

The "Membrain"

"Dedicated to the memory of our former Publisher and DVRC Founding Member, Pete Butler - WB2B"

**A Publication of the Delaware Valley
Ragchew Club
PO BOX 8813
Collingswood, NJ 08108-8813**

Club Callsign: **N 2 H Q X** – WWW.RAGCHEW.ORG
DVRC Net: 146.820/R on Tuesday at 10:00 PM EST
Meetings: Every 3rd Saturday of the month at the Haddon Township Public Library Meeting Room

DVRC CLUB REPEATER FREQ'S

146.820 (- 600) Camden NJ PL = 131.8 Hz
147.210 (+ 600) Absecon NJ PL = 123.0 Hz
448.0250 (- 5.0) Camden NJ PL = 131.8 Hz

DVRC 2010 Officers and Directors

DELAWARE VALLEY RAGCHEW CLUB – N2HQP

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NEWSLETTER EDITOR: George Primavera - WA2RCB
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President's Message

I am very happy to be your DVRC President for the Year 2010. I am also glad that George is back after a hiatus as our Editor. Please feel free to contact us via e-mail with your ideas, news and other issues relation to our enjoyment of this service called amateur Radio. Remember also that Field Day is next month and we would love to see all our members, family and friends come out for a fun day of radio and picnic activities at the Gibbsboro NJ Radar Station. Remember our meeting is May 15 at the Haddon Township Library located behind the Crystal Lake Diner starting at 10:00 AM. Hope to see you there!

Jean, KA2YKN ☺

May 2010

Editor's Corner



George – WA2RCB

Hello folks! I am glad to be back as your Editor after an extended absence. I will include some various stories of interest and hopefully some photos so send me your 'stuff' for inclusion into the Membrain. As I type this the Dayton Hamvention is taking place and WA5KUB has his great live camera setup going. Google his callsign above and see some live video and chatrooms from the Hamvention. Hope to see you all at the DVRC meeting.

73es! George
wa2rcbradio@yahoo.com

FCC Proposes Additions, Changes to Amateur 5 MHz Allocation

Acting on a 2006 Petition for Rulemaking filed by the ARRL, the FCC has issued a notice of Proposed Rule Making (NPRM), ET Docket No 10-98 to modify the rules that govern amateurs' secondary use of five channels in the 5 MHz frequency range known as 60 meters. The proposed changes would substitute a new channel for one that is seldom available because of occupancy by the fixed service, which is primary in this range. Also proposed is an increase in power from 50 to 100 W effective radiated. Acting on a 2006 Petition for Rulemaking filed by the ARRL, the FCC has issued a Notice of Proposed Rule Making (NPRM), ET Docket No 10-98 to modify the rules that govern amateurs' secondary use of five channels in the 5 MHz frequency range known as 60 meters. The proposed changes would substitute a new channel for one that is seldom available because of occupancy by the fixed service, which is primary in this range. Also proposed is an increase in power from 50 to 100 W effective radiated power (ERP) and the addition of CW, PSK31 and PACTOR-III modes with provisions to ensure that such operations would be compatible with the primary service.

The proposed changes can be found beginning on page 8 of the NPRM.

"The ARRL is pleased that the Commission has opened this proceeding to increase the usefulness of the limited 5 MHz Amateur Service allocation," said ARRL Chief Executive Officer David Sumner, K1ZZ. "We are gratified that the Commission and the NTIA agree that the responsible manner in which amateurs have been using the five USB channels warrants some expansion of privileges so that the Amateur Service can be even better prepared for service to the public."

The 60 meter band is part of the larger 5060-5450 kHz band that is allocated to the fixed service on a primary basis for Federal and non-Federal use, and to the mobile (except aeronautical mobile service) on a secondary basis for Federal and non-Federal use. Per footnote US381 to the Allocation Table, this makes five frequencies in this band -- 5332 kHz, 5348 kHz, 5368 kHz, 5373 kHz and 5405 kHz available to the Amateur Service on a secondary basis. In addition, footnote US340 authorizes Federal and non-Federal maritime and aeronautical mobile stations to use the 2-30 MHz band (which includes the 60 meter band) for measuring the quality of reception on radio channels on a non-interference basis; however, actual communication by these stations is limited to frequencies specifically allocated to these services. In 2003, the FCC added the Amateur Service secondary allocation to this band after determining that such frequencies could be useful to the Amateur Radio Service for completing disaster communications links at times when existing frequencies in the 80, 75 and 40 meter bands are not available due to ionospheric conditions. The FCC concluded "that such an allocation represented the best compromise available to give the Amateur Radio Service access to new spectrum for a wide range of radio communications, while assuring that incumbent operations are protected."

