TECHNICAL AND COMPLIANCE COMMITTEE
Fourteenth Regular Session
26 September – 2 October 2018
Majuro, Republic of Marshall Islands

Requests for new inclusions of ALCs to the WCPFC approved ALC/MTU list -Supplement

WCPFC-TCC14-2018-13A_supplement_rev1[1]
28 September 2018

Paper by the Secretariat

Purpose

1. This paper provides supplementary information related to a recent request for four new Automatic Location Communicator (ALC)/ Mobile Transceiver Unit (MTU) to be included on the WCPFC Approved ALC / MTU List.

Request for inclusion of new ALCs to the approved list

2. The Secretariat has received a request from Canada for the inclusion of the following four devices on the new the WCPFC approved ALC list:

   i) iTrac101B (MetOcean Telematics);
   iTrac-101B is the official product name. Its commercial/marketing name is iTrac 2 or iTrac II.

   ii) BB3 (SASCO);

   iii) BB5 (SASCO); and

   iv) RomTrax Wifi (Rom Communications).

3. A copy of the some of the supporting documentation supplied by Canada in support of their request is enclosed as Annex 1.

   Secretariat recommendation: The Secretariat's assessment is that the four units listed above in paragraph 2 meet minimum standards for the Commission VMS as set out in Annex 1 of CMM 2014-02 (or its successor measure) and WCPFC SSPs, as relevant, and each unit has the ability to successfully report to the Commission VMS.

[1] Revises the earlier version that was issued on 24th September, to include the Secretariats recommendation

4. At the time of writing, the Secretariat was still working with the VMS service provider to ascertain if new gateways to receive data from the above two MTUs may be required.

Recommendation

5. TCC14 is invited to:
    a. Note the Secretariats assessment that the ALC units (**iTrac101B, BB3, BB5 and RomTrax Wifi**) each meet the minimum standards for the Commission VMS and are capable to successfully report to the Commission VMS; and

    b. Recommend to the Commission the addition to the WCPFC approved ALC/MTU of the following ALC units:

Model / Approved MTU Type	Manufacturer	Comm System	Service Provider
iTrac101B (iTrac II)	MetOcean Telematics	Iridium SBD	MetOcean Telematics
BB3	SASCO	Iridium (mini LEO)	SASCO
BB5	SASCO	Iridium (mini LEO)	SASCO
RomTrax Wifi	Rom Communications	Iridium SBD	Rom Communications

From: Ruecker, Kirsten <Kirsten.Ruecker@dfo-mpo.gc.ca>
Sent: Wednesday, September 19, 2018 10:09 AM
To: Feleti Teo
Cc: Lara Manarangi-Trott; Albert Carlot; Ana Taholo; Robert Day; Estelle Couture; Barbour (Antle), Natasha; Napier, Brent; Walsh, Jerry
Subject: TCC 14: WCPFC approved MTU list
Attachments: iTrac II.PDF; TD 13-013 - iTrac User Manual v3(1).pdf; BB3 installation Manual.pdf; Brochure-BB5-Iridium.pdf; Brochure-BB3-Iridium.pdf; Iridium_Technical_Manual.pdf; VMS Wi-Fi User Manual.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Executive Director Teo,

Pursuant to email exchanges with Dr. Lara Manarangi-Trott, the WCPFC Compliance Manager, and Mr. Albert Carlot, WCPFC VMS Manager, I would like to request the addition of the following four devices to the Western and Central Pacific Fisheries Commission (WCPFC) approved Mobile Transceiver Units (MTU)/Automatic Location Communicators (ALC) list, subject to the review of the Commission's standards, specifications and procedures.

The four devices are:

-iTrac101B (MetOcean Telematics)
-BB3 (SASCO)
-BB5 (SASCO)
-RomTrax Wifi (Rom Communications)

As reference, please find attached supporting documentation for further consideration.

Please do not hesitate to contact me should you have any questions.

Thank you,
Kirsten

Kirsten Ruecker
Senior Advisor - International Fisheries Management and Bilateral Relations
Conseillère principale - Gestion internationale des pêches et relations bilaterales
Fisheries Resource Management/Gestion des ressources halieutiques
Telephone/téléphone: 613-991-0297
kirsten.ruecker@dfo-mpo.gc.ca
Fisheries and Oceans Canada | 200 Kent St., 13S042 | Ottawa, ON K1A 0E6
Pêches et Océans Canada | 200, rue Kent, 13S042 | Ottawa ON K1A 0E6

iTrac II

- Vessel Monitoring System (VMS)
- Department of Fisheries and Oceans Canada certified
- Bi-directional Iridium® communications
- Remotely programmable reporting intervals

TELEMATICS

Locate commercial and private vessels at sea.

