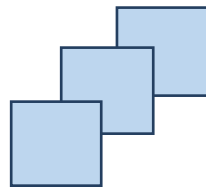


FIFOTRACK FINGERPRINT USER GUIDE




Model: Fingerprint

Version: V1.1

www.fifotrack.com

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Document History

Version	Revision Date	Author	Detail
V1.1	Nov 10, 2016	Vito Hu	Initial Version

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1 Instructions of Safety

This chapter contains information on how to operate fingerprint and device safely. By following these requirements and recommendations, you will avoid dangerous situations. Please read these instructions fully and follow them strictly before operating the tracker!

Before using, please make sure the tracker has been configured well and LED lights are visible in working status.

2 Applied Model

Fingerprint is connected to tracker via RS232 port, it is applied for:

- ⊙ A300

3 Basic Description & Specification

- ⊙ Power Supply: 5V (typical), range 4.2~7V
- ⊙ Power Consumption: 60mA average, peak 120mA
- ⊙ Working Temperature: -30°C~70°C
- ⊙ Working humidity: 20%~90%
- ⊙ Port: RS232
- ⊙ Cable length: 1.5m
- ⊙ Image Size: 256*288 pixel
- ⊙ Image Pixel: 500DIP
- ⊙ FAR: < 0.001%
- ⊙ FRR: < 0.005%
- ⊙ Memory Size: 32 pieces, can be extended
- ⊙ Searching Speed: <1s

4 Installation

4.1 Connect to A300

- ⊙ Plug fingerprint's connector into "RS232|MIC|SPK" socket of A300, connection will be finished.

- ☉ Power on tracker with external supply, and then fingerprint works normally.



4.2 Installing Buzzer

Buzzer is used to indicate operation status, and it is suggested to install buzzer for actual using. Tracker uses OUTPOUT2 to control buzzer, below is wiring method:

Buzzer	Tracker
Red	Red, or positive of vehicle battery
Red & Black	OUTPUT2

NOTE:

- ☉ There are two types of buzzer, which is used on 12V or 24V vehicle. Choosing the right one according to vehicle battery.
- ☉ Wrap over the naked joints with electrical tape after connection.

5 Operation

5.1 Register Fingerprint(s)

Before using, it is needed to register users' fingerprint to tracker, which includes the registration for fingerprint and user's ID. The below describes method:

Send SMS command to start registration

SMS command: 000000,B42,<user-id>

SMS reply : B42,OK

After reply received, procedure is started, and it is needed to finish registration in 3mins.

Put the finger on fingerprint, to sample the first finger image; If buzzer installed, "BI" twice, lift finger for more than 2s;

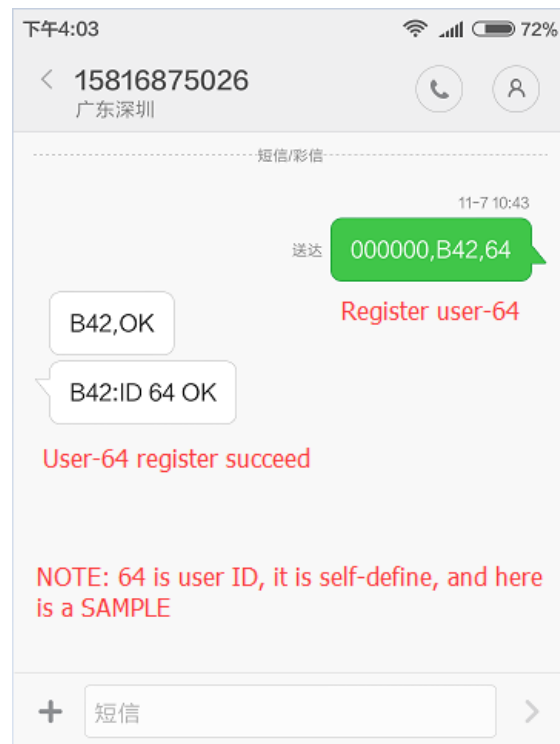
Put the finger on fingerprint again, to sample the second finger image. When the two images are similar, registration will be finished, buzzer "BI" once and the "Power" LED flashes for 3s to indicate registration result.

After registration succeed, the below SMS will be sent by tracker, to notify result and user ID

B42:<user-id> OK

NOTE:

- ⊙ **user-id** is self-define, it can be added to FIMS
- ⊙ Power on tracker with external supply (>11V), to make both tracker and fingerprint work normal.
- ⊙ After registration, fingerprint and tracker are used in pair; When fingerprint or tracker replaced, re-do registration again for the new pair.