At the request of the National Telecommunications and Information Administration (NTIA), the FCC restricted the use of these five channels to single sideband suppressed carrier voice using only the upper sideband transmission, and a maximum effective radiated power (ERP) of 50 W peak envelope power (PEP). The Commission adopted these operating restrictions to decrease the interference potential between amateur stations and federal stations. On October 20, 2006, ARRL filed a Petition for Rulemaking, seeking certain modifications to the rules governing Amateur Radio use of the 60

meter band. Seven weeks later, the FCC issued a Public Notice to seek comments on the ARRL's Petition, but none were received. In its Petition, the ARRL requested that the FCC make three modifications to the existing rules governing Amateur Radio use of the 60 meter band, specifically Section 2.106, footnote US381 of the Rule and Section 97.303 of the Rules, in order to increase the flexibility in the use of the band and to facilitate emergency communications provided by the Amateur Service. One of the available channels, 5368 kHz, be replaced with 5358.5 kHz. Three additional emission designators -- 150HA1A, 60H0J2B and 2K80J2D - be authorized in the 60 meter band, provided that the operators using these modes utilize great care to limit the length of transmissions so as to avoid interference with Federal operations. The maximum ERP on channels in the 60 meter band be increased from 50 to 100W PEP, provided that amateurs utilize Voice-Operated Transmit (VOX) while in the single sideband emission mode, so as to permit the amateur operator to bear an attempt by another station, which may be a Federal user, to utilize the channel.

The ARRL Petition argued that a successful history of sharing with Federal users together with its amateurs' strong desire to improve Amateur Service use of the band merited a grant of greater flexibility in the use of these frequencies: "Because of strong admonitions provided by ARRL to Amateur Radio operators relative to their obligations vis-à-vis Federal agency primary use of and access to these few channels, the access provided for the Amateur Service with the assistance of NTIA in the past three years has been successful without qualification. Neither ARRL, nor, apparently NTIA, is aware of a single reported instance of interference to a Federal user by a radio amateur operating at 5 MHz to date." The proposals contained in the ARRL Petition were based on these discussions and a May 12, 2006 letter from the NTIA, indicating that it would "look favorably" on the above-described modifications should ARRL choose to pursue rule changes with the Commission. On March 11, 2010, the FCC adopted a Notice of Proposed Rule Making and Order that made certain amendments to correct the Amateur Service rules and to conform the rules to prior Commission decisions.

The FCC's proposals are based on the current rules, as modified by that action.

The existing Amateur Service use of the 60 meter band represents what the FCC calls "a balancing of important interests -- the desire to provide amateur operators with frequencies that could be used to complete disaster communications links when other bands are not available, and the need to protect important primary Federal operations in the 60 meter band." The ARRL's Petition seeking to modify "the existing spectrum sharing scenario in a manner that appears to be consistent with the interests of both Federal and amateur users in the band, and we tentatively conclude that the changes to footnote US381 and Section 97.303 of our Rules that are proposed by ARRL should be adopted."

Live Shortwave Broadcast from Dayton

The QSO Radio Show www.qsoradioshow.com will be LIVE in Dayton this weekend! Come meet QSO Radio Show host Ted Randall, winner of the Bill Leonard Professional Media Award. The increasingly popular ham radio show and podcast is on the road and will be broadcasting LIVE on shortwave and streaming audio during the 2010 Dayton Hamvention. Friday May 14 we'll broadcast from 2:00 PM to 3:00 PM Eastern on 7.415, Saturday May 15, 2:00 PM to 4:00 PM on 7.415 and 4:00 PM to 6:00 PM on 9.330. The QSO Radio Show will be talking with hams and hamvention guests from across the country during the world's largest amateur radio gathering at Hara Arena in Dayton Ohio. So join Ted Randall (WB8PUM) and the QSO Radio Show road crew Holly Misslin (KG4WXV), Matt Aaron (KG4WXX), David Klimkowski (KG4WXW) and Mark Edwards (KI4JIZ). For more information about Dayton Hamvention 2010 visit hamvention.org

Rogue Galaxy 15 Satellite Won't Die - by Doug L. of TV Technology

The mainstream press has finally picked up on the failure of Galaxy 15 that was first covered in RF Report almost a month ago. While those stories focused on the impact Galaxy 15 transponders will have on AMC-11 satellite, the popular press articles are short on technical details. AMC-11 is home to popular cable nets Lifetime, Food Network, HGTV, A&E, MTV, Nickelodeon, BBC America and more. Will these popular channels disappear from cable channels when Galaxy 15 moves into AMC-11's

location? Perhaps not. After all, you didn't see a major disruption of the cable networks at 133 degrees west longitude when traffic was moved from Galaxy 15 to Galaxy 12. The 133 degree location is home to many cable feeds, including Turner networks, HBO, and NBC networks USA, Syfy, Sleuth and Oxygen. I'll explain how after a little history.

