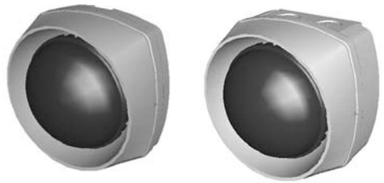
Conventional Speech Sounder and Strobe Units



These instructions cover the following conventional S³ products, which are suitable for installation in Conventional fire alarm system.

	Speech only		Speech Sounder Strobe	
	Deep base	Shallow base	Deep base	Shallow base
White	C3IP-VO-W	C3-VO-W	C3IP-VO-ST-WR	C3-VO-ST-WR
Red	C3IP-VO-R	C3-VO-R	C3IP-VO-ST-RR	C3-VO-ST-RR

The low power **Conventional Voice Enhanced Sounder** and combined **Strobe** products provide audible and visual alarm signals for use with fire alarms, internal security alarms and other hazard warning systems operating over a voltage range of 10.8V– 28.8V DC.

The S³ units are supplied with a standard speech messages and sound tones which are selectable at time of installation. Each product is supplied with a deep base (40mm) or shallow base (25mm) offering IP55C and IP31C ratings respectively.

In addition to the products covered in this leaflet there are Sounder, Sounder/Strobe and Strobe only variants available. For more information contact your supplier.

The S³ product range incorporates innovative design features protected by Patents GB2388994, GB2388995 and GB2388916. The product design has also been registered

Do's and Don'ts

Do's

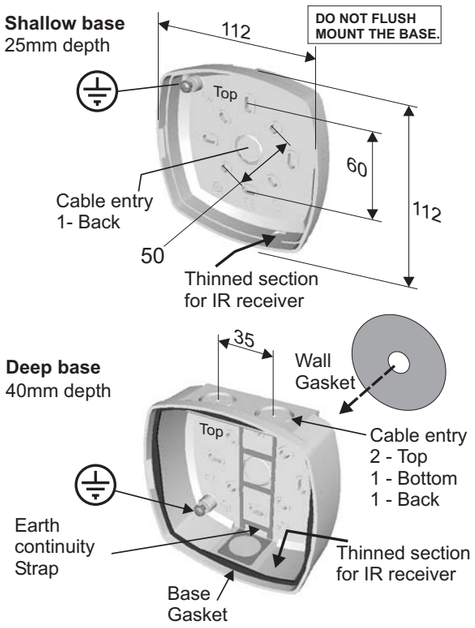
- ☐ Use correct method to open and close the unit
- ☐ Mount the unit in correct orientation with 'TOP' uppermost, to allow remote control operation
- ☐ Fit the **wall gasket** first when installing the deep base if IP55C protection is required
- ☐ Ensure the **transparent cover** is in place over the PCB
- ☐ Configure the switch SW1 for the desired speech, tone and strobe light output before closing the assembly
- ☐ Ensure the **earth continuity strap** is in place to the **deep base**

Don'ts

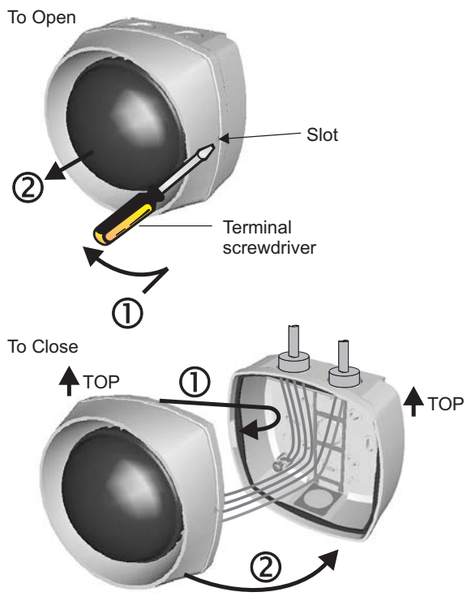
- ☐ Don't flush mount the base
- ☐ Don't have excessive incoming cable slack
- ☐ Don't locate unit such that the audible and visual outputs are obstructed
- ☐ Don't mount the unit above obstructions, such as shelves, that can prevent its operation with the IR remote control
- ☐ Don't paint the unit enclosure.

Note: Avoid operating the S³ by fast pulsing the power to the unit.

