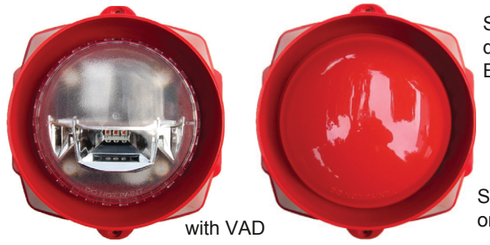
S-Cubed Mark 3 - EP
Data and Installation instructions

GENT by Honeywell



S-Cubed devices for External use

These instructions cover the installation of wall mounted S-Cubed Mark 3 devices. They can be installed in compatible GENT Vigilon fire alarm systems. They are Environmentally Protected 'EP' devices designed for outdoor use and in internal areas having harsh environments inside a building. (VAD - Visual Alarm Device)

Sounder Device (EP)	
S3EP-S-R	S3 Sounder/Red Body/EP

Visual Alarm Device (EP)	
S3EP-VAD-HPW-R	S3 VAD/High perform. White VAD/Red Body/EP
S3EP-VAD-HPR-R	S3 VAD/High perform. Red VAD/Red Body/EP

Voice Sounder and Visual Alarm Device (EP)	
S3EP-V-VAD-HPW-R	S3 Voice Sounder/High perform. White VAD/Red Body/EP
S3EP-V-VAD-HPR-R	S3 Voice Sounder/High perform. Red VAD/Red Body/EP

The S-Cubed Mark 3 devices are configured during commissioning to operate to site specific requirement.

The S-Cubed product range incorporates innovative design features protected by Patents GB2388994, GB2388995 and GB2388916.

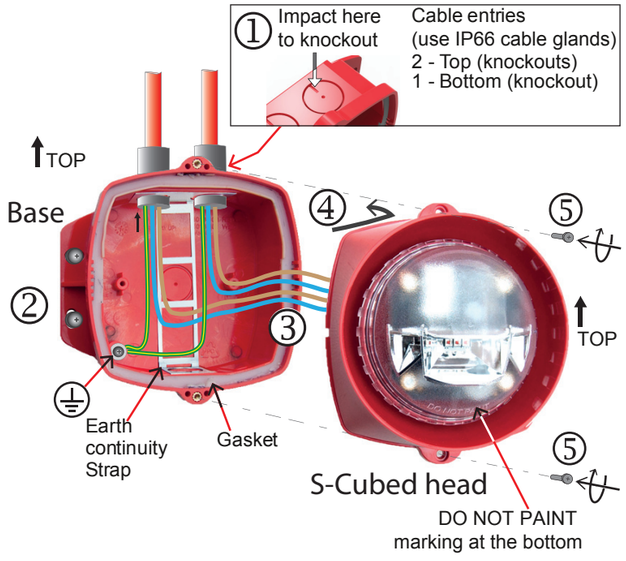
Do's

- ☐ Follow the recommendations that relate to alarm sounders, see Section 16 of BS5839 : Part 1 : 2013.
- ☐ Locate Visual Alarm Devices in accordance with Loss Prevention Council Code of Practice CoP 0001. http://www.redbooklive.com/lps.jsp
- ☐ Check and ensure the S-Cubed Mark 3 devices are compatible with the system control panel software, see technical data
- ☐ Use correct methods to open and close a device
- ☐ Mount the device with the marking 'TOP' uppermost, to allow Visual Alarm and the remote control operation
- ☐ Ensure the PCB cover is in place over the PCB to protect external cables and components on PCB
- ☐ Ensure the earth continuity strap is fitted in the base
- ☐ Install a Visual Alarm Device horizontally using levelling tool
- ☐ Clean any dust off the lens of a Visual Alarm using a lint free cloth
- ☐ Mount a unit on an external wall surface

Don'ts

- ☐ Don't scratch the lens on a Visual Alarm Device
- ☐ Don't flush mount the Base
- ☐ Don't have excessive incoming cable slack
- ☐ Don't locate a device such that the audible and visual outputs are obstructed
- ☐ Don't mount the device above obstructions, such as shelves that prevent IR remote control operation
- ☐ Don't paint the device enclosure

