

NEWSLETTER - AMSAT-EA

02/2017_{v2}
NOVEMBER

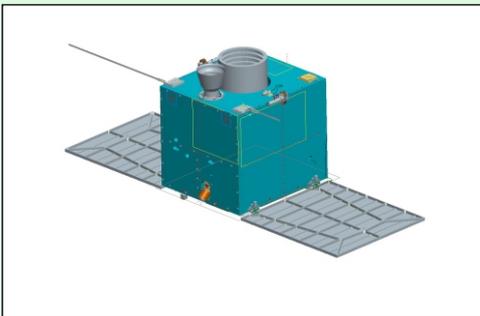
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Translation by Fernando EC1AME

AMSAT

CAS -4A and CAS-4B



Since october 18, amateur radio transponders are activated in both sats. Lot of activity in the last few days. Remember the frequencies:

CAS-4A

435.220 Tx and 145.870 Rx Inverted mode.

Beacon 145.855 CW - Telemetry 145.835 GMSK 4800

CAS-4B

435.280 Tx and 145.925 Rx Inverted mode.

Beacon 145.910 CW - Telemetry 145.890 GMSK 4800

RI1F - Franz Josef Island

Satellite activity on october 1 and 7 from RT9K Radio Club in Viktoriya Island, Franz Josef, during a polar expedition. During those days they made some 91 satellite contacts, just before leaving the island. Sat contacts where both in FM and SSB. This island is uninhabited and it's located in the Barents Sea. Each time more and more expeditions take in consideration having satellite communications among their goals.



Digital modes on FO29

In the bulletin [ANS-288](#) there was a discussion about experiments using the digital mode WSJT-X FT8 on satellites.

After paying attention to the transmissions, the recommendation is clear: Satellite users willing to test modes FT8 or MSK114 thru a satellite must pay attention when using those modes and, if any problem, stop using them.

RadFxCat (Fox-1B)



Launch was programmed for November 10 @ 01:47 PST (09:47 UTC). RadFxCat is one out of four cubesats taking part in the NASA ELaNa XIV Mission. They are a secondary payload in the JPSS-1 Mission that will launch on a Delta II vehicle from Vandenberg Air Force Base in California.

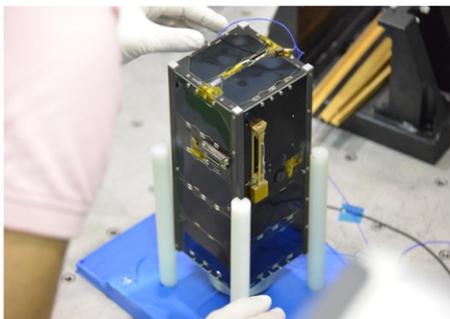
RadFxCat will have a FM U / v repeater , similar to the one used on Fox-1 .

Uplink: 435.250 MHz (67.0 Hz CTCSS)

Downlink: 145.960 MHz.

The satellite and experiment telemetry will be downlinked via the DUV subaudible telemetry stream. You can decode it with the [FoxTelem Software](#)

QBITO SATELLITE (UPM)



The QBITO satellite (Designed by the Polytechnic University of Madrid aKa UPM) was launched in may from the ISS as part of the QB50 project, led by the Von Karman Institute in Belgium, consisting in the study of the properties of the lower thermosphere. The satellite was developed during a period of 5 years by the Spanish branch of the ESA's E-USOC team. The cubesat has a size of 10x10x26 cms and weights some 2 kgs.

Unfortunately, after many attempts to activate it since may 2017, QBITO was lost at the beginning of august.

Some of those attempts to bring it to live were done together by members of AMSAT EA and other European hams, all under the coordination of Elena Vitores, engineer of the QBITO Team.

We'd like to highlight the job done by Jan PA3FXB who used, along with the PI9CAM Team, the 25m and 120 tons antenna at the Dwingeloo Radiotelescope in the Netherlands to try picking up the QBITO downlink on 70 cm (436 mhz). Method used to bring to live other sats like the Australians IINSPIRE II and UNSW-ECO.

In this case, Doctor Daniel Estévez, EA4GPZ, generated the audio commands that were sent to the satellite, in collaboration with Hans HB9CBU, who gave useful advices on how to send FSK 1K2 without distortion in the transmitter, as it was design of him.

In addition, Juan Antonio EA4CYQ was supporting the operation with his antenna, as well as, Reinhard DK5LA who was in charge of sending the recordings to the satellite using his EME rigs, more

suitable for the 2m band (145 Mhz) than the Dwingeloo antenna. Reinhard has previously succeed "waking up" the ZAAerosat satellite, also part of the QB50 Project, being able to open its solar panels and activate the EPS Energy System.

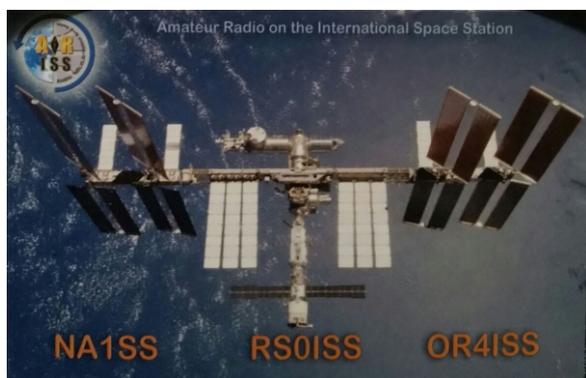


EME antennas DK5LA



Dwingeloo

QSLs RECEIVED



The International Space Station (ISS) is sponsored by **Canada, Japan, Russia, the USA and many nations in Europe**. ISS crews hail from these and other nations. Major hardware elements are:

- Zarya, Zvezda, Pirs, research modules Poisk and MRM-1 Rassvet built by Russia
- Science lab Destiny, Unity, Quest, Harmony and Tranquility modules provided by the US
- Canadian Mobile Servicing System, a 55-foot mobile robotic arm used for assembly and maintenance
- Columbus module, a science laboratory provided by ESA
- Kibo module, a science laboratory provided by Japan.

