

TESDA CIRCULAR

SUBJECT: GUIDELINES IN THE PROCUREMENT AND USE OF SATELLITE PHONES SERVICES		Page 1 of 4 page/s No. <u>006</u> Series of 2022
DATE ISSUED February 4, 2022	EFFECTIVITY Immediately	SUPERSEDES

In the interest of continued good governance thru a more effective alternate way of communication particularly in emergency situations, TESDA's Regional Directors and eventually other Officials are to be given the opportunity to avail of the Satellite Phone services available in the country.

The pertinent information and guidelines on this matter are laid down in this TESDA Circular series of 2022.

I. Background

One of the advancements in communications technology is the use of satellite phones, a tool that proves to be more effective than the regular cellular phones or radio frequency communications particularly in rough and remote areas. TESDA Management is considering this tool in resolving concerns on direct communications and interactions between Directors and Officers for TESDA wide operations purposes, with or without COVID restrictions.

II. Rationale

Satellite phones are necessary to allow TESDA officials to communicate and coordinate particularly during calamities and emergency situations. Also, under the TESDA "Abot Lahat" principle, where trainings are conducted in areas where traditional telecommunications infra are out of reach.

The following basic features of satellite phones can substantially resolve the above concerns except for the data transmission and faxing capabilities:

- GSM compatibility enabling the phone to be used as a cellular phone.
- GPS displays of longitude and latitude.
- Solar panels for remote recharging of the battery.
- Paging, data transmission and faxing capabilities.
- Made for rugged environments with water, shock and dust resistance.

TESDA is limiting the use of the satellite phones for emergency or most urgent matters of communication purposes only.

III. Procurement Guidelines

1. The procurement guidelines applicable for this recurring expense are via small value procurement (SVP) or shopping.

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2. TESDA Central Office thru ICTO and Procurement Office may negotiate for a centralized deal with a service provider in an aim to leverage on the prices or package costs.
3. The actual procurement shall be processed by the Regional Offices and charged to their regular MOOE.
4. Pertinent compliance with the requirements in whatever mode of procurement is applied shall be the responsibility and accountability of the Regional Offices.
5. The requirements for continued active service of the provider shall be the responsibility and accountability of the Regional Offices whether via regular payments or purchase of top-up loads, amongst others.
6. Receiving costs such as postpaid billing shall be processed by the Regional Offices.
7. A spending cap shall be set by the DDG-TESDO. Billings that went beyond the usage cap need to be justified and approved by the DDG-TESDO.

IV. Usage Guidelines

General

1. Satellite phones are to be issued to Regional Directors (RDs) of TESDA for the initial deployment of this communication tool.
2. The same is to be issued and released to the Directors in accordance with the procedures on Property Acknowledgement Receipt (PAR) form.
3. The satellite phones are to be given its standard care to ensure continued effective activation and usage.
4. The satellite phone is an accountability of the Regional Directors and shall be surrendered upon their resignation or termination of employment.

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5. In cases when the Regional Director concerned in reassigned to another Region, the satellite phone shall be retained as the property of the Regional Office that procured it.
6. The phone is limited to use for regular phone calls, text messages and paging for emergency communication. Emergency communication refers to communications in the context of emergencies, disasters, catastrophes, and other minor or major crises in management and operations. TESDA Management reserves the right to arrange with the provider in deactivating some of its features such as data transmission or faxing capabilities.
7. The assigned users should ensure that is to be solely used by them since the satphone is identified/issued under their name;
8. The assigned users should ensure that the satphone is open and ready to receive communication at all times.

Safety

All satellite phones pose significant potential risks to the user, based on the very real potential for interception of the transmissions and location information. However, in the case of TESDA users, in emergency cases usage, a technical committee may gauge the need for safety guidelines during this exchange of communication, e.g. use of codes or timed or encryptions, etc. if necessary or needed. But, the same may have been provided already by the SatPhone service provider.

How to Use a SatPhone

This is a complete overview for the steps involved in making a phone call or sending a message from a satphone:

1. Turn on the phone
2. Find a clear view of the sky
3. Engage the antenna to look for a signal
4. The phone obtains a GPS fix.
5. The phone connects to the satellite network
6. Make the call or send an SMS/email
7. The phone uplinks to the satellite

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8. The satellite downlinks with a Ground Earth Station (GES)
9. The GES transmits the information to the intended recipient
10. The GES records the phones GPS locations while transmitting
11. Complete the call or SMS/email
12. The phone logs its GPS Location, the number called, and length of the call
13. Close your antenna
14. Turn off and store the phone

V. Annexes

- a. About Satellite Phones
- b. Property Acknowledgement Receipt

VI. Effectivity

This Circular shall take effect as indicated.


SEC. ISIDRO S. LAPEÑA, PhD., CSEE
Director General 



ANNEX "A"

About Satellite Phones

(excerpted from: www.tutorialsworld.com)

Difference of Satellite Phones from Terrestrial Network Based cell phone

A cellular phone functions on the basis of cells (a cellular radio network distributed over land areas called cells, each served by at least one fixed-location transceiver), and hence are called cell phones. The whole network area is divided into small areas and an antenna is installed in each area. These are also called cell towers. Modern cellular phones in the industrial countries mostly work in the cities and on the major highways. This is because each cell is a radio link from the cell phone to the PSTN; and if a cell phone user is located where there are no cells, there is no service as it is not possible for cellular providers to put up cell towers in rural areas or in countries where there is low usage.

