

## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 1 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Use of Satellite Communication Devices

#### 1. Introduction

This SOP details the use for the following satellite communication devices available to borrow from the School of BioSciences:

- Inmarsat satellite phone (Sat phones 1 and 5)
- Iridium satellite phone (Sat phones 2 and 3)
- Iridium Extreme satellite phone (Sat phone 4)
- inReach satellite communicator (messages only, cannot make voice calls)

The BioSciences Fieldwork Safety Requirements, require UoM fieldworkers are able to communicate with a UoM contact (e.g. their supervisor) at all times. Where breaks in mobile reception occur at or on the way to field sites, field workers must use a satellite phone or inReach Satellite Communicator.

#### 2. Scope

All staff and students within the School of BioSciences.

#### 3. Safety

Satellite phones and inReach communicators may interfere with electrical equipment. If you have a **pacemaker or any other internal medical equipment:**

- Keep powered satellite communication devices at least 15 cm away from your device
- When making/receiving calls, use the ear on the opposite side of your body to your medical device

#### **Proper Battery Care**

Improper treatment or use of the battery may lead to fire, explosion or leakage.

- Do not let the satellite phone, battery or charger come into contact with water.
- Do not let the battery touch metal objects. Risk of explosion.
- Do not leave the phone near a heat source or in a vehicle at high temperature. Risk that battery will swell, leak or malfunction.

If battery is damaged or not holding charge email [ehs-biosciences@unimelb.edu.au](mailto:ehs-biosciences@unimelb.edu.au) and a replacement battery will be ordered from the supplier

#### **Cleaning and Sanitising**

BioSciences' communication and navigation equipment is handled by many users. Devices, therefore, must be sanitised using alcohol wipes upon pick-up and just before drop-off at reception. Ideally, only one person should handle each device on each fieldtrip, however, if multiple people are required to use the same device, it must be sanitised before and after each use.

#### 4. Licences and Permits

N/A.

## SOP: Use of Satellite Communication Devices

Date: 26/06/2022	Page: 2 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### 5. **Training and Competency**

Ensure you read this SOP, know how to use and have practiced using the communication device prior to departing for your field trip.

### 6. **Equipment and Maintenance / Handling and Storage / Labelling**

The School of BioSciences Facilities Team ensure satellite phones and the inReach are tested quarterly.

Any missing contents/ parts or damage must be reported to BioSciences 4 Reception and [ehs-biosciences@unimelb.edu.au](mailto:ehs-biosciences@unimelb.edu.au) immediately or upon return from the field trip.

### 7. **Operating Procedures**

#### **Booking Equipment**

Booking a satellite phone or inReach satellite communicator requires Outlook. If you are unable to use Outlook or require assistance, contact [ehs-biosciences@unimelb.edu.au](mailto:ehs-biosciences@unimelb.edu.au).

1. To book a piece of equipment, create an Outlook calendar meeting with the equipment you need.

Each piece of equipment is listed as a specific recipient on Outlook:

<b>Device name</b>	<b>Outlook recipient name</b>	<b>Phone number</b>
Sat phone 1	!BioSciences Satellite phone 1	0405 556 044
Sat phone 2	!BioSciences Satellite phone 2	0416 109 098
Sat phone 3	!BioSciences Satellite phone 3	0147 161 840
Sat phone 4	!BioSciences Satellite phone 4	0147 143 518
Sat phone 5	!BioSciences Satellite phone 5	0420 706 114
inReach Satellite Communicator	!BioSciences Satellite Communicator-inReach	0405 894 172
Tough Max mobile phone	!BioSciences Mobile phone	0448 922 360

2. The start time for the meeting must be the date and time you intend to **pick up** the device.
3. The end time for the meeting must be the date and time you intend to **return** the device.
4. Enter your full name in the subject heading.
5. Enter your field trip destination as the meeting location.
6. If you are making the booking for someone else, include their name in the subject heading as well as your own.
7. Equipment can be picked up and returned to BioSciences 4, Building 147. Opening hours: 8:45 – 5:00.
8. Upon pick up, ensure the following:
  - a. The wall charger is in the phone case.
  - b. The car charger is in the phone case.

