

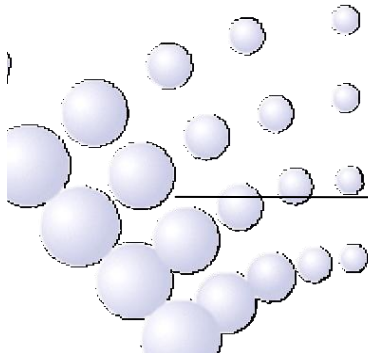
**I-9401 Addressable Sounder Strobe
C-9401 Sounder Strobe
Installation and Operation Manual
(Issue 3.0, February 2004)**



GST  **Global System Technology PLC**

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I General

Sounder Strobe is a kind of optical and visual alarm device used to warn people in field when fire occurs.

GST produces two types of sounder strobe, addressable (I-9401) and conventional (C-9401). Addressable sounder strobe can be started directly by fire alarm controller. It can be electronically programmed and modified by P-9910 Hand Held Programmer in field. Conventional sounder strobe can give optical and visual alarm when powered by DC24V, and can be connected to fire alarm controller through an addressable linkage control module. When it is not started, wire checking can be done by loading reverse voltage and connecting terminal resistor at the end of the circuit.

II Features

1. Red plexiglass panel, several strong red LED as light source, striking, long-life and low consumption.
2. Fire alarm sound over 85dB, easy to catch attention.
3. Circuit part and base box are plugged together, reliable contact convenient for engineering;

Addressable:

4. Peripheral control terminals to startup the sounder strobe directly by passive normally open contact (e.g. manual call point), unaffected by power-cut of signal bus.
5. Signal bus and power bus non-polarized, easy for connection.
6. Function of checking power-cut, sending fault information to the controller.
7. Electronic programming of address code that can be modified on site.

Conventional:

8. DC24V two-wire, polarized, easy for wire checking (connecting terminal resistor when checking, the resistance value can be deiced by connecting devices).

III Technical Specifications

1. Operating Voltage (power bus terminal only for conventional):
Signal Bus Voltage: 24V Range Allowed: 16V~28V;
Power Bus Voltage: DC24V Range Allowed: DC20V~DC28V
2. Operating Current (power alarming current only for conventional):
Power Standby Current $\leq 10\text{mA}$;
Power Alarming Current $\leq 160\text{mA}$;
Loop Standby Current $\leq 0.8\text{mA}$;
Loop Starting Current $\leq 6.0\text{mA}$.
3. Flashing Frequency: 20~180 times every minute when alarming;
4. Alarm Voice $\geq 85\text{dB}$ (Due front 3m horizontal (A weighted))
5. Wiring:

Addressable: Four wires, non-polarized, two-loop to the controller, non-polarized two-wire to the power.

Conventional: Non-polarized two-wire with the power.

6. Operating Environment:
Temperature: $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$;
Relative Humidity $\leq 95\%$, no condensation;
7. Dimension: 144mm \times 90mm \times 57mm;
8. Material and Color of Enclosure: ABS/ ivory white, front inlaid with plexiglass/red
9. Hole Distance: 65mm

IV Structure and Operation Principle

1. Structure of the sounder strobe is shown in Fig. 1.

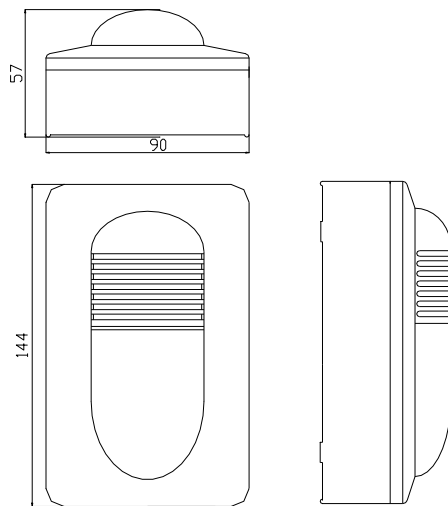


Fig. 1 Structure

2. Operation Principle:
Both intelligent and conventional sounder strobe use sound effect chip VM42 amplified by dynatron and transformer to vocalize the speaker; 6 LEDs are controlled by timing circuit giving flashing light signal.
Intelligent sounder is built in with microprocessor, which execute communication with fire alarm controller, checking power cut of the power bus and startup of audio and visual signals. Intelligent sounder strobe can start audio and visual signal after receiving startup command from fire alarm controller or directly by outer controlling contact.
Conventional sounder strobe can be started when loading DC24V between D1 and D2.

V Mounting and Wiring

Warning: Before installing the device, disconnect the power from the loop and verify that all bases are securely installed and that the wiring polarity is correct at

each base.

1. Check whether the enclosure sound or not, labels complete or not.
2. The base box and cover of the sounder strobe are plugged together, surfaced mounted on 85H50 embedded box as shown in Fig. 2.

