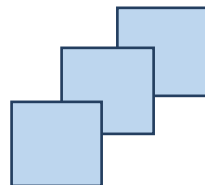


# fifotrack FIMS USER GUIDE




Model: FIMS

Version: V1.4

[www.fifotrack.com](http://www.fifotrack.com)

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- ⦿ Please read this user guide carefully before installation to avoid any possible personal injury or property loss.

## Document History

Version	Revision Date	Author	Detail
V1.3	Nov 15, 2015	Cici Wu	Revision Version
V1.4	Dec 30, 2016	Vito Hu	Reorganized Version

## Reference Documents & Tools

Document	Version
<fifotrack Digital Temperature Sensor User Guide>	V1.1
<fifotrack Fingerprint User Guide>	V1.1
<fifotrack Fuel Sensor User Guide>	V1.1
<fifotrack iButton User Guide>	V1.2
<fifotrack RFID Reader User Guide>	V1.3
<fifotrack Ultrasonic Fuel Sensor User Guide>	V1.1
Tool	Version
GPRS Command Generator	V1.0
<b>Download link:</b> <a href="http://www.fifotrack.com/Support/Userguide/">http://www.fifotrack.com/Support/Userguide/</a>	

## About FIMS User Guide

FIMS tracking software has rich features.

After proper settings, these features can meet different demands and bring more benefits to users.

**Easy to start:** Chapter 1 to Chapter 5 are basic settings of FIMS tracking software. Users who want easy start please check these chapters only.

**Advanced settings:** Chapter 6 to Chapter 10 are advanced settings of FIFM tracking software. It requires further understanding in fifotrack GPS tracker hardware and FIMS tracking software. However, the benefits are also great.

# Contents

<b>Document History .....</b>	<b>3</b>
<b>Reference Documents &amp; Tools.....</b>	<b>4</b>
<b>About FIMS User Guide .....</b>	<b>5</b>
<b>1 Request an Account .....</b>	<b>8</b>
1.1 Workspace overview .....	8
1.2 Necessary Account Setting .....	10
<b>2 Add an Object to FIMS .....</b>	<b>11</b>
<b>3 History .....</b>	<b>12</b>
<b>4 Places .....</b>	<b>13</b>
4.1 Marker .....	13
4.2 Route .....	14
4.3 Zone.....	16
<b>5 Report.....</b>	<b>17</b>
<b>6 Setting Sensors.....</b>	<b>20</b>
6.1 Setting Digital I/O Sensor .....	21
6.2 Setting Power Supply Sensor .....	22
6.3 Setting other Sensor .....	22
6.4 View Sensor information .....	22
6.5 Export/Import Sensor Setting.....	23
<b>7 Setting Events .....</b>	<b>23</b>
7.1 Add an Event.....	23
7.2 Setting Speeding Event.....	27
7.3 View Event Information.....	28
<b>8 Setting Odometer.....</b>	<b>29</b>
8.1 Setting FIMS Odometer .....	30
8.2 Setting Object Odometer.....	30
<b>9 Accessory Using .....</b>	<b>32</b>
9.1 RFID/iButton/fingerprint Using .....	32
9.2 Digital Temperature Sensor Using .....	36
9.3 Fuel Sensor Using .....	38
9.4 Ultrasonic Fuel Sensor Using .....	40
9.5 Camera .....	43

**10 Sending Command ..... 43**

    10.1 Control ..... 44

    10.2 Templates ..... 45

    10.3 Setting Output Control ..... 46

# 1 Request an Account

## Demo account:

PC Login page: [www.fimsgps.com](http://www.fimsgps.com)

Mobile login page: [www.fimsgps.com/mobile](http://www.fimsgps.com/mobile)

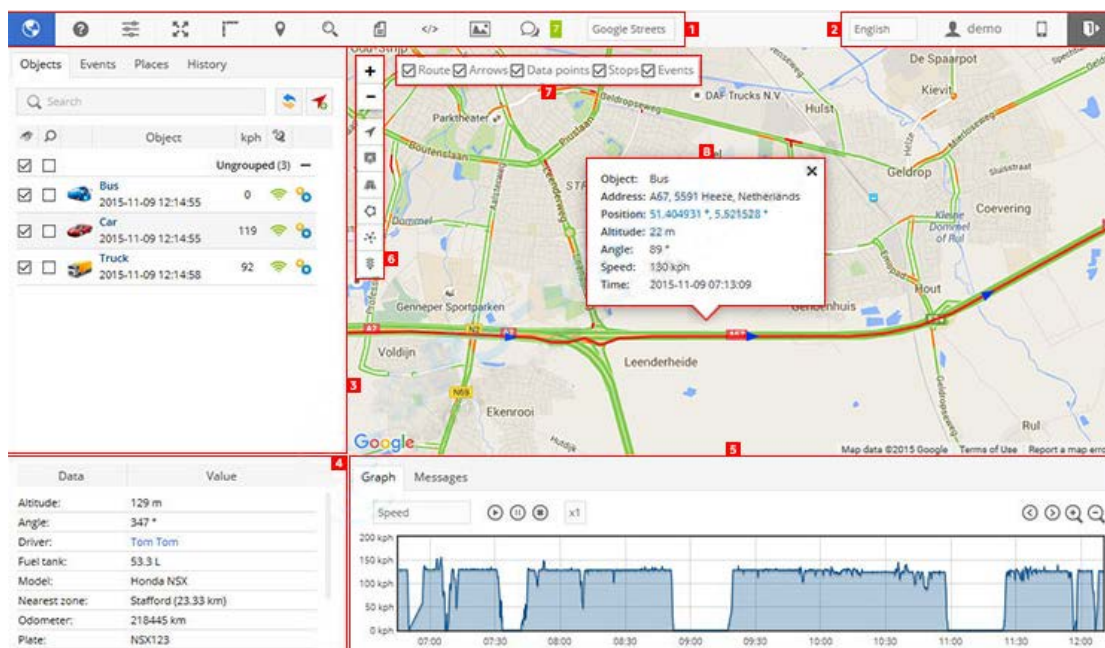
ID: fims

Password: 123456

Email to [info@fifotrack.com](mailto:info@fifotrack.com) to request an account.

## 1.1 Workspace overview

After login you will be redirected to the main page. Main page allows to access most common tracking features and settings, monitor object position on map and get detailed information such as speed, coordinates, address, movement history and more.



1 Top panel.

2 User account panel.

3 Left panel.

4 Object details panel.

5 History panel.

6 Map controls.

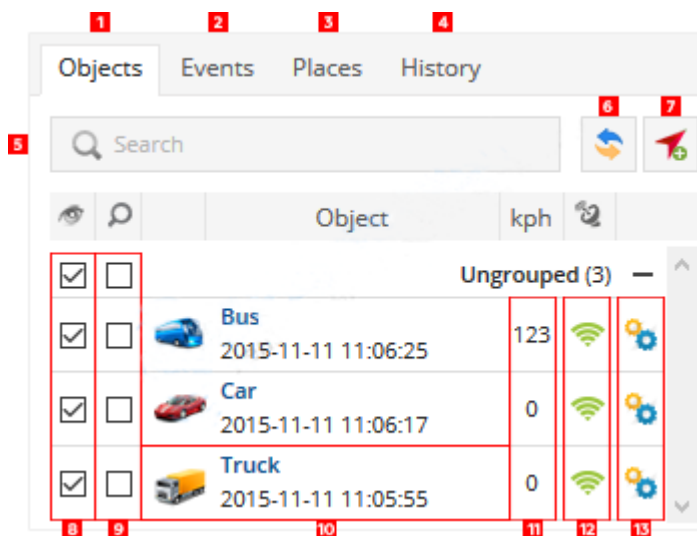


- ⊙ Map zoom control
- ⊙ objects
- ⊙ markers
- ⊙ routes
- ⊙ zones
- ⊙ Clusters - useful feature for those who has large number of objects and markers. Splits markers and objects into groups, which according to map zoom level will reveal content inside of it.
- ⊙ Live/traffic (available only with Google maps).

7 Route control.

8 Object details.

Objects list tab allows to view available objects, find them on map, view object route history and edit object settings.



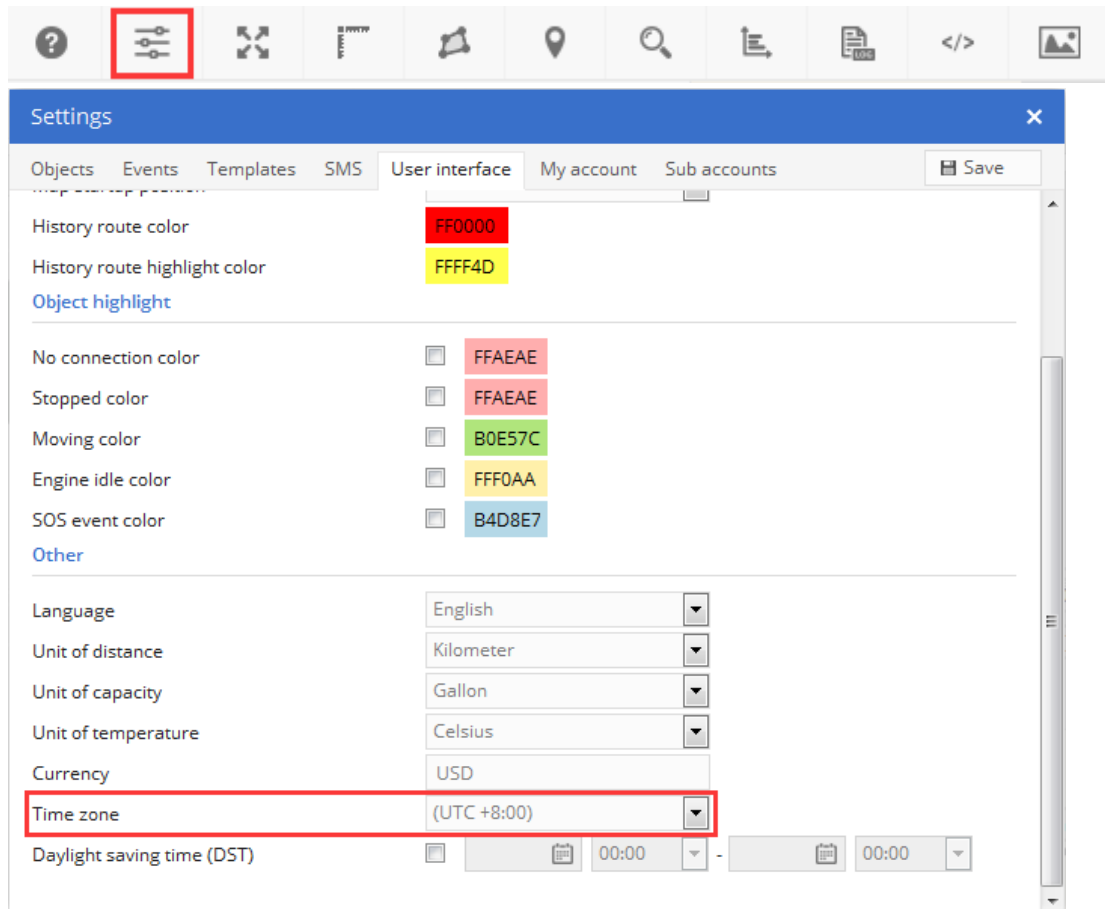
1. **Objects tab** - view current objects statistics.
2. **Events tab** - history of events can be viewed (over speeding, entering or leaving zones and etc.).
3. **Places tab** - allow creating, editing and deleting zones and markers.
4. **History tab** - view history, create reports, export them to various formats etc.
5. **Search** - allow finding objects by name.
6. **Reload** - reload objects list.
7. **Add object** - allow adding new object.
8. **Visibility checkbox** - turn on or off objects visibility on map.

9. **Follow checkbox** - center selected object in the middle of the screen every time GPS device has refreshed its position, if multiple objects selected - map zooms the way that all of them remain visible.
10. **Object information** - object name, date and time of last received location.
11. **Speed indicator** - show current object speed.
12. **GPRS indicator** - show GPRS and GPS status.
  - ☐ **Grey icon** - no GPRS and GPS
  - ☐ **Orange icon** - no GPS signal
  - ☐ **Green icon** - GPRS and GPS are OK
13. **Object control** - allow to see object history, control objects using commands and edit object settings.

## 1.2 Necessary Account Setting

After login, user time zone needs to be set first, because all date/time display, and all date/time selection for report is based on time zone.

