

BREATHALYZER

ALCOSCAN

ALP-1



Administrator's Manual

The Fuel Cell Sensor Technology, ALP-1 is highly-upgraded professional breathalyzer for measuring alcohol in human breath.

It is installed re-placeable fuel cell sensor module technology with the best accuracy. Test result can be storage on ALP-1 as well as print out the data through wire-less connecting with mobile printer

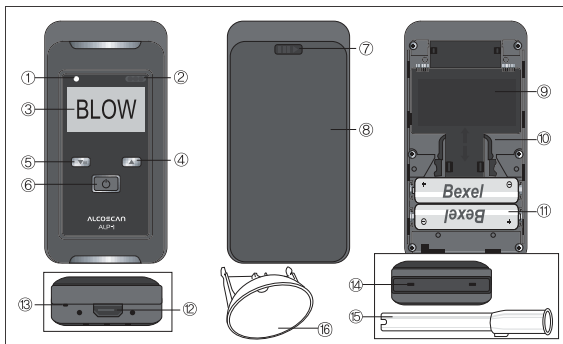
ALCOSCAN ALP-1

Administrator's Manual

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Components



- | | | |
|----------------------|-------------------------------------|----------------------------------|
| 1. Lamp | 6. Power, select button | 11. Batteries |
| 2. IRDA window | 7. Button for opening battery cover | 12. USB/Printer connector |
| 3. Display | 8. Battery cover | 13. Hand strap |
| 4. up button | 9. Sensor module | 14. Mouthpiece receptacle |
| 5. Menu, down button | 10. Handle of sensor module | 15. Mouthpiece |
| | | 16. Open container for fast mode |

Contents

- 1x Breathalyzer
- 5x Mouthpieces
- 1x Hand strap
- 1x MAX30 CD
- 1x USB cable for PC
- 2x Batteries
- 1x Manual
- 1x Leather Pouch
- 1x Open container for fast mode

[Sold separately]

Printer, Bluetooth, SD card

Preparation

1) Inserting the batteries

Push the button to the right side and pull the battery cover down and remove it.

Insert 2pcs AA batteries (1.5V Alkaline or 1.2V rechargeable battery).

Check the battery polarity!

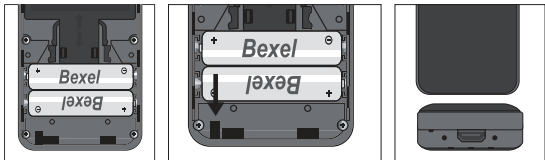
Close the battery cover.

Caution! Charging batteries while in the device will cause the damage to the device.

2) Fixing the hand strap

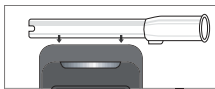
Push the button to the right side and pull the battery cover down and remove it.

Insert hand strap small hole in the housing. Fit in the inside grip.

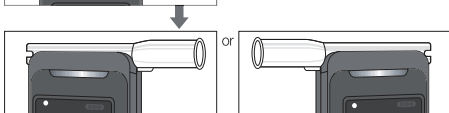


3) Fitting the Mouthpiece

Insert mouthpiece into the port on the top of the device securely with a click.



A new mouthpiece is to be used for every person tested. Mouthpiece can be used with orientation to right or left side.



*It is same to fit the open container for fast mode.

Basic Operation



1. Press the power button.

If you release the power button you can see initial window and check the information, date, time and serial number.



2. Warming up until you can see “blow” sign and hear one beep sound. During indicate WAIT/BLOW sign you can go into menu mode if you press (M) button.

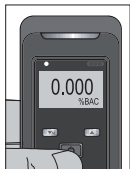
If you go out Menu mode, warming up is automatically.



3. Blowing through the mouthpiece into the unit for approx 3 seconds until the sounds concludes. Green light which is above LCD display blinks when blow sign indicates. The green light does not blink during blowing.



4. After taking your breath samples, LCD display shows “Analyzing/wait”.



5. The result is displayed with one beep sound. It displays for 15 seconds.

If you want to test again, press the power button again.

6. Power off

Auto power off

Automatically turning off after 15 seconds.

Power off
-2sec-

Power off
-1sec-

If you push power button for 3 seconds, you can see "Power off" on display.

After showing this message for 2 seconds, the device turns off.

Warning Display

1. If you see "Flow" in the display, the breath sample was not strong enough for measurement. Please wait, you can see blow sign in the display again then make sure the breath is strong and steady during sampling.

F L O W

2. If you see battery change in the display, the battery power is low. Please replace the batteries.

Battery Change

Battery symbol



100%



70%



30%



0%

***Notice.** Please don't use Manganese Battery. Use Alkaline Battery only.

3. Calibration service needs (Please contact the supplier in your country)

Service required
Calibration

This message is shown 6 months later after calibration or by setting CAL required number.

