

### Functional Test Data

The sounder is controlled by the control panel using the output bits in the communication protocol.

Protocol bit use:

Output Bit	Function	Input Bit	Function
2	group mode 1 = off 0 = on	2	group mode confirmed 1 = group 0 = individual
1	pulsed mode 1 = on 0 = off	1	pulsed mode confirmed 1 = on 0 = off
0	continuous mode 1 = on 0 = off	0	continuous mode confirmed 1 = on 0 = off

### Fault Finding

Problem	Possible Cause
No response or missing	Incorrect address setting Incorrect loop wiring (polarity reversed) Too many sounders between isolators
Analogue value 4 Analogue value 1 Sounder fails to operate	Incorrect group address or address setting Sounder test failed Control panel has incorrect cause and effect programming Incorrect group address setting

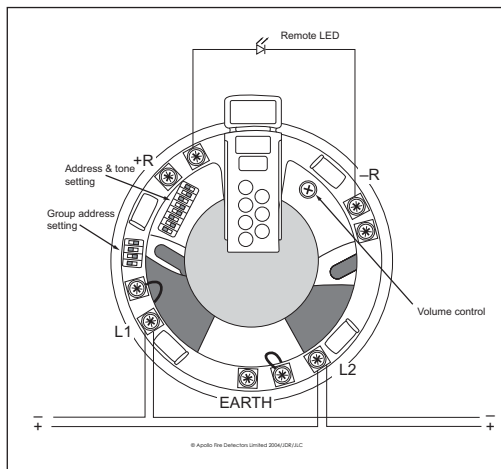


Fig. 2 Integrated Base Sounder wiring

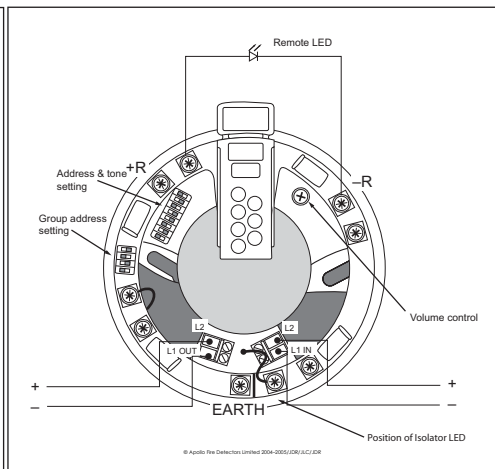
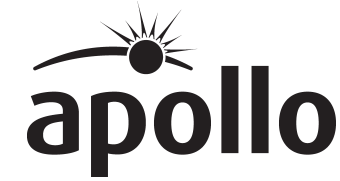


Fig. 3 Integrated Base Sounder with isolator wiring



## Integrated Base Sounder Installation Guide

### General

This guide describes the installation of the following sounders

Part number	Product Description
45681-278	Integrated Base Sounder
45681-277	Integrated Base Sounder & Isolator
45681-291	Slow Whoop version to Dutch Standard NEN2575
45681-290	Slow Whoop version to Dutch Standard NEN2575 & Isolator
45681-292	White Cap only
45681-293	Red Cap only

Connect the sounders only to control panels using either the XP95 or the Discovery protocol.

*Note: The Integrated Base Sounder is not suitable for outdoor use.*

### Mounting Instructions

The sounders may be secured to a UK standard conduit box or surface mounted (providing there is access through the surface for cabling). If a detector is fitted, lock it if required by screwing in the grub screw on the head with a 1.5mm hex driver (part no 29600-095)

### Wiring Details

*Note: The sounders are polarity sensitive (supply reversal protected) and will not function if wired incorrectly.*

### Standard Sounder

Connect the positive and negative loop cables to the L2 and L1 terminals respectively, observing polarity. The wiring terminals accept solid or stranded cables up to 2.5mm<sup>2</sup>. Functional earth or screen cables may be terminated to the EARTH connection. See Fig. 2.

### Sounder with Isolator

Connect the positive XP95/Discovery loop cables to the L2 terminals, the negative loop in to L1 IN and negative loop out to L1 OUT. (See Fig. 3.) When using the sounder as a stand-alone unit, a cap is available (red cap part no 45681-293 or white cap part no 45681-292) and is secured with a 1.5mm, AF hexagon socket head screw. A hexagonal driver (part no 29600-095) is available from Apollo. The isolator LED can be seen through the moulding as shown in Fig 3.

### Address Setting

The address of the sounder is set using seven segments of the eight-segment DIL switch. The eighth segment is used to adjust the volume output. Segments 1-7 of the switch are set to "0" (ON) or "1", using a small screwdriver or similar tool. A complete list of address settings is shown overleaf. If a detector is to be fitted, set the address as described on page 3.