Bases



How to open and close the assembly



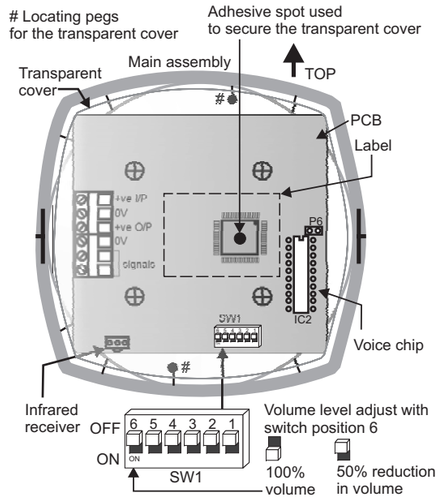
Installation

1 Drill or knockout the required cable entry points on the **Base**.

2 If using the deep base option and IP55C protection is required, then stick on the circular **wall gasket** on to the centre back of the **base.**

3 Secure the Base to the wall whilst ensuring Top of the Base is in correct orientation.

4 Terminate the cable at the entry point leaving no more than 10cm (4") tail wire length for connection.



5 Ensure the **transparent cover** is in place over the **PCB**. Connect the wires to the terminal block, see Wiring.

6 Select the required message and tone, See *Modes of operation* and *How to select messages and attention tones.*

7 Close the **main assembly** to the base.

8 If necessary you can reselect the volume and tone by making adjustment to the SW1 switch settings. As an alternatively you can use a Remote control to configure the S³ product. Contact your supplier for further information on Remote control.

Note: When selecting volume level using a remote control the settings of switch SW1 will be superseded. If subsequently the settings of switch SW1 are changed then the settings made using the remote control are superseded.

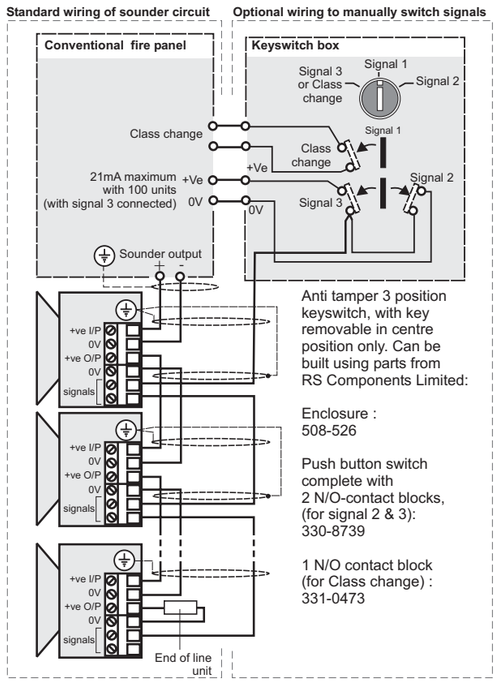
Wiring

The speech message, tone and strobe outputs can be manually switched by wiring a keyswitch. The keyswitch box and contact sets can be purchased from supplier like RS Components Limited.

Note: Avoid operating the S³ by fast pulsing the power to the unit. This type of pulsed operation will affect the speech message and strobe outputs.

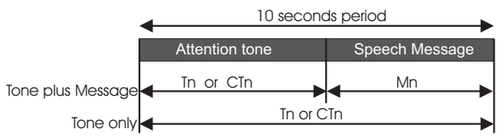
For example with the arrangement shown below you can manually activate the **bell tone**. By operating the keyswitch the bell tone signals 2 or 3 can be activated during *alarm condition*. With an optional contact set wired for class change application the keyswitch can be operated to output Signal 3 during *non alarm condition*. For this configuration we use the following switch setting: 

.



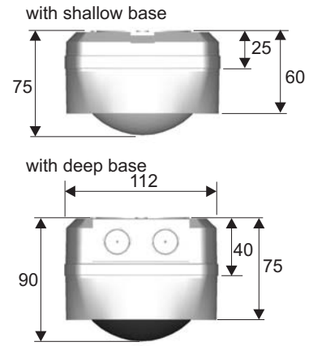
Methods of operation

The S³ unit can provide combined alarm that can output an attention tone followed by a speech message spanning over a 10 seconds period, with strobe light. The attention tone can be from a range of standard tones or complex tones. There are two methods of operation, one is *tone plus message* and the other is *tone only*.



Tn - Standard tone
CTn - Complex tone
Mn - Speech message
(n - message / tone / complex tone - number see tables over)

Technical data



Note: If you have a speech/sounder only product then ignore the strobe information given.

