

Base Mount Range Addressable Sounders & Visual Alarm Devices

Installation Instructions Discovery Compatible

Product Description

The Base Mount range of addressable, loop-powered bases includes sounders, visual alarm devices (VADs) and combined sounder VADs. They are designed for use with C-TEC's ZFP/XFP panels and other Apollo Discovery compatible fire panels. Their purpose is to visually and audibly alert building occupants of a fire alarm.



The following variants are available:

Part Numbers	Description
BF431A/CX/W	Addressable Ceiling Sounder Base with isolator, white (Discovery)
BF432A/CX/W (NOT APPROVED)	Addressable Ceiling Sounder VAD Base with isolator, white, 'O' Class (Discovery)
BF456A/CX/W	Addressable Ceiling Sounder VAD Base with isolator, white, 'C' Class (Discovery)
BF459A/CX/W (NOT APPROVED)	Addressable Ceiling VAD Base with isolator, white, 'O' Class (Discovery)
BF460A/CX/W	Addressable Ceiling VAD Base with isolator, white, 'C' Class (Discovery)

- All bases can be optionally used as either:
- a stand-alone base using a separately available locking white cap (BF330CTLIDW) / red cap (BF330CTLIDR), or
 - a stacked base and detector base combination (detector base NOT supplied).

The bases offer low current consumption, high sound output, high efficiency VADs, seven selectable volume levels, 15 selectable tone pairs and built-in short-circuit loop isolators. The sounder and VAD on the combined base can be set to operate independently of each other (panel dependent function).

All bases (excluding BF432A/CX/W and BF459A/CX/W) 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).

Mounting the Base

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

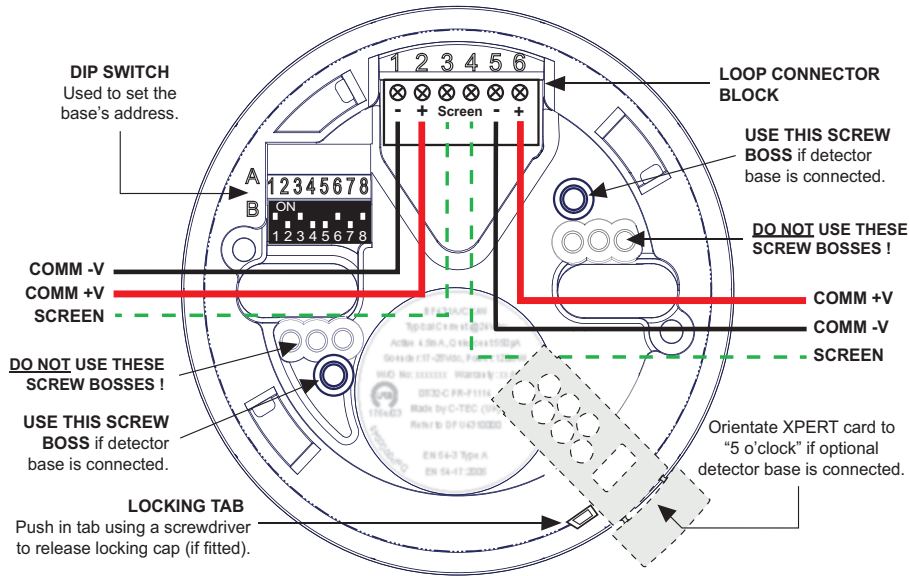
Ensure the bases are installed in accordance with applicable local or national regulations. All bases are designed for indoor use only and ceiling mounting in any orientation. Do not mount bases on uneven surfaces.

The base has screw terminals for the field wiring (refer to 'Loop Connection...' section) and includes mounting slots for standard electrical termination boxes. Securely fix the base to a ceiling using two screws in the mounting slots provided.

Loop Connection and Connection to Optional Detector Base

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

If connecting to an optional detector base, use the supplied Red (+V) and Black (-V) wires to connect from the loop connector block to the detector base terminals. Two screws are supplied to secure both bases together using the two single screw bosses shown below. **Important Note:** If fitted, the XPERT address card in the detector base must be orientated at a "5 o'clock" position so as not to block the cable entry points.



