

CASTLE GROUP

NOISE ACTIVATED SWITCH

GA905

USER MANUAL

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 courses for Human Vibration Risk Assessment and 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.

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1. INTRODUCTION.

The Castle Groups GA905 instrument is designed to provide a mains level electrical signal.. In its standard form the output is low when 'off' and high when 'on'.

All units are sold as 240V or 110V which must be specified at the time of ordering.

2. INSTRUMENT DESCRIPTION.

The instrument is basically a standard sound level meter which drives a trip circuit to provide a switch function at a chosen level. The switch activates the output. After the noise level falls below the chosen trip level the output is reset after the preset delay time. Power is provided by the normal mains source. The unit is housed in a tough case. It is simply either screwed to the location point.

3. INSTALLATION.

Choose a suitable location for the GA905. The microphone is usually mounted close to the main noise source.

The box can be mounted at any convenient point using screws in the holes provided

Power must be provided from a 3A fused mains supply.

The following connections must be made:

Live (240V, 110V)	J6/1
Neutral	J6/2
Earth	J6/3

The unit has a variable overall trip level from 75dB(A) to 112.5dB (A) in 2.5dB steps. The unit has a factory preset of 85dB(A).

3.1 Microphone

The GA905 is supplied with a remote microphone.

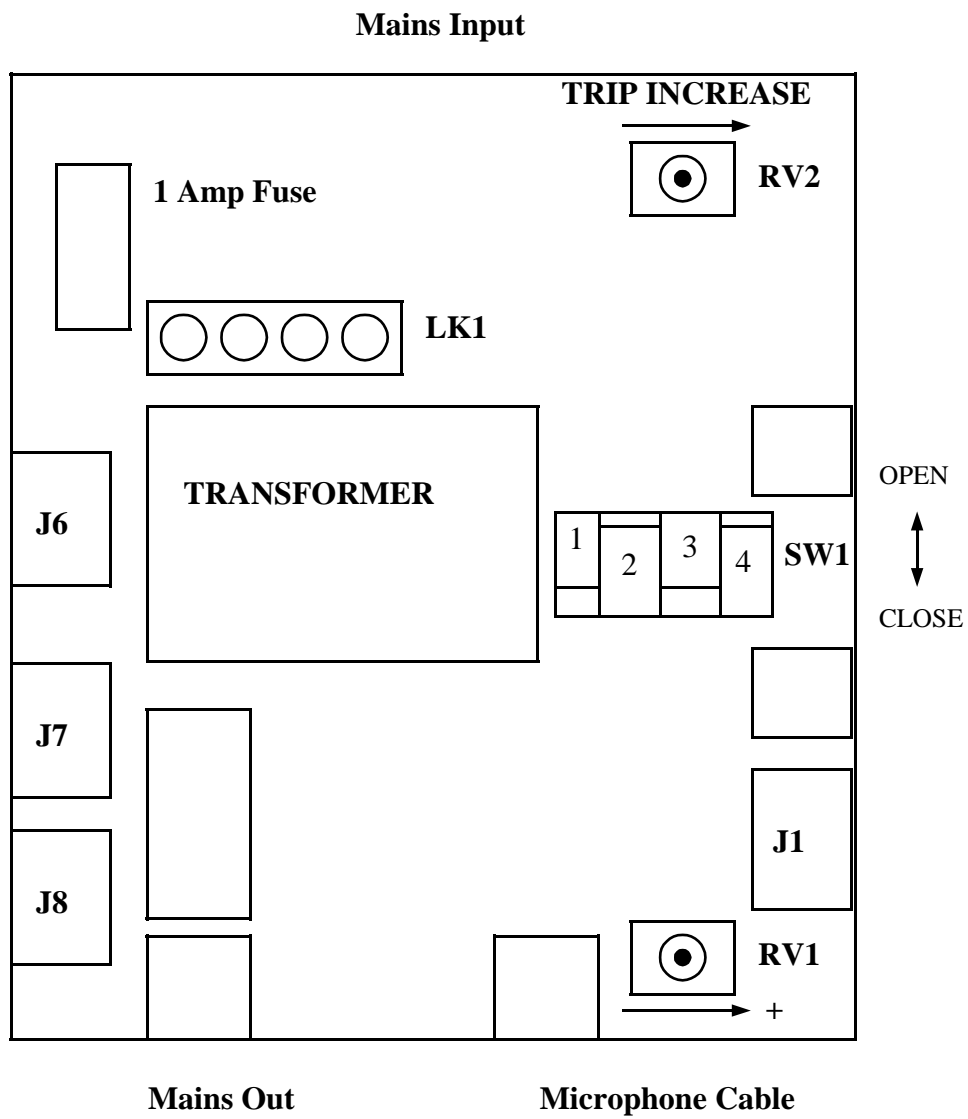
Connect the remote microphone by bringing the cable into the box bottom via one of the cable glands and connecting the wire to the PCB as follows:

J1/1	power (red or brown)
J1/2	signal (blue or white)
J1/3	screen

5. CALIBRATION.

The GA905 is set to trip at 85dB(A). This is the required sound pressure level at the microphone. This level can easily be adjusted from 75dB(A) to 112dB(A) by the user. However, it must be noted that to achieve a warning switch on level of say 85dB(A) at an operators ear position may mean setting the GA905 to work at a lower level (or sometimes higher) to compensate for the distance effects. From this it can be seen that the levels need to be measured both at the operators position and at the location site for the GA905. If a sound level meter is not available one may be purchased or hired from Castle Group Limited. Figure 5.1 shows the position of the following components on the PCB.

Figure 5.1 PCB ADJUSTMENTS.



5.1 Calibration, RV1

This potentiometer gives +5dB adjustment to the calibration level and is factory set to match the microphone supplied. This control should not require any further adjustment.

5.2 Trip Time, RV2

This potentiometer may be adjusted to control the tripped period (lamp on period) from 5 seconds to 30 seconds.

5.3 Trip Level, SW1

This switch is used to set the trip level from 75dB(A) to 112.5dB(A) in 2.5dB increments.

Access to the control board is gained by removing the top panel. All adjustments should be done with the power disconnected. Reconnect the power to test the unit.

5.4 Mains Output

The mains outputs for the GA905 are as follows:

Live	J7/1	J8/1
Neutral	J7/2	J8/2
Earth	J7/3	J8/3

WARNING
THERE ARE MAINS VOLTAGES PRESENT INSIDE
THE UNIT WHEN SWITCHED ON

5.3 Trip Level, SW1

TRIP LEVEL	SWITCH SW1			
	1 20dB	2 10dB	3 5dB	4 2.5dB
75	X	X	O	O
77.5	X	X	O	X
80	X	X	X	O
82.5	X	X	X	X
85	X	O	O	O
87.5	X	O	O	X
90	X	O	X	O
92.5	X	O	X	X
95	O	X	O	O
97.5	O	X	O	X
100	O	X	X	O
102.5	O	X	X	X
105	O	O	O	O
107.5	O	O	O	X
110	O	O	X	O
112.5	O	O	X	X

O – OPEN
X – CLOSED

8. Specification

Trip Range

75dB to 112.5dB in 2.5dB steps switch selectable
+5dB calibration control (factory set)

Trip Time

5 seconds to 30 seconds user adjustable (potentiometer)
When tripped unit automatically resets after trip time

Frequency Weighting

A weighted in accordance with BS EN 6051 Type 2

Time Weighting

Slow 100mS in accordance with BS EN 6051 Type 2

Calibration

Factory Calibrated

Temperature

Operating range: -10 to 50C
Effect of temperature: <0.5dB from 30% RH to 90% RH

Humidity

Effect of Humidity: <0.5dB from 30% RH to 90% RH

In the interest of continued development Castle Group Ltd reserve the right to change any specification without due notice.

9. 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., 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: (01723) 584250
 INT: 44 1723 584250
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E mail: sales@castlegroup.co.uk
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Any misuse or unauthorised repairs will invalidate the warranty.

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