



FEEDBACK



Warminster Amateur Radio Club Web Page www.k3dn.org

November 1999

November marks WARC's annual ARRL night. We will again be privileged to have Atlantic Division Director Kay Craigie (WT3P) as our guest. Kay will fill us in on all the latest with the League and the Atlantic Division and will be available to answer individual questions. I'm sure we'll hear the current status of the license restructuring proposal and many more items of interest to the Amateur Radio community. Remember the ARRL is our representative body and your opinion matters. Don't miss this one!

December will be the 35-year anniversary of the Warminster Amateur Radio Club! We will celebrate this event at our annual Holiday Dinner on our December 2nd meeting night. Frank (N3UQP), our archive chairperson, will be digging through the WARC archives and have a display available that night. It will be interesting to see how the club has grown and changed over the past 35 years. We are also planning a special gift for all current members commemorating 35 years of WARC. Berni (N3RJD) and Doug (N3RJE) again have an excellent menu planned. Burt (N3YVH) and Mark (N3GNW) are working hard to put the program together that will include DJ music. This should turn out to be a very enjoyable social evening for all club members and their families. Reservations are due by the November meeting.

October proved to be a busy month for WARC. Judging by the number of stations I heard on the bands, we had very strong club participation in the PA QSO Party. Hopefully we will be giving out lots of mugs to members who made 100 or more contacts. We continue to maintain a strong relationship with the community by participating in public service. Events included communications for the Five Ponds golf outing on October 11th and the Crooked Billet Run on October 16th organized by our Township Liaison, George (N3HBT). October 24th we had our first Adopt-a-Highway clean up of the WARC sponsored section of Jacksonville Road thanks to the organizational efforts of Hugh (N3SOQ). I would like to personally express my thanks to all members for their efforts at keeping WARC an active and thriving club.

See you at the next meeting.

Rocky, N3FKR

Kay Craigie -- W3TP -- our ARRL Atlantic Division director will be joining us for our annual ARRL night meeting. Kay will discuss the League's perspective and position on a number of different topics that affect the amateur radio community, the League as well as the Federal Communications Commission. During Kay's talk last November, her major topic was license restructuring. As of writing this, the FCC has not put forth its decision so this will likely be her main topic again. Please join us to find out the latest on this important subject.

Mark - N3GNW

W.A.R.C. alumni info

Hi, Randy. I have good memories of the WARC group. That was the only hamfest I never missed when I lived in the area. I don't recall exactly when I became a member, but probably around the time I moved from Langhorne to Newtown in 1983. At that time I worked for the Rohm & Haas company down in Bristol, and there was a regular morning coffee club group on the repeater during that commute. I recall Andy (KD3RF) and Irwin (KD3TB) as regulars, along with Alan (KA3YCG). I also appreciated the club meetings which always presented interesting programs. In 1992 I changed jobs and started working for the Kleerdex Company in Bloomsburg, PA. We produce Kydex sheet and compounds, originally invented by Rohm and Haas, which are used in applications like aircraft tray tables and seat parts, bus and train interiors, office equipment housings, hospital wall coverings, and holsters just to name a few. After commuting for 6 months from Newtown, my family moved to a small 40 acre farm in Bear Gap, about 25 miles south of Bloomsburg, where my wife keeps horses and gives riding lessons. We're located on the north side of Little Mountain, which hinders radio work to the south somewhat, but is a beautiful location with lots of woods and trails. Deer and turkey are common and we even get bears from time to time. Currently, I am the VP of Engineering for Kleerdex, and busy with capital projects like the new plant we just started in Reno, Nevada. We have many more expansions planned for the next few years, as well, as business has been very good. My wife, Ginger, and I have 2 sons: Grant who just started Penn State majoring in communications this Fall, and Adam who is a freshman in high school. I still commute with a "dawn patrol" group on the local repeater (147.225), and maintain a weekly HF PACTOR sked with a brother-in-law who is now retired from the Navy and living in Norfolk. Every once in a while I get on and work some DX, which I enjoy, but not nearly as much when several of us were getting DXCC and comparing notes on what was on each morning! Our local radio club (Columbia-Montour Amateur Radio Club) is much smaller than WARC, but we have a nice hamfest at the Bloomsburg Fairgrounds (June 10!) and are active in local emergency communications. It's nice to hear from the club, please pass my regards on to all. One of your members (Jim, WA4YWM) and I go all the way back to high school in East Tennessee back in the 60's!

