SCANNERS
SHORTWAVE

THE URBAN DX'ER

Vol.11 No5
December, 2006
NYDXA@yahoo.com

Established 1984

2006

I am sure there are many of you concluded that our monthly newsletter was "history." Largely, my personal schedule just did not provide the time required to put it together each month. This, along with nagging PC problems that seem unsolvable allowed several months to go by without an issue. Yet, the numerous e-mails we received inquiring about the newsletter certainly convinced us that people do look forward to receiving it. All the positive comments are certainly appreciated!

It seemed unthinkable to allow 2006 to pass without sending out an issue to formally close the year out. I hope that 2007 will provide more time to devote to the newsletter and the weekly net. In beginning this issue, I would like to wish all of you a healthy and happy 2007.

NET POLITICS

Over the past few months, selected individuals have attempted to use our weekly net as their pulpit to preach their personal issues, often their personal opinions of various public agencies. At the beginning of each net, we explain, "*it's an open forum technical discussion of all aspects of the radio listening hobby*." It is widely known that our weekly net likely has more "listeners" than the actual number of those who verbally participate each week. These listeners are members of local, city, state and federal agencies who have recognized the value of the information we discuss and openly share with discretion. How the net is conducted is a direct reflection on how our group is perceived.

For these reasons, it's expected that we all conduct ourselves in a professional manner, and abide by all applicable FCC laws and guidelines. Any individual who cannot abide by these rules is not welcome to participate in our weekly nets. This might seem a bit harsh, but we need to look at this issue and what harm it might do over the long term. The "net", under the auspices of the fraternity of amateur radio, is based on the belief of self policing of privileges.

EMERGENCY BEACONS

By Justin, KC2GIK

WASHINGTON - The U.S. Coast Guard reminds all boaters that beginning January 1, 2007, both **121.5** and **243** MHz Emergency Position Indicating Radio Beacons (EPIRBs) are prohibited from use in both commercial and recreational watercraft. **Boaters wishing to have an emergency rescue beacon aboard their vessel must have a digital 406 MHz model.** The January 1, 2007, date to stop using 121.5 MHz EPIRBs is in preparation for February 1, 2009, when satellite processing of distress signals from all 121.5 / 243 MHz beacons will terminate. Following this termination date, only the 406 MHz beacons will be detected by the International Cospas-Sarsat Satellite System which provides distress alert and location data for search and rescue operations around the world. The regulation applies to all Class A, B, and S 121.5 / 243 MHz EPIRBs. It does not affect 121.5 / 243 MHz man overboard devices which are designed to work directly with a base alerting unit only and not with the satellite system. This change, in large part, was brought about by the unreliability of the 121.5 / 243 MHz beacons in an emergency situation. Data reveals that with a 121.5 MHz beacon; only one alert out of every 50 is a genuine distress situation. This has a significant effect on expending the limited resources of search and rescue personnel and platforms. With 406 MHz beacons, false alerts have been reduced significantly, and, when properly registered, can usually be resolved with a telephone call to the beacon owner. Consequently, real alerts can receive the attention they deserve. When a 406 MHz beacon signal is received, search and rescue personnel can retrieve information from a registration database. This includes the beacon

owner's contact information, emergency contact information, and vessel/aircraft identifying characteristics. Having this information allows the Coast Guard, or other rescue personnel, to respond appropriately. In the U.S., users are required by law to directly register their beacon in the U.S. 406 MHz Beacon Registration Database at: http://www.beaconregistration.noaa.gov/ or by calling 1-888-212-SAVE. Other users can register their beacon in their country's national beacon registration database or, if no national database is available, in the International Beacon Registration Database at https://www.406registration.com/. The United States Coast Guard is the lead agency for coordinating national maritime search and rescue policy and is responsible for providing search and rescue services on, under and over assigned international waters and waters subject to United States jurisdiction. URL: http://www.piersystem.com:80/go/doc/823/140913/

LEO LAPORTE

Several years ago “Tech TV” aired two computer support programs hosted by Leo Laporte. “The Screen Savers” and “Call for Help” aired daily and provided simple solutions for many PC related problems. Leo’s style and magnetic personality provided all the components needed to get virtually any PC user addicted to both shows. Tech TV went through a reorg and both shows were eventually cancelled despite thousands of letters, e-mails and calls to Tech TV.

Leo Laporte went on to host a live call in shows on KFI, 640 in Los Angeles. Discussion topics have now been expanded to any emerging technology. It airs from 2 p.m. to 5 p.m. each Saturday and Sunday. Recently, KFI reinstated live on line listening via their web site. Consider listening, I think you’ll enjoy it! Pod casts of over 300 shows are available for download from Leo Laporte’s web site at http://leo.am/radio/Main/AudioArchives
Pod casts of his other shows are available from his other web site at http://www.twit.tv/

I’ve also discovered that Leo now hosts “Call for Help” on G4 – Tech TV’s Canadian channel, available on the Nimiq 1 satellite at 91 degrees. Though the service is not intended for US customers, FTA technology has allowed many US viewers to view this service in the U.S

POTPOURRI

Ben, N2ZGE has been very busy from his location in Union County trying to identify various active frequencies in his local area. His most recent list includes several local businesses that might be of interest to some of you. – Ben, thanks!!

