The Dipole

Radiating the News of the Marple Newtown Amateur Radio Club

April 2010

Next Club Meeting: Thurs. April 1st, 7 p.m. at The Gauntlett Center

INSIDE THIS MONTH'S DIPOLE

A REPORT FROM THE GERMAN HAM CONVENTION

For many American Amateur Radio operators it may be a shock that there is a Ham Radio convention other than that held annually in Dayton Ohio. Attendees at the Thursday, April 1 meeting of the Marple Newtown Amateur Radio Club will have the opportunity to find out details about a foreign gathering that is a parallel to the USA gathering held in Ohio's Gem City.

The guest speakers at the upcoming meeting that is held at the Gauntlett Community Center, Media Line Road, near West Chester Pike in Newtown Square will share their reflections of the 2009 Ham Radio Convention held in Friedrichshafen, Germany. Mark Humphrey, K3XY, and Larry Will, W3LW will make this presentation.

Segments of this gathering became newsworthy events. As an example, Larry E. Price, W4RA, was honored at an evening reception following the first full day of what is conveniently termed as the Ham Radio 2009 convention activities in Friedrichshafen, Germany. The Friday, June 26 reception was hosted by the convention sponsor, the Deutscher Amateur Radio Club (DARC) and was attended by officials and guests from dozens of IARU Member-Societies.

IARU Vice President Ole Garpestad, LA2RR -- who had served as President of the Norwegian Radio Relay League (NRRL) from 2000-2002, made this presentation. Price was honored with the highest award of the NRRL, Knight of the Order of the Golden Key. The award was given for Price's many years of service to the IARU, the ARRL and Amateur Radio in general. IARU President Tim

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MARPLE NEWTOWN AMATEUR RADIO CLUB
c/o The Gauntlett Center
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Newtown Square, Delaware County, PA 19073

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The Dipole

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Meetings, Nets, and Packet BBS

Monthly Club Meetings: First non-holiday Thursday, 7:00 p.m. at the Gauntlett Center in Newtown Square, Delaware County. Talk-in: 147.195 repeater

Daily Weather and Information Net: Every morning at 8:30 a.m. on 147.195 repeater

Club Web Page (including online version of *The Dipole*): http://mnarc.org

Delaware County ARES Net: Every Wednesday at 19:30 local

A Report from the German Ham Convention

from Cover

Ellam, VE6SH, then conferred the title of IARU President Emeritus upon Price. Price served as ARRL President from 1984-1992 and as IARU President from 1999-May 2009.

In a parallel to the fabled Dayton Hamvention, the ARRL had a key presence at the German gathering. Amateur Radio operators from around the world were able to test for their United States' Amateur Radio examinations on the Saturday of this international gathering. Mitch Wolfson, DJ0QN/K7DX, organized the ARRL VEC testing opportunity. Wolfson is an ARRL-accredited Volunteer Examiner. Most recently, Wolfson was appointed as the acting Secretary International Affairs for the DARC, the Deutscher Amateur Radio Club.

Former Southeastern Pennsylvania Amateur Radio operator and newly elected ARRL President Kay Craigie (third from right) was a part of the ARRL delegation attending last year's Germany-based Amateur Radio Convention.

Amateur Radio leaders gather at the 2009 Ham Radio Convention in Friedrichshafen, Germany. Pictured (left to right) are Kay C. Craigie, N3KN--ARRL First Vice President, Hani Raad, OD5TE--IARU Region 1 Executive Committee Member, Hans Blondeel Timmerman, PB2T--IARU Region 1 President, Andreas Thiemann, HB9JOE--IARU Region 1 Treasurer

For the information of **e*Dipole*** readers planning any trips to Europe for the summer of 2010, this year's Ham Radio Convention in Friedrichshafen, Germany is scheduled for June 25-27.

A Lesson in History

Most people don't know that back in 1912, Hellmann's mayonnaise was manufactured in England. In fact, the Titanic was carrying 12,000 jars of the condiment scheduled for delivery in Vera Cruz, Mexico, which was to be the next port of call for the great ship after its stop in New York.

This would have been the largest single shipment of mayonnaise ever delivered to Mexico. But as we know, the great ship did not make it to New York. The ship hit an iceberg and sank, and the cargo was forever lost.

The people of Mexico, who were crazy about mayonnaise, and were eagerly awaiting its delivery, were disconsolate at the loss. Their anguish was so great, that they declared a National Day of Mourning, which they still observe to this day.

The National Day of Mourning occurs each year on May 5th and is known, of course, "As Sinko De Mayo."

WHAT??? You expected everything in the April issue of the **e*Dipole*** to be purely educational?

An Alternative to DX

Anyone having a dry spell in working any form of DX can now have a momentary relief from that frustration. WHYY Vice President Bill Weber, ex-N2IQQ, has provided this site. One need not invest a large amount of time at this site to become impressed:
http://stuff.pyzam.com/toys/tictacscare.swf

In describing this DX alternative, Bill stated, "I bet you can't beat the machine at tic tac toe! This is gonna drive you crazy."

Click on the link at the Web site and begin the game.

Bill added that he lost every time. The staff of the **e*Dipole*** comments that this is not a site for the "weak-of-heart"

A New Era Has Begun
Something New from Something Old

While many late night drivers continue to complain that they can no longer receive the 11 o'clock news on their car FM receiver, this late night dilemma is for others a blessing.

The move to HDTV was also accompanied by a move for many away from the VHF-lower channels to UHF frequencies. While locally, WPVI has not moved from this part of the spectrum, Amateur Radio operators in this area have good reasons to embrace the demise of Analog Television. In this area as well as for our Amateur Radio neighbors living near the New York City television coverage area, there is no longer a fear of interference from 6-meters, the former Channel 1 in ancient allocations. Being adjacent to Channel 2 (54-60 MHz) was responsible for many Ham Radio operators avoiding 6-meter operations.

In addition to the removal of the fear factor, getting on 6-meters has been made easier. Many of the newer HF transceivers now include the full 6-meter band. And the coverage is also multiple-mode operation.

