ARC-SHORTS

MARCH 2016

Club Repeaters: 147.315 (PL 107.2), 444.6 (PL107.2), 224.82 (PL107.2), 53.13 (PL107.2) 927.6 (-25Mhz, PL107.2), and 1282.600 (PL 107.2), DSTAR 145.38Mhz, 442.060, and 1284.600 ALL AR UP AND RUNNING – HAM IT UP! Get on the air!

NEXT CLUB MEETING

Our next meeting is APRIL 8th. This month's program is presented by Gary Sessums, ARES EC for Arlington on the Amateur Radio Response to Katrina

President's Corner

Hello, all! It's April, which means it's another month closer to Field Day. I hope we can have at least a short, quick discussion about generalities for our upcoming event at Hensley Park during the 4th full weekend in June. We'll have more discussion about this during the May and June meetings, but it's good to at least get people's minds going early. In addition, we'll have Gary Sessums discuss amateur radio's role in the response to 2005's Hurricane Katrina. See you Friday night!

73 DE KI4BXU (Erik Misavage)

MARCH MEETING MINUTES.

Our March program was provided by Kieth , KB3TCB about progress made on the IP based network and MESHnet. Kieth presented his introduction to MESHnet last year and came back to talk about establishing a microwave backbone to cover more are. The main difference being that the backbone uses a client / server type system and the MESHnet was ad hoc and used modified WiFi routers. Both work together to establish a very high speed connection using the internet protocol (IP). One of the points made was that while two of the WIFI channels and segments of the microwave bands used by the backbone system are amateur (shared) frequencies, it is better to use the system under PART 15 to allow non-amateurs to use the system and to preclude the other limitations of Part 97. With this in mind we (amateur radio operators) provide a system that while non-commercial is not restricted to amateur use, but we also provide the background to use such a system if we were to build it. The advantage is the use of Internet Protocol and the high data speed.

ARES

Spring is finally here, I think, and we need to put a team together to check out the systems at the hospital and identify the antennas that belong to us. Also a good time to make sure they still work! We will need to see if we can get a small dual band antenna installed on the roof just above the EOC in the hospital. While we are at it, I would like to test out the ability of D-Star handhelds to work in the hospital. We've found that handhelds on simplex / FM do not provide reliable comms, but maybe if we use the D-Star UHF or VHF repeaters we can work in the hospital. I expect this will be done in late April or Early May.

73 Rick / N4ASX

Hamfests –

The Culpeper Amateur Radio Association's Swapfest will be held April 9 at Agricultural Enterprise, which is on Route 29 in Culpeper. Features outdoor tailgating and some inside tables.

The Delmarva Amateur radio and Electronics Expo takes place April 16 at the Sussex Technical High School in Georgetown, Delaware. It's sponsored by the Sussex Amateur Radio Association. The school is located at 17099 County Seat Highway (Route 9). It's an easy drive across the Bay Bridge. Take 301 North after crossing the bridge and look for US Route 13. At laurel, DE, take Route 9 East. The school is about halfway between Laurel and Georgetown. Talk in on 147.09 (PL 156.7 Hz) repeater.

The Greater Hagerstown Hamfest takes place on May 5 at the Washington County Agriculture Center. Its on MD route 65 South, Sharpsburg Pike. Talk in is 147.09(+), PL 100 Hz. Its fairly east to get to and they do have both indoor and outdoor spaces.

Its not too early to start thinking about the Dayton Hamvention. Its always the third full weekend in May, so that means May 20 through 22. Thursday is the travel day, so we have a full day at the Hamvention before the really big crowd arrives on Saturday.

I have 4 rooms at the Fairfield Inn Fairborn and 1 is already spoken for. There are several other hotels in the immediate area, but they are sold out and your only alternative is to stay in the hinterlands. Other club members may have a room or two available nearby. Gas may remain cheap for the foreseeable future, so plan on making the trip. The breakdown is usually $60 to $80 for gas, plan on $350 for hotel, $28 for the Hamvention ticket and bus fare, along with your meals and purchases.

I will need to know by the April club meeting so I can order tickets.

Training -

We have 22 students signed up for our class, including General and Extra Class. It's hard to believe, but we are now at the hallway point in our latest class. We look forward to hearing them on the air next month and at club meetings and activities.

