Technical Specification

Part Number:	BF430C/EA/SR	BF430C/EA/SW	BF433C/EA/SR	BF433C/EA/SW
Description:	EACIE Hi-Output Wall Sounder, Shallow Base, Self-Testing, Red	EACIE Hi-Output Wall Sounder, Shallow Base, Self-Testing, White	EACIE Hi-Output Wall Sounder VAD, Shallow Base, Self-Testing, Red	EACIE Hi-Output Wall Sounder VAD, Shallow Base, Self-Testing, White
Supply Voltage:	18 to 30 Vdc			
Imax:	9.1 mA		21.7 mA (0.5 Hz)	
Ityp:	6.7 mA @ 18 Vdc 8.6 mA @ 30 Vdc		15.8 mA @ 18 Vdc (0.5 Hz) 13.4 mA @ 30 Vdc (0.5 Hz)	
Power @ 30 Vdc	260 mW		402 mW	
Environment Type (EN 54-3 & 23):	Type A (indoor use only)		Type A (indoor use only)	
VAD Category W-Class:	N/A		W-2.75-9 / W-4-4	
VAD Temporal Pattern:	N/A		0.5 Hz	
Cuboid Volume (W-Class):	N/A		223 m^3 / 64 m^3	
SPL (LAFmax) @ Vmax:	97 dB(A) @ 1 m			
Dimensions (incl. base):	108 mm diameter, 99 mm deep			
Weight:	215 g		230 g	
Mounting Type:	Wall			
Body Material / Colour:	Polycarbonate RAL 3001 Signal Red		Polycarbonate White	
IP Rating (EN 60529):	IP21C			
Operating Temperature:	-10°C to +55°C (Type A)			
Humidity:	Max. 95% RH (non-condensing)			

Self-Testing Supplementary Feature:	The self-testing supplementary feature assists in detecting incorrect device operation. This feature only works with compatible CAST CA736/CA737 sounder controllers. The device will still flag open and short circuit faults on any other C-TEC sounder monitoring circuit, for example, CFP panels. Self-testing of the sounder is automatically carried out when the sounder is active. The sounder must be powered for a minimum of 10 secs after which the fault is asserted for 5 secs. The fault signals detected by the sounder include missing / damaged / non-functional piezo under normal working conditions. These are non-latching faults, therefore, after a round of testing the CIE event log will need checking to identify the fault signal(s).

Manufacturer: Computionics Limited (C-TEC), Challenge Way, Martland Park, Wigan, Lancashire WN5 0LD. www.c-tec.com

Self-Testing Hi-Output Sounders Instructions

Audio Visual Devices

BF430C/EA/SR, BF430C/EA/SW
BF433C/EA/SR, BF433C/EA/SW

NOTE: This instruction (DFU4301050) is specific to the self-testing Hi-Output sounders. Additional details regarding installation and maintenance can be found in the main Hi-Output instructions (DFU4301000) available for download on C-TEC's website www.c-tec.com.

Product Description

The ActiV Hi-Output self-testing range are wall mounted conventional sounder and conventional sounder VAD combos supplied with C-TEC standard ActiV locking bases.

The sounders automatically perform the self-test routine on power up and are useful for applications where sounders are required to be tested but may be inaccessible, e.g. normally isolated areas, flats in BS 8629 systems, etc.

These devices can also be connected to standard C-TEC conventional sounder circuits on, for example, CFP panels and will indicate any faults as per BS 5839-1.

High output with a peak in LAFmax of 97 dB(A) @ 1 m, the units are supplied with a shallow base in a red or white plastic enclosure.

