Discovery® Open-area Sounder Beacon Installation Guide

General

This guide refers to the products in the table below.

Part number	Product Name	Type
58000-005	Discovery Open-area Sounder Beacon Red Base with Red Lens	Outdoor (Type B)
58000-007	Discovery Open-area Sounder Beacon White Base with Clear Lens	Outdoor (Type B)

The Discovery Open-area Sounder Beacon is supplied with an isolating base.

Warning

The Discovery Open-area Sounder Beacon requires compatible control panel software to operate. Please check with the panel manufacturer for compatibility before installation.

Function

The Open-area Sounder Beacon combines a sounder with a beacon in a weatherproof housing. It has up to 15 tone pairs, 7 volume settings, independent control of sounder and beacon and fast turn-on functions. The configuration of the sounder is set by the control panel. Please refer to the panel literature for details.

Installation

1. Drill out the cable entries as required on the base using a 20mm hole cutter, taking care not to damage the electronics. Do not attempt to knock these out as the base could be damaged.

2. Secure the base to the mounting surface with pan-head screws. If IP65 integrity is required, fit the weatherproof mounting pad between the base and the mounting surface. Fit the 'O' ring to the base (Fig 1) using a lubricant such as silicone grease.

3. Set the sounder address using the table overleaf.

4. To lock the sounder in the base, snip the break-out on the base rim (location shown in Fig 1). Fit the sounder to the base.

IP rating

To maintain the integrity of the enclosure it is essential that suitable IP rated cable glands be used along with the 'O' ring provided and weatherproof mounting pad.

Tone Table

Byte Value	Primary Tone	Frequency	Tone No.	Secondary Tone	Frequency	Tone No.
1	Apollo Evacuation Tone*	558Hz for 0.5s, 840Hz for 0.5s	T1	Apollo Alert Tone	1s off, 1s 840Hz for 1s	T0
2	Alternating - (Hochiki & Fulleon)	925Hz for 0.25, 626Hz for 0.25s	T12	Continuous (Hochiki & Fulleon)	925Hz	T11
3	Medium Sweep	800Hz to 970Hz at 1 Hz	T14	Continuous	970Hz	T13
4	Fast Sweep	2500Hz - 2850Hz at 9Hz	T16	Continuous	2850Hz	T15
5	Dutch Slow Whoop (sweep)*	500 Hz - 1200Hz for 3.5s, 0.5s off	T3	Continuous	825Hz	T2
6	DIN Tone (sweep)*	1200Hz - 500Hz for 1s	T4	Continuous	825Hz	T2
7	Swedish Fire Tone	660 Hz, 150ms on, 150ms off	T18	Swedish all clear signal - Continuous	660Hz	T17
8	Aus (fast rise sweep)	3 x (500 - 1200Hz for 0.5s), 0.5s off	T6	Aus Alert Tone	420Hz, 0.625s, 0.625s off	T5
9	NZ (slow rise sweep)	500Hz - 1200Hz for 3.75s, 0.25s off	T7	NZ Alert Tone	420Hz, 0.625s, 0.625s off	T5
10	US Temporal LF (ISO 8201)	3 x (970Hz, 0.5s on, 0.5s off) 1s off	T19	Continuous	970Hz	T13
11	US Temporal HF (ISO 8201)	3 x (2850Hz, 0.5s on, 0.5s off) 1s off	T20	Continuous	2850Hz	T15
12	Simulated Bell - Continuous	n/a	T8	Simulated Bell - Intermittent	1s off, 1s on	T9
13	Emergency Warning Siren	n/a	T10	Emergency Warning - All Clear	n/a	T10
14	Evacuation Tone	970Hz continuous	T13	Alert Tone	Silence for 1s, 970Hz for 1s	T19
15	Apollo Evacuation Tone*	558Hz for 0.5s, 840Hz for 0.5s	T1	Apollo Alert Tone	1s off, 1s 840Hz for 1s	T0

* EN54 Compliant

Analogue Values

Analogue Value	Status	Analogue Value	Status
0	Flash Memory Fail	17	Sounder Volume 1
1	Sounder Fail	18	Sounder Volume 2
2	Beacon Fail	19	Sounder Volume 3
3	Sounder and Beacon Fail	20	Sounder Volume 4
4	General Fault	21	Sounder Volume 5
		22	Sounder Volume 6
		23	Sounder Volume 7