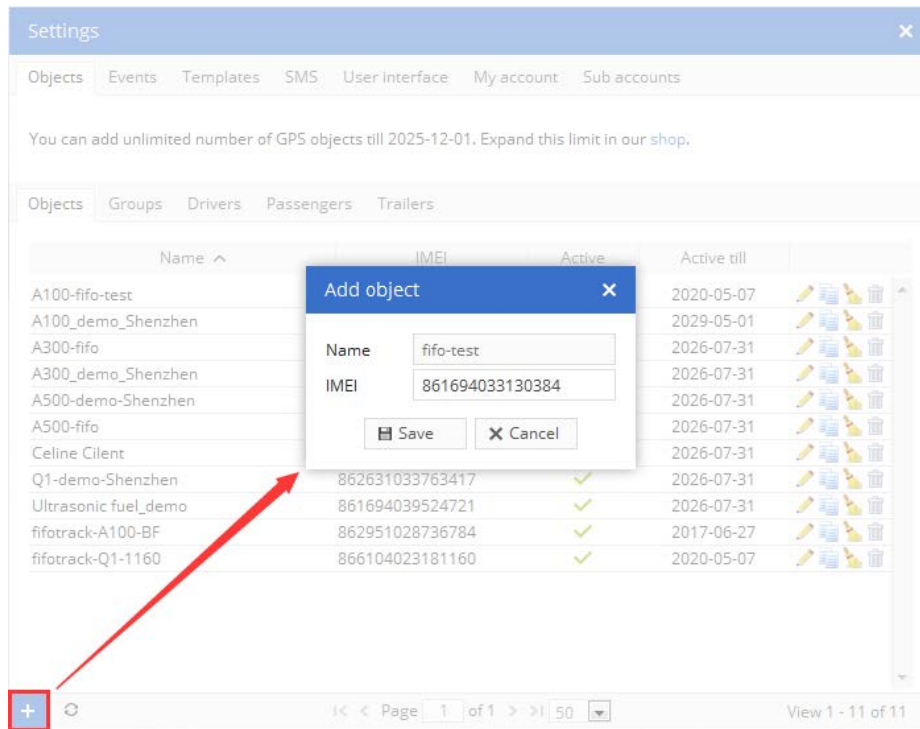
Click "Settings" icon → "User interface"; On the dialog, select local time zone shown as below, user can set other settings according to personal interests or actual using.



## 2 Add an Object to FIMS

On “Settings” dialog, click “Add” button to add an object to FIMS, user needs to input name and IMEI, while IMEI is used to identify uploading data, it can be read from object’s package.

Default, object is set to link to FIMS, user needs to set APN, APN user name, APN password to object, and then, object will connect to FIMS, upload data after SIM inserted and power on.



### NOTE:

- ☉ Refer to user guide for the detail of object’s setting and installation
- ☉ For the first using, object needs to receive valid GPS signal, and then, object’s information will be shown on the map

When data with valid GPS signal uploaded to FIMS, object’s position and other information will be shown on FIMS, as below:

Objects Events Places History

Search

Object	kph
ACUV-TIRO 2016-12-22 16:27:31	0
Celine Client No data	0
Q1-demo-Shenzhen 2016-12-28 12:35:12	0
Ultrasonic fuel_demo 2016-12-28 21:45:25	0
fifotrack-A100-BF No data	0
fifotrack-Q1-1160 2016-12-29 11:40:46	0

Data	Value
Altitude	1 m
Angle	0 °
Battery	4.02 V
Nearest zone	New zone 5 (8.25 km)
Odometer	10841 km
Position	22.621440 °, 114.036033 °
Status	Stopped 6 h 26 min 8 s
Time (position)	2016-12-29 11:40:46
Time (server)	2016-12-29 11:40:48

Basic information and sensor data

Position on map

### 3 History

FIMS supports history display; Historical trace can be viewed on map. Click “History” button, select object and time period, click “Show”, and then, history will be shown on map.

Objects Events Places History

Object: A100\_demo\_Shenzhen

Filter: Today

Time from: 2016-12-04 00:00:00

Time to: 2016-12-06 00:00:00

Stops: > 1 min

Show Hide Import/Export

Time Information

- 2016-12-04 00:00:01
- 2016-12-04 00:00:51 d 8 h 10 min 26 s
- 2016-12-05 08:10:31 10 min 52 s
- 2016-12-05 08:21:21 1 min 13 s
- 2016-12-05 08:22:34 1 min 43 s
- 2016-12-05 08:24:11 1 min 47 s

Data Value

Graph Messages

Speed

24 kph - 2016-12-05 18:08:55

Click “Import/Export” button, detailed history data can be exported according to the below formats:

- ⊙ GSR
- ⊙ GPX
- ⊙ KML
- ⊙ CSV

## 4 Places

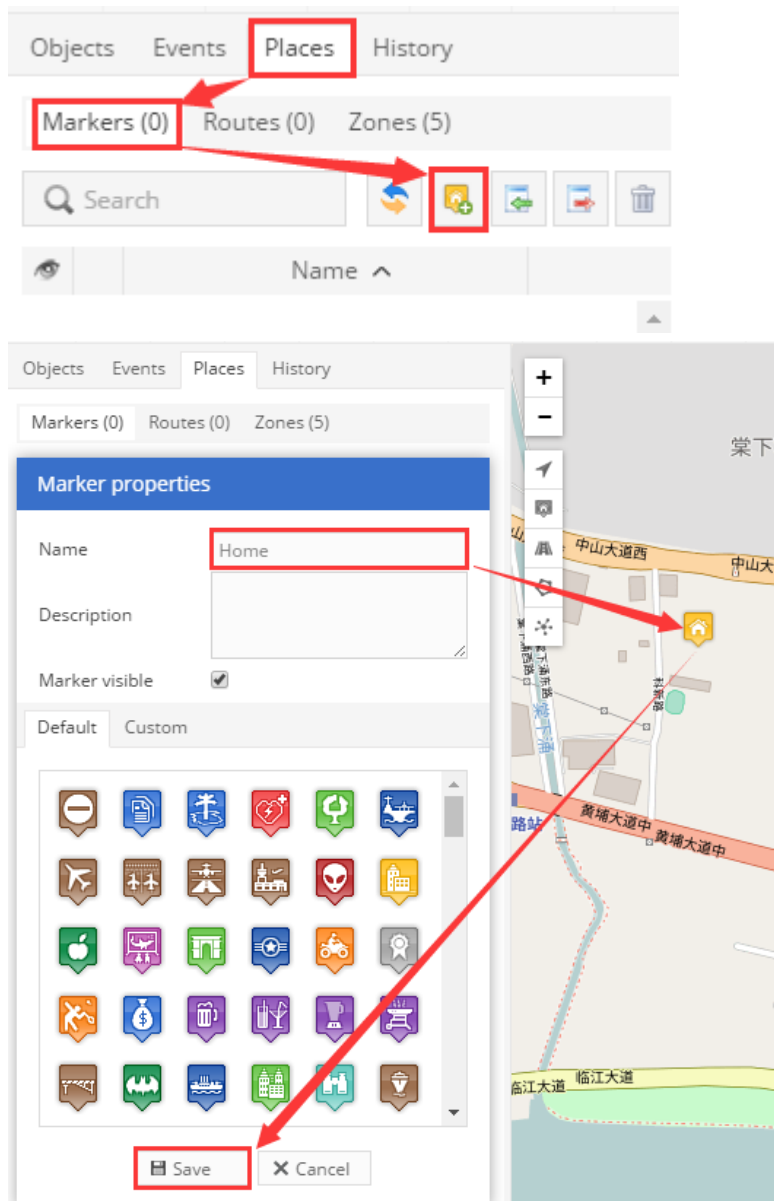
FIMS supports three kinds of places:

- ⊙ Marker
- ⊙ Zone
- ⊙ Route

### 4.1 Marker

Marker is a point of interest, which is used to find point on map rapidly; To add marker, click “Places”→”Marker”→”Add marker”, on the popup dialog, enter marker name, click on map at the interest point, click “Save” button, the a marker is added.

After marker is added, click one at marker list, map will move to the set place on map.



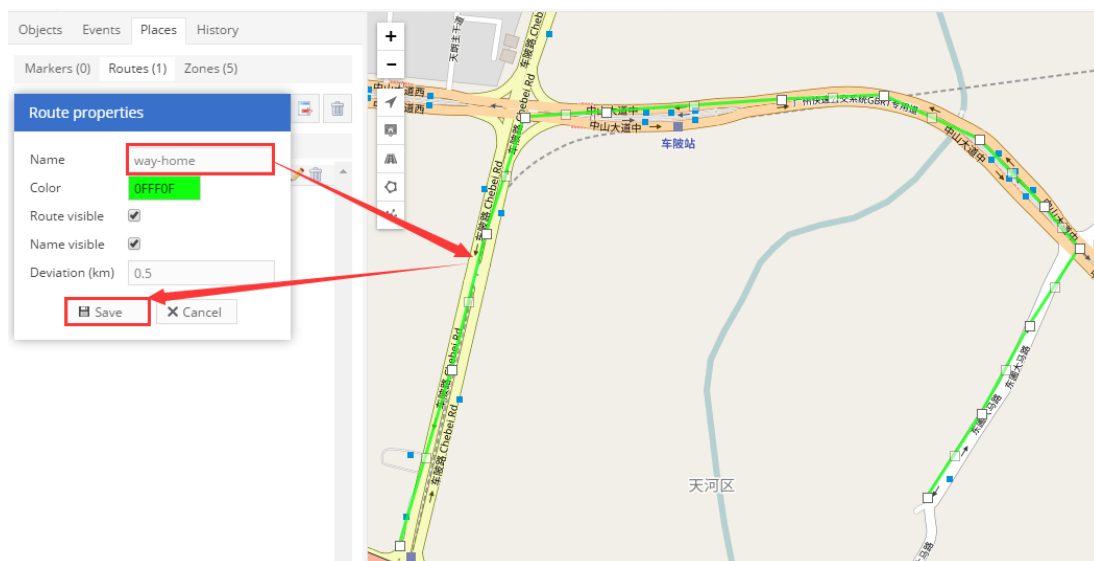
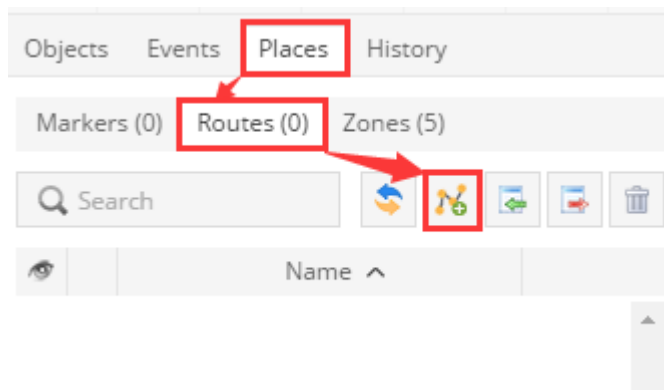
## 4.2 Route

“Route” defines a planned path, which allows creating routes and using them to get notifications about entrance and exits. This feature allows monitoring object dependency to the route.

To add a route, click “Places”→“Routes”→“Add route”, on the popup dialog, enter route name, click multiple points, and,

- ⦿ Click on map to add a route point
- ⦿ Double click to add the last point
- ⦿ Drag point to modify place. Move mouse cursor onto point and left click to remove it

After points added, click “Save” button, and then, a route is added.



After route added, user can set “Route in”/”Route out” event:

- ⦿ Select “Route in”/”Route out” for event type on “Main” page
- ⦿ Select route name on “Routes” page

**Event properties** [X]

Main Time Objects Routes Zones Notifications Object control

**Event**

Active ☒

Name

Type SOS ▼

Time period (min)

Speed limit (kph)

Parameter condition

Sensor condition

Save

Low battery  
Connection: Yes  
Connection: No  
GPS: Yes  
GPS: No  
Stopped  
Moving  
Engine idle  
Overspeed  
Underspeed  
Harsh acceleration  
Harsh braking  
Harsh cornering  
Parameter  
Sensor  
Service  
**Route in**  
Route out  
Zone in  
Zone out

Page 1

**Event properties** [X]

Main Time Objects Routes Zones Notifications Object control

**Routes**

Trigger event depending on routes Off ▼

way-home

Selected routes  
Hold "Ctrl" to select multiple items

Save Cancel

After route event added, FIMS will detect the status for route deviation, and send "Route in" or "Route out".

