



# Professional Breath Alcohol Analyzer

With Fuel Cell Sensor

## FiT333



**IMPORTANT:** Many factors (e.g. environment gas residue, smoke & various smell in human mouth, etc...) may affect the Blood Alcohol Concentration (BAC) level, so the Readings are For Reference Only.

Neither the reseller nor manufacturer accept any liability arising from the use of this unit.

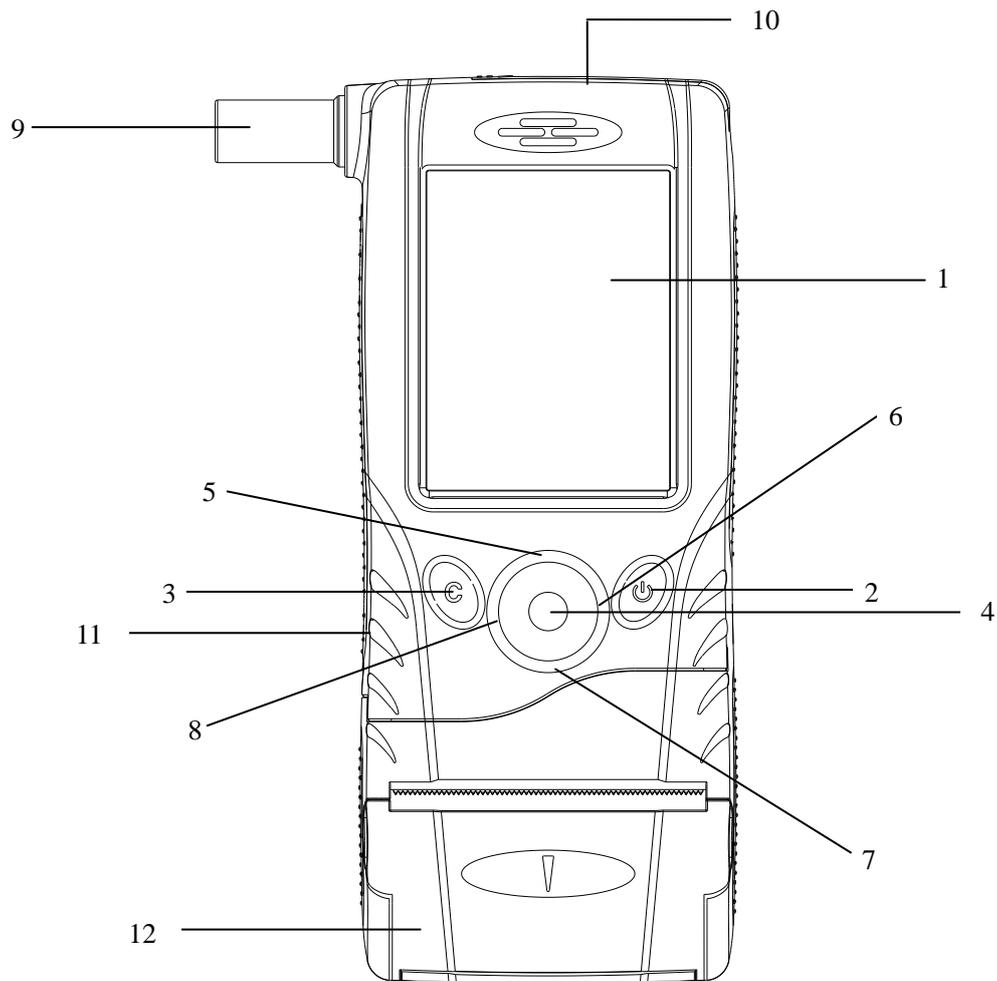
**DO NOT drink before you drive!**

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# Contents

	<b>Page</b>
<b>Measuring instrument.....</b>	<b>2</b>
<b>What is What?.....</b>	<b>3</b>
<b>Basic Scientific Principles.....</b>	<b>4</b>
<b>Maintenance.....</b>	<b>4</b>
<b>Intended Use.....</b>	<b>4</b>
<b>Preparation.....</b>	<b>5</b>
<b>Power &amp; Charging.....</b>	<b>5</b>
<b>Operation instructions.....</b>	<b>6</b>
<b>Formal Test.....</b>	<b>6-9</b>
<b>Quick start.....</b>	<b>9</b>
<b>System Setting.....</b>	<b>9-10</b>
<b>Test record.....</b>	<b>11</b>
<b>Sensor Test.....</b>	<b>11</b>
<b>PC download.....</b>	<b>12-16</b>
<b>Change the wireless printer module as following.....</b>	<b>17</b>
<b>Specification.....</b>	<b>18</b>
<b>Calibration.....</b>	<b>18</b>
<b>How often should I re-calibrate the FiT tester.....</b>	<b>18</b>

## Measuring instrument



1. TFT QVGA 3.5" display with touch panel
2. Power Key
3. Back Key
4. "OK" Button
5. UP Key
6. Right Key
7. Down Key
8. Left Key
9. Mouth piece
10. Inner tube
11. USB Jack(Connect computer)
12. Printer



## What is What?

1. Measuring instrument
2. Mouthpiece, 25pcs
3. Big mouthpiece (connect the mouthpiece to blowing), 1pc
4. Wireless receive module,1pc
5. Wireless Launch module,1pc
6. Leather sheath, 1pc
7. Printer paper, 4pcs
8. PC download cable , 1pc
9. Car adaptor (connect the unit machine directly charging in the car), 1pc
10. Rechargeable Batteries **1.2V AA Ni-H(2300mAh or above)**, 4pcs
11. Ni-battery Charger,1pc
12. CD for Download software,1pc
13. User manual 1pc

Thanks for purchasing our FiT333 Professional Fuel Cell Digital Alcohol Analyzer. FiT333 gives you a precision digital indication of your breath alcohol content and thus your possible concentration of intoxication. To achieve the high accuracy, user should study this manual carefully. And any use of the FiT333 requires full understanding and strict observation of these instructions.

