

The Dipole

Radiating the News of the Marple Newtown Amateur Radio Club

December 2007

Next Club Meeting: December 6th, 7 p.m. at The Gauntlett Center

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EXCHANGE TIME: THE AUCTION

In addition to being a social event, the annual Marple Newtown Amateur Radio Club (MNARClub) Auction proves to benefit all participants. In describing this upcoming, Thursday, December 6 meeting, President Walter Faust volunteered, "It is not unusual for area Ham Radio operators to 'complete' his or her Amateur Radio station through a bargain obtained at the yearly auction. Equally common is the practice for yet other Ham Radio operators to offer at the auction a piece of equipment that is either a functional duplicate or it was a part of an area of interest that is no longer active.

The MNARClub Auction is a part of the group's year-ending meeting. The regional group of Amateur Radio operators meeting is held at the Robert Gauntlett Center, Media Line Road, near West Chester Pike, Newtown Square. Faust advised, "While the meeting starts at 7 p.m., it is a common practice for attendees to arrive early for some active 'one-on-one' dialog."

Following traditional auction protocol, a donation from each sale is given to the Amateur Radio group.

Continuing the group's historical image, the Marple Newtown Amateur Radio has the best cookie collection in the area.

President Faust advised anyone desiring additional information about either the auction or Amateur Radio, in general, to call **610-622-2200**.

MARPLE NEWTOWN AMATEUR RADIO CLUB
c/o The Gauntlett Center
20 South Media Line Road at West Chester Pike
Newtown Square, Delaware County, PA 19073

For information about our club,
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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

Pilot-Tower Talk

Digest has a monthly feature, "Humor in Uniform." As a probable, non-re-occurring offering, the *eDipole* shares a collection of reported actual exchanges that took place between pilots and control towers. This collection was shared by frequent contributor John Malarkey, W3SMT.

Tower: "Delta 351, you have traffic at 10 o'clock, 6 miles!"
Delta 351: "Give us another hint! We have digital watches!"

.....
Tower: "TWA 2341, for noise abatement turn right 45 Degrees."
TWA 2341: "Center, we are at 35,000 feet. How much noise can we make up here?"
Tower: "Sir, have you ever heard the noise a 747 makes when it hits a 727?"

.....
O'Hare Approach Control to a 747: "United 329 heavy, your traffic is a Fokker, one o'clock, three miles, Eastbound."
United 329: "Approach, I've always wanted to say this... I've got the little Fokker in sight."

.....
A student became lost during a solo cross-country flight. While attempting to locate the aircraft on radar, ATC asked, "What was your last known position?"
Student: "When I was number one for takeoff."

.....
A DC-10 had come in a little hot and thus had an exceedingly long roll out after touching down.
San Jose Tower Noted: "American 751, make a hard right turn at the end of the runway, if you are able. If you are not able, take the Guadeloupe exit off Highway 101, make a right at the lights and return to the airport."

.....
A Pan Am 727 flight, waiting for start clearance in Munich, overheard the following: Lufthansa (in German): "Ground, what is our start clearance time?"
Ground (in English): "If you want an answer you must speak in English."
Lufthansa (in English): "I am a German, flying a German airplane, in Germany. Why must I speak English?"
Unknown voice from another plane (in a beautiful British accent): "Because you lost the bloody war!"

Tower: "Eastern 702, cleared for takeoff, contact Departure on frequency 124.7"

Eastern 702: "Tower, Eastern 702 switching to Departure. By the way, after we lifted off we saw some kind of dead animal on the far end of the runway."

Tower: "Continental 635, cleared for takeoff behind Eastern 702, contact Departure on frequency 124.7. Did you copy that report from Eastern 702?"

BR Continental 635: "Continental 635, cleared for takeoff, roger; and yes, we copied Eastern... we've already notified our caterers."

One day the pilot of a Cherokee 180 was told by the tower to hold short of the active runway while a DC-8 landed. The DC-8 landed, rolled out, turned around, and taxied back past the Cherokee. Some quick-witted comedian in the DC-8 crew got on the radio and said, "What a Cherokee pilot, not about to let the insult go by, came back with a real zinger: "I made it out of DC-8 parts. Another landing like yours and I'll have enough parts for another one."

The German air controllers at Frankfurt Airport are renowned as a short-tempered lot. They not only expect one to know one's gate parking location, but how to get there without any assistance from them. So it was with some amusement that we (a Pan Am 747) listened to the following exchange between Frankfurt ground control and a British Airways 747, call sign Speedbird 206.

Speedbird 206: "Frankfurt, Speedbird 206! clear of active runway."

Ground: "Speedbird 206. Taxi to gate Alpha One-Seven."

The BA 747 pulled onto the main taxiway and slowed to a stop. Ground: "Speedbird, do you not know where you are going?"

Speedbird 206: "Stand by, Ground, I'm looking up our gate location now."

Ground (with quite arrogant impatience): "Speedbird 206, have you not been to Frankfurt before?"

Speedbird 206 (coolly): "Yes, twice in 1944, but it was dark, -- I was dropping things and didn't land."

While taxiing at London's Gatwick Airport, the crew of a US Air flight departing for Ft. Lauderdale made a wrong turn and came nose to nose with a United 727. An irate female ground controller lashed out at the US Air crew, screaming: "US Air 2771, where the hell are you going? I told you to turn right onto Charlie taxiway! You turned right on Delta! Stop right there. I know it's difficult for you to tell the difference between C and D, but get it right!"

Continuing her rage to the embarrassed crew, she was now shouting hysterically: "God! Now you've screwed everything up! It'll take forever to sort this out! You stay right there and don't move till I tell you to! You can expect progressive taxi instructions in about half an hour, and I want you to go exactly where I tell you, when I tell you, and how I tell you! You got that, US Air 2771?"

"Yes, ma'am," the humbled crew responded.

Naturally, the ground control communications frequency fell terribly silent after the verbal bashing of US Air 2771. Nobody wanted to chance engaging the irate ground controller in her current state of mind. Tension in every cockpit around Gatwick was definitely running high. Just then an unknown pilot broke the silence and keyed his microphone, asking:

"Wasn't I married to you once?"

Dues Are Due

It is that time of the year when people's thoughts are drawn away from normal activities and drawn to seasonal needs. Readers of the eDipole who have not paid their dues are reminded to do this now. By sending in your \$20 before the holiday and year end activities and responsibilities erode our good intentions, readers will not forget this membership responsibility.

