

Boost Talk Battery and Loop Current to Line Powered Devices



The **TBB-1B** will boost talk battery voltage up to 48VDC, and current up to 26mA on single analog line extensions behind PABX's and electronic key systems. This is helpful for powering line powered devices such as touch tone dialers and emergency phones on low voltage and/or low loop current extensions.

When the **TBB-1B** is being used, the power LED lights extra bright to show activity. The **TBB-1B** is not compatible with Pulse/Rotary dialing.

Features

- Boost talk battery voltage up to 48VDC
- Boost talk battery loop current up to 26mA
- Power LED also displays activity
- Passes original ringing through to the device
- Passes caller ID data
- Passes hook switch flash
- Passes CPC signals
- Power adapter included
- Compatible with touch tone dialing

Note: Not compatible with pulse/rotary dialing.

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Applications

- Run line powered devices such as handsfree phones, touch tone hot-line dialers, digital announcers, etc.
- Increase maximum loop length on analog PABX/KSU stations
- Use with wireless doorbox devices
- Increase phone line voltage / current for alarm panels

Phone...715.386.8861

Specifications

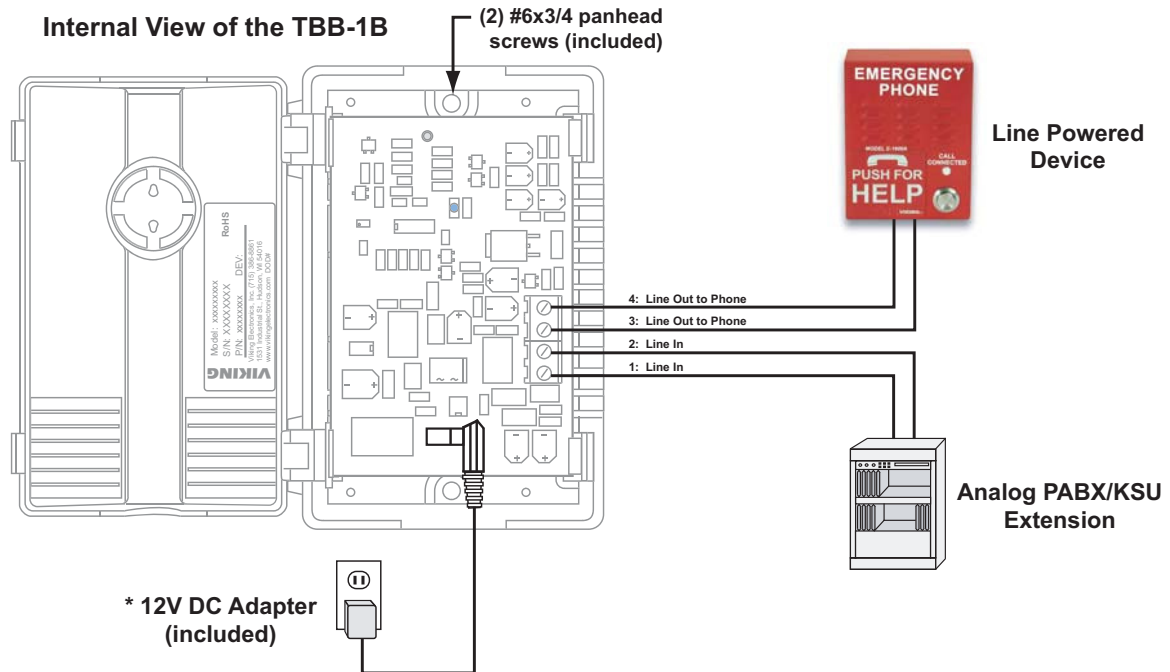
Power: 120VAC/12V DC 500mA, UL listed adapter provided
Dimensions: 76mm x 112mm x 36mm (3.0" x 4.4" x 1.4")
Shipping Weight: 0.68 kg (1.5 lbs)
Environmental: 0° C to 32° C (32° F to 90° F) with 5% to 95% non-condensing humidity
Loop Current to Device: 26mA (nominal)
Talk Battery Output: 48V DC (nominal)
Connections: (4) screw terminals

Installation

Step 1.	Open the plastic cover.
Step 2.	Connect the analog extension to the LINE IN screw terminals.
Step 3.	Connect the line powered device to the PHONE screw terminals.
Step 4.	Connect the provided 12VDC adapter to the power jack.
Step 5.	Snap the cover back into place.



IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.



* **IMPORTANT:** For emergency phone applications, use an uninterruptible power source.

Operation

The **TBB-1B** is designed to boost talk battery voltage and loop current of a single analog line. The **TBB-1B** achieves this by creating its own 48VDC talk battery supply that is set up as a 26mA current source. An analog phone line can be in three different states: the idle state, the ringing state, and the in-use state. The **TBB-1B** operated these three states like this:

Starting with the idle state; no matter what the incoming talk battery voltage is, the **TBB-1B** will supply 48VDC talk battery out to the on-hook phone. This is helpful for devices such as alarm panels that want to see high talk battery voltage as an indication the analog phone line is in good working condition.

