

CASTLE GROUP

USER MANUAL FOR

ACOUSTIC CALIBRATORS:

GA601, 607, AND GA609

COMPANY INTRODUCTION

Thank you for buying a Castle product, we are sure you will find both the goods and the service to be of the highest quality but if not, then please feel free to write us so that we can deal with any concerns you may have.

This manual is designed to show you the operation of the goods you have purchased . If you would like to become a competent person in the eyes of the law, then you may like to know more about our Competent Persons training course for the Noise at work Regulations.

It is our aim at Castle Group Ltd to provide a complete range of Noise and Vibration products and Services of the highest standard. If you would like to know more about any of our other products and services then please complete the reply paid card in warranty registration form and return it to us for prompt action or telephone on : +44(0)1723 584250.

Simon Bull

A handwritten signature in black ink, appearing to be 'Simon Bull', written in a cursive style with a horizontal line extending to the right.

Sales and Marketing Director

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INTRODUCTION

The GA601/GA607 Sound Level Calibrators provide an accurate, stable and simple to use sound source for the calibration of Sound Level Meters. Both calibrators operate at 1kHz and thereby eliminate possible confusion regarding the frequency weighting selected on the Sound Level Meter (since A,B,C and D weightings all have unity gain at this frequency). Both calibrators also feature a non-latching toggle switch operation which engages the sound source for a continuous period of 1 minute before automatically turning off. The GA601 produces a 94dB tone and the GA607 produces both 94dB and 104dB tones relative to 20 μ Pa.

Rugged, reliable and economic operation of the GA601/607 has been ensured by use of integrated circuits, a metal cone transducer, positive battery condition indication and readily available batteries. Compact size and light weight permit convenient pocket carrying and hand-held calibration of instruments.

The GA601/607 calibrators are designed for use with a variety of Sound Level Meters. Its cavity accepts standard microphones of 12.7mm (0.5") size.

Note:

We have recently introduced a GA609 to our range of calibrators. This is a Class 1 version of the single level GA601 and all operations remain the same.

BATTERY CHECK AND REPLACEMENT

Battery condition of the GA601/607 is continuously indicated when the instrument is switched on, by means of a bright red LED (light emitting diode). If the LED is not illuminated when the units are switched on then the batteries in the unit need replacing. The procedure is as follows:-

1. Pull off black retainer ring surrounding the switch panel by pulling with a slight twist. If necessary use a screwdriver through the two holes in the ring to pull it off. The retainer is held by a rubber 'o-ring' and a fairly firm 'pull and twist' is required to remove it.
2. Remove the metal plate carrying the switch and PCB by pulling on the switch. Continue pulling gently until the entire PCB is outside the bodytube (take care not to pull too far or the wires connecting to the transducer will break).
3. Unclip the lithium batteries from their holders by carefully prising them out from under their clips.
4. Place the new batteries in back under the holder clip with the positive to the top (note the holder clip may require pushing back down to make a good contact on the battery before you put the new batteries in).
5. Replace the switch panel/PCB assembly back into the bodytube and fit the black retainer ring on top by pushing firmly until flush with the bodytube.
6. Turn on the GA601/607 and verify that the LED glows brightly.

OPERATION

1. Check the battery condition of both the Sound Level Meter to be calibrated and the GA601/607.
2. Insert the microphone of the Sound Level Meter into the cavity of the GA601/607 (on base of GA601/607). Make sure that it is a tight fit.
3. Switch on both instruments and refer to the Sound Level Meters own manual for instructions on how to check/adjust its reading

Note: Both calibrators feature a non-latching switch and will automatically turn off after 1 minute. Before calibrating with any Castle calibrator you should check for an audible tone.

SPECIFICATION

Nominal sound pressure level at 101.3kPa (760mm Hg), 20°C, 65%

RH: GA601 = 94dB relative to 20 µPa
GA607 = 94dB or 104dB relative to 20 µPa

Tolerance (dB) : ± 0.5dB Class 2 ± 0.3dB Class 1

Stability (dB) : ± 0.2dB Class 2 ± 0.1dB Class 1

**Nominal frequency at 101.3kPa (760mm Hg),
20°C, 65%RH :** 1.0KHz

Tolerance (%) : ± 4.0% Class 2 ± 2.0% Class 1

Stability (%) : ± 1.0% Class 2 ± 0.5% Class 1

Harmonic Distortion : <3%

Temperature Range : -10°C to +60°C

Cavity Diameter : 12.7mm (0.5" in accordance with ANSI S.1.12 - 1967)

Batteries : 2 x Lithium coin cells type - CR2032

Life : 70 hours

Standards : Meets IEC942: 1988 Sound Calibrators:

GA601 = Class 2
GA607 = Class 1

Dimensions : Length = 140mm
Diameter = 51mm

Weight : 230gms

WARRANTY AND AFTER SALES SERVICE

Castle Group design and manufacture precision instruments, which if treated with reasonable care and attention should provide many years of trouble free service.

In the event of a fault occurring, during the warranty period, the instrument should be returned to Castle Group Ltd., in its original packaging, or to an authorised agent. Please enclose a clear description of the fault or symptom.

Details of the warranty cover are available from Castle Group Ltd or an authorised agent.

All instruments are designed to meet rigid British and International Standards. An annual calibration is recommended to ensure that these high standards are maintained. This is particularly important for cases in which instrument readings are to be used in litigation or compliance work.

For warranty and service return to:

The Service Department
Castle Group Ltd.
Salter Road
Cayton Low Road Industrial Estate
Scarborough
North Yorkshire
YO11 3UZ

Telephone UK: +44 (01723) 584250
Fax UK: +44 (01723) 583728
Email : sales@castlegroup.co.uk
Internet: <http://www.castlegroup.co.uk>

Any misuse or unauthorised repairs will invalidate the warranty.
Damage caused by faulty or leaking batteries is not covered by the warranty.