



Railroad Grade Electronics

ZEPIC III

The ZEPICIII is a 2-Wire audio overlay track circuit operating on 9 to 24VDC and is available in the following track drive frequencies: 8.2K, 10K, 11.5K, 13.2K, 15K, 17.5K, 20K. This track circuit provides a sinusoidal output under all track load conditions minimizing possible harmonic interaction with other audio equipment on the track. The unit also provides consistent activation point independent of operating battery. Digital receiver circuitry provides for precise receiver operation. The unit is calibrated by simply dropping a shunt at the activation point and pushing the cal button. Additionally, a non-vital loss of shunt timer is provided to further optimize consistent performance. A front panel LED has been provided to allow a visual indication of the ZEPIC relay drive.

8.2 KHz, 10 KHz, 11.5 KHz, 13.2 KHz, 15 KHz, 17.5 KHz, and 20 KHz Operating Frequencies. (Single frequency assigned at the time of purchase.)

Sinusoidal output independent of track load

Provides consistent activation point independent of operating battery

Built-in LOS timer (non-vital)

Semi-Automated track circuit set-up feature. "Drop a shunt and push a button."

Operational battery range of 9 to 24 VDC, simplifying AEI installations

Innovative output circuitry minimizes risk of track loading due to single component failure

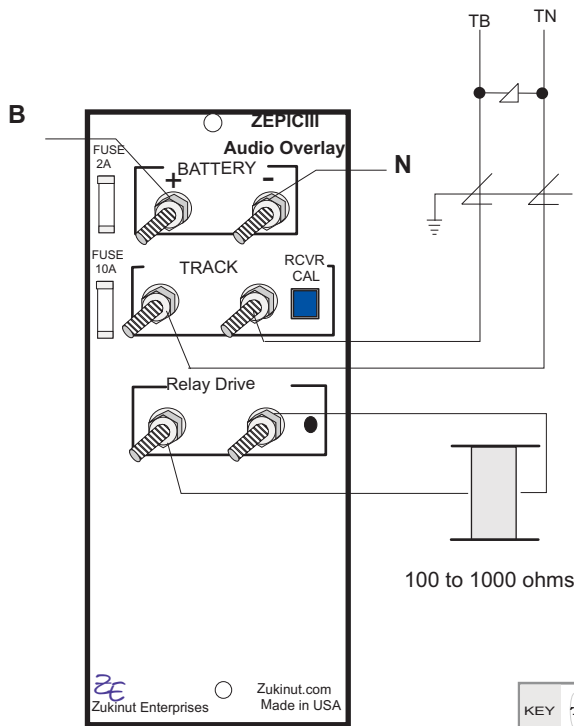
Digital band pass filter receiver circuitry

Service internal circuitry without disturbing house wiring

Replaces the EPICIII

P/N 21429



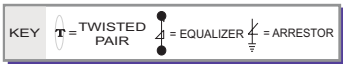


IMPORTANT: The ZEPICIII was designed for use only in **NON** vital applications.

NOTE: For communications applications the ZEPICIII can be powered from 24VDC without the need of a DC/DC converter.

NOTE: When interfacing the ZEPICIII to an AEI system, such as the SAIC APU, connect only the relay drive negative to the APU main terminal block pin 7. (presence in).
The relay shown is NOT needed.

IMPORTANT: This information is provided as an installation guideline and is not intended to supersede the recommendations of your AEI equipment provider.



Installation

Procedure

1. Mount the ZEPICIII on a shelf or wall.
2. Install Primary surge protection in the form of air gap arrestors and shunt-type equalizers on the track and battery leads.
3. Connect battery, track and relay drive wiring per the site plans. #6 bond strand is recommended for track wiring.
4. Place a 0.06 ohm shunt at the desired activation point. **NOTE:** The track **MUST** be shunted before the calibration button is pressed.
5. Press and HOLD the Blue RCVR CAL button until the relay drive LED starts blinking. Release the Blue button and the LED will stop blinking and the ZEPIC will automatically begin the calibration process. **NOTE:** The track shunt **MUST** remain in place during the calibration process.
6. The relay drive will pick (LED on) when the unit has successfully calibrated. **NOTE:** This process can take up to 45 seconds to complete.

Verification

1. Lift the shunt and relay drive should drop.
2. Move the shunt 10ft further out from the calibration point and verify that relay drive does not pick up.
3. **IMPORTANT:**
To insure accurate activation point, always place the shunt **BEFORE** pressing the RCVR CAL button.
4. If the ZEPIC can not achieve calibration, it will blink the relay drive LED 3 times in rapid succession indicating a calibration error. The unit will continuously repeat the calibration procedure (no need to press the Blue button) allowing you to troubleshoot the track circuit, wiring and battery. Once the trouble has been corrected, repeat the calibration procedure in steps 4 - 6.
5. Because the ZEPIC is a 2 wire system, it will activate an equal distance on both sides of the track feed point.

The verification procedure detailed above is a typical method and is not intended to supersede the accepted practice of your railroad.



Typical ZEPICIII Installation

Zukinut Enterprises, LLC