

INSTALLATION AND MAINTENANCE INSTRUCTIONS

SOUNDER BASE

TR-B501BH-3, TR-B501BH-3/W

For use with the following models:

TR-PTIR-W, TR-PTIR-IV, TR-FIRE-CO-IV, TR-FIRE-CO-W, TR-FIRE-CO-IV, TR-PTIR-IV, TR-HEAT-IV, TR-HEAT-HT-IV, TR-HEAT-ROR-IV, TR-HEAT-ROR-W, TR-HEAT-ROR-W, TR-HEAT-T-W, TR-HEAT-W, TR-HEAT-HT-W, TR-HEAT-ROR-W

SPECIFICATION

| | |
|------------------------------------|--|
| Base Diameter: | 4.04 inch (103 mm) |
| Base Height (less detector): | 2.15 inch (54.6mm) |
| Weight: | 0.282lb (128g) |
| Operating Temperature Range: | -4°F to 120°F (-20°C to 49°C) |
| Operating Humidity Range: | 10% to 93% relative humidity (non-condensing) |
| External Supply Electrical Ratings | |
| External Supply Voltage: | 16 to 33 VDC |
| Rated Voltage: | 24V |
| Standby Current: | <140µA (Typical in 24VDC) |
| Alarm Current: | 35mA maximum |
| SLC Electrical Ratings | |
| SLC Operating Voltage: | 15 to 32 VDC |
| Rated Voltage: | 24V |
| SLC Standby Current: | <200µA (Typical in 24VDC) |
| Alarm Current: | 6.5mA (Setting in low volume). When loop power is used and high volume is required, alarm current will be greater than 6.5mA but less than 35mA. |
| Sound Output | |
| High Volume: | Greater than 85dBA in high volume and continuous tone, greater than 75dBA in high volume and Temp-3 tone, 16 Volts, measured in a UL reverberant room. |
| Low Volume: | Greater than 45dBA measured in a UL reverberant room, 16 Volts in low volume, continuous tone or Temp-3 tone. |
| Isolator Electrical Ratings | |
| Maximum Current Draw: | 17mA (device in isolation) |
| Maximum Load Current: | 1A |
| Maximum ON Resistance: | 80mΩ @24VDC |

BEFORE INSTALLING

Please read the TRIGA Detector Application Guide, which provides Detailed information on detector spacing, placement, zoning wiring, and special applications. Copies of this manual are available from TRIGA, NFPA72 and NEMA guidelines should be observed.

NOTICE: This manual should be left with the owner/user of this equipment.

IMPORTANT: The detector used with this base must be tested and maintained regularly following NFPA72 requirements. The detector should be cleaned at least once a year.

GENERAL DESCRIPTION

The TR-B501BH-3 and TR-B501BH-3/W sounder base are used with TRIGA intelligent detectors, and it is only suitable for indoor use in damp locations. Refer to the appropriate manual for more information on detectors.

The TR-B501BH-3 and TR-B501BH-3/W sounder base were designed specifically to meet the needs of dwelling unit applications. It offers maximum flexibility in configuration and operation to meet or exceed the requirements of UL268, UL464.

The sounder base is capable of sounding in high volume or low volume and is capable of producing either the distinctive three-pulse temporal pattern (ANSI Temporal 3) fire alarm signal now required by NFPA 72 for commercial and residential applications or a continuous tone by simply setting toggle switch from the device. Additionally, the TR-B501BH-3 and TR-B501BH-3/W are designed to be compatible with existing installations of B501BH-3 sounder bases except difference of the synchronization signal.

The sounder base is intended for use with intelligent systems. It includes an isolation circuit, and the isolation circuit enable part of the communications loop to continue operating when a short circuit occurs on it. The module will automatically restore the entire communications loop to the normal condition when the short circuit is removed.

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CAUTION

For system monitoring for terminals 4 and 5, do not use looped wire under terminals. Break wire run as shown in Figure 2 to provide monitoring of connections.