Installation

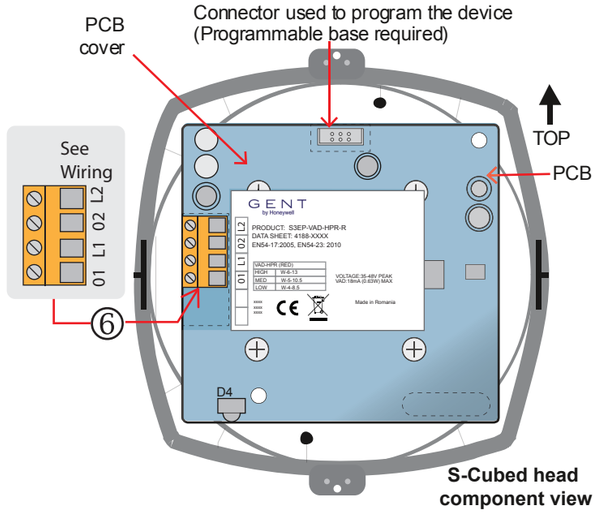


a) Knock out the required cable entry points ① from the Base.

b) Secure the Base to the wall whilst ensuring the Top of the Base is in correct orientation with marked arrow pointing upwards.

c) Use suitable fixings to secure the Base to wall ②.

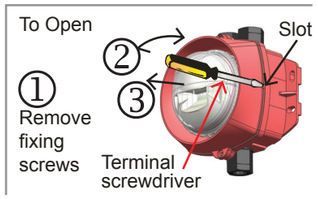
d) Terminate the external cable at the entry point ② using suitable glands leaving no more than 10cm (4") tail wire length ③.



e) Ensure the PCB cover is in place over the PCB.
Connect the wires to the terminal block ⑥, see also Wiring.

f) Align the S-Cubed head to the Base ④ and press the head against the Base until a click is heard. Ensure the two parts are locked together.

g) Secure the assemblies using 2 - M3 x 10mm screws ⑤ supplied.



Tones and Messages

Tones

Signal 1 Intermittent tone 970Hz ±10% @ 1Hz
Signal 2 Alternating tone 730Hz ±10% / 970Hz ±10% @ 2Hz
Signal 3 High Tone (Continuous 970Hz ±10%)

Speech messages

Message 1
Bell tone

Message 2 (with Signal 3)
Attention please this is an emergency please leave the building by the nearest available exit. (female voice)

Message 3# (with Signal 1)
An incident has been reported in this building please await further instructions. (female voice)

Message 4
This is a test message no action is required. (female voice)

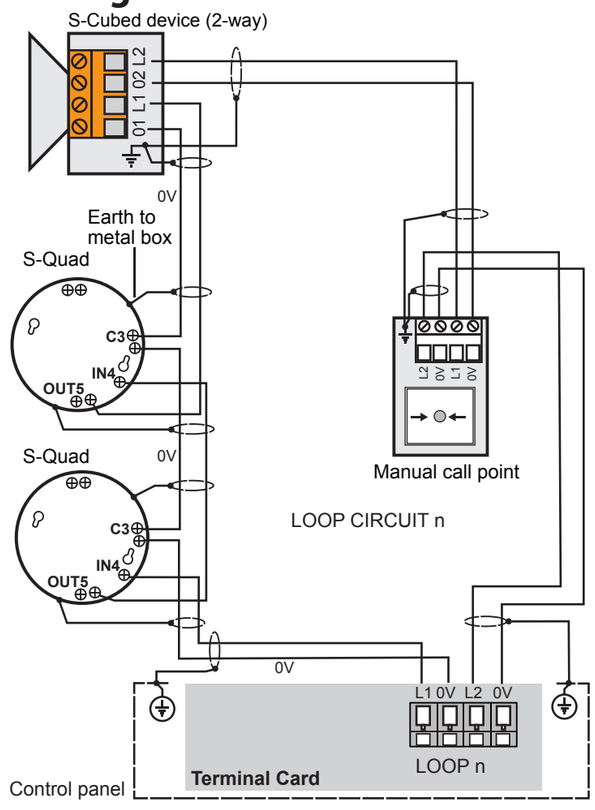
Message 5 # (with Signal 2)
This is a fire alarm please leave the building immediately by the nearest available exit. (male voice)

Approved to EN54-3 Annex C.