Six meters is a unique band, one that is blessed with a great collection of modes of propagation. Meteor scatter, sporadic-E, and tropospheric enhancements will hopefully be joined by assists from higher solar flux.

Many operators unfamiliar with 6-meters may be dreading the need to erect one or more new antennas for this band. Remembering the odd multiple harmonic relationships will hopefully reacquaint many new 6-meter operators to the reality the seventh harmonic relationship between the tried and proven 40-meter antenna and 6-meters,

Six meters has been around long enough that some investigation will also provide some easy to adapt or construct antennas for this band. Don't forget the benefits of a quad or a Yagi antenna.

If one is desperate, a CB whip antenna can be cut down to function properly on six meters.

Because 6-meters has been a feared band for many, the overall popularity has suffered. With these demons now eliminated, now is a good time to relearn or learn the characteristics of a band that has been ignored far, far too long.

Proof Internet Inserts May Not Die

It has been claimed that once an entry has been made to the Internet, it will never "go away." A report in early March 2010 that had as its origins the British Library seems to validate the "never-die" concept of Internet longevity.

The British Library is so intent on making this claim believable, this highly respected facility is creating an archive of that country's defunct Web sites to preserve snapshots of the ever-changing Internet for posterity.

The UK-based library is already charged with keeping a copy of every published work distributed in Britain and Ireland. In 2003 that directive took on a new life. It was at that time this directive was extended to electronic materials such as compact discs and online publications.

Now the British Library has now stated it has begun fishing throughout the Web and it has begun making archival copies of sites of historic interest. This expansive collection of data includes a wide collection of information. This list includes, but not limited to those once maintained by now-bankrupt companies such as their Woolworths, Web pages spawned after the July 7, 2005, terrorist attacks in London, and Internet coverage of Britain's last general election that year.

Why is this library undertaking such a project? One library spokesman said the project was aimed at filling what amounts to a "a digital black hole in the nation's memory." Despite the claims that Internet data never disappears, the library's initial inability to turn up any online evidence of such events as the 1997 death of Princess Diana has contributed to this search.

The library said it has so far archived 6,000 sites.

Several projects around the world are also aimed at archiving Web sites, not just dead ones but those that have changed over the years. Among them is the Internet Archive's Wayback Machine at archive.org.

Some Remedies That Really Work

THESE REALLY WORK!! The person submitting this list stated they checked this out on Snopes and it's for real! The editor of the **e*Dipole*** strongly suggests subscribing to the concept of **caveat utilitor**.

AMAZING SIMPLE HOME REMEDIES

1. Avoid cutting yourself when slicing vegetables by getting someone else to hold the vegetables while you chop.

2. Avoid arguments with the females about lifting the toilet seat by using the sink.

3. For high blood pressure sufferers ~ simply cut yourself and bleed for a few minutes, thus reducing the pressure on your veins. Remember to use a timer.

4. A mouse trap placed on top of your alarm clock will prevent you from rolling over and going back to sleep after you hit the snooze button.

5. If you have a bad cough, take a large dose of laxatives. Then you'll be afraid to cough.

6. You only need two tools in life - wd-40 and duct tape. If it doesn't move and should, use the wd-40. If it shouldn't move and does, use the duct tape.

7. If you can't fix it with a hammer, you've got an electrical problem

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Schedule Changes Announced

For many readers of the **e*Dipole***, the advent of spring translates to thoughts of yard work, outdoor sports, and an often large collection of personal activities. There is one more transition from winter to spring that is valuable to Amateur Radio operators.

This is the time of the year that the ARRL announces the W1AW Spring and Summer Operating Schedule.

W1AW 2010 Spring/Summer Operating Schedule

Morning Schedule

Time	Mode	Days
1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET)	CWf	Tue, Thu

Daily Visitor Operating Hours

- 1400 UTC to 1600 UTC - (10 AM to 12 PM ET)
- 1700 UTC to 1945 UTC - (1 PM to 3:45 PM ET)
- Station closed 1600 to 1700 UTC (12 PM to 1 PM ET)

Afternoon/Evening Schedule

Time	Mode	Days
2000 UTC (4 PM ET)	CWf	Mon, Wed, Fri
2000 UTC	CWs	Tue, Thu
2100 UTC (5 PM ET)	CWb	Daily
2200 UTC (6 PM ET)	DIGITAL	Daily
2300 UTC (7 PM ET)	CWs	Mon, Wed, Fri
2300 UTC	CWf	Tue, Thu
0000 UTC (8 PM ET)	CWb	Daily
0100 UTC (9 PM ET)	DIGITAL	Daily
0145 UTC (9:45 PM ET)	VOICE	Daily
0200 UTC (10 PM ET)	CWf	Mon, Wed, Fri
0200 UTC	CWs	Tue, Thu
0300 UTC (11 PM ET)	CWb	Daily

Frequencies (MHz)

CW	1.8025 3.5815 7.0475 14.0475 18.0975 21.0675 28.0675 147.555
DIGITAL	- 3.5975 7.095 14.095 18.1025 21.095 28.095 147.555
VOICE	1.855 3.990 7.290 14.290 18.160 21.390 28.590 147.555

Notes:

- CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM
- CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM
- CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2230 UTC (6:30 PM ET), Keplerian Elements for active amateur satellites are sent on the regular digital frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0000 UTC (8 PM ET) Thursdays and 0000 UTC (8 PM ET) Fridays.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Digital at 15 minutes past the hour, and CW on the half hour.

FCC licensed amateurs may operate the station from 1400 UTC to 1600 UTC (10 AM to 12 PM ET), and then from 17 FCC amateur license or a photocopy.

The complete W1AW Operating Schedule may be found on page 102 in the March 2010 issue of QST or on the web at, http://www.arrl.org/w1aw.html#w1awsked .

Also, just a reminder that beginning on the Ides of March, March 15, 2010, W1AW will alternate the digital modes used for its digital bulletin transmissions. While Baudot, BPSK31 and MFSK16 still make up the digital mode complement, the schedule is altered to give more exposure to BPSK31 and MFSK16. Because of time constraints varying lengths of digital bulletins, there were many instances in the past when only Baudot was used.