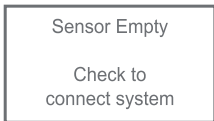
4. Number of tests after calibration (Memorized in sensor module)

C. Test No

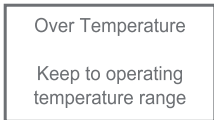
5. Number of tests with device (Memorized in device)

L. Test No

6. Error with sensor module

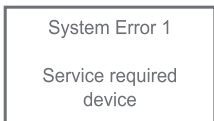


7. Error with using temperature

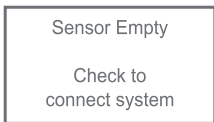


The device can not use under -5℃

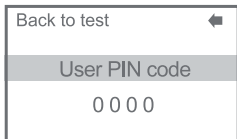
8. System Error 1 (Condenser charging error)



9. System Error 2 (Sensor leakage)



Quick Menu



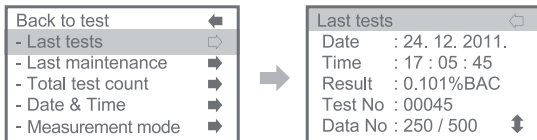
Press the power button then push the  (menu) button, Enter the Quick mode. Press the power button again then put the numbers for user pin code. (Default:0000)

1. Contents of Quick Menu

- | | |
|--------------------|--------------------|
| ① Last tests | ⑧ Display |
| ② Last maintenance | ⑨ Printer |
| ③ Total test count | ⑩ Save to SD card |
| ④ Date & Time | ⑪ Bluetooth |
| ⑤ Set date | ⑫ Change User PIN |
| ⑥ Set time | ⑬ Measurement mode |
| ⑦ Set language | |

2. Menu

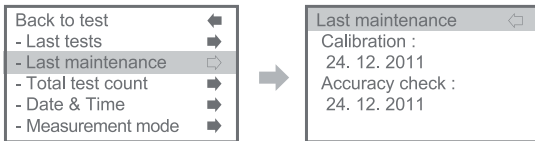
1) Last tests



Last test result is showing. You can check Max.500 accumulated tests result by pressing the UP/DOWN button.

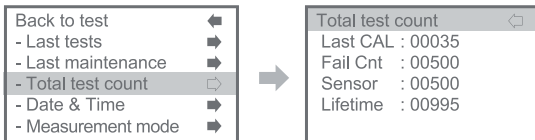
** Data No: Test result number/ the number of stored test results
(*The latest 500 result)*

2) Last maintenance



The date of last calibration & accuracy check.

3) Total test count



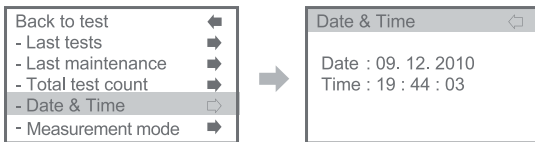
① Last CAL : The number of tests after the last calibration

② Fail Cnt : The number of fail tests

③ Sensor : The number of tests installed sensor module
(*Sensor Module is memorizing tests number)

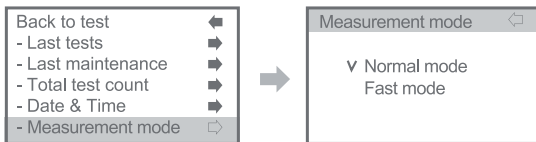
④ Lifetime : Total tests number of the device.

4) Date & Time



Checking date & time of the device.

5) Measurement mode



A. Normal mode

Measure alcohol concentration in human breath. Test result showing with digits. Please refer to p.5~6 Basic Operation.

B. Fast mode

Check for the presence of alcohol in the breath. Test will be quicker and more convenient, but result showing with "P" (PASS) or "F" (FAIL) rather than numerical reading. You don't need to use mouthpiece, just use open container. Please refer to p.32 Fast mode.

6) Set date

Adjust date format and date.



7) Set time

Adjust time but format of time is not changeable.



8) Set language

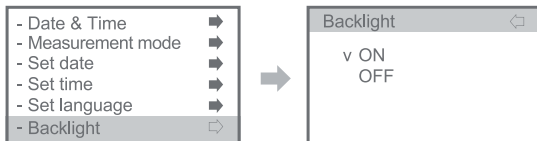
Set the language for display which you want.
English, Russian, Korean, German, Spanish, Italian available.



*Changed language is not available for quick & administer menu.

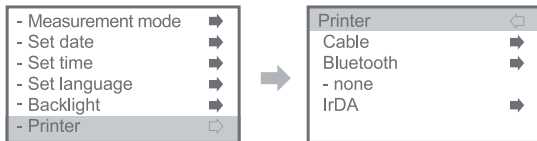
*Only English is available for quick & administer menu.

9) Backlight



10) Printer

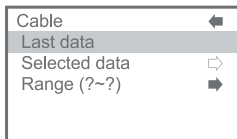
Setting printer connecting mode



① Cable

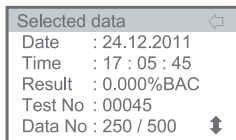
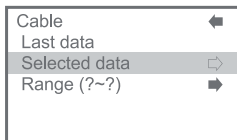
Checking the wire connection with printer before setting.

a) Last data



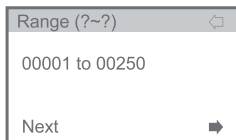
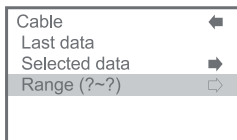
Press the power button, the last data can be printed.

b) Selected data

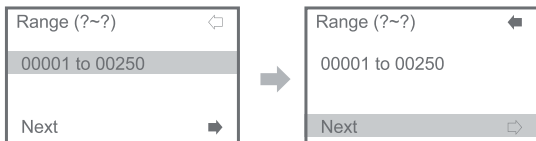


Select data by up/down button and keep press power button for 1~2 seconds then selected data printed.