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	1010100	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	1001001	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	0011001	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

### Group Address Setting

In group mode the Integrated Base sounder responds to an additional address referred to as the group address, which is used to activate groups of Integrated Base sounders and/or 100dB open area sounders simultaneously. Individual units continue to respond to their own addresses and report their status in the normal way. A group address is set on a four-segment DIL switch which is factory set to 0000. A group address may be any spare address within—and only within—the range 112 to 126 inclusive. The required group address is set in accordance with the following table. For an illustrated example, please see Fig 1.

addr	DIL switch setting 1234	addr	DIL switch setting 1234	addr	DIL switch setting 1234
112	1111	117	0101	122	1010
113	0111	118	1001	123	0010
114	1011	119	0001	124	1100
115	0011	120	1110	125	0100
116	1101	121	0110	126	1000

Note: group mode is disabled if the group address DIL switch is set to 0000, irrespective of the protocol message.

### Testing

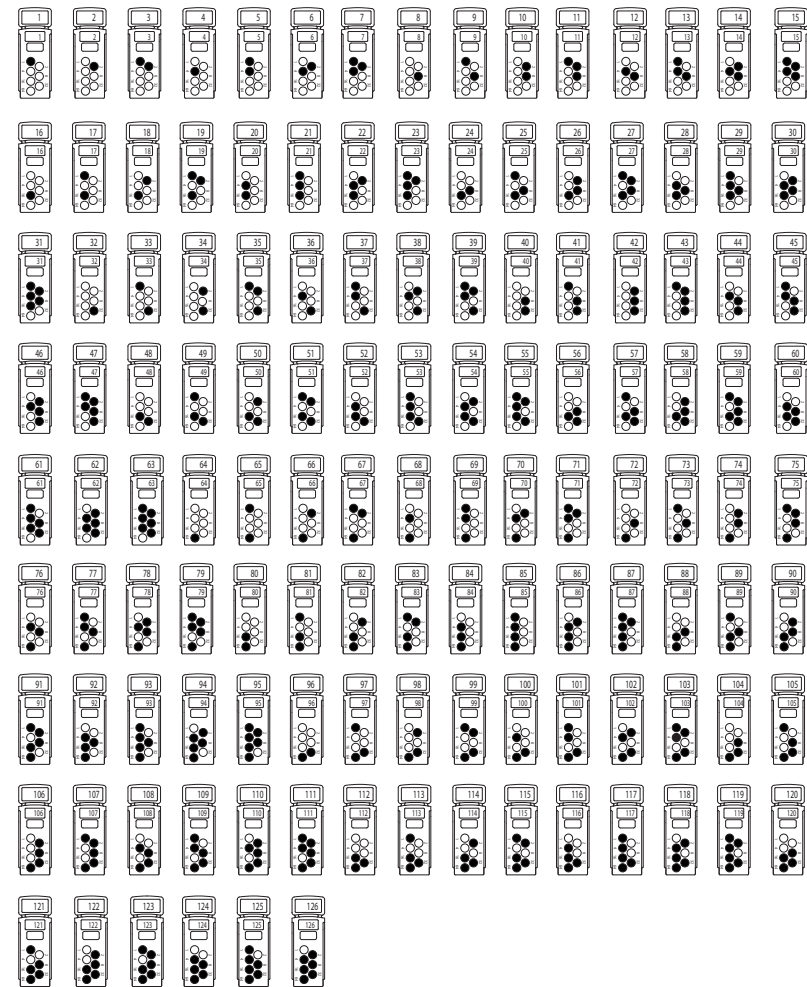
The sounder is tested via the control panel. Output bit 0 is set to 1 on two polling cycles to switch the sounder on which should be tested for at least 5 seconds.

### Commissioning

It is important that the Integrated Base Sounder be fully tested after installation. An XP95 Test Set, part no 55000-870, may be used to carry out functional testing of individual units. The test set can also perform data integrity tests of an entire system.

### XPERT Card Addressing

Select the desired address and remove the pips indicated in black with a small screwdriver.



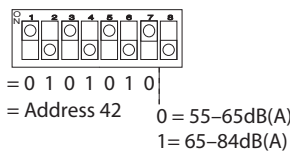
### Technical Data

Operating voltage	17–28V DC
Sounder output	
Maximum at 90°	91dB(A)
High volume setting	nominally 75 to 91dB(A)*
Low volume setting	nominally 55 to 75dB(A)
*Complies with EN54–3	

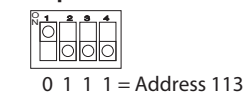
For sound pressure levels measured to EN54–3 see document PP2203 and for isolator operation information see document PP2090, both available on request. *Low volume setting does not comply to EN54–3 and should not be used for fire alarm applications*

Current consumption at 24V DC	
quiescent	200µA
switch-on surge	1.2mA for 1 sec
sounder operating	5mA

### Individual Address



### Group Address



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Fig. 1 Address example