President Walt Faust, N3FXR, has offered another suggestion. "By bringing your dues to the December 6 meeting, you can avoid both the last

minute panic of paying your dues after the due date and the expenditure of a \$.41 stamp.”

Maintaining multiple repeaters that have the capability of being efficiently linked, the expenses of membership activities, and other traditional organizational needs are a part of the demands funded by the membership dues.

As a failsafe, anyone not paying dues at the December Auction meeting may send them to treasurer Bill Bowers, N3ZAV, 1000 North Orange Street, Media PA 19063-2226.

Please remember to do your part in assuring the MNARClub linked repeater system is working and viable for both fun and emergencies.

WRC 2007 Ends

One of the fruits of international cooperation has just ended in Switzerland. The outcome of this multinational conference not only Amateur Radio, but the remaining users of the airwaves. With the completion of World Radiocommunication Conference (WRC), the world will adapt to the outcome of WRC-07 and simultaneously await the next WRC. It is expected to be held in 2011.

Progress made during WRC-07

The following is a report that details the outcome of the recently completed conference.

The final working session of the 2007 World Radiocommunication Conference (WRC-07) in Geneva drew to a close Thursday afternoon, November 15. The signing ceremony for the Final Acts will take place Friday. According to International Amateur Radio Union (IARU) Secretary David Sumner, K1ZZ, the principal achievements and disappointments, as they relate to the Amateur Services, of the conference are:

Achievements

- Maintenance all existing amateur allocations, including the 7.200-7.300 MHz allocation in ITU Region 2 (the Americas) that had been somewhat at risk in connection with consideration of additional allocations for HF broadcasting (see below).

- A new worldwide secondary allocation at 135.7-137.8 kHz with a maximum radiated power limit of 1 W e.i.r.p. (given the low efficiency of practical antennas for this frequency range, this limit is not as severe as it may sound).
- Inclusion of an item, "to consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the Amateur Service on a secondary basis, taking into account the need to protect existing services" on the provisional agenda for WRC-11 (set for 2011).
- Avoidance of future agenda items that pose serious threats to key amateur allocations.
- Some improvement in the so-called "country footnotes" that provide for different allocations by country in all or part of the 1.8, 3.5, 50 and 430 MHz amateur bands.

Not all went as hoped for in the recently completed WRC-07 for the international Amateur Radio community. This is seen in the following two topics:

Disappointments

- • No new allocation for the Amateur Service in the vicinity of 5 MHz, and no agenda item to consider such an allocation at a future conference.
- • No future agenda item to consider an amateur allocation at 50 MHz in ITU Region 1 (Europe, the former Soviet Union, Mongolia, Africa and parts of the Middle East).
- **"No Change" for Amateur Allocations, HF Broadcasting**
- The amateur issues were of course a minor part of the WRC-07 agenda, but the Amateur Service was involved in one of the most contentious agenda items dealing with allocations between 4 and 10 MHz. A series of European Common Proposals had proposed changes to allow for an increase of 350 kHz in HF broadcasting allocations, with a footnote for administrations to allow the Amateur Service to use 5.260-5.410 MHz on a

secondary basis and with a radiated power limit of 250 W; however, HF broadcasting had no support from the other regional organizations and no compromise acceptable to all parties could be found. Ultimately the European administrations had to accept "no change" for broadcasting, effectively scuttling our chances for a 5 MHz allocation.

Next WRC Tentatively Set for 2011

Following the ancient saying, "If at first you don't succeed, try, try again." The IARU, the international voice for Amateur Radio, had hopes for increased allocations. These hopes were not achieved at WRC-07. This has resulted in the hope that an appropriate agenda item can be included for WRC-11.

There are concerns that the mood that was evident in the 2007 conference may have helped set the agenda of 2011. These concerns are based upon the observations that the recently retired group had little interest in taking up HF issues at the next conference, the one that is tentatively set for 2011.

The only HF issues on the provisional WRC-11 agenda have to do with oceanographic radar applications and the implementation of new digital technologies for the maritime mobile service.

Amateur Radio Activity in Iraq

A unique, yet not unexpected message was sent to the ARRL on March 13, 2007. Not all of the American Amateur Radio community was aware of the event that was cited in this announcement. One group of Ham Radio operators –DX based operators-- was interested in this communiqué.

The text of the message sent by Iraq Amateur Radio Society (IARS) President Diya Sayah, YI1DZ, to the ARRL informed the League that all Amateur Radio activity in Iraq was suspended. Cited were concerns about security. The dialog added that this status will remain in effect until there is a improvement in the security.

The IARS president added that this suspension applies to both Iraqi citizens as well as any foreigners who have been on the air from Iraq. It

was noted that this prohibition also included military personnel and contractors

The origin of this order to halt all ham radio activity and the issuance of licenses in Iraq came from a letter from the Iraqi Ministry of Defense to Iraqi Prime Minister Nouri al-Maliki. It has been said this is a part of a new security plan.

Sayah said he received subsequent confirmation via the Ministry of Higher Education and Scientific Research to shut down ham radio activity. Some observers feel this order may be the result of a possible misunderstanding on the part of government officials as to the nature and purpose of Amateur Radio.

Eight months after the March order that stopped all Amateur Radio activities in Iraq, there was received a reversal notice. Diya Sayah, YI1DZ, President of the Iraqi Amateur Radio Society has announced that effective November 20, there will be return to "normal" Amateur Radio operations within his country. Included within his announcement was the additional information that attempted to clarify who is being covered by this announcement. Sayah said, "All Amateur Radio operators in Iraq who carry a valid Iraqi license will be able to use their radios according to regulations of IARU Region 1 and the IARS."

There were no references to the security conditions that were cited in the earlier announcement. It was concerns about security that spawned the March shut down.

Newspaper Storyline Needs More Reading

The Associated Press story that appeared in a recent Philadelphia Inquirer began with the storyline, "**E-Bay traders warned they need a Pa. auctioneer's license.**"

At first glance, the non-investigative reader could easily have missed the true meat of the story. The story did not mean that anyone who sells items through E-Bay falls under the mandate to acquire a Pennsylvania auctioneer's license.

The target of this new potential area of enforcement is those individual who have chosen to sell items on E-Bay for others. The most common characteristic of the individuals being sought for

licensing are those who sell items belonging to other and do so with the goal to be compensated for their efforts.

A further explanation cited this rule applies only to people who sell items for others through a formal arrangement. Individuals selling their own items are not the target for this new area of licensing enforcement.

