Vehicle Interrogator System

About the Interrogator System

The EMTRAC Interrogator System enables agencies using the EMTRAC system to automatically download activity logs from mobile EMTRAC equipment and upload firmware and database updates to these same components.

Vehicles equipped with the EMTRAC system are capable of requesting signal priority, and wayside workers may also be equipped with handheld EMTRAC notification units. As equipped vehicles or workers return to the garage, station, or rail yard, the Interrogator System utilizes secure frequency-hopping spread spectrum radio to download detailed logs from these mobile EMTRAC units. This data is forwarded to a server running the EMTRAC Central Monitor software where it may be viewed by operations personnel.

Interrogator Components

Directional
Antenna Shown
(Other Types Available)

The EMTRAC Interrogator Kit includes:

· **Detector Unit**: This network-connected unit seeks mobile downloads and transfers activity logs to the system server.

· **Weatherproof Enclosure w/ (4)-120 VAC Outlets**: Molded fiberglass-reinforced (or stainless steel) NEMA Type 4X / IP65 rated enclosure with stainless steel lockable latches and integral mounting flange.

· **900 MHz Antenna** (Directional or Omnidirectional Available): This antenna may be mounted inside the enclosure cabinet, on top of the cabinet, or on other nearby structures.

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Interrogator System Features

Automatic Retrieval & Update:
Wirelessly download activity logs and automatically upload firmware or database updates to the same units.

Auto-Notifications:
EMTRAC software may be configured to email periodic activity logs to agency personnel.

System Monitoring:
The EMTRAC software enables agency personnel to monitor connection status and history (between server and interrogator as well as between interrogator and EMTRAC components), and current RF signal strength.

System Stability:
Data is not lost in cases of network interruption, and data transfers resume from the point of interruption.

Interrogator System Benefits

Low Profile:
The EMTRAC Interrogator Kit requires only 120 VAC power and Ethernet. All communication with EMTRAC vehicle components is performed wirelessly.

Limitless Memory:
By transferring activity logs to the system server, onboard EMTRAC components are able to continually store new log items.

Timeliness:
High transfer rates enable data transfers that take a relatively short period of time, offering multiple options for where to mount the Interrogator— such as near refueling or washing stations.

Flexibility:
The Interrogator may be mounted on wall, pole, or other structure, and multiple antenna options allow for effective communication in even high-interference environments.

Interrogator Kit Specifications

Enclosure

Enclosure Material:	UV-Inhibited Fiberglass
Outside Dimensions:	19.5H x 17.5W x 9D inches (49.5H x 44.4W x 22.8D cm)
Total Weight Of Kit:	25.4 lbs (11.52 kg)
RoHS Compliant:	Yes
Voltage:	120VAC, Contains (4)-120V Surge-Protected Outlets
Cable Feed:	1/2" Cable Conduit Connector
Cable:	120VAC w/ 3-Prong Plug and Pigtails
Flame Rating:	UL 94-5V
Rating:	NEMA 4X / IP65

Detector Unit

Enclosure Material:	Aluminum, NEMA Rated
Outside Dimensions:	5.375H x 2.75W x 8D inches (13.7H x 7.0W x 20.3D cm)
Unit Power:	12ft, 120VAC, NEMA-Rated Power Cable In Braided Sleeve w/ AC Plug and Pigtails
Comm. Ports:	(2)-100 Base-T Ethernet Ports (NTWRK & LOCAL) and (1) Serial Port (RS-232)
Frequency:	902-928 MHz FHSS

Antenna*

Directional

Frequency:	900 MHz	Gain:	7 dBi (min.)
Maximum Power:	20 watts	Dimensions:	8.8H X 8.1W X 1.6D inches
Front-To-Back Ratio:	> 15 dB	Weight:	1.2 lbs (0.54 kg)
Temperature Range:	-40° F to +158° F (-40° C to +70° C)		
Mounting Options:	Pole, Wall, Ceiling		

Omnidirectional

Frequency:	902-928 MHz	Whip Material:	ABS Plastic
Gain:	3 dB	Connector:	N (f)-installed
Maximum Power:	100 watts		

*Specs fit specific models, but are included as representative figures only. Specs vary by model.

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