

### 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.

### Functional Test Data

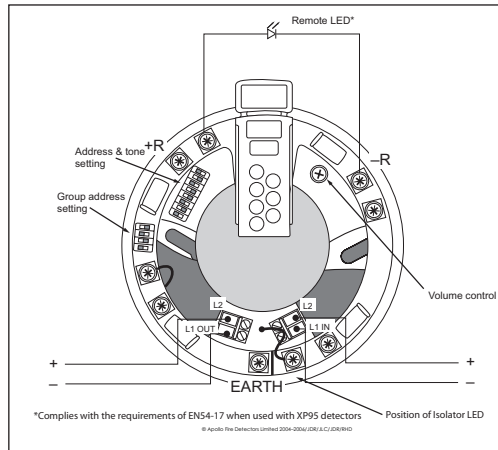
The sounder is controlled by the control panel using the output bits in the communication protocol.

Protocol bit use:

| Output Bit | Function                             | Input Bit | Function                                            |
|------------|--------------------------------------|-----------|-----------------------------------------------------|
| 2          | group mode<br>1 = off<br>0 = on      | 2         | group mode confirmed<br>1 = group<br>0 = individual |
| 1          | continuous mode<br>1 = on<br>0 = off | 1         | continuous mode confirmed<br>1 = on<br>0 = off      |
| 0          | DIN tone<br>1 = on<br>0 = off        | 0         | DIN tone confirmed<br>1 = on<br>0 = off             |

### Fault Finding

| Problem                                                          | Possible Cause                                                                                                                |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| No response or missing                                           | Incorrect address setting<br>Incorrect loop wiring (polarity reversed)                                                        |
| Analogue value 4<br>Analogue value 1<br>Sounder fails to operate | Incorrect group address or address setting<br>Sounder test failed<br>Control panel has incorrect cause and effect programming |



**Fig. 2** Integrated Base Sounder with isolator wiring



## Integrated Base Sounder with Isolator DIN 33 404 Tone Installation Guide

### General

This guide describes the installation of the following sounder

| Part number | Product Description                                            |
|-------------|----------------------------------------------------------------|
| 45681-300   | Integrated Base Sounder with Isolator DIN 33 404, Part 3, Tone |
| 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.

The Integrated Base Sounder with short circuit isolator has a yellow LED which illuminates through the moulding if a short circuit is detected on the loop wiring

*Note: The Integrated Base Sounder is Type A, ie, not suitable for outdoor use.*

### Mounting Instructions

The sounders may be secured to a UK or European 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.*

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. 2) Functional earth or screen cables may be terminated to the EARTH connection. 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.

### 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<br>1234567 | addr | DIL switch setting<br>1234567 | addr | DIL switch setting<br>1234567 | addr | DIL switch setting<br>1234567 | addr | DIL switch setting<br>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                       |

### 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.

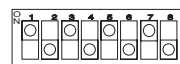
| addr | DIL switch setting<br>1234 | addr | DIL switch setting<br>1234 | addr | DIL switch setting<br>1234 |
|------|----------------------------|------|----------------------------|------|----------------------------|
| 112  | 1111                       | 117  | 0101                       | 122  | 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 fire control panel. Output bit 0 is set to 1 on two polling cycles to switch on the sounder which should be tested for at least 5 seconds.

#### Individual Address

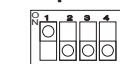


= 0 1 0 1 0 1 0

= Address 42      0 = 55–65dB(A)

1 = 65–84dB(A)

#### Group Address



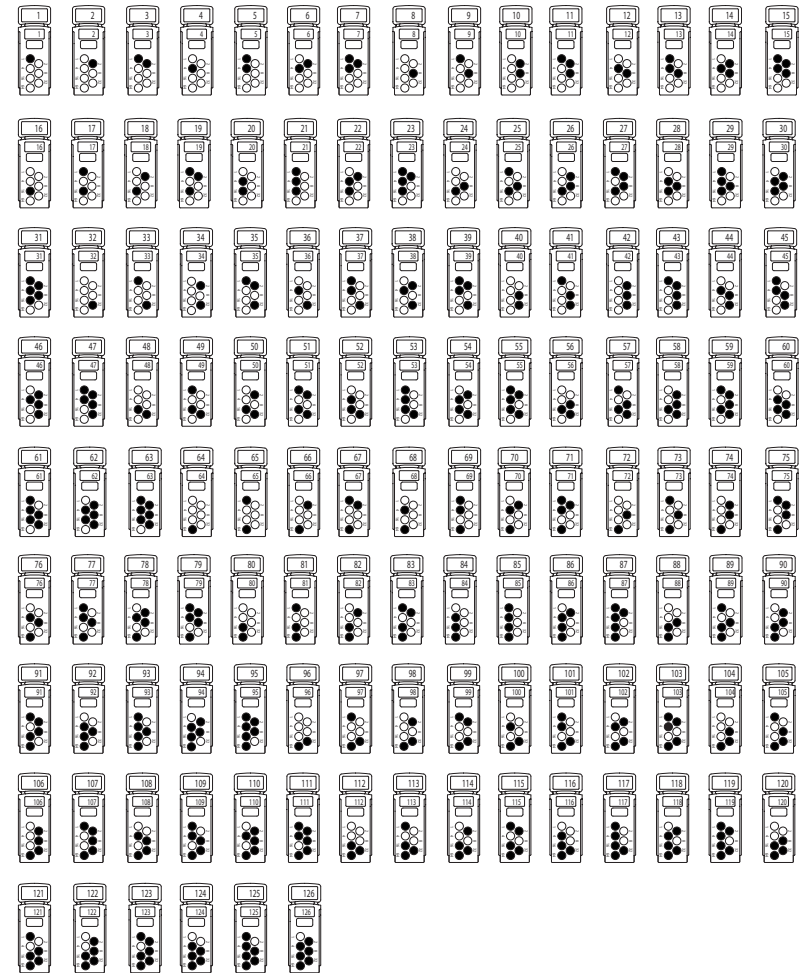
0 1 1 1 = Address 113

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**Fig. 1** Address example

### XPERT Card Addressing

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



### Technical Data

|                     |                          |
|---------------------|--------------------------|
| Operating voltage   | 17–28V DC                |
| Sounder output      |                          |
| Maximum at 90°      | 91dB(A)                  |
| High volume setting | nominally 65 to 84dB(A)* |
| Low volume setting  | nominally 50 to 65dB(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             |