As a bit of information, these licenses which are designed to protect consumers. Current regulations require an applicant to serve an apprenticeship with a licensed auctioneer or in an alternative method, through successful completion of a college auctioneering course. Anyone performing as an auctioneer risks a possible \$1000 fine for breaking this law.

This is not just a single event. It is reported that sitting in the Pennsylvania legislature are bills that are designed to address the topic of eBay auctioneering.

One of these bills has been sponsored by a Pennsylvania State Senator from Montgomery County. Commenting on the possible legislation, Senator Rob Wonderling, R-Montgomery said there are more than 15,000 state residents who make most of their money through Internet trading, but only 2,100 licensed auctioneers in Pennsylvania.

He added, "The bureaucracy, and those special interests that are encouraging the bureaucracy, are lacking in common sense."

One of the lessons learned from the recent eBay story is the reality that the storyline does not tell the full story. One must read the entire article to determine the true and full meaning.

Irish Earn 5 MHz

It may have been ignored (or neglected), but the Irish now have the opportunity to operate on the 5 MHz, 60-meter band. The mid November announcement stated the Irish Amateur Radio community may operate on four 5-MHz channels in contrast to the five similar grants from the United States' Federal Communications (FCC).

There is no complete worldwide agreement on the specific channels select for the new 60-meter band. One example of s popular agreed upon frequency is the channelized 5.405 MHz.

Some, or in some instances all of these channels are also in use in the UK, Iceland, Finland, Norway, Canada and the US.

As a demonstration of the US and Irish lack of total agreement for channel assignments is seen in the accompanying table:

Irish	5.280, 5.290, 5.400, 5.405 MHz
USA	5332, 5348, 5368, 5373, 5405 KHz

While there are some administrative details that need to finalized, the hope is the first variations of Irish licenses will be issued by the end of November or early December. As a first step in this growth within this new Irish grant is the issuing of permission for a local, 5-MHz beacon.

Just as it was announced on July 3, 2003, the 60-meter band in the United States is a secondary allocation. The primary user is the Federal Government. Also attached to the shared use is the unique HF channalized authorization. There are other dictates that came with this grant.

The granted frequencies came with a channel width of 2.8 KHz. This is in contrast to the 150 KHz wide allocations requested by the ARRL. The mode is stipulated to be USB only. The amount of power is influenced by the choice of antenna. The Dipole is the standard cited in the grant. Any change in antenna type demands a change in power. The quest appears to be a control of the effected radiated power.

In their US frequency assignment, the FCC selected one frequency, 5405, that is common to many areas of the world. In their grant several years ago, the US channelized, 5 MHz frequencies are available to General and higher class licensees.

We Are Not Immune

As many of the Delaware County, FCC-licensed radio fraternity have quietly kept to themselves, one of the reasons we have not become active in the twin emergency service responsibilities within Amateur Radio, is simple. The common thought process shared by far too many Ham Radio operators' stresses, "We don't have potential emergency like our neighboring counties. No one needs me."

If one follows statistics, the types of possible emergencies within Delaware County, may not be

as widely geographic damaging as those associated with the nuclear reactors having potentially fatal affects in Chester and Montgomery counties.

By carefully observing the possible dangers highway and railroad traffic, unobserved commercial storage and that flying overhead. It can be easily documented that these forgotten dangers have a greater threat than the universally feared nuclear possibilities.

By opening our minds we can see a wonderful opportunity to become working partners in the forgotten Delaware County emergency radio response organizations.

In reading the well prepared review of the recent, October 6 Simulated Emergency Test that took place in Delaware County, any reader can see that his type of emergency has happened multiple times in past and can reoccur far too many times before event he small accident at a nuclear facility.

Delaware County is alive and well placed in a potentially active danger zone.

One bit of realism that is missing. What kind of emergency can we have that will compare with a nuclear event?

Far too few people can see the potential for such an emergency in Delaware. Please reverse this example of cranial-rectal thinking nearby the next time you read about an airplane crash.

Better yet, the next time any of us hear a plane flying into or out of Philadelphia Airport, remember this flight could easily become a statistic; a statistic for which you can contribute to a happy ending.

If an airplane crash is too dramatic, there is a large collection of other less dramatic events that can happen in our seemingly immune county. Traveling through even residential streets are trucks carrying some very dangerous materials. Yes, this is very legal. With few exceptions there can be small, undocumented quantities in delivery vehicles that travel throughout the area.

The increased use of rail transportation produces yet another collection of potential emergencies. One must not forget the Delaware River. There is a history of a very dangerous maritime mishap that happened here in Delaware County.

Remember, it does not take a large-scale such as a refinery accident to prompt the callout of trained, experienced communicators. The most effective way to prove one's skills in emergency communications begins with ARES-RACES

membership. One enrolled, this experienced group will aid in providing the necessary and required training that qualifies a licensed Amateur Radio operator to become a true emergency asset to his or her community and county.

As a tool to help potential members sample one of the many ARES-RACES activities, read the following report. It is time for all of us to become involved. Our county is not immune.

***Report on Simulated
Emergency Test (SET)
Delaware County ARES / RACES***

The October 6 SET conducted by Delaware County ARES / RACES was a successful exercise with a realistic scenario involving a simulated aviation disaster. The simulated disaster involved an outbound 737 airliner that experienced engine failure taking off from PHL, crashing in Eddy stone, igniting fires and resulting in mass casualties. The simulation involved 70 of the injured requiring transport to four area hospitals.

The scenario entailed Delaware County emergency officials requesting support from ARES / RACES in furnishing communications at the crash / triage site and coordinating patient transport to the four area hospitals.

Activation for the exercise was at 0825 hours with on-air callus commencing at 0836 hours on the 147.195 repeater with operations immediately moving to the 447.375 repeater.

To accommodate the requested support, the following communications units were deployed:

1. *Field Communications Command Post located at Ridley Creek State Park.*
2. *EOC Liaison Station at 911 in Lima.*
3. *Crash Site / Medical Triage Station with digital telpac capability at Governor Printz Park in Essington.*
4. *Tactical Voice Station at Crozer-Chester Hospital in Chester.*
5. *Tactical Voice Station at Taylor Hospital in Ridley Park.*

- 6. *Tactical Voice Station at Delaware County Memorial Hospital in Lansdowne.*
- 7. *Tactical Voice Station at Jefferson Hospital in Philadelphia.*

Personnel responding to the callup included (9) members who successfully manned the designated stations in a timely and professional manner. Four separate patient lists were originated from the Medical Triage Station and sent via email using a portable telpac station, WinLink/Airmail software via the two Delaware County nodes (N3UP-10) in Aston and (W3AEC-10) in Lima.