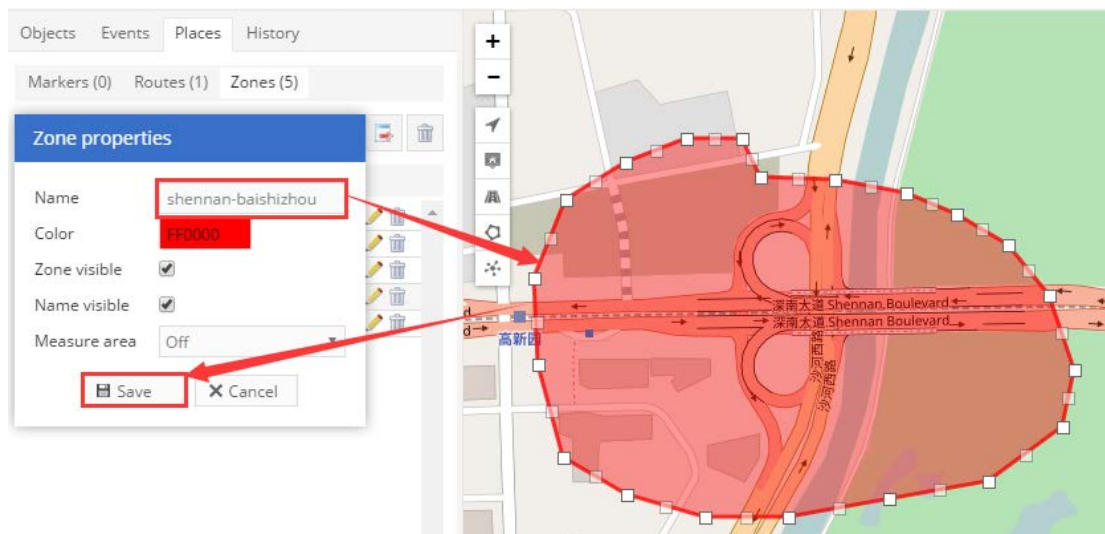
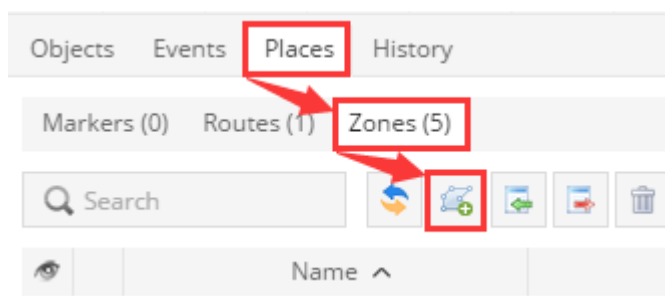
### 4.3 Zone

“Route” defines a polygon geo-fence, which allows creating area and using them to get notifications about entrance and exit. This feature allows monitoring object dependency to the area.

To add a zone, click “Places”→”Zones”→”Add zone”, on the popup dialog, enter zone name, and click on map to:

- ⦿ Click on map to add a zone point
- ⦿ Double click to add the last point
- ⦿ Drag point to modify zone. Move mouse cursor onto point and left click to remove it

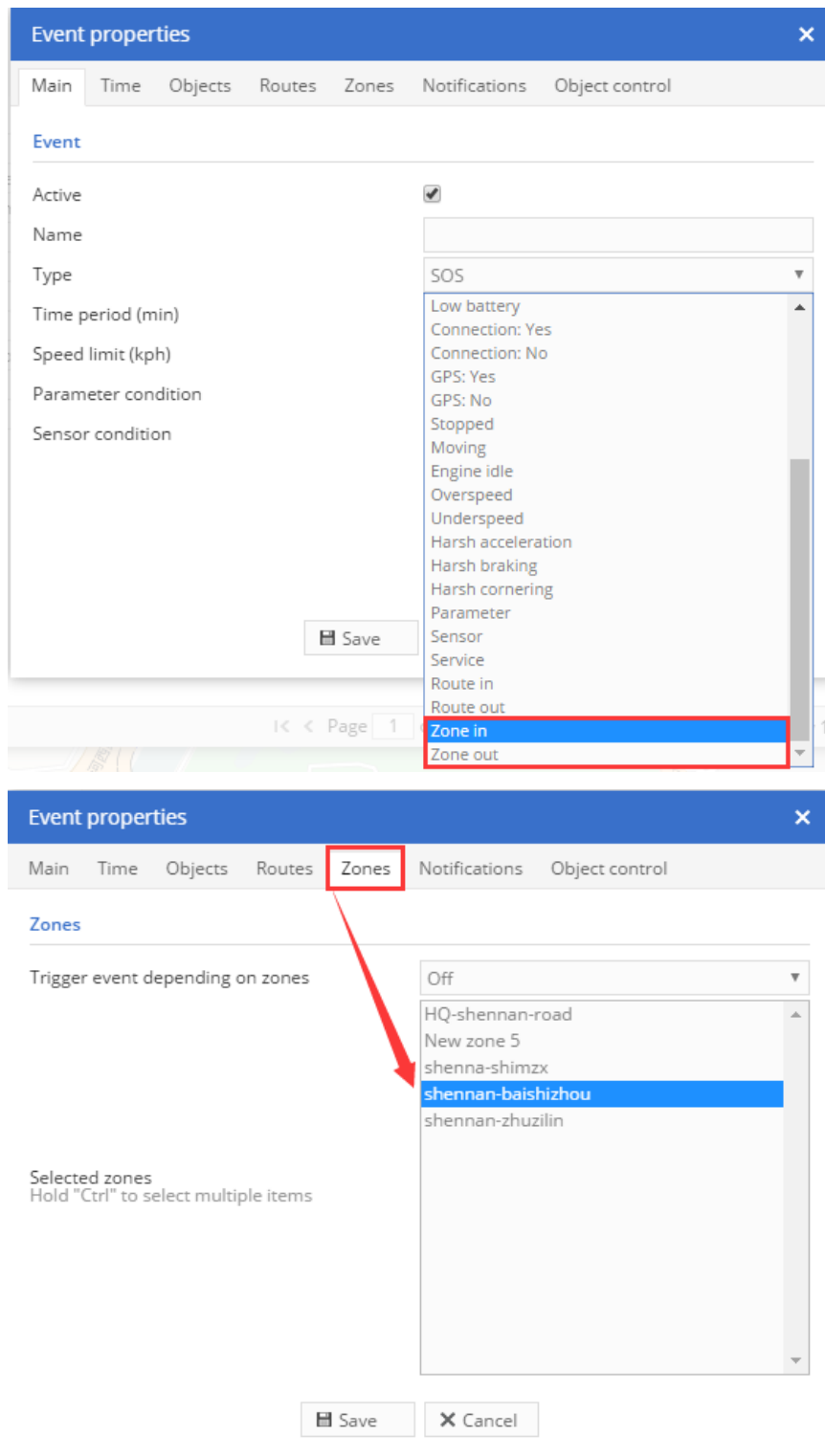
After points added, click “Save” button, a zone is added.



After route added, user can set “Zone in”/”Zone out” event:

- ⦿ Select “Route in”/”Route out” for event type on “Main” page
- ⦿ Select route name on “Routes” page





After zone event added, FIMS will detect whether object(s) enter or exit the selected zone, and send "Zone in" or "zone out".

## 5 Report

FIMS supports various reports for data statistics, click "Reports" icon to open dialog,



The following reports are supported on FIMS:

- ⊙ General information
- ⊙ General information (merged)
- ⊙ Object information
- ⊙ Drives and stops
- ⊙ Travel sheet
- ⊙ Events
- ⊙ Overspeeds
- ⊙ Underspeeds
- ⊙ Zone in/out
- ⊙ Service
- ⊙ Driver behavior (RAG)
- ⊙ Fuel fillings
- ⊙ Fuel thefts
- ⊙ Logic sensor information
- ⊙ Ignition (ACC) graph
- ⊙ Fuel level graph
- ⊙ Temperature graph
- ⊙ Sensor graph

When “Reports” dialog opened, select report type, time period, on “Objects”, “Data items”, “Zones”, “Sensors”, press “Ctrl” to select multiple items, click “generate” at right corner to check reports.

Reports

+ New

Save

Generate

Report

Name

Type

Zone in/out

Format

html

Show addresses

☐

Zones instead of addresses

☐

Stops

> 1 min

Speed limit (kph)

Objects

Data items

Zones

Sensors

A100-fifo-test

A100\_demo-Shenzhen

A300-fifo

A300\_demo-Shenzhen

A500-demo-Shenzhen

A500-fifo

Celine Cilent

Q1-demo-Shenzhen

Ultrasonic fuel demo

Time period

Schedule

Filter

Today

Time from

2017-01-01

00

00

Time to

2017-01-03

00

00

Daily

☐

Weekly

☐

Send to e-mail

E-mail address

Name ^	Type	Format	Objects	Zones	Schedule
Fuel level	Fuel level graph	html	1	0	✖

User can set schedule report, then, FIMS sends email with selected report, as below:

**Reports**

+ New Save Generate

**Report**

Name: A500-info

Type: General information (merge)

Format: html

Show addresses: ☐

Zones instead of addresses: ☐

Stops: > 1 min

Speed limit (kph): 0

**Time period**

Filter: Today

Time from: 2017-01-01 00:00

Time to: 2017-01-03 00:00

**Schedule**

Daily: ☒

Weekly: ☐

Send to e-mail: info@fifotrack.com

Name	Type	Format	Objects	Zones	Schedule	
A500-info	General information (merged)	html	1	0	✓	
Fuel level	Fuel level graph	html	1	0	✗	

The below figure show "General information" report:

### General information

Object: A100\_demo\_Shenzhen

Period: 2017-01-01 00:00:00 - 2017-01-06 00:00:00

Route start: 2017-01-01 00:00:09

Route end: 2017-01-05 16:12:55

Route length: 175.6 km

Move duration: 4 h 11 min 44 s

Stop duration: 4 d 12 h 1 min 2 s

Top speed: 101 kph

Average speed: 13 kph

Overspeed count: 0

Fuel consumption: 58.19 gallons

Fuel cost: 290.95 USD

Engine work: 6 h 4 min 15 s

Engine idle: 1 h 52 min 35 s

Odometer: 2300 km

Engine hours: 14340 h

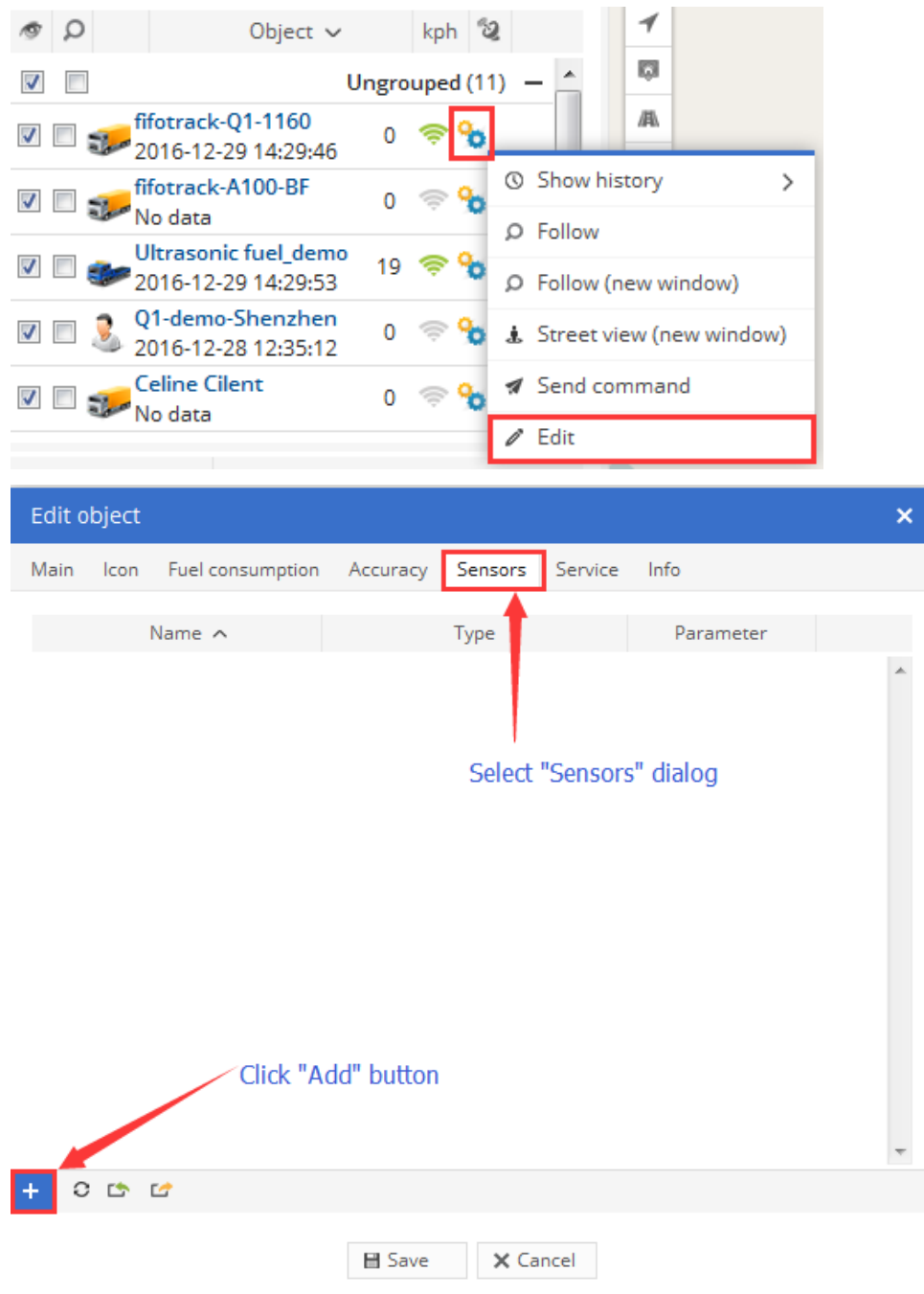
Driver: n/a

Trailer: n/a

## 6 Setting Sensors

All data fields, including digital input/output, analog data, odometer, runtime, etc., uploaded from object to FIMS, are regarded as sensor. To retrieve necessary data from object, it is needed to set sensor on object.