## SOP: Use of Satellite Communication Devices

Date: 26/06/2022	Page: 3 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

c. An instruction manual is in the phone case.

As soon as possible after pick-up:

- Read through the instruction manual so that you are confident in operating the device.
- Power up the device to check that the batteries are charged.
- Check that it is working by making a call to and from the phone.

Seek assistance at BioSciences 4 Reception or [ehs-biosciences@unimelb.edu.au](mailto:ehs-biosciences@unimelb.edu.au) if any of the following is displayed:

- Bad card
- Check card
- Denied
- SIM PIN
- Invalid account
- Phone PIN
- PIN blocked
- PIN2 blocked
- SIM error

### **Receiving a call**

Ensure the phone is switched on as it cannot receive calls when turned off. The antenna must be fully extended, if not, you will receive a notification of an incoming call and be prompted to extend the antenna.

You must establish two-way communication with your UoM contact every time you report from the field. For example, you may send them an “All OK” SMS and your UoM contact may reply with “Thanks”.

**DO NOT** switch off your satellite phone until you receive confirmation from your UoM contact.

## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 4 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Iridium 9555 Satellite Phone

Figure 2: Front and rear features of Iridium 9555 Sat phone.



#### Charging the battery

1. Connect the charger or car charging accessory to the phone through the DC power jack (Fig. 2).
2. Plug the other end of the charger into an appropriate power source. The phone will beep and the battery icon on the display will flash once charging.

While off, the 9555 takes ~4 hours to fully charge.

#### Status Indicator LED

LED is....	Indicates
Alternating red and green	Ringling, dialling or in call
Flashing green	Phone is idle.
Flashing yellow	SIM problem.
Flashing red	No connection to network.

#### Entering Characters

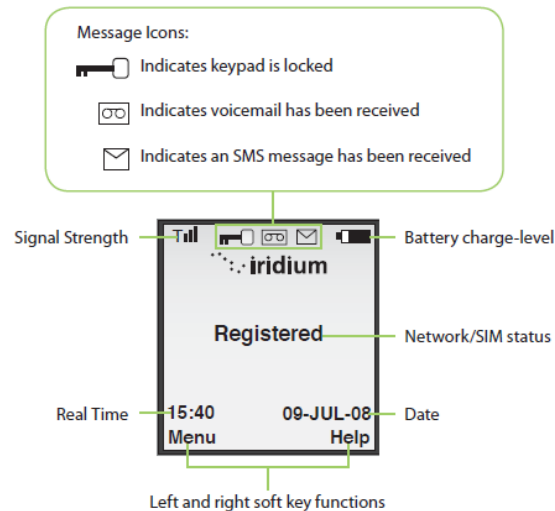
- Use the keys on the keypad to enter text.
- Each key represents a set of letters.
- Press the # key to shift between upper case and lower case.
- Press the \* key for punctuation.

## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 5 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Iridium 9555 Satellite Phone

Figure 3: Homescreen icons.



#### **Sending an SMS**

Follow the below pathway:  
Menu → Messages → Create Message

After writing the message: Options → Send → Add

Select a recipient from the Phonebook or enter a new number.

#### **Checking Voicemail**

If a caller leaves a voicemail, this is indicated by the voicemail symbol (Fig. 3)

Menu → Voicemail → Call Voicemail

Follow the audio prompts.

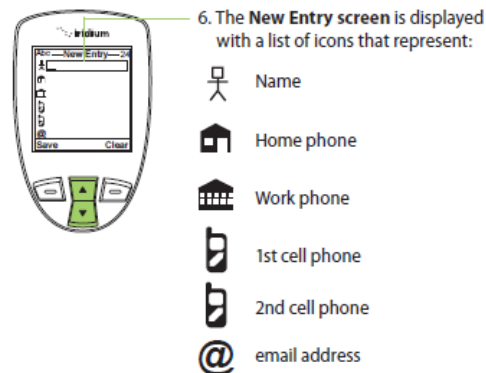
#### **Using My Phonebook**

You can use the My Phonebook function to save contacts onto the satellite phone.