Apollo Fire Detectors Limited, 36 Brookside Road, Havant, Hants, PO9 1JR, UK
Tel +44 (0)23 9249 2412 Fax +44 (0)23 9249 2754
Email: techsales@apollo-fire.co.uk Website: www.apollo-fire.co.uk

Wiring Diagram
Individual Address Setting

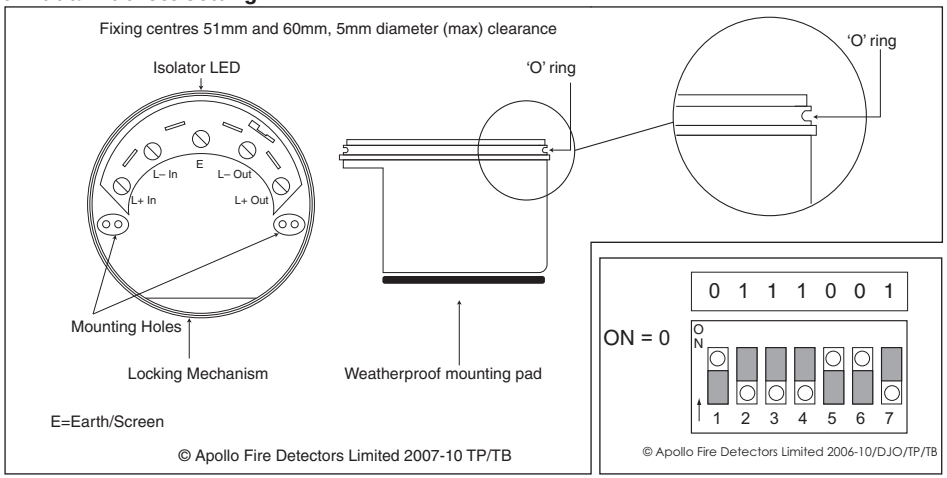

Fig 1. *Wiring diagram*

Fig 2. *Example of Address 78*

The address of the Open-area sounder beacon is set using segments 1-7 of the DIL switch. Each switch is set to "0" (ON) or "1", using a small screwdriver or similar tool. A complete list of address settings is shown below.

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

Commissioning

It is important that the device be fully tested after installation. Many fault conditions are the result of simple wiring errors. Check all connections to the unit.

Setup and Test Mode

These modes allow volume adjustment and functional testing locally. In test mode no volume adjustment is possible.

The required mode is entered via the control panel and is confirmed by a red LED which flashes once a second on the sounder beacon. Sounder state is controlled by placing a magnet adjacent to the flashing LED. When all LEDs flash, withdraw the magnet. A suitable extendable magnetic wand is available, part no. 29650-001.

In setup mode the volume can be adjusted by holding the magnet adjacent to the flashing LED and removing it at the desired volume level. If min or max volume is reached, the LEDs stop flashing. To alter the direction of adjustment, remove the magnet for one second and re-apply. Saving the volume setting is performed at the control panel.

Please check with panel manufacturer for compatibility of the above setup/test modes.

Technical Data, Sounder

Operating Voltage	17-28V DC
Switch on surge	<1.2mA for 1s
Quiescent	450µA
Sounder operating	Variable
Sound output at 90° ± 3dB(A) max,	100dB(A)
IP rating	65
	No condensation or icing
Nominal sounder output ± 3dB(A) at 28V - Tone 1	
Level 1 (60dB(A))*	1mA
Level 2 (69dB(A))	1.4mA
Level 3 (75dB(A))	1.6mA
Level 4 (81dB(A))	2mA
Level 5 (87dB(A))	2.6mA
Level 6 (93dB(A))	3.6mA
Level 7 (100dB(A))	5.5mA
Beacon operated	+3mA

* not EN54-3 compliant

For sound pressure levels measured to EN54–3 see document PP2203 and for isolator operation information see document PP2090, both available on request.

Fault Finding

Problem	Possible Cause
No response or missing	Incorrect address setting Incorrect loop wiring (polarity reversed)
Device fails to operate	Control panel has incorrect cause and effect programming
Device difficult to fit to base	Insufficient lubricant on 'O' ring
Water ingress	Weatherproof mounting pad missing or damaged Incorrect cable glands Damaged base