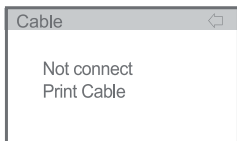
c) Range (?~?)



Set the data range for printing then select the next.



Press the power button then select the data range by up/down button then press the power button again.
Select next for printing and press the power button, the selected data printed.

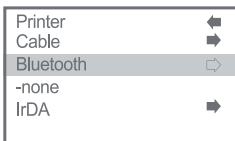


If there is no cable connection,
"Not connect print cable" showing on the LCD.

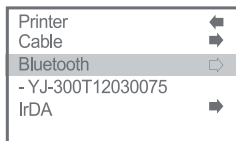
② Bluetooth

This function is optional.

(A) Non available



(B) Available

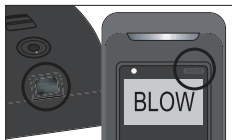


Please check you device is operating in Bluetooth mode.
Check p.34 Optional function - Bluetooth.

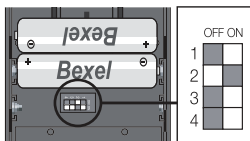
③ IrDA



Select last data and close the device's IrDA window to the printer's IrDA window then press the power button. Last test result will be printed.



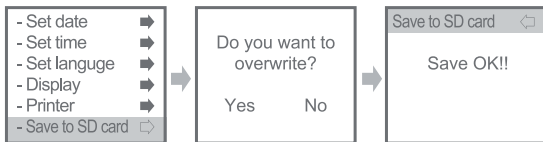
Keep both IrDA windows facing each other!



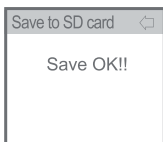
2nd switch OFF : Bluetooth OFF, IrDA ON
 2nd switch ON : Bluetooth ON, IrDA OFF

IrDA and Bluetooth function are not compatible so check the printer switch which is in battery lot in mobile printer.

11) Save to SD card

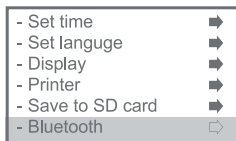


If you select yes, data in SD card will be deleted and data in the device will be loaded to SD card.



"Not available" shows that there is no SD card.

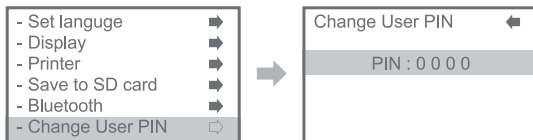
12) Bluetooth



This function is optional. Please check your device is operating in Bluetooth mode. Check p.34 Optional function - Bluetooth.

13) Change User PIN

Setting new user PIN. "Password save" will be shown after setting.



Administer Menu

Turn on the device and press  button 2~3 seconds

Put administer pin code (default: 0530)

Back to test	←
Administer PIN code	
0 0 0 0	

1. Contents of Administer Menu

- ① Information
- ② General setting
- ③ Measurement set.
- ④ Calibration

2. Menu

1) Information

- ① Last tests

Information	←
- Last tests	⇐
- Last maintenance	⇒
- Total test count	⇒
- Date & Time	⇒
- Configuration	⇒



Last tests		⇐
Date	: 24. 12. 2011.	
Time	: 17 : 05 : 45	⇒
Result	: 0.101%BAC	⇒
Test No	: 00045	
Data No	: 250 / 500	↕

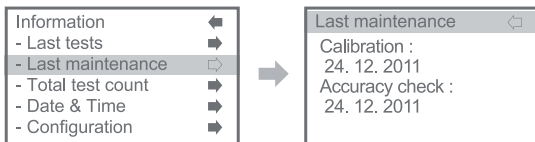
Last test result is showing. You can check Max.500 accumulated tests result by pressing the UP/DOWN button.

*Data No : Test result number/ the number of stored test results

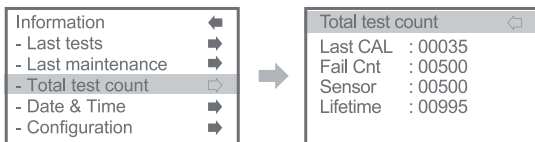
*The latest 500 result

② Last maintenance

The date of last calibration & accuracy check.



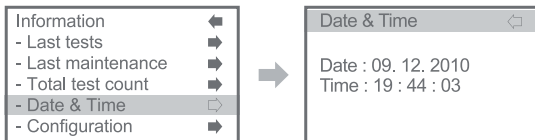
③ Total test count



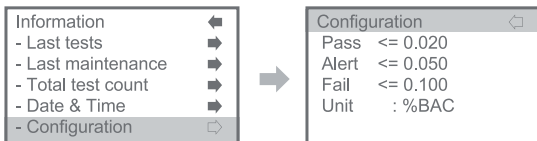
- Last CAL : The number of tests after the last calibration
- Fail Cnt : The number of fail tests
- Sensor : The number of tests installed sensor module
(*Sensor Module is memorizing tests number)
- Lifetime : Total test number of the device.

