

How do I?

An occasional series

This week: SSTVWhat happened?

Slow Scan Television (SSTV) is a really fun way to communicate. It is not used so much for casual conversation, and the convention is to establish contact (usually via phone or voice) then transmit your images. It is much more commonly used to receive transmissions broadcast by astronauts and cosmonauts aboard the International Space Station (ISS), unmanned high-altitude balloons, and the like. Several other articles in the How Do I series discuss SSTV operation and software.

Follow the trail to <https://www.radioclub-carc.com/resources/>

Today, let's take a look at why some images may not be so great.

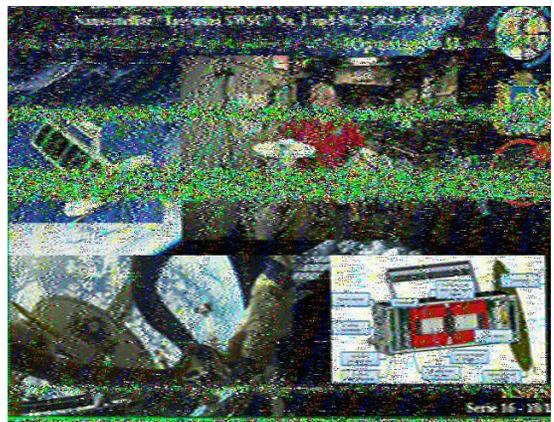


Picture 1 ** 2020 10/1 1848 GMT

Picture 1 was from the tail end of the pass as the ISS went over the horizon. The green bands are noise. Probably the result of a pass at a less than ideal elevation and the image is chopped off about 2/3 of the way through because the pass was really short. Some people like to be with their equipment when it is operating and do not like to get up at zero dark 30+. So they will go to a website or smart-phone app to check the best times. They are seeking the highest possible elevation (usually 30 degrees or more) and the longest duration pass. At least 8 minutes but 12 minutes or so is better.

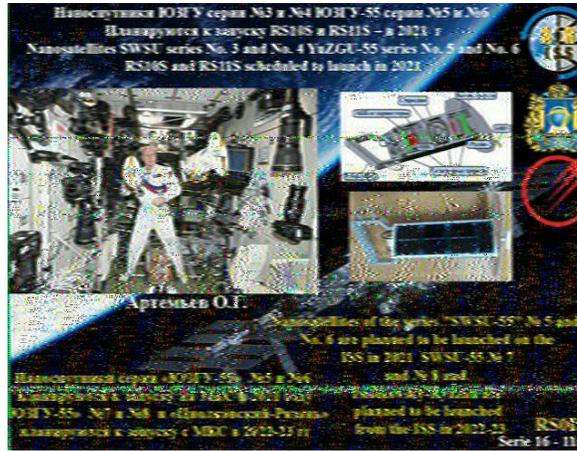
That 6 minute, 4 degree pass just will not yield great results! It takes about 4 minutes of reception time per image. I prefer, since I usually find out about these events at the last minute, to simply leave my radio and computer turned on and see what it captured.

Picture 2 is from a different set of ISS transmissions made in October 2020. This was a decent pass, but the weather was less than ideal. Those green bands are noise or static, possibly from the radio signals passing through water drops on the way down. It is a complete transmission, just flawed.



Picture 2 ** 2020 10/5 2209 GMT

Picture 3 is from a
The ISS is
point of the pass
trouble is the
end. Not sure

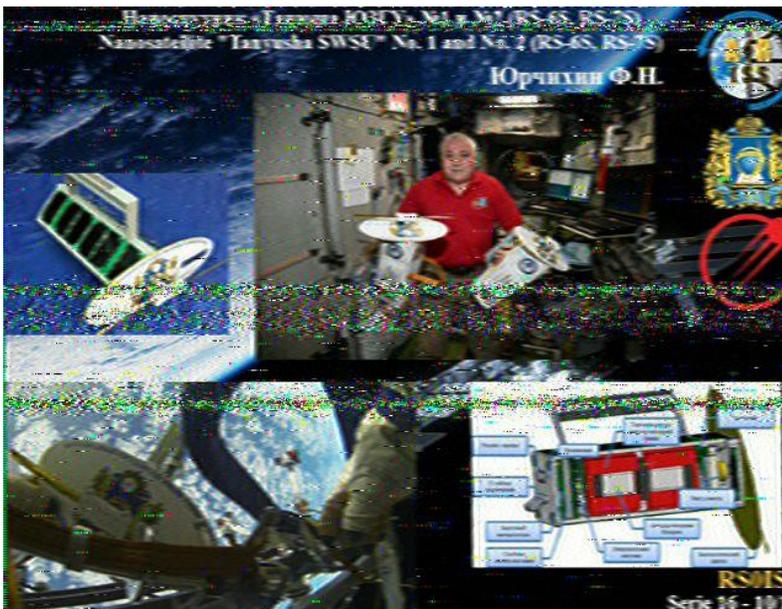


mere 4 minutes later.
probably near the highest
and the only real sign of
green band towards the
what caused that.

Picture 3 ** 2020 10/5 2213

The next pass had some results I didn't expect. Just two images. The first image (Picture 4) is from the beginning and the photo was being transmitted when the ISS came into range, so it is a good example of receiving just the tail end of a transmission.

The second image (Picture 5) is from 6 minutes later and is nearly perfect.



Picture 4 (Above)
2020 10/5 2345

Picture 5 (Left)
2020 10/5 2351

The **MMSSTV** software links directly to **Microsoft Paint** so you can edit images and clean them up a bit. **Paint** can only do so much though. A full-fledged photo editor such as **Adobe Photoshop** or **GIMP 2.0** can often do more.

I think one reason the ISS images are so popular is that, generally speaking, any mobile radio and many HTs can be connected to a personal computer soundcard to receive the images. I use a Diamond X300A antenna for much of my two meter operation.

The ISS has a photo gallery to which you can upload images. If your upload is completed within a specified time window you can receive a certificate. I was disappointed with the photo series Picture 1 came from and looked to see what other participants received. At that time most of the images posted were from participants located in Europe. The few images submitted by North American participants were mostly from Canada. I saw no images from participants located south of New York State. I didn't really verify this theory, but I think during the short time those images were being transmitted, the ISS was on a northern track and I was perhaps lucky to get anything at all.

Catch π on the air!