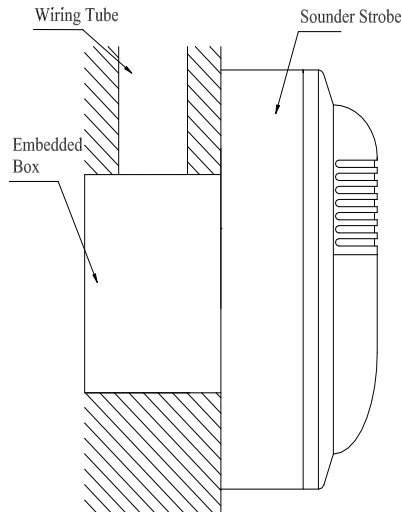


Fig. 2 Mounting

3. The base box of I-9401 is shown in Fig. 3, please note direction when installing.

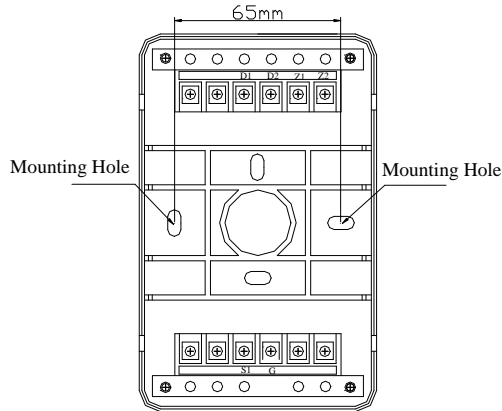
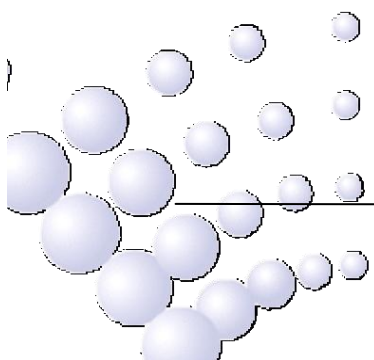


Fig. 3 I-9401 Base box

Terminals:

- D1, D2: Connecting DC24V power, non-polarized;
- Z1, Z2: Connecting signal loop of the controller, non-polarized;
- S1, G: Externally controlled passive input.

4. The base box of C-9401 is shown in Fig. 4, please note direction when installing.



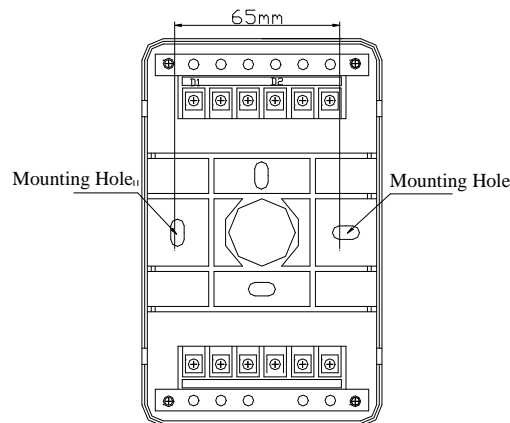


Fig. 4 C-9401 Base box

D1, D2: Startup power DC24V; D1 is positive, D2 is negative.

5. Wiring: Twisted pair for signal loop Z1 and Z2, cross section $\geq 1.0\text{mm}^2$; 227IEC01 wire for power supply D1 and D2, cross section $\geq 1.5\text{mm}^2$.

VI Testing

Warning: Power up only after all devices are well connected.

1. Test should be made to the sounder strobe at least once a year after installation and put into operation.
2. Before testing, notify the proper authorities that the system is undergoing maintenance and will temporarily be out of service. Disable the zone or system undergoing maintenance to avoid unwanted alarms.
3. Testing:
Intelligent: Providing close signal to the outer control contact by manual call point, the sounder strobe is activated and gives audio and visual alarm; Cut the close signal of the outer control contact of the sounder strobe, give start command to the sounder strobe from the controller, the sounder strobe is activated, gives audio and visual alarm, the sounder strobe is in normal operation.
Conventional: Connect DC24V to D1, D2; D1 is positive and D2 negative. The sounder strobe will be activated and give audio and visual alarm.
4. After testing, intelligent sounder strobe can be reset through the controller; conventional sounder strobe can be reset by power cut. Notify the proper authorities the system is back on line.
5. If a sounder strobe fails in testing, check its connection and test again. If it still fails, return for repair.

VII Applications

The wiring of signal bus and power bus for intelligent sounder strobe and direct control through passive normally open contact of manual call point are shown in Fig.5:

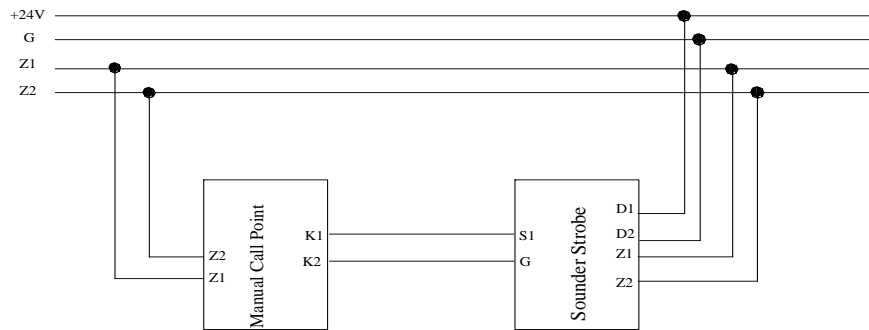


Fig.5 Wiring of signal bus and power bus for intelligent sounder strobe and direct control through passive normally open contact of manual call point

Conventional sounder strobe connects DC24V power in direct startup; D1 is positive and D2 is negative which are reverse when not started up.