④ Date & Time

Checking date & time of the device.



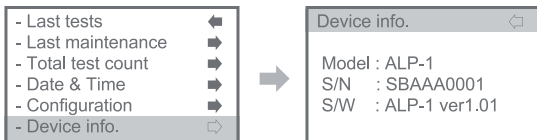
⑤ Configuration



Checking the alcohol concentration each mode.
Blow limits can be adjustable on p.25, 3) Measurement set / ③ Limits level.

⑥ Device info

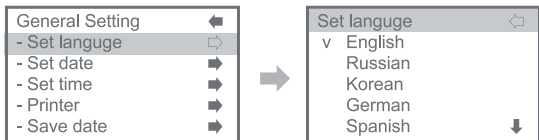
Checking the device information.



2) General setting

① Set language

Set the language which you want.
English, Russian, Korean, German, Spanish, Italian available

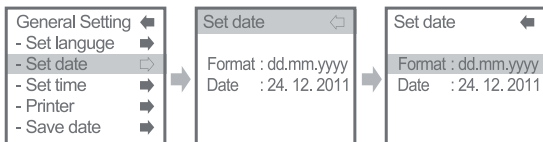


*Changed language is not available for quick & administer menu.

*Only English is available for quick & administer menu.

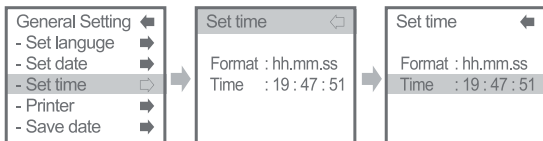
② Set date

Setting date format and date.



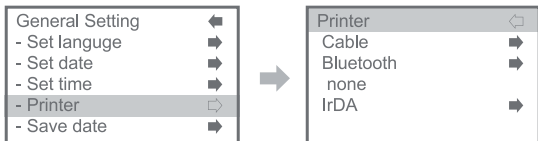
③ Set time

Setting time of the device



④ Printer

Setting printer connecting mode



A. Cable

Checking the wire connection with printer before setting.

a) Last data

Cable	←
Last data	
Selected data	⇐
Range (?~?)	➡

Press the power button, the last data can be printed.

b) Selected data

Cable	←
Last data	
Selected data	⇐
Range (?~?)	➡



Selected data ⇐	
Data	: 24. 12. 2011
Time	: 17 : 05 : 45
Result	: 0.000%BAC
Test No	: 00045
Data No	: 250 / 500 ⇅

Select data by up/down button and keep press power button for 1~2 seconds then selected data printed.

c) Range (?~?)

Cable	←
Last data	
Selected data	➡
Range (?~?)	⇐



Range (?~?) ⇐	
00001 to 00250	
Next	➡

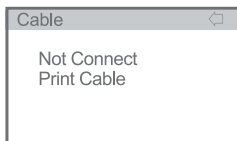
Set the data range for printing then select the next.

Range (?~?)	←
00001 to 00250	
Next	➡



Range (?~?) ←	
00001 to 00250	
Next	⇐

Press the power button then select the data range by up/down button then press the power button again. Select Next for printing and press the power button, the selected data printed.

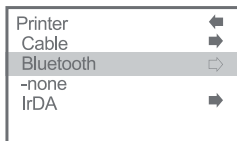


If there is no cable connection, "Not connect print cable" showing on the LCD.

B. Bluetooth

This function is optional.

(A) Non available

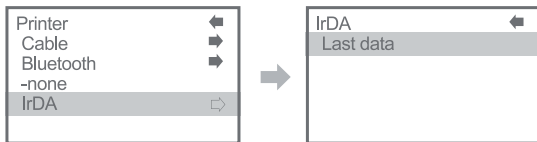


(B) Available

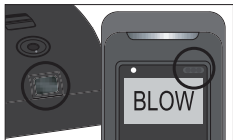


Please check your device is operating in Bluetooth mode. check p.34 Optional function - Bluetooth.

C. IrDA

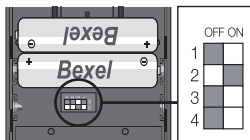


Select last data and close the device's IrDA window to the printer's IrDA window then press the power button. Last test result will be printed.



Keep both IrDA windows facing each other!

IrDA and Bluetooth function are not compatible so check the printer switch which is in battery lot in mobile printer.

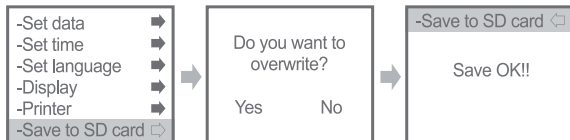


2nd switch OFF : Bluetooth OFF, IrDA ON

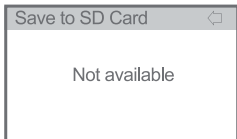
2nd switch ON : Bluetooth ON, IrDA OFF

⑤ Save to SD card

Saving the data to the SD Card

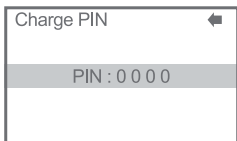


If you select yes, data in SD card will be deleted and data in the device will be loaded to SD card.



