



# Sounder base for CO and fire detectors

GSA-SBT, GSA-T3T4



GSA-SBT



## Description

The GSA-SBT Fire/CO sounder base, which requires the use of a GSA-T3T4 Temporal Pattern Generator, adds an audible output function to the V-PCOS intelligent combination fire/CO detector. The GSA-T3T4 requires VS series control panel V2.2 or higher. It uses the same address and programming label as the detector it supports.

The GSA-SBT sounder base is field-configurable for output volume (low or high dBA). By default, the GSA-SBT sounder base is set for high dBA.

GSA-SBT sounder bases on the same circuit may be activated through programming or as a group or zone with the use of a GSA-CRR polarity reversal module.

Additionally, the fire/CO sounder base can simply operate according to the state of its detector, or it can be configured through system programming to operate in conjunction with all sounder bases on the same circuit, or it can be controlled by program rules.

The base generates a loud piercing tone that has excellent wall penetration qualities. It uses the same tone generator found in the award-winning Genesis line of wall and ceiling horns.

## Standard Features

- Compatible with CO and smoke detectors**  
 Approved audible output facilitated by the GSA-T3T4 Temporal Pattern Generator module.
- High or low dB output**  
 Jumper selects low or high dBA output.
- Single or group operation**  
 Optional programming and polarity reversing module configures base for group alarm output.
- UL268, UL464, and UL2075 listed**  
 UL listing under smoke detector, CO detector, and audible signal standards allows application as smoke alarm, CO alarm and/or audible signal.
- Attractive installation**  
 Flush mount to a wide selection of North American boxes or surface mount to optional custom-matched box.

## Application

The GSA-SBT sounder base is for use with V-PCOS detectors in applications where localized or group alarm signaling is required. The base uses the same address and programming label as the detector it supports.

The base is listed by Underwriters Laboratories under the UL268, UL464, and UL2075 standards, allowing its application where smoke alarms, CO alarms, and/or notification appliances are required. This makes the GSA-SBT ideal for hotels, dormitories, and other residential occupancies where supplementary audible output is required to meet required sound levels for sleeping areas or areas subject to high levels of ambient noise.

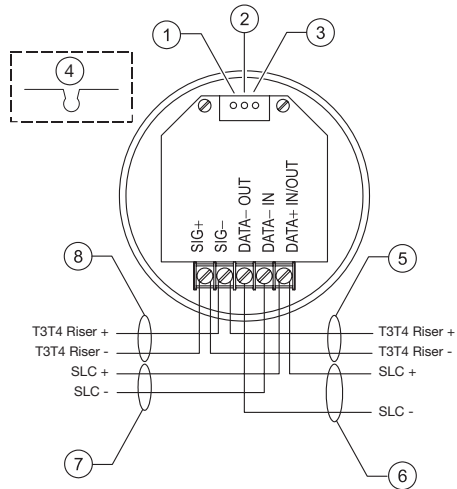
## CO Applications

When a GSA-SBT gets a signal from its detector to activate, there is a delay so the sounder doesn't immediately go in steady tone. When it detects pulses on the coded riser, it activates the sounder. If there are no pulses, the GSA-SBT just sounds steady after the short delay expires.

Depending on the type of alarm, the panel can select the corresponding pattern and send the activation command to the GSA-T3T4.

All sounder bases in the loop are controlled through panel programming. A GSA-CRR module can also be used.

## Configuration



1. Volume setting. Default is high volume. For low volume, cut trace per item 4.
2. Reserved for future use. Do not cut.
3. Reserved for future use. Do not cut.
4. To configure output volume, cut trace as shown.
5. To next GSA-SBT sounder base or EOL relay.
6. SLC\_OUT to next intelligent addressable device.
7. SLC\_IN from intelligent addressable controller or previous device.
8. From GSA-T3T4 Temporal Pattern Generator or previous GSA-SBT sounder base.