## Basic Scientific Principles

Fuel Cell sensor is using the electrochemical reaction for platinum against ethanol molecules, gives the most stable and reliable measuring technology.

**Declaration:** This manual **should** be read before use.

## Liability for proper function or damage

Never unscrew the FiT333. **Warranty not valid** if any screws had being loosened or warranty label had being broken. Serviced or repaired by personnel not employed by FiT Service centre or authorized by FiT or if the instrument is used in a manner not conforming to its intended use.

## Maintenance

Repair/maintenance of the FiT333 should only be carried out by trained technician from authorized FiT professional breath alcohol tester Service Center.

Only authentic FiT spare parts can be used for maintenance.

## Intended Use

- \* Don't put this product in high temperature, high humidity or high dust environment.
- \* Don't knock this product, especially do not press the TFT-LCD by force.
- \* Don't dismantle the machine and use the alcohol, thinner or benzene to clean the surface of the product and its components.
- \* Don't use in the area prohibiting using of wireless devices.
- \* Don't use in the flammable and explosive environment.
- \* Please use the touch pen when doing the touch screen calibration
- \* Before use, please fully charge up the Handset using the provided accessory charger.

## General Conditions

- Use a new mouthpiece for each person being tested.
- Make sure no alcohol and solvent vapors (disinfectants) in the ambient air.
- Do not allow a high alcohol concentration to reach the sensor. For instance, from drinking alcohol, eating alcohol containing foods or rinsing the mouth with alcohol mouth washer just before measurement.
- Keep away from the antenna of mobile phones or transmitters.

## Conditions for Tested Person

To begin, rinse out your mouth with water or non-alcoholic drinks before using the unit. Abstain from smoking (for 15 minutes) or drinking (for at least 15 minutes.) Actual residues of alcohol in the mouth may enhance the measured values. This may also occur by aromatic drinks (e.g. fruit juices), alcoholic mouthwashes or mouth sprays, medicines and drops, as well as by burping and vomiting.

Breathe evenly and normally before the test.

## Important:

DO NOT EAT, DRINK, OR SMOKE FOR 15 MINUTES PRIOR TO UNDERTAKING A TEST. FAILURE TO DO SO MAY IMPAIR RESULTS AND DAMAGE THE UNIT.

REMEMBER: NEVER DRINK & DRIVE – THE ONLY SAFE LEVEL IS ZERO

## Preparation

### Power

- Remove the door of battery compartment.
- Observe correct polarity before installing the batteries
- Insert 4pcs rechargeable **1.2V AA Ni-H** batteries (**2300mAh or above**) into the battery compartment.
- Close the battery cover.



### Power & Charging

- If the battery symbol on the display indicates “**empty**”, please charge it as soon as possible.

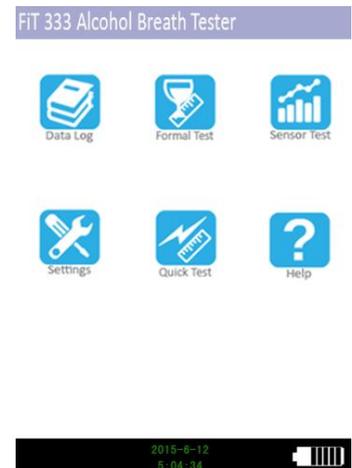
**Pull out battery and put in** the provided power adaptor to charge. Or connect with provided car charger in car to

charge the battery. Unit battery symbol display charging



### Power ON/OFF

1. Press the “Power Key” for 2 seconds to turn ON the machine then enter into the main interface.
2. Press and hold the “Power Key” for about 3 seconds to turn OFF the machine.
3. If no key input for 10 minutes, the machine will power off automatically to save the battery.
4. User can use either normal keys or touch screen for key operation



# Operation instructions

**1. Formal Test:**  Under this test mode, the device will initialize the sensor condition. In some case, it need take few seconds to 2 minutes.

1.1 Insert a new mouthpiece in **CORRECT** orientation.

1.2 Press the “” icon on the main menu, The LCD will shows “Ready-blow”, user can start the alcohol test. Insert the mouthpiece into chamber inlet.

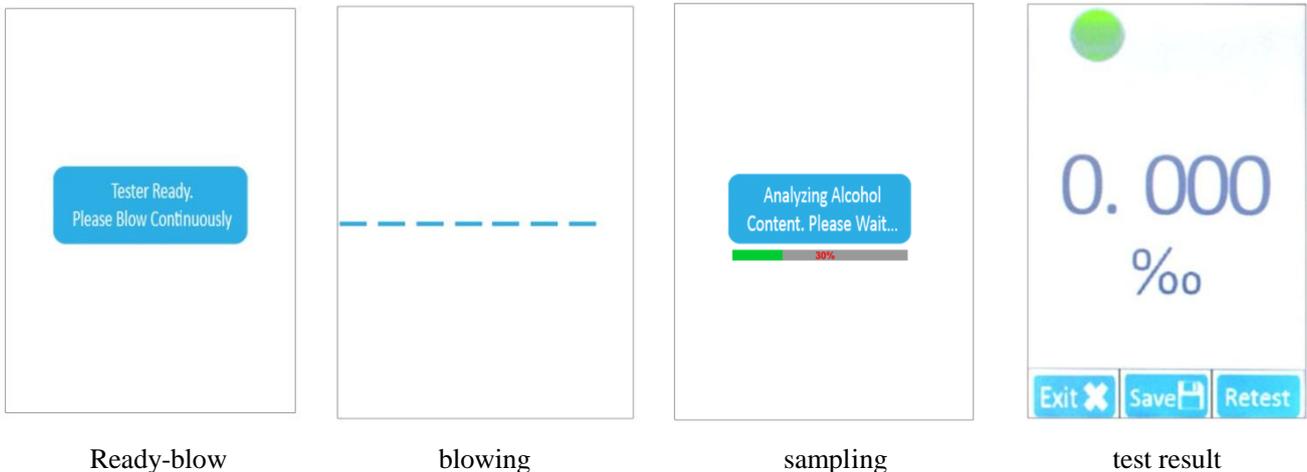
i. Automatic test: Evenly blow into the mouth piece for about 6 seconds with a continuous “Beep” sound announcement. (**Active test**)

