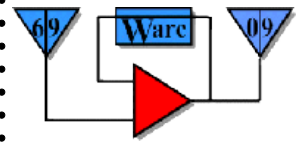




FEEDBACK



Web Site k3dn.org

Warminster Amateur Radio Club

January 2009

Next Meeting January 8th - Digital TV

President's Message



Some important milestones have marked the close of 2008. The first is that our good friend Tom Michaud WA3TQJ has become a silent key. Tom was truly one of the pillars of the Warminster Amateur Radio Club. He has been a long-time member and supporter of our club, going back to about 1970. He has served as a VE since the earliest days of the VEC program, with more testing sessions to his credit than any other VE in the EPA section. Tom was a past president of WARC and has served for many years as a director. He was the auctioneer at our annual club auction. Tom served as the chairperson of our interference committee. He was the go-to guy for advice on just about any topic. He will be greatly missed. Our sympathies go out to Tom's wife Judy and his family.

A second milestone was the passing and implementation of PRB1 legislation in our state. Act 88 has granted Pennsylvania hams protection from undue restrictions of their antennas and antenna support structures by local municipalities. Club members George Brechmann N3HBT and Doc Morein KA3RAU were instrumental in convincing our local state senator and state representatives to introduce and support PRB 1 bills. In fact, George received national recognition through the ARRL for his efforts. But it was the emails, letters, and phone calls by club members, as well as hams across the state, which provided the momentum to make Act 88 a reality.

A third milestone finds our club with a new president. Anthony Burokas KB3DVS, our president for the last year and a half, has resigned and

has moved to Texas, where his wife has found an exciting new job. Anthony has brought a new vitality to the office of president and the club has prospered under his leadership. We are sorry to see him go, but we wish him and his family the best in their new venture. Anthony's resignation means that, as outlined in our Constitution, the vice president moves up to the office of president. Therefore, I have assumed the role of president starting on December 18 for the remainder of Anthony's term

Of course, a fourth milestone is the ending of the year and the start of 2009. The efforts of so many in the club have made 2008 a success and a special thank you goes out to each of you. Now we have to prepare to meet the new challenges and opportunities that 2009 will present. One of my challenges will certainly be my "promotion" to president. Hopefully I can live up to the examples set by Anthony and our previous presidents. But there are lots of things for all our members to do. Get involved. Let's make 2009 a great year for WARC and for ham radio.

Ralph "Larry" Abbott WA3ELQ
President

CLUB STATION

The WARC club station is open to anyone with an interest, on Tuesday evenings between the hours of 7:00 and 9:00 pm. For further information, call George Brechmann N3HBT at 215-443-5656.

WARC ALUMNI MEMBERSHIP

Attention all former WARC members. At the March 4, 1999 General Meeting,

revisions to our club's constitution were approved that among other things, establishes a new Alumni membership category for former WARC members who are unable to attend meeting and Club activities on a regular basis due to health considerations or travel impediments. Dues for the Alumni membership were established at \$8.00 annually to cover the costs of printing and mailing our monthly FEEDBACK newsletter. Contact Alumni Coordinator Randy Gehman (N3LJE) or Membership co-chair Mark Hinkel (WA3QVU) for more information.

Attention members

The Membership Committee has badges and Club cards for you to pick up. If you do not have a Warminster Amateur Radio Club badge or card with your picture on it, please stop by and visit your Membership Chairs, Mark Hinkel - WA3QVU or Michelle London - KB3MTW at the WARC monthly meetings. Otherwise, please contact Membership at: WARCmembership@K3DN.org. Thank you.

FOR SALE

Twenty (20) foot aluminum 2 inch

(Continued on page 2)

The Warminster Amateur Radio Club is a volunteer-based organization. Without the selfless work performed by volunteers such as yourself, there would be no Club.



PROGRAMS

Thursday January 8, 2009 *Digital TV Night*

On February 17, 2009 all analog TV broadcasts will cease in the United States and all TV stations will be required to broadcast in digital format. Bill Weber, VP for Content Distribution & Chief Technology Officer for WHYI will give us an overview and the technical details of digital TV broadcasting, as well as information on the consumer options that are available. Don't miss this informative and timely presentation.

(*January 1 is New Years Day, so our meeting will be held on January 8.)

