Next Generation Track Circuit

The next generation of track circuit technology – delivering advanced signal processing, safety-critical digital communications, and seamless integration with Electro Code 5 and ElectroLogIXS®. Electro Code 6 (EC6) enhances reliability, reduces maintenance compared to previous generations of Electro Code, and optimizes railroad operations for the future.

KB SIGNALING™

Electro Code 6 (EC6)
Next Generation Track Circuit

Key Benefits

- Vital and secure digital rail communication
- No adjustments required (initially or ongoing)
- 8 additional vital signal aspects (14 total)
- 10 Application Defined Statuses
- Real-time ballast, rail resistance measurement
- Longer track circuits (up to 40,000 feet)
- Advanced broken rail detection
  - Separate indication from train detection
  - Detection with occupied or unoccupied blocks
  - Break location
- Improved detection of poor shunting

About the Technology

The EC6 uses advanced signal processing techniques to provide a digital vital communication through the rails. The communication is designed such that it will not interfere with other track connected devices such as highway grade crossings, cab signal systems, and audio overlays.

The digital communications allows for an increase in the amount of data that can be transmitted between wayside locations. It also allows for each location to share information with each other regarding how much signal is transmitted and received, which enables real-time measurement of ballast conditions. Knowledge of the ballast conditions has not traditionally been known and is useful for understanding the overall health of the track.

This innovative approach to track circuit design, in some cases, allows for operation at lower ballast conditions. It also allows for better detection of poor shunting vehicles.

EC6 allows the user to insert Application Defined Statuses into the digital communications. This can be useful for propagating custom information through the rails such as maintenance alerts, switch position, crossing alarms, etc.

Unlike when migrating from EC4, existing EC5 and ElectroLogIXS installations do not need to be replaced but can be easily upgraded to utilize EC6 track protocol. Many of the benefits can be realized with a simple module swap (VTI-2E for VTI-2S), replacement of the lightning protection and fuses on the Track Inductor Panel (TIP upgrade kit for EC6), and a VPM-3 executive software upgrade, without any changes to existing application software or wiring. To use EC6 Application Defined Statuses, Track Codes A-H, or VTI-2E NVIO requires an application compiled in LogicStation revision 2.13 or newer.

For more information regarding which VPM-3 executive software versions support EC6, contact KB Signaling.

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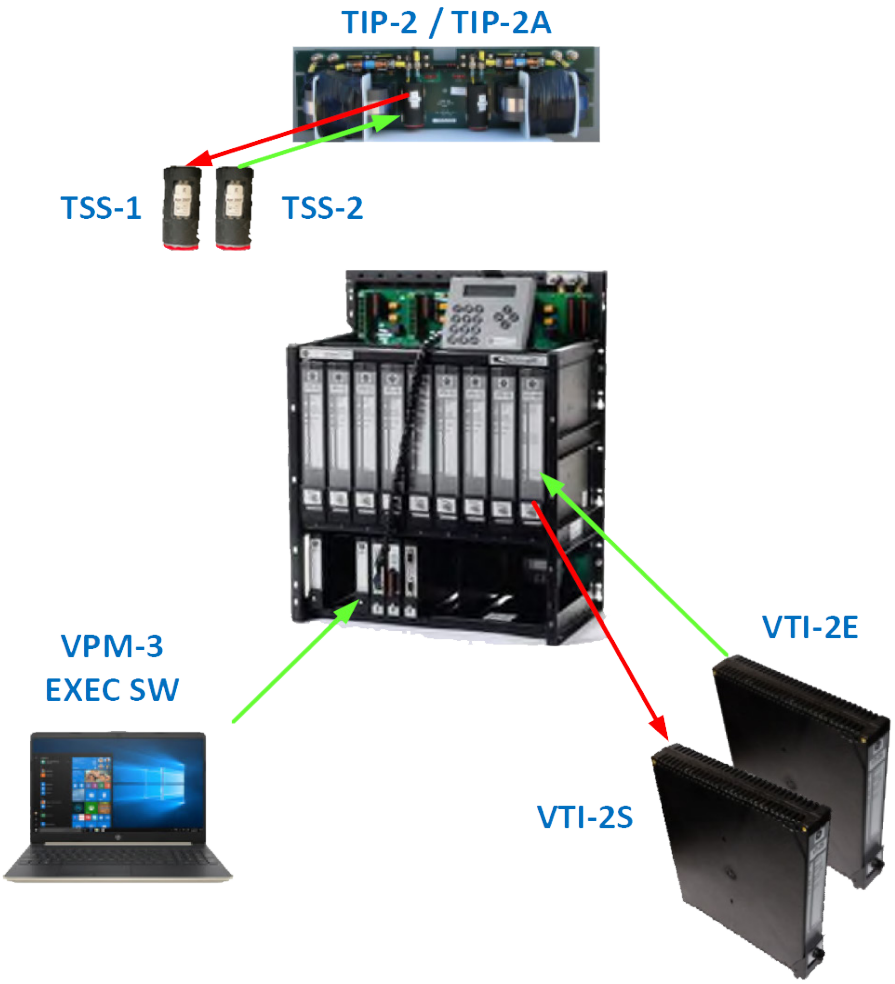
Customer Benefits

Simple Upgrade

- No changes to application software required (if not using additional codes/statuses)
- Replace the VTI-2S module with the VTI-2E module
  - PN 251777-200 supports legacy Electro Code and the new EC6 protocol
  - PN 251777-300 supports legacy Electro Code, the new EC6 protocol, and Virtual Block
- Upgrade the executive software to version 6.42 or newer
- Upgrade or replace the Track Inductor Panel to be compatible with EC6
  - TIP upgrade kit for EC6 (PN 180756-000)
  - For new installations, use TIP-2E (PN 800-096000-711)



Contact your KB Signaling Business Development Manager
Call 1-800-825-7090, or Email us at aso.techsupport-kb@alstomgroup.com for more information today

KB Signaling
2712 S. Dillingham Rd.
Grain Valley, MO 64029
Phone: +1 800-825-7090
www.kb-signaling.com

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IFE
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