With the new schedule, Amateur Radio operators preferring either BPSK31 or MFSK16 will find these modes no longer secondary.

The regular call-up is made using the mode that is transmitted first. The digital bulletin times remain at 6 PM and 9 PM eastern, daily.

The Tuesday and Friday Keplerian data bulletins will continue to be sent using just Baudot and BPSK31.

Given time constraints and bulletin lengths, all three modes may not always be transmitted.

The new digital schedule can be found in teleprinter and packet versions of 2010 ARRL Bulletin ARLB005.

League Seeking Input

In their attempt at seeking input from the US Amateur Radio community, the ARRL is asking for ideas for a new IARU Region 2 Band Plan. As a jogging of memories, we are located within the International Amateur Radio Region 2.

The International Amateur Radio Region 2 (IARU R2) conference will be held later this year in El Salvador. This organization brings together delegations from the national Amateur Radio Societies in the Western Hemisphere. One of the topics on the agenda will be the Region 2 HF Band Plan.

The Region 2 HF Band Plan may be viewed at http://www.iaru-r2.org/wp-content/uploads/region-2-mf-hf-bandplan-e.pdf Remembering that radio signals truly know no boundaries, this collection of radio frequencies fall within a segment of the spectrum that is "harmonized with," or similar with the spectrum uses within the band plans for IARU Region 1 and Region 3.

The ARRL, in reporting to a comment made by ARRL President Kay Craigie, N3KN, stated: *many hams in the USA probably did not know there was such as thing as a Region 2 band plan until recently*.

Kay Craigie's comments added, "Now, however, many more American hams have heard of it, but may not know how -- if at all -- this band plan affects them."

In explaining the value and concepts associated with IARU Band Plans, the following are important guidelines that IAUR Region 2 members (including American Ham Radio operators) should in mind:

- IARU band plans are voluntary guidelines. They do not have the force of FCC regulations.
- It would be inappropriate to incorporate Region 2 band plans into the FCC rules, and the ARRL has no plan to petition the FCC to do so.
- Most other countries do not have the detailed sub-band regulations that are in Part 97 of the FCC Rules; for amateurs in those countries, IARU band plans offer the only guidance on frequency use.
- The recognition of a calling frequency or band segment for a particular purpose or mode in the IARU band plan does not convey any special rights or exclusivity of use.

The League comments of this upcoming event shares the following:

A new, more transparent procedure will be followed this year for considering possible changes to the Region 2 band plan. The ARRL is cooperating with this procedure by inviting input to be sent to the ARRL Board of Directors' Band Planning Committee. The committee will review the existing Region 2 band plan, consider input from the amateur community and make recommendations to the ARRL Board for submission to IARU Region 2.

The inadvertent omission of the AM center of activity frequency (calling frequency) -- 3.885 MHz on 80 meters -- has already been noted, and this will be one of the recommended revisions.

The deadline line set by Region 2 for gathering input and formulating recommendations is rather short. Amateurs who would like to submit input should take the following steps:

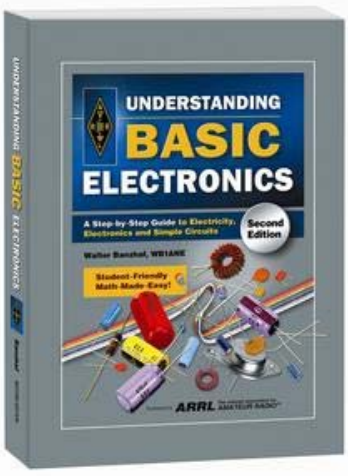
- First, study the existing IARU Region 2 band plan is posted on the Region 2 Web site [seen their archive at http://www.iaru-r2.org/band-plan/]. The Region 1 and Region 3 band plans are also posted there, so be sure you are looking at the band plan for Region 2.
- Next, formulate a clear statement of any change you propose. Include a brief explanation of why you think the change would be beneficial. Please include your name and call sign in your input.
- Finally, send your input via e-mail [bandplan2010@arrl.org] no later than

April 5, 2010. Messages will be automatically acknowledged.

- The ARRL has also reminded Amateur Radio operators living in another country within Region 2, to please contact your national Amateur Radio Society for information on how to submit input for the band plan process.

An Elmer Tool

While the Elmer concept has become somewhat dormant, having someone to be a sounding board, a mentor, a motivator, and helper is an important tool in obtaining an Amateur Radio license. The ARRL has introduced a new publication via the second edition of ***Understanding Basic Electronics.***



This new or renewed ARRL publication can easily become a gateway into the exciting world of electricity and electronics. For either the beginner, or a teaching mentor, this text is written in a friendly, easy-to-understand style. One that both beginners and non-technical readers will enjoy.

As the ARRL stated in its announcement, "This introductory guide is ideal for students with basic math skills, as well as radio amateurs and experimenters interested in gaining a more complete understanding of basic electronic principles -- anyone eager to unlock the mysteries of electronic circuits."

In describing this tool for understanding the basics of electronics, the ARRL added the following:

> Authored by Walter Banzhaf, WB1ANE, this new edition features student-friendly math made easy -- an inexpensive calculator is all you need -- and now includes digital electronics. Even if you already have a foundation in basic electronics, you will enjoy the small module format of each chapter, allowing readers to digest "bite-sized" chunks of learning material. Real-world examples and clear illustrations make the study of electronics interesting and fun! A handful of small "kitchen table" projects are included to help bring abstract concepts to life.
>
> *Understanding Basic Electronics, second edition* includes chapters on electronics, analog and digital electronic circuits, electrical terms, conductors, insulators and resistors, electricity and magnetism, capacitors and inductors, electrical circuits (both series and parallel), Ohm's law, techniques and tricks on how to solve circuit problems, energy and power, alternating current (ac), capacitors and inductors, transformers, impedance, resonant active device concepts, semiconductors, diodes, transistors and ICs -- and much more.