'73 Vic Klein; WA4THR <vhklein@sunlink.net>

Submitted by Randy, N3LJE

Public service events in October

On Monday, October 11 eight members of the WARC struggled out of a warm bed at the unheard of hour of 7:00 am to be at the Five Ponds golf course in Warminster to provide security communications for the Warminster parks and recreation department hole in one competition. Bill N3RAF, Randy N3LJE, Hugh N3SOQ, Bob K3SRO, Bob WR3B, and Chris N3JHR all supplied their sharp eyesight and communication skills to make sure that if anyone made a hole in one, it would be made honestly. Although, nobody made the golfer's supreme achievement, the weather was perfect and a good lunch was enjoyed by all. My grateful thanks for making the event go smoothly.

On Saturday, October 16, eight members of the WARC spent a couple of hours of a beautiful fall morning, providing security and communications for the Fourth annual Craven Hall 5K run. Unlike past races, where the weather has ranged from a torrential downpour to bitter cold, this year's event was held on a perfect fall day. Al W13Z, Stu K2QBU, Gail N6LUL, Bill N3RAF, Bill K3MFI, Hugh N3SOQ, Rocky N3FKR, and Bob KA3TSJ all made the event go off without any problems. The number of runners was down from past years, but the T-shirts that were given to the volunteers were of the usual high quality we have been given to expect from the race organizers. The cooperation and support I have been given from the WARC club members makes these events a pleasure to run. Thank you for making my position so easy.

'73 George, N3HBT

George Brechmann

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WARC Meeting Minutes - October 7, 1999

Meeting called to order 19:45. 53 people signed the log.

Guests: Dennis and his son David, KB3ECP. David is a new ham. Al, guest of K3WG.

Minutes - waive reading of minutes; no additions or corrections? - APPROVED

Officer Reports

President (Rocky N3FKR)

- WARC picnic, WARC Special Event Station

Vice President (Mark N3GNW)

- Future Meeting Programs

- October 7 GPS; November 4 ARRL Night with Kay Craigie;

- December 2 Holiday Dinner

- Inventory was done 3 years ago by K3MFI. We need to do another.

Treasurer (John N3ZMJ)

- Report - current balance reported.

Secretary (Ron NY3J)

- Motion for meeting minutes reported monthly in Feedback.

Approved last January.

Committee Reports

Membership - (Tina KA3ECW)

- 130 actual, 11 lapse, 38 inactive.

Classes- (George KA3WXV)

Repeater- (Brian N3EXA / George N3HBT)

- report: motion for purchase of new antenna

- N3HBT made motion, WA3TQJ seconded, membership approved.

Picnic'99- September 19 (Mark N3GNW)

Holiday Dinner '99 - (Mark N3GNW, Burt N3YVH, Berni N3RJD, Doug N3RJE)

- MUGS - Club voted yes on coffee mug purchase. We need final cost and club vote to approve purchase.

- K3MFI talked about prices and selection.

There will be competition for slogan, board to decide winner.

- Theme for dinner is 35-year commemoration.

PA QSO Party (Marty NR3Z)

- report/information **Offer from Don N3WOE for center PA operation

RACES Liaison (Bob KA3VKU) Limerick Drill

Youth (Steve KA3ZLY) Jamboree on the air

- Camp Okinickon, Weblos weekend and KB3BOY to participate in PA QSO Party.

- JOTA weekend - demo of various ham radio activity, i.e. satellite

- Bucks County Council Camporee - help with radio merit badge.

Public Service events (George N3HBT)

- October 11 - 5 Ponds Golf Outing
- October 16 - Craven Hall 5K Run

- November 25 - Turkey Trot (Doc W3GAD) - sign up sheets next meeting.

Old Business

- K3DN Special Event Station- Pearl S. Buck House September 26 (Bob K3SRO)
- Logs to N3HBT.

- PA Adopt a Highway Program- Jacksonville Road (Hugh N3SOQ)
- club viewed video from state.
- will meet for breakfast at 7am then at Wal-Mart at 8am.

New Business

- Tower takedown (George N3HBT)
- contest for club qsl card design.