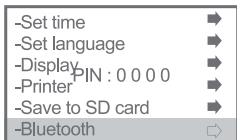
"Not available" shows that there is no SD card.

⑥ Charge PIN



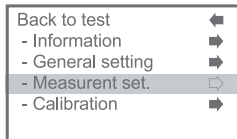
Setting new administrator PIN.
"Password save"
will be shown after setting.

⑦ Bluetooth

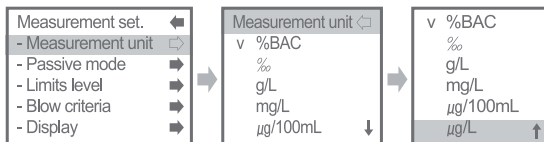


This function is optional.
Please check your device is operating
in Bluetooth mode.
Check p.34 Optional function - Bluetooth

3) Measurement set. (Measurement setting)

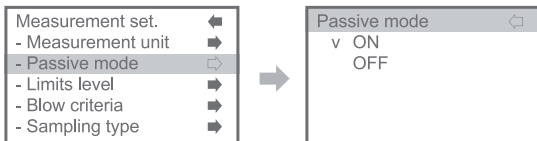


① Measurement unit

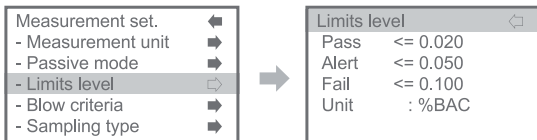


Available alcohol unit - %BAC, ‰, g/L, mg/L, μg/100mL, μg/L

② Passive mode



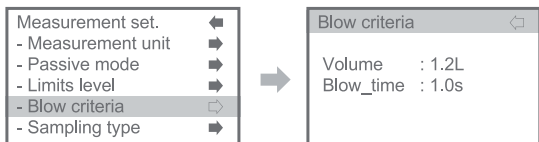
③ Limits level



Setting pass, alert, fail range

- Pass <= 0.020
- Alert <= 0.050
- Fail <= 0.100

④ Blow criteria



Setting of the minimum breathing volume and minimum blowing time

* Default setting is like below

- Volume : 1.2L
- Blow time : 1.0s

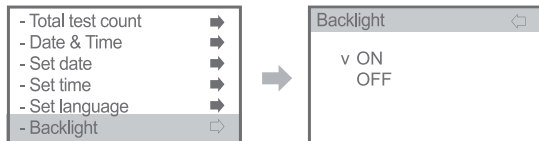
⑤ Sampling type



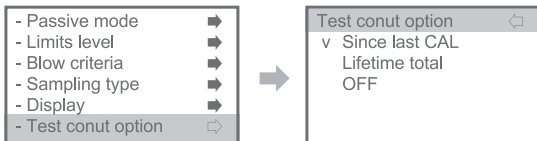
Setting of 2 types of sampling : Fixed volume or End of breath

- **Fixed volume** : Sampling is finished when minimum volume is reached.
- **End of breath** : Sampling is finished at the end of exhalation.

⑥ Backlight



⑦ Test count option

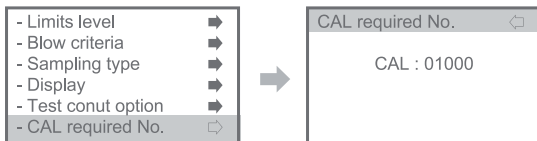


Since last CAL : A number of the tests after calibration

Lifetime total : Total tests number with device

OFF : Function off

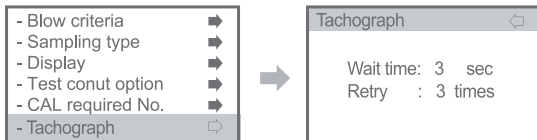
⑧ CAL required No.



Setting of calibration period

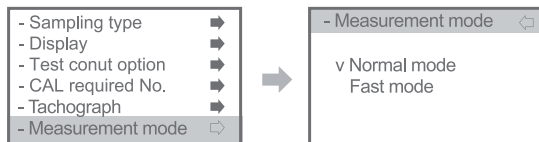
From 100 tests to 15,000 tests available

⑨ Tachograph



This is optional function to connect Tachometer of vehicles.

⑩ Measurement mode



A. Normal mode

Measure alcohol concentration in human breath.

Test result showing with digits.

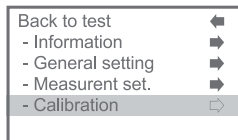
Please refer to p.5~6 Basic Operation.

B. Fast mode

Check for the presence of alcohol in the breath. Test will be quicker and more convenient, but result showing with "P" (PASS) or "F" (FAIL) rather than numerical reading. You don't need to use mouthpiece, just use open container.

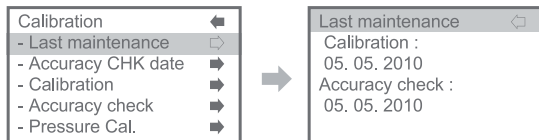
Please refer to p.32 Fast mode.