Contests -

April 9 and 10 – New Mexico QSO Party. Exchange is RST and state.
April 9 and 10 – Georgia QSO Party. Exchange is RST and state.
April 16 and 17 – Nebraska QSO Party. Exchange is RST and state.
April 16 and 17 – North Dakota QSO Party. Exchange is RST and state.
April 17 – ARRL Rookie Roundup, SSB. Exchange is name and 2 digit year you were first licensed.
April 30 and May 1 – Florida QSO Party. Exchange is RST and state.
May 7 and 8 – 7th call area QSO Party – Exchange is RST and state.
May 7 and 8 – Indiana QSO Party. Exchange is RST and state.
May 7 and 8 - Delaware QSO Party. Exchange is RST and state.
May 7 and 8 – New England QSO Party - Exchange is RST and state.
May 14 and 15 – Arkansas QSO Party. Exchange is RST and state.

Contests help you exercise your radio skills, test out how well your station performs and teaches you about propagation. They also show those who want our spectrum that we are using it!!!!!

Club Repeaters -

The Alexandria Radio Club owns more repeaters than other club in the area. We have repeaters on every ham radio band between 6 meters and 23 cm. Here is a great opportunity to try a new band. With the exception of the 23 cm repeater, all our analog repeaters are commercial grade equipment which should run for many years with minimal work.

In the late 1980's the FCC opened up spectrum at 902 to 928 MHz to US amateurs. Like most of our spectrum above 225 MHz, it's shared spectrum. In fact, we share it with a multitude of other services, such as military radar, cordless phones, baby monitors, over the road truck locating services as well as medical and industrial users to name a few.

. Most of the other users are concentrated in the middle part of the band, leaving the edges relatively interference free. The original bandplan called for 12 MHz repeater splits and the FM portion was right in the middle of the mess.

As commercial equipment designed for the spectrum above 928 MHz has become available on the open market, hams have been converting these radios to our purposes. The only way to get on 33 cm is to convert commercial equipment. (Alinco made a handheld radio with 1.25 meters and 33 cm for a brief period, but discontinued it) (WORKS well on our 224.82MHz repeater). Some radios are more ham friendly than others. There is one Kenwood mobile as well as a Motorola mobile and handheld that are the most commonly used. They can be had inexpensively at hamfests in the local area. There is group in Richmond who promotes 900 MHz ham use and they often have radios for sale.

As the commercial radios were being modified for our use, it became very apparent the 12 MHz offset we were using was not feasible with the commercial units. They were designed for a 39 MHz offset. But they can be re-tuned for a 25 MHz offset. As it turns out, FM is allowed at both ends of the band. Most new repeaters are coordinated with a 25 MHz offset.

We have one of the very few 33 cm repeaters in the area. It's a converted Motorola MSF-5000 that originally belonged to a commercial user. Modifying it to amateur service was fairly easy, basically programming it with a computer. One item we added was a duplexer. The original user used 2 separate antennas and no duplexer because their coverage area was Alexandria and the repeater offset was sufficient enough to not require one. Even 25 MHz was not enough for our use, so we put a duplexer on the repeater and it has solved a lot of de-sense problems on the receiver. Like our other commercial grade repeaters, the power has been throttled back to less than half of what it is rated for, so it should run for many years. Our repeater transmits a PL tone, as well as requires one to access it. This is a good thing with all the other services on 33 cm that can cause potential interference.

Propagation on 33 cm is very different than 2 meters. The 33 cm band is very much line of sight, unlike 6 or 2 meters. Range on 33 cm is not as good as on lower frequency bands, but that's expected. Also, 33 cm does not always work in buildings as well as 70 cm. Radio to radio inside the building works well, but inside the building to the outside can be problematic. Public safety agencies are finding this out as they migrate to 700/800 MHz.

Antennas on 33 cm are half the size of 70 cm antennas, i.e. a quarter wave whip for 33 cm would be about 3 inches tall. Base and mobile antennas are smaller too. You will get a higher gain antenna in the same footprint as a two meter antenna. At the UHF frequencies, higher gain is a big deal.

Our repeater has good coverage around Alexandra and fairly good coverage outside the immediate area. Overall, the 33 cm band is good for general use.

As always, ham it up and get on the air.

73,
Rich, KA4GFY

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Future Programs

April – Gary Sessums – Katrina Response
May – Field Day planning part I and D-Star for beginners
June - D-Star Ops and programming
July – VHF Contesting (tent.)
August – DX Contesting (tent.)
September - HF Portable Operations (tent.)
October – ARES ops and City interface
November - Club Elections
December – Club Party

Let me know what you want to hear about. HELP !!!! If you have an idea for a program, please let Rick know and he will try to find someone to provide the program.

Social Events

Monday Night Burgers – There is a group that gets together at 6:15 PM on Mondays at a local burger joint. Mark up on the 147.315 repeater and join them for the fun. At this time the group meets at SMASH BURGER At Van Dorn and Pickett St.