TR-B501BH-3 TR-B501BH-3/W TERMINALS

- No. Function
- External Supply Negative (-)
 - External Supply Positive (+)
 - Isolation Positive (+) Comm. Line In and Out
 - Sounder Base Interconnect
 - Positive (+) Comm. Line In and Out
 - Negative (-) Comm. Line In and Out

FIGURE 1:

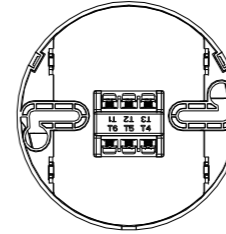
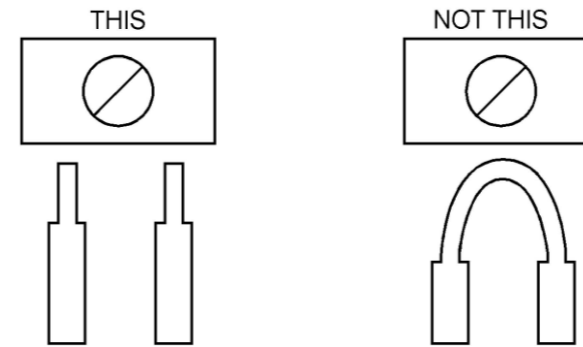


FIGURE 2:



MOUNTING

Mount the TR-B501BH-3 and TR-B501BH-3/W directly to an electrical box. Embedded box mounting holes distance greater than 1.96 inch (49.8mm) and smaller than 3.43 inch (87.1mm).

- Install the plastic ring to the sounder base if the sounder base install with plastic ring.
- Connect field wiring to terminals, as shown in Figure 1 and 2.
- Attach the sounder base to the junction box as shown in Figure 3.
- Secure the sounder base by tightening the mounting screws.
- Install a compatible detector as described in the installation manual for the detector.

TESTING AND MAINTENANCE

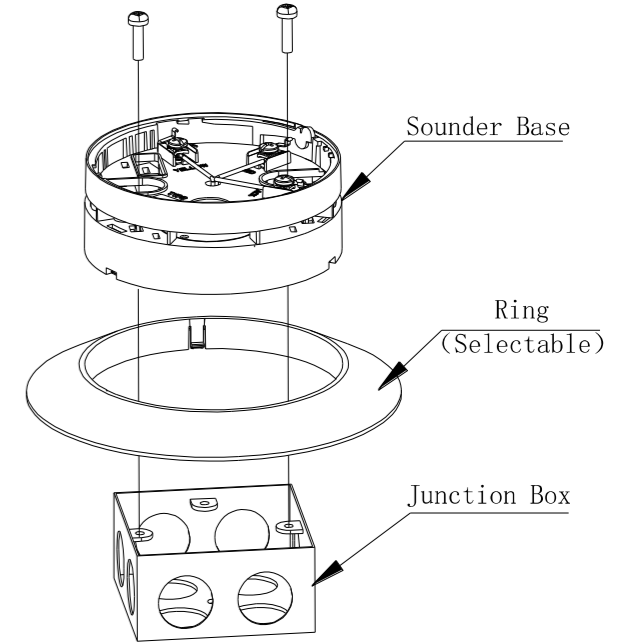
Detectors and bases must be tested after installation and as an Integral part of a periodic maintenance program. Test the TR-B501BH-3 and TR-B501BH-3/W as follows:

NOTE: Before testing, notify the proper authorities that the detectorsystem is undergoing maintenance, therefore, will be temporarily out of service. Disable the system undergoing maintenance to prevent unwanted alarms.

- If configured in external power supply, reverse the polarity of the external 24VDC supply. If configured as in Figure 7, turn on the Intelligent Relay Module.
- Latch the detector LED on from the control panel. That individual detector's TR-B501BH-3 and TR-B501BH-3/W sounder base should sound.

When performing maintenance on connected detectors, carefully note the location and address of each removed detector.

FIGURE 3: MOUNTING



TAMPER RESISTANT FEATURE

NOTE: Do not use the tamperresist feature if the removal tool is to be used.

