

**CD100A
COMBUSTIBLE GAS
DETECTOR**

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OPERATING INSTRUCTIONS

PRODUCT FEATURES



1. Flexible Gooseneck
2. Visual Leak indicator
3. Low Battery Indicator
4. Power On Light
5. Solid State semi-conductor sensor
6. Sensor Cover
7. Audible Leak Indicator
8. Tic Adjustment (located on the side of the unit)
9. Protective Boot
10. Gooseneck Clip
11. Socket for Optional Earphone
12. Tip Light

GENERAL DESCRIPTION

This instrument is an advanced combustible gas leak detector, capable of locating many combustible, non combustible and toxic gases.

A partial list of these gases include:

Acetone	Jet Fuel
Alcohol	Lacquer Thinners
Ammonia	Methane
Benzene	Naphtha
Butane	Natural Gas
Ethylene	Propane
Gasoline - Petrol	Toluene
Hydrogen	
Industrial Solvents	

The detector is factory calibrated for methane in air.

Operation

1. Turn the instrument on by rotating the thumbwheel downwards in a non-contaminated environment. i.e. Fresh Air.
2. The green Power LED will be illuminated when the unit is turned on. If the battery level is low then the red LED will be steady and the tic rate will not be adjustable. The battery will need replacing.
3. Adjust to a slow uniform tic rate with the use of the thumbwheel (approximately 2 ticks per second). This sets the instrument to the background level, you should start your testing by setting in fresh air. The red LED indicator will flash in correspondence with the tic rate. Please allow around 10 seconds for the sensor to stabilise indicated by a steady tic rate. However it may occasionally require up to 2 minutes to stabilise under some conditions.
4. The unit responds to gas with a variable audible ticking sound. The audible tic increases in volume when exposed to gases with 50 parts per million or more. When gas is detected the tick rate will increase, rotate the thumbwheel back to the steady tick, resetting the instrument to this new background level. Move the instrument into higher concentrations of gas (indicated by increased tick rate) until the leak is found.

5. The 'Tip-light' is used to see around the area of the leak when in a dark environment.
6. When this instrument is used in noisy environments, look at the red LED which flashes more rapidly as the tic rate increases. The optional earphone can be plugged into the unit's side if there is high background noise or the operator does not want to disturb other people. This also disables the speaker.
7. If the tic rate becomes uncontrollable, it may be necessary to change the sensor.
8. The detector will respond to some leak finding solution (e.g. Soap), so please use your detector first. If over exposed to some gases, the detector may take an extended period of time to return to normal.

Battery Replacement

1. Remove the battery case cover.
2. Replace the 9V alkaline battery. An alkaline battery should always be used. Ensure the polarity of the battery matches that shown in the compartment.
3. Replace battery case cover.

ELECTROMAGNETIC COMPATIBILITY

The European Council Directive 89/336/EEC requires that electronic equipment does not generate electromagnetic disturbances that exceed defined levels and has an adequate level of immunity to enable it to be operated as intended. The specific standards applicable to this product are detailed in the appendices.

Since there are many electrical products in use that pre-date this Directive and may emit electromagnetic radiation in excess of the standards defined in the Directive there may be occasions where it would be appropriate to check the analyser prior to use. The following procedure should be adopted:

- Go through the normal start up sequence in the location where the equipment is to be used.
- Switch on all localised electrical equipment that might be capable of causing interference.
- Check that all performance are as expected. (A level of disturbance in the performance is acceptable). If not adjust the position of the instrument to minimise interference or switch off, if possible, the offending equipment for the duration of the test.

At the time of writing this manual (April 1998) there is no awareness of any field based situation where such interference has ever occurred and this advice is only given to satisfy the requirements of the Directive.

Sensor Filter and Sensor Replacement

The sensor is housed at the tip of the gooseneck assembly.

To remove the sensor:

1. Turn the unit off.
2. Pull off the top half of the sensor housing. Pushing to one side aids removal.
3. With care move the 'Tip-light' LED to one side to gain access to the sensor (small silver can).
4. Unplug the sensor and replace it with a new one.

Note: The sensor can be fitted in either one of two ways without affecting instrument operation.

5. Realign the LED ensuring it sits above the sensor.
6. Replace sensor cover by pushing it firmly in place. Note ! the locating pin between the body and sensor cap.

The sensor has a life greater than 3 years.

Specifications

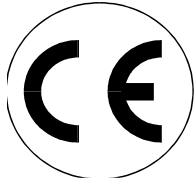
Power Supply	1 x 9V battery (alkaline preferred)
Sensor	Solid state semi conductor
Sensitivity	<50ppm methane
Indicators	Audible: Adjustable tic rate Visual: Flashing LED
Warm-up	10 seconds
Response Time	Instantaneous
Duty Cycle	Continuous
Battery Life	5 hours typical use
Dimensions	8 " H x 4 " W x 1.5" D 205mm x 100mm x 36mm
Weight	15 oz / 460 gm
Probe Length	18 inches / 460 mm
Operative	0-50°C / +32-122°F

Protection Against Electric Shock **(in accordance with EN 61010-1 : 1993)**

This instrument is designated as Class III, SELV.

APPENDIX

**ELECTROMAGNETIC
COMPATIBILITY**



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

EN 61000-6-3
EN 61000-6-1

and is certified to be compliant

Specification EC/EMC/KI/CD100A 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.