4) Calibration



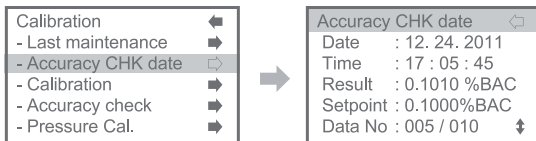
① Last maintenance

Checking of the last calibration, Accuracy check date

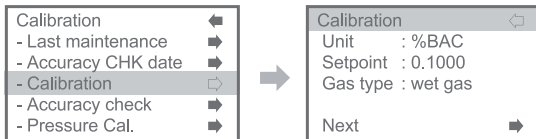


② Accuracy CHK date

Checking of accuracy check date and result. Max.10 data can be stored.



③ Calibration



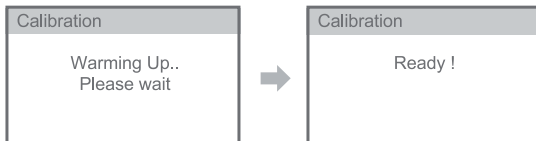
Enter the calibration mode.

Calibration have to be done under trained expert with calibration equipment.

Set the set point and Gas type then move to the Next.

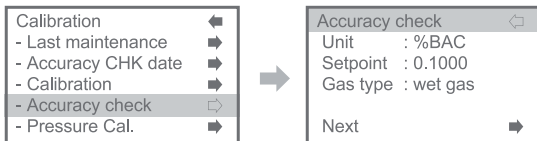
· Set point : 0.0300 ~ 0.1000 (unit : %BAC)

· Gas type : Wet gas or Dry gas



Warming up -> Ready (Blowing) -> Analyzing -> Calibration OK

④ Accuracy check



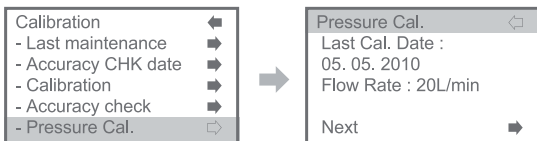
Enter the accuracy check

And set the Set point, Gas type then move to the Next.

The rest of the procedure is the same with calibration.

※ Tests in accuracy check mode is not included in total test account.

⑤ Pressure Cal. (Pressure Calibration)



Note. Pressure Calibration only can be performed by Manufacturer.
Please contact supplier in your country.

⑥ Set last CAL date

Setting of the last calibration date .



⑦ Set last ACC date

Setting of the accuracy check date.

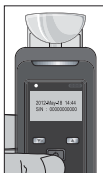


Fast mode Operation

Set the Measurement mode in quick or administer menu.

Please refer to 13) Measurement mode in Quick menu, p11. &

3) Measurement set ⑩ Measurement mode in administer menu, p.28



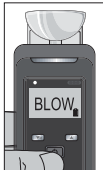
1. Press the power button.

If you release the power button you can see initial window and check the information, date, time and serial number.



2. Warming up until you can see "blow" sign and hear one beep sound. During indicate WAIT/BLOW sign you can go into menu mode if you press (M) button.

If you go out Menu mode, warming up is automatically.



3. Blowing through the open container into the unit for 1 second.



4. After taking your breath samples, LCD display shows "Analyzing/wait".



5. The result (PASS or FAIL) is displayed with one beep sound.

It displays for 15 seconds. After showing the result, it is warming up again for next test.

6. Power off

Auto power off

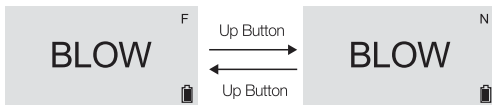
Automatically turning off after 15 minutes.

If you push power button for 3 seconds, you can see "Power off" on display.

After showing this message for 2 seconds, the device turns off.

Power off
-2sec-

Power off
-1sec-



You can change measure mode by pressing  (UP) button in fast mode.

If measurement mode is changed you can see "N" sign of LCD display.

If you want to go back fast mode, press up button again.

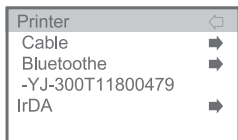
"N" : Normal mode

"F" : Fast mode

It returns fast mode automatically after test as general mode.

Optional function - Bluetooth

A. **Printer** with Bluetooth in Quick menu, p.14 & administer menu, p.22

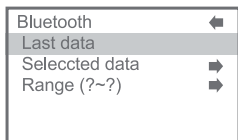


If there was a printer connected before, device memorizes it and printer serial number will be shown as above picture.



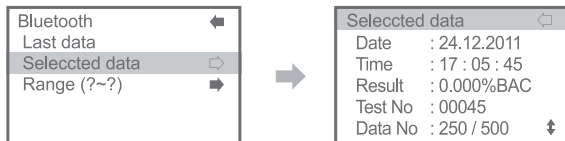
Enter the Bluetooth mode and waiting time will be shown. After Bluetooth connecting completed, printer will it another green light on the feed button.

a) Last data



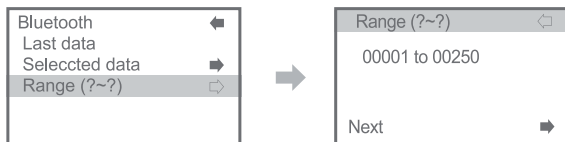
Press the power button, the last data can be printed.

b) Selected data

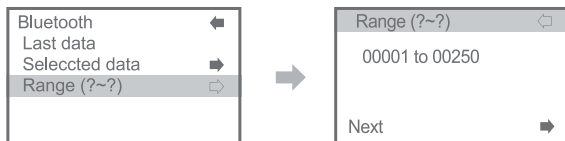


Select data by up/down button and keep press power button for 1~2 seconds then selected data printed.