Thursday February 5, 2009 *Club Auction*

Going once...going twice...Yes, February is the time for our annual club auction. Check those closets and bring in that gear you don't use any more, those parts that are just taking up space, or that "junk" you have been meaning to get rid of, and donate it to the club. We will auction it off to other interested hams who may find your "junk" their treasure. Bring along some cash. You may find some treasures as well.

Thursday March 5, 2009 *TBA***Thursday April 2, 2009 *ARRL Night***

Norm Fusaro W3IZ, Assistant Manager of the ARRL Membership and Volunteer Programs Department, and Dennis Dura K2DCD, ARRL Emergency Preparedness and Response Manager, join us for a very informative program on what is happening at the ARRL and in ham radio. A question and answer session is included. Mark this on your calendar now – this is one meeting you do not want to miss.

Thursday May 7, 2009 *Nomination of Officers/TBA***Thursday June 4, 2009 *Homebrew, Cool Gadgets, and Pizza Night/Election of Officers***

It's Pizza Night and that means it's show-and-tell time again! Bring in that homebrewed gear you just built, that kit you just finished, or that unusual gadget that you use in your shack. This is your chance to show it off!! Come out and see everyone's "stuff" while you enjoy some delicious pizza. It's also **election night**. Remember WARC is your club and you decide who will direct it for the next year – so come out and vote.

(Continued from page 1)

schedule 40 mast with a slight bend at the 4 foot area \$45.00. Contact George N3HBT at (215) 443-5656.

(Editor's Note: Although the following article is not strictly a "ham" article, I thought it would be very interesting for all of us since most of us have a cell phone and it is all about communications.)

Peering Inside a Mobile Phone Network

by Rich Mogull

Have you ever wondered why your mobile phone can alert you to new voicemail without having ever rung? Or why a text message can get through when a call can't? Maybe you've traveled across continents and been amazed at how calls still manage to follow you? Or perhaps you've noticed that sometimes your battery only seems to last a fraction of its normal life? And why can the iPhone 3G figure out your location in 3 seconds when it takes takes your car GPS 3 minutes?

Although we normally take the

ubiquitous mobile phone for granted; assuming it should work anywhere at any time, there's quite a bit of complex technology involved in sending a call to a device in your pocket. While we've all screamed in frustration over dropped calls and other annoyances, the truth is these are impressive devices, packed with amazing technology, that still hold a few tricks up their sleeves. And after you learn a little more about the inside of the system, maybe, just maybe, you'll be a little less irritated the next time you battle to make a simple call.

How Your Calls Follow You -- One of the most fascinating aspects of mobile phones is how calls manage to find us in the first place. If you think about it, you are basically wandering the planet with a tiny radio in your pocket, but by calling a single number anyone can track you down in seconds. Although there are a few different types of mobile phone networks, they all follow the same basic, yet elegant, architecture. For this article I'll be

using terms for the GSM (Global System for Mobile communications) network; the one used by AT&T and other international iPhone providers. I've also simplified things a bit, and Wikipedia is a great source if you'd like to dig in deeper.

It all starts with the phone in your pocket. Every phone in the world has a unique identifier called an IMSI - your International Mobile Subscriber Identity. In most phones, this is encoded on a small smart card (yes, the same technology used by some banks and ID cards) called a SIM - Subscriber Identity Module. When you turn your phone on it tries to find the nearest base station, which is a collection of switching equipment tied to that (likely ugly) cellular antenna on the side of the highway. Your phone connects to the nearest base station, based on signal strength, and that's where the interesting stuff starts to happen.

The IMSI truly is a unique number tied to you and your mobile phone provider, and is the key to the entire

(Continued on page 3)

system. The base station is a relatively dumb system that just passes on your information to the main brains of the system - the Mobile Switching Center (MSC). The MSC can be located pretty much anywhere, which is why in the very early days of cell phones 911 calls might have been routed to a confused emergency dispatcher in a different city or state (don't worry, that's all fixed now). While each system is a little different, a large cell phone provider will generally have a bunch of MSCs to support different phone numbers for different local areas.

At its simplest, the MSC is just two big databases and a connection to the regular phone system. One database, called your Home Location Registry (HLR) is the master database for your account, with your IMSI, phone number, and current location. The second database is called the Visitor Location Registry (VLR) and it keeps track of people that have wandered into that area (a VLR serves only a single base station). Here's how it works - your phone registers your unique IMSI with the nearest base station, and that base station tells its VLR that you are connected. The VLR then contacts your HLR and, using your IMSI, registers your location.