Messages, Tones and Strobe flash rate	see tables
Strobe light output with red lens	equivalent to 3W Xenon flasher
Average current	See tables
Operating voltage	range 10.8V to 28.8V
Maximum reverse voltage (used for monitoring sounders)	30V <1µA
Terminal size	2.5mm² maximum
IP rating with deep base with shallow base	 IP55C IP31C
Enclosure colour	White and Red (Standard Strobe option has a red translucent cover)
Enclosure material	Flame retardant ABS (Strobe cover is polycarbonate)
Weight	0.3Kg (approximate)
Operating temperature	-10°C to 50°C
Storage temperature	-20°C to 70°C
Relative humidity (non condensing)	up to 90%
IR operating distance (used for selecting volume level and tone/speech messages)	3m
Message and attention Tone period	10 seconds

Note: The S³ Units when installed on the same circuit will provide sound and strobe light synchronisation better than +/-30mS over 20 minutes.

Due to on going development of the products, the information contained in this leaflet is subject to change without notice.

Gent by Honeywell
Hamilton Industrial Park, Waterside Road, Leicester LE5 1TN, UK
Website: www.gent.co.uk
Telephone +44 (0) 116 246 2000 Fax (UK): +44 (0)116 246 2300

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.

Conventional Speech Sounder and Strobe

Note: Only the messages and complex tones specified in *table 1* are applicable to this S³ product.

table 1 ①

Message No.	Speech message
M1	*Attention please this is an emergency please leave the building by the nearest available exit.* (female voice)
M2	*An incident has been reported in this building please await further instructions.* (female voice)
M3	*This is a test message no action is required.* (female voice)
M4	*This is a fire alarm! please leave the building immediately by the nearest available exit.* (male voice)

②

Complex tone No.	Description of tone
CT0	**Alarm Bell** (equivalent to 8" Solenoid Bell) **12V 105dBA @ 1m** with strobe 19mA (without strobe 14.5mA) **24V 105.5dBA @ 1m** with strobe 13mA (without strobe 7.4mA)

Standard messages and complex tones (Voice IC 2202-001)

How to select a speech message and attention tone

1. Take into account the two methods of operation. Select the required *speech message* ① and *tone* ② from *tables 1 and 2*. Choose the required *message with tone* or *tone* alone in *table 3* column ③. Make a selection.
2. If a switchbox is used then check on the left of the selected row the switched Signal 2 and 3 messages and tones in column ④ of *table 3*.
3. After making a selection set the switch SW1 as shown in column ⑤ of *table 3*.

table 2 ②

Attention tone No.	Description	Graphical representation
Tone 1	Alternating tone 800/970Hz @ 2Hz - FP 1063.1 Telecoms	
Tone 2	Intermittent tone 970Hz @ 1Hz LF back up alarm - BS5839:Part 1	
Tone 3	Intermittent tone 970Hz 0.25s on, 1s off - BS5839:Part 1	
Tone 4	Continuous @ 970Hz - BS5839:Part 1	
Tone 5	Fast sweep 800Hz - 970Hz @ 7Hz - BS5839:Part 1	
Tone 6	Medium sweep 800Hz - 970Hz @ 1Hz - BS5839:Part 1	
Tone 7	Sweep 1200Hz @ 1200Hz - 500Hz @ 1Hz with 10ms silence - German DIN tone Evacuate	
Tone 8	Alternating tone 440Hz / 554Hz @ 2Hz - Turn out Sweden	
Tone 9	Intermittent tone 1000Hz @ 1Hz - Local warning Sweden	
Tone 10	Intermittent Tone 700Hz 4s On , 4s Off - Industrial alarm Germany	
Tone 11	Fast Whoop 500Hz - 1000Hz @ 7Hz	
Tone 12	US Temporal Tone LF	
Tone 13	US Temporal Tone HF	
Tone 14	Define during manufacture - default is a fast siren	

Note also the **nominal sound frequencies** stated in the table are based on the resonance frequency of the transducer.

