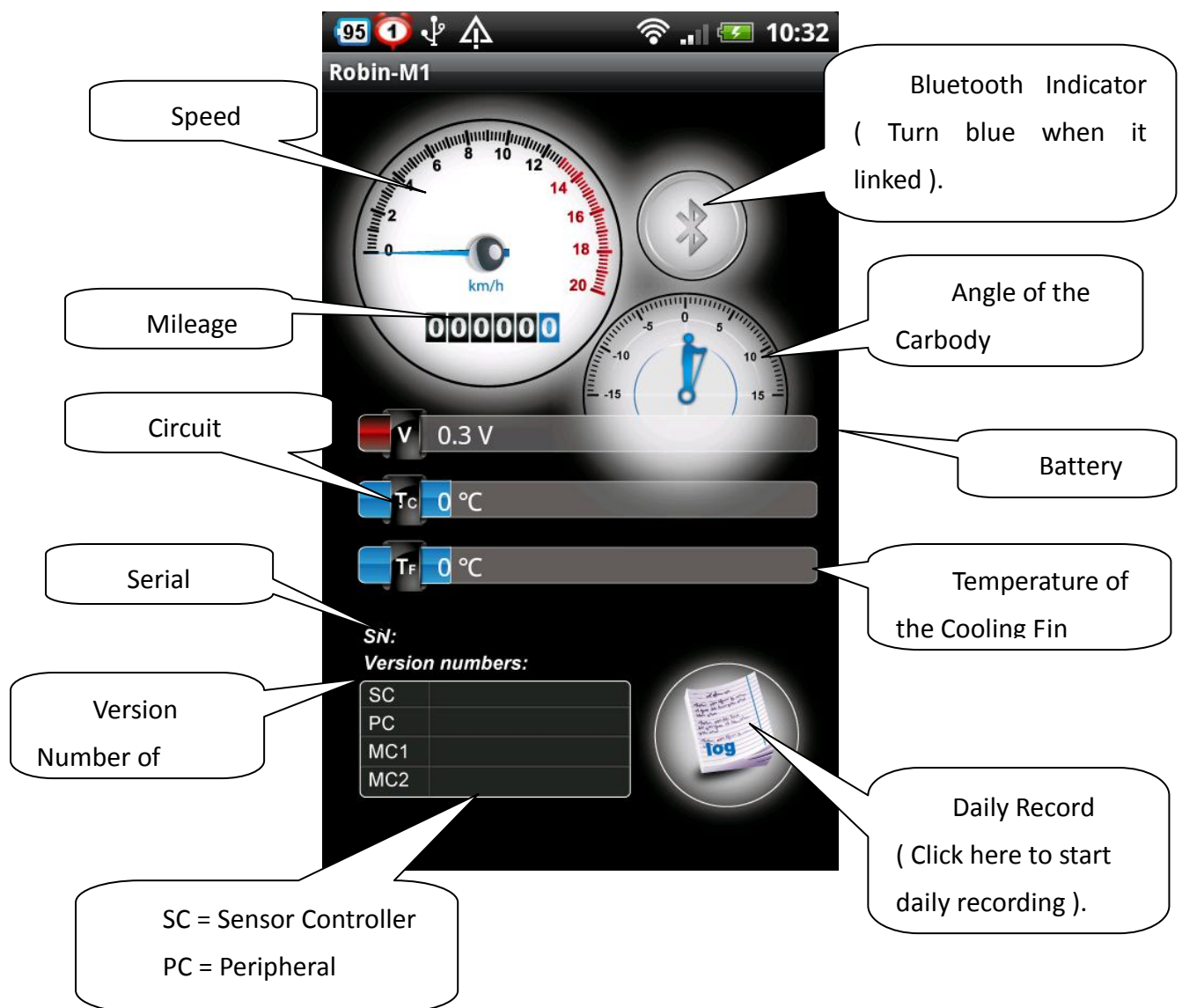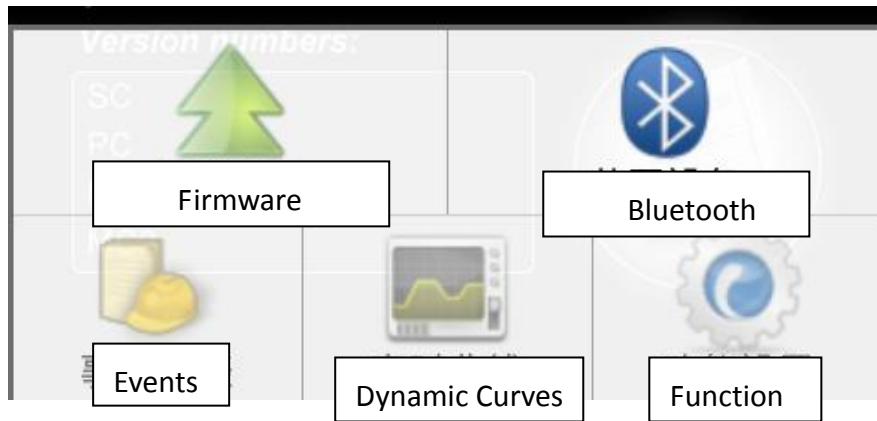
Bluetooth Matching and Connection

