Overseas Security Advisory Council
Bureau of Diplomatic Security
U.S. Department of State

Guide for Overseas Satellite Phone Usage

Overview

Satellite phones are proven to facilitate communications in remote destinations, making the devices ideal for wilderness adventure seekers, cruise ship staff, teams responsible for emergency preparedness and contingency planning, or employees operating in isolated locations. While satellite phones are legal – and even encouraged – in most countries, OSAC members should be mindful of overseas destinations that regulate or prohibit their use. The following report provides information on the limitations of satellite phones and serves as an overall resource for using (or not using) satellite phones overseas.

What Makes a Satellite Phone Different?

Satellite phones generally offer call- and text-based communication services and transmit data exclusively via satellite, with Globalstar, Inmarsat, Iridium, and Thuraya being the most common satellite networks. The network of satellites is either geostationary – fixed 22,000 miles above the equator – or in Low Earth Orbit (LEO), anywhere from 500 to 1,000 miles above the earth. Satellite phones are not reliant on ground-based infrastructure that may not exist in remote locations or that could be damaged by natural disasters. Due to the satellite architecture, these phones can essentially work anywhere in the world, greatly assisting organizations operating in locations that lack a reliable communications infrastructure. Satellite phones are generally a useful tool for communicating in remote areas.

However, satellite phones should not necessarily be a replacement for cell phones or other, more common means of communication, as there are several drawbacks to their usage. There may be country-level entry and/or usage restrictions, they do not consistently offer the day-to-day internet access and data speeds akin to smartphones, and they require a line of sight to orbiting satellites to operate effectively. The interior of buildings or vehicles, areas close to tall buildings or dense vegetation, deep valleys or canyons, and severe cloud cover can hinder satellite communications. Potential satellite phone users should also consider a provider's geographic coverage; the cost of the handset and calls, which generally exceed traditional mobile phones; and transmission delays, which increase the further the distance between the user and the satellite.

Potential Threats to Privacy

Like other communication technologies, satellite phones may also be susceptible to jamming, surveillance, interception, and other security threats. In 2012 and 2017, researchers identified weaknesses and cracked satellite phone encryption standards used by multiple service providers, underscoring that users should have no expectation of privacy when communicating by satellite phone. Additionally, satellite phone users could potentially be tracked through frequency emissions, commercially available tracking devices, and built-in global positioning system (GPS) capabilities. While GPS features may facilitate locating an individual in an emergency situation, it could also be a potential security vulnerability to be exploited and used for malicious intent, like kidnapping or detention.

It is also feasible for a nation-state or criminal enterprise, with financial resources and access to the right commercially available technology, to track a satellite phone and intercept communication beyond voice calls and texts. This could be accomplished using specific identifiers, like the international mobile subscriber identity (IMSI) number or the international mobile equipment identity (IMEI) number assigned to each phone. Some apps could also present physical and cybersecurity threats depending on their sharing permissions or unpatched security vulnerabilities present in the app.

Governments can also intercept communications on satellite phones. Satellite phone calls with a mobile phone or landline are routed through ground stations in numerous countries. When transmitting through these ground stations, communications providers must comply with local legal and regulatory frameworks, making it possible for local governments to intercept private communications. The Committee to Protect Journalists encourages users operating in hostile environments to use satellite phones with strict radio discipline, using the tactics outlined below.

Avoid using a satellite phone (or any radio frequency-based device) from the same position more than once.
Avoid using a satellite phone or similar device from a location that cannot be easily evacuated in case of attack.
Keep the maximum length of any transmission to 10 minutes at most, then cease transmitting and change location as soon as possible.
Avoid having multiple parties transmit from the same location.

Despite the negative factors noted above, satellite phones provide many OSAC members with reliable communications in the most austere environments.