The following personnel responded to the Simulated Emergency Test and performed flawlessly:

- 1. N3IXQ - Dan McMonigle
- 2. K3RF - Bob Famiglio
- 3. W3BIG - Bob Wilson
- 4. W3JY - Joe Ames
- 5. W3EMA - Bill Wilson
- 6. KB3FPM - John Dallatore
- 7. N3ZAV - Bill Bowers
- 8. WB2C - Andrew Kirk
- 9. W3BMA - Dick Hoffman (from PHILA ARES)

The exercise concluded at approximately 1100 hours.

Thanks to all who participated in the SET for a very professional response. A subsequent analysis with recommendations will follow in the near future.

Bob Wilson, W3BIG
 RACES Radio Officer - Delaware County
 ARES AEC for Operations - Delaware County
 ARRL Official Emergency Station
 Eastern Pennsylvania Section

Water Flow Patterns

Many advanced high school and college students have heard discussions about the path of water going down sewer drains in each of the northern and southern hemispheres. These discussions spawn the question, "Does water go down the drain counterclockwise in the northern hemisphere and clockwise in the southern hemisphere?"

The answer may surprise many people who have believed the fabled water flow patterns. The technically influenced answer states: It all depends upon how the water was introduced and the geometric structure of the drain.

There goes the myth.

The supporting observations show that one can find both counterclockwise and clockwise flowing drains in both hemispheres. Some people would like you to believe that the Coriolis force affects the flow of water down the drain in sinks, bathtubs, or toilet bowls. Don't believe them! The Coriolis force is simply too weak to affect such small bodies of water.

What is now known as the Coriolis force was first described by French engineer Gaspard Gustav de Coriolis (1792-1843). The Coriolis force is caused by the earth's rotation. It responsible for air being pulled to the right (counterclockwise) in the Northern Hemisphere and to the left (clockwise) in the Southern Hemisphere.

The Coriolis Effect is the observed curved path of moving objects relative to the surface of the Earth. Hurricanes are good examples. They curve to the right in the northern hemisphere and to the left in the southern hemisphere. What makes the hurricanes move in this way is the Coriolis force.

What happens at the equator? The Coriolis force is too weak to operate on the moving air at the equator. This means that weather phenomena such as hurricanes are not observed at the equator, although they have been observed at 5 degrees above the equator. In fact, the Coriolis force pulls hurricanes away from the equator.

Maybe we should find more important topics than drain flow patterns.

Missing Dipoles

The interruptions in the “radiation” from the *eDipole* were totally unavoidable. They were medically related. During a trip to native Ohio for a high school reunion the intensity of a pain in his left knee influenced the next 60-plus days for the *eDipole*'s Jim Biddle, W3DCL. A cell phone consult with his orthopedic doctor resulted in a quick return from northern Ohio and an admission on the Tuesday following the Labor Day holiday.

Several days later, with the preliminary tests complete the first of two left knee surgeries were performed at Paoli Hospital. Post surgical review of the findings resulted in a second, follow up operation.

Biddle was stabilized and then transferred to Chester County's Devon Manor. During this approximate 18 week stay at the rehabilitation center he continued the 2-hour, twice a day intense IV treatments. Additionally, sessions in both physical and occupational therapy have help Biddle re-learn walking and the skills of working with walking aids.

There was little success in thwarting boredom until a laptop was added to his list of tools. This permitted a gradual return to a part of his daily discipline.

The task of learning and mastering the differences between his long standard Microsoft 2000 operating system and the sought-after XP also helped in the return to the mental challenges that were non-challenging for much of the two-month absence.

In a personal note, the Marple Newtown Amateur Radio Club's veteran Public Information Specialist thanks the many callers, the personal messages in the appreciated cards, and the visit to both the hospital and the rehab center.

Wordy Humor

Joe Arico, N3BAM, submitted this collection of humorous sayings. This clever use of words surely will help reduce the stress that is the product of some ambitious end of December shopping.

HUMOR FOR LEXOPHILES
(LOVERS OF WORDS)

1. I wondered why the baseball was getting bigger. Then it hit me.
2. Police were called to a day care center where a three-year-old was resisting a rest.
3. Did you hear about the feuding city that expelled all the liberals? The town is all right now.
4. The roundest knight at King Arthur's round table was Sir Cumference.
5. A butcher backed into the meat grinder and got a little behind in his work.
6. To write with a broken pencil is pointless.
7. When fish are in schools some take debate.
8. A thief who stole a calendar got twelve months
9. While fleeing, a thief fell and became mired in setting cement. The judge called him a hardened criminal.
10. Thieves who steal corn from a garden could be charged with stalking.
11. We'll never run out of math teachers because they can multiply.
12. When the smog lifts in southern California, U.C.L.A.
13. A math professor became angry at the blackboard and did a number on it.
14. Another professor discovered that her theory of earthquakes was on shaky ground.
15. A merchant complained that the batteries he imported from China arrived free of charge.
16. If you take a laptop computer for a run you'll jog your memory.
17. A dentist and a manicurist fought tooth and nail.
18. A bicycle is an exhausted vehicle -- it is two tired.
19. A will is a dead giveaway.
20. Time flies like an arrow; fruit flies like a banana.
21. Does a dyslexic poet write inverse?
22. In a democracy it's your vote that counts; in feudalism, it's your Count that votes.
23. Show me a piano falling down a mineshaft and I'll show you A-flat miner.
24. When a clock is hungry it goes back four seconds.
25. A grenade fell onto a kitchen floor in France, resulting in Linoleum Blownapart.
26. You are stuck with your debt if you can't budge it.

- 27. Local Area Network in Australia: The LAN down under.
- 28. He had to break into song because he couldn't find the key.
- 29. A calendar's days are numbered.
- 30. A boiled egg is hard to beat.
- 31. He had a photographic memory which was never developed.
- 32. A plateau is a high form of flattery.
- 33. When you've seen one shopping center you've seen a mall.
- 34. When she looked in the mirror and saw her first strands of gray hair, she thought she'd dye.
- 35. Bakers trade their recipes on a knead to know basis.
- 36. Acupuncture: a jab well done.
- 37. Most of the money in the world is tainted: 'Taint yours, and 'taint mine.

BPL Returns

FCC "Admonishes" utility over BPL Issues

Once upon a time in the world of Amateur Radio, the three letters BPL was a revered topic. Its meaning was Brass Pounders League. "Pounding Brass" was a substitute phrase for using Morse Code. The pounding reference came from the physical activities incorporated in using a telegraph key.

