
DOCUMENT CONTROL NUMBER /

901SB TYPE 'A' SOUNDER BASE - INSTALLATION INSTRUCTIONS



BLUE TEMPORARY PARK PLUNGER

Fig. 1 901SB Sounder Base

1. TECHNICAL SPECIFICATION

System Compatibility: Use only with Minerva Analogue Addressable or MX Digital Fire Alarm Controllers

Environment: Indoor Application only

Operating Temperature: -25° to +70°C

Storage Temperature: -40° to +80°C

Operating Humidity: Up to 95% non-condensing

Dimensions:

Height (including mounting flange): 37.5mm

Diameter: 110mm

Weight: 0.192kg

Mounting Requirements: Flat surface or suitable electrical backbox with 50 to 70mm fixing centres with the 4" flange.

Electrical Characteristics:

Loop current

Standby: <5µA typical

Alarm: <20µA typical

External 24V

6.8mA at full volume (90dBA)

1.2mA at low volume (68dBA)

CAUTION:

ENSURE THAT SITE PLAN DEFINES THE POLARITY OF POLARITY CONSCIOUS BASES.

Electromagnetic Compatibility:

The 901SB complies with the following:

Product family standard EN50130-4 in respect of Conducted Disturbances, Radiated Immunity, Electrostatic Discharge, Fast Transients and Slow High Energy.

EN50081-1 for emissions.

2. INTRODUCTION

The 901SB Sounder Base provides an additional sounder function on the Minerva Analogue Addressable and MX Digital loop circuits.

The 901SB Sounder Base requires an associated detector in order to operate, as it uses the address of the detector that is fitted to it. Removal of the detector or loss of power to the loop will cause the sounder to cease operating.

The 901SB is *not* loop powered.

3. FEATURES

The 901SB provides eight tone and variable volume settings.

WIRING NOTES

The following notes apply:

- a) All wiring must conform to the current edition of IEE Wiring Regulations and BS 5839 Part 1.
- b) All wiring must be free of earths.

4. SETTING SOUNDER OUTPUT OPTIONS

The sounder outputs are set as follows:

- Tone - using the 4-way DIL switch (Fig. 3 and Table 1 refer).
- Volume - using a trimmer tool (S/C No. 517.050.015) (Fig. 2 refers).

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DIL Switch Settings					
1	2	3	4	Response Sound	Marketing Tone No.
0	0	0	x	Dutch	7
0	0	1	x	Temporal 4	-
0	1	0	x	Slow Sweep	3
0	1	1	x	March Time Beep	25
1	0	0	x	Fast Sweep	2
1	0	1	x	Temporal 3	-
1	1	0	x	Two Tone	11
1	1	1	x	Continuous	14

Table 1:

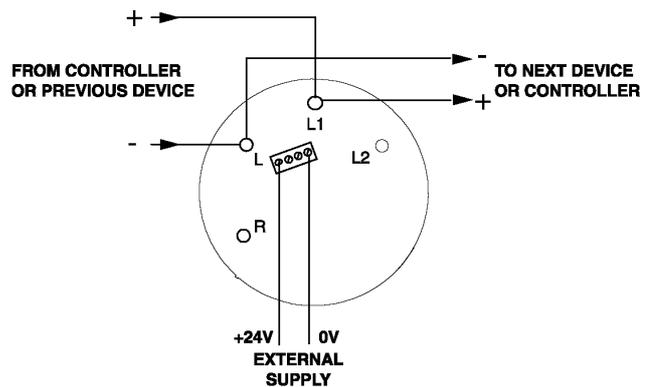


Fig. 3 Connections to 901SB Sounder

5. INSTALLATION TO A FLAT SURFACE OR ELECTRICAL BACKBOX

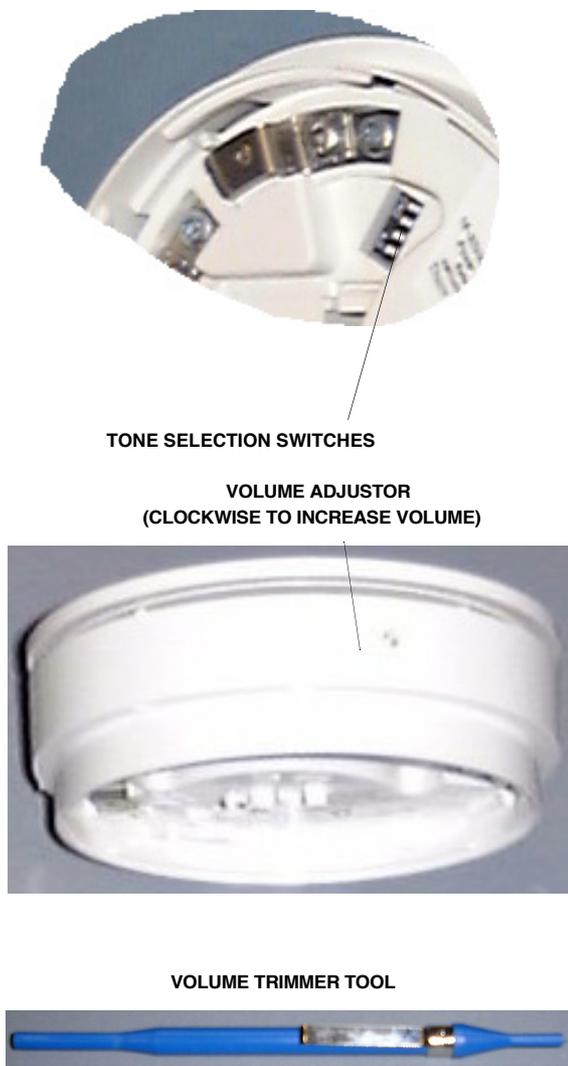


Fig. 2

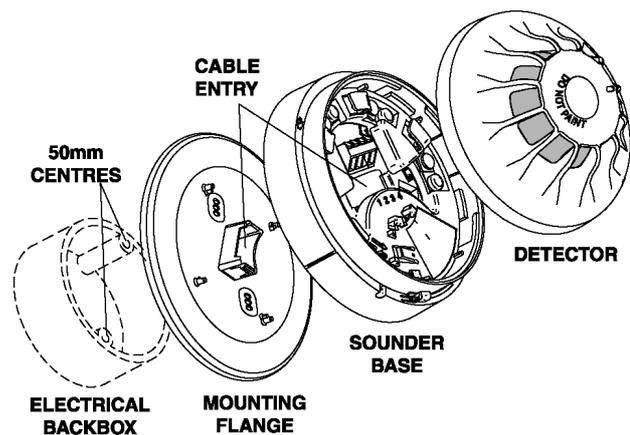


Fig. 4

To install a sounder base, proceed as follows:

- Feed the addressable loop and sounder wiring through the mounting flange cable entry.
- Secure the mounting flange to either an electrical backbox or a flat surface as required.
- Feed the addressable loop wiring sounder through the sounder base cable entry, then clip the sounder base to the mounting flange.
- Wire the sounder base as shown in Fig.3 ensuring correct polarity. Terminals 2 (+24V) and 3 (0V) may be used to carry the external supply to another device.

- e) Fit the address flag to the detector, see Fig. 5.
- f) For a Minerva system, fit the address smart card to the detector, see Fig. 6.
- g) Fit the detector to the sounder base, (the address flag and smart card will be transferred to the sounder base).