● Please choose the connected Robin-M1 before Bluetooth connection: choose *Manu -> Bluetooth*. Click into the *Bluetooth Interface(see the lower left picture)*, binding equipment will be shown from the system; if not, click " *Bluetooth Equipment Discovering*"(see the lower right picture) and start for searching.

● Click the equipment when searching finished and the system will then match with it. The system will enter into the *Interface* when match succeed, blue light on the display board of Robin will shine at this moment. However, connection might be failed in some certain system, in this case, please click into the *Android Setting System* and choose *Wireless and Internet -> Bluetooth Setting -> Bluetooth Setup Scanning*, choose *Matching* after the scanning. Back into the main program and choose *Connecting*.

Bluetooth

Device name

Discovering

Advanced setting

Bluetooth device scanning

蓝牙设置

Bluetooth device

搜索蓝牙设备

Bluetooth device discovering

Tech-Road.9-1, High-tech industrial park, Songshan Lake, Dongguan, China.

Tel：86-769-26620928   Fax：86-769-26620929   Website：www.robstep.com

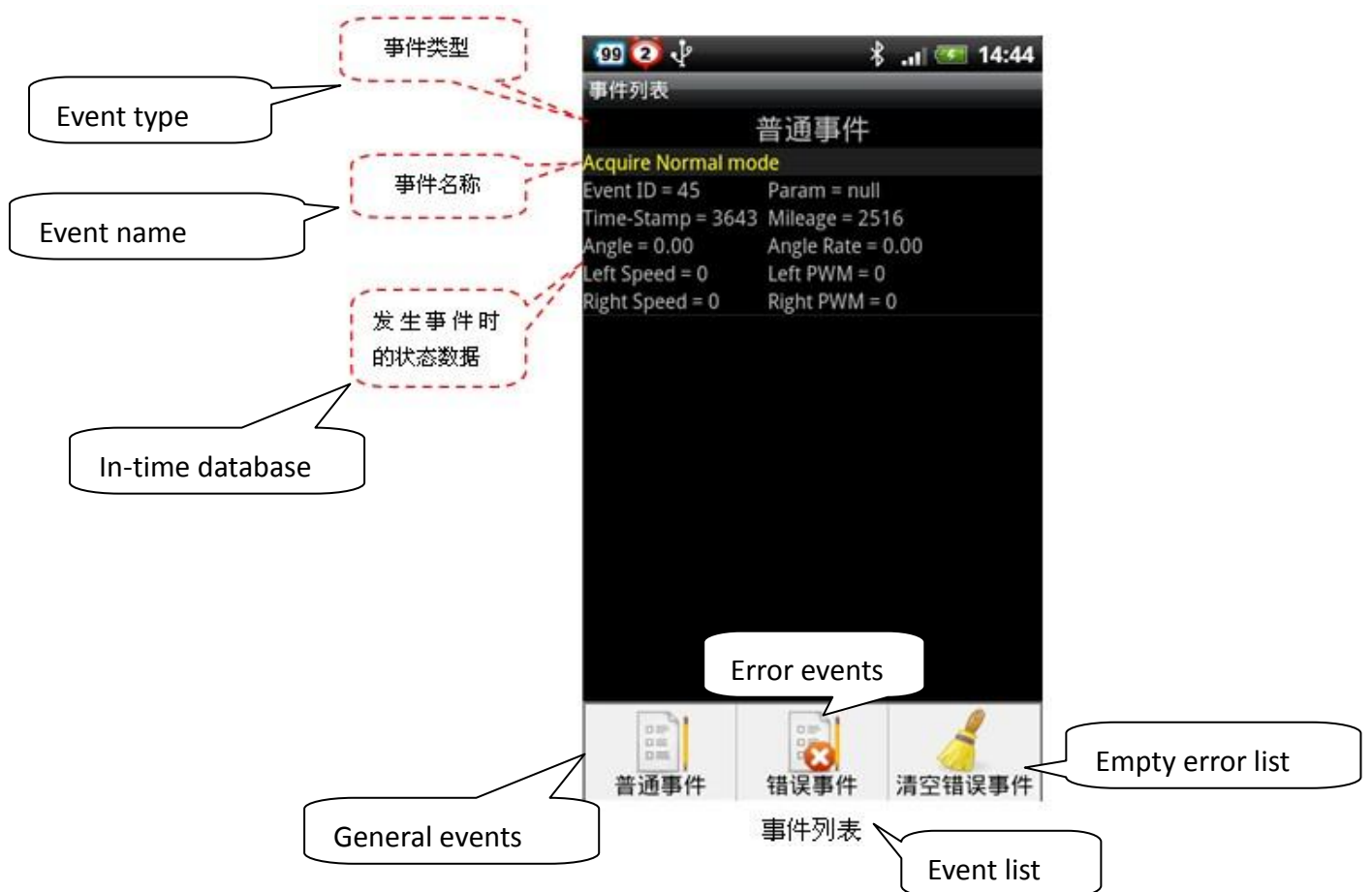# Introduction of Android Client Software---Interface

- Frequently used information such as speed limit, mileage, angle, temperature and voltage of Robin-M1 can be displayed as graphical-user-viewing from the *Interface*. Information is presented as long as Bluetooth connection succeeds.

- Manu of the Interface mainly including *Firmware Upgrading, Bluetooth Device, Events List, Dynamic Curves Display* and *Function Setup.*

- Please see the *Interface* as shown (Be kindly noticed that content display differs from cell-phone with differential screen resolution).

Speed

Mileage

Circuit

Serial

Version Number of

Bluetooth Indicator (Turn blue when it linked).

Angle of the Carbody

Battery

Temperature of the Cooling Fin

Daily Record (Click here to start daily recording).