When someone calls you, the call is routed from the regular phone system through your MSC all the way out to the highway you're driving on, since the system always knows where you are. If you happen to be on a GSM system like AT&T (and unlike Verizon), your call can even follow you to any other GSM system in the world, as long as it has some sort of agreement with your primary phone provider. I used to have to rent a local phone when I traveled someplace like Australia (since U.S. phone companies don't play nice with others), but in recent years my biggest worry is someone from home accidentally waking me up at 3 AM local time.

How Calls Work in Cars and Planes -- This may seem pretty straightforward, but it becomes more complex since we

mobile phone users have a bad habit of moving around - sometimes at high speed - while we're on the phone. To handle this, the base stations and MSC work together to hand off your call as you move from tower to tower. This is a bit easier today since we've switched off the old analog system (where your phone needed a dedicated channel to talk) to the new digital systems (where many phones share a channel, just like a computer network). All your conversations are digitally encoded and the phone system routes them around as needed.

Not that it's perfect - especially if you drive the main highway between my home in Phoenix and my wife's office. Some of these hand-offs don't always work as planned, especially if there are dead zones between towers. But it does explain those times when your call becomes garbled or you lose half the conversation, then everything magically returns to normal (by magically, I mean rarely). As we move around with our phones, they're constantly negotiating with base stations, who are constantly negotiating with each other and one or more MSCs.

Now imagine you're 30,000 feet in the air traveling at 500 miles per hour. Although our mobile phones don't have a lot of power, from up in the sky it's not unlikely a single phone could hit dozens of towers with nearly equal power signals. That's the main reason you're not supposed to use your phones in the air; Wikipedia explains in more detail. Planes are extremely well shielded from interference and won't crash, but all the base station switching and phone tracking confuses the heck out of the mobile phone network. The systems some airlines outside the United States are putting into planes set up a tiny cell network on the plane itself so your phone locks in to the plane's system, and then it handles talking to the ground.

As a side note, the real reason airlines make you turn all your electronics off during takeoff and landing is so you aren't distracted and can hear and follow directions if something goes

wrong.

Why Text Messages Work When Your Phone Won't Ring -- All of that crazy call setup happens in the background without you ever noticing because, as anyone who watches spy movies will tell you, your phone is always talking to the network. It does this using channels dedicated to signaling and messaging that are separate from the channels we use to talk. That's how your phone is initially registered, or how calls are handed off (or dropped) as you move from one base station to another.

Early on when they invented GSM, someone decided it would be useful to dedicate a small part of this signaling to sending messages to your phone. They added a feature to send 160-character messages over the signaling channel. The initial idea was to use it to alert you to new voicemail messages, but then someone thought it might be nice to also send some short text messages, and thus the Short Messaging Service (SMS) was born.

That's why you sometimes get voice mail notifications without hearing your phone ring. If the local voice channels are all filled, the call can't get through and callers are forced to leave a message, but since the notification uses that signaling channel, it still reaches you right away. A nice side benefit is that SMS messages will often go through even when regular calls won't. When I'm wearing my part-time hat as a disaster worker, I often find myself using SMS when I can't make regular calls. If you are at that big concert, game, or Steve Jobs keynote you might try SMS instead of battling your neighbors for scarce voice channels.

WARC JACKETS, SHIRTS AND HATS

Are available. Delivery within one month of placing order- the more we order, the lower the prices. See Burt (N3YVH) for order forms and cost information.

The Multimedia Messaging Service (MMS) that Apple mysteriously won't support on the iPhone also uses SMS. In this case, the short message contains a special link that tells your phone where to find a photo or video someone shared with you.

The downside of SMS is that there's no guarantee your message will go through, and the system can't alert either you or the recipient if it was dropped somewhere along the line.

Why Your Battery Sometimes Dies Faster -- As you now realize, there's a ton of signaling and messaging going on in the background as you walk down the street with that amazing battery-powered radio in your pocket. Modern mobile phones are incredibly power efficient and use this signaling to "tune" themselves to their local environment. When they have a good signal, they use less power, but the further you move away from the base station the more power they need to maintain these signaling channels. If you are in a really busy area your phone might also be battling for space on the network, which increases how many signals are sent and thus how much power it uses.