Base Contact	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.
- Terminals can accept 0.25 mm² to 2.5 mm² wiring.
- For optimum performance, it is recommended that screened cables are used.

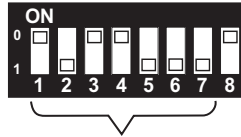
Setting the Base Address

Each base's address is set using Bits 1 to 7 on its DIP switch. Bit 8 is not used.

DIP switch up (ON) = 0, DIP switch down (OFF) = 1.

DO NOT use addresses 0 or 127.

Use a small screwdriver to set the switches and refer to the chart below for address settings. Ensure the switches are set before installation and fully pushed up or down.



Use Bits 1-7 on the DIP switch to select the base's address (114 in above example).

Addr	DIP position 1234567	Addr	DIP position 1234567	Addr	DIP position 1234567	Addr	DIP position 1234567	Addr	DIP position 1234567
1	1000000	26	0101100	51	1100110	76	0011001	101	1010011
2	0100000	27	1101100	52	0010110	77	1011001	102	0110011
3	1100000	28	0011100	53	1010110	78	0111001	103	1110011
4	0010000	29	1011100	54	0110110	79	1111001	104	0001011
5	1010000	30	0111100	55	1110110	80	0000101	105	1001011
6	0110000	31	1111100	56	0001110	81	1000101	106	0101011
7	1110000	32	0000010	57	1001110	82	0100101	107	1101011
8	0001000	33	1000010	58	0101110	83	1100101	108	0011011
9	1001000	34	0100010	59	1101110	84	0010101	109	1011011
10	0101000	35	1100010	60	0011110	85	1010101	110	0111011
11	1101000	36	0010010	61	1011110	86	0110101	111	1111011
12	0011000	37	1010010	62	0111110	87	1110101	112	0000111
13	1011000	38	0110010	63	1111110	88	0001101	113	1000111
14	0111000	39	1110010	64	0000001	89	1001101	114	0100111
15	1111000	40	0001010	65	1000001	90	0101101	115	1100111
16	0000100	41	1001010	66	0100001	91	1101101	116	0010111
17	1000100	42	0101010	67	1100001	92	0011101	117	1010111
18	0100100	43	1101010	68	0010001	93	1011101	118	0110111
19	1100100	44	0011010	69	1010001	94	0111101	119	1110111
20	0010100	45	1011010	70	0110001	95	1111101	120	0001111
21	1010100	46	0111010	71	1110001	96	0000011	121	1001111
22	0110100	47	1111010	72	0001001	97	1000011	122	0101111
23	1110100	48	0000110	73	1001001	98	0100011	123	1101111
24	0001100	49	1000110	74	0101001	99	1100011	124	0011111
25	1001100	50	0100110	75	1101001	100	0010011	125	1011111
								126	0111111

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 BS5839-1 Fire detection and alarm systems for buildings: Code of practice for system design, installation & maintenance. 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 third-party fire alarm maintenance organisation.

Technical Specifications

EN 54-17 Isolator Specification (Autonomous Voltage Sensing Isolator)

Supply Voltage (V min to V max):	17 to 28 Vdc *
Nominal Supply (V nom):	24 Vdc
Maximum Rated Continuous Current (Ic max):	1 A - switch closed
Maximum Switching Current (Is max):	3 A - short circuit condition
Maximum Leakage Current (IL max):	14 mA @ 28 Volts - switch open
Maximum Impedance (Zc max) @ loop startup/recovery condition:	100 mOhm - switch closed
Maximum Isolating Voltage (Vso max):	16.5 Volts - switches from closed to open
Minimum Isolating Voltage (Vso min):	12.5 Volts - switches from closed to open
Maximum Re-connecting Voltage (Vsc max):	13.5 Volts - switches from open to closed
Minimum Re-connecting Voltage (Vsc min):	7.0 Volts - switches from open to closed