ii. Manual test: If user cannot perform the automatic test (Driver do not provide continuously breath blow), press the OK key once to take sample (**Passive test**)

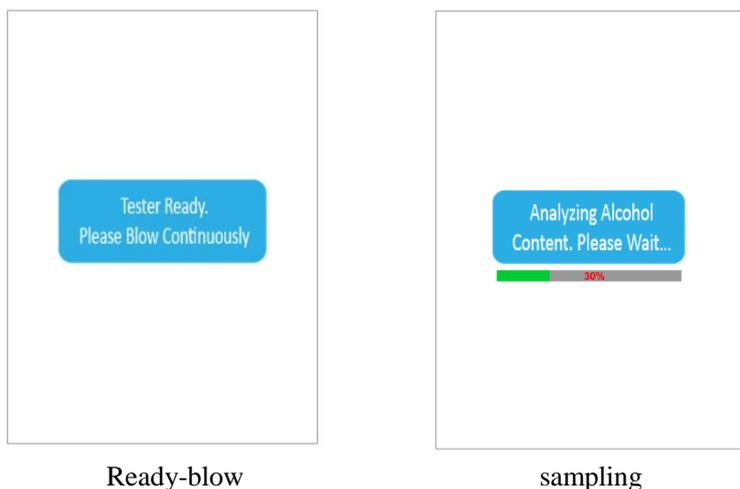
1.3 If the breath sample flow rate is too soft or duration is too short, “Blow Abort or too Short” will be shown on the display. The machine will return to the main menu automatically. Repeat 1.1 & 1.2 to test again.

**Active test: Under this test mode, the device have require for air pressure.**

**Blow continuously through the blowing tube for approximately 6 seconds.**

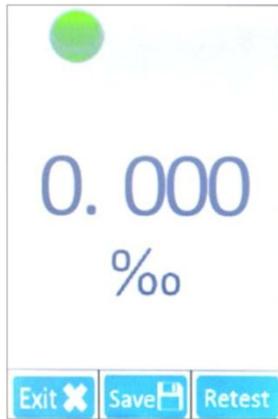


**Passive test: Press OK key for taking breath sample.**



1.4 If the breath sample is taken successfully, the display will show “**Sampling...Please wait**” The machine will analyze the breath sample and the test result will then be shown on the display after analyzing.

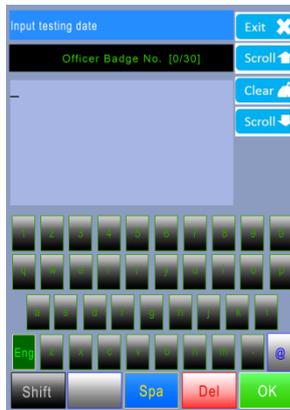
1.5 Press “Retest” icon to start another test or press “**Save**” to input the relevant information. Press “Exit” to return back into the main menu;



1.6 If the breath sample is taken not successfully. Then “**blow time-out**” or “**blow abort**” will show as following. User need to re-test again.

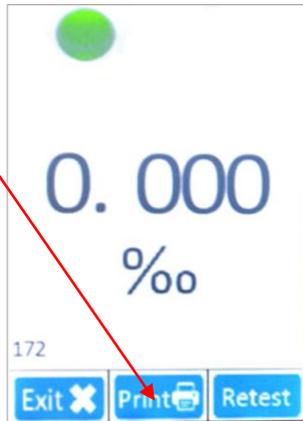


1.7 Press “**Save**” to input the relevant pictures below:



After inputted the relevant information, the Print or Retest interface will display on the LCD.

Press "**Print**" key to print out the test result or Press "**Retest**" to start another test or Press "**Exit**" key to return back.



**The Printout contains: instrument name & number, Police information, Driver information, Test Date & Time, Vehicle Number & Test result**

**To ensure the accuracy and no environment residue, the machine should rest for 3 minutes for each quick test.**

**Also, need to change the mouthpiece for each test**

#### 1.8 Change new mouthpiece

Remove and change a new mouthpiece after each test.