So you might notice two effects - in some places your battery may seem to last forever, whereas in other places it drains quickly, no matter how little you use it. If you are deep inside in a big building your phone might need to use a lot more power to communicate with the nearest base station, taxing your battery. Another area might require less power under normal circumstances, but if it's saturated with a lot of phones you'll be signaling more, or talking to a base station that's further away, and your phone will die sooner. That's why my iPhone battery doesn't last nearly as long at Macworld Expo as it does during other conferences in Moscone Center - the density of iPhone (and thus AT&T) users is significantly higher.

Why the iPhone GPS is Faster than Your Car GPS -- By this point, you probably already know the answer to

that question. While phones are constantly tracking their location so calls can reach you, when you turn a GPS on it needs to figure out where you are nearly from scratch. Your GPS looks for special signals from satellites, and then compares the strength of those signals to triangulate your position. When you pull a GPS out of the box for the first time, it has no idea where you are on the face of the planet, and has to spend a few minutes looking around for those signals to narrow your location. Every time you turn it on in roughly the same location after that, it will be faster to acquire the satellites, but it still has to lock on to the necessary satellite signals before it can determine your location.

Your iPhone cheats. In order to support 911 emergency services, all mobile phone systems now try to track your physical location down to about a minimum of 150 meters (it's a bit different outside the United States). Thus your phone has a good rough idea where you are before the GPS even starts. If you are near a Wi-Fi network, the Skyhook Wireless-enabled location feature of the iPhone may then narrow your location down even more. This means your iPhone GPS already has a good idea of where to look for those satellites, while the unit in your car needs to start scanning from scratch (or based on remembering where you are when you last turned it off).

The Future Is Now -- We take them for granted, but mobile phones, and the networks that back them, are fascinating pieces of technology that provide capabilities that seemed like science fiction only a few short decades ago (consider Dick Tracy's wristwatch radio, Maxwell Smart's shoe phone, and James Bond's car phone in the 1963 "From Russia with Love"). Now maybe the next time you're ready to slam that frustrating marvel against the floor because you can't make a call, you'll hesitate briefly and send your mother a text message instead.

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Easiest Path to Validate Echolink

I was listening the other evening to a fellow amateur radio operator who was going through a lot of effort to validate his call with Echolink. Having gone through the process twice in less than a year, I thought I would share what I found to be the easiest and quickest method. It takes less than 10 minutes, and there is no cost. FYI: Echolink is a amateur radio system linking your computer to other hams around the world via both internet and radio links. The WARC has a node interconnect via the 440 repeater

In order for this to work you'll need a copy of your license (or reference copy) and a listed telephone with the same address which is on your license. If you have a copy of your radio license, you will need your 10-digit file number (not the FRN). If you don't have a copy of your license handy, fret not there's an easy solution.

[Download Echolink Program](#) - The first step is to download, install, and run the EchoLink software (located at: <http://www.echolink.org>) on your computer. This registers your callsign and your email address with the Echolink system. However, you will not be able to connect with anyone on the EchoLink network until you have been authenticated. There is no cost for downloading or using Echolink.

[Validate your Callsign](#) - The next step is to visit the validation page to request access for your callsign. This is located at <http://www.echolink.org/validation/>

Please understand that the purpose of authentication is not to exclude any licensed Amateur from using EchoLink, but to ensure its continued enjoyment by you and other users who appreciate its commitment to security. Part of this is to ensure that the callsign you're using is valid. But the other, and most important part, is to verify that you are indeed the licensee.

(Continued from page 4)

Once you have run the Echolink software, your callsign (unvalidated) is in the Echolink system. You will be directed to call a telephone number given to you by the Echolink program. When you call the automatic answering device it will ask you for your 10-digit file number listed on your FCC license (not your FRN). Enter the entire number, including the leading zeros. Once it verifies the File Number is correct, the system will give you an access code, and disconnect.

The system will call you back at your listed telephone number in a few minutes, and the system will ask you to re-enter the access code given to you previously. You must have your phone listed in the telephone directory for this process to work – and the address for the phone must match the address on

your license.

After you re-enter the code, this completes the process, and you are good to use the Echolink system. The whole process takes less than 10 minutes.