As announced at the time of the preparation of the April edition of the eDipole, for a limited time, ARRL members can purchase *Understanding Basic Electronics, second edition* for only $29.95 (http://www.arrl.org/catalog/?item=0823). For bargain hunters, this amount is $3 off the regular price of $32.95!

Technical Advances Create Opportunities

As more and more changes occur in the use of software defined communications and the earlier move to Phase Lock Loop circuits, there was more and more research being done in a quest to tag each oscillator with a footprint. Couple that with the increased use of a mandated sub-audible tone additions to transmitters and the concept of an easy and dependable form of identification for each transmitter is quickly becoming a near-reality.

In an over simplistic explanation, as the sub audible tone begins to be generated, there are minute time differences between the creation of a carrier and the generation of the necessary sub audible tone. It is this difference that has begun to be analyzed by affordable and reliable timing circuits. With memory also becoming "almost cheap," tagging of individual identities is laboratory possible.

This research will recognize an individual transmitter through this sub-audible footprint. By coupling this tag with a known Amateur Radio call, it has been said the research is so close to inserting a keyed identity for every CTCSS-equipped transceiver.

When this research is completed, there will be two benefits – one now and one not too far off in the future. This second benefit will require a legal blessing.

The most immediate benefit is the ability to identify anyone who kerchunks or makes an unidentified transmission. Their electronic footprint will be on record and likened to a fingerprint or DNA, it cannot be fooled.

Just think of that second benefit. Once there is a mandated, single source system, it is conceivable that repeaters properly outfitted with an identification documentation system will permit identified users to skip the current identification formats. With an on board memory that carries a list of pre-documented CTCSS habit sequences, a memory who was using that repeater, the time of each transmission and a host of other use data can be tracked.

A significant tone will assure a repeater user that their identity is both properly stored on a specific repeater. Without such a tone acknowledgement of identity recognition, the current, but hopefully someday form of verbal ID will be a thing of the past. The creator of this concept, Prostul Apr volunteered, "Science marches on."

Amateur Radio Diversity

Not all Amateur Radio operators have coupled their hobby with their vocation. The Silent Key notice of mid March was one example of the success, recognition, and praise earned by in an Amateur Radio operator in a field that is not Ham Radio based.

The ARRL recently cited one member of this special class of Amateur Radio operators. Their story headline stated, "Baby Blindness Pioneer Dr Arnall Patz, ex-WA3EVC (SK).

In the interest of accuracy, the eDipole is sharing the ARRL text that tells of the discoveries made by one of growing group of non-electronic, successes in another field.

> Dr Arnall Patz, ex-WA3EVC -- an ophthalmologist who discovered and eliminated a major cause of blindness in premature infants -- passed away from heart disease on March 11. He was 89. In 1954, Patz proved that treating premature babies with pure oxygen could destroy their eyesight. At the time, this was the most common cause of blindness in premature infants.
>
> As was a young physician at Washington DC's Gallinger Municipal Hospital (now known as DC General Hospital), Patz observed that a new incubator, sealed all around to contain an inner climate, was enabling doctors to save premature babies. "But something was wrong," he told the *Baltimore Sun* in 2004 profile. Patz noticed that the advance coincided with an epidemic of infant blindness, and that most of the victims were "preemies" who lay for weeks in an atmosphere of near-total oxygen. "In a question that outraged physicians at the time, but later won their admiration, Dr Patz wondered whether there might be a connection: Was it possible that oxygen was robbing babies of their sight?" the profile

read. "It had become standard practice to put babies in incubators and crank up the oxygen," Patz told the *Sun*. "[I] could hardly blame the doctors who did this because it turned struggling babies from blue to pink."

Unable to secure grant money to prove their hypothesis, Patz and his colleague Leroy Hoeck funded their early tests with money borrowed from Patz's brother Louis, later receiving a small grant after promising to turn on the oxygen at the first sign of troubled breathing (Louis Patz and his wife were killed in a 1962 airplane crash; their three children were raised by Patz and his wife Ellen). Their hunch was correct: Almost immediately, doctors stopped automatically giving oxygen to premature infants, ending the epidemic of blindness because of retrolental fibroplasias, now known as retinopathy of prematurity (ROP). By the time the practice of providing pure oxygen to premature infants was stopped, more than 10,000 of these babies had had their eyesight destroyed.

To prove their theory, the pair of doctors conducted what is widely believed to be the first randomized controlled trial in ophthalmology. In the early 1950s, they divided 120 premature babies at Gallinger into two groups. In the first group, which received concentrated oxygen constantly, 12 infants went blind. In the second group, babies received oxygen only if they were in respiratory distress, and only one became blind. Elevated oxygen levels, it turned out, destroyed the arteries of the eye. That in turn caused abnormally wild growth of blood vessels, irreversibly damaging the retina. It was discovered that oxygen caused blood vessels in the back of the eye to constrict. In a doomed attempt to compensate, the eye sprouted twisted vessels that would eventually bleed and destroy the retina. "Never in the history of ophthalmology has a blinding condition become so quickly widespread and equally rapidly been abolished," wrote Scottish ophthalmologist Sir Stewart Duke-Elder in the 1970s.

The results of a subsequent larger trial led by biochemist Everett Kinsey and involving patients at 18 hospitals substantiated the earlier findings at Gallinger. Although the new understanding came too late for thousands of people who were made blind by oxygen -- including the singer Stevie Wonder, ARRL Connecticut Section Manager Betsey Doane, K1EIC, and her twin sister Barbara Lombardi, K1EIR -- it undoubtedly saved many more from a similar fate. "Barb and I are thrilled to learn that the doctor who discovered the effect of too much oxygen at birth was a ham. We only wish we had met him or worked him on the air. How exciting that would have been!" Doane told the ARRL.

Patz operated a ham radio from his home on behalf of the Maryland Eye Bank. According to *The Wall Street Journal*, Patz erected an 80-foot tower at his home and became known to amateurs across the country for putting out the word on the airwaves whenever corneas were needed for transplant.