All of that pleasantness in the reference to BPL was dashed when the combination of Internet needs, availability of sufficient technology, and the commercial desires to satisfy a corporate profit motive. Today, the Amateur Radio world, when hearing references to BPL, experiences anger and feelings of invasion in our world and our fought-for spectrum. Today, the common explanation for BPL is Broadband over Power Lines.

Far to many FCC reports have given little or any support to the erosion and invasion into the Ham Radio spectrum. It appears a recent letter to the Ambient Corporation for problems experienced with their operations in the vicinity of Briarcliff Manor, New York.

In recent communication to Yehuda Cern, Ambient Corporation's Chief Engineer, the FCC reported that in concluding their investigation into whether Ambient's BPL operation did cause

"harmful interference" to Amateur Radio stations in Briarcliff Manor, New York.

The Commission found that "Ambient's BPL operation has violated the radiated emission limits of Section 15.109" of the FCC Rules "as well as the terms of its experimental license, call sign WD2XEQ." The FCC's correspondence continued, stating "we hereby admonish Ambient."

What was not stated is a part of the continuing ongoing Amateur Radio worries. What was lacking was some statement that would document whether or not the system actually caused interference to Amateur Radio. Additionally, the Enforcement Bureau left open the issue of future experimental BPL operations at Briarcliff Manor.

The following is the dialog that has transpired in this case. Because of the complexity, both legal and technical, the follow up is presented as initially reported.

Since Ambient's Briarcliff Manor facility is operating under an experimental license, the FCC says Ambient "is subject to the operating conditions contained on its license. Condition 4 of its license requires that Ambient file a progress report six months from the date of the grant. Additionally, Condition 5 provides that the progress report '... should include, but is not limited to, a description of measurements and results demonstrating compliance...' with the radiated emissions limits of Section 15.109."

Ambient submitted a progress report on February 5, 2007. The report indicated that Ambient "[h]as notched out its signals on the Amateur Radio bands, demonstrating significant advancements..." but the report did not address Condition 5, according to the FCC.

FCC Responds to Ambient

The FCC's Spectrum Enforcement Division sent letters to Ambient in March and May 2007, directing Ambient to "provide the results of any measurements made prior to the filing of its February 5, 2007 report to demonstrate compliance with the radiated emission limits of Section 15.109." The Division also directed Ambient to "submit a follow-up report confirming

compliance once it had completed any necessary system modifications."

Ambient's attorneys filed responses to the FCC's March and May letters in June. Ambient's response, the FCC said, indicated that Ambient "had made compliance measurements as required by the Division." Ambient's response further stated that they had found "an older, first generation BPL unit in its network was malfunctioning, causing the device to exceed the applicable Section 15.109 emission limits," and that it "immediately took the equipment out of service." Ambient, the FCC said, "indicated that [they] would soon replace the remaining first generation equipment in its network with newer equipment."

In August, Ambient told the FCC that it has replaced all its first generation BPL equipment with second generation equipment. The FCC's letter to Ambient goes on to say that Ambient has completed and submitted results of on-site testing that demonstrates compliance with the Commission's regulations. In the time since Ambient replaced all their equipment, "neither Ambient or the [Spectrum Enforcement] Division has received complaints indicating continuing interference to Amateur operations from Ambient's BPL system," the FCC's letter said. The FCC made no findings about the interference that had been previously reported, however, nor did the Commission undertake any on-site investigation or inspection of the facility at Briarcliff Manor.

The FCC found that Ambient's BPL operation in Briarcliff Manor "has operated in violation of Section 15.109 of the Commission's Rules. Accordingly, we admonish Ambient for violating Section 15.109 of the Commission's Rules and the terms of its experimental license, call sign WD2XEQ." The FCC cautioned Ambient that any violations of future license provisions "may result in additional sanctions."

As an example of the continuing, ongoing efforts by the ARRL, they have active correspondence in the New York operations by Ambient. The following is a collection of activities by the League.

The ARRL Has Filed Numerous Complaints with FCC Regarding Ambient's Briarcliff Manor Operation

ARRL first filed a complaint with FCC concerning the radiated emission violations at Briarcliff Manor on October 12, 2004. Subsequent complaints were filed on December 17, 2004; January 7, 2005; March 17, 2005; January 6, 2006; March 29, 2006, and June 1, 2007 each of which reported ongoing harmful interference caused by the unlawful operation of Ambient's BPL system at Briarcliff Manor. The complaints included technical reports on the result of tests conducted by ARRL staff. Each of the complaints requested that the Ambient system be required to cease operation immediately. The FCC took no action on any of these complaints, and it did not address any of them in its letter to Ambient.

Still before the Commission is the question of whether or not Ambient's experimental authorization should be renewed for a further period. Ambient has had an experimental authorization in Westchester County, NY since June of 2002. The most recent experimental authorization expired August 1, 2007. On July 24, Ambient filed an application to extend their authorization for an additional two-year period. ARRL filed an informal objection to that application on July 25, arguing that Ambient should be held to the same standard as the other BPL companies which are subject to the rules governing BPL, such as inclusion of the BPL system in the public database, so that victims of BPL interference can determine the source of it.

Continuing in its ongoing battle for Amateur Radio and our use of the spectrum assigned to us, the ARRL consistently does investigation, performs active dialog with the Commission, and it "never blinks." The following is an example of the tenacity of the team from Newington.

ARRL Chief Executive Officer David Sumner, K1ZZ, said, "It is gratifying that

the FCC finally has recognized that Ambient's BPL operation in Briarcliff Manor violated both the FCC rules and the terms of its experimental license, has made these violations a matter of public record and has admonished Ambient; however, this action comes three years and one month after the ARRL first brought Ambient's violations to the Commission's attention. This is hardly the speedy resolution that the Commission has promised, and to which its licensees are entitled."

ARRL General Counsel Chris Imlay, W3KD, concurred with Sumner, saying "The FCC's admonishment to Ambient was 'too little, too late' from the FCC's Enforcement Bureau. It continues the disappointing inaction that we have come to expect from FCC in addressing blatant cases of harmful interference. Must Amateur Radio operators wait more than three years for some relief after filing legitimate complaints of harmful interference? The FCC has consistently refused to even acknowledge, much less investigate, the complaints of harmful interference at Briarcliff Manor, because it wants no bad news about BPL."

The following is a collection of the frequencies that have been associated with BPL (Broadband over Power Lines) transmissions within the USA.