The iTrac II system consists of a bi-directional Iridium® satellite communicator which transmits vessel position reports at specified intervals. The iTrac II system may be remotely programmed to change the reporting interval. The iTrac II system consists of a satellite communicator and a marine grade antenna. An internal battery for backup is provided to maintain all parameters in the case of power failure. The vessel provides normal operating power. The communicator is housed in an IP68 rated ruggedized enclosure.

DFO CERTIFIED

End-user and fisheries management web interface.

metOcean telematics | iridium

21 Thornhill Drive, Dartmouth, Nova Scotia B3B 1R9 CANADA
Tel: +1 902 468-2505 | Email: sales@metocean.com

iTrac II

KEY FEATURES

- Department of Fisheries and Oceans Canada certified for monitoring vessels
- An automatically generated message is transmitted 24 times a day consisting of vessel position, heading, speed and time
- Two-way communications via satellite telemetry
- Message frequency can be updated from shore, to generate and transmit a position at various time periods
- LED's on the unit provides indication of power on/off, transmit/receive and status
- Units are GPS-equipped (10 m (33 feet) CEP, 45 sec cold start)
- Data is sent via e-mail, or direct IP to end users or via web services to fisheries management
- Geofencing capability provided
- Shock and Vibration tested to ISTA 1A specifications
- Surge and reverse polarity protected
- Distress/panic button included
- Manufactured under ISO 9001 compliance

OPTIONAL FEATURES

- USB communications port for future expandability, including PC communications and external sensors
- At sea e-mail capability
- Emergency vessel position trigger
- E-log compatible

TECHNICAL SPECIFICATIONS

PHYSICAL

Length	20.63 cm (8.125 inches)
Width	16.25 cm (6.400 inches)
Height	6.350 cm (2.500 inches)
Weight	0.884 kg (1.95 lbs)

POWER

Transmit frequency	1616 MHz to 1626.50 MHz
Transmit power	1.2 Watts
Receive frequency	1616 MHz to 1626.50 MHz
Sensitivity (minimum)	-118 dbm
Battery requirements	12 volt Lead Acid Battery
Power requirements	12 to 32 VDC (external power)
Power use	Transmit 2.5 A max. Monitoring 100 mA
Sleep	<20uA (7V - 28V
GPS acquisition	280mW (24mA @ 12V) Typical time to fix: <60 seconds

ENVIRONMENTAL

Operating temperature	-40°C to +70°C (-40°F to +158°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Waterproof	IP-68 tested to 1.5m submergence

metOcean telematics | iridium

21 Thornhill Drive, Dartmouth, Nova Scotia B3B 1R9 CANADA
Tel: +1 902 468-2505 | Email: sales@metocean.com

metocean.com

FEB. 2017 — V1.0.0

SASCO BB3 Iridium VMS

Certified for DFO VMS Regulations

The BB3 (Black Box #3) is approved by DFO for VMS use in all fishing Areas of Atlantic Canada. Also, few years ago DFO recommended new specifications intended to improve overall VMS performance and to provide better information for both DFO and skippers. While the new specs are not yet implemented, the BB3 (and all Sasco models) meets and exceeds those recommendations.

External GPS and Iridium antennas

Both the GPS and Iridium antennas are mounted outside. This configuration keeps the electronics inside the boat and is the preferred in situations where barometric swings and ice buildup are factors. The display provides the skipper with 9 indicator lights so that any VMS problems are identified and easier for the skipper to correct.

Iridium has low message latency at high latitudes

An Iridium VMS is the best choice for vessels at higher latitudes where the coverage is usually poorer for other satellite systems. Iridium's 66 satellites provide continuous coverage and they will relay your message from satellite to satellite until it reaches the ground station. So your vessel is essentially always connected. Because of the number of satellites and method, Iridium messages are sent in about 2 minutes anywhere on Earth.

Features and Requirements

Display Indicator Lights

- Power On
- Satellite in View
- Program Running (blinking)
- Iridium Message Transmission problem
- GPS receiver problem
- GPS cannot get a valid fix
- Message Inbound (blinks when transmitting)
- Message Outbound

Specifications

- 11 to 28 volts DC
- 23 x 13 x 11 cm 1.5 kg
- External GPS antenna (BNC)
- External Iridium antenna (TNC)

Vessel Email (text only):

- 2-way text email using "Oceanmail".
- A PC computer is required if you. wish to use the email feature

SASCO BB5 Iridium VMS

Certified "Black Box" for new DFO VMS Regulations

Meeting the new DFO requirements:

In September 2005, DFO published a new specification intended to improve overall VMS performance and to provide better information for DFO and skippers. On Nov 3rd 2009, DFO advised that the new spec was now in effect but then on Jan 20th 2010 they postponed implementation for an additional year. If you are in the market for a new VMS unit, it makes sense to purchase one that is already certified for the future specification.

External GPS and Iridium antennas.

