

VIAMI

Seeker D with MCA III

Digital Leakage Management System
A Trilithic Series Leakage Solution

Overview

With the Seeker D™ and Seeker MCA III along with existing Seeker analog leakage detectors, the VIAMI Seeker GPS System provides the complete leakage solution. This means no investment for special drive-out vehicles is required, and every truck in the operator's fleet can identify leakage outbreaks with GPS precision.

Digital Leakage Detection

The VIAMI Seeker D leakage detector accurately detects and measures signal leakage near the LTE and aeronautical frequency bands and features an unsurpassed sensitivity from 2–2000 $\mu\text{V}/\text{m}$.

The Seeker D works in conjunction with the CT-4™ Channel Tagger. The CT-4 is a 1U rack mounted unit that is located in the head end that provides an uncompromising tagging solution for active analog or digital systems.

In the NAV band, the Seeker D detects the proprietary signal from the CT-4 and scales it to be similar to leakage readings taken from an analog carrier. Consequently, readings taken from the Seeker meter and Seeker D meter produce similar results in the aeronautical band. In fact, this system provides the flexibility to scale the reading to analog or digital, your choice.

Key Features

- High-performance, GPS-based leakage management system that accurately monitors leakage in all digital systems or mixed digital and analog systems with unsurpassed sensitivity from 2–2000 $\mu\text{V}/\text{m}$
- Upload Leakage data and receive firmware upgrades via LAW software through WiFi, Ethernet, or Cellular.
- Optional Garmin interface provides turn-by-turn directions to leak locations
- Cost-effective solution utilizing the majority of existing seeker GPS installation and equipment



Whether testing for leaks in both digital and analog systems, or monitoring aeronautical bands or LTE, Seeker D provides all of the capability to find and fix leaks quickly, accurately, and effectively.

The Seeker D leakage detector and the included mobile mount allows you to utilize your existing LAW Server, and Garmin GPS receiver, while keeping your plant technologically ready to meet tomorrow's leakage monitoring needs.

Advanced Channel Tagging

The CT-4 can act as a traditional CT-2™ or CT-3™ and can insert the VIAVI proprietary tagged signals in both the aeronautical range and the LTE range at the same time. This feature provides the ability to detect tagged leaks and ignore untagged leaks, saving time from false alarms from signals not originating in your system.

The CT-4 eliminates the risk of affecting any adjacent digital channels by injecting an adjustable signal from 10 to 30 dBmV, targeting approximately 30 dB below the chosen digital carriers.

Next-Generation Mobile Support

The Seeker MCA III offers high-performance GPS location recording and documentation when monitoring only the aeronautical bands with existing Seeker leakage detectors or monitoring both the aeronautical and LTE bands with the new Seeker D leakage detector. This device also allows you to daisy chain the mobile mounts of the Seeker and Seeker D units together in order to log data from multiple units mounted in the same vehicle.

While driving to a location or to work, the technician leaves the Seeker in the mobile mount, where it's connected to vehicle power, an antenna, and a GPS receiver. The Seeker MCA III automatically monitors leakage outbreaks and records the data with a time/date stamp and the leak's GPS location.

The operator has several options for providing the GPS receiver/antenna to link with the Seeker GPS system.

If there is no existing unit, one can be obtained from VIAVI. If the vehicle is already equipped with a fleet management system using a GPS receiver, in many cases the Seeker GPS system can make use of it.

Uploading data records to a server can be fully automated, occurring whenever the MCA III detects any one of 10 possible operator-controlled WiFi hotspots.

Remote upgrade capabilities via the LAW server provide users with the ability to update firmware without physically connecting to the Seeker MCA III. This feature also provides the ability to perform remote firmware upgrades on the Seeker D when it is placed in the included mobile mount.

Early Detection Notifications

When a set threshold level within the Seeker has been surpassed, the VIAVI Leakage Analysis Workshop™ (LAW) will email an EDN (Early Detection Notification) to insure that large leaks will be identified immediately. This automatic process helps keep the technician from being distracted while driving or working.