To repel the mouthpiece

Push the REJECT trigger



#### 1.9 Change new inner tube

To ensure the accuracy

1. Wait for few minutes to perform the test
2. Blow fresh air to clear the residue
3. Change a new inner tube and mouth piece

**If continually use the machine for more than 15 minutes or water vapor condenses inside the inner tube, please change a new inner tube (or allow the device to rest for 3 minutes.)**

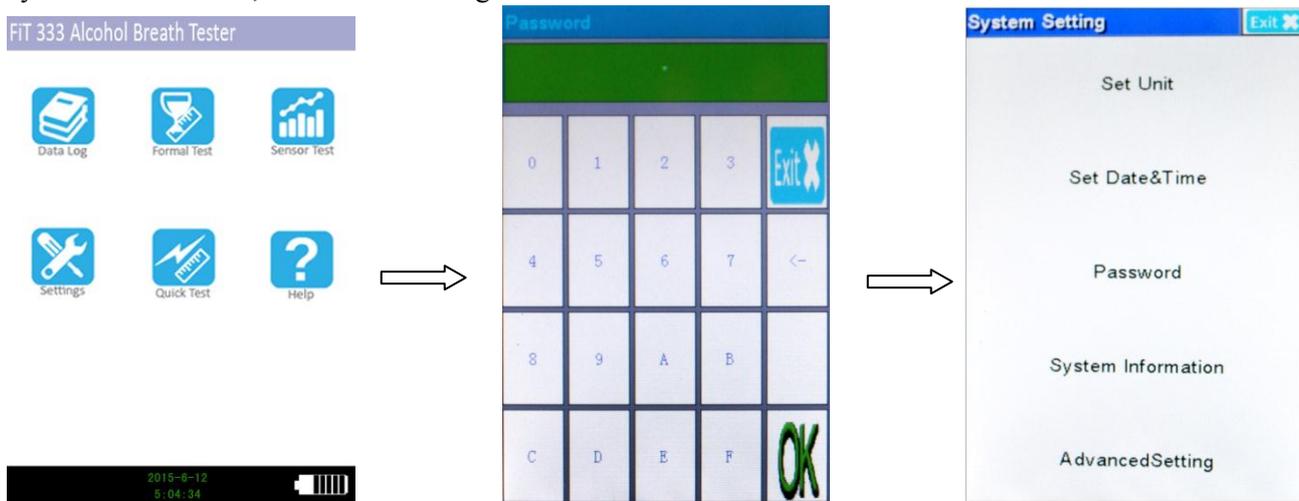
**2. Quick Start:**  Under this mode, the device allow to test without initialize sensor condition. Eg: temperature & residual alcohol.

It can ready to test within 1 second.

Repeat the 1.1 – 1.8 to do the quick breath alcohol test.

**3. System Setting (Available for Service Center only):**

Select the “” menu, and input the password (The default password is nothing, only press the OK key to enter into the system setting). Then, shows the sub-menu as following: Set unit, “Set Date & Time”, “Password”, “System Information”, “Advanced Setting”.



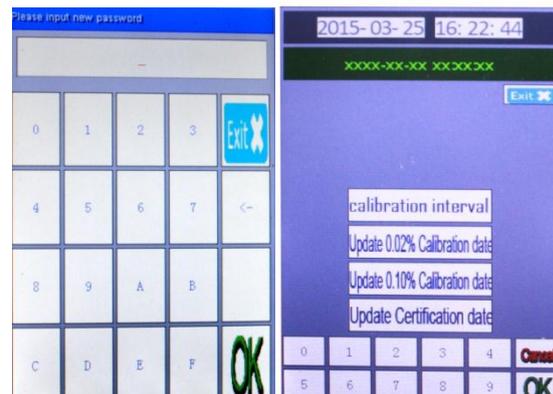
**Caution:** The calibration is already been done before shipping, user alters the setting parameters will override all calibration data. Only FiT authorized technician is allowed to modify the calibration data.

① **Set Unit**

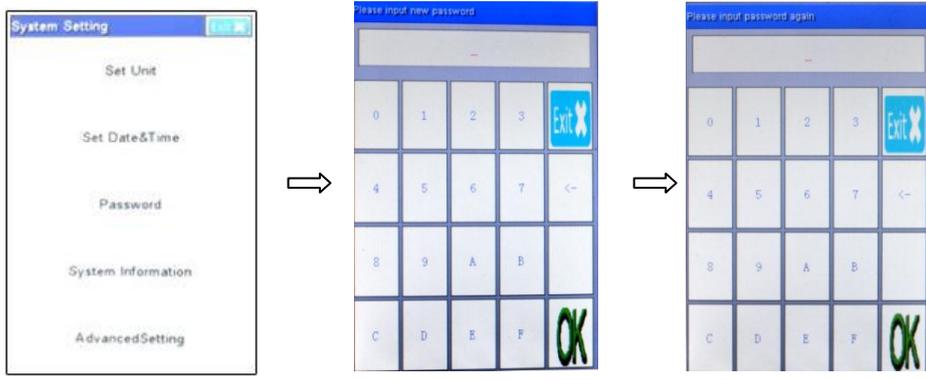
Set the unit to Permillage (%BAC), Percentage (%BAC) and mg/L, and mg/100ml. as picture:



② **Set Date & time:** under this model user can **input password** to set the new date & time ; **“calibration interval” (default 365days) for Calibration Reminder / Automatically Stops Testing When Unit is due for Calibration ; The calibration interval base day is “Update 0.02% Calibration date”** Input the real year/month/date/ hour/minute/second by turn and press " OK " key to save and return back



③ **Password:** user can set the new password under this model.  
 (The default password is nothing, only press the OK key to enter into the system setting).



④ **System Information**



⑤ **Advanced Setting:** (Super-user password is required)  
 In this mode, user can set the as follow information.

A: conversion rate for mg/L

B: Airflow

**C: Alcohol Calibrate (Available for Service Center only)**

Enter the calibration mode by input the supervisor password.  
 Only allowed to perform this function by FiT or FiT authorized service center (The detailed calibration procedure will only provided to FiT authorized dealer or service centre.)