Both the GPS and Iridium antennas are mounted outside. This configuration keeps the electronics indoors and is preferred in situations where ice buildup might adversely effect a BB4 installation. The unit is certified with its 48 hour internal backup battery supply. The display provides the skipper with 9 indicator lights so that any VMS problems such as GPS antenna etc. are identified and so easier for the skipper to correct.

Polar Performance- External Antennas and Internal Backup Batteries:

The BB5 features an Iridium Short Burst Data transceiver which is the world class solution for any VMS system anywhere in the world. No other satellite system can equal the performance of Iridium in polar latitudes. Iridium's 66 satellites make two way text messaging and position reporting nearly instantaneous anywhere at all times.

Features

Display Indicator Lights

- Unit has Power
- Satellite in View
- Program Running
- No Satellite Message Transmission
- No GPS receiver function
- No GPS antenna fix
- Message Inbound (blinks when transmitting
- Message Outbound

Power input 12-45 volts VDC

(Optional) Vessel Email:

A PC computer is required if you wish to use the 2-way email feature. certified and working Orbcomm

External Antennas

Garmin GPS with RG58 cable (tough)
Iridium Pole mount Antenna

sales@Sasco-inc.com
Ph 813-247-6448

ROMTraX Wi-Fi

User Documentation

-- (February 1/2014)

"Keeping business in touch with its people and resources…Anytime, Anywhere!"

Part number: ROM-VMS-WF2

Document Revision History

February 11, 2014	Review/Edit	NP
March 28, 2014	Add Set/Haul Deck Switch Update Terminal Strip Diagram Updated Specifications	NP/NM

Contents

License & Disclaimer

6.01 All software programs used in connection with the Products and/or Services which are embodied in human readable source form or machine readable object form and which include, but are not limited to, programs having a series of instructions, statements and data (the "**Software Programs**"), and related materials provided by ROM are the property of ROM and/or others and are subject to the terms set forth in this paragraph, in which Subscriber is provided solely with a personal and non-exclusive license to use such programs solely for their internal business purposes in the Territory and for execution on the system for which it was provided. This license shall terminate automatically if Subscriber is in breach of this Agreement.

6.02 Subscriber agrees not to reverse engineer, decompile, or disassemble the Software Programs. Software Programs and related material must not be copied.

6.03 No title to intellectual property in the Software Programs or related material is transferred to Subscriber under this license. All copyrights and other intellectual property rights in the Software Programs are owned by ROM and/or its suppliers. The software is protected by Canadian copyright laws and international treaty provisions.

For full disclaimer, please contact ROM Communications. Below is an excerpt of key points.

8.01 Subscriber acknowledges that the Services provided by ROM are dependent upon services, networks and other facilities provided to ROM by third parties. Satellite based data communication services are provided to ROM pursuant to an agreement with IRIDIUM and are subject to the terms, conditions and exclusions contained therein. Cellular based communication services are provided to ROM pursuant to an agreement with ROGERS WIRELESS. and are subject to the terms, conditions and exclusions contained therein (IRIDIUM, ROGERS and, such participating cellular carriers, and their affiliates are collectively referred to as "**Third Party Service Providers**").

8.02 ROM shall provide the Services on a good faith efforts basis but ROM does not guarantee uninterrupted or error-free Service or receipt of data transmitted over or through networks of other companies or the Internet, and ROM makes no representations as to coverage or quality of service. Subscriber acknowledges that failure or interruption of Services may occur from time for reasons including, but not limited to, placing Products in locations that preclude communication with the relevant communication system, environmental conditions, technical limitations, defects or failures, or other causes beyond ROM's control. SUBSCRIBER ACKNOWLEDGES AND AGREES THAT THIRD PARTY SERVICE PROVIDERS AND ROM: (i) DISCLAIM ALL WARRANTIES RELATING TO THE SERVICES OR ANY PORTIONS THEREOF INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ANY IMPLIED WARRANTY ARISING FROM COURSE OF CONDUCT OR USAGE OF TRADE, OR ANY IMPLIED WARRANTY AS TO THE ACCURACY, AVAILABILITY OR CONTENT OF THE SYSTEMS OR SERVICES, AND; (II) DISCLAIM ALL LIABILITY TO THE SUBSCRIBER, OF ANY NATURE, WHETHER DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL ARISING OUT OF SUBSCRIBER'S USE OF THE SERVICES, AND SUBSCRIBER AGREES THAT SUBSCRIBER SHALL HAVE NO CLAIMS AGAINST ANY THIRD PARTY SERVICE PROVIDERS OR ROM OF ANY KIND WITH RESPECT THERETO.