5.2 Delete fingerprint(s)

To delete fingerprint(s), send the below SMS command:

SMS command: 000000,B43,<user-id>/<ALL>

SMS reply : B43,OK

NOTE:

- ⊙ **user-id** is the registered user ID saved in tracker which corresponds to **user-id** in B42 command
- ⊙ When send command “000000,B43,ALL”, delete all fingerprints saved in tracker

5.3 Normal Using

After registration finished, fingerprint can be used to identify driver. When driver swipes finger, tracker will generate “Login” or “Log out” alarm, and send to FIMS.

5.3.1 Operation Logic

- ⊙ The first time to swipe finger, tracker generates “Login” alarm, and attaches user ID into GPRS position package.
- ⊙ When tracker is in “Login” state, swipe the same finger, tracker generates “Log out” alarm, with empty user ID in GPRS position package.
- ⊙ When tracker is in “Login” state, swipe the other finger, tracker generates “Log out” alarm for the previous user ID, and generates “Login” alarm with the new user ID. All the following GPRS position packages are uploaded with new user ID.
- ⊙ When finger swiped, and the corresponded user ID is got, tracker’s “Power” LED flashes for 3s.

5.3.2 Buzzer Mode Summary

When buzzer installed, there are some modes to indicate operation status, as below:

Mode	Description	Next to do
Register fingerprint(s)		
“BI” twice	The first finger image is got	Lift finger for more than 2s, then put finger on device again, to get the second finger image
“BI” once	Fingerprint registration is succeed	None
Normal using		
“BI” twice	Logout	None
“BI” once	Login	None

5.3.3 Control

In actual usage, user can use fingerprint and “Login”, “Logout” alarm to control vehicle, usually, control engine with external relay. As a result, when the registered driver swipes finger, tracker will unlock engine, otherwise, lock the engine. Setting B23 command to achieve vehicle control:

SMS command: 000000,B23,<alm-code>,<GPRS><SMS><two-way><monitor><photo><AN-idx>

SMS reply : B23,OK

- ⊙ alm-code: alarm code, for “Login” alarm, alm-code is 37, while for “Log out” alarm, alm-code is 38;
- ⊙ GPRS: GPRS: Disable/enable GPRS uploading;
- ⊙ SMS: Disable/enable SMS to SOS number(s);
- ⊙ two-way: Disable/enable SOS number(s) dialing under two-way conversation;
- ⊙ monitor: Disable/enable SOS number dialing under monitor mode;
- ⊙ photo: Disable/enable photographing; The option is invalid when fingerprint in using;
- ⊙ AN-idx: Complicated action;

Under default setting, tracker will lock engine via OUTPUT1 when setting **AN-idx** to 1 in B23 command, and unlock engine via OUTPUT1 when setting **AN-idx** to 2 in B23 command; Set the other options according to actual using.

For example:

SMS command: 000000,B23,37,100002

SMS reply : B23,OK

After the command sent, when registered fingerprint swiped, tracker generates “Login” alarm, sends GPRS data to platform, and unlocks engine.

SMS command: 000000,B23,38,100001

SMS reply : B23,OK

After the command sent, when registered fingerprint swiped again, tracker generates “Log out” alarm, sends GPRS data to platform, locks engine.

5.4 Setting on FIMS

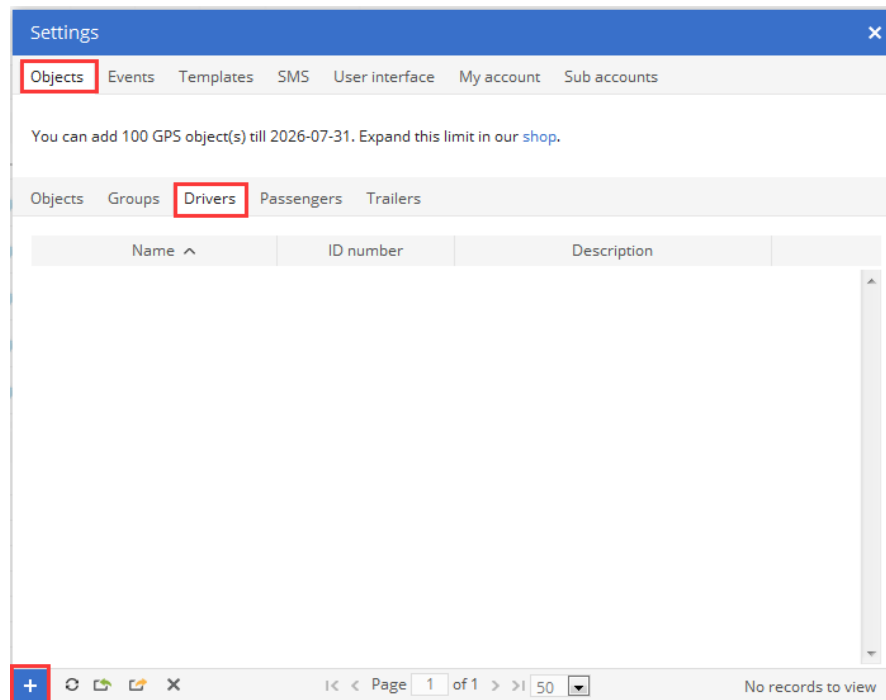
Setting on FIMS includes:

- Add global driver information
- Assign driver to tracker

5.4.1 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.

NOTE:

“RFID or iButton” corresponds to ***user-id*** setting in chapter 5.1

Click “Save” button, then one driver’s information has been added.

5.4.2 Assign Driver to Tracker

select target tracker→”Edit”→”Sensors”→”Add”

The screenshot shows a list of vehicles under the heading "Ungrouped (9)". The list includes:

Vehicle Name	Date/Time	Value	Signal	Settings
A100-BF	2016-06-18 16:49:39	0	Wi-Fi	Settings
A300-Rock	2016-07-21 18:13:12	0	Wi-Fi	Settings
A300-Vito	2016-07-13 09:52:59	0	Wi-Fi	Settings
A300-test	2016-05-27 12:33:45	0	Wi-Fi	Settings
Kan_A300	2016-07-11 21:54:28	0	Wi-Fi	Settings

A context menu is open over the list, with the "Edit" option highlighted in red. The menu items are:

- Show history
- Follow
- Follow (new window)
- Street view (new window)
- Send command
- Edit

Below the list is a table with columns "Data" and "Value". The "Data" column contains "Altitude" and the "Value" column contains "139 m".

The "Edit object" dialog is open, showing tabs for "Main", "Fuel consumption", "Accuracy", "Sensors", and "Service". The "Sensors" tab is active, displaying a table with columns "Name", "Type", and "Parameter".

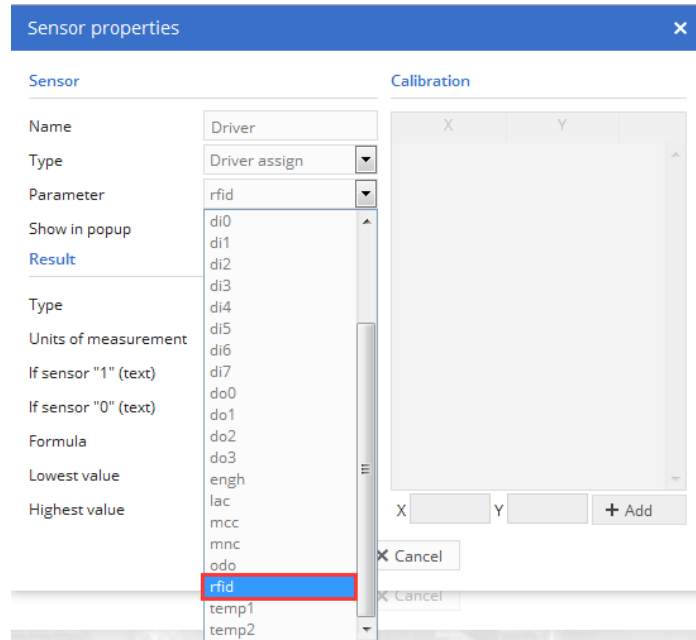
Name	Type	Parameter
ACC	Ignition (ACC)	di1

At the bottom of the dialog, there is a toolbar with a "+" icon (highlighted in red), a refresh icon, a save icon, and a delete icon. Below the toolbar are "Save" and "Cancel" buttons.

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 "Object page", as below:

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

5.4.3 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 1/2 -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 1/2 -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 1/2 -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 1/2 -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 1/2 -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 1/2 -1977 Hua Fu Lu, HuaQiang Bei, Futian Qu, Shenzhen Shi, Guangdong						

View 1 - 6 of 6

6 NOTE

- ⊙ Fingerprint works only when external power on.
- ⊙ After swiping registered fingerprint, tracker's power LED will flashes for 3s.
- ⊙ It is suggestion to use buzzer together with tracker and fingerprint.
- ⊙ After registration, tracker and fingerprint are used in pair, when tracker or fingerprint replaced, re-do the registration operation for the new pair.

Please e-mail us at info@fifotrack.com if any question or feedback.