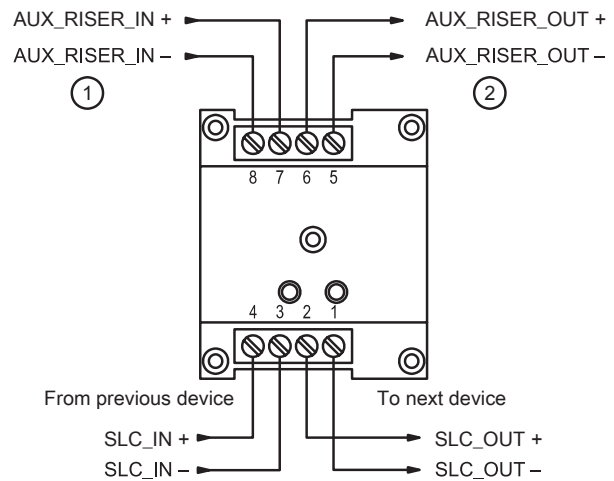
## GSA-T3T4 Temporal Pattern Generator

The GSA-T3T4 Temporal Pattern Generator is an addressable device that generates sound patterns for carbon monoxide (CO) and fire signals for the GSA-SBT sounder base. The control panel sends synchronization and channel commands to the GSA-T3T4; the channel selection determines the pattern. In the U.S. Channel 1 is TC3 and Channel 2 is TC4.

### Temporal patterns

Name	Code	Used for
TC4	UL2075	CO
TC3	NFPA 72	Fire

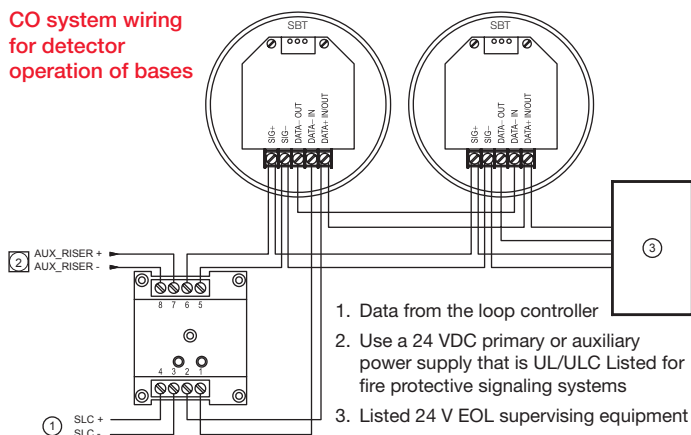
The GSA-T3T4 module uses two addresses on the signaling line circuit (SLC). Address 1 is tied to Channel 1; Address 2 is tied to Channel 2.



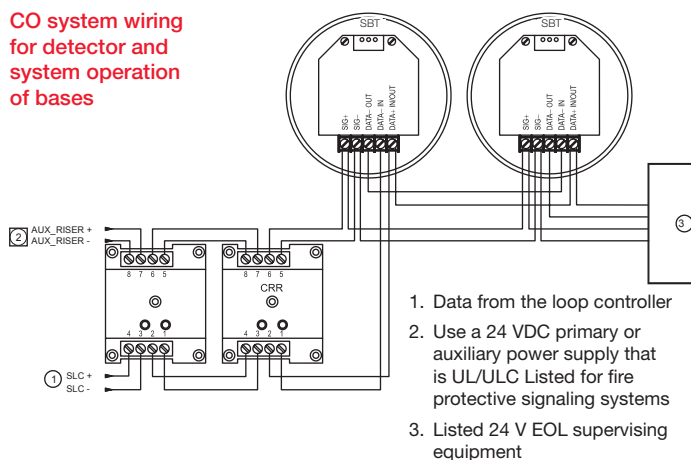
1. Use a power-limited and regulated 24 VDC primary or auxiliary power supply that is UL/ULC listed for fire protective signaling systems.
2. Power out to Fire/CO sounder base or listed EOL relay and supervising module

## Typical Wiring

### CO system wiring for detector operation of bases



### CO system wiring for detector and system operation of bases



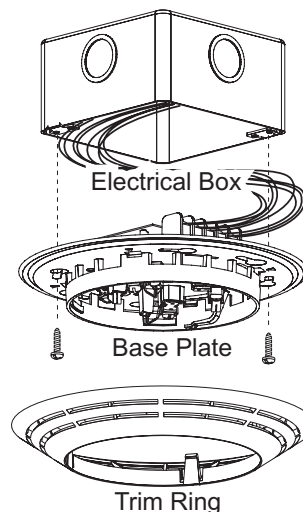
## Fire/CO sounder operating current in mA (RMS)

