The cause and effect programming (the control panel software responsible for switching sounders and outputs etc. in alarm condition) should be fully checked, along with all equipment connected to the Sounder Control Unit.

Note: If this product has been subjected to excessive shock during transportation, it may be received with the relay contacts in the 'set' position. Reset the relay by subjecting it to one operating cycle before commissioning the system.

Functional Test Data

output bit	function	input bit	function
2	group mode* 1 = off 0 = on	2	group mode 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

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

Troubleshooting
Before investigating individual units for faults, it is very important to check that the system wiring is fault free. Earth faults on a data loop or any ancillary zone wiring may cause communication errors. Many fault conditions are the result of simple wiring errors. Check all connections to the unit and make sure the correct value resistors are fitted where necessary.

Fault Finding

Problem	Possible Cause
No response or missing	Incorrect individual address setting Incorrect loop wiring
Fault condition reported	Incorrect group or individual address setting Incorrect wiring of sounder zone or fault input Faulty sounder Local supply faulty or polarity incorrect Fuse blown on sounder PCB
Sounders do not operate	Incorrect wiring Incorrect group address setting Fuse blown on sounder PCB Incorrect cause and effect programming Faulty sounder Panel fault
Sounders operate continuously Analogue value unstable	Incorrect sounder zone wiring Dual address Loop data fault, data corruption

©Apollo Fire Detectors Limited 2011
Apollo Fire Detectors Limited, 36 Brookside Road, Havant, Hants, PO9 1JR, UK
Tel +44 (0)23 9249 2412 Fax +44 (0)23 9249 2754

Sounder Control Unit Installation Guide

General
The Sounder Control Unit, part no 55000-852, is designed to control a zone of sounders powered by an external DC supply. It is supplied with a backbox for surface mounting and has an integral isolator as standard.

Note: The Sounder Control Unit is not designed for outdoor use unless it is mounted in a suitable weatherproof enclosure.

Installation
1. Mount the backbox as required and install all cables for termination. Ensure that earth continuity is maintained.

2. Remove the cover plate (if secured) from the Sounder Control Unit assembly by inserting the blade of a terminal screwdriver into each of the four securing clips in turn, gently prising the outer edge of the cover plate over the clips underneath. DO NOT USE EXCESSIVE FORCE.

3. Terminate all cables observing polarity.

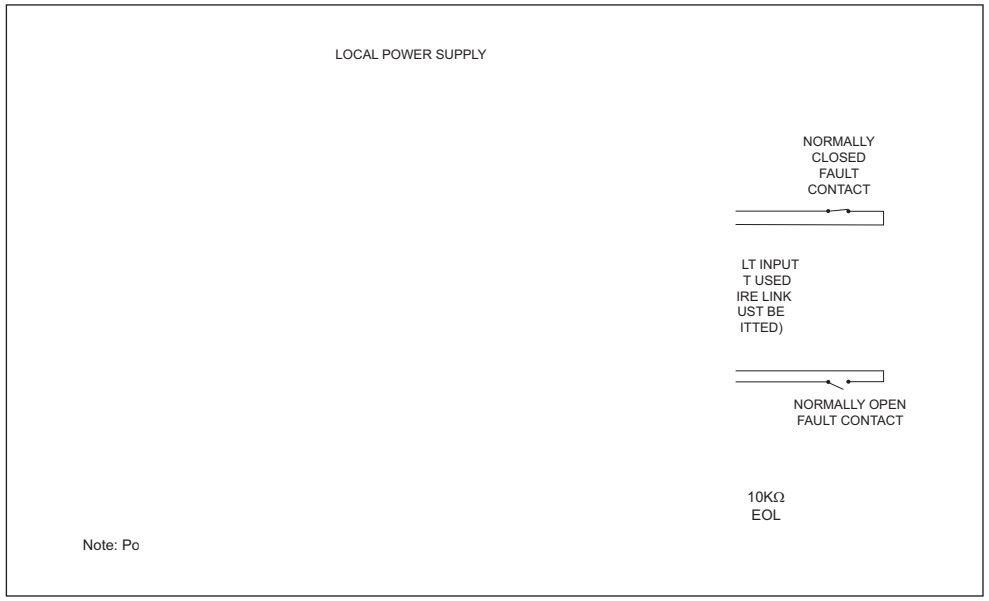
   Note: Cable length to be kept 3m or under.

4. Gently push the completed assembly towards the backbox until the mounting holes are aligned and secure with the two mounting screws provided. DO NOT OVERTIGHTEN.

5. Set the address of the unit as shown on page 3.

6. Finally, when commissioning is complete, fit the cover plate by placing it in position, observing the correct orientation (LEDs on the PCB must be aligned with viewing holes). Apply pressure to the cover plate until all four clips are holding it in position.

Wiring Details
All wiring terminals accept solid or stranded cables up to 2.5mm².



Fuse: 1.0A, anti-surge Local supply: 24V (9—32V) Sounder zone end-of-line resistor: 10KΩ, $^1/_3$Watt

Current consumption at 28V (no protocol)

switch-on surge, max 120ms	4.0mA
quiescent	1.5mA
sounders operated	1.7mA
fault	3.6mA

LED Indicators
Three LEDs are fitted to the PCB to indicate functions as follows:

- ⊙ Isolator — Illuminated yellow when a short circuit on the loop causes the integral isolator to operate
- ⊙ Sounders On — Illuminated red when sounder relay is energised
- ⊙ Fault — Illuminated yellow under any fault condition (except group address conflict)

Address Setting
The Sounder Control Unit is designed to be polled by the control panel in two ways, individually or as part of a group. Two DIL switches are provided for setting the addresses.

Note: one switch is sealed with a sticky label. This label should not be removed unless the unit is to be controlled as part of a group.

Individual Address Setting
The individual address of the Sounder Control Unit is set using the seven-segment DIL switch. Each segment of the switch must be set to "0" or "1", using a small screwdriver or similar tool. A complete list of address settings is shown opposite.

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

Group Address Setting
In Group mode the Sounder Control Unit responds to an additional address referred to as the "group address", which is used to activate groups of Sounder Control Units simultaneously. (The unit continues to respond to its own individual address and report its status from that address in the normal way.) The group address is selected by the 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 by moving one or more of the segments on the switch to "1". The following table shows the settings for the group address switch.

addr	DIL switch setting 1248	addr	DIL switch setting 1248
112	1111	121	0110
113	0111	122	1010
114	1011	123	0010
115	0011	124	1100
116	1101	125	0100
117	0101	126	1000
118	1001		
119	0001		
120	1110		

Commissioning
It is important that the Sounder Control Unit be fully tested after installation. An XP95 Test Set, part no 55000-870, may be used to carry out functional testing of individual units. It can also be used to perform data integrity tests of an entire loop. For a full technical specification of the Sounder Control Unit, please refer to the Sounder Control Unit PIN Sheet, PP2094. For further information on isolators, please refer to PP2090.