8.03 Without limiting the generality of the foregoing, neither the Third Party Service Providers nor ROM shall be liable to Subscriber for any losses or damages of any kind whatsoever arising out of any failure of performance, error, omission, interruption, deletion, defect, damage, delay in transmission, communication line failure, theft or destruction or unauthorized access to, alteration of or use of the records associated with the Services or such portion thereof provided by Third Party Service Providers, whether for breach of contract, tortious behaviour, negligence or under any other cause of action. IN NO EVENT SHALL THIRD PARTY SERVICE PROVIDERS OR ROM HAVE ANY OBLIGATION OR LIABILITY TO SUBSCRIBER UNDER THIS AGREEMENT FOR THE LOSS OF USE, REVENUE, PROFIT, BUSINESS OPPORTUNITIES OR ANY OTHER INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

8.04 ROM's goods are not designed, intended or authorized for use in life support, life sustaining, nuclear or other applications where the failure of such goods could reasonably be expected to result in personal injury, loss of life or catastrophic property damage.

8.05 In no event shall any liability of ROM exceed the total amount of Charges paid by the Subscriber during the 1 month preceding the event which gave rise to the claim.

Introduction

The ROMTraX Wi-Fi Vessel Monitoring System (ROMTraX) is an advanced satellite communicator with built-in GPS and Wi-Fi. The device wirelessly connects to any compatible Smartphone, tablet, laptop or computer for detailed GPS and Satellite status, two-way communication and is E-Log ready.

The ROMTraX is approved for fishing vessels that are required to participate in the Canadian DFO Vessel Monitoring Program. ROMTraX utilizes the Iridium Satellite Network, MTK3329 GPS technology with anti-jamming and Wi-Fi connectivity. The unit is housed in a UV resistant ABS enclosure and has a 10 meter 4 conductor polyurethane cable with a circular weatherproof connector. Cables are terminated at a 4 terminal strip with a "Super Bright" LED indicator.

An optional battery backup module is available and plugs into the 4 terminal block, the 10ah 12 volt battery meets the DFO requirement of transmitting a position report every five minutes for 48 hours.

ROM Communications VMS Communications Plans

Contact ROM Communications for current plan pricing.

Installation

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

ROMTraX was designed to be simple to install, essentially secure it somewhere with a clear view of the sky and provide a nominal 12 volt DC power supply and it's ready!

1**. Equipment supplied**

- ROMTraX modem with circular connector
- 10 meter cable with mating connector
- 4 terminal strip with a "Super Bright" LED indicator 6

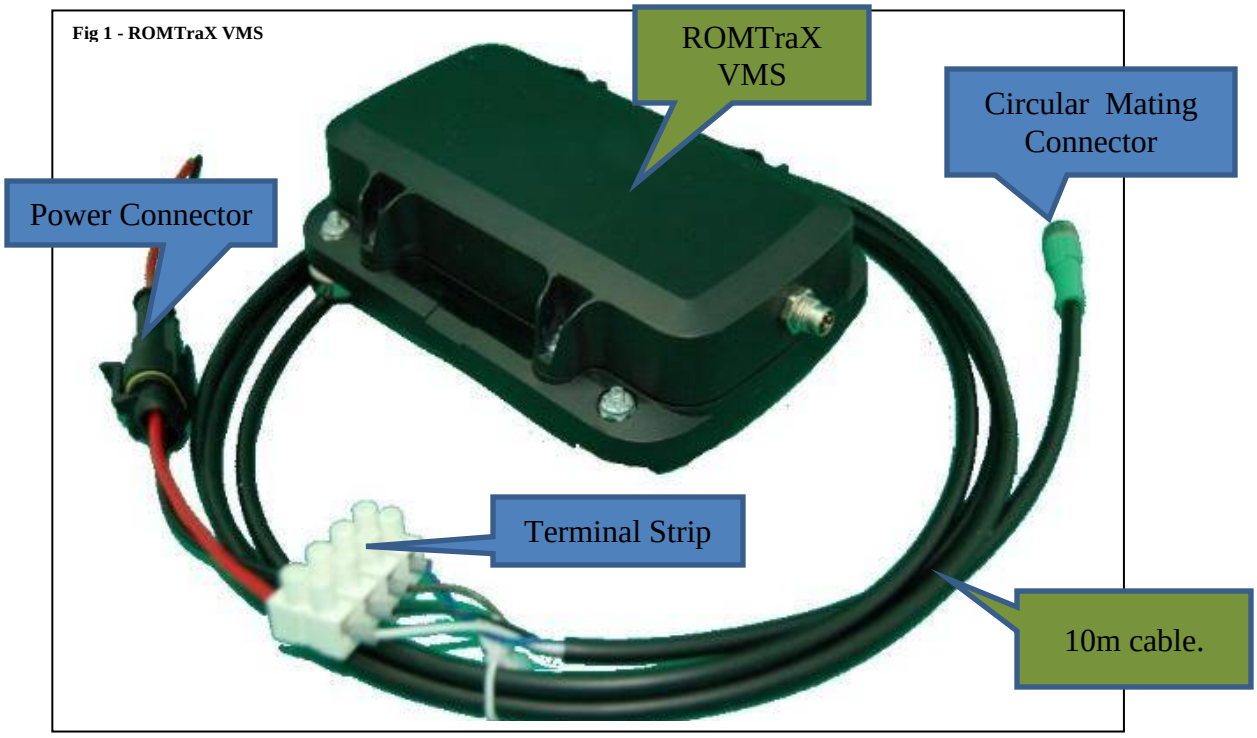


Fig 1 - ROMTraX VMS

Optional equipment;