D: Sensor Amend

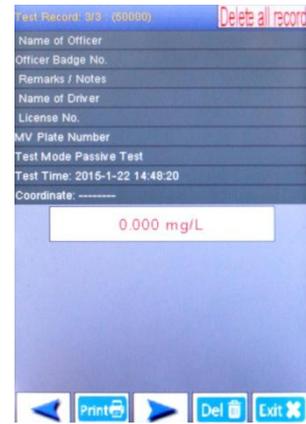
E: Temperature Amend

F: Set Misc

## 4. Test record



- 4.1. Review all records by pressing “←” or “→” icon.
- 4.2. Print: print out the test record providing the printer being connected
- 4.3. Delete: to delete the test record
- 4.4. Exit: return to previous menu.
- 4.5 Delete all record: need input user password.

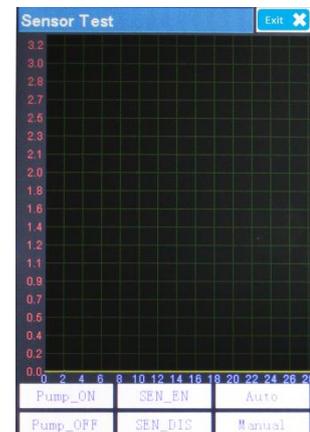


Records in FiT 333 Machine can only be deleted through "super password" similar to advanced setting password



## 5. Sensor Test:

Press “Sensor Test” icon and blow **alcohol breath** (about 0.05%BAC) into chamber through the blow tube for about six seconds and observe the sensor sensitivity & waveform as attached. If the curve is a straight line, it means the sensor already lost the sensitivity and need to change a new sensor.



## 6. User Instructions

To show the basic operation steps via a simple animation broadcast, it will be more convenient for user use. And can click anywhere of the touch screen to exit the animation broadcast.

## 7. PC download

Support Windows XP, Windows7 home edition, windows 8;

**NOT support windows 7 ultimate edition.**

**Before using this software system , it is best to backup the data and read the instructions carefully, operate after full understanding.**

Connect the computer using FiT download cable, open the PC application software. Please see as follow details information.



Step 1: Please turn off the FiT333 machine then use the download cable to connect the computer.

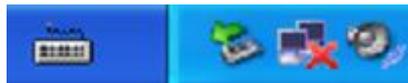
Step 2: Please copy all the files under the content of FiT333 from the optical disk into computer.

**(Remark:** have to run the download software after copy all the files into computer, otherwise, the download software cannot work normally; the optical disk packed with FiT333)

Step 3: Use the PC download cable to connect the 8pin USB port of the FiT333 machine with the computer USB port.

Step 4: **Hold the power key and “↑” key of the FiT333 machine for a few seconds till heard the third long “tick” sound.**

Step 5: Please wait, There will be a “Found New Hardware Wizard” appear on the bottom right corner of the computer.

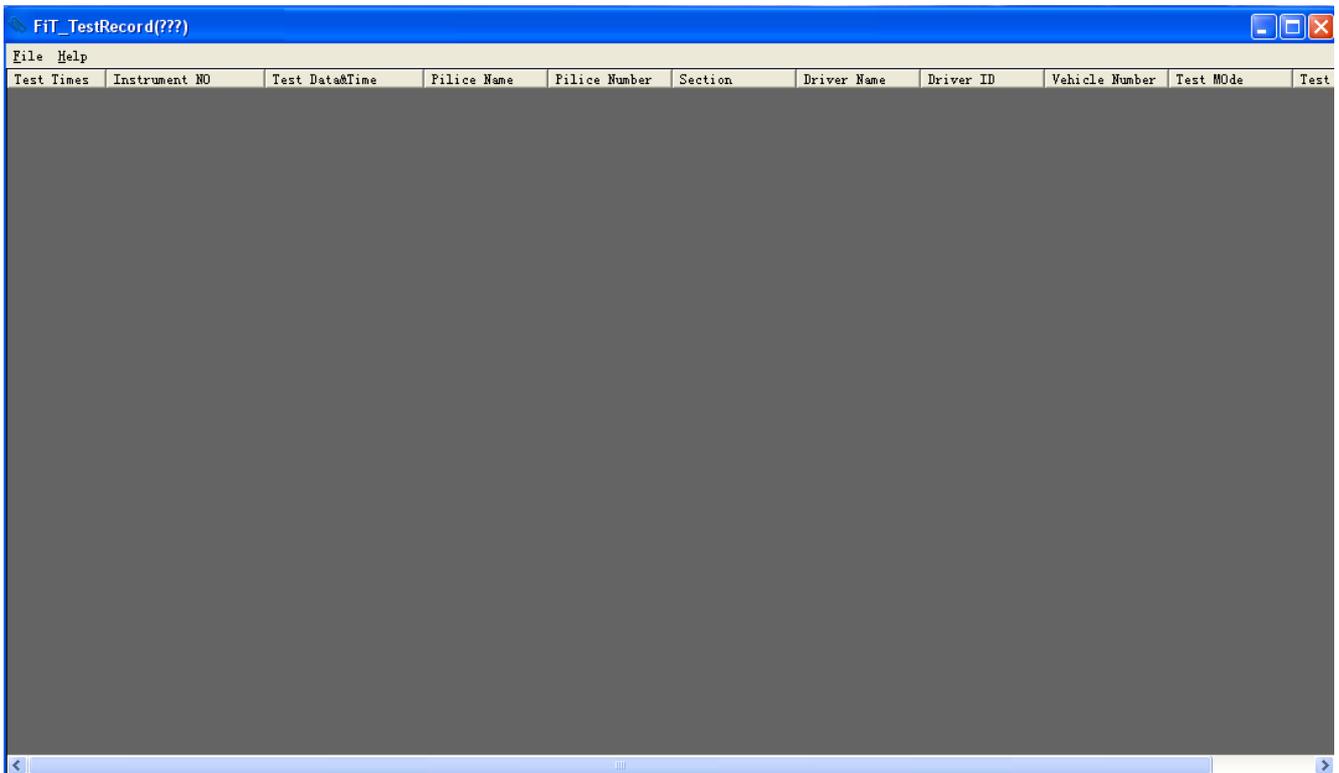


Step 6: Open the Removable disk in the computer, find and click “FiT\_TestRecord.exe” file