This success story was not without influences and references to Amateur Radio. The League story explained:

> Patz became interested in Amateur Radio thanks to his nephew Sam, ex-WA3EAV, son of his deceased brother Louis. "Arnall knew of my interest in electronics and science, and when I came to Baltimore, he encouraged me to get my ham license," Sam Patz told the ARRL. "I started with a Novice license and the moved to a General perhaps a year or two later. Arnall then got more and more interested and then he obtained his license. It is true that he purchased an 80-foot tower. We assembled a two element cubical quad antenna on top of it. Arnall also received a complete set of Swan gear as a gift from one of his patients that we immediately installed, switching from an old Galaxy V unit. I believe the gift came from the owner of Swan, who had come to see Arnall for a problem with his eyes."" Patz also introduced his nephew to the Maryland Eye Bank: "One of us would sign in daily to report either the need for or the availability of corneas for human transplant. Other ham operators associated

with different cities would do the same. Whoever had a need or availability would then report back to their Center which cities had an availability or need. The Centers would then contact each other by phone to arrange emergency transport of the corneas."

Both uncle and nephew became involved in public service over the airwaves. "Arnall and I got interested in doing phone patches for military personnel overseas," Sam Patz told the ARRL. "Arnall used the Eye Bank and the phone patch experiences to teach me about public service!" Sam Patz is now an associate professor of Radiology at Harvard Medical School and is also the Scientific Director for the Center for Pulmonary Functional Imaging at Brigham and Women's Hospital in Boston, Massachusetts. "Arnall was truly an incredibly special man. For me, he became a second father, looking after me and nurturing me during a very critical time in my life. Everyone in the family will miss him sorely."

In 1955, Patz became a part-time member of the Johns Hopkins faculty, maintaining a private ophthalmology practice for 15 years until becoming a full-time research professor in 1970. In 1979, he became the director of the Wilmer Eye Institute at Hopkins, a position he held for 10 years. Patz collaborated with colleagues at the Johns Hopkins Applied Physics Laboratory to develop one of the first argon lasers used to treat diabetes-related eye disease and other retinal problems. He and Kinsey received the Albert Lasker Clinical Medical Research Award for his groundbreaking research. Helen Keller presented them with the honor in 1956. In 2004, President George W. Bush presented Patz with the Presidential Medal of Freedom, the nation's highest civilian award, calling him "the man who has given to uncounted men, women and children the gift of sight." -- *Thanks to* The Wall Street Journal, The New York Times, The Washington Post *and* The Baltimore Sun *for some information*

While Amateur Radio may not have a foundation in a successful tool outside of our hobby, the non-technical applications continue to be a bond that cements this hobby through its diversity.

Helen Keller (center) presents the prestigious Albert Lasker Medical Research Award for 1956 to Drs Arnall Patz, WA3EVC (right), and Everett Kinsey. Kinsey is the biochemist who organized a larger study that confirmed Patz's RLF oxygen findings that proved that treating premature babies with pure oxygen could destroy their eyesight. [Photo courtesy of the Wilmer Eye Institute]

Changes Within Part 97

In an announcement shared by the ARRL, the United States' Amateur Radio world has learned that the FCC is Proposing to Eliminate Spread Spectrum APC Requirement, Reduce Spread Spectrum Power Limit and to clean up portions of Part 97. This action is in response to a 2006 ARRL Petition regarding spread spectrum issues.

This activity was shared through an FCC released a *Notice of Proposed Rule Making* (*NPRM*) on March 16 (WT Docket No 10-62). By proposing to amend Part 97, this proposed rule making would facilitate the use of spread spectrum communications technologies though the following changes**:**

eliminating the requirement that amateur stations use automatic power control (APC) to reduce transmitter power when the station transmits a spread spectrum (SS) emission and reducing the maximum transmitter power output when transmitting a SS emission.

Through an *Order* attached to the NPRM, the Commission also made "certain non-substantive revisions" to the Amateur Service rules.

The following topics supplied by the ARRL help explain the steps behind the Notice of Proposed Rule Making and accompanying Order**:**

> Spread spectrum techniques are methods by which the information signal of a particular bandwidth is intentionally spread in the frequency domain. At any point of bandwidth the SS emission occupies, either the power spectral density of the transmitted signal is reduced to a comparatively low level or the duration of a transmission on any frequency in the frequency segment is very brief. Consequently, stations in the same area can transmit SS signals without causing harmful interference to or experiencing harmful interference from each other or a station transmitting a non-SS signal over the same spectrum segment.
>
> Back in 1985, the FCC authorized Amateur Radio stations to transmit SS emissions with a maximum transmitter power limit of 100 W PEP. To emphasize the experimental nature of spread spectrum as well as some of the potential benefits associated with it, the Commission authorized such transmissions on a secondary basis to other amateur service communications. At that time, the Commission noted that "to reduce the likelihood that SS transmissions from an amateur station could be made for the purpose of obscuring the meaning of a message, the Commission permitted only frequency hopping and direct sequence spreading techniques." Fourteen years later, the FCC eliminated restrictions on spreading techniques "to allow amateur stations greater flexibility and permit them to use the SS techniques used in other communications services." The Commission also required stations transmitting SS communications with a transmitter power greater than 1 W to utilize APC to limit the transmitter power in accordance with a specific formula (permissible power is determined by the use of the ratio, measured at the receiver, of the received energy per user data bit [Eb] to the sum of the received power spectral densities of noise [No] and co-channel interference [Io]; average transmitter power over 1 W shall be automatically adjusted to maintain an Eb/[No + Io] ratio of no more than 23 dB at the intended receiver).

In 2006, the ARRL petitioned the FCC, [http://www.arrl.org/announce/regulatory/SS-Rulemaking-Petition.pdf], requesting that the APC requirement be eliminated, asserting that the APC provision has proven to be "virtually impossible" as it requires the operators of the transmitting stations to determine the transmitter power received at distant receivers and that this requirement has proven to be " something of a barrier to SS experimentation."

The League further contended that the APC requirement could be eliminated without increasing the risk of harmful interference because**:**

- The station licensee or control operator of the station transmitting the SS emission would still be obligated under Section 97.313(a) of the Commission's Rules to use the minimum power necessary to conduct communications, and

- Under Section 97.311(b) of the Commission's Rules, SS communications are already secondary to other Amateur Service communications.