SC = Sensor Controller
PC = Peripheral

Firmware

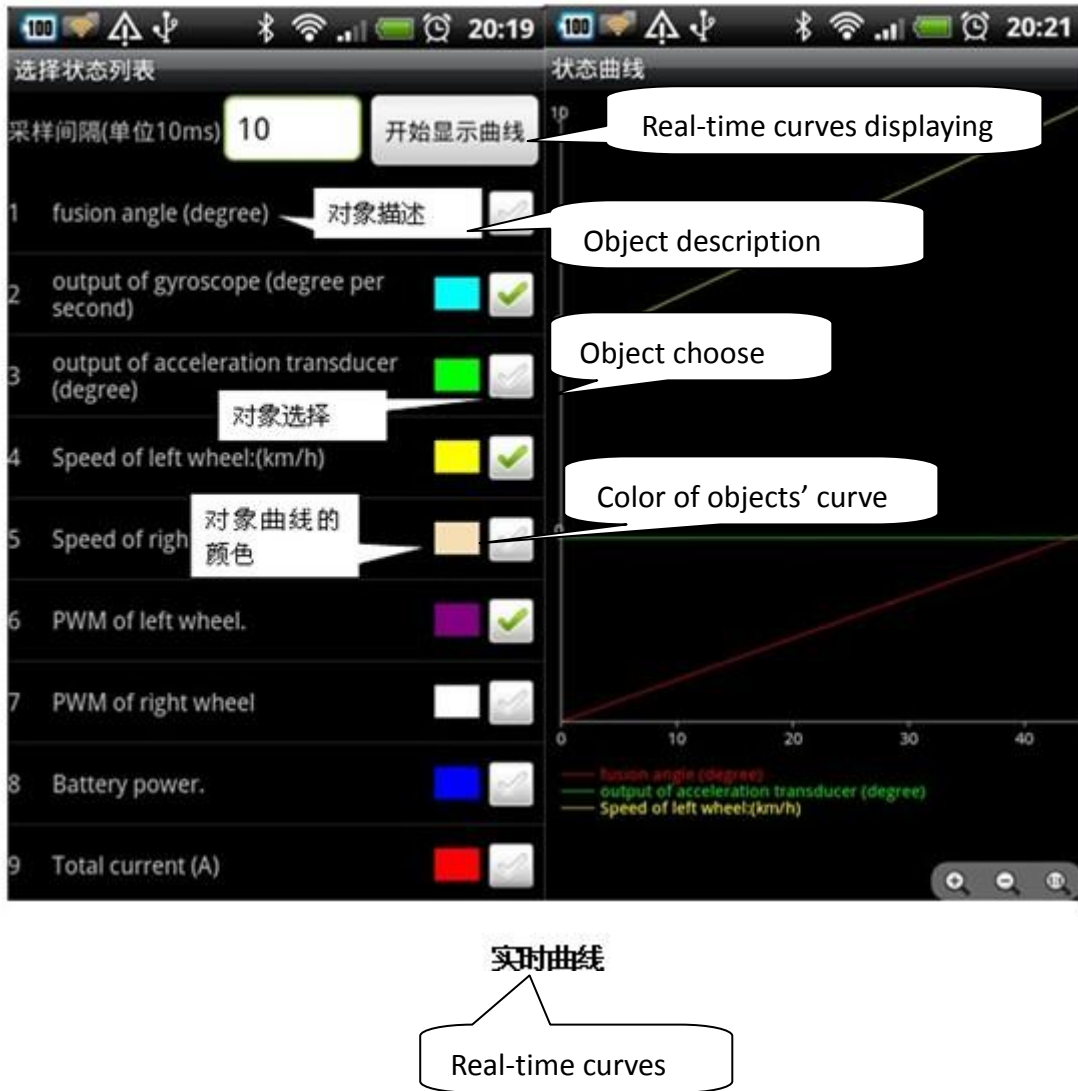Bluetooth

Events

Dynamic Curves

Function

Event List

● As it shown from the image list below, the *Events List* consists of *Normal Events* and *Events Error*. Needed information will be displayed through the changing-over of the *Android Manu*. The function of the *Events List* aims at providing assistance of events observing to end-users. Additionally, it benefits with product examination and maintenance.

Event type

事件类型

Event name

事件名称

In-time database

发生事件时的状态数据

事件列表

普通事件

Acquire Normal mode
Event ID = 45   Param = null
Time-Stamp = 3643   Mileage = 2516
Angle = 0.00   Angle Rate = 0.00
Left Speed = 0   Left PWM = 0
Right Speed = 0   Right PWM = 0

Error events

Empty error list

General events

Event list

普通事件   错误事件   清空错误事件

事件列表

Error events

General events

Real-Time Curves

● Real-time observation and monitoring of status data of Robin-M1 is presented through the *Real-Time Curves Display.* Choose any of the contents you would like to know and set up the sampling interval (it's defaulted as 100ms). The motor can then show any of the chosen curves. Meanwhile, you can choose to save the data, store the picture or stop displaying from the *Manu* of the *Status Curves*.