Good and Welfare

- Passing of Kay Peterson, wife of Pete Peterson, K3DN (SK).
- Family in need (Burt N3YVH)

MOTION to adjourn - adjourned

Earth and Space Science

Seismology: The Science of Earthquake Waves

No, it's not the study of "sizes." Seismology is the study of earthquake waves as they move through the Earth's interior (body waves) and along Earth's outer layer (surface waves). In view of the recent earthquake in Turkey (as well as the dozens of seismic events which occur daily), I thought this would be an appropriate topic for this month's Earth and Space Science column.

An earthquake is a vibration of Earth produced by the rapid release of energy caused by slippage along a fault, a break or fracture along a rock mass, in the Earth's crust. The energy released from such a slippage radiates in all directions (similar to an omni directional antenna radiating RF or a stone being dropped into a calm pond) from its source or "focus." Similarly, the seismic waves produced in an earthquake radiate throughout the earth. The energy associated with the wave motion dissipates rapidly at increasing distances from the focus.

The mechanism for earthquake formation is explained by the theory of plate tectonics. This theory proposes that Earth's outer shell consists of individual plates, rigid sections, which interact with each other creating deformations in those plates as they "float" over the asthenosphere, a subdivision of the Earth's mantle. In other words, the "material" of the Earth is in a dynamic state; grinding, bending, and pushing in continual slow motion. As these large slabs or plates interact with neighboring plates, rock mass begins to bend and store energy (much like taking a flexible stick and slowly bending it from each end). The stored energy results in a buildup of strain in the area of the fault. Eventually, the frictional resistance holding the rocks together is overcome resulting in a "slippage" or a "rupture" at the weakest point (focus) in the material. Sudden release of this strain allows the deformed rock to "snap back" and elastically return to its original shape. This snapping back, also called "springing back," is termed elastic rebound. This elastic rebound is similar to the rebound that occurs when you stretch and release a rubber band. The bottom line is most earthquakes are produced by the rapid

release of elastic energy stored in rock mass that has been subjected to tectal motion and strain. Scientists use seismographs to amplify and record ground motion. Seismograms have revealed that seismic waves travel along the Earth as either surface waves or body waves. Surface waves travel along the ground in two fashions. First, there is an up-and-down motion in the vertical plane. It results in objects being "tossed" much like ocean swells toss a boat. Second, surface waves have a side-to-side motion in the horizontal plane. This type of motion results in adjacent parts of the ground being rapidly offset from each other in a "tearing" fashion. Body waves are further divided into "primary waves"(P waves) and "secondary waves"(S waves). P waves are push-pull waves- they alternately compress and expand rock mass in the direction the wave is traveling. Think of holding one end of a slinky while the other end is fastened to a stationary object. Compressing and pulling on the slinky results in back-and-forth vibration in the same direction as the wave. S waves are "shake" waves, which move perpendicular at right angles to the direction of the wave. This can be illustrated by fastening one end of a rope to a stationary object and shaking the opposite end from side-to-side. This side-to-side oscillation results in a shaking motion.

It has been said that earthquakes don't kill people, structural and secondary damage does. Destruction from seismic vibration depends upon several factors, most notably the amplitude of the surface waves, the duration of the vibrations, the nature of the material/mass upon which the structure rests, and the design of the structure. Wave amplitudes are expressed as magnitudes on the Richter scale. It should be noted that the Richter scale is a logarithmic scale and not a linear scale. In other words, the amplitude for a surface wave rated at 7.0 on the Richter scale is 10 times greater than the wave amplitude for a wave rated at 6.0. In addition, each Richter magnitude equates roughly to a 30-fold energy increase. This means that an earthquake of magnitude 7.0 releases 30 times more energy than one with a magnitude of 6.0 and about 900 times (30x30) more energy than a magnitude 5.0 quake! In regards to duration of the quake, it should be intuitive that the longer the vibrations last the more damage will result. Structures situated upon bedrock will be able to withstand damage from seismic waves more so than structures situated on soft or unconsolidated sediment. The "harder" the surface material in the area of the quake, the less likely damaging vibrations will be amplified and /or transmitted. Finally, the construction material of the structure exposed to the seismic waves, to some extent, determines the amount of damage that will result from seismic waves. Steel-frame construction, which gives, tends to withstand vibrations more so than concrete or wooden construction. The most violent earthquake to strike North America this century occurred in Alaska in 1964. It had a Richter magnitude of 8.3 to 8.4(energy release roughly equivalent to the detonation of 1 billion tons of TNT) and lasted almost 4 minutes! In comparison, California's Northridge earthquake of 1994 had a Richter magnitude of 6.7 and lasted only 40 seconds. What is the possibility of a major earthquake east of the Rockies? Seismologists guesstimate that sometime within the next 30 years there is a 66% chance of an earthquake of comparable damage to a California earthquake occurring somewhere east of the Rocky Mountains. I suppose that those of us who reside in Bucks and Montgomery County should keep our eye on that Coldspring Creamery fault line. For more up-to-the-minute earthquake information, check out the National Earthquake Information Center website:
<http://gldss7.cr.usgs.gov/neis/qed/qed.html>