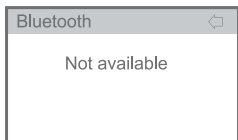
c) Range (?~?)



Set the data range for printing then select the next.

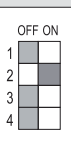
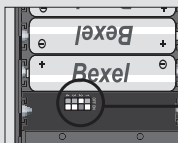


Press the power button then select the data range by up/down button then press the power button again.
Select Next for printing and press the power button, the selected data printed.



"Not available" means no Bluetooth is connected.

** Note, Please check printer before using bluetooth function*



2nd Switch OFF : Bluetooth OFF, IrDA ON

2nd Switch ON : Bluetooth ON, IrDA OFF

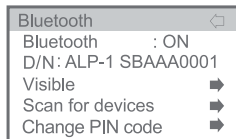
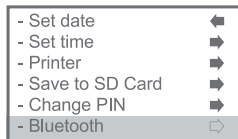
2ND switch which is on right side of the battery lot of the mobile printer has to be "ON" status like picture

When 2ND switch is "ON", IrDA connecting is not working.

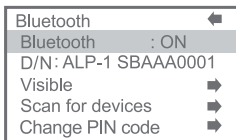
B. Bluetooth mode setting in Quick menu, p.14 & administer menu, p.22

Enter the Bluetooth mode.

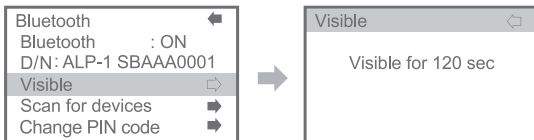
Setting of Bluetooth ON/OFF, Visible, Scan for devices, Change PIN code



①Bluetooth function ON/OFF

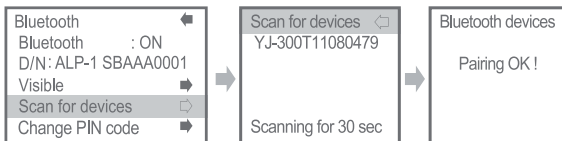


②Visible



- Bluetooth connecting device with MAX30 software in PC
- For the installation, please refer to MAX30 manual in Max30 software CD

③Scan for devices

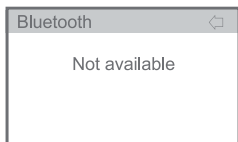


- Searching for available Bluetooth device around 30 seconds.
- Select the device and press Ⓜ button.
- Then "Pairing OK" will show on the LCD with beep sound from mobile printer.

④ Change PIN code

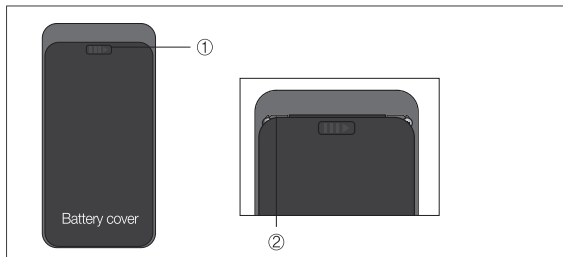


- For the Bluetooth connecting with PC
- For the setting, please refer to MAX30 manual in Max30 software CD
- * The PIN code for connecting with Printer is 1000.



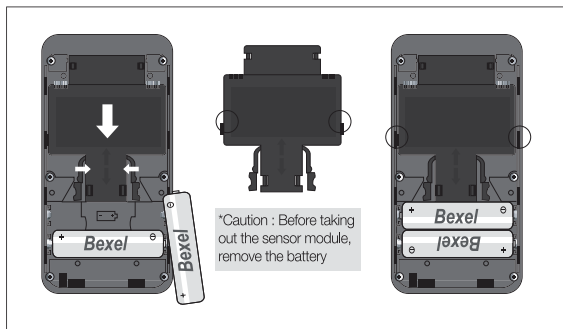
If device is not available for Bluetooth connecting, "Not available" will be shown on the LCD. Please check your device is supporting Bluetooth function.