- 12 volt 10ah Lipo battery pack, with integrated charger and indication circuitry
- Rare Earth Magnetic Mounting (100 lb. pull)

2. **Site Preparation**

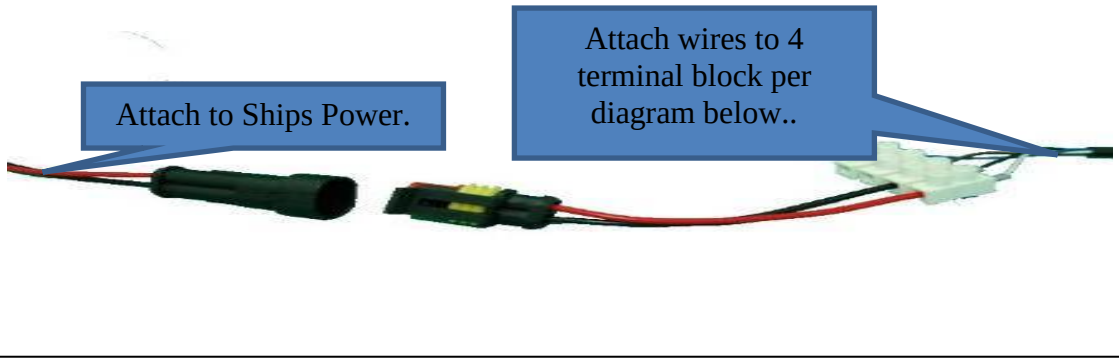
The ROMTraX modem needs to be mounted in a location where it has a clear view of the sky in order for the GPS and Satellite modem to send and receive signals. Avoid mounting the ROMTraX unit near a RADAR transmitter / Radome.

- The ROMTraX modem can be mounted by Silicone Sealant, screws through the 4 mounting holes, strapping/tie straps or the optional rare Earth magnetic feet.
- The location of the ROMTraX should allow for easy feeding of the four conductor cable to the Vessel's 12 volt power supply and 4 terminal strip.
- The 4 terminal strip should be mounted in a location where the LED can be observed.

3. **Installation**

- Locate the "Activation" Card included with the ROMTraX device and make note of the RID number, place somewhere safe for activation and future status changes or support.
- Mount the ROMTraX modem horizontally in a suitable location with a clear view of the sky. Use Silicone Sealant, the 4 screw holes, strapping/tie straps or the optional rare Earth magnetic feet.
- Feed the 4 conductor cable from the power supply access point to where the Modem is secured; Wrap the end of the cable with electrical tape to prevent damage the circular connector.
- Screw together the mating connectors on the modem and cable, do not over tighten as it may lose its weather proof status.
- Mount the 4 terminal block in a suitable indoor location where the LED will be visible using the 2 mounting holes or double sided epoxy tape provided.
- Connect the Vessel 12 Volt DC power (fused at 5amps) to the Red (Positive) and Black (Negative) flying lead connected to the 4 terminal block. Ensure correct polarity.

Fig 2 - Power Connector with Terminal

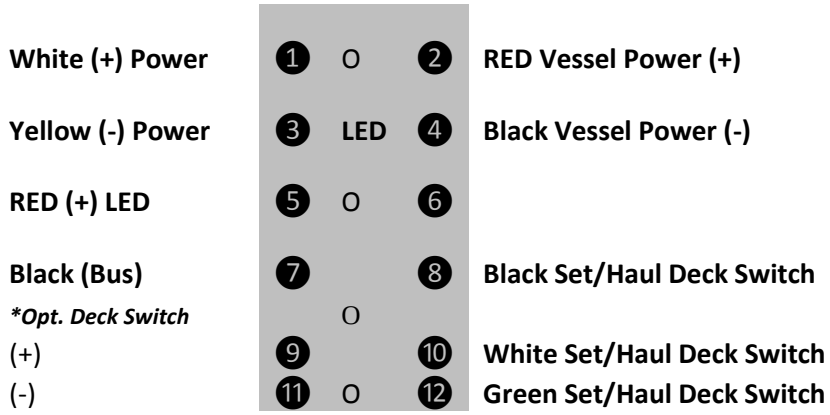


Make sure that the Power polarity is correct. If power is reversed, damage may occur to the ROMTraX Wi-Fi unit and/or other ship systems!

n

(Optional) Connect the output of the 12 volt 10 ah Lithium Polymer (LiPo) battery to the above noted red & Black flying leads. Connect the input of the battery pack to the 5 amp fused 12 Volts DC power.