To open sensor setting dialog, click "Object control" icon-->"Edit"-->"Sensors"-->"Add", and then, "Sensor Properties" dialog opened.



**Sensor properties**

**Sensor**

Name  Self-define sensor name

Type

Parameter

Show in popup ☒ Enable sensor information display on "Object" web-page, set selected

**Result**

Type

Units of measurement

If sensor "1" (text)

If sensor "0" (text)

Formula

Lowest value

Highest value  X  Y  + Add

**Sensor result preview**

Current value  > Result

## 6.1 Setting Digital I/O Sensor

The below table describes how to set object's digital input/output, to display I/O status on "Objects" web-page, set "Show in popup" selected.

I/O <sup>(1)</sup>	Sensor--Type <sup>(2)</sup>	Parameter <sup>(3)</sup>	Result—Type <sup>(4)</sup>	If sensor "1" <sup>(5)</sup>	If sensor "0" <sup>(5)</sup>
SOS	Digital input	di0	Logic	ON	OFF
ACC	Ignition(ACC)	di1	Logic	ON	OFF
IN3	Digital input	di2	Logic	ON	OFF
IN4	Digital input	di3	Logic	ON	OFF
OUT1	Digital output	do0	Logic	ON	OFF
OUT2	Digital output	do1	Logic	ON	OFF

### NOTE:

- (1): Digital input/output supported by object
- (2): "Type" in "Sensor" column on "Sensor Properties" dialog
- (3): "Parameter" in "Sensor" column on "Sensor Properties" dialog
- (4): "Type" in "Result" column on "Sensor Properties" dialog
- (5): Logic string is self-define, here are common-use ones. For example, when user connects IN3 to vehicle's door sensor, it can be set to "Door Open" for "If sensor "1"", and "Door close" for "If sensor "0"".

## 6.2 Setting Power Supply Sensor

The below table describes how to set object's power supply, to display power status on "Objects" web-page, set "Show in popup" selected.

Power Type	Sensor--Type <sup>(1)</sup>	Parameter <sup>(2)</sup>	Result—Type <sup>(3)</sup>	Unit	Formula
Battery	Custom	accv	Value	V	$(X*6.6)/4096$
Ext-pwr	Custom	batc	Value	V	variable <sup>(4)</sup>

NOTE:

(1): "Type" in "Sensor" column on "Sensor Properties" dialog

(2): "Parameter" in "Sensor" column on "Sensor Properties" dialog

(3): "Type" in "Result" column on "Sensor Properties" dialog

(4): Formula to calculate ext-pwr is different according to object model

A100/A200/A300/A500:  $(X*3.3*16)/4096$

Q1:  $(X*6.6)/4096$

## 6.3 Setting other Sensor

The other sensor setting will describe in the following chapters.

## 6.4 View Sensor information

After setting, sensor information can be read on "Objects" web-page, and it will change when new object's data uploaded, shown as below:

The screenshot shows the 'Objects' page in the fifotrack FIMS interface. At the top, there are tabs for 'Objects', 'Events', 'Places', and 'History'. Below the tabs is a search bar and a list of objects. The 'Objects' tab is selected, and a red arrow points to it. The list of objects includes:

- ACUU-TITO (2016-12-22 16:27:31) with speed 0 kph
- Celine Client (No data) with speed 0 kph
- Q1-demo-Shenzhen (2016-12-28 12:35:12) with speed 0 kph
- Ultrasonic fuel\_demo (2016-12-29 15:45:30) with speed 0 kph
- fifotrack-A100-BF (No data) with speed 0 kph
- fifotrack-Q1-1160 (2016-12-29 15:45:13) with speed 0 kph

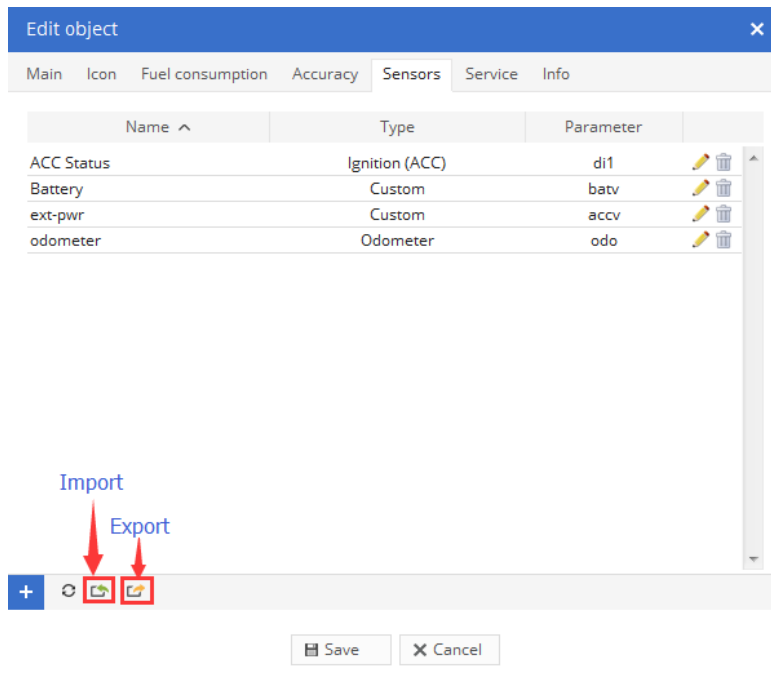
Below the list is a table showing sensor information for the selected object 'fifotrack-Q1-1160'. A red box highlights the 'Battery' row, and a red arrow points to it with the text 'Sensor information'.

Data	Value
Altitude	1 m
Angle	0 °
Battery	3.77 V
Nearest zone	New zone 5 (8.25 km)
Odometer	10841 km
Position	22.621440 °, 114.036033 °
Status	Stopped 10 h 30 min 39 s
Time (position)	2016-12-29 15:45:13
Time (server)	2016-12-29 15:45:15

## 6.5 Export/Import Sensor Setting

To reduce operation, FIMS supports export/import for sensor setting. After one object's sensor settings finished, user can export setting data to ".sen" file, which can be imported to other objects with the same model.

To export/import sensor setting, click the below icon in "Edit object" dialog:



## 7 Setting Events

Events are used to simplify objects monitoring. FIMS supports event detection and event notification.

Event can be detected by FIMS or by object's GPRS data. When event detected, FIMS can be set to send multiple notification, such as system popup message, e-mail, object control, etc..

### 7.1 Add an Event

Click "Settings" icon → "Events" → "Add", "Event Properties" dialog opened



Settings

Objects **Events** Templates SMS User interface My account Sub accounts

Name ^	Active	System	E-mail	SMS	
ACC OFF	✓	✓	✗	✗	
ACC ON	✓	✓	✓	✗	
Door Open	✓	✓	✓	✗	
G (ACC ON)	✓	✓	✓	✗	
HDA	✓	✓	✗	✗	
HDB	✓	✓	✗	✗	
Idling	✓	✓	✗	✗	
Log out	✓	✓	✗	✗	
Low ext-pwr	✓	✓	✓	✗	
SOS	✓	✓	✗	✗	
login in	✓	✓	✗	✗	

On "Events" page

Click "Add" button

+ Page 1 of 1 > 50 View 1 - 11 of 11

Event properties

Main Time Objects Routes Zones Notifications Object control

Event

Active ☒

Name

Type SOS

Time period (min)

Speed limit (kph)

Parameter condition

Sensor condition

Save Cancel

On "Event Properties" dialog, user can set some events directly, as below:

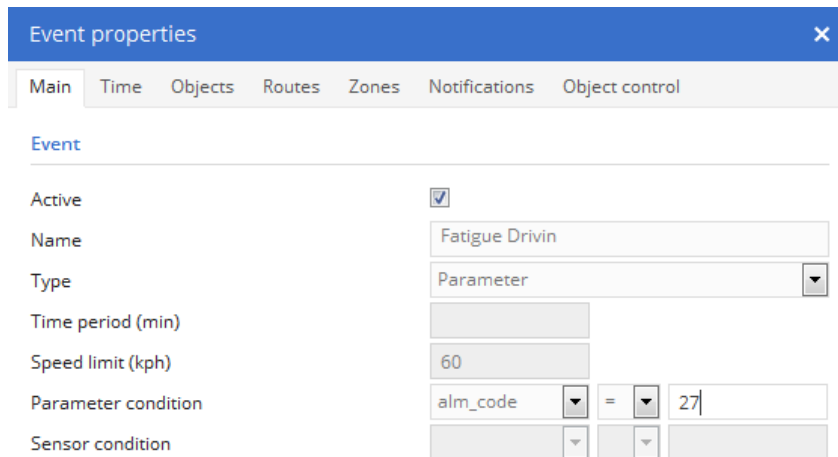
- ⦿ SOS
- ⦿ Power cut
- ⦿ GPS antenna cut
- ⦿ Signal jamming
- ⦿ Low DC



- ⊙ Connect: Yes
- ⊙ Connect: No
- ⊙ Stopped
- ⊙ Moving
- ⊙ Engine idle
- ⊙ Harsh acceleration
- ⊙ Harsh braking
- ⊙ Zone in
- ⊙ Zone out
- ⊙ Route in
- ⊙ Route out

For event not supported on FIMS, using “Parameter” event type to add, operation as below:

Column	Content																																								
Active	Set selected																																								
Name	Self-define																																								
Type	Parameter																																								
Parameter condition	<p>Set “alm_code=X”, while X means</p> <table> <tr> <th>X</th><th>Event Type/Name</th></tr> <tr> <td>4</td><td>IN2 active/ACC ON</td></tr> <tr> <td>5</td><td>IN2 inactive/ACC OFF</td></tr> <tr> <td>6</td><td>IN3 active</td></tr> <tr> <td>7</td><td>IN3 inactive</td></tr> <tr> <td>8</td><td>IN4 active</td></tr> <tr> <td>9</td><td>IN4 inactive</td></tr> <tr> <td>17</td><td>Internal Battery Low</td></tr> <tr> <td>25</td><td>Enter Sleep</td></tr> <tr> <td>26</td><td>Wakeup</td></tr> <tr> <td>27</td><td>Fatigue Driving</td></tr> <tr> <td>28</td><td>Fatigue Relieve</td></tr> <tr> <td>33</td><td>Exit Fence</td></tr> <tr> <td>34</td><td>Enter Fence</td></tr> <tr> <td>37</td><td>Login</td></tr> <tr> <td>38</td><td>Log out</td></tr> <tr> <td>39</td><td>Illegal Login</td></tr> <tr> <td>40</td><td>High Temperature Alarm</td></tr> <tr> <td>41</td><td>Low temperature Alarm</td></tr> <tr> <td>43</td><td>Accessory Communication Error</td></tr> </table>	X	Event Type/Name	4	IN2 active/ACC ON	5	IN2 inactive/ACC OFF	6	IN3 active	7	IN3 inactive	8	IN4 active	9	IN4 inactive	17	Internal Battery Low	25	Enter Sleep	26	Wakeup	27	Fatigue Driving	28	Fatigue Relieve	33	Exit Fence	34	Enter Fence	37	Login	38	Log out	39	Illegal Login	40	High Temperature Alarm	41	Low temperature Alarm	43	Accessory Communication Error
X	Event Type/Name																																								
4	IN2 active/ACC ON																																								
5	IN2 inactive/ACC OFF																																								
6	IN3 active																																								
7	IN3 inactive																																								
8	IN4 active																																								
9	IN4 inactive																																								
17	Internal Battery Low																																								
25	Enter Sleep																																								
26	Wakeup																																								
27	Fatigue Driving																																								
28	Fatigue Relieve																																								
33	Exit Fence																																								
34	Enter Fence																																								
37	Login																																								
38	Log out																																								
39	Illegal Login																																								
40	High Temperature Alarm																																								
41	Low temperature Alarm																																								
43	Accessory Communication Error																																								