Satellite phones use Low Earth Orbiting (LEO)/MEO (Medium Earth Orbit/Geo-stationary satellites). They do not have any intermediate towers and they do not use cell towers, so communication link rarely gets broken.

Features of Satellite Phones

The features of satellite communication over terrestrial communication are:

1. Satellite phones provide a solution for communication when all other forms of communication are disrupted or limited in cases like earthquakes, floods etc.
2. The coverage area of a satellite greatly exceeds that of a terrestrial system.
3. Transmission cost of a satellite is independent of the distance from the center of the coverage area.
4. Satellite to Satellite communication is very precise.
5. Higher Bandwidths are available for use.

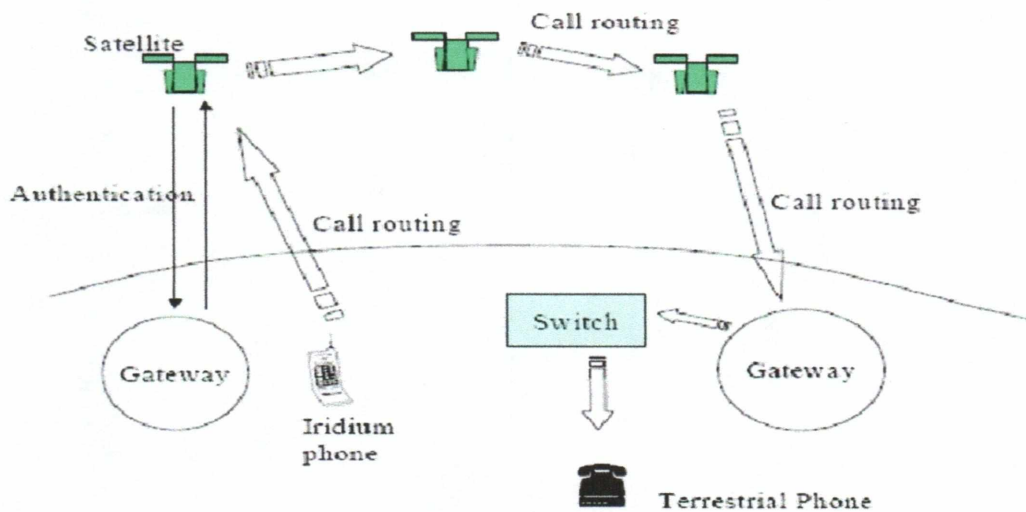
Components of a Satellite Phone

A typical satellite phone network consists of components. These are:

1. Satellite network
2. The ground stations and
3. Subscriber products (The satellite phones and data units)

Satellite network consists of or more satellites for transmitting the signals for source to destination. For example, Iridium satellite network consists of 66 satellites circles around the earth along LEO. Each satellite traveling at 16,832 miles per hour, each satellite is able to circle the globe every 100 minutes. These satellites act as cellular towers in the sky. Voice and data messages can be routed anywhere in the world by the Iridium network.

The ground network consists of earth stations that are used for command and control, in addition to transmission/reception of user signals. The earth stations also work as Hubs for interconnecting with other communication systems. For example, Iridium gateways interconnect the iridium constellation with public switched telephone network, making communication possible between iridium phones and any other telephone in the world.



Advantages and Disadvantages of satellite phones

The advantages of satellite phones are:

- Wide network coverage
- Uniform performance irrespective of location
- Uniformity in phone number
- No installation/setup required
- Highly useful in disaster response

The disadvantages are:

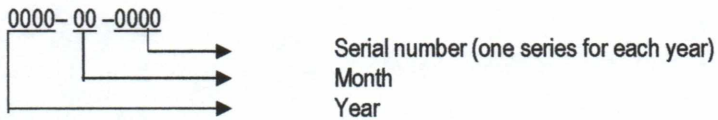
- High cost of the phone as well as call cost
- Large antenna size
- Delay in voice communications conversations, particularly when using networks based on geosynchronous orbits.
- Low data bandwidths for Internet access etc.
- Local government regulations may also prevent one from using satellite phones without prior permission.

Conclusion

Satellite phones (SatPhones) are the ultimate in providing global coverage however, tradeoffs are its high cost of acquisition and maintenance plus they are bulkier than regular cell phones. And though in theory their coverage might be close to universal, they usually don't work inside buildings or anywhere that has an obscured view of the sky. However, as it is, the concern of the location (far flung areas, those with no cell sites, etc.) is one of the major factors why TESDA is acquiring or availing this communication tool for emergency situations and training/operations coordination across Regional Offices.

B. This form shall be accomplished as follows:

1. **Entity Name** – name of the agency/entity
2. **Fund Cluster** – the fund cluster name/code in accordance with the UACS
3. **PAR No.** – number assigned by the Supply and/or Property Custodian for control purposes which shall be as follows:



4. **Quantity** – number of unit/s issued to the employee or user of the property
5. **Unit** – unit of measurement such as piece, set, etc.
6. **Description** – brief description or details of the property including serial number, if any
7. **Property Number** – number assigned by the Supply and/or Property Division/Unit to the property issued
8. **Date Acquired** – acquisition date of the property
9. **Amount** – acquisition cost of the property

C. The PAR shall be prepared in two copies distributed as follows:

- Original* – Supply and/or Property Division/Unit for file
Copy2 – Recipient or user of the property

D. The recipient or end user of the property shall acknowledge receipt of the property by signing the "Received by" portion and also indicate the date of receipt of the property. The designated Supply and/or Property Custodian shall sign the "Issued by" portion and indicate the date of issue of the property.