Creating a new contact:

1. Menu → My Phonebook → Options → New
2. Fill in the appropriate fields (Fig. 4).
3. To call or SMS a contact, you must highlight them in My Phonebook and select 'Options'. Then select the action you would like to perform.

Figure 4: Fields for new contacts.



## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 6 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Iridium Extreme Satellite Phone

Figure 5: Front and rear features of Iridium Extreme Sat phone



#### **Charging the battery**

The Iridium Extreme uses an accessory adaptor attached to its base.

1. Connect charger or car charging accessory to accessory adaptor.
2. Plug the other end of the charger into an appropriate power source.

The battery symbol on the display flashes while charging.

#### **Status Indicator LED**

LED is....	Indicates
Alternating red and green	Call in progress; ringing, dialling or in call
Flashing green	Network is available and SIM status okay. Phone is idle.
Flashing red	No connection to network or valid SIM card is required.

See operating procedures for Iridium 9555 for:

- Entering characters
- Sending an SMS
- Checking voicemail

## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 7 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Iridium Extreme Satellite Phone

#### SOS Indicator LED

SOS LED is....	Indicates
Off	Handset not in Emergency Mode
Solid red	Handset in Emergency Mode, no emergency message sent.
Solid green	Handset in Emergency Mode, emergency message sent in last 5 minutes
Solid Yellow	Handset in Emergency Mode, emergency message sent more than 5 minutes ago

#### SOS Button – Emergency Mode

Pressing the SOS button activates Emergency Mode, sending a call and/or text to your saved emergency contacts.

- Emergency call goes to Emergency Services.
- Emergency texts can go to 3 recipients.

If prompted to do so, unlock GPS lock using the **Lock PIN: 3333**. GPS coordinates can then be sent with the SOS SMS.

In Emergency Mode, an SMS is automatically sent to the emergency contact every 5 minutes. Includes:

- an ‘Emergency’ notification
- your GPS coordinates
- altitude
- date and time
- % of phone battery remaining

#### Setting up Emergency Mode

Menu → Setup → Emergency Options → Emergency Actions

Default setting: call and SMS emergency contact when the SOS button is pressed.

You may change the Emergency Mode to ‘Message Only’ or ‘Call Only’.

#### Setting Message Emergency Contacts

Menu → Setup → Emergency Options → Message Recipient

The phone will remain in Emergency Mode until you select ‘Cancel’ on the home screen. A cancellation message will be sent to your emergency contact.

## SOP: Use of Satellite Communication Devices

Date: 26/06/2020

Written by: Kimberley Meyers

Latest Review: Nicole Middleton 21/5/2021

Page: 8 of 13

Authorised by: Timothy Bold

Version: 2.5

Next Review: Apr 2023

SOP Sat phones/ InReach

### inReach Satellite Communicator – text messages only

Figure 6: inReach Satellite Communicator.



#### **Pairing the inReach to your personal phone**

The inReach design makes it difficult to send messages and save contacts (Fig. 6). Using the “Earthmate” app, you can access contacts and send messages from your personal phone with the inReach acting as a satellite transmitter. The inReach will still need a clear view of the sky to transmit.

1. Download and install the “Earthmate” app on your personal phone. Do not download maps.
2. Turn Bluetooth ON on the inReach:  
Settings → Bluetooth → Pair inReach
3. Turn Bluetooth ON on your personal phone. Search for available devices. Select the inReach SE.
4. Sending an SMS from your mobile: open the “Earthmate” app and search for your desired contact **within** the app. After selecting the contact, you will be prompted to add the international code. Delete the leading 0 from the number and substitute with +61 (e.g. 0403123456 would become +61403123456). Compose your message and then send.