**Event properties** [X]

Main Time Objects Routes Zones Notifications Object control

Event

Active ☒

Name Fatigue Drivin

Type Parameter

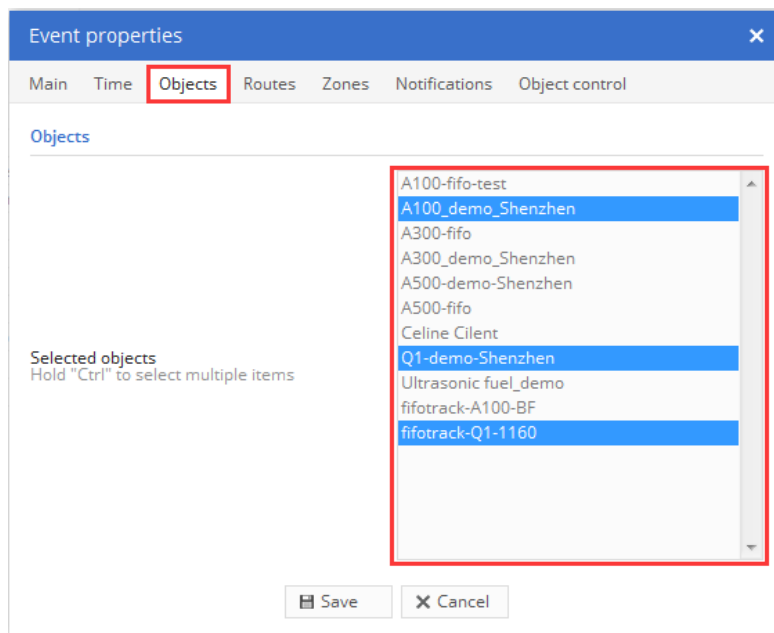
Time period (min)

Speed limit (kph) 60

Parameter condition alm\_code = 27

Sensor condition

After setting on “Main” dialog, select event monitoring targets on “Objects” dialog, press “Ctrl” to select multiple objects, shown as below:



**Event properties** [X]

Main Time **Objects** Routes Zones Notifications Object control

Objects

A100-fifo-test  
**A100\_demo-Shenzhen**  
 A300-fifo  
 A300\_demo-Shenzhen  
 A500-demo-Shenzhen  
 A500-fifo  
 Celine Cilent  
**Q1-demo-Shenzhen**  
 Ultrasonic fuel\_demo  
 fifotrack-A100-BF  
**fifotrack-Q1-1160**

Selected objects  
 Hold "Ctrl" to select multiple items

Save Cancel

Setting notification operations after event detected in “Notifications” dialog, there are several options to be set:

- ⊙ System message – Popup information on map when event detected
- ⊙ Sound alert – Play sound when event detected
- ⊙ E-mail – Send e-mail with specified e-mail template when event detected
- ⊙ SMS – Send a SMS to specified phone number via SMS gateway, object’s setting command, event notification can be sent by SMS. E-mail to [info@fifotrack.com](mailto:info@fifotrack.com) for SMS gateway APK and operation guide.

Event properties

Main
Time
Objects
Routes
Zones
Notifications
Object control

Notifications

System message
☒

Auto hide
☐

Sound alert
☐

alarm1.mp3
Play

Message to e-mail, for multiple e-mails  
separate them by comma
☒

vito.hu@fifotrack.com,wherepty@qq.com

SMS to mobile phone, for multiple phone  
numbers separate them by comma
☐

Phone number with code

E-mail template

Default

SMS template

Default

Save
Cancel

After setting on “Main”, “Objects”, “Notifications” dialog, click “Save” button, and then, an event is added.

## 7.2 Setting Speeding Event

Speeding event is special, which can be detected by FIMS, or by object. As a result, there are two different settings on FIMS.

Default, when select “Overspeed” in “event type” column, it is needed to set “Speed limit” at the same time. FIMS compares object’s real-time speed to “Speed limit”, and sends speeding event when object speed exceeds. Setting details as below:

Event properties

Main

Time

Objects

Routes

Zones

Notifications

Object control

Event

Active

☒

Name

Speeding

Type

Overspeed

Time period (min)

Speed limit (kph)

70

Parameter condition

Sensor condition

Save

Cancel

When user needs real-time speeding monitoring, it is suggested to set speeding event as below; besides, using B08 command to set speed limit in object. After setting, object compares GPS speed to speed limit setting by B08, and sends speeding event to FIMS when GPS speed exceeds.

Event properties

Main

Time

Objects

Routes

Zones

Notifications

Object control

Event

Active

☒

Name

Speeding

Type

Parameter

Time period (min)

Speed limit (kph)

70

Parameter condition

alm\_code

=

18

Sensor condition

Save

Cancel

### 7.3 View Event Information

After adding event setting, all event information can be viewed on “Events” web-page, click item, detailed information will be shown on map.

Objects **Events** Places History

Search

Time	Object	Event
15:58:29	A500-demo-Sh	Door Open
14:56:30	A500-demo-Sh	Door Open
16-12-30	A500-demo-Sh	Door Open
16-12-30	A500-demo-Sh	Door Open
16-12-30	A500-demo-Sh	Door Open
16-12-30	A500-demo-Sh	Door Open
16-12-30	Ultrasonic fuel	Low ext-pwr
16-12-29	A500-demo-Sh	Door Open
16-12-29	A500-demo-Sh	Door Open
16-12-28	A500-demo-Sh	Door Open
16-12-27	A500-demo-Sh	Door Open
16-12-27	A500-demo-Sh	Door Open
16-12-27	A500-demo-Sh	Door Open

Page 1 of 11

Data Value

Object: A500-demo-Shenzhen  
 Event: Door Open  
 Address: Teng Long Lu, Baoan Qu, Shenzhen Shi, Guangdong Sheng, China  
 Position: 22.630188 °, 114.017501 °  
 Altitude: 78 m  
 Angle: 199 °  
 Speed: 0 kph  
 Time: 2016-12-30 13:41:10  
 ACC: ON  
 temperature: 26.81 Celc

## 8 Setting Odometer

Default, FIMS calculates odometer according to latitude and longitude uploaded by object. Besides, object will calculate odometer in firmware, which is more accurate. As a result, user can set to select which odometer used on FIMS.

After odometer source setting, odometer data is shown on “Objects” page, as below:

Objects **Events** Places History

Search

On "Objects" page

Object kph

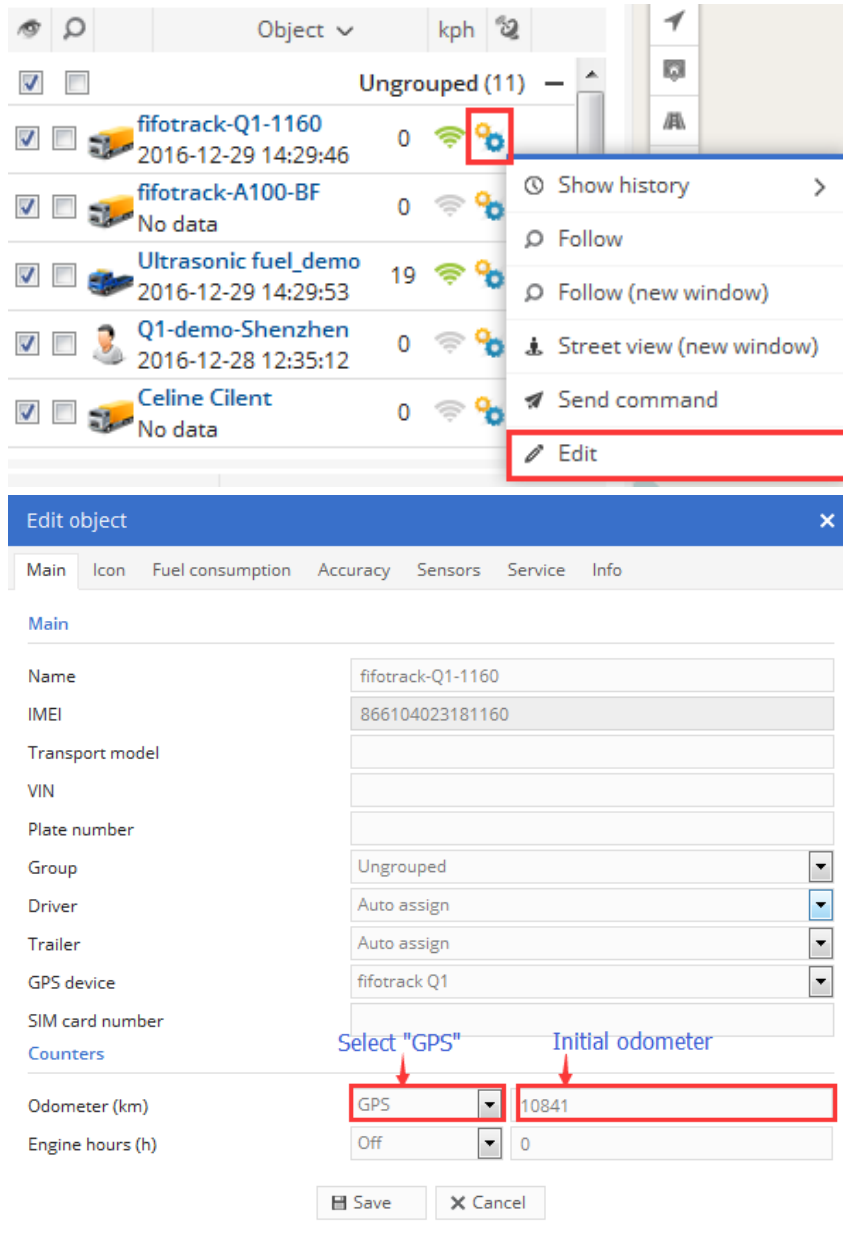
Ungrouped (11)

- A100-fifo-test No data
- A100\_demo\_Shenzhen 2016-12-31 11:03:47
- A300-fifo 2016-12-23 16:53:29
- A300\_demo\_Shenzhen 2016-11-11 18:16:28

Data	Value
ACC Status	OFF
Altitude	82 m
Angle	0 °
Battery	4.14 V
Engine hours	13755 h
Nearest zone	shennan-zhuzilin (12.02 km)
Odometer	2096 km
Position	22.648596 °, 113.996858 °
Status	Stopped 16 h 50 min 53 s
Time (position)	2016-12-31 11:03:47
Time (server)	2016-12-31 11:03:48
ext-pwr	11.86 V

