

VIACI Seeker D with MCA III

DIGITAL LEAKAGE MANAGEMENT SYSTEM

Seeker D with MCA III is a GPS-based leakage management and CATV leak detection system with a dual-band leakage detector capable of monitoring leakage within the aeronautical band or the near-LTE band in a complete digital system.

- 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 $\mu\text{V/m}$ to 2000 $\mu\text{V/m}$
- Near Real-Time Vehicle Tracking via LAW, Leakage Record Upload and Remote Programming via WiFi, Ethernet, or USB
- Optional Garmin Interface Provides Turn-by-Turn Directions to Leak Locations and Ability to Close-Out Leaks from Compatible Garmin Navigation Devices
- Cost Effective Solution Utilizing the Majority of Existing Seeker GPS Installation and Equipment



Digital Leakage Detection

Trilithic's new Seeker D leakage detector accurately detects and measures signal leakage within the near-LTE and aeronautical frequency bands and features and unsurpassed sensitivity from 2 to 2000 $\mu\text{V/m}$.

The Seeker D works in conjunction with the new 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.

Whether testing for leaks in both digital and analog systems, or monitoring aeronautical bands or near-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 new CT-4 can act as a traditional CT-2™ or CT-3™ and can insert Trilithic's proprietary tagged signals in both the aeronautical range and the near-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 near-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 Trilithic. 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 vehicle enters a base location, via an operator-controlled Wi-Fi hotspot.

Early Detection Notifications

When a set threshold level within the Seeker has been surpassed, Trilithic's 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.

SEEKER D SPECIFICATIONS

SPECIFICATIONS	
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 to 2000 µV/m scaled to match an analog carrier with an AFS-2/4 Handheld Dipole or AVM-3 Vehicle Mounted Whip Antenna High band: 2 to 2000 µV/m scaled to match an analog carrier with an AFS-7 Handheld Yagi antenna OR 4 to 2000 µV/m scaled to match an analog carrier with an AVM-4 Vehicle Mounted Colinear Array Antenna
Level Accuracy	±2.0 dB
Numerical Display	Readout of any detected 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 Wi-Fi connection from Seeker MCA III to the LAW Server while the Leakage Detector is located in the Mobile Mount

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Ethernet Communications	10/100 RJ45 connection to fleet management systems
Wi-Fi Communications	Type: Wi-Fi (802.11 a/b/g/n) to operator-controlled and configured hot-spot Security: WPA-PSK (TKIP), WEP (128-bit) or WPA2-PSK (AES)
Cellular Communications	Optional GSM/GPRS cellular connection to operator-provided cellular carrier
Early Detection Notification (EDN)	Email notification of threshold exceeding leaks

ORDER INFORMATION

AVAILABLE SEEKER D MODELS

DESCRIPTION	PRODUCT NUMBER
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

DESCRIPTION	PRODUCT NUMBER
Seeker MCA III with WiFi	TRI-LKG-SEEKER-MCA-WIFI

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
LAW Integrated Server Package	TRI-LKG-LAW-SERVER-W-SW
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 to 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