

## Tone List (Tones are selectable at the panel)

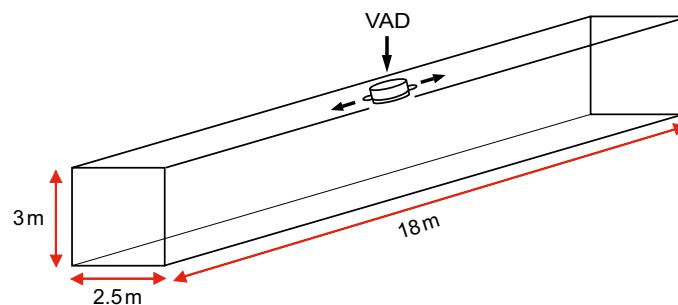
TONE #	TONE NAME	COUNTRY	TONE
1	C-TEC Evacuation Tone *	UK	610Hz for 0.5s, 810Hz for 0.5s
2	Alert	All	825Hz, 1s on, 1s off
3	C-TEC Fast Warble *	UK	810Hz for 0.25s, 610Hz for 0.25s
4	Medium Sweep	UK	800 - 970Hz at 1Hz
5	Dutch Slow Whoop (sweep) *	The Netherlands	500-1200Hz for 3.5s, 0.5s off
6	DIN Tone *	Germany	1200Hz - 500Hz for 1s
7	Swedish Alternating Tone	Sweden	660Hz, 150ms on, 150ms off
8	Swedish all clear	Sweden	660Hz constant on
9	Swedish Local Warning	Sweden	660Hz, 1.8s on, 1.8s off
10	Swedish Pre-mess	Sweden	660Hz, 6.5s on, 13s off, 20s period
11	Swedish Turn Out	Sweden	554Hz for 1s, 440Hz for 1s
12	Swedish tone	Sweden	660Hz 0.5s on, 0.5s off
13	Evacuation Tone (Apollo Comparable)	UK	550Hz for 0.5s, 825Hz for 0.5s
14	Alternating (Hochiki/Fulleon Comparable)	UK	925Hz for 0.25s, 626Hz for 0.25s
15	French Fire Tone *	France	554Hz for 100ms/440Hz for 380ms to 420ms
16	Australian Alert Tone AS1670 (ISO7731)	Australia	420Hz 0.625s on/off
17	Australian Evacuation Tone AS1670	Australia	500 - 1200Hz, 0.5s/0.5s off x 3/1.5s off
18	Aus (fast rise sweep)	Australia	3x(500-1200Hz for 0.5s), 0.25s off
19	NZ (slow rise sweep)	New Zealand	500-1200Hz for 3.75s, 0.25s off
20	US Temporal LF(ISO 8201)	USA	3x(970Hz, 0.5s on, 0.5 off), 1s off
21	US Temporal HF(ISO 8201)	USA	3x(2850Hz, 0.5s on, 0.5 off), 1s off
22	Simulated Bell	USA/General	n/a
23	Singapore Alert Tone	Singapore	1kHz, 2kHz 0.5s alternating
24	PFEER Alert Tone	All	950Hz, 0.25s on, 0.25Hz off
25	PFEER Alert Tone	All	970Hz, 1s on, 1s off
26	ISO 8201	All	970Hz, 0.5s on/0.5s off x 3/1.5s off
27	ISO 8201	All	2850Hz, 0.5s on/0.5s off x 3/1.5s off
28	Misc Tone 1	All	925Hz continuous
29	Misc Tone 2	All	975Hz continuous
30	Misc Tone 3	All	2850Hz continuous
31	Fast Sweep	N/A	2.5-2.85kHz at 9Hz

\* Approved to EN54-3 (see Document No. DFU4310008 for SPL measurements)

### Dimensions of O-Class VAD (O-R-3-2.5-18)

O = O-Class; R = Rectangular Cuboid; 3 m Height; 2.5 m Width; 18 m Length.

VAD is mounted with lens pointing directly along the length of the corridor, centre of the ceiling (9 m either side length and 1.25 m either side width).



Manufacturer: Comptonics Limited (C-TEC), Challenge Way, Martland Park, Wigan, Lancashire WN5 0LD. [www.c-tec.com](http://www.c-tec.com)  
E&OE. No responsibility can be accepted by the manufacturer or distributors of these units for any misinterpretation of this instruction, or for the compliance of the system as a whole. The manufacturers policy is one of continuous improvement and we reserve the right to make changes to product specifications at our discretion and without prior notice.



## Base Mount Range Addressable Sounders & VADs Installation Instructions

CAST Compatible

### Product Description

The CAST Base Mount range of addressable, loop-powered bases include sounders, visual alarm devices (VADs) and combined sounder VADs. They are designed for use with C-TEC's CAST XFP/ZFP panels and other 'CAST' compatible fire panels.

Their purpose is to visually and audibly alert building occupants of a fire alarm.

