

Dxers Unlimited middle of the week program for Tuesday 9 May 2017



By Arnie Coro
radio amateur CO2KK

Hola amigos radioaficionados all around the world now watching yet another typical period of very low solar activity of this cycle 24 that has sent the daily solar flux now very near the baseline recorded during solar minimum years Corresponding with the decrease in solar activity radio amateurs operating on the 12, 10 and 6 meters bands were able to establish DX contacts by means of the now more frequent sporadic E band openings. Scientists continue to carefully study each Sporadic E even, trying to learn more about the inverse correlation between sunspots and the formation of highly ionized patches at the altitude of the E layer.

Solar cycle 24 continues to bring interesting news surprising news due to the fact that the general trend has been to behave well below the activity of the previous five cycles... Keep a close watch on the short wave propagation conditions during the rest of the week amigos, as more surprising E skip events may be seen ...

Item two: Yes, this is Dxers Unlimited's middle of the week program, with yours truly Arnie Coro, radio amateur CO2KK as the host of this show that is entirely devoted to the promotion and development of the radio hobby.... Yes, amateur radio operators provide community oriented services that are highly valued by local authorities... Here in

Cuba they are just getting ready to provide alternate communications during the upcoming tropical hurricane season, due to start on the first day of June. In the meantime in a few days from now, a national hurricane emergency training event will take place at a nationwide level... This time it will also contemplate what to do in case that an earthquake happens and will require the assistance of amateur radio operators. Using low power 2 meters band FM radios and home brew antennas, at many locations the radio amateurs used battery power and even connected their radios to solar panels to assure reliable links at distances of several tens of miles from mountain sites in western Pinar del Rio province, as well as at central Cuba Guamuha mountain range that spans over three provinces, Cienfuegos, Villa Clara and Sancti Spiritus. Eastern Cuba radio amateurs installed their portable stations at remote mountain locations of the Sierra Maestra and Sierra Cristal mountains that are part of the provinces of Granma, Santiago de Cuba, Holguín and Guantánamo provinces.

The rigs used included hand held portable FM rigs running from one to five watts and mobile radios of up to fifty watts connected to home brew antennas built by amateurs following several well known designs like the J and Super J, as well as several Yagi beams with from three to six elements. By the way, the Santa Clara city antenna factory is now producing three different models specifically for amateur 2 meters band use, that include a J pole, a three elements and a six elements Yagi antennas, that are sold on a non profit basis to Cuban radio amateur operators.

Stay tuned for more radio hobby related news and information, coming to you from sunny La Habana, Cuba.

Si amigos, this is Radio Havana Cuba, the name of the program is Dxers Unlimited, and here is now our next topic.... So called minimalist radios for amateur radio use are making a comeback and generating a lot of interest both between beginners and experts. Minimalist radios are described as transmitters, receivers or transceivers that follow design criteria with simplicity as the main goal... Designers accept the challenge of making those radios work while using the lowest possible number of parts. In actual practice, the operation of minimalist amateur radio equipment is quite a challenge making this aspect of the hobby a really rewarding one indeed. Imagine communicating at distances of thousands of miles using, for example, while using a transmitter built with just nine, ten or maybe a maximum of fifteen parts... Such a simple rig operating on the A1A CW radiotelegraphy communications mode while running less than five watts to the antenna will make possible nice contacts on the ever popular twenty meters amateur band at distances from a few hundred miles to half way around the world... depending on the actual propagation conditions and the type of antenna in use. My own personal experience with a single vacuum tube crystal controlled transmitter operating on fourteen thousand zero thirty two kiloHertz is that when propagation conditions are above average, and using a sloping half wave dipole, calling CQ DX will usually bring back answers from several stations.... and that using the Reverse Beacon Network, I can check that

the little rig is really getting out to far away locations. Of course that connecting the same simple transmitter to a three elements Yagi beam antenna makes quite a difference because the beam provides up to six decibels gain over the dipole.... Minimalist rigs are quite a challenge for sure, but they also make possible for radio amateurs that do not have the possibility of using commercial made equipment, to home brew radios using in many instances recycled parts. As a matter of fact, Cuban radio amateurs are always looking around for discarded or damaged electronic equipment that can be successfully disassembled and the parts removed for further use. Among the more common sources of broken down equipment are computer UPS supplies that provide power MOSFET devices, transformers and high current diodes, we also look for computer monitors, TV sets, fax machines... you name it... anything that you can think about will become a source of parts for Cuban radio experimenters, like for example the damaged compact fluorescent light bulbs that are a treasure chest of high voltage diodes and switching

transistors.... If you want to know more about one of the most popular Cuban designed and built ham radio rigs just drop me a note to inforhc at enet dot cu, again inforhc at enet dot cu, and I will send you the circuit diagram, that is the schematic of the Super Islander Mark 5 receiver module... It is a hand drawn circuit that I then took a photo of it so that it would be possible to send it as a dot jpg image file....This is a very nice 40 meters amateur band receiver that is very easy to build, has a very low parts count and is easy to adjust too.... If forms parts of a modular amateurs band transceiver that is made of the already mentioned receiver, a transmitter and VFO module, and a DC power supply There are many Cuban radio amateurs that use the Islanders and Super Islanders on 40 meters and that are able to make nice voice two waycontacts using them...

Let me add that having lost the last three Super Islanders to friends in need of a ham radio transceiver I am now, yes once again, gathering the parts to build the fourth rig, that will benefit from the previous experience accumulated from the assembling, alignment and testing of the previously built rigs.

The Super Islander in its final version is available in two options, one a totally solid state transceiver and the other as a hybrid that uses vacuum tubes for the radio frequency linear amplifier stages... Now here is our following radio hobby related item here at the middle of the week edition of Dxers Unlimited.... Big thank you to the many Radio

Havana Cuba listeners that are reporting the quality of reception achieved after our A.17 broadcast schedule went in effect recently... It is nice to know that programs in Spanish are well heard during the morning Wake Up with Cuba , Despertar con Cuba show , on the 11760 kiloHertz 25 meters band frequency using an omnidirectional antenna and the 6100 kiloHertz frequency beamed to Eastern North America f 13 hours UTC. Now let me add that we continue to work hard towards using again the 90 meters Tropical Band here in Cuba... with the possibility of running a 50 kiloWatts transmitter to a full wave dipole antenna around three thousand three hundred and fifty kiloHertz... a frequency that will work quite well during the winter season and that will improve in coverage as solar cycle 24 continues its downward phase.

Now at the end of the show.... expect very quiet geomagnetic conditions during the next two days... and also keep a watch on what may happen if more sporadic E layer events do happen during late morning, early afternoon and near local sunset....Please send me your d signal reports and comments to inforhc at enet dot cu or Via Air Mail to

Arnie Coro ; Radio Havana Cuba, Havana, Cuba listen to the weekend edition of Dxers Unlimited just after the top of the hour news on Sunday and part of Monday UTC days.

<https://www.radiohc.cu/index.php/en/noticias/ciencias/129318-dxers-unlimited-middle-of-the-week-program-for-tuesday-9-may-2017>



Radio Habana Cuba