ISS crews and visitors often use their Amateur Radio station, first set up in Zarya and then Zvezda, to talk with school students to aid in their education, plus chat with fellow radio amateurs around the world. The ARISS Team continually works to extend ISS Amateur Radio station capability with new operation modes and, more recently, equipment placement in the Columbus module.

To EC1AME					
From	Day	Month	Year	UTC	MHz
<input checked="" type="checkbox"/> NA1ISS					
<input type="checkbox"/> RS0ISS	01	11	2017	11:13	145.800
<input type="checkbox"/> OR4ISS					
Mode : <input checked="" type="checkbox"/> Voice <input type="checkbox"/> Packet <input type="checkbox"/> SSTV <input type="checkbox"/> APRS <input type="checkbox"/> Repeater <input type="checkbox"/> SWL					

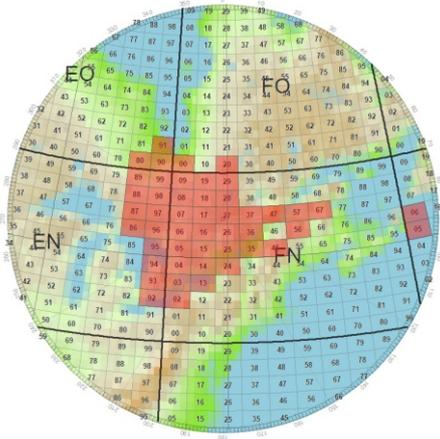
VE3HLS, Ken Alexander

¡Hello! I am VE3HLS, Ken Alexander and I am happy to be able to send greetings to my satellite colleagues in Spain! My home grid is FN03gw, in Richmond Hill in the province of Ontario. I have been an amateur since 1974, but my satellite career only began in May 2016, when I activated GN05 and GN06 while on a Mediumwave DXing trip to Nova Scotia province. I am a Mediumwave DXer as well.

I fell in love with satellite roving and have over 40 grids since that time, traveling across southern Ontario and Quebec. My roving station consists of a Yaesu FT-991a that I use for transmitting and a Yaesu FT-817ND for receiving. My antenna is a handheld Arrow with 3 elements on 2m and 7 elements on 70cm.



Ken ready for an activation



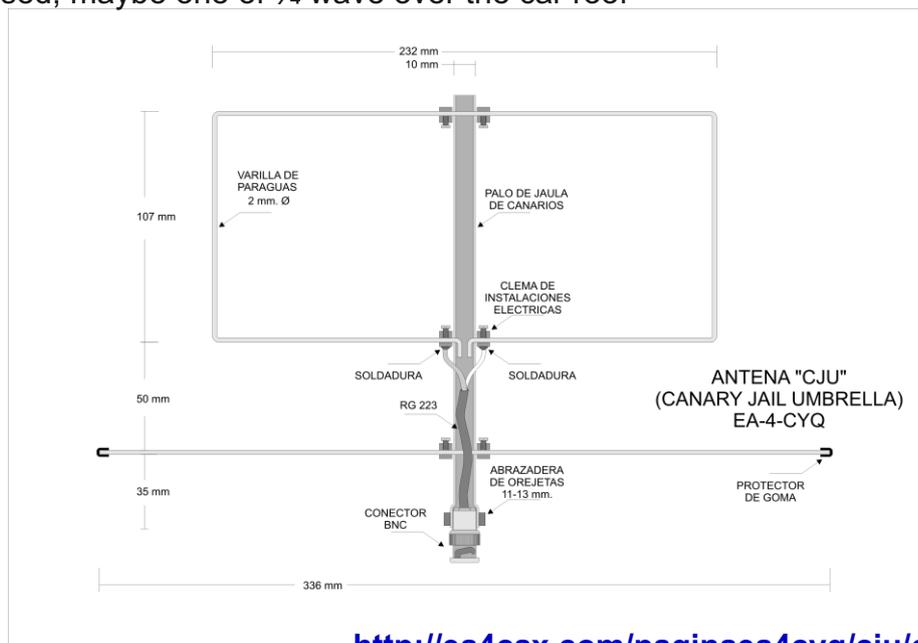
Activated Grids.

Between now and the end of 2017 I hope to activate FN16/17/18, FN38/48 and FO01/10/11 on three separate roving weekends. I also plan to make a trip to FO00 if I can find the time! FO00 requires a separate trip because access is difficult. Of course I will activate the grids I drive through to get to these destinations. I am active on Twitter (@ve3hls) and I hope you will follow me to get the latest information about my roves. I happily take "requests" and always try hard to find AO-7 and FO-29 passes that provide access into Europe. 73! I hope we can QSO soon!

Ken

ANTENNAS

The so called CJU antenna tries to get better reception signals on UHF using a WT. This antenna is hooked directly to the WT, so no line loss, and you don't even need an rf amplifier. This antenna is intended for LEO FM SATS, though we had success using it on the FO29. It's original version is made with a bird cage stick and umbrella rods. For the uplink another antenna can be used, maybe one of $\frac{1}{4}$ wave over the car roof



<http://ea4cax.com/paginaea4cyq/cju/cjuingles.pdf>