



ROMTraX VMS-9601

User Documentation

-- (*June 12/2011*)



*“Keeping business in touch with its people and resources...Anytime,
Anywhere!”*

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06/12/2011	1.0	First Draft of Manual
09/20/2011	1.1	Pictures added, Install section expanded.
09/21/2011	1.1	Edit and corrections.

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Introduction

The ROMTraX VMS 9601 (ROMTraX) is a sealed satellite communicator with integral GPS and Satellite antennas. The ROMTraX is approved for fishing vessels that are required to participate in the Canadian DFO Vessel Monitoring System. The ROMTraX utilizes the Iridium Satellite Network for reliable 2 way communication. The unit is housed in a UV resistant ABS enclosure, with a 6 meter, 7 conductor polyurethane cable.

The ROMTraX unit is installed with a ROMTraX Interface Box (RIB) that terminates all of the ROMTraX signals and houses status LEDs and a USB to serial converter. A 6 meter DB 9 serial cable and a 2 meter USB cable are supplied for connection to a computer.

An optional battery backup module is available, and plugs into the RIB for charging and supplying current to the ROMTraX if vessel power is interrupted. At 12ah capacity, it will power the unit for a minimum of 72 hours, with 15 minute reporting.

ROM Communications VMS Communications Plans

Contact ROM Communications' for current plan pricing.

1. Base Plan – (Required for all units) this provides the satellite service; Satellite messaging (SMS), and E-Log messaging functionality.
 - a. **Additional costs for SMS messages. See pricing sheet.**
2. Position Reporting – (Required for some fisheries, please contact DFO for details)
 - a. 1 hour
 - b. 15 minute
 - c. 1 minute (** available Nov 2011)

Installation

This document covers the steps to install the ROMTraX satellite modem for use with the DFO E-LOG program, ROM's GlobalX email program and VMS position tracking.

Note: A small flat tip screwdriver, electrical tape and any mounting hardware will be required.

1. Equipment supplied

- ROMTraX modem with 6 meters of 7 conductor cable
- ROMTraX Interface Box (RIB) with mounting tabs and 12 position connector.
- 6 meter DB9 serial cable
- 2 meter USB cable

Optional equipment;

- 12 volt 12 amp hour battery pack, with 4 meter lead, and polarity protection connector
- Stainless steel mounting bracket for the ROMTraX unit

2. Site Preparation

- The ROMTraX modem needs to be mounted in a location where it has a clear view of the sky in order for the GPS and Satellite modem to send and receive signals. Also avoid mounting the ROMTraX unit near a RADAR transmitter / Radome. The ROMTraX modem has 2 magnets for mounting onto metal and 4 mounting holes for screws.
- The location of the ROMTraX should allow for easy feeding of the seven conductor cable to where the RIB box is mounted.
- The RIB box should be mounted in a location where the LEDES can be observed with room to connect and disconnect the 12 position connector easily.

3. Installation

- The ROMTraX unit is shipped with the 7 ROMTraX wires and the 3 DB9 serial cable wires attached to the RIB. Note the position of the wires in the 12 position connector and disconnect the wires from the connector. Record the RID number that is printed on the bottom for future reference.
- Mount the ROMTraX modem horizontally in a suitable outdoor location with a clear view of the sky. 4 mounting holes are provided in the flange of the housing for this purpose. These same 4 holes will match up to the optional stainless steel "L" bracket, if a vertical mounting surface is more convenient.
- Feed the 7 conductor cable into the location where the RIB is to be installed. The stripped wires of the cable should be wrapped with electrical tape to prevent damage during the feeding of the cable.
- Reconnect the wires into the 12 position connector using the label on the RIB as a guide.
- Mount the RIB in a suitable indoor location where the LEDs will be visible using the 2 mounting tabs provided.
- If using the DB9 Serial cable, disconnect the 3 wires of the cable from the 12 position connector and feed the cable from the computer location to the RIB. Reconnect the wires into the 12 position connector using the label on the RIB box as a guide.
- If using the USB cable to connect to the computer, route as required, and plug the USB2 end into the side of the RIB.