The following base device variants are available:

Part Number	Description
CA431A/W	Addressable Ceiling Sounder Base with isolator, white (CAST)
CA432A/W	Addressable Ceiling Sounder VAD Base with isolator, white, O-Class (CAST)
CA456A/W	Addressable Ceiling Sounder VAD Base with isolator, white, C-Class (CAST)
CA459A/W	Addressable Ceiling VAD Base with isolator, white, O-Class (CAST)
CA460A/W	Addressable Ceiling VAD Base with isolator, white, C-Class (CAST)

All CAST base devices can be optionally used as either:

- a stand-alone, base device using a separately available locking white cap (BF330CTLIDW) / red cap (BF330CTLIDR) / black cap (BF330CTLIDB), or
- a combined, base device and CAST detector (CAST detectors are separately available).

The devices offer low current consumption, high sound output, high efficiency VADs, built-in short-circuit loop isolators, four selectable volume levels and 31 selectable tones. Please note the volume levels and tones can be changed using the panel's programming tools.

The sounder and VAD on the combined devices (CA432A/W and CA456A/W) can be set to operate independently of each other (panel dependent function).

The devices are fully certified with all relevant sections of the fire alarm device standards EN 54-3 (Sounders), EN 54-23 (Visual alarm devices - VADs) and EN 54-17 (Short-circuit isolators).

**Note:** For compliance to EN 54-3, EN54-17 & EN54-23, a Quick Connect Plate (Part No. BF431QCP) must be used. The BF431QCP assists with cabling to the base device (refer to BF431QCP Document No. DFU4310020 for details).

### Mounting the Base Device



#### THE SYSTEM MUST BE COMPLETELY POWERED DOWN BEFORE INSTALLATION

Ensure the base devices are installed in accordance with applicable local or national regulations. All bases are designed for ceiling mounting, indoor use only. Do not mount bases on uneven surfaces.

CA431A/W, CA456A/W and CA460A/W bases may be mounted in any orientation, whilst CA432A/W and CA459A/W O-Class bases must be mounted with their lens pointing directly down the length of the corridor.

The base device has screw terminals for the loop cable (see 'CAST Loop Connections' section) and includes rear mounting slots for standard electrical termination boxes. Securely fix the base device to a ceiling using two screws in the mounting slots provided.



## Maintenance

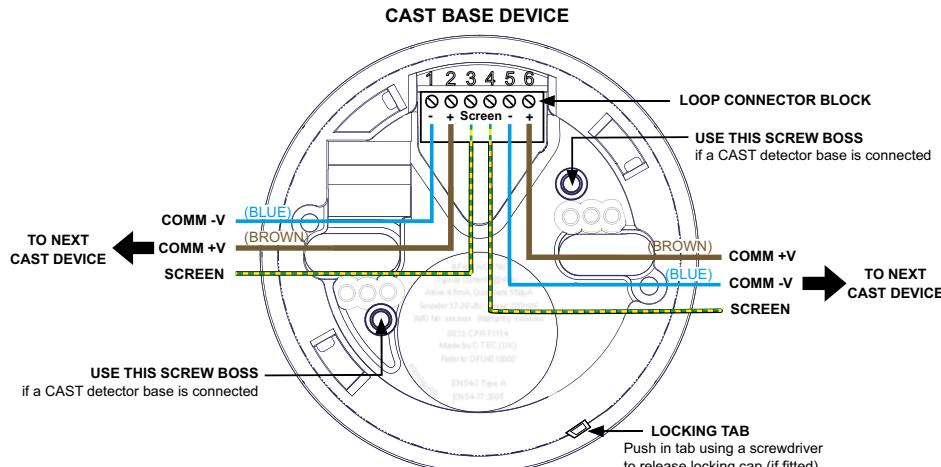
Periodic inspection, testing and maintenance of fire detection systems should be carried out in accordance with national, regional or local standards. In the UK the relevant standard is BS 5839-1 Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises.

Inspection and maintenance of the system should only be carried out by a competent person with specialised knowledge of fire detection and alarm systems. This is normally a competent service provider appointed to maintain the system.

## CAST Loop Connections

Connect the incoming and outgoing CAST loop cable to the base's connector block, as shown in figure 1. Note the loop connections are polarity sensitive.

Figure 1 - Loop Connections (Typical)



Connector	Function
1	-Ve IN
2	+Ve IN
3 & 4	cable screen
5	-Ve OUT
6	+Ve OUT

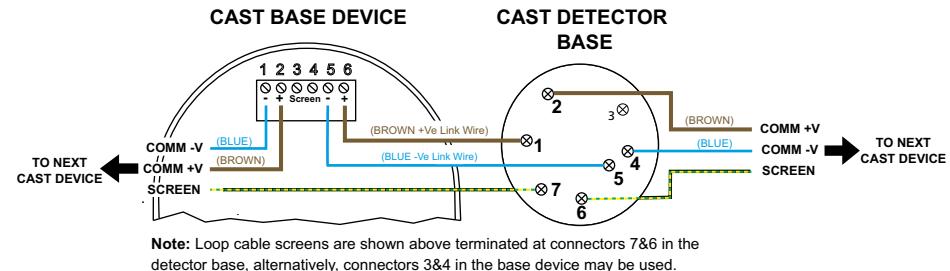
- All wiring must conform to local or national regulations.
- Correct polarity must be observed.
- Slot head terminals can accept 0.25 mm<sup>2</sup> to 2.5 mm<sup>2</sup> wiring.
- For optimum performance, it is recommended that screened cables are used.