When Galaxy 15 was in between Galaxy 12 and AMC 11, Intelsat and Orbital Sciences engineers tried to regain control of it. When that failed, they had to take more drastic measures. Uplink operators know they have to be in contact with the satellite operator and gradually increase power when transmitting to a satellite. The fear is that if there is too much power, not only will it cause interference to other users but it could damage the power amplifiers in the satellite. As I suspected they would do, it appears Intelsat attempted to kill Galaxy 15 by transmitting strong signals and overloading its power circuits.

Unfortunately, the protection circuits worked better than the telemetry, tracking and telecommand (TT&C) payload. This attempt required careful coordination between Intelsat and SES New Skies, the owner of AMC-11 to avoid interfering with AMC-11. Intelsat is posting data on Galaxy 15's movement towards AMC-11. Go to Intelsat owned/Operated Satellites Ephemeris Data and scroll down to "Galaxy Region (W)". Using the dropdown menus, select "Galaxy 15" to view the data. The "Center of Box" has the predicted location of the satellite for the next two weeks. According to the May 11 prediction, Galaxy 15 will be within 0.5 degree of 131 degrees west longitude around 17:00 UTC on May 24. Many cable downlinks operate with antennas as small as 4.5m. At this size, the 3 dB beamwidth is around 1.3 degrees. In less than two weeks Galaxy 15 will be sitting in the main beam of these antennas. Will Food Network be toast when this happens? Perhaps not!

Two things could help viewers of programs on AMC 11. First, Galaxy 15 is not tumbling through space. Its transponders are cross-polarized with AMC 11. This helps in both directions uplinks aimed at AMC 11 will put less signal into Galaxy 15 and Galaxy 15 signals will be attenuated at downlinks polarized for AMC 11. Because adjacent transponders overlap, this won't completely eliminate interference. The best hope of Intelsat and SES New Skies

may be the size of the uplink dishes used to access these cable satellites. For example, a Vertex 9m C-band uplink dish has a 3 dB beamwidth of 0.36 and a 15 dB beamwidth of 0.76 degrees. Up the dish size to 11.1 meters and the beamwidth is even smaller 0.28 degrees at 15 dB. As long as AMC 11 can stay 0.5 degrees or so away from Galaxy 15, the amount of energy hitting Galaxy 15 and, as a result, the amount of interference from Galaxy 15 to AMC-11 downlinks, will be greatly reduced. Operating a satellite this far out of its normal 0.1 degree box will require FCC approval. Keeping MTV viewers happy will require a celestial dance of the satellites; SES New Skies will need to move AMC 11 around Galaxy 15, maintaining enough distance from it for uplinks to minimize the signal into Galaxy 15 while staying close enough to 131 degrees west longitude so cable operators don't have to adjust their antennas to follow it. Engineers at uplinks looking at AMC 11 will be busy, as they will need to move their uplink dishes to follow AMC 11 as it dances around Galaxy 15. Other steps SES New Skies could take to minimize interference would be to have uplinks lower power so they can remove attenuators from the transponder input, further reducing the amount of signal into Galaxy 15. Will they be able to pull it off? I think there is a good chance they will. The cable nets have a big incentive to make it work! If you are uplinking or downlinking AMC 11 signals, drop me a note in two weeks and let me know how its is working.

WOUXON US TO INTRODUCE CHINESE DUAL-BAND HT at Dayton 2010 HAMVENTION

If the information on the Hamvention Yahoo groups Reflector is correct, then there is a new player in town to rival Alinco, Icom, Kenwood and Yaesu in the dual band handheld radio competition for your dollar. The new company is called Wouxon dot US and their first radio for the United States market is their new model KG-UVD1P 2 meter and 70 centimeter Dual-Bander will be available at the Dayton Hamvention.

In a news release, Wouxon.US says that it will be at booth is #172, just inside the North Hall entrance and to the right. The company says that it will have 100 units plus accessories packed up and ready to go at a special Hamvention price. The news release did not specify what that price will be, but from Hong Kong dealers advertising on eBay, these radios,

complete with a rechargeable battery desktop drop-in charger, auxiliary earphone and a belt clip seem to sell for an average of around \$80 plus \$40 shipping to the United States That said, few expect the price to be that low in a retail environment such as Hamvention or your favorite radio store. The home company is Quanzhou Wouxun Electronics Co. Ltd. of Fujian, China. It says that the new ham radio dual bander has received FCC certification. It's approved as FCC ID: WVTWOUXUN04.

More on the new radio is on-line at:

<http://www.eham.net/reviews/detail/8524>

<http://www.youtube.com/watch?v=XEkvyYjQZ3s>

<http://www.youtube.com/watch?v=ewoo8nv1bTw>