Obtaining Your File Number – If you don't have immediate access to your license or file number, you can print off a reference copy of your license by going to: <http://wireless.fcc.gov/uls/index.htm?job=home> and do a search for your license. Look for the tab above the listing of your license which says "Reference Copy". Printing out that file will give you a duplicate of your original license and the file number is listed.

'73's

Rich Luce
AG3L
Echolink node: 390784

V.E. TEST LOCATIONS

Confirm all information, in advance, with the contact person. Licensed applicants must bring the original, and one photocopy of their license. All applicants, including children, must bring two forms of positive ID. Also bring the original, and a copy, of any Certificate of Successful Completion needed to prove current status. The ARRL VEC'S 2009 test fee is **\$15.00**.

Warminster Amateur Radio Club, Monthly, Last Wed. 7:00 pm - Tom Michaud, WA3TQJ, 215-343-3494.

Atco, NJ, The fourth (4th) Tuesday of each month, at 7 p.m. Winslow Township Senior Center, 33 Cooper Folly Road, 08004-2603.

Mark (K2AX) jtra@comcast.net

Levittown, PA, Monthly, 1st Saturday - George LeNoir, WR3B, 215-943-4886.

Telford, PA, Monthly, RF Hill ARC. 3rd Monday at the Indian Valley Library. Charles Schmell, KB3CEZ, 215-257-6368 days 215-538-7458 evenings.

Philadelphia, PA, Testing is done on the 4th, non holiday Thursday of the month at the, Community Ambulance Association of Ambler, 1414 E Butler Pike, Ambler PA 19002 at 7:00 PM We also are testing on Saturdays at least once per quarter at 9:00 AM. For further information contact James McCloskey at jmcclloskey@msn.com and by phone 215-275-2979.

Lansdale, PA Testing on the first non-holiday Tuesday of the month starting at 7:00 PM. The Lansdale Library Community Room Vine St. and Susquehanna Ave. Lansdale, Pa. Registration is required 48 hrs. or more before the scheduled exam date. If there are no registrations the scheduled exam date will be canceled. NO WALK-INS. You can register by contacting:

Olaf N. Markert ----- Phone (610) 517-5074, E-mail w3pa@arrrl.net

2009 Contest Calendar

- January** 17 - 19 ARRL January VHF Sweepstakes
- February** 16 - 17 ARRL International DX Contest (CW)
- Vermont QSO Party 0000Z, Feb 2 to 2400Z, Feb 3
- Minnesota QSO Party 1400Z-2400Z, Feb 2
- Delaware QSO Party 1700Z, Feb 2 to 0500Z, Feb 3 and 1300Z, Feb 3 to 0100Z, Feb 4
- New Hampshire QSO Party 0001Z, Feb 9 to 0001Z, Feb 10
- Louisiana QSO Party 1500Z, Feb 9 to 0300Z, Feb 10
- Mississippi QSO Party 1500Z, Feb 23 to 0300Z, Feb 24
- North Carolina QSO Party 1700Z, Feb 24 to 0300Z, Feb 25

➤ **ATLANTIC DIV. HAMFESTS - 2009**

- 25 Jan 2009 + Post Holiday Hamfest Maryland Mobileers Amateur Radio Club Odenton, MD Odenton Volunteer Fire Department Hall 1425 Annapolis Road (Rte 175)
- 28-29 Mar 2009 + Greater Baltimore Hamboree & Computerfest Baltimore Amateur Radio Club <http://www.gbhc.org> Timonium, MD Maryland State Fairgrounds 2200 York Road
- 18 Apr 2009 + York Spring Hamfest York Hamfest Foundation <http://www.yorkhamfest.org> Dover, PA Brookside Park 4054 Fox Run Road
- 3 May 2009 + Warminster Amateur Radio Club <http://www.k3dn.org/hamfest.htm> Wrightstown, PA Middletown Grange Fairgrounds 576 Penns Park Road

SKYWARN INFORMATION

MOUNT HOLLY NWSFO SKYWARN Weekly Information Net: EVERY THURSDAY AT 21:00 HOURS
SKYWARN Net Repeater Listing/ Streaming Audio of scheduled SKYWARN Net: <http://www.skywarnnet.net>
You do NOT have to be a certified SKYWARN Weather Spotter to check into the Net

Bucks County SKYWARN Weather Spotter PRIMARY FREQUENCY: 147.300MHZ (+ 131.8)