#### **Powering Off**

1. Press and hold the Power/Enter button for three seconds to display options.
2. Select “Power Off”.



## SOP: Use of Satellite Communication Devices

Date: 26/06/2022	Page: 9 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### inReach Satellite Communicator – text messages only

#### Charging the battery

Connect the charging adaptor to the device and plug into the appropriate electrical outlet. Alternatively, connect the USB cable to charge using your computer.

#### Status Indicator LED

Status light:	Indicates:
Flashing green	New message
Flashing red	Important alert (e.g. low power, sending message delay)

#### Creating a new contact

From home screen: Contacts → Create New

#### Create a message

1. From the home screen: Messages → New Message.
2. In the 'To' field, you may type the name of an existing contact, search through your contacts or fill in a contact's details manually.
3. Select the message field to create the body of the message.

Once complete, press Enter. Then select 'Send'.

#### Keyboard shortcuts

Press and hold	Shortcut
Left arrow	Backspace
Right arrow	Space
Up arrow	Shift
Down arrow	OK
Enter	Additional shortcut characters

#### SOS mode

When SOS mode is activated, the inReach will send a message to Emergency Services with your most recent location. While SOS is active, the inReach will track and send your location automatically.

1. If the inReach is on, slide SOS lock to the left to use the SOS button. Sliding the SOS lock is not necessary while the device is off.
2. Press and hold the SOS button for three seconds to send a distress message to Emergency Services.
3. To cancel an SOS message, press and hold the SOS button for five seconds.
4. A screen will appear confirming that you are in a real emergency. Emergency → Compose SOS
5. You may change the default SOS message if need be. Select 'Send'.
6. A 20-second countdown will start. Press X to cancel the SOS message if needed.

You may also activate SOS from the home screen.

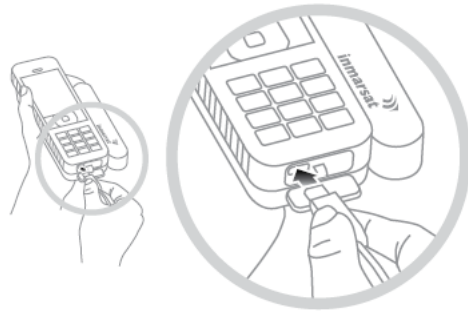
## SOP: Use of Satellite Communication Devices

Date: 26/06/202	Page: 10 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Inmarsat IsatPhone

Figure 7: a) Charging port for Inmarsat IsatPhone; b) Inmarsat features.

a.



b.



#### **Charging the Phone (Fig. 7a)**

The battery can be charged using

- the AC charger: connect to wall socket
- the micro USB cable: connect to a PC
- the car charger: connect to vehicle cigarette lighter

#### **Turning phone on and off:**

Hold down the red key for a few seconds to switch on (Fig. 7b). Do the same to switch off.

#### **Information shortcut**

On the main screen is the “Info” option. Press the centre selection key to access Info which includes:

























- Missed calls
- New messages
- Voicemail
- Today’s organiser appointments
- Your phone number

## SOP: Use of Satellite Communication Devices


Date: 26/06/202	Page: 11 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

### Inmarsat IsatPhone

Figure 8: Inmarsat IsatPhone icons and meaning.

 Keypad locked	 GPS fix required
 Alarm set	 USB connection
 Call divert on	 Conference call activated
 Unread message	 Closed user group number
 Message sent	 New voicemail
 Microphone muted	 Missed call
 Loud profile active	 Loudspeaker activated
 Vibrate profile active	 Silent profile active
 Phone memory full	 Message memory full
 Bluetooth is paired	 SIM card memory full
 Bluetooth headset connected to your phone	 Bluetooth on
 Wired handsfree headset connected	 Assistance button activated

#### Issues with connectivity

-  Indicates that a GPS fix is needed to make and receive calls (Fig. 8).
- Keep the antenna extended with a clear view of the sky.
  - The display may show you the direction of the nearest satellite.
  - Point your antenna in that direction until the satellite image turns green.