Available Seeker D Models

Seeker D Leakage Detector without Mobile Mount	TRI-LKG-SEEKER-D-METER
Seeker D Leakage Detector with Mobile Mount	TRI-LKG-SKR-D-W-MOUNT

Available Seeker MCA III Models

Seeker MCA III with WiFi	TRI-LKG-SEEKER-MCA-WIFI
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Specifications

Seeker D	
Frequency Range	Low band: 135–139 MHz
	High band: 610.5–615 MHz
	Adjustable in 12.5 kHz Steps via Seeker Setup Software
Frequency Settings	10 user-adjustable operating frequencies, selectable on front panel Set using the configuration methods listed below
Receiver Sensitivity	-115 dBmV
Calibrated Level Range	Low band: 2–2000 μ V/m scaled to match an analog carrier with an AFS-2/4 Handheld Dipole or AVM-3 Vehicle Mounted Whip Antenna
	High band: 2–2000 μ V/m scaled to match an analog carrier with an AFS-7 Handheld Yagi antenna OR 4–2000 μ V/m scaled to match an analog carrier with an AVM-4 Vehicle Mounted Colinear Array Antenna
Level Accuracy	\pm 2.0 dB
Display	Dual numerical readout of detected low and high band leakage within sensitivity range
Audible Tone	Tone is present if leakage amplitude exceeds squelch setting and digital tag is detected
	Pitch is proportional to strength of leak
Automatic Noise and Overbuild Discrimination	Internal circuitry discriminates between leaks and noise
	Overbuild discrimination provided by CT-4 channel tagger installed in hub or head-end
Power	Internal battery with eight hours of operation per charge OR Vehicle power of 12 VDC while in Mobile Mount
Configuration Method	USB connection from Leakage Detector to local PC running Seeker Setup Software OR Ethernet or WiFi connection from Seeker MCA III to the LAW Server while the Leakage Detector is located in the Mobile Mount

Seeker MCA III	
Ethernet Communications	10/100 RJ45 connection to fleet management systems
WiFi Communications	Type: WiFi (802.11 a/b/g/n) to operator-controlled and configured hot-spot
	Security: WPA-PSK (TKIP), WEP (128-bit) or WPA2-PSK (AES)
Early Detection Notification (EDN)	Email notification of threshold exceeding leaks

Seeker D Includes	
Seeker D leakage detector	Seeker MCA III
Mobile Mount, Vehicle Power Cable and Wiring Protection Kit (optional)	Seeker MCA III to Mobile Mount Power and Data Cable
Low Band Rubber Duck Antenna	2.4 and 5 GHz WiFi antenna
High Band Rubber Duck Antenna	Shielded ethernet cable (10 ft)
AC Travel Charger and USB Cable	Cellular antenna (optional)
Printed Quick Start Installation Checklist and Guide	
Digital Channel Tagger	Part Number
CT-4 Channel Tagger	TRI-LKG-CT4
Available Software	Part Number
Seeker Setup Configuration Software	TRI-LKG-SW-SEEKER-PC
Low Band Antennas	Part Number
AFS-2 dipole antenna (138 MHz)	TRI-LKG-AFS-2-LONG
AVM-3 magnetic base, vertical quarter-wave whip antenna (138 MHz)	TRI-LKG-AVM-3
High Band Antennas	Part Number
AFS-7 YAGI antenna	TRI-LKG-ANT-AFS-7-YAGI
AVM-4 magnetic base, whip antenna (600–700 MHz)	TRI-LKG-AVM-4
Optional Accessories	Part Number
Garmin® GPS receiver for Seeker MCA II and Seeker MCA III	TRI-LKG-GPS-MCA
CL-9 vehicle power adapter	TRI-ACCY-USBPWR-VEH-WCBL
Replacement Parts	Part Number
Shielded ethernet cable (10 ft)	TRI-ACCY-CAT5-10FT-QUAD
Seeker MCA III to Mobile Mount Power and Data Cable	TRI-LKG-SKR-MCA-PWR-CBL
2.4 and 5 GHz WiFi antenna	TRI-LKG-MCAIII-WIFI-ANT

VIAMI Care Support Plans

Increase your productivity for up to 5 years with optional VIAMI Care Support Plans:

- Maximize your time with on-demand training, priority technical application support and rapid service.
- Maintain your equipment for peak performance at a low, predictable cost.

For more Information: go to viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration
 BronzeCare	Technician Efficiency	Premium	✓	✓	✓		
 SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓



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