# Satellite and Amateur Radio For Emergency Communications

**Satellite Communications Combined with Amateur Radio Communications** 

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# Satellite Communications



# Starlink Mini Satellite System



It's Portable

Runs on 110 vac or USB PD or 12 volt cigarette lighter outlet.

Has a built-in wi-fi router.

Easily connects to a phone, computer, or other wi-fi device.

#### Why Not Use Satellite Communications Without Amateur Radio?

Because many people and organizations do not have a satellite system.

# Amateur Radio Communications





#### Amateur Radio Emergency Communications in the Community

Every major disaster throughout the entire world represents sudden local emergency conditions where loss of life, limb, property, necessary resources and even the ability to call for help have been forced upon people somewhere.

When the news story breaks and we hear about it in the midst of our daily lives, the story is about the event itself and the extensive upset to life at the scene.

However, somewhere in those initial reports, you usually hear that it was some local ham radio operator who was first able to re-establish communications and get out the call for help.

They're usually first, they're usually there, and they usually get it done!

## Amateur Radio Emergency Service (ARES)

The Amateur Radio Emergency Service (ARES) is a private volunteer organization of licensed amateur radio operators.

It is not a part of any government organization.

ARES may assist private organizations, such as The American Red Cross, The Salvation Army, etc.

### Radio Amateur Civil Emergency Service (RACES)

RACES is authorized by local, county, state, and federal emergency management agencies, under the direct control of the Federal Emergency Management Agency (FEMA) of the United States government.

Amateur Radio Service provides radio communications during periods of local, regional or national civil emergencies.

Only certified RACES personnel can assist government organizations, such as state, county, town, village, police, fire, EMS, etc.

### Local and Long Distant Communications

Primarily, amateur radio emergency operations are used for local communications.

Sometimes, it is used for long distance communications.

## Long Distance Amateur Radio Communications

Long Distance Amateur Radio Communications often requires amateur radio equipment (HF) with large antennas and it is subject to interference.

Sometimes short distance equipment and smaller antennas (VHF/UHF) is used as a relay operation or through repeaters and repeater networks to relay messages over long distances.

### Amateur Radio Digital Systems

Digital systems are used, but may not be ideal because they are complicated and require special equipment, knowledge, and training.

#### Amateur Radio Communications Combined With Satellite Communications

Amateur Radio is usually already setup and ready to go in various areas including Emergency Operation Centers and is usually adequate for local operations.

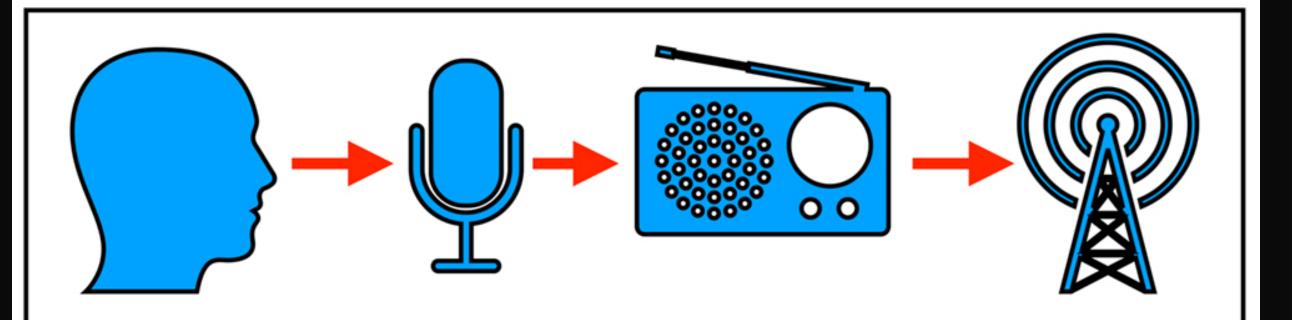
Satellite communications is excellent for long distance communications and doesn't require a radio operator on the other end.

Combining the two can provide excellent local to long distance communications.

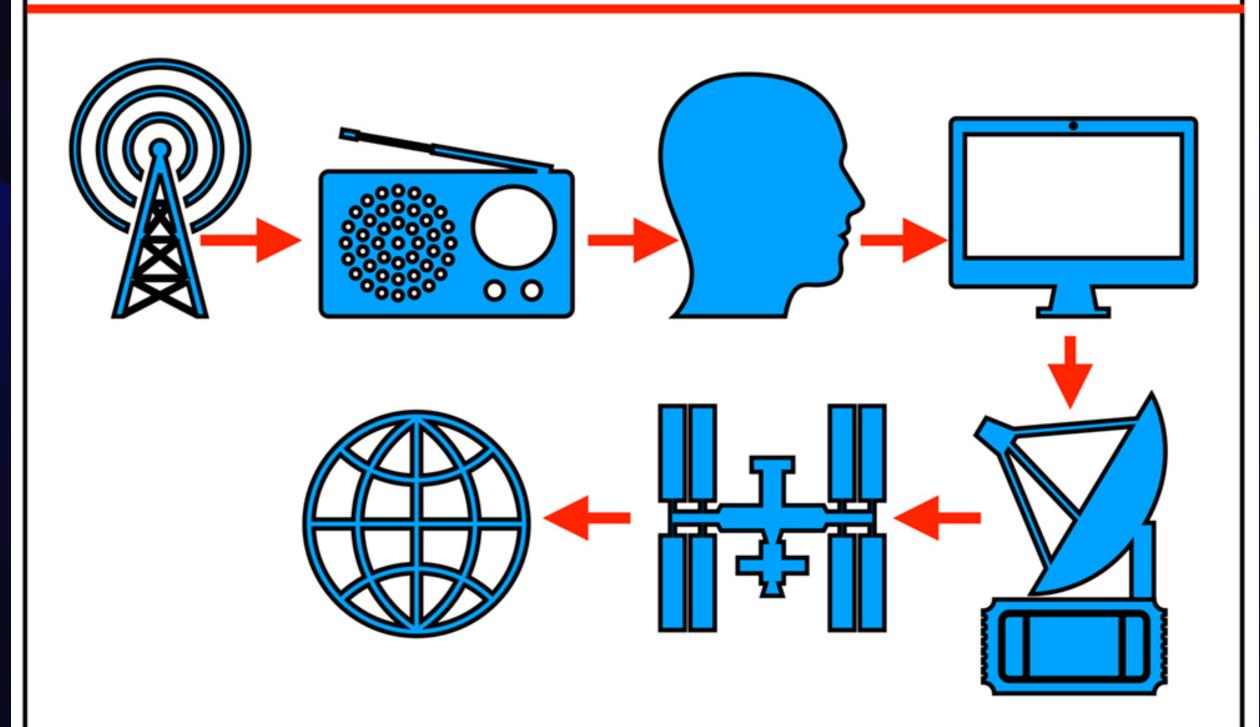
# How Does it Work?

An amateur radio operator sends a message to another amateur radio operator who has a satellite system via amateur radio.

The amateur radio operator with the satellite system receives the message from the amateur radio. Then, sends it to the intended party via email or text.



Person sends message through amateur radio via RF



Person receives message through amateur radio via RF Then, sends it to the internet via satellite as email or text

#### For Further Information

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