Keep Looking Up (and Down)!

Mike P.
 W3MJP

NASA now says the space shuttle Atlantis flight--mission STS-101--that will carry the initial Amateur Radio gear into space for the International Space Station will launch no earlier than February 10, 2000.

The flight transporting the VHF and UHF hand-held transceivers and associated antennas and accessories to the ISS had been scheduled to launch in December. NASA imposed a shuttle launch hiatus to perform electrical inspections of the entire shuttle fleet, however, disrupting the launch schedule. The inspections came in the wake of problems during the July launch of the shuttle

Columbia, when astronauts and ground controllers struggled with power failures in computers controlling two of the orbiter's three main engines.

"Our number one priority for the space shuttle is to fly safely, and that is why we delayed our launch preparations and have performed comprehensive wiring inspections and repairs," Space Shuttle Program Manager Ron Dittmore said.

NASA and Russian space agency officials also have agreed to delay the launch of the Zvezda service module that will house the amateur gear. According to a NASA, a US delegation and the Russians agreed that "it is no longer prudent to proceed with the current service module schedule." The new projected launch window is between December 26 and January 16.

In August, key antenna hardware for the Amateur Radio on the International Space Station project headed for NASA's Goddard Space Flight Center to undergo integration and flight qualification testing. The initial ham gear will support amateur operation from the ISS on voice and AFSK packet on 2 meters and 70 cm.

For more information on ARISS, visit <http://garc.gsfc.nasa.gov/~ariss/ariss.html>.

Courtesy The ARRL Newsletter

Solar Update

Sun watcher Tad Cook, K7VVV, Seattle, Washington, reports: Solar flux had a spectacular increase over the past week, with values around 200. Flux values stayed above 190 until October 16.

Geomagnetic conditions were quite stormy October 10-17, when the planetary A index ranged from 21 to 34. This was caused by a series of coronal holes and flares, streaming charged particles in a high speed solar wind. October 18-20 the planetary A index was in the single digits, with many periods having a K index of 1. On October 21, the effects of a coronal mass ejection a couple of days earlier could be seen, with K indices back up above 4.

The latest forecast for the A index is 25 to 30 for October 22, 10 for October 23, and 15 to 20 October 24, due to a coronal hole. The predicted solar flux is 150, 145 and 140 for the same period. After the weekend the solar flux is expected to bottom out around 125 from October 26-29, then rise back to 200 around November 10 or 11. Geomagnetic indices are expected to be mostly low until November 6, when recurring coronal holes are expected to keep conditions unsettled or stormy through November 13.

Sunspot numbers for October 14 through 20 were 206, 130, 189, 169, 135, 169 and 193 with a mean of 170.1. The 10.7-cm flux was 199.8, 198.2, 189, 178, 172.7, 169.6 and 158.8, with a mean of 180.9.

The estimated planetary A indices were 24, 24, 21, 26, 6, 7 and 4, with a mean of 16.

Courtesy The ARRL Newsletter

Solar maximum prediction: Solar physicist David Hathaway at the Marshall Space Flight Center says he expects the current solar cycle to peak by mid-2000. "The projected peak is comparable to, but lower than the peaks of the last two maxima--1989 and 1978," Hathaway says. One thing is for sure: As the geomagnetic activity increases so do the chances of more geomagnetic storms. While there will be more disturbances, those in the mid-latitudes will have the unique opportunity to see some spectacular sights that are normally visible during these times only in the higher latitudes.--NASA via The Daily DX/Bernie McClenny, W3UR

Courtesy The ARRL Newsletter