

INTELLIGENT BASE SOUNDER

A NEW INTELLIGENT SOUNDER

Apollo Fire Detectors has developed a new loop-powered sounder to replace the existing, highly-successful sounder introduced in 1997.

FEATURES

The new sounders build on the strengths of the existing products and offer additionally:

- synchronisation of continuous and pulse tones
- multiple allocation of any address to sounders

Synchronisation of pulse tones ensures the integrity of the alert signal—tones from different sounders do not merge into one signal that could be mistaken for an 'evacuate' tone.

Since more than one sounder can be allocated to any address (the upper limit is 126) more sounders or detectors can be fitted to the loop. There is also a further advantage in that sounder activation time is reduced.

MULTIPLE ADDRESS ALLOCATION

Allocation of more than one sounder to a single address is achieved by a new design known as the '**master/slave**' concept. This is quite different from the group address system used by the Apollo Sounder Control Unit.



Part no 45681-265 shown with an optical detector

All the sounders selected for the address to be used are set to that address. All sounders at that address will respond to commands from the control panel but only one sounder will be able to reply. This sounder is the 'master' and all others at the same address are the 'slaves'. Because these sounders are slaves, they are invisible to the control panel.

One segment of the DIL switch on the sounder is used to determine the status of the sounder as a master or a slave. All sounders are supplied with the DIL switch in the 'master' position. If the sounder is to be used as a slave the DIL switch is simply changed at the installation stage.



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MONITORING SLAVE SOUNDERS

Slave sounders cannot respond to interrogation by the control panel but, since they are wired to the loop and conduct power to the associated detectors, the wiring is monitored by the detector and any faults would be apparent.

STAND-ALONE SLAVE SOUNDERS

Base sounders may be used as stand-alone slave sounders, ie, with no associated detector. They may be connected *only*:

- to the main loop *or*
- to a spur providing an addressable device capable of signalling to the control panel is fitted to the end of the spur (Fig 1).

Stand-alone slave sounders should not be used if there is a danger that the address might be changed by an unauthorised person. A master sounder should be used instead.

SYNCHRONISATION

Sounders allocated to the same address will all be switched at the same time and therefore synchronise automatically.

Sounders are also able to recognise address 0 and synchronise, as in the case of the 100dB sounder and the Sounder Control Unit. This method of synchronisation depends on the design and configuration of the control panel. The manufacturer of the panel should be consulted to determine whether this feature is available or not.

REPLACEMENT OF EXISTING SOUNDERS

Intelligent sounders set as masters can be used as a straightforward replacement for existing sounders.

SHORT-CIRCUIT ISOLATORS

Isolators should be designed into the system in the normal way.

Note 1: if slave sounders are located between isolators the associated master should also be located in the same segment of the loop otherwise, in the event of a short circuit fault, there will be no indication of sounder loss.

SOUNDERS FOR ISOLATING BASES

The intelligent sounder range includes a sounder for use with isolating bases. The connection to the detector is not, however, routed through the sounder terminals.

The sounder for use with isolating bases cannot be used as a slave and is therefore supplied as a *master only*.

TYPE CODE

The sounder type code is 001 00. (bits 210 43).

SYNCHRONISATION

The sounders can be synchronised by means of the panel transmitting address '0'.

CONTROL PANEL CONFIGURATION

Master sounders will be identified at the control panel in the same way as previous loop sounders.

Since slave sounders will not be responding to the panel their location should be carefully recorded on drawings and their use should be noted at the control panel. The control panel manufacturer should be consulted for information on this aspect of system design.

MECHANICAL CONSTRUCTION

The intelligent sounder is moulded in polycarbonate and has stainless steel contacts that accept solid or stranded cables of up to 2.5mm².

DIMENSIONS AND WEIGHT

Part no	Description	Dimensions	Weight
45681-265	Sounder	115 x 32mm	135g
45681-266	Sounder for use with isolating base	102 x 26mm	140g
55000-269	Sounder with white cap	115 x 37mm	155g
55000-270	Sounder with red cap	115 x 37mm	155g