The following variants are available:

Part Number	Description
BF430C/EA/SR	EACIE Conventional Hi-Output Wall Sounder, Shallow Base, Self-Testing, Red, IP21C
BF430C/EA/SW	EACIE Conventional Hi-Output Wall Sounder, Shallow Base, Self-Testing, White, IP21C
BF433C/EA/SR	EACIE Conventional Hi-Output Wall Sounder VAD, Shallow Base, Self-Testing, Red, IP21C
BF433C/EA/SW	EACIE Conventional Hi-Output Wall Sounder VAD, Shallow Base, Self-Testing, White, IP21C

CONVENTIONAL SOUNDERS

Shallow Base
BF430C/EA/SR (Red)

Shallow Base
BF430C/EA/SW (White)

CONVENTIONAL SOUNDER VADs

Shallow Base
BF433C/EA/SR (Red)

Shallow Base
BF433C/EA/SW (White)

The devices offer low current consumption, high sound output, high efficiency VADs, selectable primary tones plus override secondary tones, selectable volume levels and selectable VAD flash rates. Tones, volume levels and VAD flash rates may be altered using the device's 8-way DIP switch.

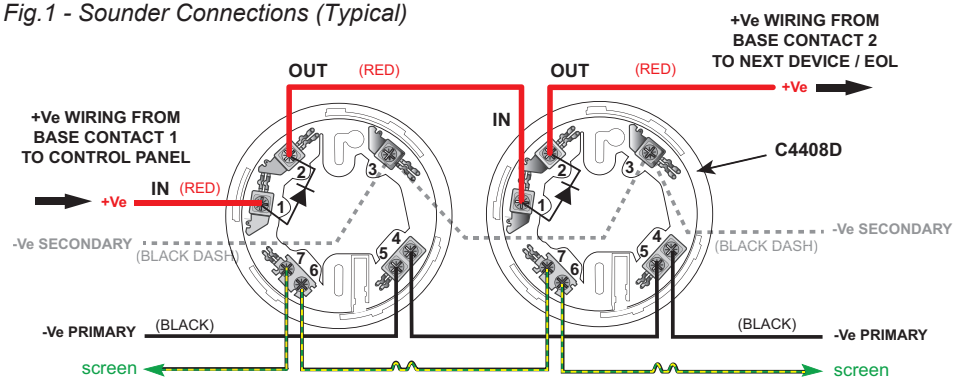
All devices are designed to comply with EN54-3 and 23.

Connections

Connect incoming and outgoing line cables to the base's screw terminals, as shown in Fig.1.
The bases incorporate a diode to allow detection of a sounder/VAD head removal and still allow operation of devices (downstream) in alarm.

For correct operation wire the +Ve connector wiring from contact 1 to the control panel and wiring from contact 2 to the next device/End of Line (EOL).

Fig.1 - Sounder Connections (Typical)



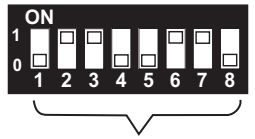
Base Contact	Function
1	+Ve (IN)
2	+Ve (OUT)
4 & 5	-Ve PRIMARY
3	-Ve SECONDARY
6 & 7	cable screen

- Correct wiring to IN & OUT terminals is imperative.
- Terminals can accept 0.25 mm² to 2.5 mm² wiring.
- It is recommended that screened cables are used to reduce electrical noise and lower electromagnetic radiation.
- Diode base C4408D MUST be used to maintain correct monitoring.

Note: The selection of secondary tones is made by wiring to the '-Ve SECONDARY' connections (see contact 3, Fig.1). Optional secondary wiring provides override secondary sounder tones.
This wiring configuration is dependent on the fire panel having secondary wiring capability.
The 'self-testing' feature only works with -Ve PRIMARY wiring and WILL NOT work with -Ve SECONDARY WIRING.
Contact C-TEC Technical for further information about secondary wiring.

DIP Switch Operation

IMPORTANT NOTE: THE SELF-TESTING FEATURE IS OPTIMISED TO WORK WITH SOUNDER TONES 1-6.



Example above (using -Ve PRIMARY wiring):

DIP Switch Setting = 0 1 1 0 0 1 1 0
Sounder Tone 6 (DIN Tone)
Volume Level High
VAD Flash Rate W-2.75-9 / W-4-4, 0.5 Hz

Each device's operation is set using Bits 1 to 8 on its DIP switch.
DIP switch up (ON) = 1, DIP switch down (OFF) = 0.

