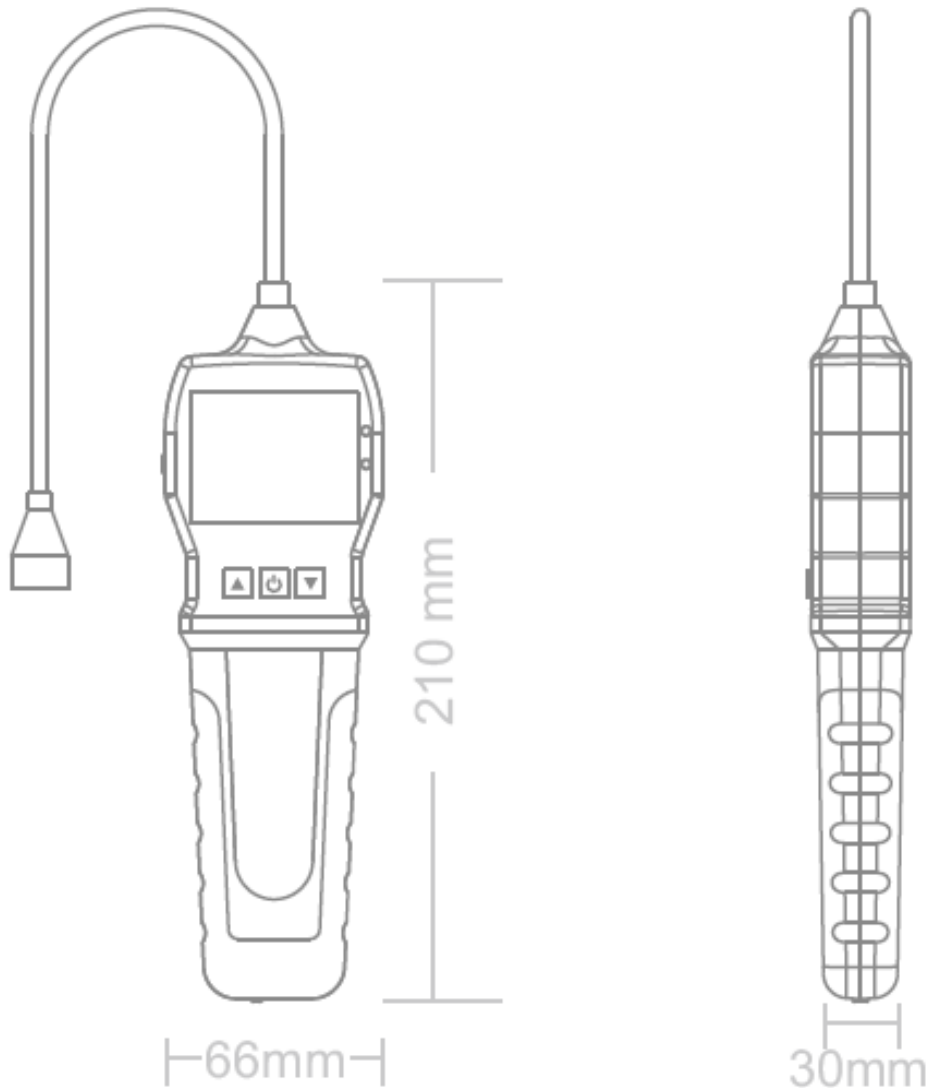




## Portable Gas Detector 90E COLOR YELLOW



## User Manual

## 1. INTRODUCTION

The 90E portable gas detector is a state-of-the-art gas leak detector. We employ the best Japanese high quality semi-conductor sensor and embedded microcontroller to detect gas leakage with high sensitivity and fast reaction time. The detector is waterproof, dustproof, explosion-proof, and easy to use with super high reliability. This detector is widely used in oil, coal, municipal construction, chemical engineering, environmental protection, metallurgy, refining, gas transmission and distribution, biochemistry, agriculture and pharmaceutical industries.

## 2. FEATURES & SPECIFICATIONS

**ACCURATE:** Accurate Made in Japan sensor, most sensitive with ppm (0-10,000ppm) concentration display. Comes FACTORY CALIBRATED. Turn ON and GO.

