

LS1

Operator Manual



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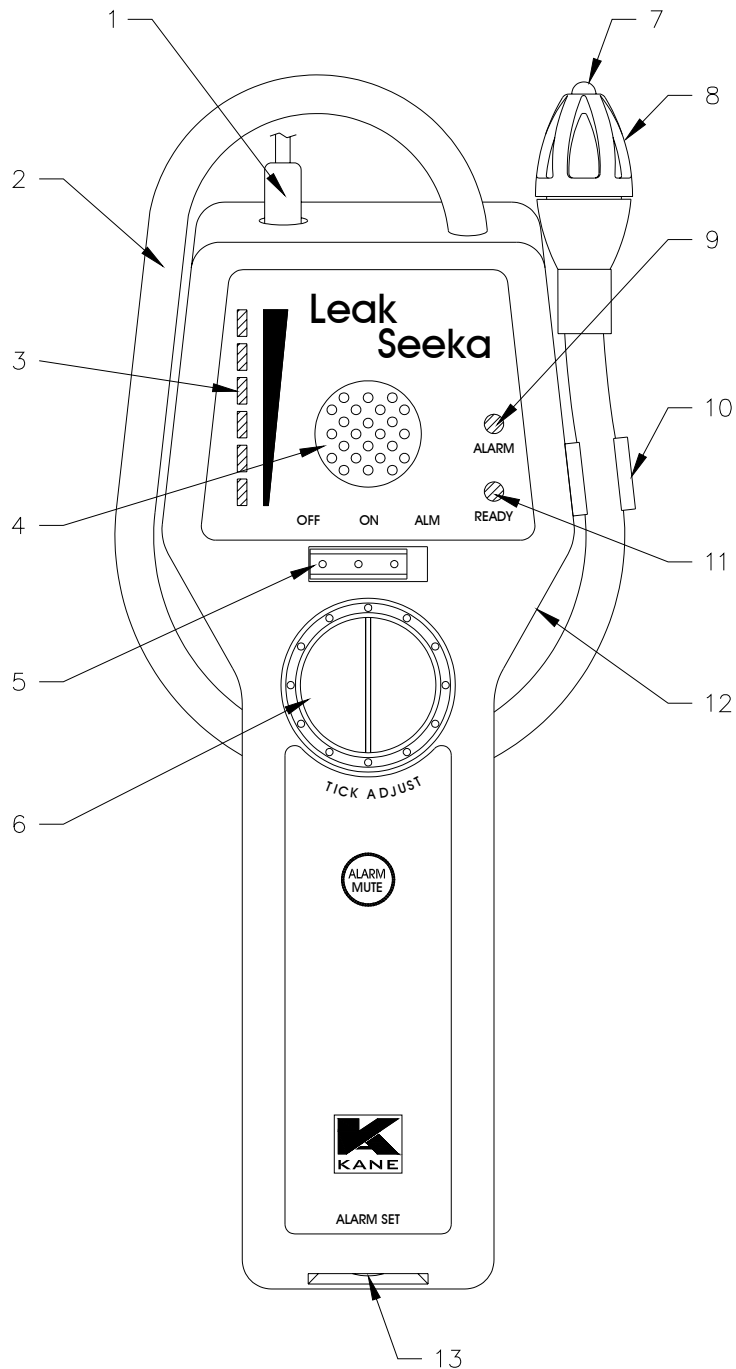
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CAUTION

The LeakSeeka-1 LS-1 instrument is factory calibrated for methane in air. The alarm will be set off when the gas concentration in the air approaches the “ALARM” set point. The “ALARM” set point is adjustable by the user for any gas concentration within the range of 0% to 40% of the lower explosive limit (LEL). The “ALARM” response in the presence of any other gas will be different.



- | | | | |
|----|-------------------------|-----|------------------------|
| 1. | Earphone Jack | 8. | Sensor Cover |
| 2. | Gooseneck | 9. | Alarm Light |
| 3. | Level Indicator | 10. | Gooseneck Clip |
| 4. | Audible Alarm | 11. | Power On Light (Ready) |
| 5. | Off/On/Alarm Switch | 12. | Battery Compartment |
| 6. | Level "Tick" Adjustment | 13. | Alarm Set |
| 7. | Tip Light | | |

GENERAL DESCRIPTION

The LeakSeeka LS-1 is an advanced state-of-the-art leak detector capable of detecting many combustible and toxic gases.

