Comrex Technical Bulletin: Using SpaceX Starlink with Comrex Codecs

From the Codec Answer Guy

Q: Hey CAG, what's this Starlink thing anyway?

A: Starlink is a new way to deliver the internet to users via a constellation of low-orbit satellites. The service has an accessible price and offers fairly high speed and low ping times for satellite-based services.

Q: So I need to install a dish?

A: Yes, there are multiple choices available, including manual, self-actuated and mobile antennae/dishes.

Mini

Standard

Enterprise

Q: Do I need to point the dish?

A: Depending on the service and antenna choice, minor adjustments may be required. Self-actuating dishes will auto-align to maximal orientation.

Self-Actuating

Q: What's your opinion on Starlink for general purpose web usage?

A: Here at Comrex, we installed Starlink as a backup to our cable-based internet service. For general usage, we find it satisfactory, with ping times in the 50-60 mS range, and upload speeds ranging from 1-50 Mbps. Download speeds are higher, up to 300 Mbps (depending on location).

Q: Can I bring Starlink on the road?

A: Yes! With the multitude of satellites added around the world, Starlink now provides a "Roam" option that will allow you to take your service on the road using a 10" x 11" antenna.

Performance

COMREX BROADCAST RELIABLE

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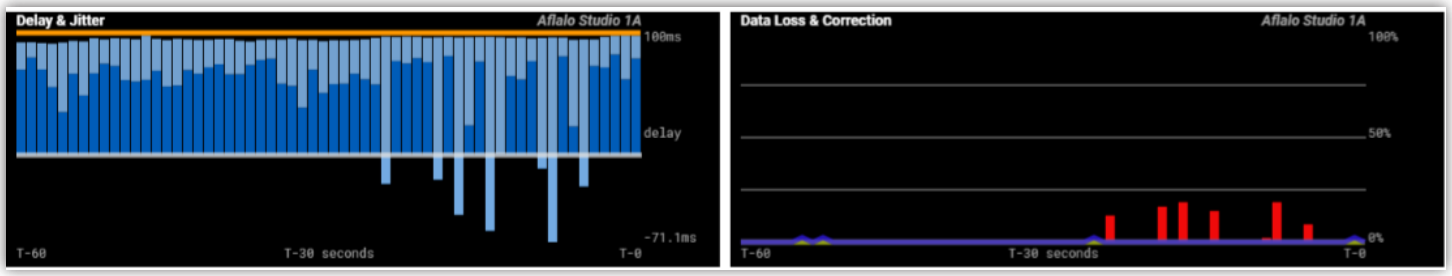
Q: How's audio performance on Starlink?

A: Mixed. Starlink experiences several different kinds of issues:

1. Occasional packet drops over a short time (1-2 seconds) of 1-25% of the data expected. To a large extent, the use of CrossLock on Comrex codecs can mitigate these drops.
2. Several seconds of 100% packet loss. This occurs on average every 3-10 minutes. It causes a momentary "soft" fade and return of audio.
3. Short intermittent increases in jitter. These usually cause the codec buffer manager to expand upwards of one second. They can be mitigated by reducing the maximum buffer within the codec settings, but may result in an increase of issues 1 and 2.
   For audio codecs, we think Starlink may be acceptable as a backup or for a main channel that has no alternatives and can tolerate short, occasional fades. It is not suitable for "nailed-up" connections like STLs.



Q: How about your LiveShot video codec?

A: Because video interruption is more dramatic than audio, and because a video link can take more time to recover from packet loss, we don't feel that Starlink is suitable for LiveShot use at this time.

Have Questions or need technical support?

Email techies@comrex.com, or call + 1-978-784-1776 between 9AM and 5PM Eastern Time.