Message and attention Tone
Programmable period normally set at 10 seconds can be configured up to 30 seconds.
The default period is 10 seconds. This may be altered (using the commissioning tool) to suit custom messages or use of non standard tones

Flash memory can hold up to 20 seconds of audio and bell tone.

Wiring



Technical data

Designed to the requirements of Standards
Sounder - EN54-3 : 2001, A1:2002, A2:2006
Visual Alarm Device (VAD) - EN54-23 : 2010
Short-circuit isolator - EN54-17 : 2005

Sound level - for Sounder only
103dB(A) +/-3dB 90° at 1m

VAD flash rate
pulsed output every 2s

Weight
S-Cubed VAD + base 308g

Compatiblility
see section headed Compatibility

Ambient operating temperature
-15°C to +55°C

Storage temperature
-20°C to +60°C

Relative Humidity
95% non condensing
(+5°C to +45°C)

Operating voltage
35V - 48V

Material - body and lens
Polycarbonate

(* - not LPCB approved)

IP Ratings - IP 33 (LPCB Approved)
Independent testing performed to IP66*

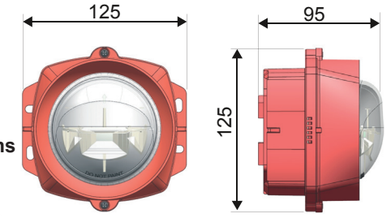
Colour
Red body RAL 3020

Flammability - V2 Rated

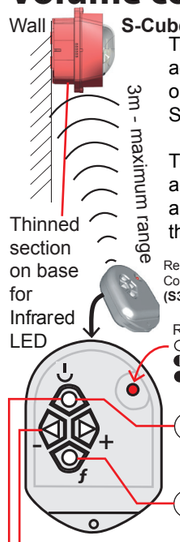
IR remote - volume control
Operating range up to 3m

EN54-17 data - short circuit isolator

Vmax 48V	ICmax 0.4A
Vnom 40V	ISmax 1A
Vmin 35V	ILmax 20µA
VSOmax 16V	ZCmax 0.13Ω
VSOmin 8V	



Volume control



The volume of a Sounder S-Cubed can be adjusted by the Commissioning tool or by a remote control with panel in Test mode. Save the new volume at the panel after adjustment.

The sound levels in the areas should be tested in accordance with the British Standard requirements and to meet the site specific needs as agreed with the customer.

Trouble shooting
If the remote control fails to operate in close proximity to the thinned section of the S-Cubed device, then a possible cause may be the battery. Replace the battery.

① Perform a short press on the ⏻ Power button to turn On the remote control. The Red LED will flash ◐ x1 every 2 seconds

② Press the ƒ function button to toggle between:
Volume function and note the Red LED flashes ◐ x1 every 2 seconds
Tone/Speech message function and note the Red LED flashes ◐ x 2 every 2 seconds

③ Press the ▷+ or -◁ to increase or decrease **volume** or to select next or previous **tone/Speech**
Note: The light on the S-Cubed unit if fitted will flash rapidly when the volume is being adjusted using the remote control.