4. **Double check correct wiring for the 4 Terminal Strip**



5. **LED Status**

LED1	RED	**Solid**. Indicates unit is fully functional with available Satellite Network and valid GPS position.
	RED	**Flashing**. Indicates the unit has power but is not operational due to No Satellite Coverage or No Valid GPS position.

A detailed status is of the Satellite Network and GPS performance is also available by connecting to a Wi-Fi compatible Smartphone, tablet, laptop or computer. The APP is built-in and requires no programming or additional software.

VMS Use

Basic:

Ensure that the power is properly connected and on.

After the device initializes, the RED LED will begin to flash until the device gets a Satellite and a valid GPS lock, once this happens usually within a few seconds to a couple of minutes the LED will turn solid indicating normal operation.

Wi-Fi:

1) Using a compatible Wi-Fi equipped Smartphone, tablet, laptop or PC (Apple, Android or Microsoft) go to your Wi-Fi settings menu and select ROMTraXxxxx as your Wi-Fi connection.

You are now set up to use E-Log if your device has it installed.

2) To use the status or messaging features open your browser and enter 10.10.10.10 in the address bar and press go or hit the return to open the ROMTraX APP.

Fig 3. – Select Wi-Fi Network

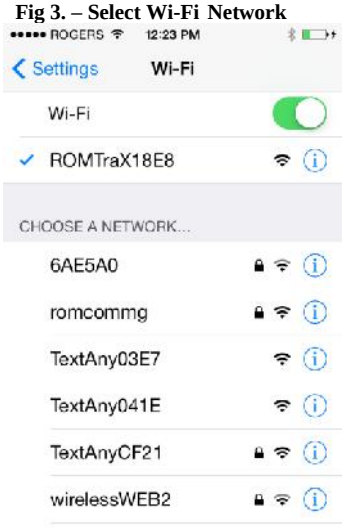


Fig 4- Wi-Fi APP

Only one device can be connected to the Wi-Fi connection at a time, make sure you close the Wi-Fi connection if you wish to have another device access it.

This Wi-Fi connection DOES NOT provide any connectivity to the Internet whatsoever!

To prevent unauthorized use, activate the secured network in the tools menu in the ROMTraX TextAnywhere App.

Settings

The ROMTraX Wi-Fi can be configured for the following options:

1. Enable or Disable Virtual Set/Haul buttons
2. Set WEP network security
3. Set / Update vessel information
4. Set / Update PFMA

The following information is displayed about your ROMTraX Wi-Fi unit:

A. Firmware Version
B. Webpage Version
C. Wi-Fi Service ID (SSID)
D. Unit Serial Number (IMEI)
E. Outgoing and Incoming message transmission history

Fig 7 - Settings Page (Top)

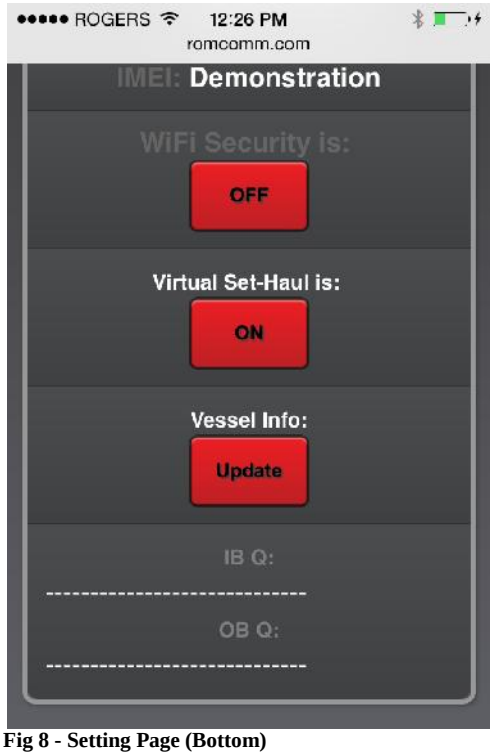
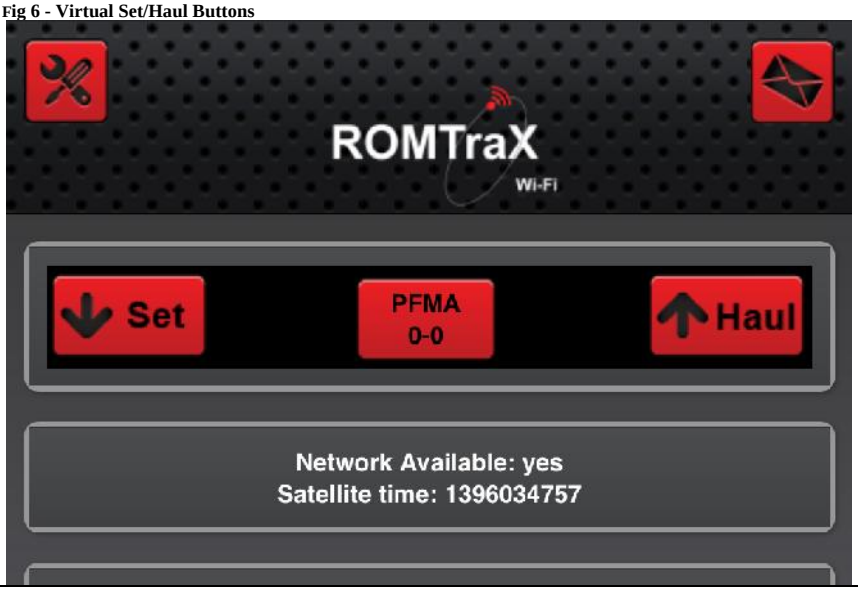