Fairless Hills, PA (many remote access locations throughout Bucks County)

Mount Holly NWSFO SKYWARN Homepage:
<http://www.erh.noaa.gov/phi/skywarn/index.html>

SKYWARN Basic Weather Spotter Educational Programs URL:
<http://www.erh.noaa.gov/phi/skywarn/training.html#sched>

➤ **CLUB EQUIPMENT**

WARC has purchased four Vertex Standard 2-meter HT's that are available for use by members of the club. The HT's are available on a month-by-month basis and have been purchased primarily to help new hams get on the air. However, they may also be used by any club member who is in need of a temporary 2-meter radio. They are also available for use by participants in WARC's public service activities. DE, Larry Abbott WA3ELQ
 WA3ELQ@k3dn.org
 215-443-7521

Area Repeaters

VHF

- 145.310 R.F. Hill
- 145.350 Doylestown R.C.
- 145.250 Penn Wireless
- 145.330 Hilltown
- 146.670 DVRA
- 146.685 Holmesburg
- 146.925 Willingboro
- 147.000 Ham Bueggers
- 147.030 Phil-Mont
- 147.090 Warminster
- 147.270 Frankford
- 147.300 BEARS
- 147.390 CBRA

220

- 224.580 PackRats
- 223.76 K3NAL

UHF

- 442.650 DVRA
- 443.250 TAG
- 443.050 Metro-Comm
- 443.950 Warminster
- 444.200 BEARS
- 449.325 KA3WXV
- 447.475 WR3B
- 447.625 WE3E
- 448.225 Penn Wireless

D-STAR

- 447.625 K3PDR DStar DV

6 Mtr

- 53.030 WA3BXW
- 53.230 N3DQZ
- 53.320 K3MFI



*The Warminster Amateur Radio Club
 Announces Free Ham Radio Instructional Classes*

If you're interested in Ham Radio, or think you might be, this is your opportunity. Perhaps you'd like to learn about digital communications, Morse code, VHF, UHF, satellite, or perhaps you'd rather sit down and chat with someone in South Africa, Russia, Great Britain or in the space shuttle.

For further information contact: Rich Enwright at 215-357-9055 or George Brechmann at 215-443-5656

Bucks County Amateur Radio Emergency Service (BCARES)

www.bucksares.org
 Bucks County ARES will be on the air Wednesdays, at 9:00 PM . We will be using Warminster Amateur Radio Club's repeater on 147.090, pl 131.8.

Telpac Stations on:

- Upper NJ3A-10 145.610 Riegelsville
- Central KB3BUX-10 145.670 Ivyland Home frequency
- Lower NY3J-10 145.530 Bensalem

Net Schedules

Sunday	2100	10 Meter Net	28.445 MHz
Wednesday	2030	2 Meter Net	147.09 Rptr.
Wednesday	2030	Linked w/ 2 Meter Net	443.95 Rptr.
Sunday	2030	Informal Net	223.5 Simplex
Wednesday	2030	WARC	147.09 Rptr.
Thursday	1900	Mont. Cnty RACES Net	146.835 Rptr.

Are you submitting an article for the Feedback ?

Contributions of articles to be published are always accepted for consideration. Please follow these guidelines:

- Submit in IBM format on a floppy disk.
- Or via E-Mail to:
wa4ywm@comcast.net
- Or via snail mail to:
FEEDBACK EDITOR
Warminster Amateur Radio Club
Box 113
Warminster, Pa 18974
- Use both upper and lower case letters.
- Use your program's spell check.
- If you don't have a computer, then typewritten sheets are o.k, but please use both upper and lower case.
- Put your name and call at the beginning or end of the article, and show credits if you are using material from another source.
- Deadline for articles is the Thursday after the Club meeting.
- Volunteers are needed for folding at the Board Meeting, Ben Wilson Center, last Thursday of the month, 7:30 PM.

Bucks Bagels
1179 York road (RT. 263)
Warminster, PA
674-1400

"Home of the fresh, not frozen dough"

The annual dues rate structure is as follows:

Full Member: \$ 20.00
2nd Family Memer: \$ 10.00
Student: \$ 10.00
Alumni: \$ 8.00
12th grade or under: \$ 5.00

- Are your dues current ?
- Check the date on your Feedback mailing label.