1.705 MHz to 2.850 MHz (160m)
 3.025 MHz to 3.400 kHz
 3.500 MHz to 4.650 MHz (80m)
 4.700 MHz to 5.450 MHz (60m)
 5.680 MHz to 6.525 MHz
 6.685 MHz to 8.815 MHz (40m)
 8.965 MHz to 10.005 MHz
 10.100 MHz to 11.275 MHz (30m)
 11.400 MHz to 13.260 MHz
 13.360 MHz to 17.900 MHz (20m)
 17.970 MHz to 21.924 MHz (17m, 15m)
 22.000 MHz to 74.800 MHz (12m, 10m, 6m)
 75.200 to 80.000 MHz

Pedigree Radio Helps on Being Prepared

In selecting possible "door prizes" for premier Info Fest, there was total agreement that one of the

prize areas had to be very special. The unanimous decision was the Eton FR300 multi-faceted receiver.

The expressions of approval demonstrated by the four winners at the Marple Newtown Amateur Radio Club's Info Fest Ed validated this selection.

The four winners were Bob Wilson, W3BIG, Dominic Edinger, KB3GNL; Anthony Zagame, AA3VZ; and Victoria Rosco. Ten year old Victoria is the daughter of MNARClub program presenter Nick Rosco, N3NR. She enjoyed the meeting. Hopefully this may help her become licensed

Victoria's mother volunteered that her daughter's radio has become a centerpiece in the family kitchen, where it is enjoyed by the entire family.

The Eton FR300 radio is filled with many features. These features qualify the unit as one that fits well into domestic, entertainment uses as well a rugged tool for emergency use.

The following are the specifications of the **Self-Powered AM/FM Radio with NOAA and TV-VHF:**

This emergency radio model combines the hand-crank technology, built-in flashlight, and cell-phone charger with access to NOAA weather channels and TV-VHF channels. Stay aware of approaching storms or shifting weather patterns, and keep abreast of emergency alerts. And the FR300 lets you listen to your favorite shows, even when you're nowhere near a television set.

- AM and FM
- TV1 and TV2 – VHF channels 2-13
- NOAA weather – all 7 channels plus "Alert"
- 3 LED light system with emergency flash
- Can be powered from four different sources:
- Built-in rechargeable Ni-MH battery
- Dynamo crank alone
- 3 "AA" batteries
- AC Adapter (not included)
- Cell-phone charger

The birth and growth of Eton is interesting. In 1986, Eton, which was known as Lextronix at that time, became the exclusive licensee of Grundig products in North America. They shared in the acceptance of a pair of portable shortwave radios, the Satellit 650 and the Satellit 500. In 1990, the introduction of the Traveller II is well accepted by world travelers. This unit incorporates AM/FM

reception plus reception in five shortwave bands, is launched. Its smaller size and alarm clock feature add to its appeal.

This success continues and in the 1990s. Etón made a strategic decision; its sole focus became Grundig shortwave radios. This proved to be a wise business decision. Grundig by Etón now controls 65 percent of the shortwave radio market in American.

The Eton 300 is one of a large collection of general use and emergency radio units. This line of receivers also includes units for both XM and Sirius

The specialty focus for a receiver with a unique application became evident in 2002. In each of the units in this collection, one the key ingredients is the crank radio. This self-powered radio class, Eton provided a receiver that has been tagged by many as the "American Red Cross" receiver. It is totally independent for both house power and the availability of batteries. They are truly self-powered radios that have proven to be a perfect radio for emergencies.

Included in the features of this class of receivers include AM, FM, shortwave, NOAA, and TV/VHF tuning, a built-in flashlight, a cell phone charger and a siren.

The solid construction and the stylish appearance, when coupled with the well-chosen features incorporated in this line of emergency service receivers makes any of these Eton receivers a good addition to the shack or the emergency service supplies.



The happy winners of the November Info Fest Eton FR300 receivers posed for a picture at this premier event. Shown are Bob Wilson, W3BIG; Demonic Edinger, KB3GNL; Victoria Rosco; and Anthony Zagame, AAVZ.

Planning Aids Program

As any successful salesman knows, the key to success comes in part to simple saying, "Plan your work and then work your plan." While not formally a part of the thought process behind two area programs, this philosophy was a part of successes of both the November 1, **Info Fest** and Field Day. The third is an example of youthful planning.

While each of the planners and the participants had an enjoyable outing for Field Day, there was the mood of "having a good time." Despite this repeated focus, there still exist an element of competitiveness that was for many years the sole reason for participation. I

It is in this partial mood of competitiveness that this and other items in this and past issues of the eDipole are used as a reminder of "next year."

The following e-mail message almost shouts out with enthusiasm. Coming from Jeff Lynch, W3JEF, the results he cited are perfect proof of the fruits of planning. The success of this year's standings is the result of using the products of previously well-planned and executed Field Days and then, through current planning, they created the template this year.

One must thank both the committee and the participants. Without the worker bees, even the best plan is only a concept. This work paid good rewards and everyone had good and safe time.

QST arrived today with the FD scores in the pages starting with 80. The 3A scores started on page 85 and ran to page 87.

There were, by my preliminary count, 284 stations listed in the straight 3A category. We were ranked number 79, (also to the FD crew and the people that planned and operated on Field Day.

Lets start looking at the 2008 Field Day and score even better.

We by my count.) That puts us solidly in the top third of all 3A contestants.

Congratulations had 812 confirmed contacts with 39 participants on the operator's roster and racked up 3714 points. Let's see if we can top

During a series of radio exchanges the topic has repeatedly that next year.

While is growing more and more difficult to find activities on the majority of our region's repeaters, it is not uncommon to hear an occasional common theme during these infrequent QSOs. That topic is the lack of activity on both HF and repeaters. One suggestion was the advent of the cell phone. Others causes were suggested as well. One topic dealt with the possibility that not everyone knows of the growing areas of interest that are available through services we can perform and the special interests of some of our neighboring organizations.

This thought became a target and a hard working support team began to plan for a special meeting. The creative juices of Dan Amoroso, W3DI, sparked this process. His enthusiasm once more proved to be contagious.

The result of this plan and an energetic follow through was felt by the many participants. Because of the "Plan your work and then work your plan" concept, the November 1 Info Fest became a success in its premier year. One of the key ingredients was the behind the scenes work that assured this success.

One of the eclectic participants in this premier meeting concept was the United States Marine Corps and the "Toys for Tots." Sergeant Nilson left with a collection of new, unwrapped gifts for area children in need of Christmas gifts.