Sounder Tones (DIP Switches 1 to 5)

PAIR	PRIMARY TONE	SECONDARY TONE	DIP SWITCH 1 2 3 4 5
0	Sounder Off	Sounder Off	0 0 0 0 0
1	C-TEC Evacuation Tone (675Hz for 0.5s, 925Hz for 0.5s) *	Steady Tone 2 (975Hz Continuous)	1 0 0 0 0
2	Alert (825Hz, 1s on, 1s off)		0 1 0 0 0
3	C-TEC Fast Warble (920Hz for 0.25s, 975Hz for 0.25s) *		1 1 0 0 0
4	Medium Sweep (800 - 970Hz at 1Hz)		0 0 1 0 0
5	Dutch Slow Whoop (sweep) (500-1200Hz for 3.5s, 0.5s off) *		1 0 1 0 0
6	DIN Tone (1200Hz – 500Hz for 1s) *		0 1 1 0 0
7	Swedish Alternating Tone (660Hz, 150ms on, 150ms off)		1 1 1 0 0
8	Swedish all clear (660Hz Constant on)		0 0 0 1 0
9	Swedish Local Warning (660Hz, 1.8s on, 1.8s off)		1 0 0 1 0
10	Swedish Pre-mess (660Hz, 6.5s on, 13s off, 20s period) **		0 1 0 1 0
11	Swedish Turn Out (554Hz for 1s, 440Hz for 1s)		1 1 0 1 0
12	Swedish Tone (660Hz 0.5s on, 0.5s off)		0 0 1 1 0
13	Evacuation Tone (Apollo Comparable) (550Hz for 0.5s, 825Hz for 0.5s)		1 0 1 1 0
14	Alternating (Hochiki/Fulleon Comparable) (925Hz for 0.25s, 626Hz for 0.25s)		0 1 1 1 0
15	French Fire Tone (554Hz for 100ms / 440Hz for 380ms to 420ms) *		1 1 1 1 0
16	Australian Alert Tone AS1670 (ISO7731) (420Hz 0.625s on/off)		0 0 0 0 1
17	Australian Evacuation Tone AS1670 (500–1200Hz, 0.5s/ 0.5s OFF x 3/1.5s OFF)		1 0 0 0 1
18	Aus (fast rise sweep) (3x(500-1200Hz for 0.5s), 0.25s off)		0 1 0 0 1
19	NZ (slow rise sweep) (500-1200Hz for 3.75s, 0.25s off)		1 1 0 0 1
20	US Temporal LF(ISO 8201) (3x(970Hz, 0.5s on, 0.5 off), 1s off)		0 0 1 0 1
21	US Temporal HF(ISO 8201) (3x(2850Hz, 0.5s on, 0.5 off), 1s off) **		1 0 1 0 1
22	Simulated Bell (n/a) **		0 1 1 0 1
23	Singapore Alert Tone (1kHz, 2kHz 0.5s alternating)		1 1 1 0 1
24	PFEER Alert Tone (950Hz, 0.25s on, 0.25s off)		0 0 0 1 1
25	PFEER Alert Tone (970Hz, 1s on, 1s off)		1 0 0 1 1
26	ISO 8201 (3x(970Hz, 0.5s on, 0.5 off), 1s off)		0 1 0 1 1
27	ISO 8201 (3x(2850Hz, 0.5s on, 0.5 off), 1s off) **		1 1 0 1 1
28	Steady Tone 1 (925Hz Continuous)		0 0 1 1 1
29	Steady Tone 2 (975Hz Continuous)		1 0 1 1 1
30	Steady Tone 3 (2850Hz Continuous) **		0 1 1 1 1
31	Fast Sweep (2.5-2.85kHz at 9Hz) **		1 1 1 1 1

* Designed to comply with EN 54-3
** Self-test function not available

Volume Level (DIP Switch 6)

VOLUME LEVEL	DIP SWITCH 6
Low Volume	0
High Volume *	1

* Designed to comply with EN 54-3

VAD Flash Rate (DIP Switches 7 & 8)

FLASH RATE	DIP SWITCH 7 8
Off	0 0
W-2.75-9 / W-4-4, 0.5 Hz **	1 0
Power Save, 0.5 Hz	1 1

** Designed to comply with EN 54-23