The League added the following dialogue**:**

> In the *NPRM*, the FCC agreed with the ARRL that the APC requirement "may be unnecessarily impeding Amateur Radio operators in advancing the radio art," but the Commission does not propose to simply eliminate the APC requirement. Noting that the purpose of the APC requirement is to limit interference to other stations, the FCC

pointed out that commercial broadband Internet service providers operating in the 900 MHz and 2.4 GHz ISM bands argue that the APC requirement should be maintained in order to prevent interference to other users. They also referred to suggestions maintaining that if the APC requirement is eliminated, the FCC should lower the maximum power limit on amateur stations transmitting SS emissions so that interference is minimized.

Given these concerns, the FCC proposes to eliminate the APC requirement and reduce the maximum transmitter power output amateur stations may use when transmitting SS communications from 100 W to a peak of 10 W.

"We believe that this approach is consistent with both the ARRL's request that we eliminate a requirement that may be impossible to implement and the intent of the APC requirement to limit interference to other stations," the FCC stated in the *NPRM*. "We also believe that the proposed rule change would (1) encourage individuals who can contribute to the advancement of the radio art to more fully utilize SS technologies in experimentation, (2) balance the interests of all users in mixed-mode and mixed-service frequency bands until sharing protocols are sufficiently developed to avoid interference and (3) promote more efficient use of the radio spectrum currently allocated to the Amateur Service." The Commission is seeking comments on this proposal.

Order

Again, correspondence from the ARRL supplies the following text**:**

In the *Order*, the FCC made amendments "to correct the Amateur Service rules or conform them to prior Commission decisions." These revisions will take effect once they are published in the *Federal Register*.

The FCC noted that when they authorized Novice class and Technician Plus class operators to transmit in certain portions of the 80, 40, 15 and 10 meter bands in 2006, they intended to limit those stations' power in those bands to 200 W PEP, "but the implementing amendment to Section 97.313(c) inadvertently applied that power limitation to all frequencies authorized to Novice and Technician Class licensees. We therefore correct Section 97.313(c) to clarify that the limitation applies only in those bands."

The Commission also revised Sections 97.301 and 97.303 related to the 40 and 60-meter and the 70 cm and 9 cm bands to conform to the Table of Frequency Allocations (Table), and to references within the relevant sections of the rules. They also revised the frequency sharing requirements in Section 97.303 "to limit the summary to those frequency bands that are allocated to the Amateur Service on a secondary basis, and to present the requirements more clearly."

In addition, the FCC moved transmitter power limit information from Section 97.303(s) to Section 97.313, the section concerning transmitter power standards. Section 97.103(c) was amended to delete the cross-reference to Section 0.314(x) that was removed in 1999. They also removed the entry "1260-1270 MHz" from Section 97.207(c) that lists the frequency bands authorized to amateur space stations "because footnote 5.282 to the Table limits the use of that segment to Earth station transmissions."

How to Make Comments on the *NPRM*

Any one desiring to make comment, pro and con, may do so by following the FCC's procedures as outlined by the ARRL**:**

Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, interested parties may file comments on the *NPRM* on or before 30 days after date of publication in the *Federal Register* and reply comments on or before 45 days after date of publication in the *Federal Register*. Based on previous experience, the ARRL expects publication of the *NPRM* and *Order* in the *Federal Register* sometime in early spring. Instructions on how to file comments on the *NPRM* **only** are listed on pages 6-7 in the

NPRM (http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-38A1.pdf)

Support Requested

The American Radio Relay League (ARRL) has asked the Amateur Radio community to become politically active. No, that term does not mean we must become active in any political party activities. Politically active translates to communications.

This should not be difficult for any of us. Communications is one of the concepts that we are globally recognized. By contacting our neighborhood US Representative our communications skills differ a bit from our daily skills. Yet, by doing this often –unfamiliar form of communications, we are working for our hobby. It can use the identity enhancement that provides an added dimension to our identity.

In a rare pattern, A bill introduce in October 2009 in a non-partisan venture by Senators Joe Lieberman (ID-CT) and Susan Collins (R-ME) was passed by the US Senate by a unanimous ballot. This bill, Senate bill **Senate Bill 1755** -- ***The Amateur Radio Emergency Communications Enhancement Act of 2009*** -- has now been sent to the US House of Representatives for consideration by that body. Currently the House Bill is sitting in the House Committee on Energy and Commerce.

In asking the ARRL membership to contact the leadership of the Energy and Commerce committee, the League is requesting support and action on moving S 1755 through this committee. The ARRL advised its membership that Senate Bill 1755 "accomplishes the same things as HR 2160."

The ARRL added that **HR 2160** was introduced in April 2009 by Rep Sheila Jackson Lee (D-TX-18). The League added, "Since S 1755 has already been approved by the Senate, moving it forward in the House will simplify the process."

> S 1755 points out that "[t]here is a strong Federal interest in the effective performance of Amateur Radio Service stations, and that performance must be given -- (A) support at all levels of government; and (B) protection against unreasonable regulation and impediments to the provision of the valuable communications provided by such stations."

The following is a brief, ARRL-supplied background on this bill. They state:

> If enacted into law, S 1755 would instruct the Secretary of Homeland Security (DHS) to undertake a study -- and report its findings to Congress within 180 days -- on the uses and capabilities of Amateur Radio communications in emergencies and disaster relief.
>
> The study shall:
>
> - Include recommendations for enhancements in the voluntary deployment of Amateur Radio licensees in disaster and emergency communications and disaster relief efforts.
>
> - Include recommendations for improved integration of Amateur Radio operators in planning and in furtherance of the Department of Homeland Security initiatives.
>
> - Identify unreasonable or unnecessary impediments to enhanced Amateur Radio communications, such as the effects of private land use regulations on residential antenna installations, and make recommendations regarding such impediments.
>
> - Include an evaluation of Section 207 of the Telecommunications Act of 1996 (Public Law 104-104, 110 Stat. 56 (1996)).