One of the many special focuses during the Marple Newtown Amateur Radio Club's premier Info Fest was a visit by the United States Marine Corps' Sgt Nilson. He attended the local meeting of regional Amateur Radio operators and returned with the group's Toys-For-Tots donations. Involved with this collection (left to right) were Jim Goldman, W3JG, club vice president; Lois Faust; Sgt. Nilson, USMC; and Edwina Amoroso.

Another example of planning was unearthed during the preparation of this eDipole piece. Neil Blaho, AA3EO, forwarded a newspaper clipping of the students from St. Joseph School. They had been interviewed by a staff member of the Hometown Press, one of a collection of neighborhood newspapers. As is shown in the clipping, each student, two 13-year olds, two 14-year olds, and 12-year old Colleen Blaho were asked the question, "Why is it important that we honor our veterans?" Very proud father Neil began the evening dialog with his question, "Is it me or does she speak differently than most kids?"

The replay was "Yes." What was not included in the reply was the parenthetical thought, "Thank goodness; some one should."

What does this do with planning?

Colleen's parents have invested time and energy in the growth of their daughter. Anyone who spent time with Colleen at various Ham Radio gathering has witness a very well-spoken preteen who in many ways remains a charming 12-year old. Her page mates, while older, answered the question, but the answer crafted by our young, Ham-to-be is articulate.

In another example of planning, an inquiry about Colleen's future plans prompted a reply that demonstrates her planning skills. She has plans to be a doctor, a pediatrician.

At age 12, that is planning.



Five St. Joseph School students are shown with their answer to the common question asked by Loretta Rodgers of the *Hometown Press*.



Colleen Blaho is seen relaxing. The smile is common to both photographs.

Special Opportunity in December

SKYWARN operations have been a part of many area Amateur Radio operators' public service responsibilities. A growing number of Ham Radio operators are becoming certified in SKYWARN operations. This benefits the general public because our weather skills can aid in "filling in" the information void that can exist with even the most sophisticated information-gathering devices.

December 1, 2007 has been established as SKYWARN Recognition Day. Local participants should be advised this event begins at 0000 UTC and ends at 2400 UTC. As a reminder, this translates to a local November 31 start time.

The focus for this 24 activity is the recognition of the Amateur Radio operators for their commitment to aid in keeping our communities safe. This event is co-sponsored by the ARRL and the National Weather Service.

This is the ninth annual SKYWARN recognition effort. Weather Service personnel have stressed, "These folks are dedicated, and the assistance they provide throughout the year is invaluable. SKYWARN Recognition Day is our way of saying thank you." event and z NWS office in Goodland, Kansas, concurred. "Radio amateurs are a tremendous resource for the Nation."

According to Goodland Kansas', Warning Coordination Meteorologist David Floyd, N5DBZ, the participation during the 2006 recognition there were 90 NWS offices across the country involved and they logged more than 16,000 radio contacts.

A sample of the special services provided by Amateur Radio operators during typical SKYWARN operations during severe weather occur include reporting hail size, wind damage and storm rotation in real time. Data of this type greatly assists the radar warning operator, since that information can be correlated with Doppler radar displays.

Recently the assembling of snow nets has become a staple winter event. The reports of snow totals, ice accumulations and whiteout conditions in blowing snow help NWS forecasters assess the extent and severity of winter storms.

With the advent of the increases in wildfires, Amateur Radio operators are being called upon to

report the precise locations of thick smoke and zero visibility. These observations help provide crucial weather updates to fire fighters.

In citing additional examples where Amateur Radio operators have provided crucial weather information Meteorologist Floyd volunteered, "NWS offices utilize the real-time reporting of weather events to assist in warning operations, but certainly hurricanes Katrina and Rita have shown us that ham radio operators are equally important during the recovery phase of large-scale natural disasters."

Another severe weather assistance area cited by Floyd was the Hurricane Watch Net (HWN), which was organized in 1965 during Hurricane Betsy. This weather-based net began as an informal group of Ham Radio operators. The early contributions from this group have grown through a formal relationship with the National Hurricane Center.

On the Local Scene

There is planned for this event a great deal of local participation. As outlined by Lou Ruh, WX3I, there will Amateur Radio operations from the Mount Holly office of the National Weather Service.

Operating under the fitting call, WX2PHI, the majority of the Amateur Radio bands will be used to make both local and DX contacts. The bands covered by the area weather facilities Amateur Radio operations included 40-meters, 20-meters, 15-meters, 10-meters, 6-meters, and 2-meters. SSB will be used in the HF operations and FM in the VHF region.

As shown in the accompanying table, many of the participating weather stations plan to QSL. Mount Holly is one of the QSLing stations. The following is their address:

National Weather Service
732 Woodlane Road
Mount Holly NJ 08060

A List of the Participants

The following is a tabular list of the additional Weather Service Offices that will, at press time, be participating in this year's SKYWARN Recognition Day, December 1, 2007 UTC.