4. Power

- Connect vessel power to the 12 Position connector as indicated on the label of the RIB, ensuring correct polarity. Connect the vessel power, +12 Volts DC, line through a 5 amp fuse. Connect vessel ground, -12 Volts DC, to the RIB.
- (Optional) Mount the backup battery pack in a suitable location using the 4 mounting feet, preferably on the floor as it has some weight. Run the cable up to the RIB, and connect to the polarity safe connector on the RIB.

5. Double check for correct wiring into the 12 position RIB connector.

- Vessel Ground
- Vessel Power 12-14 Volts DC
- ROMTraX Orange
- ROMTraX Red
- ROMTraX White
- ROMTraX Blue
- ROMTraX Brown
- ROMTraX Black
- ROMTraX Yellow
- DB9 Serial White
- DB9 Serial Green
- DB9 Serial Black

VMS-9601 Tour

1. VMS-9601 ROMTraX



Figure 1 - ROMTraX Unit

2. ROMTraX Interface (RIB)



a. Connector Pin out

PIN1	Vessel Ground
PIN2	Vessel Power 12-14 Volts DC
PIN3	ROMTraX Orange

PIN4	ROMTraX Red
PIN5	ROMTraX White
PIN6	ROMTraX Blue
PIN7	ROMTraX Brown
PIN8	ROMTraX Black
PIN9	ROMTraX Yellow
PIN10	DB9, Serial, White
PIN11	DB9, Serial, Green
PIN12	DB9, Serial, Black

b. Status LED configuration

LED1	RED	Power LED. On solid when power is applied to the ROMTraX unit.
LED2	GREEN	Message LED. On solid when there is a message queued to be sent or a message waiting to be read.
LED3	GREEN	Satellite LED. On solid when a satellite is view. Flashing when satellite is being acquired or communicating with satellite.
LED4	GREEN	GPS LED. On solid when GPS has a position fix. Flashing when GPS is searching for satellites.
LED5	AMBER	Serial Rx LED. Flashing when computer is communicating to ROMTraX unit.
LED6	AMBER	Serial Tx LED. Flashing when ROMTraX unit is communicating with computer.

3. Backup Power Module (Optional)



Use

Connect the 12 position connector to the RIB and apply power to the RIB.

The RED LED (1) should light up indicating power. After about 10 seconds, the 3 GREEN LEDs will light up momentarily and then go off.

The GREEN message LED (2) will light up indicating a “Power ON” message is queued to go out. Once the Iridium modem acquires a satellite the GREEN satellite LED (3) will turn on, and the GREEN Message LED will turn off, indicating that the initial “Power On” message has been transmitted. This will typically happen within 30 seconds.

The GREEN GPS LED (4) will turn on once the unit has acquired a good GPS fix. Depending on the coverage, this can take up to 1 minute. Once a position has been acquired, the unit will maintain a continuous GPS lock unless powered off, or an obstruction is placed over the ROMTraX.

The message LED will turn on if there is a message waiting or a message to transmit. The Satellite LED will blink if it is searching for a satellite.

Connect the DB9 serial cable to your computer and start the E-LOG program.

Getting Help

- On the web at <http://www.romcomm.com>
- Email us at sales@romcomm.com for product information.
- Email us at techs@romcomm.com for technical assistance.
- Call us at **1.877.860.3762**
- Fax us at **1.250.860.3763**

ROM Communications

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Specifications

Temperature

Operating.....	-30 to +45 C
Storage.....	-40 to +60 C

Power Requirements

Voltage.....	+12-28V dc
Current.....	Nominal: 125mA, Transmit: 1500mA

Interface

Analogs.....	N/A
Digitals.....	N/A
Power.....	Terminal Strip
Serial.....	Shared, RS232, DB9
USB.....	Shared, Type B

Physical

Dimensions.....	220mm (L) x 103mm (W) x 61mm (H)
Weight.....	1.140 Kg
Case.....	PVC, UV stable, Weather sealed