Global Coverage, Not Universally Legal

U.S. satellite phone providers must comply with U.S. embargo and sanctions restrictions, which could affect the availability of hardware in certain locations. For example, U.S.-based companies cannot provide services in places like Iran, Cuba, and North Korea. However, many service providers still offer global coverage with the caveat that possession and use may not be legal. This global coverage can extend to emergency services assistance, where service providers will accept phone-based emergency distress calls and dispatch assistance regardless of the local legal and regulatory situation.

New technologies that allow for satellite communications through cell phones may purport to bridge the gap in locations where satellite communications are illegal. However, this technology is new enough that few (if any) countries are likely to have legislation specifically addressing it. Rather, it is likely that a government would view any phone (cellular or otherwise) as a satellite phone if it uses satellite technology to communicate and might not look kindly on those in possession of such devices, especially if it appears they are attempting to evade the law.

Case Study: India

India is one of the most high-profile locations prohibiting the use of satellite phones, not only on land but also in its territorial waters. India's Department of Telecommunications (DoT) maintains that "satellite phones are permitted only with specific permission," with DoT permits restricted to Inmarsat phones. India reportedly instituted and maintains the regulation of satellite phones for national security purposes, particularly after Pakistan-based terrorists used satellite-phone technology to communicate with their handlers during the 2008 terror attacks in Mumbai.

There are multiple instances of authorities confiscating undeclared satellite phones from foreign travelers upon arrival in India. The official notice states: "All foreigners travelling to India are hereby informed that it is illegal to use/carry Thuraya or other such satellite phones in India. Custom authorities in India may seize such phones and legal action may be taken against the passenger concerned." In 2012, the Civil Aviation Authority issued a memo to all Indian airports to detain passengers carrying satellite phones. Multiple OSAC members have reported legal actions against their travelers, including arrests, court appearances, fines, and confiscation resulting from satellite phone possession. As in the United States, ignorance of the law is not an acceptable defense.

Declared Travel Restrictions

The following table provides some of the known satellite phone restrictions for specific countries; some of the information in the table can be found from the relevant source by clicking on the link associated with the country name. Consult your satellite phone service provider for specific information on coverage, emergency assistance, and local regulatory compliance. This list is not exhaustive. Additionally, OSAC members who violate local/national laws prohibiting satellite communications or GPS devices may put themselves at risk of detention and/or imprisonment. Be aware of and refrain from breaking laws prohibiting possession or use of satellite phones and other communications equipment.

Bangladesh	Travelers need authorization from the Bangladesh Telecommunication and Regulatory Commission, which may grant approval under specific criteria related to national security, dignitary protection, humanitarian assistance, and disaster recovery.
Burma	Satellite phones are functionally illegal. Communications equipment (satellite dishes, fax machines, phones, walkie-talkies, short-wave radios, etc.), including satellite phones, require individual import permits from the Ministry of Posts and Telecommunications prior to arrival. While cell service is widely available, maintain redundant communications through voice, text, and email using separate carriers.
Chad	Satellite phones are illegal. Travelers using satellite phones risk arrest and seizure.
China	All mobile devices in China and the IMSI must be tracked and registered to the user by the appropriate Chinese regulatory body – the Ministry of Industry and Information Technology – using a national ID as well as facial recognition. Satellite phones issued by Chinese carriers and registered may be legal. However, bringing a foreign satellite phone into China likely runs afoul of the registration requirement. Additionally, all mobile communications infrastructure in China is considered a state-owned asset and is monitored.
Cuba	You cannot bring/ship a satellite phone into Cuba without a permit from the Cuban Ministry of Informatics and Communications. Being caught with one can lead to arrest.
Ethiopia	Travelers need written permission from the Ministry of Communication and Information Technology to import satellite phones. Satellite phones that do not use the Ethio-Telecom (Ethiopian Telecommunication Company) network, which has an agreement with Thuraya and Iridium, may raise security concerns. Travelers arriving at the airport with a satellite phone must present the phone and written permit to customs. Without a permit, customs will seize the phone and hold it until a permit is obtained.
India	As discussed in the case study above, authorities have arrested and prosecuted travelers (including U.S. citizens) for possession of satellite phones, which is prohibited in India. However, an individual or entity can apply to the Department of Telecommunications for a No Objection Certificate to use an Inmarsat satellite phone. Approval is not guaranteed.
Nicaragua	Satellite phones are illegal and may be confiscated.

