

# 1701

## Portable Test and Calibration Unit

*The **1701** is a portable test and calibration unit used to verify the operation and, if necessary, calibrate the GM Ultrasonic Gas Leak Detectors (UGLD).*



### Description

Although the Gassonic detectors do not require regular maintenance, the 1701 can be used to satisfy the requirements for regular plant maintenance. Compared to traditional detection methods, calibration gas is not needed for testing the functionality of Ultrasonic Gas Leak Detectors. Furthermore, the 1701 requires no electrical connection to the gas leak detector, but is simply placed over the sensor head of the gas leak detector.

To ensure stable test conditions, the 1701 is easily attached onto the GM UGLD via a bayonet fitting to ensure a well defined distance between the detector microphone and sound source in the 1701. This ensures that traceable and accurate test conditions can be obtained. If only a non-traceable function testing of the GM UGLD is necessary, the handheld SB100 can be utilized where the UGLD can be bump tested up to 18 meters distance from the detector.



### Features & Benefits

| Features                                            | Benefits                                                                                                                                                                                      |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Traceable and calibrated to international standards | Provides clear evidence that the detector always has the same detection coverage thereby ensuring reliability. Comes with individual calibration sheet, calibrated to international standards |
| Tests full dynamic range as well as delay function  | Tests all GM Ultrasonic Gas Leak Detectors which eases maintenance                                                                                                                            |
| Onsite calibration of Gassonic UGLD                 | No need to open up detector or remove parts in the field                                                                                                                                      |
| Approved for use in hazardous areas                 | No need for special work permit prior to use                                                                                                                                                  |

### Functions

#### Test Function

The test function in the 1701 is for traceable testing of GM UGLD. In test mode, the 1701 emits a constant calibrated sound that the ultrasonic gas leak detector responds to. On the Observers and EX-5, the sound level emitted from the 1701 appears on the display of the detector and on the Surveyor and IS-5, the trigger level is displayed on the 1701.

#### Calibration Function

The GM UGLD can be re-calibrated onsite. When calibrating the detectors, the portable test and calibration unit emits a series of ultrasonic sound levels at different amplitudes. It then automatically performs a zero and a span calibration of the detector.

#### Delay Test Function

During the delay test function, a constant sound level is emitted from the 1701. The purpose of this function is to test the GM ultrasonic gas leak detectors after they have been installed with either the built-in delay function enabled or an external delay function. The 1701 delay test function permits users to verify the complete signal transmission from the detector head into the fire and gas panel or the DCS system.

#### Step Function

For more accurate testing, a step test can be performed on the Observers and EX-5 where the dynamic range from 44 dB to 101 dB can be tested in 1 dB steps.

## Specifications

| System Specifications        |                                                                                                                                                                                |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instrument Type              | Traceable portable test and calibration unit for GM UGLD                                                                                                                       |
| Accuracy                     | ± 3dB within the sensitivity range of the GM UGLD (44 to 104 dB)                                                                                                               |
| Approvals Classification     | ATEX: II2G EEx ib IIC T3<br>CSA: Class I, Div. 1                                                                                                                               |
| Approvals                    | ATEX, C-UL, CE                                                                                                                                                                 |
| Warranty                     | 2 years                                                                                                                                                                        |
| Electrical Specifications    |                                                                                                                                                                                |
| Battery Type                 | Rechargeable NiMH battery pack                                                                                                                                                 |
| Battery Life                 | 10 hours of full operation without backlight<br>5 hours of full operation with backlight<br>Standby state: approximately 2 months<br>Low battery indicator in display          |
| Charging Requirements        | Fast charging current: 650 mA for 2 hours                                                                                                                                      |
| EMC Emission                 | EN 50081-1 (1992) Generic emission standard; Part 1: Residential, commercial and light industry<br>EN 50081-2 (1993) Generic emission standard; Part 2: Industrial environment |
| EMC Immunity                 | EN 50082-1 (1997) Generic immunity standard. Part 1: Residential, commercial and light industry<br>EN 61000-6-2 (1999)                                                         |
| Environmental Specifications |                                                                                                                                                                                |
| Operating Temperature        | −15°C to 50°C (5°F to 122°F)                                                                                                                                                   |
| Storage Temperature          | −20°C to 60°C (−4°F to 140°F)                                                                                                                                                  |
| Mechanical Specifications    |                                                                                                                                                                                |
| Dimensions – Instrument      | 173 mm H x 105 mm W x 115 mm D (6.81 in H x 4.13 in W x 4.53 in D)                                                                                                             |
| Weight                       | 1.6 kg (3.53 lbs)                                                                                                                                                              |
| Dimensions – Suitcase        | 173 mm H x 452 mm W x 325 mm D (6.81 in H x 17.79 in W x 12.79 in D)                                                                                                           |
| Weight                       | 6.8 kg (15 lbs); includes 1701 and accessories                                                                                                                                 |
| Ordering Information         |                                                                                                                                                                                |
| Part No.                     | 80510-1                                                                                                                                                                        |

## Maintenance

If traceability is required, the 1701 should be returned to the factory for re-calibration, according to international standards.

*Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.*