Voltage	Low dBA	High dBA
16 VDC	17	28
24 VDC	24	41
33 VDC	31	52
16 VFWR	41	48
24 VFWR	51	60
33 VFWR	60	66

VDC = Volts direct current, regulated and filtered  
VFWR = Volts full wave rectified

## Installation and Mounting

**Flush Mounting:** The sounder base flush mounts into 2-1/2 inch (64 mm) deep standard North American 4 inch square electric box, North American 4 x 4 inch octagonal concrete ring (mud box), and standard European 100 mm square electric boxes. The terminal block makes field wire connections fast and efficient. After wiring, a simple push and twist motion locks the Signature detector into the base.



**AB4G-SB**  
Optional Surface Box  
(6.8" diameter x 1.8" deep)

Edwards recommends that life safety systems and their devices always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

## Sound Level Output

Signal	Voltage	Low dBA	High dBA
<b>Reverberant room per UL 464 <sup>1</sup></b>			
TC3 (fire pattern)	16 VDC	80.5	85.2
TC4 (CO pattern)	16 VDC	73.9	77.5

<b>Reverberant room per UL 268 and FM <sup>2</sup></b>			
TC3 (fire pattern)	16 VDC	86.5	90.8
TC4 (CO pattern)	16 VDC	77.5	84.1

<b>Sound pressure level per CAN/ULC-S525 <sup>3</sup></b>			
Temporal	24 VDC	95	91
Steady	24 VDC	93	89

<sup>1</sup> For UL 464 applications, low dBA settings are for private mode only.

<sup>2</sup> For UL 268 applications, the high setting must be used for evacuation.

<sup>3</sup> Voltage is regulated and filtered.

## Audible directional characteristics

Angle (degrees)	Output sound pressure level
90 (ref)	0 dBA
75 and 110	-3 dBA
55 and 115	-6 dBA

ULC anechoic room



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## Fire/CO Sounder Base Specifications

Riser operating voltage	16 to 33 VDC
Current (RMS)	Operating 31 mA (low dBA); 52 mA (high dBA) Supervisory DC = 1.46 mA, FWR = 2.15 mA
Default output volume	High dBA
Resonant frequency	3.2 kHz
Temporal pattern	As determined by the GSA-T3T4
Compatible detectors	V-PCOS only
Compatible electrical boxes	AB4G-SB surface box for audible base; 4 in. square by 2-1/2 in. (64 mm) deep box; 3-1/2 in. octagonal by 2-1/2 in. (64 mm) deep box; Standard European 100 mm <sup>2</sup> box
Wire size	12 to 18 AWG (0.75 to 2.50 mm <sup>2</sup> )
Base diameter	6.8 in. (173 mm)
Base height from box	0.8 in. (21 mm)
Maximum distance from ceiling	Wall mount — 12 in. (305 mm)
Environment type	Indoor only
Operating environment	Temperature 32 to 120°F (0 to 49°C) Relative humidity 0 to 93% noncondensing
Storage temperature	-4 to 140°F (-20 to 60°C)

## Ordering Information

Catalog Number	Description	Ship Wt., lb. (kg)
GSA-SBT	Audible (Sounder) Base for CO and Fire Detectors	0.3 (0.15)
GSA-T3T4	Temporal Pattern Generator	0.2 (0.1)
AB4G-SB	Surface Box for Audible Base	1.0 (0.45)
<b>Related Equipment</b>		
GSA-MCRR	Polarity Reversal Relay (Plug-in UIO module)	0.18 (0.08)
GSA-CRR	Polarity Reversal Relay (Standard mount module)	0.2 (0.1)
GSA-MCR	Control Relay Module (Plug-in UIO module)	0.18 (0.08)
GSA-CR	Control Relay Module (Standard mount module)	0.2 (0.1)
GSA-RM1	Riser Monitor Module	0.2 (0.1)
G1M-RM	Signal Master (1-gang remote mount)	0.2 (0.1)