North Korea	GPS-trackers and satellite phones are not allowed.
Russia	Russia requires advance approval to import satellite telephones. Global Positioning System (GPS) and other radio electronic devices, and their use, are subject to special rules and regulations in Russia. Contact the Russian Customs Service for required permissions.
Sri Lanka	Journalists and other media personnel can clear their equipment, including satellite phones, in advance of arrival. Authorities require a license from the Sri Lanka Telecommunications Regulatory Commission.
Sudan	Satellite phones require approval and licensing from the Sudanese National Telecom Corporation, and the traveler must have the approved license available for inspection upon arrival. Complete applications in advance at the Telecommunication & Post Regulatory Authority.
Turkmenistan	The possession/use of satellite phones is illegal.
South Sudan	The government requires registration of some forms of communication equipment, including satellite phones.

Former Restrictions

Other travel destinations frequently prompt questions, often because satellite phone use may have been restricted or banned at one time. This includes Nigeria, where in 2013 the army announced a ban on the use of satellite phones and shut down all communications networks in the northern state of Borno due to terror attacks launched by terrorist group Boko Haram. While there has been no formal announcement lifting the ban, all forms of communication are now permitted in the state. Travelers still should check with their satellite phone service provider and the nation's embassy or consulate for guidance on satellite phone usage prior to travel.

Impact on OSAC Members

OSAC members have reported difficulties importing satellite phones in countries where the devices are technically permitted (or not restricted). In Libya, there are no laws against satellite phones, but there have been multiple reports of authorities confiscating satellite phones, GPS devices, and personal tracking devices at the airport. This and other examples seem to be the result of opaque laws, lack of familiarity with equipment, corruption, or newly employed or overly suspicious customs agents, but it does happen. Unfortunately, there may be little recourse in these situations; travelers should comply with the decisions of local government authorities regardless of their compliance with the written law and avoid escalating any incident into confrontation.

Satellite phones can greatly facilitate locating and communicating with employees, especially in remote areas or during an emergency that otherwise affects standard landline and cell service. The U.S. Department of State recommends their use for travelers in at least a dozen countries, including Afghanistan and across Sub-Saharan Africa. However, as noted above, OSAC members should refrain from bringing satellite phones into nations where they are prohibited. For other destinations, check with the service provider to ensure coverage is available and for any potential operating restrictions. Consult with the relevant embassies and consulates of the host nation and the State Department website for additional guidance. Finally, OSAC facilitates several country-, region- and sector-specific networks that regularly discuss this issue, including reputable service providers and updates on restrictions; joining those groups may prove useful.

Additional Information

For additional information regarding satellite phones or other technical communication concerns, contact OSAC's Cybersecurity Team, or contact one of OSAC's regional teams below for country- or region-specific concerns.

Africa: OSACafrica@state.gov

Asia: OSACasia@state.gov

Americas: OSACamericas@state.gov

Europe: OSACeurope@state.gov

Middle East and North Africa: OSACmena@state.gov

Additionally, please review the following OSAC resources:

OSAC Report: Preparing for Communication Shutdowns in South and Southeastern Asia
Case Study: Bangladesh

Case Study: Burma/Myanmar

Case Study: India

Case Study: Pakistan

Case Study: Sri Lanka

OSAC Report: Traveling Abroad with Mobile Devices: Best Practices for the Private Sector

Older versions of this report:

OSAC Report: Satellite Phones – What to Know & Where They Go (2015)

OSAC Report: Satellite Phones: Critical or Contraband? (2018)

Attachments

OSAC - Satellite Phones.pdf

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Satellite Phones: Critical or Contraband?

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Satellite Phones – What to Know & Where They Go

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