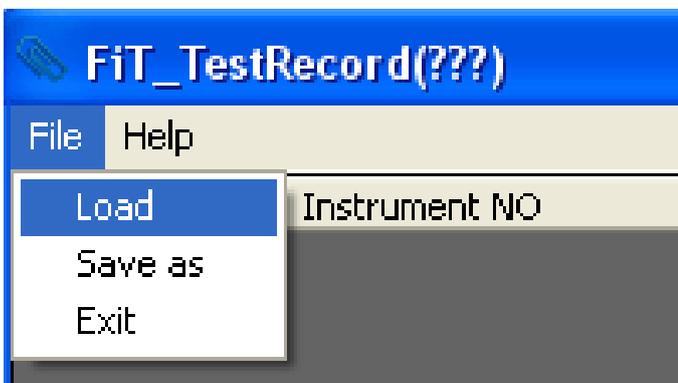


FiT\_TestRecord.exe

, then will see the interface as picture below:



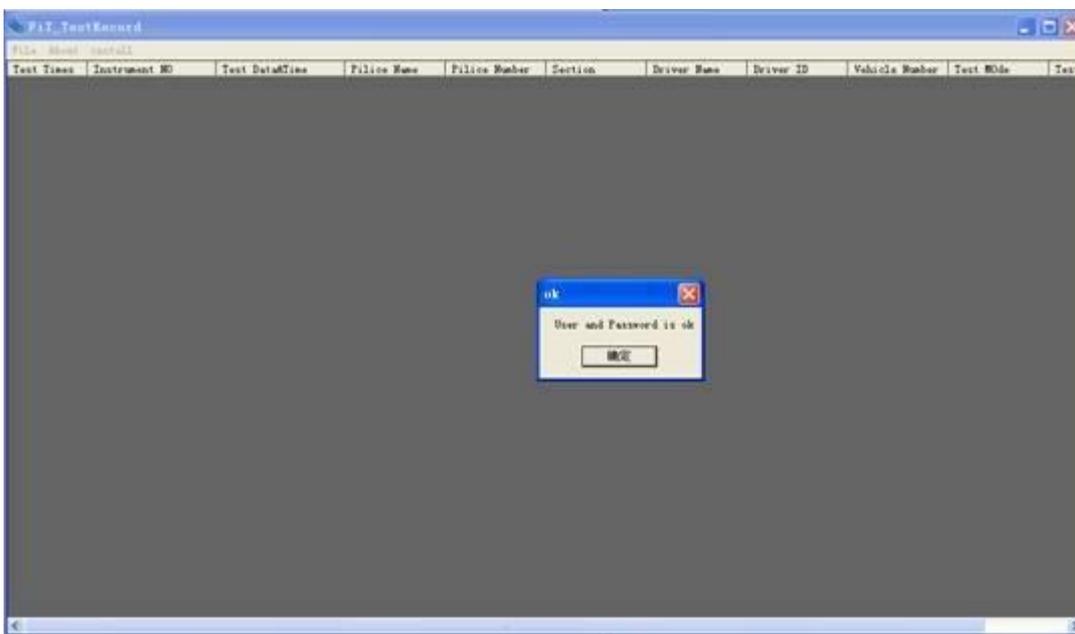
Step 7: Click “File’ and select “Load” to upload the data to computer, see picture below:



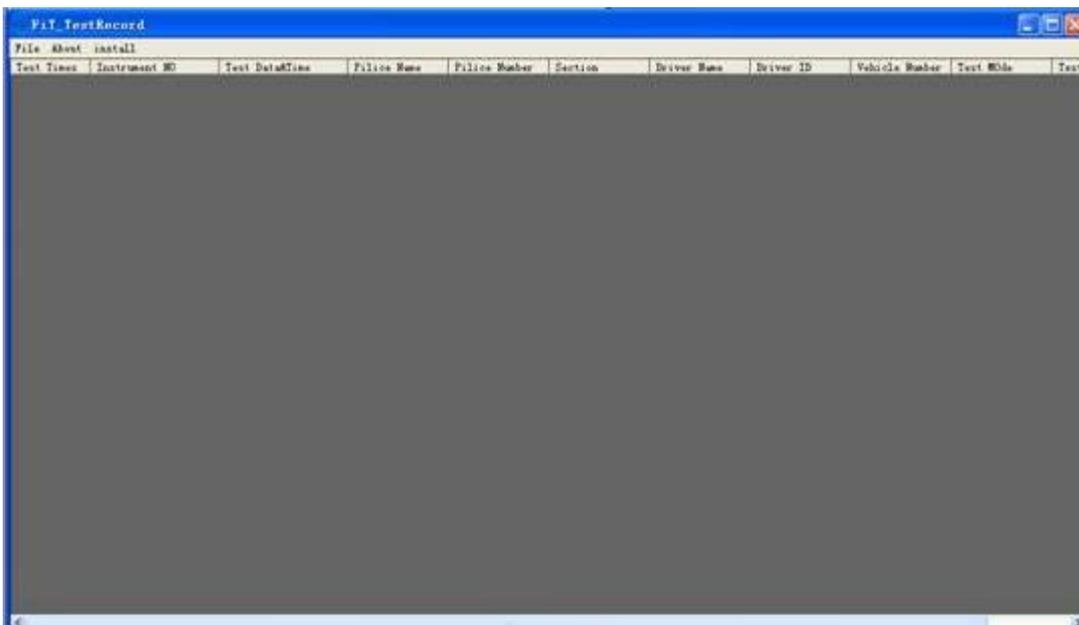
To input the User '000000' and Password '000000', as below picture:



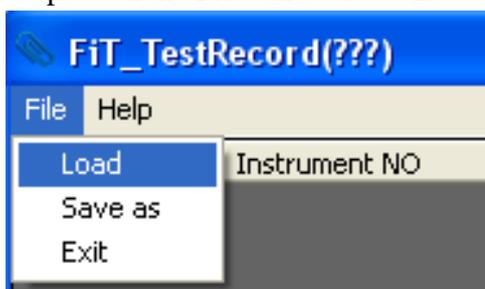
User and Password is ok, display as below picture:



To click 'confirm' return to below picture:



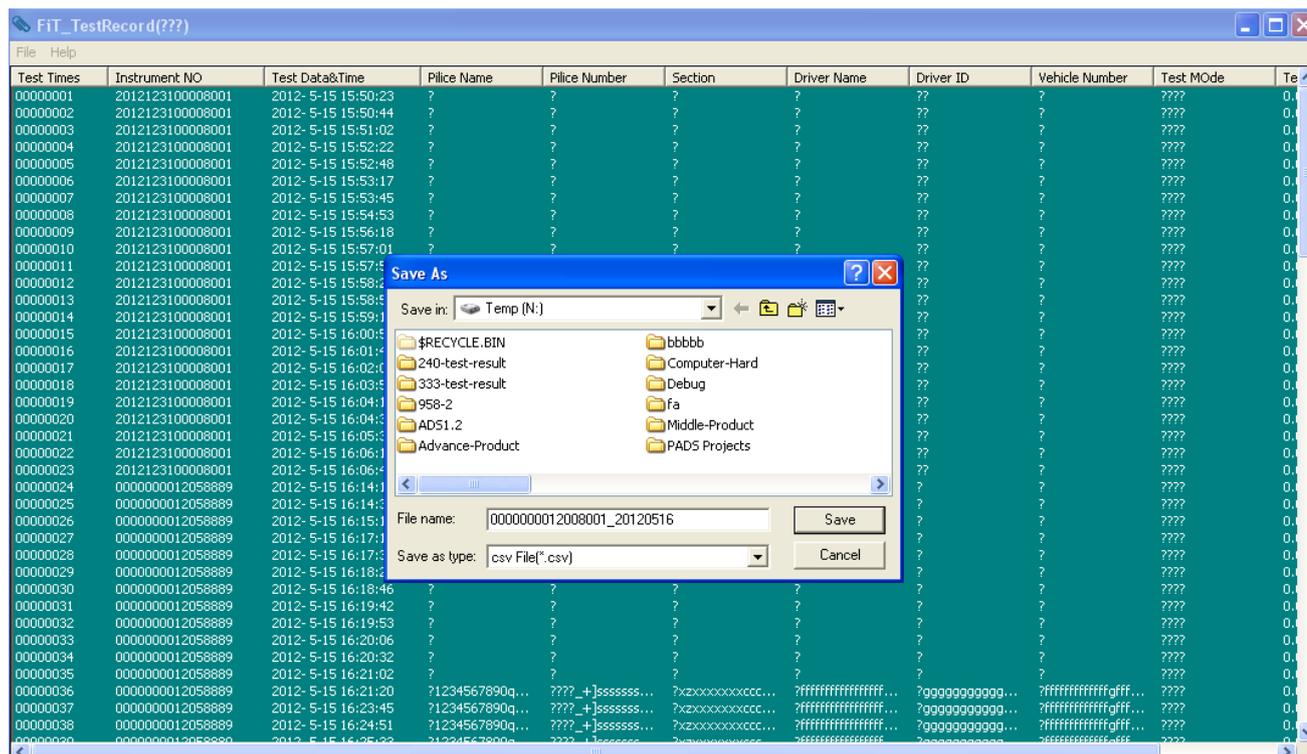
Step 8: Click "File" and select "Load" again to upload the data to computer as picture below:



The screenshot shows the application window displaying a data table with the following columns: Test Times, Instrument NO, Test Data@Time, Pilice Name, Pilice Number, Section, Driver Name, Driver ID, Vehicle, and Test Result. The table contains 142 rows of data.