Recommend whether Section 207 should be modified to prevent unreasonable private land use restrictions that impair the ability of amateurs to conduct, or prepare to conduct, emergency communications by means of effective outdoor antennas and support structures at reasonable heights and dimensions for the purpose, in residential areas. The Secretary of Homeland Security shall utilize the expertise of stakeholder entities and organizations, including Amateur

Radio, emergency response and disaster communications.

The ARRL has asked members to please contact Committee Chairman Henry Waxman (D-CA-30) and Ranking Member Joe Barton (R-TX-6), urging them to send this bipartisan bill to the House floor for adoption. The most forceful correspondence is a letter using our own, individual verbiage.

To help in providing "talking points," the ARRL has constructed a sample letter. If letter writing is not one of favorite pastimes for readers of the eDipole, the next best form of communications would be the use of the sample. Remember, a reworded letter is best. These letters that will be urging consideration of S 1755 by the House Committee on Energy and Commerce to Rep Waxman may sent via fax at 202-225-2525, and to Rep Barton via fax at 202-225-1919.

The ARRL also asks that a copy of this correspondence should be faxed to the ARRL's Washington representative, Chwat & Co at 703-684-7594.

The following is sample of the talking points for individual letters:

Representative Henry A. Waxman
Chairman, House Energy
and Commerce Committee
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

Representative Joe Barton
Ranking Member
House Energy and Commerce Committee
United States House of Representatives
2322A Rayburn House Office Building
Washington, DC 20515

[date], 2010

Dear Chairman Waxman and Ranking Member Barton:

As one of more than 680,000 Amateur Radio licensees throughout the United States, I urge your support for passage of S.1755, the "*Amateur Radio Emergency Communications Enhancement Act*," which is pending in your Committee. This bill directs the Department of Homeland Security to undertake a study on the uses and capabilities of Amateur Radio communications in emergencies and disaster relief.

S. 1755, a bipartisan bill sponsored by both Chairman Lieberman and Ranking Member Collins, passed without opposition in the Senate Homeland Security and Governmental Affairs Committee on November 4, 2009. On December 14 it passed by unanimous consent on the Senate floor. It was referred to your Committee on the following day.

This bill promotes and encourages the valuable public service, disaster relief, and emergency communications provided on a volunteer basis by licensees of the Federal Communications Commission in the Amateur Radio Service, by undertaking a study of the uses of Amateur Radio for emergency and disaster relief communications, by identifying unnecessary or unreasonable impediments to the deployment of Amateur Radio emergency and disaster relief communications, and by making recommendations for relief of such unreasonable restrictions so as to expand the uses of Amateur Radio communications in Homeland Security planning and response.

Please pass S.1755 and send it to the House floor and to President Obama for signature.

If you or your staff has any questions, please feel free to contact John Chwat, the Washington, D.C. representative of the American Radio Relay League, Inc., 703-684-7703 or by e-mail to john.chwat@chwatco.com.

Sincerely,

[Name, address]

ARRL April Contests

On the following page, please find the April ARRL contest schedule from http://arrl.org/contests.

Contest Corral

in association with the *National Contest Journal*

April 2010

AM/PM times are local. UTC dates and may be different than calendar date in North America. No contest activity on 60, 30, 17, 12-meters.
Refer to the contest Web sites for full rules, scoring information, operating periods or time limits, and log submission information.
Serial - Sequential number of the contact. S/P/C - State, Province, DXCC Entity
Publication deadline for Contest Corral listings is the first of the second month prior to publication.
For updates and additional contests, see the Contest Corral Web page at **www.arrl.org/contests**.