Fig 8 - Setting Page (Bottom)

Set / Haul Feature

Your new ROMTraX Wi-Fi comes with some features that enable you to comply with DFO license conditions in place for the spring 2014 Season. Most notably are the virtual set/haul buttons and the Vessel Information set-up.

Fig 6 - Virtual Set/Haul Buttons



1) Make sure the ROMTraX Wi-Fi has power. Connect it to the ROMTraX APP using your Smartphone, laptop or tablet as described in the ***Use section***.

2) On the home page you will notice a tool icon in the upper left corner, click on the icon and it will take you to the tool menu. Click on the "Virtual Set-Haul" button to turn "On". Continue down to the next button "Vessel Update" and select "Update". Fill in the required information, the CSP number is the RID number that was on the ID card next to the IMEI.

3) Click the arrow in the upper left corner and you will go back to the main menu and the virtual buttons will now be displayed. You will notice the PFMA button in the center which is used to enter the area where you are fishing. The PFMA should be updated each time you go to a new area.

4) You are now ready to go fishing, each time you set or haul a trap, simply press the corresponding button to register the location. The system will automatically look after the rest.

5) If you are using the optional set/haul wired deck switch you will only ever have to use the built in APP when moving to a new area to enter the PFMA location.

Optional Set/Haul Deck Switch

The optional smart set/haul deck switch works the same way as the virtual buttons except instead of a pop-up confirmation, you simply press and hold the up or down button until the red indicator light comes on. The indicator light lets you know that the message has been properly received by ROMTraX device with a valid GPS position.

Fig 5 - Set/Haul Deck Switch

Please refer to ***Installation section, point 4*** for connection instructions.

TextAnywhere Messaging System

What is TextAnywhere?

TextAnywhere is a personal satellite text messaging hotspot for use with compatible Wi-Fi enabled Smartphones, tablets, laptops and computers. The onboard web application eliminates the need for special apps or dedicated hardware, providing Global satellite coverage, true 2-way messaging, no contracts and low cost connectivity for fishermen, remote workers, adventurists and sportsmen alike.

System Features:

- Personal Texting Hotspot (Wi-Fi)
- Iridium Satellite True Global Coverage
- Full 160 Character Text or Email Messages

- Android, Apple, Blackberry & Microsoft Friendly
- Works with Compatible Smartphones, Tablets, Laptops, and Computers
- True 2-way Messaging, Receive Messages Initiated from Standard Cell Phones
- No Apps Required
- Included with your ROMTraX Wi-Fi product
- No Contracts
- Post to Twitter & Facebook

Using TextAnywhere

Send and receive cellular text messages anywhere in Canada & United States or text based emails anywhere in the World. Touch or click the Mail Icon in the upper right corner, the TextAnywhere screen will open (Fig. 9) and simply follow the intuitive graphical user interface (GUI). Compose a new message by clicking on the envelope, entering an email address or cell phone number and typing a 160 character message then hit send.

Fig 9 - TextAnywhere Main Screen

Fig 10 - Send Message screen

Advanced features and security options as well as message history is available by going to http://www.textanywhere.ca and logging on as a new user. Your default email address will be your *RID number (see activation card included in the kit) @textanywhere.ca*. Each message received or sent will each count as one message including any satellite checks for stored messages.