## 8.1 Setting FIMS Odometer

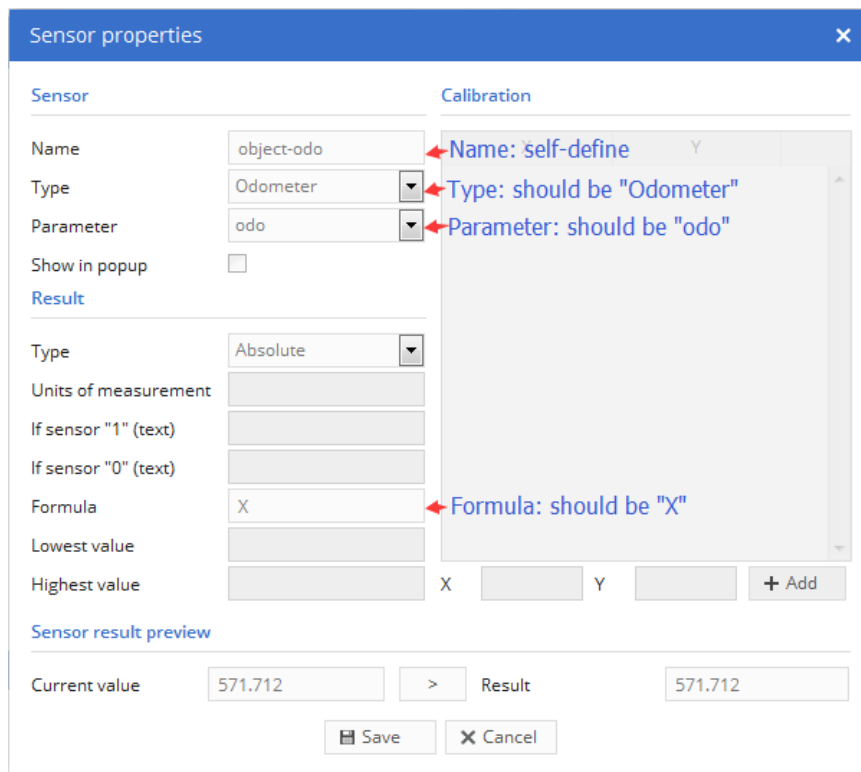
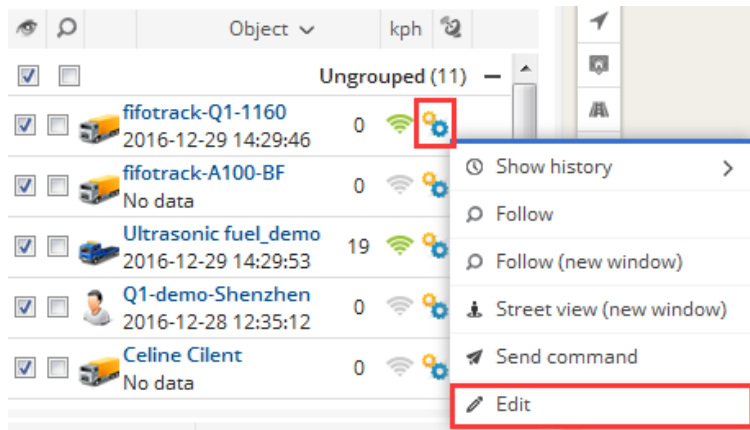
Default, after object added, odometer is calculated using latitude and longitude. Also, it can be set on “Edit Object” dialog, click “Object control” icon-->“Edit”-->“Main”, FIMS odometer and initial value can be set in “Counter” column. As below:



## 8.2 Setting Object Odometer

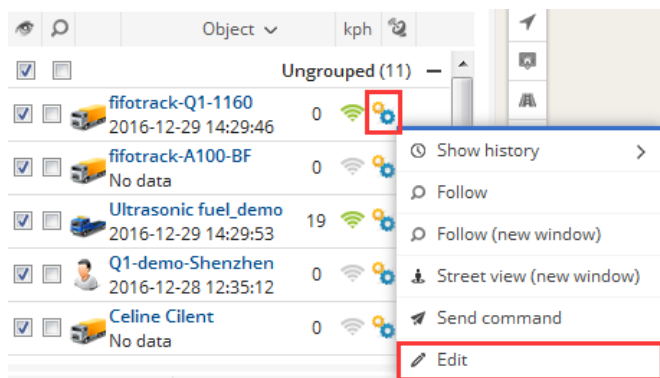
To get more accurate value, object odometer can be set on FIMS. Object calculates odometer every second, using GPS speed. To enable this function, it is needed to set odometer sensor first:

Click “Object control” icon-->“Edit”-->“Sensors”-->“Add”, set “Odometer” sensor on the dialog.



After sensor set, enable object odometer as below:

click "Object control" icon-->"Edit"-->"Main", FIMS odometer and initial value can be set in "Counter" column. As below:



Edit object

Main

Icon

Fuel consumption

Accuracy

Sensors

Service

Info

Main

Name

fifotrack-Q1-1160

IMEI

866104023181160

Transport model

VIN

Plate number

Group

Ungrouped

Driver

Auto assign

Trailer

Auto assign

GPS device

fifotrack Q1

SIM card number

Counters

Select "Sensor"

Odometer (km)

Sensor

10841

Engine hours (h)

Off

0

No set

Save

Cancel

## 9 Accessory Using

Object supports multiple accessories, which can be used on FIMS:

- ⊙ RFID reader
- ⊙ iButton Reader
- ⊙ fingerprint
- ⊙ Digital temperature sensor
- ⊙ Fuel sensor
- ⊙ Ultrasonic fuel sensor
- ⊙ Camera

To use accessory on FIMS, it is needed to do some settings. The following chapters describe operations on FIMS, to operate and install accessories, refer to corresponding user guide.

### 9.1 RFID/iButton/fingerprint Using

RFID/iButton/fingerprint is used to identify driver's information, whose settings are the same on FIMS.

Settings for RFID/iButton/fingerprint include two steps:

- ⊙ Adding global drivers' information for account
- ⊙ Setting "driver assign" sensor for specified object(s)

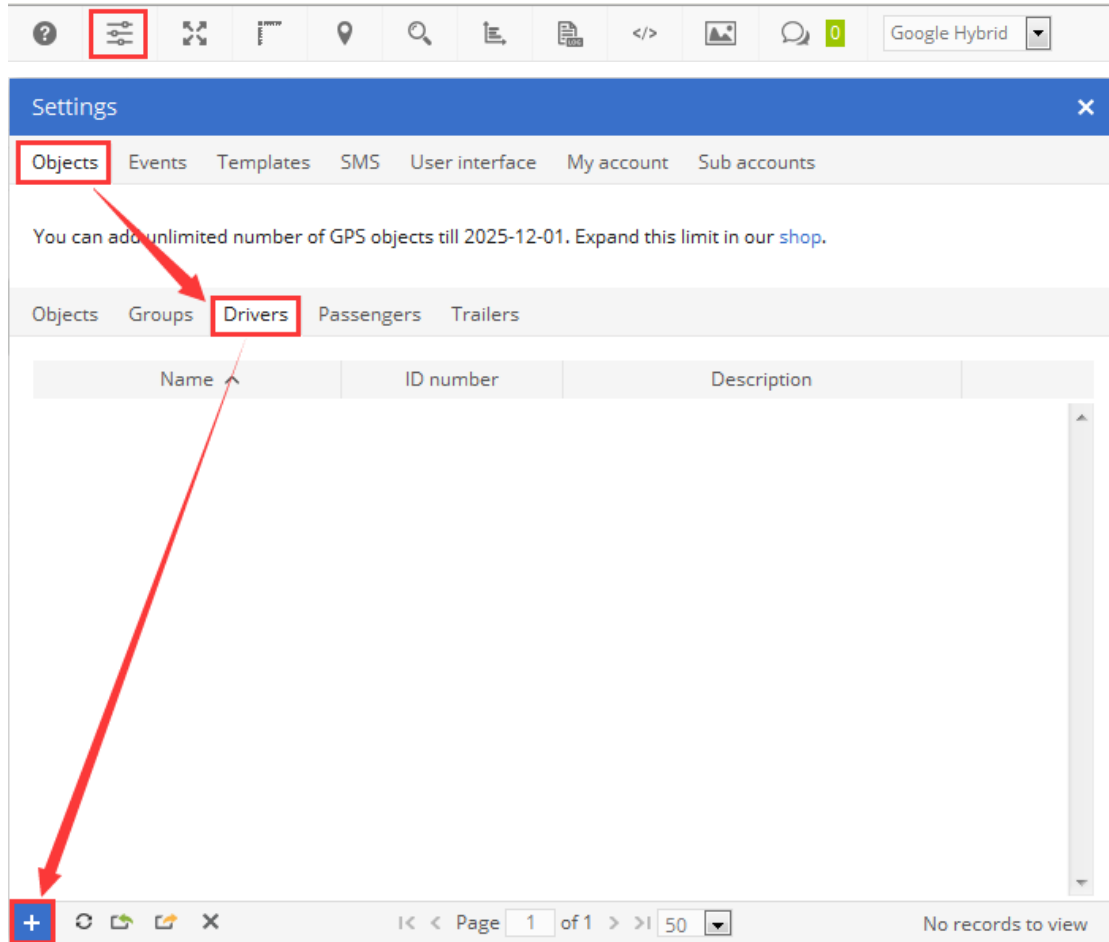
After setting, driver's information will be shown on "Objects" web-page according to actual situation,



and “RFID/iButton” logbook can be exported for detail.

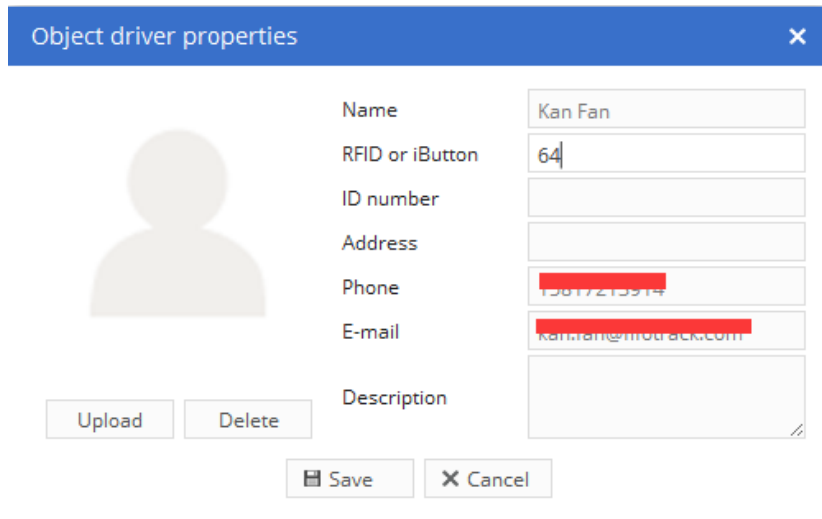
#### 9.1.1 Adding Global Driver Information

Select “Setting”→”Objects”→”Drivers”, click “Add” button.



In “Object driver Properties” web-page, add driver’s information, such as “Name”, “Address”, “Phone Number”, etc.. Also, driver’s photo can be uploaded in this page.

Column	Content/Specification
Name	Driver’s name, self-define; Required Field
RFID or iButton	RFID/iButton tag’s number, or the registered fingerprint number; Required field
ID number	Internal number of company for driver, self-define; Optional field
Address	Driver’s address; Optional field
Phone	Driver’s phone number; Optional field
E-mail	Driver’s e-mail; Optional field
Description	Description to driver; Optional field
Photo	Driver’s photo, PNG format, 144*160; Optional field



The dialog box titled "Object driver properties" contains a user profile icon on the left. To the right, there are input fields for the following information:

- Name: Kan Fan
- RFID or iButton: 64
- ID number: (empty)
- Address: (empty)
- Phone: 13817213314
- E-mail: kan.fan@fifotrack.com
- Description: (empty text area)

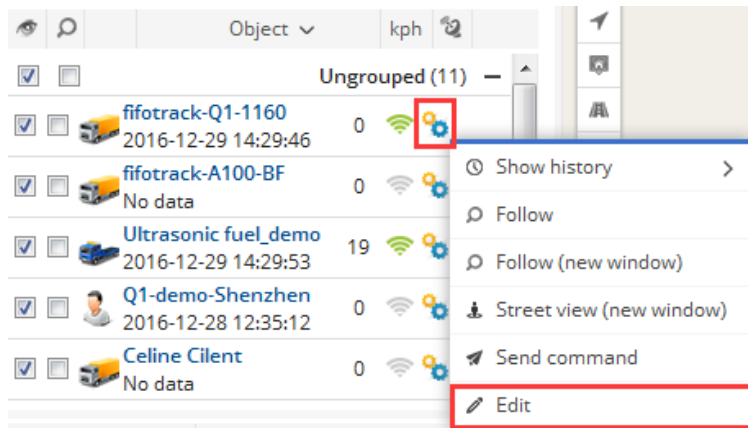
At the bottom left are "Upload" and "Delete" buttons. At the bottom right are "Save" and "Cancel" buttons.

Click "Save" button, then one driver's information has been added.

### 9.1.2 Setting object's "Driver assign" sensor

**NOTE:** Before setting "Driver assign" sensor, object should be connected to server, and should be in "Log in" status. User can swipe RFID/iButton/fingerprint to enter "Log in" status. After then, FIMS can identify corresponding GPRS data field.

