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An ISO 9001:2000 Certified Company

WIRELESS VIDEO FOR GRADE CROSSING SAFETY



Circular-polarized train receiver antenna

AVOID DANGERS BEFORE THEY BECOME COSTLY — OR DEADLY



Wireless Technology, Inc. has developed a real-time video system that increases the safety and reduces the liabilities of high speed rail transportation. Grade Crossing Video On-Board Monitoring is a system that allows the Train Engineer to view and avoid any potential dangers at grade crossings before they become costly or even deadly disasters.

Without Wireless Technology's On-Board Monitoring System, an engineer has limited visibility along the tracks. If a stalled vehicle or debris were positioned at an upcoming grade crossing, the engineer would have little chance to stop the train and avoid disaster. With Wireless Technology's Grade Crossing Video On-Board Monitoring System the engineer is able to view the obstruction on the track and have adequate warning to respond safely.

HOW THE VIDEO ON-BOARD MONITORING SYSTEM WORKS



The On-Board Monitoring System utilizes a wide angle (6mm) video camera, custom designed FS5800F video transmitter and directional antenna to send live video signals down the track to the train engineer. A specially designed FS5800H circular polarized receiver antenna is installed on the front of the train engine to receive the video transmission as the train moves into the signal path.

The engineer has the entire field of view at the grade crossing displayed on a video monitor located near the engineer's controls. In addition, a machine-vision detection system is incorporated with the video signal for advanced warning of a potential grade crossing blockage. To eliminate the constant distraction of viewing a normal or safe crossing, the video monitor displays a blank screen and will only display the video signal when an obstruction is within the grade crossing detection zone. With the use of Wireless Technology's Grade Crossing Video On-Board Monitoring System the engineer is insured adequate time to evaluate and respond safely to any grade crossing situation.



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PRODUCT INFORMATION — FS-5800 GRADE CROSSING VIDEO SYSTEM



The FS-5800 Grade Crossing Video System includes: (1) Grade Crossing Video Transmitter, (1) Transmitter Antenna, (1) Video Receiver, (1) Custom Designed Receiver Antenna, (1) Installation/Operations Manual and Cables, Connectors, and Mounting Brackets.

WIRELESS TECHNOLOGY VIDEO TRANSMITTER FS-5800F

Power Input Voltage	11-16 VDC or 115 VAC, 60 Hz @ 0.5 amp
Power Draw	250 ma. — low power 500 ma. — high power
Transmitter Frequency	5825-5875 MHz
Frequency Accuracy	50 ppm -15° to +75° C
Transmitter Power Output	50,000 Micro-volts/meter, low power Contact WTI for other available power levels.
Spurious & Harmonics	Less than -60 dBc
Modulation (FCC Index)	FM NTSC Video (5M0A3F)
Pre-Emphasis Complies to:	ITR and CCIR, 405-1
Output Impedance	50 ohms
Transmitters Output Stability	Unconditionally stable into a 10:1 VSWR load, any phase angle. No damage with open or short across output.
Antenna	Truncated Fan
Range	Up to 50 miles dependent on system selected
Image Sensor	Broadcast Standard Color & B&W, EIA-250-C

INPUTS

Video: BNC Connector that accepts a standard NTSC composite video signal (1.0 V P-P), 75 Ohms input impedance.

Power: Terminal strip connector with wire clamps for each terminal

OUTPUT

RF Output: Type "N" coaxial connector. Mates with antenna cable connector provided with antenna.

DIMENSIONS:

Weight: 8 pounds

Size: 9.3" wide X 11.3" high X 5.3" deep

Weatherproof NEMA 4X non-metallic enclosure provided with a mast mount bracket (2" diameter mast, minimum size)

FCC CERTIFIED • MADE IN USA • PATENT PENDING

CONFORMS TO EIA-TIA-250-C

WIRELESS TECHNOLOGY VIDEO RECEIVER FS-5800H

Power Input Voltage	11-16 VDC or 115 VAC, 60 Hz @ 0.5 amp
Power Draw	500 ma.
Receiver Frequency	5825-5875 MHz
Receiver Input Sensitivity	-108 dBm
Receiver Accuracy	50 ppm, -15 to +75° C
Spurious & Harmonics	Less than -80 dBc
Noise Figure (Total System)	< 4 dB
Video Bandwidth	up to 16 MHz
Image Sensor/Video Output	NTSC Color and RS-170, 1.0 V P-P
Frequency Response	10Hz to 100 KHz +/- 1.5 dB
Total Harmonic Distortion 10Hz to 100 KHz	less than 0.5dB
Antenna	Dual Helical

INPUTS

RF Input Antenna: "N" Connector, mates with connector on antenna provided.

POWER

Terminal strip connector with wire clamps for each terminal.

OUTPUT

Video Monitor: BNC Connector, NTSC Standard Output, EIA-250-C, 1.0 V P-P; 75 Ohms.

DIMENSIONS:

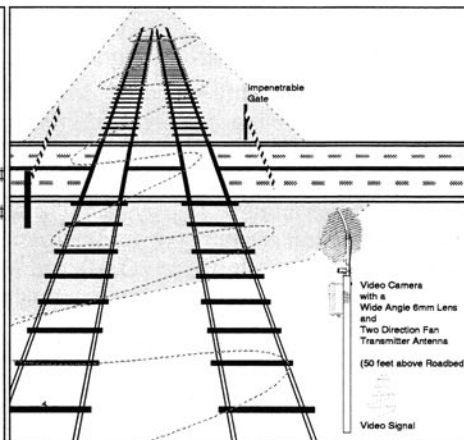
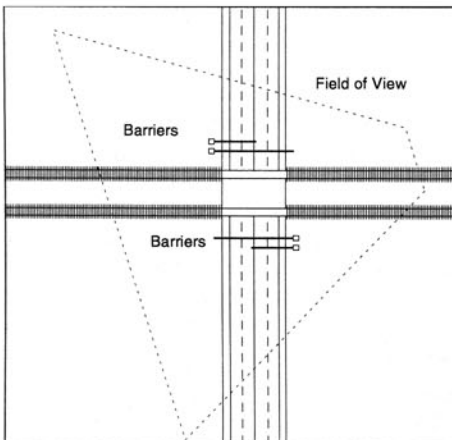
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CONFORMS TO EIA-TIA-250-C



Wireless Technology, Inc.
Field of View at Train Grade Crossing

Wireless Technology, Inc.
Field of View at Train Grade Crossing

Wireless Technology, Inc.
Monitor Inside Train