In the ringing state, the **TBB-1B** provides a “copper-thru” path from input to output. This allows both the ringing signal and caller ID signals to simply pass through the unit.

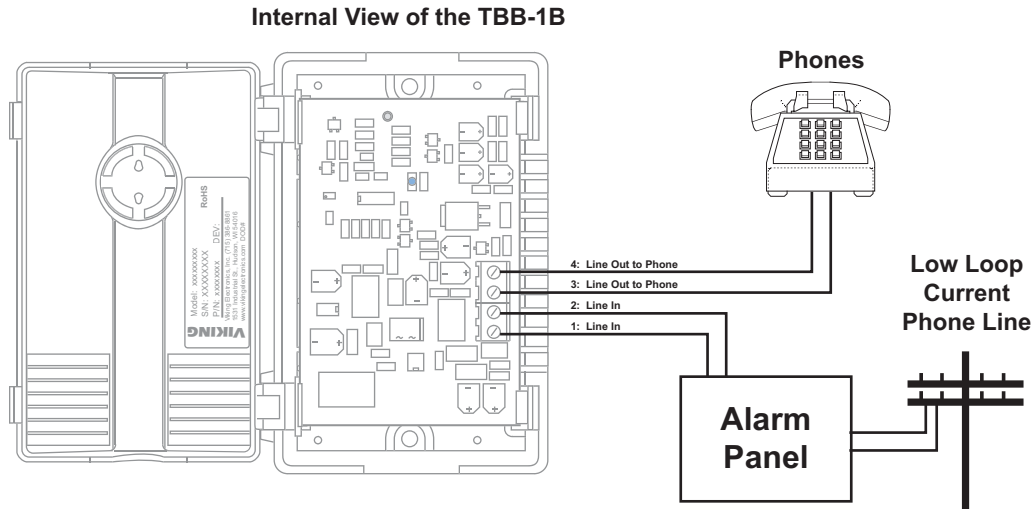
In the in-use state, the **TBB-1B** seizes the incoming analog line with a “gyrator” circuit, which provides a DC off hook state to the incoming analog line. At the same time, allowing the AC audio signal to freely pass through to the **TBB-1B**'s 26mA current source which is feeding the off hook phone device. So, no matter what the incoming loop current is, the **TBB-1B** will output 26mA of loop current to the off hook phone.

In the idle and ringing state, the **TBB-1B** power LED lights blue. When in the in-use state, the power LED lights extra bright.

Alarm Panel Applications

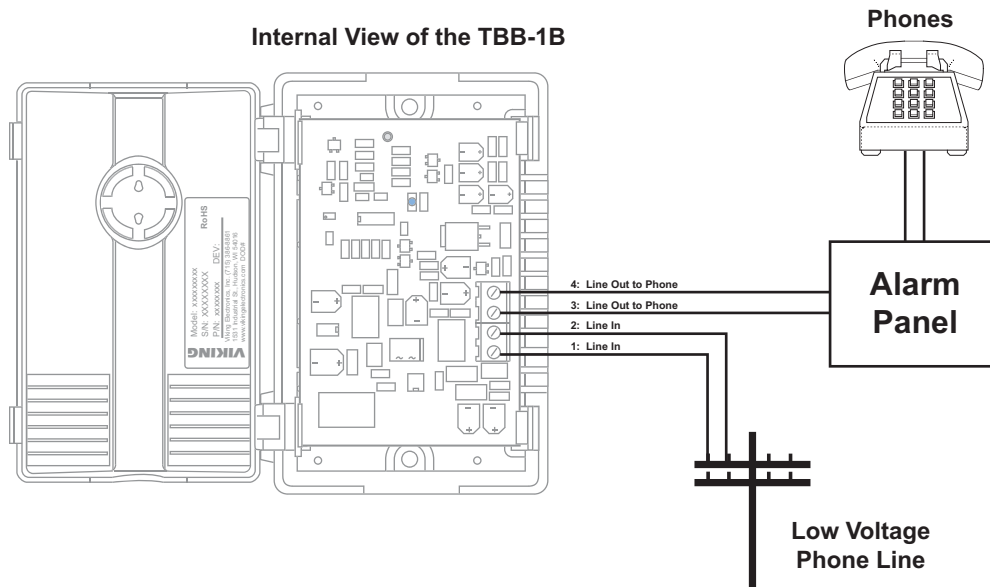
A. Low Loop Current

Low loop current from a VoIP ATA, cable company, or telco provided phone lines can cause some alarm panels to go into an alarm state due to very low levels at the phone when in-use. Solve this problem by wiring a **TBB-1B** as shown below. The **TBB-1B** increases the in-use voltage.



B. Low Idle Voltage

Low idle voltage from a VoIP ATA, cable company or telco provided phone lines can cause some alarm panels to go into an alarm state. Solve this problem by wiring a **TBB-1B** as shown below. A **TBB-1B** increases the idle voltage, converting 24 volt lines to 48 volt lines.



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