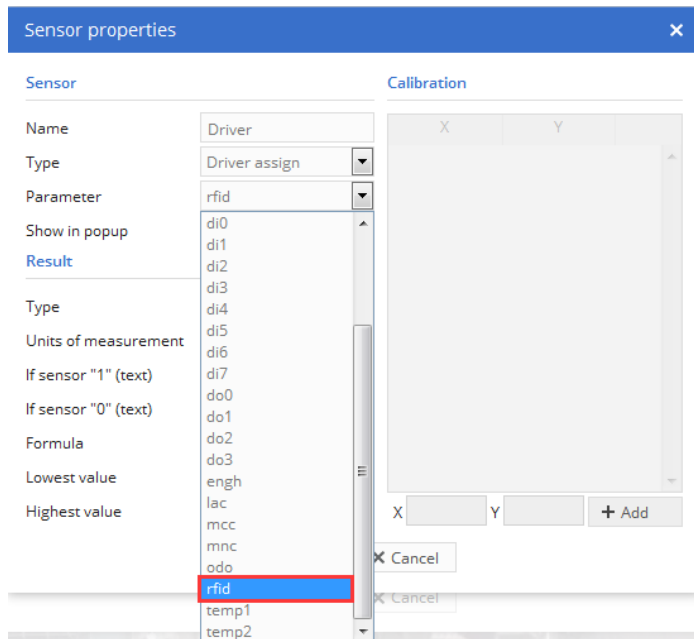
Click "Object control" icon → "Edit" → "Sensors" → "Add"



At "Sensor Properties" dialog, set parameters as below:

#### Sensor

- ⊙ Name: Input self-define string
- ⊙ Type: Select "Driver assign"
- ⊙ Parameters: Select "rfid"



Click “Save”, real-time driver information will be display at “Objects” page, as below:

Object	kph
Ungrouped (9)	
A100-BF 2016-06-18 16:49:39	0
A300-Rock 2016-07-25 11:16:19	0
A300-Vito 2016-07-13 09:52:59	0
A300-test 2016-05-27 12:33:45	0
Kan_A300 2016-07-11 21:54:28	0
Data	Value
Altitude	160 m
Angle	28 °
Driver	Kan Fan
Nearest zone	HQ-shennan-road (0.08 km)
Odometer	56 km
Position	22.546528 °, 114.079393 °
Time (position)	2016-07-25 11:16:19
Time (server)	2016-07-25 11:16:20
t-sensor-1	NaN Cels
t-sensor-2	25.68 Cels

### 9.1.3 View Logbook

FIMS supports logbook, which shows the information of driver, click “RFID and ibutton logbook” button to start logbook, as below:



Log detail is shown:

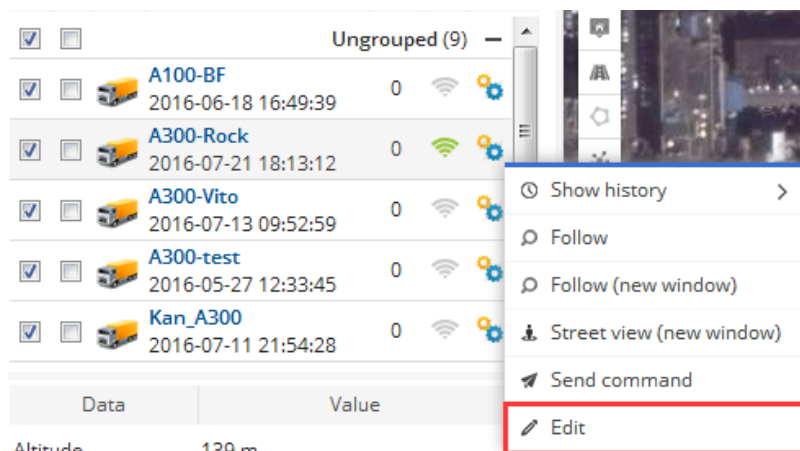
RFID and iButton logbook									
					Delete all		Export to CSV		Show
Object	All objects	Time from	2016-07-01	00:00	Drivers	<input checked="" type="checkbox"/>	Passengers	<input checked="" type="checkbox"/>	
Filter	Whole period	Time to	2016-07-31	00:00	Trailers	<input checked="" type="checkbox"/>			
Time	Object	Group	Name	Position					
2016-07-28 09:54:23	A300-Rock	Driver	165906249	22.546485 °, 114.080598 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					
2016-07-26 14:22:57	A300-Rock	Driver	166549319	22.546506 °, 114.080551 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					
2016-07-25 18:55:10	A300-Rock	Driver	165906249	22.546945 °, 114.079531 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					
2016-07-25 11:15:58	A300-Rock	Driver	Kan Fan	22.546530 °, 114.079398 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					
2016-07-07 18:52:50	Kan_A300	Driver	4586911	22.546670 °, 114.079853 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					
2016-07-07 18:52:28	Kan_A300	Driver	1647308	22.546670 °, 114.079853 ° - 1963 ½-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong					

## 9.2 Digital Temperature Sensor Using

Before using on FIMS, installation and settings of temperature sensor should be finished, refer to “FIFOTRACK DIGITAL TEMPERATURE SENSOR USER GUIDE” for detail.

To using temperature sensor on FIMS, user needs to set “temperature” sensor, as below:

Click “Object control icon” -> “Edit” -> “Sensors” -> “Add”,



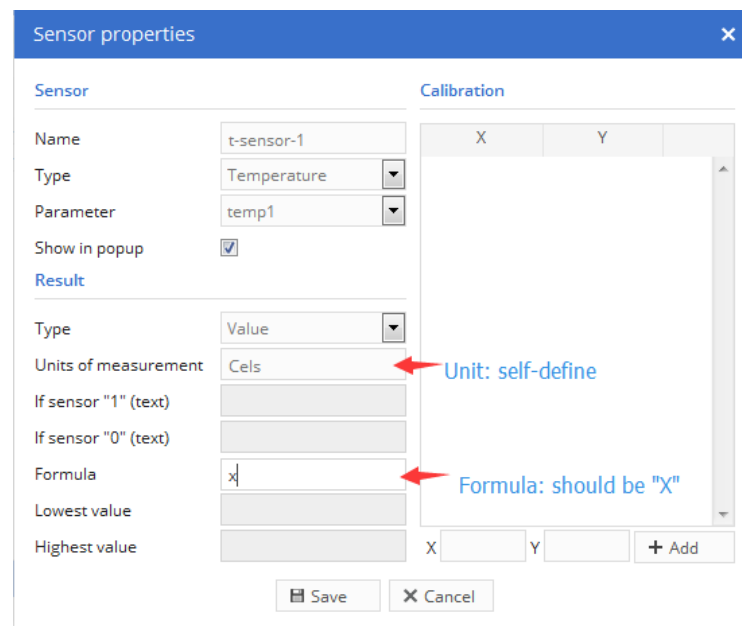
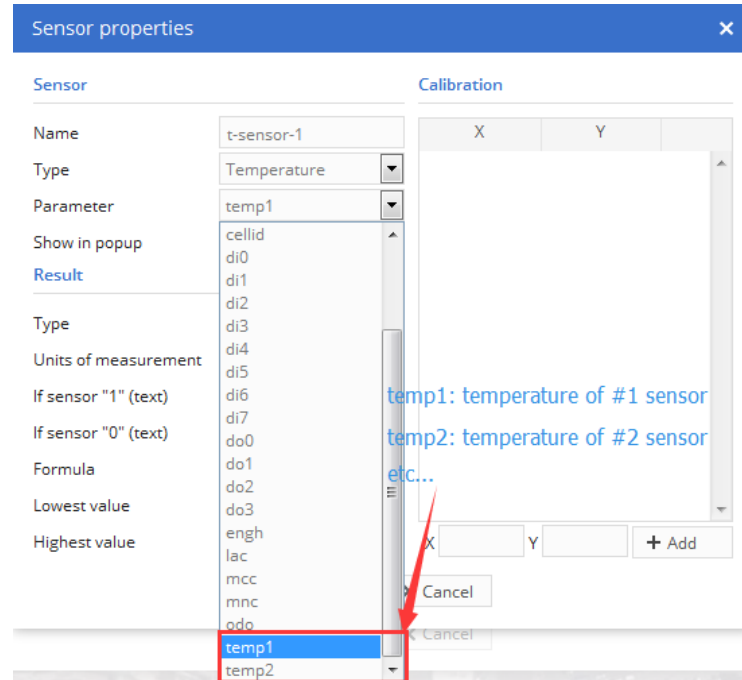
At “Sensor Properties” dialog, set parameters as below:

### Sensor

- ⊙ Name: Input self-define string
- ⊙ Type: Select “Temperature”
- ⊙ Parameters: Select “Tempx”
  - If single sensor is using, “Temp1” is shown in the “Parameters” box
  - If multiple sensors are using, “Tempx” corresponds to #x sensor’s temperature, while ‘x’ is the sequence number of sensor set/retrieved by B37 command.
- ⊙ Show in popup: selected

## Result

- ⦿ Type: Select “Value”
- ⦿ Units of measurement: self-define, the unit of sensor is °C.
- ⦿ Formula: should be “x” or “X”



Click “Save”, all sensors’ temperature will be display at “Object page”, as below:

Object	kph	
Ungrouped (9) —		
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A100-BF</b> 2016-06-18 16:49:39	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-Rock</b> 2016-07-21 18:06:10	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-Vito</b> 2016-07-13 09:52:59	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-test</b> 2016-05-27 12:33:45	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>Kan_A300</b> 2016-07-11 21:54:28	0	

Data	Value
Altitude	163 m
Angle	121 °
Nearest zone	HQ-shennan-road (0.09 km)
Odometer	56 km
Position	22.546700 ° , 114.079546 °
Time (position)	2016-07-21 18:06:10
Time (server)	2016-07-21 18:06:12
t-sensor-1	25.62 Cels
t-sensor-2	25.62 Cels

After setting “Temperature” sensor, “Temperature graph” report is working.

### 9.3 Fuel Sensor Using

Before using on FIMS, installation and settings of fuel sensor should be finished, refer to “FIFOTRACK FUEL SENSOR USER MANUAL” for detail.

To using fuel sensor on FIMS, user needs to set “fuel level” sensor, as below:

Click “Object control icon” -> “Edit”-> “Sensors”-> “Add”,

Object	kph	
Ungrouped (9) —		
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A100-BF</b> 2016-06-18 16:49:39	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-Rock</b> 2016-07-21 18:13:12	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-Vito</b> 2016-07-13 09:52:59	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>A300-test</b> 2016-05-27 12:33:45	0	
<input checked="" type="checkbox"/> <input type="checkbox"/> <b>Kan_A300</b> 2016-07-11 21:54:28	0	

Data	Value
Altitude	139 m

At “Sensor Properties” dialog, set parameters as below:

#### Sensor

- ⊙ Name: Input self-define string
- ⊙ Type: Select “fuel level”
- ⊙ Parameters: Select “ai0”
- ⊙ Show in popup: selected

### Result

- ⊙ Type: Select “type”
- ⊙ Units of measurement: input unit of fuel level, such as “L” or “Liters”, it is self-define
- ⊙ Formula: input formula to calculate fuel level, the formula is “ $(X * \text{max\_level}) / 4096$ ” while “max\_level” is the maximum capacity of fuel tank. (In this example, max\_level is 200L)

Click “Save”, data about fuel level will display at “Object page”, as below:

Sensor properties
×

**Sensor**

Name:

Type:

Parameter:

Show in popup: ☒

**Result**

Type:

If sensor "1" (text):

If sensor "0" (text):

Units of measurement:

Formula:

Lowest value:

Highest value:

**Calibration**

X ^
Y

X

Y

+ Add

Objects
Events
Places
History

Search

Object	kph
2016-02-16 10:32:29	
<input checked="" type="checkbox"/> <input type="checkbox"/> Halogen Demo-Nigeria	0
2015-12-08 04:09:33	
<input checked="" type="checkbox"/> <input type="checkbox"/> Q1-test	0
2016-02-15 10:42:26	
<input checked="" type="checkbox"/> <input type="checkbox"/> TESTE CAC	0
2016-02-16 10:32:36	
<input checked="" type="checkbox"/> <input type="checkbox"/> Uncle Hossein_Iran	0
2016-01-28 11:20:48	
<input checked="" type="checkbox"/> <input type="checkbox"/> nauman	0
2016-02-16 10:32:45	

Data	Value
ACC:	ACC OFF
Altitude:	0 m
Angle:	0 °
Engine hours:	0 h
Nearest marker:	FRATELSAT (13.79 km)
Nearest zone:	New zone 1 (0.35 km)
Odometer:	18 km
Position:	22.546750 °, 114.078885 °
Time (position):	2016-02-16 10:32:45
Time (server):	2016-02-16 10:32:49
<b>fuel:</b>	<b>148.68 L</b>

After setting, all functions on fuel level is working, such as “Fuel level graph” report, “Fuel fillings” report, “Fuel thefts” report.