Replacing sensor module

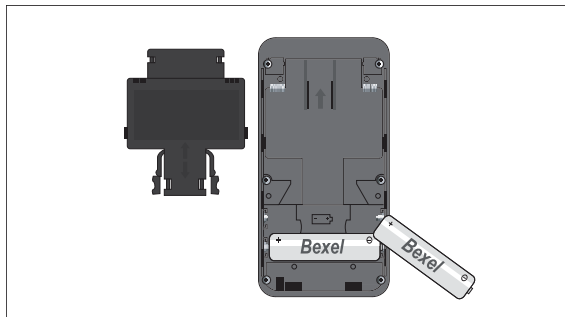


- ① Push to the right side
- ② And pull down the bottom side

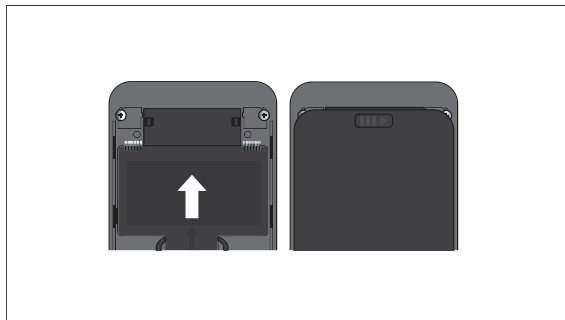
Please fit to the both of grooves when replacing



- ③ Grab handles and pull down side like picture



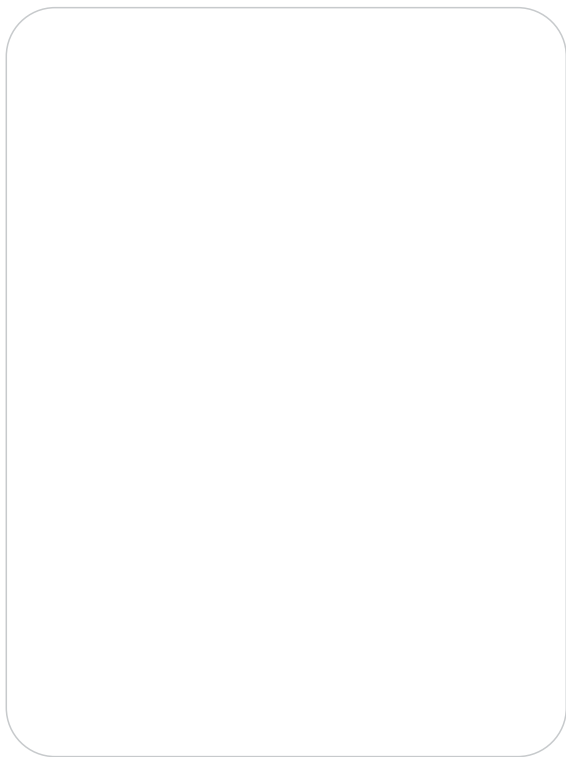
- ④ Take out the sensor module
- ⑤ Place new sensor module like picture

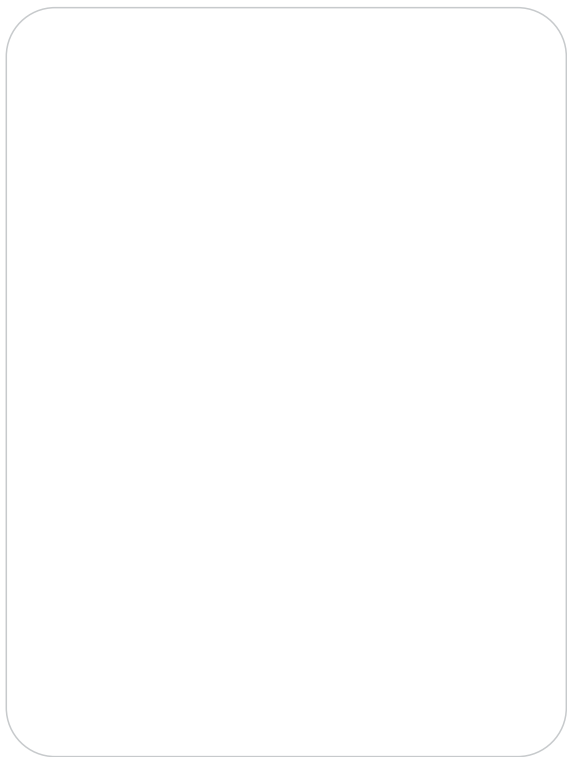


- ⑥ Push to the upper side and it locked with “click” sound
- ⑦ Place battery cover and push to the upper side then it locked.

Specification

- **Indication of B, A, C** : 0,000 ~ 5,000 ‰
0,000 ~ 0,500%BAC
0,000 ~ 2,500 mg/l BrAC
0,000 ~ 5,000 g/l
0~250 μ g/100ml
0~2500 μ g/l
- **Warm up time** : 5 seconds ~ 2 minutes
- **Response time** : within 10 seconds at 0,100%BAC
- **Accuracy** : $\pm 0,005\%$ BAC at 0,100%BAC
- **Ambient conditions** : operation (-5°C ~ 40°C), storage (-10°C ~ 50°C)
- **Sensor** : Fuel Cell Sensor
- **Calibration** : Replaceable Fuel cell sensor Module
- **Use mouthpieces** : MP1
- **Power Supply** : Two 1,5V AA Alkaline Batteries
- **Battery Change** : Approx. 3,000 tests
- **Weight** : 198g(include AA Alkaline battery 2EA)
- **Dimensions(mm)** : 133(height) X 64(width) X 33(thickness)
- **Measurements memory** : Approx. 500 measurements
(Device No. / Date % Time / test result & number)





BREATHALYZER
ALCOSECAN
ALP-1