## Connection to an Optional CAST Detector

If a combined, base device and CAST detector is used, wire the two bases using the supplied Brown (+Ve) and Blue (-Ve) link wires (see figure 2). Two screws are supplied to secure both bases together using the screw bosses (see figure 1).

**Important Note:** For optimum performance, DO NOT SPUR to the detector base. The preferred method is to run the loop cable into the base device, then connect to the detector base (using the link wires), then back out to the next CAST device on the loop. Note that loop cable screens should be terminated to ensure continuity of the screen to and from the panel.

Figure 2 - Connection to CAST Detector Base (Typical)



## Technical Specifications

EN 54-17 SC-Isolator Specification (Controllable Isolator)

Maximum Loop Voltage (V max):	40 Vdc
Nominal Loop Voltage (V nom):	40 Vdc
Minimum Loop Voltage (V min):	22 Vdc
Maximum Current Device Isolates, switches from closed to open (Is <sub>o</sub> max):	55 mA
Minimum Current Device Isolates, switches from closed to open (Is <sub>o</sub> min):	15 mA
Maximum Rated Continuous Current with switch closed (I <sub>s</sub> max):	1 A
Maximum Rated Switching Current under short circuit conditions (I <sub>s</sub> max):	1.6 A
Maximum Leakage Current with switch open (I <sub>L</sub> max):	20 µA
Maximum Series Impedance with switch closed (Z <sub>c</sub> max):	100 mohms

## Supplementary Specification

Part Numbers:	CA431A/W	CA432A/W	CA456A/W	CA459A/W	CA460A/W
Description:	Base Sounder with isolator	Base Sounder VAD with isolator, O-Class	Base Sounder VAD with isolator, C-Class	Base VAD with isolator, O-Class	Base VAD with isolator, C-Class
Certified Standards: ***	EN 54-3:2014 + A1:2019, EN 54-3:2001 + A1:2002, EN 54-17:2005	EN 54-3:2014 + A1:2019, EN 54-3:2001 + A1:2002, EN 54-17:2005, EN 54-23		EN 54-17:2005, EN 54-23	
LPCB Certificate Number:	176e/08 ^	176f/08 ^	176f/09 ^	176g/03 ^	176g/04 ^
CPR Certificate Number:	2831-CPR-F2217 ^	2831-CPR-F2218 ^	2831-CPR-F2219 ^	2831-CPR-F2220 ^	2831-CPR-F2221 ^
UKCA Certificate Number:	0832-UKCA-CPR-F0771 ^	0832-UKCA-CPR-F0782 ^	0832-UKCA-CPR-F0783 ^	0832-UKCA-CPR-F0786 ^	0832-UKCA-CPR-F0787 ^
Declaration of Performance:				DoP0000056 ^	
Communication Protocol:				CAST (C-TEC)	
Supply Voltage:	24 to 40 Vdc (sounder)	24 to 40 Vdc (sounder) 27 to 40 Vdc (VAD)	24 to 40 Vdc (VAD)	27 to 40 Vdc (VAD)	
Quiescent Current (Typical):				390 µA	
Active Current (Typical):	5.1 mA *	10.6 mA *	8.1 mA *		
Active Current (Max):	5.7 mA *	12.3 mA (0.5 Hz) *	9.8 mA (0.5 Hz) *		
Power:	210 mW	430 mW	330 mW		
Environment Type (EN 54-3/23):	Type A (EN 54-3)	Type A (EN 54-3 & EN 54-23)	Type A (EN 54-23)		
VAD Category (EN 54-23):	N/A	O-R-3-2.5-18	C-3-8	O-R-3-2.5-18	C-3-8
VAD Temporal Pattern:	N/A			0.5 Hz synchronised	
Coverage Volume (C-Class):	N/A	135 m <sup>3</sup>	170 m <sup>3</sup>	135 m <sup>3</sup>	170 m <sup>3</sup>
Flash Rate / Colour:	N/A			0.5 Hz / White	
Peak SPL at Vmax:		92 dB(A) @ 1 m **			N/A
Indicator:				Polling LED	
Dimensions:				112 mm diameter; 46 mm deep (with cap fitted)	
Weight:	160 g	170 g	170 g	160 g	160 g
Mounting Type:				Ceiling	
Body Material / Colour:	Polycarbonate / White			Polycarbonate / Clear	
IP Rating (EN 60529):				IP21C	
Operating Temperature:				-10°C to +55°C (Type A)	
Humidity:				Max. 95% RH (non-condensing)	

\* @ maximum volume level @ Vmin; \*\* ±3 dB(A) when set to Sounder Tone 1

\*\*\* For compliance to EN 54-3, EN54-17 & EN54-23, a Quick Connect Plate (Part No. BF431QCP) must be used with the base device.

^ Certificates and DoPs are available for download on C-TEC's website