ADDITIONAL PARTICIPATING OFFICES SRD 2007

CALL SIGN	LOCATION	BANDS	MODES	HOURS	QSL CARD
K0DMX	DES MOINES, IA	2 10 15 20 40 80 440	PHONE SSB FM	?	Y
K0MPX	MINNEAPOLIS ST PAUL, MN	2 10 15 20 40 80 440	PHONE SSB PSK FM ECHOLINK	24	Y
K0NWS	DULUTH, MN	2 10 15 20 40 80	PHONE SSB CW RTTY PSK FM	24	Y
K5LCW	LAKE CHARLES, LA	2 6 10 15 20 40 80	PHONE SSB CW FM ECHOLINK	24	Y
K5SHV	SHREVEPORT, LA	6 10 15 20 40 80	PHONE	0000-1800	N
K8DTX	DETROIT, MI	2 6 10 15 20 40 80	PHONE SSB ECHOLINK	24	Y
KA6OQJ	EUREKA, CA	2 6 10 15 20 40 80 440	PHONE SSB CW RTTY PSK FM	24	N
KC0NWS	CENTRAL REGION HQ KANSAS CITY, MO	2 10 15 20 40 80 440	PHONE SSB PSK FM	24	Y
KC0SKY	PLEASANT HILL, MO	2 10 15 20 40 80	PHONE SSB CW FM	24	Y
KD5UMW	AUSTIN SAN ANTONIO, TX	2 6 10 15 20 40 80 440	PHONE SSB CW RTTY PSK FM ECHOLINK	0000-0400 1400-2300	N
KF4ZOQ	GREENVILLE SPARTANBURG	2 6 10 20 40 440	PHONE SSB	1400-2200	N
KH6SW	HONOLULU, HI	2 440	PHONE SSB IRLP	24	Y
KL7FWX	FAIRBANKS, AK	2 6 10 15 20	PHONE SSB CW RTTY PSK FM	24	Y
N0GF	GRAND FORKS, ND	2 6 10 15 20 40 80 440	PHONE FM	24	Y
N0W	GRAND JUNCTION, CO	2 6 10 15 20 40 80 440	PHONE SSB PSK FM IRLP	24	Y
N0Y	ABERDEEN, SD	2 6 10 15 20 40 80	PHONE SSB CW FM IRLP	18	Y
N5CCW	CORPUS CHRISTI, TX	2 6 10 15 20 40 80 440	PHONE FM ECHOLINK IRLP	0000-0500 1200-2300	N
N7PI	POCATELLO, ID	10 15 20 40 80	PHONE SSB	24	Y
W0BIS	BISMARCK, ND	2 6 10 15 20 40 80 440	PHONE SSB CW RTTY PSK	24	Y
W0NWS	OMAHA/VALLEY, NE	2 6 10 15 20 40 80 440	PHONE SSB CW FM	24	Y
W1BOS/MQE	MILTON, MA	2 10 20 40 80	PHONE SSB FM	1400-2000	N
W7GBU	SPOKANE, WA	2 6 10 15 20 40 80 440	PHONE SSB CW RTTY PSK FM	24	Y
W9NWS	INDIANAPOLIS, IN	20 40 80	PHONE SSB	14	N
WL7NWS	JUNEAU, AK	10 15 20 40 80	PHONE SSB	8 - 10	N
WX0GLD	GOODLAND, KS	2 6 10 15 20 40 80	PHONE CW RTTY PSK APRS ECHOLINK IRLP	24	Y
WX0TOP	TOPEKA, KS	2 10 15 20 40 80	PHONE SSB ECHOLINK	24	N
WX1BOX	TAUNTON, MA	2 6 20 40 80 440	PHONE SSB FM ECHOLINK IRLP	0000-0500 1200-2400	Y
WX1BTV	BURLINGTON, VT	2 10 20 40 80 440	PHONE SSB	0000-0400 1000-1800	N
WX1CAR	CARIBOU, ME	2 6 10 15 20 40	PHONE SSB FM	24	Y

		80 440	ECHOLINK APRS		
WX1GYX	GRAY, ME	2 6 10 15 20 40 80 440	PHONE ECHOLINK	24	Y
WX2BUF	BUFFALO, NY	2 10 15 20 40 80	PHONE SSB CW FM APRS	24	Y
WX4HUN	HUNTSVILLE, AL	2 10 15 20 40 80 440	PHONE SSB CW FM ECHOLINK IRLP	24	Y
WX4JAX	JACKSONVILLE, FL	2 6 10 15 20 40 80	PHONE SSB CW PSK	0000-0800 1600-2400	Y
WX4LWX	STERLING, VA	2 6 10 15 20 40 80 440	PHONE SSB CW RTTY PSK FM ECHOLINK IRLP	24	Y
WX4MHX	NEWPORT/MOREHEAD, NC	2 20 40 80 440	PHONE SSB FM	12	N
WX4MLB	MELBOURNE, FL	2 10 15 20 40 80	PHONE SSB CW FM ECHOLINK	24	Y
WX4NC	RALEIGH, NC	2 20 40 80 440	PHONE IRLP	1300-2100	Y
WX4NHC	MIAMI, FL	2 10 15 20 40 80 440	PHONE SSB FM ECHOLINK IRLP	10	Y
WX4PTC	PEACHTREE, GA	2 10 15 20 40 80 440	PHONE SSB FM ECHOLINK	24	Y
WX4RNK	BLACKSBURG, VA	2 20 40 80	PHONE SSB CW	24	Y
WX4TOR	RUSKIN, FL	2 10 15 20 40 80 440	PHONE SSB FM ECHOLINK	0000-0400 1400-2400	N
WX5AMA	AMARILLO, TX	2 10 15 20 40 80 440	PHONE SSB CW FM	24	Y
WX5BRO	BROWNSVILLE, TX	2 10 15 20 40 80	PHONE SSB ECHOLINK	24	N
WX5FWD	FORT WORTH, TX	2 6 10 15 20 40 80 440	PHONE SSB CW PSK FM ECHOLINK IRLP	24	Y
WX5HGX	HOUSTON, TX	2 6 10 15 20 40 80 440	PHONE SSB CW PSK FM IRLP	1400-2200	N
WX5LBB	LUBBOCK, TX	2 6 10 15 20 40 80 440	PHONE SSB PSK FM ECHOLINK	0000-0400 1200-2400	Y
WX5TUL	TULSA, OK	2 6 10 15 20 40 80 440	PHONE SSB FM ECHOLINK	1400-2400	Y
WX7BOI	BOISE, ID	?	PHONE SSB ECHOLINK IRLP	24	N
WX7CYS	CHEYENNE, WY	2 10 15 20 40 80 440	PHONE SSB CW PSK IRLP	24	Y
WX7GGW	GLASGOW, MT	10 15 20 40 80	PHONE SSB CW PSK	24	Y
WX7GTF	GREAT FALLS, MT	2 20 40 80	PHONE SSB PSK FM ECHOLINK IRLP	20	Y
WX7LKN	ELKO, NV	15 20 40 80	PHONE SSB CW	24	Y
WX7MFR	MEDFORD, OR	2 10 15 20 40 80 440	PHONE SSB CW RTTY PSK FM HF-pac I	24	Y
WX7MSO	MISSOULA, MT	2 10 15 20 40 80 440	PHONE CW RTTY PSK	0000-0700 1500-2400	Y
WX7PHX	PHOENIX, AZ	2 10 15 20 40 80 440	PHONE SSB FM ECHOLINK IRLP	24	Y
WX7SEA	SEATTLE, WA	10 20	PHONE FM	0000-0400 1600-2400	N

WX7SLC	SALT LAKE CITY, UT	2 20 40 80 440	PHONE SSB FM ECHOLINK IRLP	24	N
WX9GRB	GREEN BAY, WI	2	PHONE FM IRLP	0000-0600 1800-2400	N
WX9ILX	LINCOLN, IL	2 10 15 20 40 80 440	PHONE SSB CW ECHOLINK	24	N
WX9MKX	MILWAUKEE, WI	2 10 15 20 40 80	PHONE SSB FM	0000-0600 1200-2400	Y