Table 1 Dimensions and weights

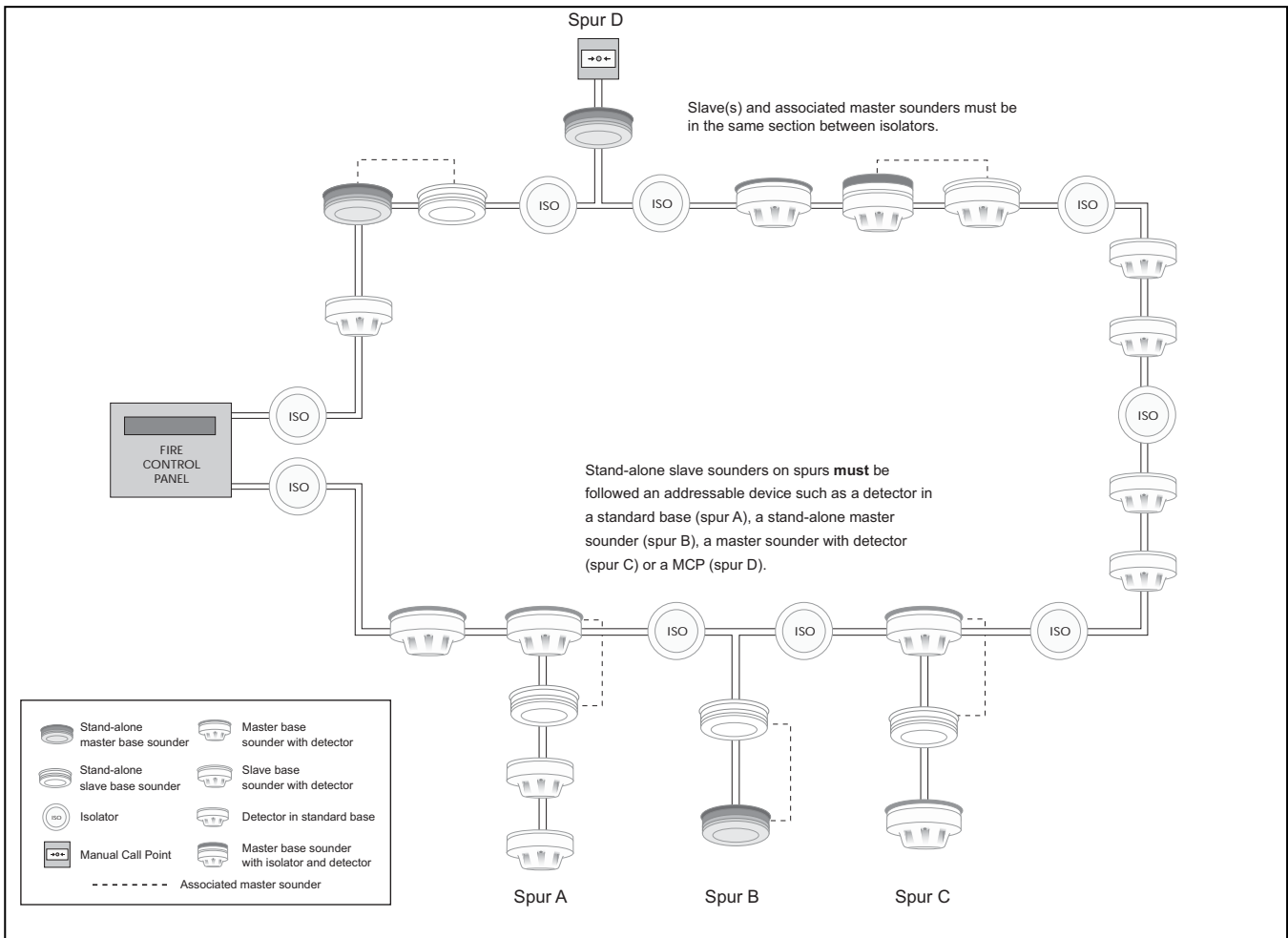


Fig 1 Diagram to show connection of master and slave sounders on loop and spurs

TECHNICAL DATA

Operating voltage	17—28V DC
Sounder output	switch selectable 85±3 or 92±3dB(A)
Current consumption at 24V DC	
quiescent	1.2mA
switch-on surge	1.2mA for 1 sec
sounder operated at 85dB(A)	3.5mA
sounder operated at 92dB(A)	8.25mA
Function of output bits	see Table 2

Output Bit Settings			Sounder action
2	1	0	
0	0	0	Sounder off
0	0	1	Alarm alternates 0.5sec 610Hz, 0.5sec 510Hz
0	1	0	Alarm intermittent 1 sec off, 1 sec 510Hz
0	1	1	Alarm alternates 0.5sec 610Hz, 0.5 sec 510Hz
Input bits 2, 1, 0 confirm the receipt of the corresponding output bits			

Table 2 Use of output bits