This detector base includes a tamperresist feature that prevents its removal from the base without the use of a tool. To activate this feature, break the tab from the detector base as shown in Figure 4A. Then, install the detector.

To remove the detector from the base once the tamperresist feature has been activated, insert a small-bladed screwdriver into the slot from the top and press down on the lever (see Figure 4B).

This allows the detector to be rotated Counter-clockwise for removal. The tamperresist feature can be defeated by breaking and removing the plastic lever from the base. However, this prevents the feature from being used again.

FIGURE 4A. ACTIVATING TAMPER-RESISTANT FEATURE

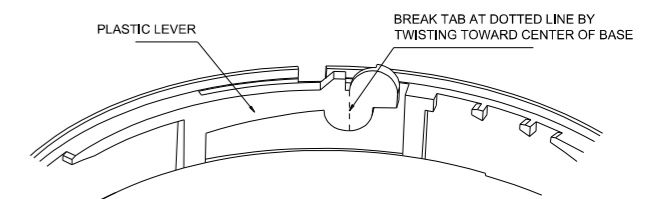


FIGURE 4B. REMOVING DETECTOR HEAD FROM DETECTOR BASE.

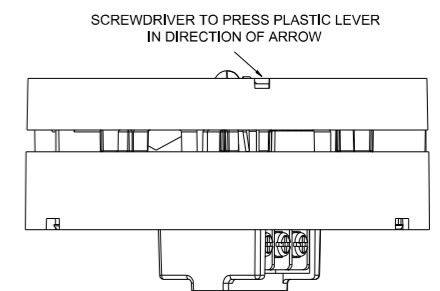
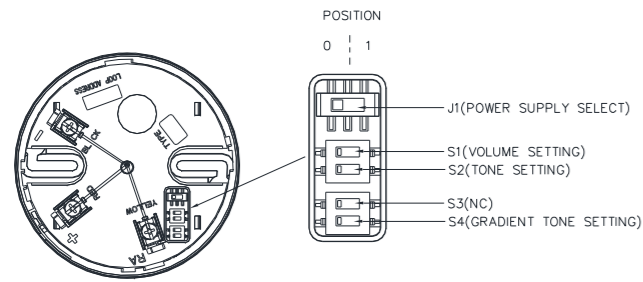


Table A

FIGURE 5: TR-B501BH-3 , TR-B501BH-3/W SETTING POSITION



Notes:

1. Slide SPST switch to position "0" or "1" to change Setting for Volume, Tone, and Gradient tone.
2. There are totally 8 configurations. See Table A.
3. When loop power is used, it is recommended to switch S1 to "0" for low volume.
4. When loop power is used and high volume is required, alarm current will be greater than 6.5mA but less than 35mA.

| J1 Power Supply Setting | | | | | |
|-------------------------|---------------------------------|-----|-----|-----|--|
| Position | DESCRIPTION | | | | |
| 0 | Communication loop power supply | | | | |
| 1 | External DC24V power supply | | | | |
| Function Setting | | | | | |
| No. | Position | | | | DESCRIPTION |
| | S 1 | S 2 | S 3 | S 4 | |
| 1 | 0 | 0 | / | 0 | Low volume & Continuous & Alarm without gradient tone |
| 2 | 1 | 0 | / | 0 | High volume & Continuous & Alarm without gradient tone |
| 3 | 0 | 1 | / | 0 | Low volume & Temp-3 & Alarm without gradient tone |
| 4 | 1 | 1 | / | 0 | High volume & Temp-3 & Alarm without gradient tone |
| 5 | 0 | 0 | / | 1 | Low volume & Continuous & Alarm with gradient tone |
| 6 | 1 | 0 | / | 1 | High volume & Continuous & Alarm with gradient tone |
| 7 | 0 | 1 | / | 1 | Low volume & Temp-3 & Alarm with gradient tone |
| 8 | 1 | 1 | / | 1 | High volume & Temp-3 & Alarm with gradient tone |

FIGURE 6: WIRING DIAGRAM

DETECTOR ACTIVATES SOUNDER BASE(S) IN COMMUNICATION LOOP POWERED.

