NAL RESEARCH CORPORATION

SHOUT tw HANDHELD IRIDIUM® TRACKER

DEVICE FEATURES

- ✓ Low-cost, body-worn tracker and messaging device

- ✓ Programmed for either DoD or Commercial Iridium Gateway

- ✓ Ultra-low power consumption

- ✓ Automatic location reports (>1500 reports)

- ✓ Guarded 911 alert switch

- ✓ High resolution touchscreen

- ✓ Free-text, canned messages, or combined free-text and canned messages

- ✓ Data logging (waypoints and tracking reports)

- ✓ 256-bit AES encryption

- ✓ Real-time, pole-to-pole coverage

- ✓ Weighs ~7.5 ounces

- ✓ Volume of 4.2" x 2.4" x 0.9"

- ✓ USB interface

- ✓ Internal rechargeable battery using AC adapter, USB port, or solar charger

- ✓ Integrated motion sensor

- ✓ 50-channel GPS receiver with -160 dBm sensitivity

- ✓ IP67 Rated

- ✓ Compatible Airtime Service(s): SBD

IRIDIUM® HANDHELD TRACKER
POWERED *by the* IRIDIUM NETWORK

SHOUT tw HANDHELD IRIDIUM® TRACKER

The SHOUT tw is an IP67 rated handheld, global, two-way satellite messaging and personal tracking device. It utilizes Iridium's short burst data (SBD) service to provide location information determined by a GPS receiver, two-way inbound and outbound status, text messaging, and emergency/alert notifications. The SHOUT tw measures 4.2" x 2.4" x 0.9" and weighs ~7.5 ounces.

The SHOUT tw is designed with ultra-low power consumption electronics drawing less than 35μA during sleep. With an internal 1.95 A-Hr rechargeable Li-Ion battery, it can send a position report every hour for up to two months (about 1,600 reports). The SHOUT tw is equipped with a resistive high resolution color touchscreen supporting transmission of free-text, canned messages and a combination of free-text and canned messages. Similar to a "smart" phone, the menu options are displayed as icons for quick access. The device can periodically wake up from sleep to send its position report to a command center. A 911 button is used for immediate emergency/alert notifications. Data is packaged in either standard or 256-bit AES encrypted format. Data can also be sent in encrypted PECOS formats to include Brevity codes.

The SHOUT ts offers a variety of services including:

- Normal Tracking — programmed to automatically wake up and send a position report at a set interval ranging from once a minute to once a day.

- Emergency Alert — sends alerts to a designated monitoring center using a 911 button. The monitoring center and the user can then communicate to define further specifics of the emergency.

- Free-Text Messaging — sends free-text via four different sets of on-screen keyboards.

- Canned Text Messaging — sends canned messages in short codes to save bandwidth instead of the entire message body.

- Waypoint Tracking — sends and/or saves waypoints for later retrieval.

- Check-In — allows a quick check-in message to be sent using a single soft key.

iridium

- ✓ Pocket-sized, self-contained satellite tracker
- ✓ Ultra-low power consumption
- ✓ IP67 Rated
- ✓ AES 256-bit encryption both transmit/receive
- ✓ Two-way communications
- ✓ Real-time reporting
- ✓ Truly global coverage

Specifications

Mechanical

Dimensions:	4.2" L x 2.4" W x 0.9" D (107 mm x 61 mm x 23 mm)
Weight:	~7.5 ounces (213 grams)
I/O Interface:	Micro USB
Cooling:	Convection
Enclosure:	Hard-Anodized Aluminum (EMI shielded)

Electrical

Input Voltage Range:	2.7VDC to 5.5VDC
Battery:	1.95 A-Hr rechargeable Lithium-Ion
Sleep Mode:	< 35μA between reports
Transmission Mode:	1.12mA-Hr per report

Iridium RF Board

Operating Frequency:	1616 to 1626.5 MHz
Link Margin Downlink:	13 dB average
Link Margin Uplink:	7 dB average
Average Power Transmission:	1.0 W

GPS Receiver

Receiver Type:	1575.42 MHz (L1), 50-channel, C/A code
Accuracy:	2.5 m CEP
Update Rate:	4 Hz
Start-up Times:	< 1 sec hot start, 29 sec warm start, and 29 sec cold start
Sensitivity:	-160 dBm

Environmental

Operating Temperature:	−4ºF to +140ºF (−20ºC to +60ºC)
Operating Humidity:	< 75% RH
IP Rating	IP67