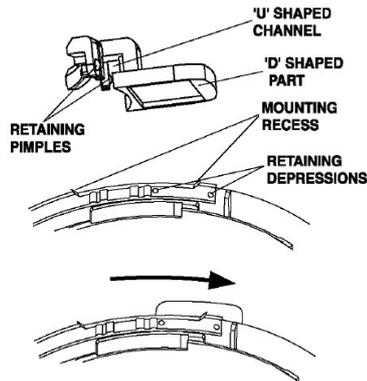


Fig. 5 Fitting Address Label Carrier

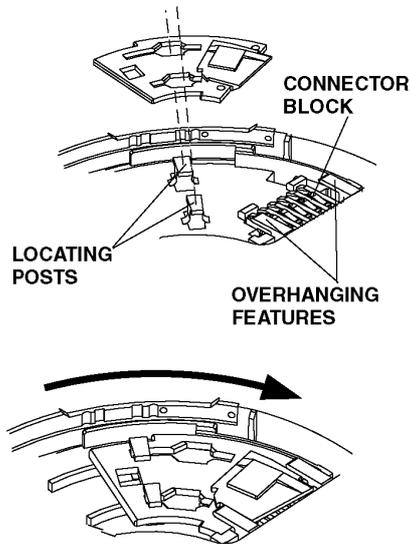


Fig. 6

CAUTION:

1
DO NOT FILL SOUND GAP BETWEEN
MOUNTING FLANGE AND SOUNDER BASE.

2
DO NOT CONNECT ANY EXTERNAL
WIRING TO CONNECTION L2.

Note: For LPCB approval, detectors and caps must be locked into the sounder base using a locking device (Factory fitted). Ensure that the locking device is in place before fitting a detector or cap. See Fig. 7.

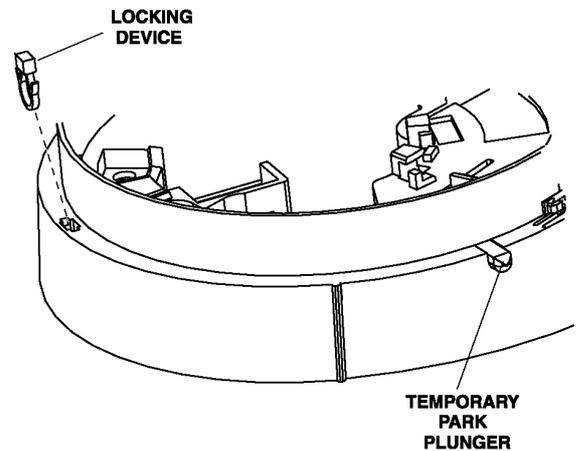


Fig. 7 Locking Device

6. CABLING

Cables are to be selected in accordance with Publication 17A-02-D1 and the requirements of the current issue of BS5839. A maximum of $2 \times 1.5\text{mm}^2$ or $1 \times 2.5\text{mm}^2$ cable may be connected at any one terminal.

7. MINERVA 'CONSYS' CONFIGURATION

The 901SB configured in Minerva 'CONSYS' as follows:

- When a Sounder Base unit is attached to an addressable detector, the "Point" and "Point Type" configuration in CONSYS does not require any change, ie, they remain the same as for the detector in question.
- Minerva will regard such a device primarily as a detector, but additionally, it will now allow output commands like "Switch ON", "Switch OFF", "Switch to P1", "Force", etc. to be fired at the Input Group to which the detector belongs! These commands will only affect the output (Sounder or Relay) and not the detector.

7.1 BELL MAPPING

If it is required for the output to operate as a Bell Map output, then put the Input Group to which the device belongs into the Bell Map Outputs Supergroup.

To achieve this use the 'Edit' menu, select 'Edit Group Data' and then select 'Supergroups'. Select the first 'SuperGroup' (SG082 Bell Map Outputs SG) and then select 'Edit'. By default, 'Bell Map Alarm Sounders ON186' is the only output group included and as such is indicated by a tick. Select the group to be added, (the group the Sounder/Relay Base is in), and press the space bar. A tick will appear next to it. Now press F5 to save. The chosen group will now operate as if it were 'Bell Map Alarm Sounders ON186'. Do not forget to program the Bell Map as required!

7.1.1 POINT-TO-POINT ACTIVATION

If it is required for the detector to activate its own Sounder/Relay Base ONLY and no other, eg, where there are no more than 16 devices per Zone.

- Instead of using only one Input Group for all detectors (eg, IN001 Alert Inputs), create (up to) 16 of them, all doing the same thing eg, generating a "FIRE ALARM (alert)" event. Then, activate the outputs by targeting back each one of the 16 Input Groups respectively, making sure to specify the Target Area as Input; this requires 16 commands in this example.
- Those same 16 Input Groups may be used in as many Zones as needed, assigning only one device per Zone to each Group; each device will then belong to a unique Zone/Group intersection and hence will only respond to its own activations.