A partial list of these gases is:

Acetone
Ammonia
Carbon Monoxide

Alcohol
Butane
Halon

Petrol
Hydrogen Sulphide
Industrial Solvents
Lacquer Thinners
Propane
Refrigerants
Natural Gas

Jet Fuel
Smoke
Methane
Naphtha

OPERATING INSTRUCTIONS

BASIC OPERATION

1. Turn the instrument on in a non-contaminated atmosphere by moving the OFF/ON/ALARM slide switch to “ON” or “ALARM”.
2. The green “READY” light will always be on when the batteries have sufficient power to run the LS1. If the ‘READY’ light flashes then the batteries need to be replaced.
3. During warm-up it is normal but not required that the ticking sound increases and all lights on the ‘LEVEL INDICATOR’ are ON. The “ALARM” light may also flash for a short time.
4. The ticking rate will slowly decrease and lights on the ‘LEVEL INDICATOR’ will go off. The time required for this could take up to several minutes depending on the duration of time since the instrument was last used. (Normally approximately 15 seconds).
5. Turn the “LEVEL ADJUST” until ONLY the first green light on the ‘LEVEL INDICATOR’ is ON, this will also give a slow uniform ticking sound.

FINDING A LEAK

6. Move the sensor head along area to be checked. Lights on the ‘LEVEL INDICATOR’ will illuminate and the tick rate will increase as a higher concentration of gas is detected. The lights will change from green to yellow and ultimately red.
7. If the last red light is illuminated turn the ‘LEVEL ADJUST’ so that the lights start to go out. This resets the LS1 for the higher concentration and allows stronger leaks to be detected.
8. Again move the sensor head until stronger concentrations of gas are found. Reset for higher concentrations as required.
9. If the first green light on the ‘LEVEL INDICATOR’ goes out and the tick rate reduces then you are moving away from the leak source.

ALARM INDICATION (only works with switch set to “ALARM”)

10. The Alarm is pre-set at approximately 0.5% gas (10% of L.E.L.) with the potentiometer in the locked position. If gas at the sensing head rises above this level then a two tone sound will be heard and the “ALARM” light will flash. This indicates a potentially hazardous atmosphere.
11. Note: If the instrument is in an area where high gas concentrations are present, the “ALARM” may not stop. The unit may still detect any higher gas levels in a normal manner.
12. To continue searching for a leak while the unit is alarming press the “MUTE” button or slide the switch to “ON”, this disables the alarm facility. The ‘LEVEL INDICATOR’ and ticking sound will continue to work as detailed in BASIC OPERATION.
13. The ‘LEVEL INDICATOR’ and tick rate are independent of the alarm, which is calibrated to the appropriate gas concentration.

SETTING THE ALARM

14. Turn on to “ALARM” for ten minutes to warm up.
15. Insert the sensor into a clean, closed container filled with the level of gas to be detected (i.e. in the factory we set to 0.5% dry methane-air). This gas can be in the range 0-2% methane in air or an equivalent desired gas i.e. propane.
16. Rotate the “ALARM SET” adjustment until the “ALARM” light JUST comes on.
17. Remove the sensor from the gas for 1 minute the re-insert to verify the adjustment.

If the unit cannot be calibrated using this procedure, it should be returned to Kane International or an authorised distributor for repair.

HINTS AND TIPS

18. The earphone can be plugged into the unit if there is high background noise or the operator does not want to disturb other people. Inserting the earphone disables the speaker.
19. If the lights do not light or go out and the audio does not work, this is an indication that the batteries need replacing.
20. The unit will respond to some leak finding solutions (soap). Use your LeakSeeka LS-1 first!
21. If the sensor is overexposed to some gases, the unit may take an extended period of time to return to a steady condition.
22. To increase battery life, turn the unit “OFF” when not in use.

SPECIFICATIONS

(NOTE: MAY BE SUBJECT TO CHANGE)

Power Supply	Four AA-sized Alkaline Batteries
Sensitivity	<50 ppm methane
Sensor	Solid-State
Level Indicator	Six LEDs moving from green at low concentration through yellow to red. Level is adjustable and hence does not give concentration reading.
Alarm	Visual and audio at approximately 10% of L.E.L. with an absolute maximum of 40% L.E.L. for methane. Can be calibrated for other concentrations or gases.
Warm-up	Approximately 1 min.
Response Time	Less than 2 seconds (to 40% L.E.L.)
Recovery Time	Less than 4 seconds (from 40% L.E.L.)
Duty Cycle	Continuous
Battery Life	Approximately 12 hours
Dimensions	80 x 220 x 60 mm
Weight	450g
Probe Length	400mm
Accessories	Carry Case Alkaline Batteries Instruction Manual

<u>Operation Environment</u>	
Temperature	0-50°C
Humidity	10% - 90% RH non-condensing

BATTERIES

Battery Replacement

If the 'READY' light fails to light or flashes the batteries need replacing. Remove the battery cover on the back of the instrument by pressing in the catch. Replace the batteries with 4 AA-size alkaline batteries.