UL has approved grouping for up to six TR-B501BH-3 and TR-B501BH-3/W sounder bases. When wired as a group, any detector in the group that is activated by the panel will cause other TR-B501BH-3 and TR-B501BH-3/W units in the group to sound. This type of "local" grouping is accomplished by wiring the grouped devices together using terminal T4, Sounder Base Interconnect, as shown in the diagram. When loop power is used and high volume is required, alarm current will be greater than 6.5mA but less than 35mA.

The equipment and wiring in dotted line are optional.

NOTE: A local grouping of horns via the sounder base inter-connects is not supervised, therefore the groups can only be used as a supplementary evacuation system. It is not acceptable to group horns via the sounder base interconnect for primary alarm signaling.

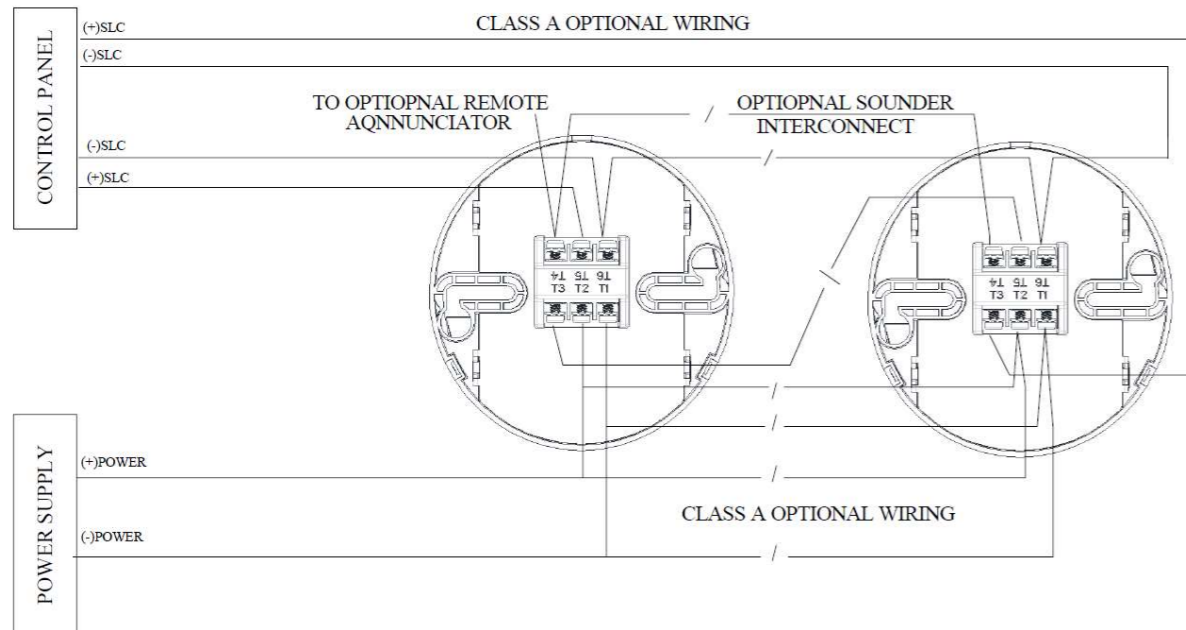


FIGURE 7: WIRING DIAGRAM

DETECTOR ACTIVATES SOUNDER BASE(S) IN EXTERNAL POWER SUPPLY POWERED; INTELLIGENT RELAY MODULE ACTIVATES ALL SOUNDER BASES.