2009 Officers

Executive Officers

President	Larry Abbott	WA3ELQ	443-7521
Vice-President			
Secretary	Dan Myers	KB3IBQ	957-2343
Treasurer	Denise Burstein	KB3ANO	355-1150
Director (E)			
Director (E)	George Brechmann	N3HBT	443-5656
Director (A)	Al Konschak	WI3Z	491-9941
Director (A)	Michael Davis	KB1JEY	646-6011
Past President	Tony Simek	N3YNH	674-5218

Committee Chairpersons

Feedback Editor	Jim Elmore	WA4YWM	538-1889
Membership	Mark Hinkel	WA3QVU	6594449
	Michelle London	KB3MTW	672-7578
Field Day '09	Rich Enwright	KB3NRL	357-9055
Hamfest '09	Michael Davis	KB1JEY	646-6011
January '09 VHF Contest	Joe Bagnick	N3EMA	997-2539
PA QSO Party '09	Mark Kempisty	N3GNW	953-1493
Archives	Frank O'Neill	N3UQP	699-9549
Alumni Coordinator	Randy Gehman	N3LJE	822-9473
ARRL Liaison	Kristina Pistilli	KB3ECW	572-5330
ARES Liaison	Denise Burstein	KB3ANO	355-1150
Awards Mgr.	Vince Pironti	KD3TC	674-0446
Classes	Rich Enwright	KB3NRL	357-9055
DXpedition	Doc Whitticar	W3GAD	968-0641
Special Interest Groups	Ron Wenig	NY3J	638-9257
CW/QRP co-chair	Marty Squicciarini	NR3Z	393-1492
Digital/APRS co-chair	Ron Wenig	NY3J	638-9257
FM/Repeater co-chair	Mark Hinkel	WA3QVU	659-4449
Satellite co-chair	Joe Bagnick	N3EMA	997-2539
VHF/UHF/MW co-chair	Al Sheppard	N3ITT	610-847-5490
Fundraising	Adam Huffnagle	KB3JCP	442-9526
Hamwear	Burt Ludin	N3YVH	267-781-0603
Holiday Dinner co-chair	Berni Lindinger	N3RJD	343-5249
Holiday Dinner co-chair	Doug Mahoney	N3RJE	343-5249
Interference	Tom Michaud	WA3TQJ	343-3494
Net Manager	George Brechmann	N3HBT	443-5656
Notary Public	Whitey Metzger	AA3FT	947-0843
Publicity	Dan Myers	KB3IBQ	957-2343
RACES Liaison	Bob Phillips	KA3VKU	766-0456
Refreshments	Randy Gehman	N3LJE	822-9473
Refreshments	Doc Morein	KA3RAU	542-0593
Repeater Coordinator	Brian Taylor	N3EXA	257-6303
SKYWARN Liaison	Mike Patton	W3MJP	491-9665
Station Trustee	George Brechmann	N3HBT	443-5656
Sunshine Club	Vince Pironti	KD3TC	674-0446
Township Liaison	George Brechmann	N3HBT	443-5656
VE License Testing	Tom Michaud	WA3TQJ	343-3494
WEB Site Coordinator	Al Konschak	WI3Z	491-9941
Youth Programs Co-Chair	Steve Larson	WW3Y	822-1511

Club Station**Meetings****Talk To Us**

The Club Station - K3DN - is located at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. The station is open for club members and the interested general public on non-holiday Tuesday evenings from 7 to 9 pm . The station is fully operational on HF (80 meters through 10 meters) both phone and CW. There is an assortment of amateur radio shareware which may be copied under the shareware licensing agreement.

For additional information on the Club Station please call the Station Manager N3HBT - George at 215-443-5656.

- WARC Meetings are held the first Thursday of each month at 7:30 pm at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. Talk in is available on the 147.09 & 443.950 repeaters.

For general club correspondence:

k3dn@k3dn.org

For Feedback articles:

wa4ywm@comcast.net

Visit our Home Page at:

<http://www.k3dn.org>

**Federal Communications
Commission**

1270 Fairfield Road
Gettysburg, PA 17325

License Information

800-322-1117 - M-F 0800-1630

Fax-On-Demand 202-418-0177

FEEDBACK

Warminster Amateur Radio Club
Box 113
Warminster, Pa 18974

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