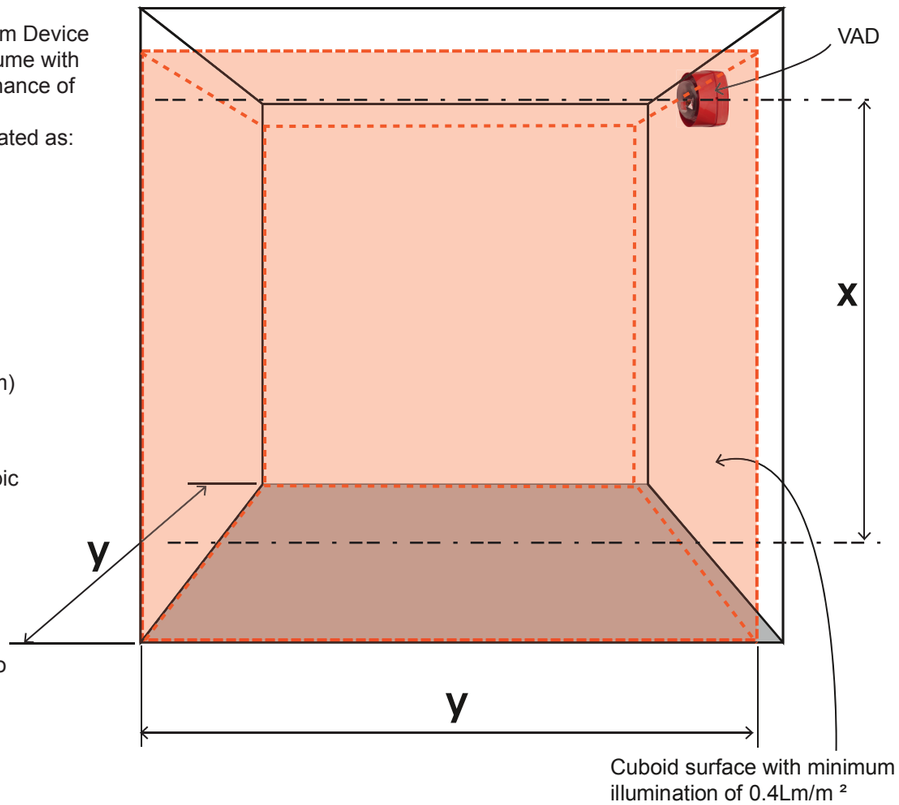
④ Press and hold the ⏻ Power button to save the settings. The Red LED will remain On ● whilst the button is held pressed. The data is saved to the unit when the tone/speech on the S-Cubed stops briefly. Release the button on the remote control and the Red LED will switch Off ○.

Visual Alarm Coverage data

A wall mounted Visual Alarm Device (VAD) covers a cuboid volume with a minimum effective illuminance of 0.4 Lux.
The coverage volume is stated as:

W-x-y

- ☐ where 'W' is the wall mounted category
- ☐ 'x' is the maximum mounting height in metres (minimum 2.4m)
- ☐ 'y' is the maximum length and width of cubic volume in metres.



This diagram shows how to relate the cuboid when the device is mounted at height 'x'.

Performance data for S-Cubed Mark 3 EP devices

Table 1 Shows the worst case performance data for S-Cubed White VAD (high perform. -HPW) and S-Cubed Red VAD (high perform. -HPR)

	Power setting	Maximum loop current and power for the VAD only	Maximum loop current and power for the sounder (minimum voltage)	Maximum total loop current and power for VAD and sounder	EN54-23 rating & coverage volume in cubic metres: WHITE VAD (high performance HPW)		RED VAD (high performance HPR)	
High Performance	High	18mA (630mW)	Turbo = 5mA (175mW)	23mA (805mW)	W - 5 - 12.5	781	W - 6.7 - 14	1313
			Non Turbo = 3mA (105mW)	21mA (735mW)				
	Medium	14mA (490mW)	Turbo = 5mA (175mW)	19mA (665mW)	W - 4.5 - 11.3	574	W - 6.5 - 12.5	1015
			Non Turbo = 3mA (105mW)	17mA (595mW)				
	Low	8mA (280mW)	Turbo = 5mA (175mW)	13mA (455mW)	W - 3 - 8.5	216	W - 5 - 9.5	451
			Non Turbo = 3mA (105mW)	11mA (385mW)				

CoP 0001 Coverage distance multiplication factors

The table below shows how the EN54-23 coverage specification will vary with the ambient light level and if the VAD can be viewed directly or indirectly i.e. if it relies on reflections to be viewed.

It is however advisable to site the VAD so that direct viewing is possible to maximize the VAD coverage.