Note: When replacing batteries observe polarity markings in the battery compartment. A fresh set of alkaline batteries should operate the unit for approximately 8 hours.

Battery Disposal

Always dispose of depleted batteries using approved disposal methods that protect the environment

ELECTROMAGNETIC COMPATIBILITY

European Council Directive 89/336/EEC requires electronic equipment not to generate electromagnetic disturbances exceeding defined levels and have adequate immunity levels for normal operation. Specific standards applicable to this analyser are stated below.

As there are electrical products in use pre-dating this Directive, they may emit excess electromagnetic radiation levels and, occasionally, it may be appropriate to check the analyser before use by:

Use the normal start up sequence in the location where the analyser will be used.

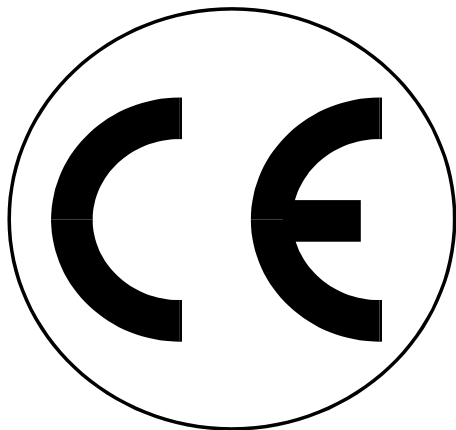
Switch on all localised electrical equipment capable of causing interference.

Check all readings are as expected. A level of disturbance is acceptable.

If not acceptable, adjust the analyser's position to minimize interference or switch off, if possible, the offending equipment during your test.

N.B. Maximum cable lengths must be less than 3 metres.

At the time of writing this manual (February 1999) Kane International Ltd are not aware of any field based situation where such interference has occurred and this advice is only given to satisfy the requirements of the Directive.



This product has been tested for compliance with the following generic standards:

EN 61000-6-3 : 2001

EN 61000-6-1 : 2001

and is certified to be compliant

Specification EC/EMC/KI/LS1 details the specific test configuration, performance and conditions of use.

Please Note:

Batteries used in this instrument should be disposed of in accordance with current legislation and local guidelines.

WARRANTY

All Kane International instruments include batteries and carry a 12 months warranty, covering any manufacturing defects and component failures. The warranty applies to all Kane International products world-wide.

In line with our policy of continuous development we reserve the right to alter any part of our product specification without prior notice.

At the end of the product's life it should be re-cycled in accordance with current legislation and local guidelines.

Product Registration

*Please complete, detach and return to: Kane International Ltd,
Kane House, Swallowfield, Welwyn Garden City, Hertfordshire, AL7 1JG*

Your Details	
Name:	
Job Title:	
Company Name:	
Company Address 1:	
Address 2:	
Town/City:	
County:	
Postcode:	
Country:	
Phone Number:	
Fax Number:	
Mobile Number:	
Email Address:	

Product Details	
<i>Note: Proof of Purchase may be required for warranty claims.</i>	
Date Purchased as numbers (05.01.10):	
Purchased From:	
Model Number:	
Product Serial Number:	



Why did you buy a Kane Product?

- Dealer Recommendation
- Value for Money
- Kane
- Not your Decision
- Other Recommendation
- Our Fixed Price Servicing Programme
- Previous Owner
- Other:

What brand was your previous analyser?

How did you hear about Kane?

- Magazine Advert
- Personal Recommendation
- Exhibition
- Trade Counter Literature
- Internet
- Other:

Which do you read most often?

	Often	Sometimes	Hardly Ever
Registered Gas Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gas Installer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P.H.P.I.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P.H.A.M. News	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating Ventilating & Plumbing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating & Plumbing Monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for completing this survey.
All the information we have collected is confidential.
We do not sell or share data with any other company or organisation.



Thank you for buying this
analyser.

Before use, please register on
our website

www.kane.co.uk

or complete, detach and return
the Product Registration page.