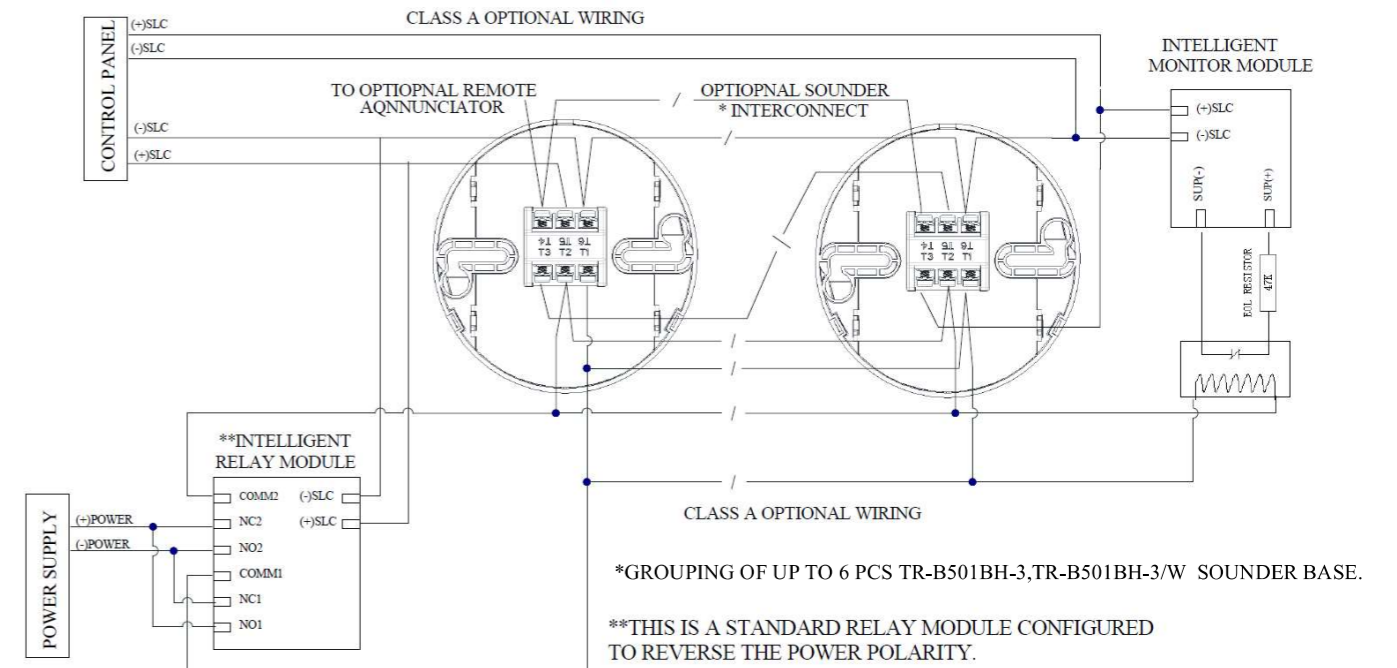
UL has approved grouping for up to six TR-B501BH-3 and TR-B501BH-3/W sounder bases. When wired as a group, any detector in the group that is activated by the panel will cause other TR-B501BH-3 and TR-B501BH-3/W units in the group to sound. This type of "local" grouping is accomplished by wiring the grouped devices together using terminal T4, Sounder Base Interconnect, as shown in the Diagram.

The equipment and wiring in dotted line are optional.

Connecting to the Intelligent Relay Module, all TR-B501BH-3 and TR-B501BH-3/W sounder bases on the external power supply loop will sound if Relay Module is activated.

Interconnection and Reverse external power polarity to sound function are independent of each other. They can also be combined according to different applications.

NOTE: A local grouping of horns via the sounder base inter-connects is not supervised; therefore, the group can only be used as a supplementary evacuation system. It is not acceptable to group horns via the sounder base interconnect for primary alarm signaling. An individual power supply should be used for the relay module. If one power supplier is used to provide power for the relay module, the power supply may be shorted.



Note: Please dispose electronic waste following national or local regulations after being scrapped or replaced. Do not discard.

Please refer to insert for the Limitations of Fire Alarm Systems

THREE-YEAR LIMITED WARRANTY

TRIGA warrants its enclosed sounder base to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. TRIGA makes no other express warranty for this sounder base. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the sound-er base which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture.

The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.