* Excluding data pulses

Supplementary Specification

Part Numbers:	BF431A/CX/W	BF432A/CX/W (NOT APPROVED)	BF456A/CX/W	BF459A/CX/W (NOT APPROVED)	BF460A/CX/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 54-3:2001 + A1:2002 + A2:2006, EN 54-17:2005	EN 54-3:2001 + A1:2002 + A2:2006, EN 54-17:2005, EN 54-23:2010		EN 54-17:2005, EN 54-23:2010	
LPCB Certificate Numbers:	176e/03 ^	N/A	176f/03 ^	N/A	176g/01 ^
CPR Certificate Numbers:	0832-CPR-F1114 ^	N/A	0832-CPR-F1115 ^	N/A	0832-CPR-F1116 ^
Declaration of Performance (DoP):	DoP0000045 ^	N/A	DoP0000045 ^	N/A	DoP0000045 ^
Communication Protocol:	Apollo Discovery				
Supply Voltage:	17 to 28 Vdc *	17 to 28 Vdc (sounder only) *	21 to 28 Vdc (VAD only) *	21 to 28 Vdc *	
Quiescent Current (Typical):	550 µA				
Active Current (Typical):	+4.5 mA (above quiescent) **	+13.5 mA (above quiescent) **	+9 mA (above quiescent) **		
Power:	120 mW	340 mW	230 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 Cat. (EN 54-23) (Class):	N/A	O-3-2.5-15	C-3-8 #	O-3-2.5-15	C-3-8 #
VAD Temporal Pattern:	N/A	0.5 Hz, synchronised			
Coverage Volume:	N/A	113 m³	151 m³	113 m³	151 m³
Nominal SPL at Vmax:	96 dB(A) @ 1 m ***				
Indicators:	Polling LED (Green) S/C Isolator Active (Amber)				
Dimensions:	112 mm diameter; 46 mm deep (with cap fitted)				
Weight:	160 g	TBC	170 g	TBC	160 g
Mounting Type:	Ceiling				
Body Material / Colour:	Polycarbonate / White				
IP Rating (EN 60529):	IP21C				
Operating Temperature:	-10°C to +55°C (Type A)				
Humidity:	Max. 95% RH (non-condensing)				

* Excluding data pulses; ** @ maximum volume level; *** ±3 dB(A) When set to Sounder Tone 1 (Primary);

^ Certificates and DoPs available for download on C-TEC's website; # XPERT address card NOT fitted (C-3-6 if card fitted).

Sounder Tone Pair Details (Tones are selectable at the panel)

PAIR	TONE 1 - PRIMARY	TONE 2 - SECONDARY
1	Evacuate (550 Hz for 0.5 sec, 825 Hz for 0.5 sec) *	Alert (1 sec off, 825 Hz for 1 sec)
2	Alternating (925 Hz for 0.25 sec, 626 Hz for 0.25 sec) *	Continuous (925 Hz)
3	Medium Sweep (800 Hz to 970 Hz at 1 Hz)	Continuous (970 Hz)
4	Fast Sweep (2500 Hz to 2850 Hz at 9 Hz)	Continuous (2850 Hz)
5	Dutch Slow Sweep (500 Hz to 1200 Hz for 3.5 sec on, 0.5 sec off) *	Continuous (825 Hz)
6	DIN Tone Sweep (1200 Hz to 500 Hz for 1 sec)	Continuous (825 Hz)
7	Swedish Fire Tone (660 Hz, 150 msec on, 150 msec off)	All clear continuous (660 Hz)
8	Aus Fast Rise Sweep [3 x (500 Hz to 1200 Hz for 0.5 sec on), 0.5 sec off]	Aus Alert (420 Hz, 0.625 sec, 0.625 sec off)
9	NZ Slow Rise Sweep (500 Hz to 1200 Hz for 3.75 sec on, 0.25 sec off)	NZ Alert (420 Hz, 0.625 sec, 0.625 sec off)
10	US Temporal LF [3 x (970 Hz, 0.5 sec on, 0.5 sec off), 1 sec off]	Continuous (970 Hz)
11	US Temporal HF [3 x (2850 Hz, 0.5 sec on, 0.5 sec off), 1 sec off]	Continuous (2850 Hz)
12	Simulated Bell Continuous	Simulated Bell Intermittent (1 sec off, 1 sec on)
13	Cranford Sweep	Cranford Alert
14	Cranford Continuous	Cranford Alert
15	Cranford Two Tone	Cranford Alert

* Approved to EN 54-3 (refer to Document No. DFU4310007 for SPL measurements)

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