

## VisiRAIL

Visual inspection of your track components from a vehicle or even an office saves track time.

### High-speed Digital Imaging Aids Visual Track Inspection

By providing a recorded view of track components and their conditions, the VisiRail system increases productivity of track inspectors, saves track time, and improves safety. The video playback feature of VisiRail allows track inspectors to identify visual defects in the track bed or track components from inside an inspection vehicle, or even from the comfort of their own office. VisiRail images can even be linked to data from other on-board inspection systems and displayed alongside exception reports and strip charts.

### Next Generation Technology

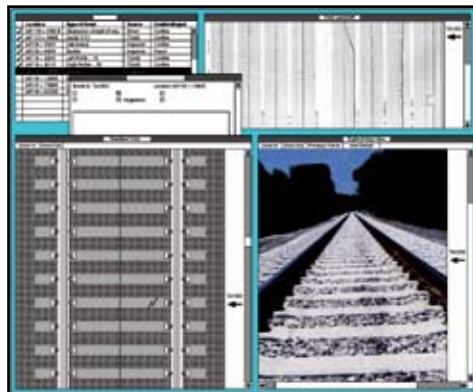
The VisiRail system uses the latest advancements in high resolution image acquisition to capture images of the track bed at track speed (up to 80 mph). Line scan cameras are triggered at a fixed distance sampling rate while high-intensity lights illuminate the track bed. The images are assembled by state-of-the-art processors. Successive images are stitched together to form a video of the track bed. This approach ensures that the quality of the images, and the resulting video, will not be compromised by fluctuating speeds.

### Primary Benefits of VisiRail Technology

- Improves safety and productivity of visual track inspection
- Saves track time required for track inspection
- Decreases subjectivity in track inspection
- Provides documented records/images of track and track components' conditions



VisiRail eliminates the subjectivity of manual inspection, improving safety and efficiency.



- Flexible, modular design that is easily upgraded
- Fully operational while traveling at high speeds

ENSCO provides VisiRail for Amtrak's track inspection program. VisiRail can be customized to meet your individual needs, and can be integrated with other

inspection systems to give you the most complete information on the condition of your track.

### Augment Your Current Visual Inspections with VisiRail

As a video recording system, VisiRail can be used to collect high resolution images of your track while it is traversed by any vehicle—inspection car, hi-railer, or even a revenue vehicle. Included with the VisiRail system is a software program for image viewing and analysis. The package provides a GUI interface with play, pause, zoom, and scroll functions for reviewing images. Once an image analyst finds a defect, the software captures its location and provides a report window that includes a field for analyst comments. Upon completion of the report, the report information with a digital image of the de-

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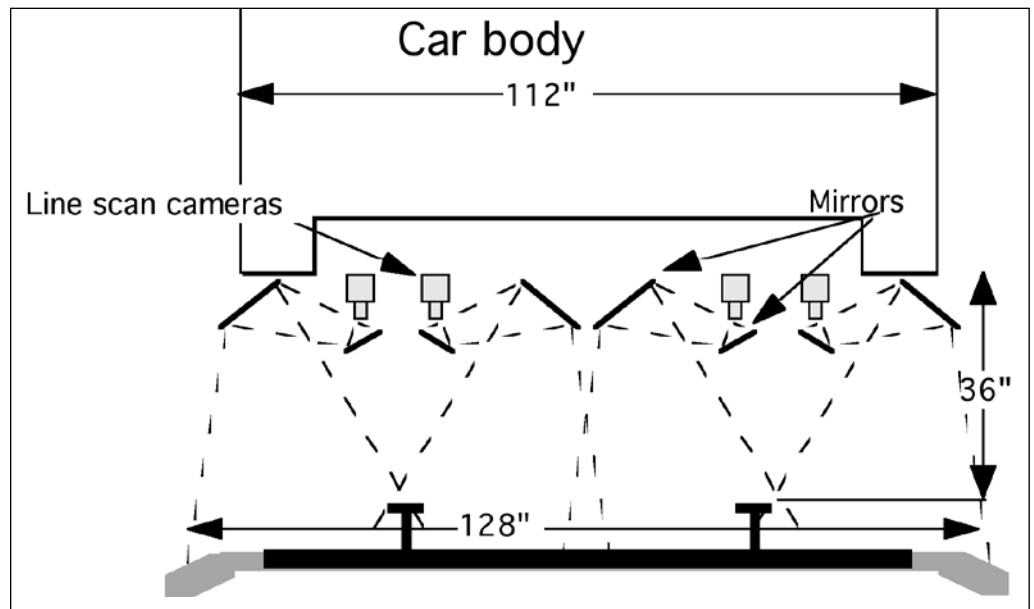


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fect is automatically recorded and can be exported to an exception report.

The video can be reviewed by a track inspector from inside the vehicle or an office. The video is tagged with milepost/footage information and GPS coordinates, so defects are easy to locate once they are spotted in the video. The system provides users with an inventory of images that can be used for visual review of road crossings, switches, bridges and locations with detected exceptions. The system also provides information for use in accident investigations, maintenance planning and presentations. By using VisiRail in this manner, valuable track time can be saved, the safety and efficiency of visual inspections is improved, and visual inspections are thoroughly documented by video.



## Complete Your Inspection Platforms with VisiRail

VisiRail can be linked to other inspection systems, such as track geometry, ride quality, gage restraint, and many others. The images from VisiRail can be displayed alongside strip charts, waveforms, or other data displays from the inspection systems to provide visual verification of the defect from inside the inspection vehicle. The operator will be able to identify worn or missing track components using the images, and remedial action can be prescribed based on the images associated with a defect. VisiRail images can be printed with your exception reports to assist the maintenance workers in locating the defect. By supplementing your inspection platforms with VisiRail, you have the most complete information possible about your track.

## Key Features

- Visual track inspection up to 80 mph vehicle speed
- High resolution, high quality images of track structure and roadbed
- Advanced video and data processing technology
- Continuous image recordings
- Integration with advanced track geometry, ride quality and global positioning satellite systems
- On-board image display and analysis
- Time and location of events/ discrepancies provided