7.1.2 PULSING OUTPUTS

No more than 20 outputs should be pulsed simultaneously on a single loop. This restriction has not changed and also applies to the Sounder/Relay bases. It is, however, important to remember that Minerva does not know how many devices actually have sounder bases attached to them.

Therefore, if the above method of programming using 'SuperGroups' is used then the Minerva will try to switch on and/or pulse every device which happens to be in the group(s) contained in the 'Supergroup'. Practically, this may be more than 20 because devices which do not have Sounder/Relay Bases will be in the same group as those that do. The solution is to ensure devices which need to be pulsed are in a different group to the devices which do not have Sounder /Relay Bases. The effective solution is to create a 'User Defined Group' with the same functions as the non-Sounder /Relay Base devices and only use this for the detectors which have Sounder/Relay Bases.

To summarize, **if pulsing Sounder/Relay Bases, do not put more than 20 devices** into a single group if they are to pulse simultaneously.

7.1.3 OPERATING SOUNDER/RELAY BASES

An addressable detector fitted with a Sounder Base or Relay Base is treated almost as two separate devices; an input and an output. However, this separation is not perfect and there are some resources which are shared. For example, there is only one Point Description - also, both input and output share the same Zone assignment. These examples are obvious, since they derive from the fact that there is only one device configured into CONSYS for each I/O unit.

When it comes to the Minerva Controller resources, be aware that there is only one Isolate status for both the input and the output sharing the same address, so either both are isolated or both de-isolated.

As a consequence, Minerva has to decide when an Isolate/De-isolate command should have an effect on an I/O device. The general rule is that Minerva treats the I/O device primarily as an input (detector in this case) and hence an "Isolate Sounders" command will NOT isolate the Sounder Base since we don't want to also isolate the detector with such a command. However, an "Isolate Point" command WILL isolate both sounder base and detector.

If it is required to activate detectors without activating sounders, it is recommend that Walk Test is used.

If an "Isolate Sounders" type command is required for the Sounder Bases, a Group configuration structure which can stop their activation when an input switch is operated, will have to be created. It is recommended that the DISABLE LED is activated as well, using "Force ON" and "Unforce" commands – **do not use "Switch ON" and "Switch OFF" because it may clear a valid DISABLE indication.**

8. MX 'CONSYS' CONFIGURATION

The 901SB is configured in MX CONSYS (refer to Publication 17A-06-X1 - MX CONSYS Configuration Tool) as follows:

- When a Sounder Base unit is Attached to an addressable detector, the "Point" and "Point Type" configuration in MX CONSYS requires that the Sounder Base is added to the detector configuration. To add the Sounder Base to the point, select the point, select the 'Advanced' option then click the Sounder box.
- MX will regard such a device primarily as a detector, but additionally, it will allow output commands like "Switch ON", "Switch OFF", "Switch to P1", "Force", etc. to be fired at the Group assigned. These commands will only affect the output and not the detector.

8.1 BELL MAPPING

If it is required for the output to operate as a Bell Map output, then put the Input Group to which the device belongs must be put into the Bell Map Outputs Supergroup.

To achieve this, select group 50 Bell Map Output SG and then select "Edit Members". Use "Add member" to append the Bell Map Output SG with the points Input Group.

If the sounder base needs including in any sounder Walk Test then super group number 51 "Sounders to walktest SG" will have to be edited to add the point's input group to the list of supergroup members.

8.2 OPERATING SOUNDER BASES

An addressable detector fitted with a Sounder Base is treated almost as two separate devices; an input and an output. However, this separation is not perfect and there are some resources which are shared. For example, there is only one Point Description - also, both input and output share the same Zone assignment. These examples are obvious, since they derive from the fact that there is only one device configured into MX CONSYS for each I/O unit.

Using MX, the Sounder Base can be Isolated and De-isolated independently from the detector. There are two separate isolate states, one for the input and one for the output.

7. ORDERING INFORMATION

901SB Sounder Base: 516.800.911