#### Creating a new contact

Menu → Contacts → New contact

#### Checking voicemail

To listen to a voicemail, hold down the 1 key for a few seconds. Your phone will automatically connect to the Inmarsat voicemail.

#### Returning a call

To return a call: Menu → Call log → Missed calls/Received calls.

## SOP: Use of Satellite Communication Devices

Date: 26/06/202

Written by: Kimberley Meyers

Latest Review: Nicole Middleton 21/5/2021

Page: 12 of 13

Authorised by: Timothy Bold

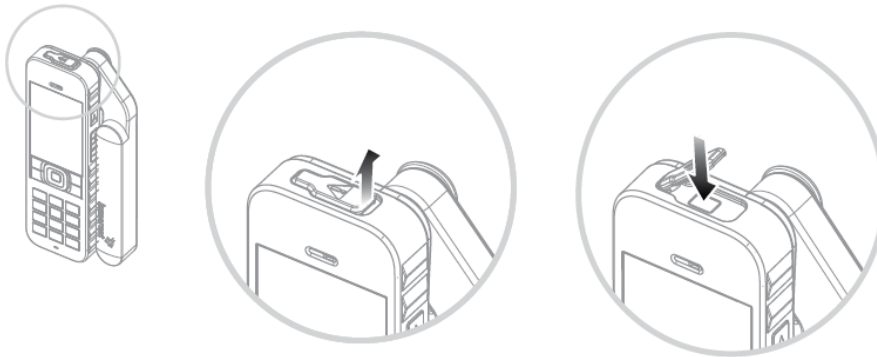
Version: 2.5

Next Review: Apr 2023

SOP Sat phones/ InReach

### Inmarsat IsatPhone

Figure 9: Activating the Inmarsat IsatPhone Assistance button.



#### **Assistance button (Fig. 9)**

Calls Emergency Services or messages one or more recipients in a critical situation.

To enable the assistance button:

Menu → Location Services → Assistance button → Configure → Assistance feature

Select the alert type (call and/or text) and the recipient:

Location services → Assistance button → Configure → Alert type

Enter your emergency contacts using the 'Call config.' option in the 'Configure' menu.

Turn 'Call Retry' on in the 'Call config.' menu so that the phone redials the emergency contact if the call fails.

Once the button is activated, the alert will be sent in 15 seconds or immediately if you select 'Alert now'.

## SOP: Use of Satellite Communication Devices

Date: 26/06/2021	Page: 13 of 13	Version: 2.5
Written by: Kimberley Meyers	Authorised by: Timothy Bold	Next Review: Apr 2023
Latest Review: Nicole Middleton 21/5/2021		SOP Sat phones/ InReach

8. **PPE**  
N/A.

9. **Controls and Calibrations**

The School of BioSciences is responsible for and ensures satellite phones and the inReach are tested quarterly.

Each device case should include:

- Handheld satellite phone / inReach device
- Power charge cable
- Car charge cable
- Instructions for use

Any missing contents/ parts or damage must be reported to BioSciences 4 Reception and [ehs-biosciences@unimelb.edu.au](mailto:ehs-biosciences@unimelb.edu.au).

10. **Waste Disposal**

Out of service units are disposed of using the UoM E-Waste service

11. **Relevant Documents / References**

The following documentation is kept in the relevant sat phone cases, on the BioSciences server (EHS folder) and on Canvas (EHS, Fieldwork)

- Iridium 9555 User Manual
- Iridium Extreme 9575 User's Manual
- IsatPhone 2 User Manual
- inReach SE User Manual

12. **Signage / Summaries / Templates**

N/A.

13. **Appended Material**

N/A.

14. **Emergency Response**

Police, Fire, Ambulance	000 112 (on mobile)
Victorian State Emergency Services (SES)	13 25 00
Parks Victoria	13 19 63
Current Fires and other emergencies (VicEmergency)	1800 226 226