Table 2

Ambient light level (Lux)	Wall mount direct viewing	Wall mount indirect viewing
<100	5.2	1.8
100-200	4.4	1.7
200-300	3.2	1.4
300-400	2.3	1.2
400-500	1.8	1.0
500-600	1.3	0.9
600-700	1.0	0.7*
700-800	0.7	0.6*

* Where ambient light levels may, at any time, exceed 600 lux, direct viewing is preferred.

Select the correction factor from Table 2 and multiply it with the cuboid dimensions. The coverage of the VAD will increase or decrease depending on the light level and line of sight.

TIP To survey and determine the ambient light levels a LUX meter that complies with BS667 should be used.

CE
0832

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DoP	Product No.
091-CPR-2014	S3EP-S-R
092-CPR-2014	S3EP-VAD-HPW-R
093-CPR-2014	S3EP-VAD-HPR-R
094-CPR-2014	S3EP-V-VAD-HPW-R
095-CPR-2014	S3EP-V-VAD-HPR-R

EN54-3:2001, A1:2002, A2:2006, EN54-17:2005, EN54-23:2010

S3EP-S-R (EN54-3,17)
S3EP-VAD-HPW-R (EN54-17, 23)
S3EP-VAD-HPR-R (EN54-17, 23)
S3EP-V-VAD-HPW-R (EN54-3,17, 23)
S3EP-V-VAD-HPR-R (EN54-3-17,23)

Intended for use in fire detection and fire alarm systems in and around buildings

Refer to DoP 091-CPR-2014 to DoP 095-CPR-2014 for level or class of performance declared, for details see website www.gent.co.uk

LPCB
042bj
042bs
042bt
For model reference associated with LPCB certificate see list below

Product No.	LPCB No.
S3EP-S-R	042bj/25
S3EP-VAD-HPW-R	042bt/03
S3EP-VAD-HPR-R	042bt/04
S3EP-V-VAD-HPW-R	042bs/07
S3EP-V-VAD-HPR-R	042bs/10

The system design may incorporate S-Cubed with VAD and S-Quad with VAD to achieve visual alarm coverage.

Note: These S-Cubed products can be installed in GENT Nano fire alarm system to operate in non compliant mode, ie not compliant to EN54 Part 23.

It is recommended that the 'Battery Standby and Loop load Calculator' is used for system design.

Compatibility

The S-Cubed Mark 3 devices with VAD can be used in a Vigilon system providing the software versions stated below are met.

All VAD devices can either operate in *'Compliant mode'* to meet the requirements of EN54 Part 23 or *'Non Compliant mode'* meaning does NOT meet EN54 Part 23.

≥ means equal to or greater than	EN Vigilon Panels: Vigilon 4 loop	Vigilon Compact	Vigilon Compact VA	Vigilon 4-6 loop	All panels
Cards	MCC	MCB	MCB	MCC	LPC
All S-Cubed Mark 3 devices (VADs in 'Compliant mode')	≥ V4.52	≥ V4.52	-	≥ V4.52	≥ V4.48
All S-Cubed Mark 3 devices (VADs in 'Non compliant mode' #)	≥ V4.37	≥ V4.37	≥ V4.37	≥ V4.37	≥ V4.30

Vigilon system is configured using Vigilon Commissioning Tool ≥ V1.30

VAD data shown in Table 1 are not applicable with the panel software stated here.

≥ means equal to or greater than	BS Vigilon 4-loop Panel: MCC	LPC
All S-Cubed Mark 3 devices (VADs in 'Non compliant mode' #)	≥ V3.90	≥ V3.90

System configured with Vigilon Commissioning Tool V1.30

≥ means equal to or greater than	Nano Panel: MC	LP
Cards		
Sounder devices only VADs are not supported	≥ V2.79	≥ V1.05

Nano system is configured using Nano Commissioning Tool ≥ V2.07.

WEEE Directive:
At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre.
Do not dispose of with your normal household waste.
Do not burn.

At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre and in accordance with national or local legislation.

Gent by Honeywell reserves the right to revise this publication from time to time and make changes to the content hereof without obligation to notify any person of such revisions of changes.

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