Real-time curves displaying

Object description

Object choose

Color of objects' curve

实时曲线

Real-time curves

Function Setup

● Frequently-used functions as well as parameters setting-up & access are provided by *Function Setup*. Additionally, status such as max-speed setting, Bluetooth naming, revolved zero-alignment, horizontal zero-alignment, firmware version and, serial number access & setup are included.

Max speed

Acquire

Set up

Bluetooth name

Rotating to zero

Real-time curves

Firmware version

Device's serial number
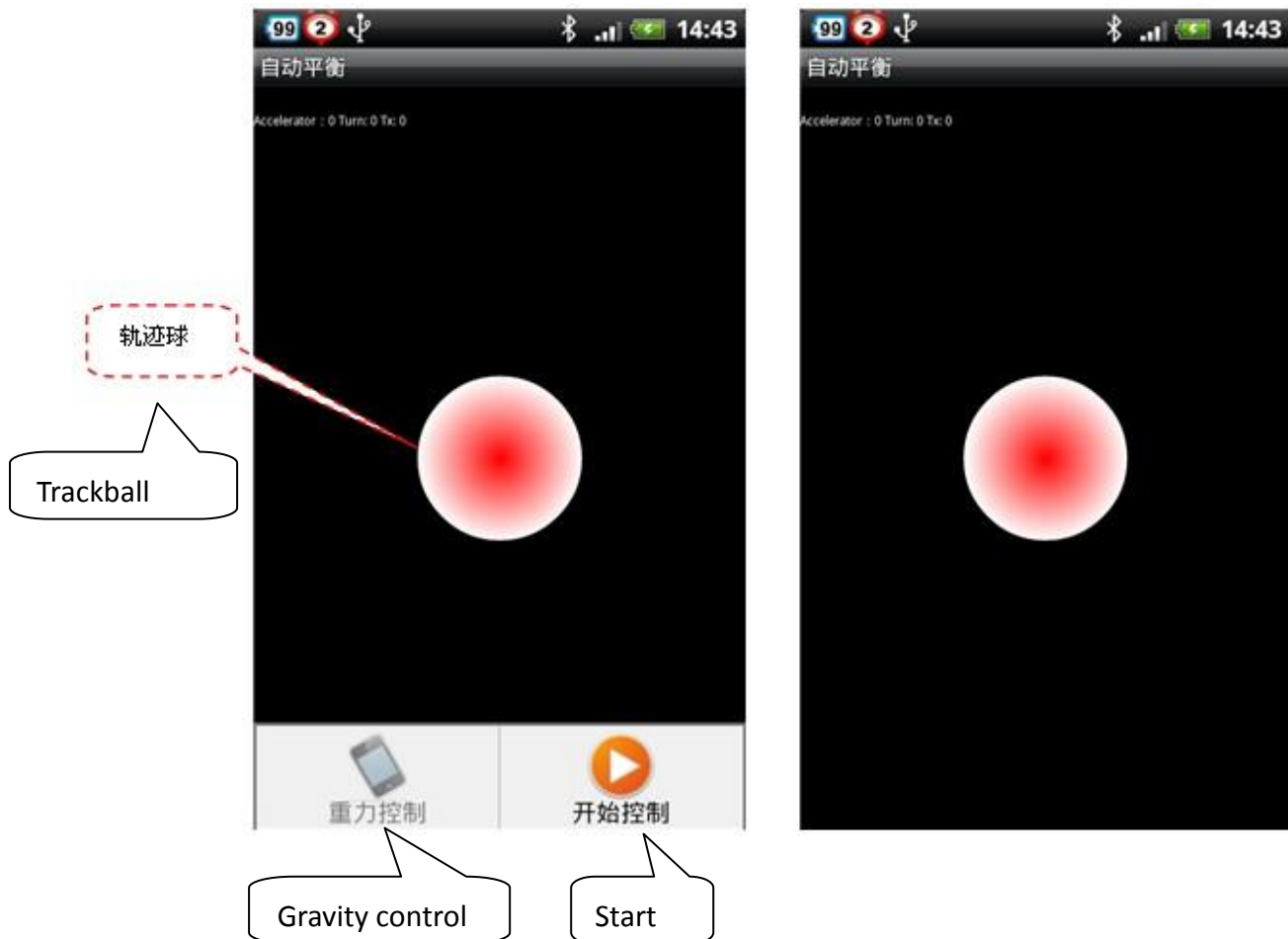
Functions setup

Auto-balancing

- Auto-balancing is kind of remote control performance, Robin can go automatically through cell phone controlling, cell phone fixed with Android system.

- See below step: click the "*Start*", enter into the manual control then touch the trackball gently and slowly, drag it to the direction that you want; press "*Gravity Control*", enter into the Gravity control mode then lie the mobile horizontally, when lean the phone to a certain direction, the trackball will move accordingly, so as Robin.

- Press "*Stop*" or step on robin anytime you want, this function will then stop.

⚠ WARNING	● Before the performance of auto-balancing, do remember an open place with enough friction is needed in that slippy ground will increase the possibility of losing control.

● Please be kindly noted that certain distance shall be kept between Robin to the users during the performance of auto-balancing. To advoice un-expected accidence because of losing control, pls do not touch Robin and no load should be added on Robin during auto-balancing performance.

● Speed of Robin should be limited during auto-balancing performance for the first time.

Trackball

Gravity control   Start

Firmware Upgrading

Firmware upgrading is another way of updating the firmware of Robin-M1 through cell-phone. The

updating process is as follows:

⚠ WARNING	● Please make sure that electric quantity of Robin and the cell phone shall no less than 20% and 30% respectively.

● System upgrading should be operated under the condition of no load on Robin.