**ALARMS:** Adjustable Audio, visual, and vibration alarms alert when preset levels are reached.

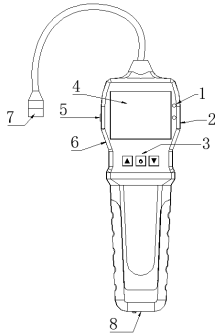
**COLOR DISPLAY:** Large LCD screen. Shock proof, water proof, dust proof and explosion proof.

**USES:** Designed for inspectors, utility workers, refinery workers, maintenance engineers and technicians.

**TRUST:** \*\* 1 year limited warranty \*\* Arrives with calibration and QA certificate \*\* 100% product test and verification in the USA \*\* 100% quality guaranteed \*\*

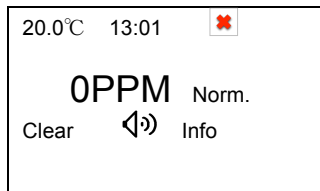
<b>Target gas</b>	Combustible gas
<b>Range</b>	0-10,000ppm (based on Methane) 0-1,000ppm for Hydrogen
<b>Sampling method</b>	Natural diffusion
<b>Alarm point</b>	Default: Low alarm: 500ppm; High alarm: 2000ppm.
<b>Alarm types</b>	Audible buzzer alarm; Visual LED light alarm; Vibration alarm
<b>Warm-up time</b>	60S
<b>Response time</b>	<30s
<b>Protection level</b>	IP65
<b>Explosion-proof grade</b>	Exib IIB T3 Gb
<b>Sensor type</b>	Japanese FIGARO sensor
<b>Sensor life</b>	2 years
<b>Power supply</b>	Rechargeable lithium battery, DC3.7V 1800mAH
<b>Charging Time</b>	6h-8h
<b>Operating Time</b>	> 8 hours (normal working environment)
<b>Working conditions</b>	Temperature: -10~40°C Humidity: ≤95% RH with no condensation.
<b>Storage</b>	Temp: -20~50°C Humidity: ≤90% RH, avoid caustic gases or substances.
<b>Weight</b>	Approx. 300g (excluding accessories)
<b>Dimension</b>	Approx. 210mm(L)×66mm(W)×30mm(H)
<b>Packing list</b>	Detector, Carrying case, Charger, USB cable

### 3. Configuration and Functions



1	LED lights	5	USB Charging socket
2	Label (back)	6	Buzzer hole
3	Operation buttons	7	Gas sensor
4	LCD screen		

### 4. Operation & Function



4.1 Display Icons

20.0°C	Temperature	13:01	Time
[Red X icon]	Full voltage	0PPM	Concentration value
[Red X icon]	Low voltage	Normal	Status
Clear	zero clearing	[Red X icon]	Sound
Info	Information	[Red X icon]	Muting

#### 4.2 Turn ON

Press the button for 3s and then release it. The interface shows “Welcome Starting”, “LED Testing”, and then vibrates with “Motor Testing”, then beep and flashes with “Sound and Alarm Testing”, after “60s warming”, it enters into detecting status.

At this time, it displays the combustible concentration in the environment.

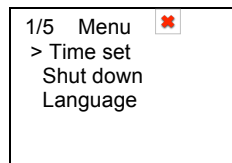
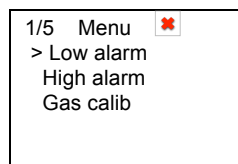
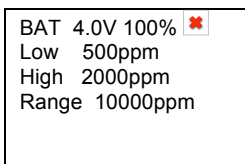
#### 4.3 Menu Operation Instructions





The interface menu contains: [Clear] , [Left Arrow] , [Info] .







**[Clear]** : press the key for 2 seconds after the instrument into the clear state, and save the value of the display was successful.

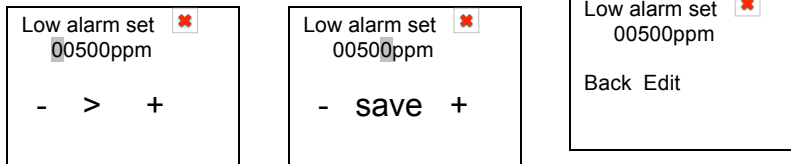
**[Left Arrow]** : Press the key to switch to the silent state, display , and then press the button to switch to the sound state.