CE

table 3 ③ ⑤ — Attention tone — ④ ~ intermittent 1s On and 1s Off

	Signal 1 message	strobe	Attention tone	SW1 switch	12V dBA @ 1m	with Strobe mA	without Strobe mA	24V dBA @ 1m	with Strobe mA	without Strobe mA	**Signal 2** message	strobe	Attention tone	**Signal 3** message	strobe	Attention tone
attention *tone* followed by *Speech message*	M1	1Hz	Tone1		101.8	16.5	7.4	101.8	9.5	3.4	M2	0.5Hz	Tone 2	M3	1Hz	Tone 4
	M1	1Hz	Tone 6		94.1	16.5	8.7	94.3	9.5	4.0	M2	0.5Hz	Tone 3	M3	1Hz	Tone 4
	M1	1Hz	Tone 11		95.8	15.8	7.0	96.0	8.7	3.3	M2	0.5Hz	Tone 9	M3	1Hz	Tone 4
	M1	1Hz	Tone 5		93.5	16.3	8.2	93.7	9.4	3.7	M2	0.5Hz	Tone 3	M3	1Hz	Tone 4
	M1	1Hz	Tone 8		90.1	15.8	5.7	90.3	8.9	2.8	M2	0.5Hz	Tone 9	M3	1Hz	Tone 4
	M1	1Hz	Tone 7		96.6	16.2	7.3	98.1	9.5	3.5	M2	0.5Hz	Tone 10	M3	1Hz	Tone 4
	M1	1Hz	Tone 12		100.6	12.0	3.0	100.6	5.5	1.0	M2	0.5Hz	Tone 13	M3	1Hz	Tone 4
	M1	1Hz	Tone 14		98.8	16.0	7.5	99.2	9.5	3.5	M2	0.5Hz	Tone 14	M3	1Hz	Tone 14
	M4	1Hz	Tone 1		101.8	16.5	7.4	101.8	9.5	3.4	M5	0.5Hz	Tone 2	M6	1Hz	Tone 4
	M4	1Hz	Tone 6		94.1	16.5	8.7	94.3	9.5	4.0	M5	0.5Hz	Tone 3	M6	1Hz	Tone 4
	M4	1Hz	Tone 11		95.8	15.8	7.0	96.0	8.7	3.3	M5	0.5Hz	Tone 9	M6	1Hz	Tone 4
	M4	1Hz	Tone 5		93.5	16.3	8.2	93.7	9.4	3.7	M5	0.5Hz	Tone 3	M6	1Hz	Tone 4
	M4	1Hz	Tone 8		90.1	15.8	5.7	90.3	8.9	2.8	M5	0.5Hz	Tone 9	M6	1Hz	Tone 4
	M4	1Hz	Tone 7		96.6	16.2	7.3	98.1	9.5	3.5	M5	0.5Hz	Tone 10	M6	1Hz	Tone 4
	M4	1Hz	Tone 12		100.6	12.0	3.0	100.6	5.5	1.0	M5	0.5Hz	Tone 13	M6	1Hz	Tone 4
	M4	1Hz	Tone 14		98.8	16.0	7.5	99.2	9.5	3.5	M2	0.5Hz	Tone 14	M3	1Hz	Tone 14
	Ml	1Hz	CT0								M2	0.5Hz	CT0~	M3	1Hz	CT0
	M1	1Hz	CT1								M2	0.5Hz	CT1~	M3	1Hz	CT1
	M1	1Hz	CT2								M2	0.5Hz	CT2~	M3	1Hz	CT2
	M1	1Hz	CT3								M2	0.5Hz	CT3~	M3	1Hz	CT3
	M1	1Hz	CT4								M2	0.5Hz	CT4~	M3	1Hz	CT4
	M1	1Hz	CT5								M2	0.5Hz	CT5~	M3	1Hz	CT5
	M1	1Hz	CT6								M2	0.5Hz	CT6~	M3	1Hz	CT6
	M1	1Hz	CT7								M2	0.5Hz	CT7~	M3	1Hz	CT7
tone only	-	1Hz	CT0								-	0.5Hz	CT0~	-	1Hz	CT0
	-	1Hz	CT1								-	0.5Hz	CT1~	-	1Hz	CT1
	-	1Hz	CT2								-	0.5Hz	CT2~	-	1Hz	CT2
	-	1Hz	CT3								-	0.5Hz	CT3~	-	1Hz	CT3
	-	1Hz	CT4								-	0.5Hz	CT4~	-	1Hz	CT4
	-	1Hz	CT5								-	0.5Hz	CT5~	-	1Hz	CT5
	-	1Hz	CT6								-	0.5Hz	CT6~	-	1Hz	CT6
	-	1Hz	CT7								-	0.5Hz	CT7~	-	1Hz	CT7

Refer to decibel (dBA) and current (mA) values stated in *table 1*.

Note: Only the complex tones (CTn) and Speech messages specified (Mn) in *table 1* are valid.

The highlighted row in this table show the factory default setting of this S³ unit.