Test Times	Instrument NO	Test Data@Time	Pilice Name	Pilice Number	Section	Driver Name	Driver ID	Vehicle	Test Result	
00000102	0000000012058889	2012-5-15 17:35:08	1	2	3	4	5	6	0.0	
00000103	0000000012058889	2012-5-15 17:35:29	1	2	3	4	5	6	0.0	
00000104	0000000012058889	2012-5-15 17:35:48	1	2	3	4	5	6	0.0	
00000105	0000000012058889	2012-5-15 17:36:00	1	2	3	4	5	6	0.0	
00000106	0000000012058889	2012-5-15 17:36:21	1	2	3	4	5	6	0.0	
00000107	0000000012058889	2012-5-15 17:36:33	1	2	3	4	5	6	0.0	
00000108	0000000012058889	2012-5-15 17:39:11	1	2	3	4	5	6	0.0	
00000109	0000000012058889	2012-5-15 17:39:44	1	2	3	4	5	6	0.0	
00000110	0000000012058889	2012-5-15 17:41:19	1	2	3	4	5	6	0.0	
00000111	0000000012058889	2012-5-15 17:59:54			jjii	kkkkoo	jjj	kkk	kkk	0.0
00000112	0000000012058889	2012-5-15 18:00:21	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000113	0000000012058889	2012-5-15 18:00:36	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000114	0000000012058889	2012-5-15 18:01:04	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000115	0000000012058889	2012-5-15 18:01:29	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000116	0000000012058889	2012-5-15 18:01:50	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000117	0000000012058889	2012-5-15 18:02:03	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000118	0000000012058889	2012-5-15 18:02:23	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000119	0000000012058889	2012-5-15 18:02:37	88k		jjii888iii	kkkkooiiijj	jjj	kkk	kkk	0.0
00000120	0000000012058889	2012-5-15 18:02:55	88k		jjii888iii9	kkkkooiiijj	jjj	kkk	kkk	0.0
00000121	0000000012058889	2012-5-16 8:57:17	1	2	3	4	5	6	0.0	
00000122	0000000012058889	2012-5-16 8:57:48	1	2	3	4	5	6	0.0	
00000123	0000000012058889	2012-5-16 8:58:05	1	2	3	4	5	6	0.0	
00000124	0000000012058889	2012-5-16 8:58:19	1	2	3	4	5	6	0.0	
00000125	0000000012058889	2012-5-16 8:58:30	1	2	3	4	5	6	0.0	
00000126	0000000012058889	2012-5-16 8:59:00	6	2	3	4	5	6	0.0	
00000127	0000000012058889	2012-5-16 8:59:37		2	3	4	5	6	0.0	
00000128	0000000012058889	2012-5-16 9:00:22		2	3	4	5	6	0.0	
00000129	0000000012058889	2012-5-16 9:02:10	g	2	3	4	5	6	0.0	
00000130	0000000012058889	2012-5-16 9:02:37	g		4	5	6	6	0.0	
00000131	0000000012058889	2012-5-16 9:03:22			4	5	6	6	0.0	
00000132	0000000012058889	2012-5-16 9:04:54			4	5	6	6	0.0	
00000133	0000000012058889	2012-5-16 9:05:31	22	33	44	55	5	6	0.0	
00000134	0000000012058889	2012-5-16 9:06:12	22	33	44	55	5	6	0.0	
00000135	0000000012058889	2012-5-16 9:06:30	224	33	448	55u	5	6	0.0	
00000136	0000000012058889	2012-5-16 9:06:50	224	33	448	55u	5	6	0.0	
00000137	0000000012058889	2012-5-16 9:07:51	224mgui	33	448	55u	5	6	0.0	
00000138	0000000012058889	2012-5-16 9:09:17	wang xin tao	3344521	448	sha shuo	5689833	66332	0.0	
00000139	0000000012058889	2012-5-16 9:11:15	wang xin tao	3344521	448	sha shuo	5689833	66332	0.0	
00000140	0000000012058889	2012-5-16 9:12:56	5	5	4	5	5	r	0.0	
00000141	0000000012058889	2012-5-16 9:13:37	5	5	4	5	5	r	0.0	
00000142	0000000012058889	2012-5-16 9:13:54	5	5	4	5	5	r	0.0	

Step 9: after uploaded the data, please click “File” and select “Save as”, to save the data as CSV. Format file. See picture below:



Step 10: In the computer, can use the office software to process the uploaded test record data.

PS: Please copy the file under the FiT333 file list of the CD into the computer disk, and run “CD-ROM\FiT\_TestRecord.exe” or register manually to have a re-registration, otherwise, will indicate that the software is not normal.

Software version report

times	data	item	REV	Change item	Manual-REV	Manual-item
1.	2015-01-12	Second release	1.1	Demo	1.1	

## 8. Change the wireless printer module as following.

Printer: The printer can be detached from the tester

(Option: The detached printer can be connected to a wireless module and become a wireless printer)



Use the provided car adaptor and connect to car cigarette plug.

Then use the wireless printer to printing the test result as following.



**Caution: Keep the wireless printer in warm area. (Inside the car)**

## 9. Specification

1. LCD : TFT 3.5" TFT QVGA display with touch panel
2. Range : 0.0‰BAC to 4.0‰BAC
3. Measurement precision: Standard deviation  $\pm 0.5\%$ BAC or  $\pm 5\%$  of the measurement (Room temp.) Drift: typically  $< 0.8\%$  of the measurement value/month
4. Voltage: 4 \*AA 1.2V Ni-H (2300mAh or above) rechargeable battery.
5. Operating Temperature:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  ( $0^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  for optimum operation)
6. Dimension: : 188\*78\*33 (mm)
7. Weight: 300g (net weight)

## 10. Calibration:

Does the FiT tester require calibration? Yes. While some ‘novelty’ breathalyzers cannot be recalibrated, serious devices such as the FiT tester must and can be recalibrated to ensure consistent accuracy. Consumers should be wary of units that cannot be calibrated as their accuracy will eventually waver. First innovation Technology provides a calibration service which can be organized by e-mailing [sales@aap.com.hk](mailto:sales@aap.com.hk)

## 11. How often should I re-calibrate the FiT tester?

The FiT tester can remain accurate for 1 year of use. The more frequent the use, the more the unit will need to be calibrated. According to DIN31051, we recommend recalibration every 12 months (or earlier) basis to ensure maximum accuracy.

### **Please contact the Authorized service center or reseller.**

NB\* It is important to observe the recommended 15 minute pause without consuming any alcohol, cigarettes or anything else before testing. Failure to do this can shorten the life of the sensor. In such cases, the sensor can be permanently damaged or may need more frequent calibration. This user manual should be read carefully for information on caring for the unit sensor.

**Many factors (e.g. environment gas residue, smoke & various smell in human mouth, etc...) may affect the BAC level, so the readings are For Reference Only. Neither the reseller nor manufacturer accepts any liability arising from the use of the unit. Don't drink before you drive!**

**Made in China.**