Wireless

Carrier Type

Modem Type.....	Iridium SBD
Service Type.....	Short Burst Data (SBD)
Frequency.....	1616 – 1625 MHz
Latency (Typical).....	6sec – 20sec (Connected)
Antenna	Integrated

GPS

Type.....	SIRF III
Channels.....	20
Time To Acquire.....	Cold: >45 sec Warm: < 5 sec
Antenna.....	Integrated

Warranty

ROM Communications INC. (hereinafter referred to "ROM") warrants that its products are free from defects in material and workmanship within the product warranty duration. Subject to the conditions and limitations set forth below, ROM will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials. Repaired parts or replacement products will be provided by ROM on an exchange basis, and will be either new or refurbished to be functionally equivalent to new.

This warranty does not cover any damage to this product that results from accident, abuse, misuse, lightening, fire, water, natural or personal disaster, or any unauthorized disassembly, repair, or modification.

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Certifications & Compliance

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

CANADIAN COMPLIANCE STATEMENT

This digital apparatus is in conformity with standard NMB-003 of Canada.
Cet appareil numérique est conforme à la norme NMB-003 du Canada.

Radio and Television Interference

When installed at a certain location, the machine may cause interference with radio and television reception. If you notice flickering or distorted images or noises on your audio-visual units, your machine may be causing radio interference.

Switch it off, and if the interference disappears, the machine is the cause of radio interference. Perform the following procedure until the interference is corrected.

- Move the machine and the TV and/or radio away from each other.
- Reposition or reorient the machine and TV and/or radio.
- Unplug the machine, TV and/or radio, and re-plug them into outlets that operate on different circuits.
- Reorient the TV and/or radio antennas and cables until the interference stops. For an out-door antenna, ask your local electrician for support.
- Use coaxial cable antennas.

FCC warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- The use of a non-shielded parallel interface cable with the reference devices is prohibited. The length of the parallel interface cable must be 3 meters (10 feet) or less. The length of the serial interface cable must be 600 meters (1970 feet) or less.
- The length of the power cord must be 3 meters (10 feet) or less. This equipment is in the 2nd class category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council For Interference by Information Technology Equipment aimed at preventing radio interference in such residential area.

* When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

Glossary of Terms

In this manual, the following terms may be used:

ROMTraX Modem: The ROMTraX modem is the physical device mounted permanently or magnetically to your vessel.

ROMTraX System: Combination of the ROMTraX modem, ROMTraX Interface Box (RIB) and software.

RIB: 'ROMTraX Interface Box' terminates wire connections, power connections and serial communications from the various components of the ROMTraX System.

Iridium: Iridium is the satellite service provider used to transmit data messages for the ROMTraX modem.

Satellite Message Service: ROMTraX system and the ROM GlobalX email client allows short text messages to be sent a destination email. This feature **is not** related to the cellular SMS text messaging services available on most cell phones.

Troubleshooting

Topic	Issue	Possible Fix
No Power	No LED's lit on RIB	<ol style="list-style-type: none"> 1. Open Fuse on vessel power lead. 2. Vessel Power lead not connected. 3. (Optional) Backup Power Module not plugged in.
	Only Power LED lit	<ol style="list-style-type: none"> 1. Connector from ROMTraX unit is loose or disconnected 2. Power wire going to ROMTraX unit is broken / disconnected.
No Signal	Never acquires Satellites	<ol style="list-style-type: none"> 1. ROMTraX unit covered or interference. 2. No active communications plan. 3. Not powered / power fail. 4. ROMTraX satellite module / antenna failure.
	Never acquires GPS	<ol style="list-style-type: none"> 1. ROMTraX unit covered or interference. 2. ROMTraX GPS module / antenna failure.
No Messages	Cannot send or receive SMS messages	<ol style="list-style-type: none"> 1. Serial / USB cable not correctly plugged into computer. 2. Check for Power and Satellite LED's are lit. 3. No active communications plan.
	Not sending Location messages.	<ol style="list-style-type: none"> 1. Check for Power, Satellite and GPS LED's lit on RIB. 2. Check for Message LED lit on RIB. 3. No active communications plan.