**[Info]** : press the key to display the status information, including battery power, low value, high value and range (see below).

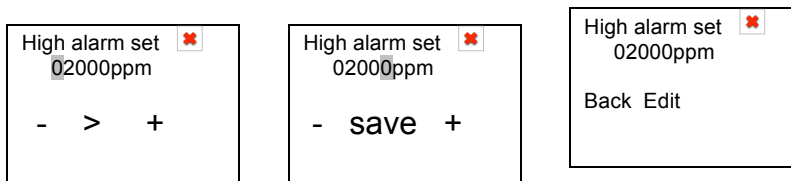


Press the button  for 2 seconds to enter the user menu, including the following options: low alarm set, high alarm set, gas calibration, time set, shutdown. Press the button  for the down button, press the key  for the return,  to confirm.







**【Low alarm set】** Press the  key to move the cursor to Low alarm set, press  to enter the editing state, then press the  button you can increase the value of the black position, press the button  to reduce the black position value, press the button  to switch to the next digit value to adjust, when the switch to the last bit when displayed (right figure), press the key  to save then the low alarm setting is done.

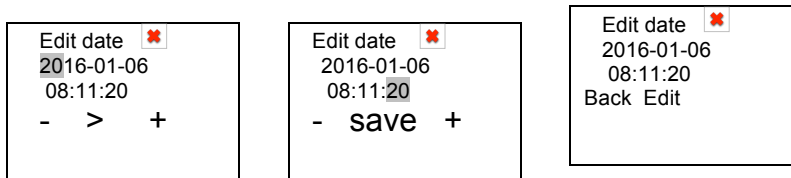


**【High alarm set】** Press the  key to move the cursor to High alarm set, press  to enter the editing state, then press the  button you can increase the value of the black position, press the button  to reduce the black position value, press the button  to switch to the next digit value to adjust, when the switch to the last bit when displayed, press the key  to save then the high alarm setting is done.









**【Gas calibration】** : This option for the special operation, please email FORENSICS DETECTORS for operation.

**【Time setting】** : press the  key to move the cursor to time setting, press  to enter the editing interface, then you can adjust the years, press the  key black position move to the last two position, through  and  can be achieved to increase and decrease, in turn adjust the time, when switching to seconds when the interface, press  to save the settings to complete the time adjustment.



**【Shutdown】** : There are two ways to shut down the detector:

**Method 1:** press the  in any interface, press  for 3 seconds to automatically shut down to confirm the interface, press  or press  to shut down.

**Method 2:** enter the user menu, switch to the shutdown menu option, press the  key to enter the shutdown confirmation interface, press the  key to shut down.

#### 4.4 Menu Operation Instructions

**LOW alarm:** the status indicator shows low alarm, the instrument issues a slow drop alarm sound, while the red alarm light slowly blinking and vibration.

**HIGH alarm:** status indicator shows the high alarm, the instrument issues a rapid drop of the alarm sound, while the red alarm light flashing and rapid vibration.

**OVERRUN alarm:** status indicator shows overrun, the instrument has issued an alarm sound, while the red alarm light and backlight.

#### 4.5. BATTERY Charging

Use the USB charger provided. If the battery is low the detector will not be able to turn ON. Before charging, please turn off the detector to avoid any potential damage. When the battery mark on the screen is full and doesn't charge any more, it means the charging is complete.

## **\*\* WARNING \*\***

- DO NOT turn on the detector when it's off and being charged.
- DO NOT charge the detector at leak detection site. Explosions may be caused by sparks introduced from plugging / unplugging the charger.
- DO NOT charge the detector when it is ON.
- Prevent dropping the detector and vibrations.
- DO NOT use sensor tip to touch other objects nor block sensor tip.
- The detector will only detect gas concentration when in the main screen.
- The detector should not be stored or used where there are caustic gases (such as CL2), or under other rigorous circumstances (no excessive high and low temperature, high humidity, electromagnetic field and sunlight).
- After long-term use, if there is dust on detector surface, please clean it lightly with clean soft cloth, instead of caustic solvents or hard things.

## **5. Customer Support**

**WEB:** [www.forensicsdetectors.com](http://www.forensicsdetectors.com)  
**Email:** [forensicsdetectors@gmail.com](mailto:forensicsdetectors@gmail.com)



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