● Do not power off the cell phone during system upgrading. At the meanwhile, keep the distance between Robin and the cell phone within five meters.

● Quit from the system and re-connect the Bluetooth when system upgrading finished.

1) Acquire the unique serial number of your Robin-M1 through this software.

2) Send the serial number to the *After-sales Service of Robstep Robot.*

3) The serial number can then be used to create a correspondingly updating firmware after examination and verification by stuff from Robstep Robot.

4) The *Correspondingly Updating Firmware* will then send back to the end-user through Internet.

5) Save the new firmware into your mini SD card (Name the file as "robin_update.bin" and store it in the root directory of your mini SD card).

6) Use the main program of your cell-phone and click into *The Interface of Firmware Updating*, the system will then analyze the firmware file (Make sure that the Bluetooth connection is linked).

7) Click "Begin" for status downloading. This means the process of firmware updating is working on.

8) According to the document size, it costs 3-10 minutes for the whole process.

9) Successful hint can be shown through the system as firmware upgrading process is completed.

10) Power on Robin with the remote control in case Robin does not power on automatically after system upgrading.

11) The whole system upgrading process are showed as follows:

Tech-Road.9-1, High-tech industrial park, Songshan Lake, Dongguan, China.

Tel：86-769-26620928　Fax：86-769-26620929　Website：www.robstep.com

Click "Re-download" in case there's download failure appeared for special reasons.

➢ Please click "Start Downloading" once again if the indicated lamp still shinning.

➢ Please click "Download peripheral control unit only" first if the indicated lamp keep shinning or there's no light shinning.

➢ In case of the above two steps cannot solve the problem, please call the after-sales department of Robstep for further information.

Tech-Road.9-1, High-tech industrial park, Songshan Lake, Dongguan, China.

Tel：86-769-26620928   Fax：86-769-26620929   Website：www.robstep.com