Specifications

Temperature

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

Power Requirements

Voltage (without battery module)……...	+12-20V dc
Voltage (with battery module)……	+12-14V dc
Current……	Nominal: 200mA, Transmit: 1500mA

Interface

I/O…LED……..	Firmware Configurable - Red
I/O…BUS....……..	Firmware Configurable - Black
Wi-Fi …….....	100' + Range (unshielded)

Physical

Dimensions……	140mm (L) x 97mm (W) x 35mm (H)
Weight……...	.54 Kg c/w 10m Cable
Case……...	ABS, UV stable, Weather sealed

Wireless

Carrier Type

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

GPS

Type…….	MTK3329
Channels……..	66
Time To Acquire…….....	Cold: >45 sec Warm: < 5 sec
Antenna……	Integrated

Wi-Fi

Module Type ……	IEEE 802.11 b/g/n compatible
Frequency……	2.4 GHz
Operating Mode ……	Adhoc
Security ……..	Open / WEP
Antenna ……..	Integrated

Safety Information

Disposal
Dispose of all electronic devices and batteries in compliance with local regulations in your area.

Pacemakers
Follow the guidelines of the Health Industry Manufacturers Association (www.hira.org) as they may be updated from time to time regarding maintaining minimum distance between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker.

Hearing Aids
Digital wireless devices may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices
If you use any other personal medical device, consult the manufacturer's guidelines for that device and consult your physician to determine compatibility with your medical device.
Turn your ROMTraX device OFF in or near any health care facility when necessary to comply with posted rules and regulations.

Blasting Areas
To avoid interfering with blasting operations, turn your device OFF when in a "blasting area" or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Potentially Explosive Atmospheres
Power OFF your device and do not remove your battery when you are in any area with a potentially explosive atmosphere. Obey all signs and instructions. Sparks from your battery or from discharge of static electricity in areas such as gasoline filling stations could cause an explosion or fire resulting in serious injury or even death. Areas with a potentially explosive atmosphere are not always clearly marked, and include fueling areas such as gasoline stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where fuel odors are present (for example, if a gas/propane leak occurs in a car or home); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you normally would be advised to turn off your vehicle.

Warranty

ROM Communications INC. (hereinafter referred to "ROM") warrants that its products are free from defects in material and workmanship within one (1) year of purchase. 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.

THE WARRANTY AND REMEDIES PROVIDED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CERTAIN JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES. IF LAWS UNDER SUCH JURISDICTIONS APPLY, THEN ALL EXPRESS AND IMPLIED WARRANTIES ARE LIMITED TO THE WARRANTY PERIOD IDENTIFIED ABOVE. UNLESS PROVIDED HEREIN, ANY STATEMENTS OR REPRESENTATIONS MADE BY ANY OTHER PERSON OR FIRM ARE VOID. EXCEPT AS PROVIDED IN THIS WRITTEN WARRANTY AND TO THE EXTENT PERMITTED BY LAW, NEITHER ROM NOR ANY AFFILIATES SHALL BE LIABLE FOR ANY LOSS, (INCLUDING LOSS OF DATA AND INFORMATION), INCONVENIENCE, OR DAMAGE, INCLUDING, BUT NOT LIMITED TO, DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OR INABILITY TO USE THE ROM PRODUCT, WHETHER RESULTING FROM BREACH OF WARRANTY OR ANY OTHER LEGAL THEORY. NOTWITHSTANDING THE FOREGOING, ROM TOTAL LIABILITY FOR ALL CLAIMS UNDER THIS WARRANTY SHALL NOT EXCEED THE PRICE PAID FOR THE PRODUCT. THESE LIMITATIONS ON POTENTIAL LIABILITIES HAVE BEEN AN ESSENTIAL CONDITION IN SETTING THE PRODUCT PRICE.

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.

EU REGULATORY CONFORMANCE

ROM Communications Inc hereby declares that this ROMTraX Wi-Fi device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC, Directive 2002/95/EC, and Directive 2002/96/EC. The Declaration of Conformity made under Directive 1999/5/EC (HG nr.88/2003).

Contains Transmitter Module(s);

Satellite Modem:

FCC ID: **Q639602**
IC: **4629A-9602**
RoHS Compliant

Wi-Fi Module:

FCC ID: **W7OMRF24WG0MAMB**
IC: **7693A-24WG0MAMB**
RoHS Compliant

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, Optional backup battery software and services.

VMS Vessel Monitoring System

4 Terminal Strip: Terminates the 4 conductor cable from the ROMTraX System to attach power and various I/O devices as well as provide a visual indicator by way of a Red LED as to the operational status of the system.

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

TextAnywhere: The text based messaging service included with the ROMTraX system and accessed by Wi-Fi. http://www.textanywhere.ca

Wi-Fi: The wireless protocol to connect Wi-Fi enabled Smartphones, tablets, laptops and PC's to the VMS system for status, messaging and E-Log.

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.
- On the web at http://www.textanywhere.ca for TextAnywhere information
- Call us at **1.877.860.3762**
- Fax us at **1.250.860.3763**

ROM Communications Inc.
Suite 540, 1632 Dickson Avenue
Kelowna, BC CANADA
V1Y 7T2