The below figures are exported reports:

### Fuel level graph



### Fuel fillings

Object: Ultrasonic fuel\_demo

Period: 2016-10-11 13:00:00 - 2016-10-13 18:00:00

Time	Position	Before	After	Filled	Sensor	Driver
2016-10-12 06:33:59	27.342533 °, 114.178288 °	52.70 Liter	68.20 Liter	15.5 Liter	Ultrasonic sensor	n/a
2016-10-13 12:54:55	27.342485 °, 114.178231 °	39.52 Liter	89.51 Liter	49.99 Liter	Ultrasonic sensor	n/a

Total filled: 65.49 Liter

## 9.4 Ultrasonic Fuel Sensor Using

Ultrasonic is working with objects, which has RS232 port, such as A300, A500, etc..

### NOTE:

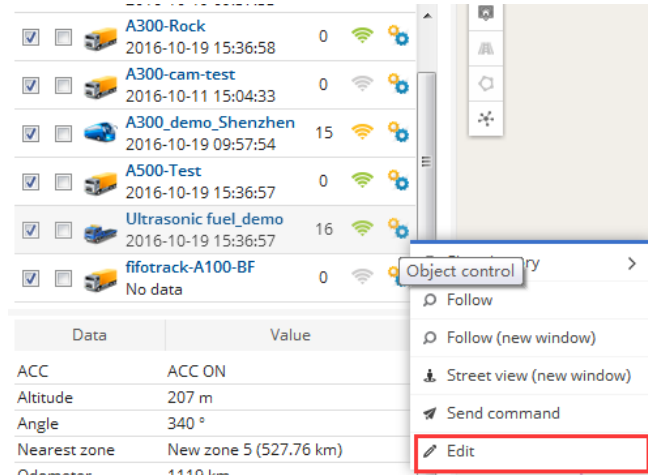
- Before using, ultrasonic fuel sensor should be installed and connected to object, refer to “FIFOTRACK ULTRASONIC FUEL SENSOR USER GUIDE” for operation details;



- ⦿ After GPRS data with fuel level data uploaded to FIMS, the below steps could continue.

User needs to set “Fuel level” sensor on FIMS, and then, all function about fuel will be working. Follow the below steps:

Click “Object control” icon->”Edit”->”Sensors”->”Add”,



At “Sensor Properties” dialog, set parameters as below:

### Sensor

- ⦿ Name: Input self-define string
- ⦿ Type: Select “Fuel level”
- ⦿ Parameters: Select “ai2”
- ⦿ Show in popup: selected

### Result

- ⦿ Type: Select “Value”
- ⦿ Units of measurement: self-define
- ⦿ Formula:  $(X * \text{max\_c}) / \text{max\_h}$ , while

max\_c: maximum capacity of tank, using the unit specified in “Units of measurement”

max\_h: maximum height of tank, unit mm

For example, when tank has capacity of 155Liters, and maximum height 40cm, the formula is  $(X * 155) / 400$

Sensor properties

Sensor

Name: Ultrasonic sensor  
Type: Fuel level  
Parameter: ai2  
Show in popup: ☒

Calibration

X

Y

Formula:  $(X * \text{max\_c}) / \text{max\_h}$

Here is an example only

Result

Type: Value  
Units of measurement: Liter  
If sensor "1" (text):  
If sensor "0" (text):  
Formula:  $(x * 155) / 400$   
Lowest value:  
Highest value:

Sensor result preview

Current value: 132  
Result: 51.15 Liter

Save

Cancel

Click "Save", fuel level will be display at "Object page", as below:

<input checked="" type="checkbox"/>	<input type="checkbox"/>		A300-cam-test	0		
2016-10-11 15:04:33						
<input checked="" type="checkbox"/>	<input type="checkbox"/>		A300_demo_Shenzhen	15		
2016-10-19 09:57:54						
<input checked="" type="checkbox"/>	<input type="checkbox"/>		A500-Test	0		
2016-10-19 15:52:35						
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Ultrasonic fuel_demo	26		
2016-10-19 15:52:33						
<input checked="" type="checkbox"/>	<input type="checkbox"/>		fifotrack-A100-BF	0		
No data						
<input checked="" type="checkbox"/>	<input type="checkbox"/>		fifotrack-01-1160			

Data	Value
ACC	ACC ON
Altitude	176 m
Angle	309 °
Nearest zone	New zone 5 (530.52 km)
Odometer	1124 km
Position	27.340468 °, 114.187388 °
Status	Moving 10 min 38 s
Time (position)	2016-10-19 15:52:33
Time (server)	2016-10-19 15:52:35
Ultrasonic sensor	101.53 Liter
ext-pwr	28.68 V

After setting, all functions on fuel level is working, such as "Fuel level graph" report, "Fuel fillings" report, "Fuel thefts" report.

The below figures are exported reports:

### Fuel level graph



## Fuel fillings

Object: Ultrasonic fuel\_demo

Period: 2016-10-11 13:00:00 - 2016-10-13 18:00:00

Time	Position	Before	After	Filled	Sensor	Driver
2016-10-12 06:33:59	27.342533 °, 114.178288 °	52.70 Liter	68.20 Liter	15.5 Liter	Ultrasonic sensor	n/a
2016-10-13 12:54:55	27.342485 °, 114.178231 °	39.52 Liter	89.51 Liter	49.99 Liter	Ultrasonic sensor	n/a

Total filled: 65.49 Liter

## 9.5 Camera

Click the below icon to start "Image gallery",



And then, user can view photo(s) on the pop-up page, as below:

Image gallery

Object: All objects

Filter: Whole period

Time from: 2016-09-01 00:00

Time to: 2016-09-01 00:00

Show X Delete all

Time	Object
2016-08-27 11:49:48	A300-cam-test
2016-08-27 11:44:12	A300-cam-test
2016-08-27 11:38:37	A300-cam-test
2016-08-27 11:24:26	A300-cam-test
2016-08-26 13:51:44	A300-cam-test
2016-08-26 13:44:01	A300-cam-test
2016-08-26 13:30:40	A300-cam-test
2016-08-26 13:20:13	A300-cam-test
2016-08-26 13:09:59	A300-cam-test
2016-08-26 12:59:17	A300-cam-test
2016-08-26 12:48:57	A300-cam-test
2016-08-26 12:38:18	A300-cam-test
2016-08-26 12:27:42	A300-cam-test
2016-08-26 12:17:34	A300-cam-test
2016-08-26 12:06:46	A300-cam-test

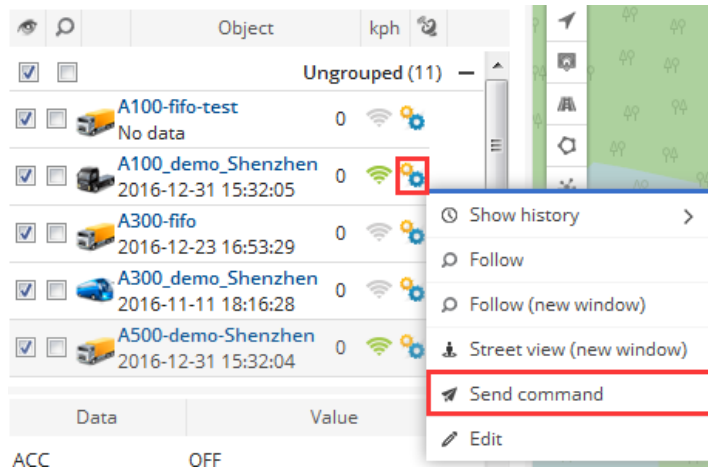
22.546510 °, 114.079848 ° - 1963号-1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong Sheng, China

## 10 Sending Command

Object can be set or controlled via GPRS command sent from FIMS, which contains:

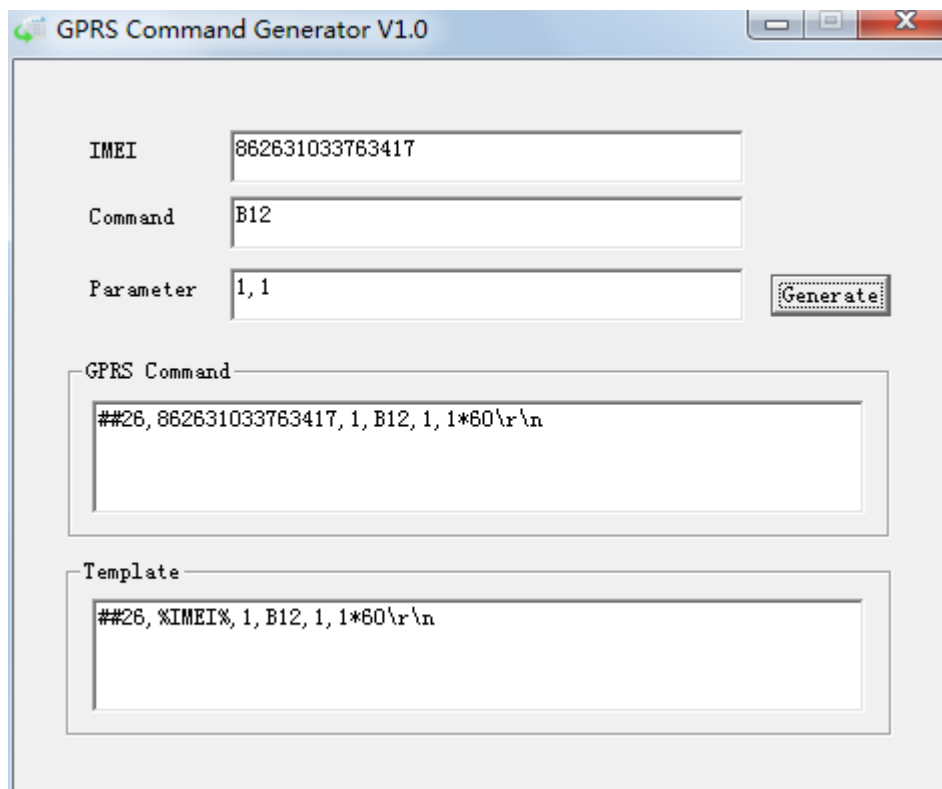
- ⦿ Control – Sending command to specified object, used for real-time control
- ⦿ Templates – Command template, simplify command sending operation

Click "Object control" icon → "Send Command" to open dialog:



## 10.1 Control

On “Control” dialog, user can send command to object; Tool “GPRS Command Generator” is used to generate needed command, copy the generated command string to “Command” column, click “Send” button, and then, command is sent.



Object control

Control Templates

Object: A100\_demo\_Shenzhen Gateway: GPRS

Template: Custom Type: ASCII

Command: ##26,862631033763417,1,B12,1,1\*60\r\n

Send

Time	Object	Name	Gateway	Type	Command	Status
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## 10.2 Templates

User can edit command template on FIMS, which can simplify command sending operation. Click “Templates”→”Add”, to open template edit dialog, input contents, click “Save” button, and then, a template is generated.

Object control

Control **Templates**

Command properties

Template

Name: OUT1 Cut Engine

Hide unused protocols: ☐

Protocol: fifotrack

Gateway: GPRS

Type: ASCII

Command: ##26,%IMEI%,1,B12,1,1\*60\r\n

Variables

%IMEI% - Object IMEI

Save Cancel

Column	Content
Name	Self-define
Hid unused protocols	Unselect
Protocol	fifotrack
Gateway	GPRS
Type	ASCII
Command	Command string, it can be generated by using “GPRS Command Generator”

After template saved, it can be used for command sending in “Control” dialog, as below:

Object control
×

Control
Templates

Object
A100\_demo\_Shenzhen
Gateway
GPRS
Template
OUT1 Cut Engine
Type
ASCII
Command
Custom
OUT1 Cut Engine
Send

Time	Object	Name	Gateway	Type	Command	Status

### 10.3 Setting Output Control

Output control is a common used function. Setting templates will simplify operation, which can be used for all objects in the account; On “Templates” dialog, setting according to actual need, as below:

Column	Content	
Name	Self-define	
Hid unused protocols	Unselect	
Protocol	fifotrack	
Gateway	GPRS	
Type	ASCII	
Command	Operation	Command String
	Set “1” via OUTPUT1	##26,%IMEI%,1,B12,1,1*6A\r\n
	Set “0” via OUTPUT1	##26,%IMEI%,1,B12,1,0*6B\r\n
	Set “1” via OUTPUT2	##26,%IMEI%,1,B12,2,1*69\r\n
	Set “0” via OUTPUT2	##26,%IMEI%,1,B12,2,0*68\r\n

Please e-mail us at [info@fifotrack.com](mailto:info@fifotrack.com) if any question or feedback.