HF	VHF+	Contest Title	Phn	CW	Dig	Exchange & Frequencies (MHz)	Sponsor's Web Site or Contact	Logs Due
1.8-28		Lighthouse Spring Lites QSO Party	X	X	X	ARLHS number or serial, name, S/P/C	arlhs.com	12 days
Apr 1, 0001Z - Apr 11, 2359Z								
3.5, 7		LZ Open 40 Meter Contest		X		6-digit serial and serial from previous QSO	www.lzopen.com	30 days
Apr 3, 0400Z - Apr 3, 0800Z								
1.8-28		QRP ARCI Spring QSO Party		X		RST, S/P/C, power or QRP ARCI number	www.qrparci.org	30 days
Apr 3, 1200Z - Apr 4, 2400Z						QRP calling frequencies.		
1.8-28		SP DX Contest	X	X		RS(T), serial or SP province	www.spdxcontest.info	Apr 30
Apr 3, 1500Z - Apr 4, 1500Z								
3.5-28		EA RTTY Contest			X	RST, serial or EA province	www.ure.es/contest	Apr 24
Apr 3, 1600Z - Apr 4, 1600Z								
1.8-28		MO QSO Party	X	X		RS(T), serial, MO county or S/P/C	www.w0ma.org	May 4
Apr 3, 1800Z - Apr 5 2359Z						CW 1.820 and 40 kHz from band edge; Phone--1.860,3.825,7.220,14.250,21.360,28.350.		
1.8-28		Low Power Spring Sprint		X		RST, grid square, category	alexanderkorda@hotmail.com	30 days
Apr 5, 1400Z - Apr 5, 2000Z								
1.8-28	50-432	Montana QSO Party	X	X	X	RS(T), S/P/C or MT county	www.fvarc.org	May 31
Apr 9, 0000Z - Apr 11, 0000Z						CW-1.81, 3.54, 7.035, 14,04, 21.05, 28.05 SSB – 1.845, 3.810, 7.244, 14.262, 21.365, 28.325		
3.5-14		EU Spring Sprints		X		Both callsigns, serial, name	www.eusprint.com	15 days
Apr 10, 1600Z - Apr 10, 1959Z						3.550,7.025,14.040.		
1.8-28		Japan International DX Contest		X		RST, JA prefecture or CQ Zone	jidx.org	May 31
Apr 10, 0700Z - Apr 11, 1300Z								
14		PSK31 Flavors Contest			X	S/P/C and name or 070 number	www.podxs070.com	May 10
Apr 10, 12 Noon - Apr 10, 6 PM						14.070-14.080.		
1.8-28	50+	QCWA Spring QSO Party	X	X	X	Call,year llc'd,name,QCWA chap or S/P/C	www.qcwa.org/qso-party.htm	30 days
Apr 10, 1800Z - Apr 11, 1800Z								
1.8-28	50	GA QSO Party	X	X		RS(T), S/P/C or GA county	gqp.contesting.com	May 15
Apr 10, 1800Z - Apr 11 2359Z						CW 1.815,3.545,7.045,14.045,21.045,28.045,50.095; Phone 1.865,3.810,7.225,14.250,21.300,28.450,50.135.		
1.8-28		Yuri Gagarin DX Contest		X		RST, ITU Zone	gc.qst.ru/en	May 7
Apr 10, 2100Z - Apr 11, 2100Z								
7,14		International Vintage Contest	X	X		RS(T), grid square	www.contestvintage.beepworld.it	May 30
Apr 11, 0800Z - Apr 18 1800Z								
	144	VHF Spring Sprints	X	X	X	Grid Square (6-character preferred)	tinyurl.com/springsprints	14 days
Apr 12, 7 PM - Apr 12, 11 PM								
3.5-14		CWops Test		X		Name, member number or S/P/C	cwops.org	2 days
Apr 14, 1100Z - Apr 15 0400Z						18 to 28 kHz above band edge.		
1.8-28		Holyland DX Contest	X	X	X	RS(T), serial or Israel district	www.larc.org	May 31
Apr 16, 2100Z - Apr 17, 2100Z								
3.5-14		EU Spring Sprints		X		Both callsigns, serial, name	www.eusprint.com	15 days
Apr 17, 1600Z - Apr 17, 1959Z						3.730,7.050,14.250.		
	2.3G	EU EME Contest	X	X		TMO/RS(T) and "R"	www.dubus.org	Jun 12
Apr 17, 0000Z - Apr 18, 2400Z								
1.8-28	50	TARA Skirmish Dig Pfx Contest			X	Name, prefix	www.n2ty.org/seasons/tara_dpx_rules.html	May 17
Apr 17, 0000Z - Apr 17, 2400Z								
3.5,7		ES Open HF Championship	X	X		RS(T), serial, dupes OK once/hour	www.erau.ee/index.php?newlang=eng	May 20
Apr 17, 0500Z - Apr 17, 0659Z								
3.5-28		Michigan QSO Party	X	X		Serial and MI county or S/P/C	www.miqp.org	30 days
Apr 17, 1600Z - Apr 18, 0400Z						CW 45 kHz from band edge,Phone 3.825,7.200,14.250,21.300,28.450.		
3.5-28		EA QRP Contest		X		RST, category, M if EA QRP member	www.eaqrp.com	30 days
Apr 17, 1700Z - Apr 18, 1300Z								
1.8-28	50,144	Ontario QSO Party	X	X		RS(T), S/P/C or Ontario QTH	cco.ve3xd.com/oqp	May 19
Apr 17, 1800Z - Apr 18 1800Z						CW 30 kHz above band edge; Phone 1.870,3.795,3.980,7.070,7.280,14.130,14.285,21.280,28.980; VHF-SSB: 50.130,52.540,144.205,146.550.		
1.8-28		YU DX Contest		X		RST and ITU zone	www.yu1srs.org.rs/dl/yudx/yudxmain.html	30 days
Apr 17, 2100Z - Apr 18 2100Z								
3.5-28	**50**	**ARRL Rookie Roundup**	X			**Both calls, name, check, S/P XE# or "DX"**	**www.arrl.org/contests**	**See Web**
Apr 18, 1800Z - Apr 18, 2359Z								
	222	VHF Spring Sprints	X	X	X	Grid Square (6-character preferred)	tinyurl.com/springsprints	14 days
Apr 20, 7 PM - Apr 20, 11 PM								
7,14		John Rollins Memorial DX		X		RST, name, and S/P/C	www.antiquewireless.org	30 days
Apr 21, 2300Z - Apr 25 2300Z								
	432, 5.7G	EU EME Contest	X	X		TMO/RS(T) and "R"	www.dubus.org	June 12
Apr 24, 0000Z - Apr 25, 2400Z								
28		Ten-Ten Spring CW Contest		X		Call, name, county & S/P/C, 10-10 number	www.ten-ten.org	May 10
Apr 24, 0001Z - Apr 25, 2359Z								
3.5-28		SP DX RTTY Contest			X	RST, serial, SP province	www.pkrvg.org/zblor.html	May 25
Apr 24, 1200Z - Apr 25, 1200Z								
1.8-28		Helvetia Contest	X	X	X	RS(T), serial or Swiss canton	www.uska.ch	15 days
Apr 24, 1300Z - Apr 25, 1259Z								
7-28		QRP To The Field		X		RST, S/P/C	www.zlanet.com/QRP	Jun 1
Apr 24, 1500Z - Apr 25, 0300Z								
7-28		Florida QSO Party	X	X		RS(T), FL county or S/P/C	www.floridaqsoparty.org	30 days
Apr 24, 1600Z - Apr 25 2159Z						CW 7.025-7.035,14.040-14.050,21.040-21.050,28.040-28.050; Phone 7.18-7.19,14.265-14.275,21.340-21.350,28.480-28.490.		
1.8-28	50,144	Nebraska QSO Party	X	X	X	RS(T), NE county or S/P/C	www.hdxa.net	May 31
Apr 24, 1700Z - Apr 25, 1700Z						CW: 1.805 and 35 kHz above band edge,Nov/Tech--10 kHz above band edge; Phone--1.915,3.885,7.285,14.285,21.385,28.485,146.460.		
		WSJT Sprint			X	NA report or NA grid	www.ykc.com/wa5ufh/	Next Sat
Apr 24, see Web - Apr 24, see Web								
		VHF Spring Sprints	X	X	X	Grid Square (6-character preferred)	tinyurl.com/springsprints	14 days
Apr 28, 7 PM - Apr 28, 11 PM								