- **462.250** - Journal Square Taxi Cab Co., Jersey City
- **160.860** - I know it's listed everywhere as "Conrail", however the Raritan Valley Line NJ Transit train line communicates with Conrail and the Newark operators directly on this frequency (for those who may ride the Raritan Valley train line)
- **463.950** - Cushman and Wakefield Security, Iselin NJ
- **463.8625** - Hotel maintenance and Security somewhere in Union County, NJ "mentioned lobby near the Grand piano in their comms" <must be a fancy place>
- **472.9375** - Apt. maintenance somewhere in NYC **451.825** - Contractor/Construction Company in Morris County, NJ
- **929.0125** - Arch Wireless Internet signals - heard very strong in Union, NJ **469.0125** - McDonalds Drive Thru - Roselle Park, NJ
- **30.840** - Wendy's drive thru - Roselle, NJ
- **467.750** and **467.775** - Target Mall - Clark, NJ
- **469.1125** - McDonalds Drive Thru - Clark, NJ
- **469.6875** - Erhart Gardens Senior Citizen Complex- Union, NJ
- **478.7875** - Comcast, Union NJ (however, not active). They mostly communicate with cell phones now.
- **160.155** - Spanish Speaking company, heard very strong in Union Center, NJ **464.250** - Alpha Transportation Service - Brooklyn, NY
- **415.150** - ???? "back to the station" "Copy Charlie"
- **416.775** - ???? any ideas

DRM BROADCASTS TO N. AMERICA

- 1200-1300: 13.750 Vatican Radio various Santa Maria Vatican

- 2045-2130: 9.800 Vatican Radio English Sackville Canada
- 2130-2200: 9.800 R Nederland English Sackville Canada
- 2200-2257: 15.425 R Nederland English Montsinery French Guiana
- 2200-2300: 9.800 R Canada English Sackville Canada
- 2200-0200: 11.675 Radio Kuwait Arabic Sulaibiyah Kuwait
- 2300-2330: 9.800 Deutsche Welle English Sackville Canada
- 2300-2345: 7.370 Vatican Radio English Santa Maria Vatican
- 2330-2400: 9.800 Radio Sweden English Sackville Canada
- 0000-0100: 9.790 TD Pradio (Belgium) Dance Music Sackville Canada
- 0100-0200: 6.080 China Radio Int'l English Sackville Canada

WEST POINT MILITARY ACADEMY

At the U.S. Military Academy at West Point, N.Y., achieving interoperable communications between the academy's emergency services, its local civilian public-safety partners and the cadets themselves presents unique challenges. The military recently standardized Project 25 trunked radio systems for force protection and other base-related activities. However, the civilian public-safety partners that assist the academy in emergency responses use communications systems that are anything but standardized.

West Point prepares 2nd lieutenants for service in the U.S. Army, which presents additional communications challenges. The training of the cadets involves classroom activities and also field instruction across nearly 16,000 acres of rugged and heavily wooded, upstate New York countryside. Therefore, the interoperable communication system for the academy must support all the normal base activities while also providing backstop communications for cadets using tactical radios, to give cadets and their trainers immediate access to base dispatchers in case of an emergency.

During the summer of 2005, a trunked radio system was installed at West Point, which is situated on the mountainous banks of the Hudson River, extending many miles into wooded and treacherous terrain. M/A-COM's P25^{IP} VHF system was selected because the characteristics of VHF are more conducive to this terrain. The system required an interoperability solution that, first and foremost, communicated with the surrounding area's various police, fire and medical organizations. However, the post also had some unique interoperability requirements.

To meet the wide-ranging requirements, an IP-based NetworkFirst interoperability solution from M/A-COM also was installed to enable the connection of all disparate radio systems into the P25 trunked system, in order to instantaneously establish communications between the base, academy personnel on field exercises, state and local first responders and even academy guests such as ROTC units bringing their own communication equipment.

The 1300 users of the trunked radio network can now operate within their own talk groups, and yet, when situations dictate, have immediate access to the town's police, county EMS and state police. This level of interoperability greatly increases the academy's effectiveness in protecting the base, its personnel and the cadets.

With any interoperability solution, making the equipment work often is the simple portion of the project — interagency cooperation generally is more problematic. In this case, meetings between the local police, state police and several county EMS services were held and memorandums of understanding were established. The critical maxim is that local agencies must communicate before an incident if they expect to communicate during an incident. This situation is not unique to West Point and is a challenge to just about anyone running a communications system where multiple agencies are involved. Once consensus and understanding is achieved, the actual equipment deployment can begin in earnest.

At West Point, the interoperability site utilizes three towers, a 12.5 kw uninterruptible power supply, a M/A-COM OpenSky gateway and 12 digital voice units (DVUs). This equipment is connected via a fiber link back to a network-switching center. The DVUs can be configured with DC-based E&M signaling, VOX or tone signaling, and will balance the audio between systems.

Four of the DVUs are used for conventional VHF mutual aid communications. These units successfully link to the local agencies, which are

assigned permanent talk groups and are monitored directly on five consoles and/or the West Point emergency service radios. One DVU is used for a public network connection, which lets a radio make a call out to the local wire line network or allows a landline-originated call to connect to an interoperability call by entering the ID number of the radio. System users find this helpful in situations where a supervisor may be located deep inside a building or may be outside of the coverage area.

The academy holds 12 weeks of field training each summer during which cadets are exposed to military communications and utilize low-band SINCGAR radios. This equipment is mounted in tactical vehicles, located at first-aid stations and carried in “man-pack” harnesses. The DVUs can be configured to operate on three basic connections: receive (RX) audio, transmit (TX) audio and push-to-talk (P2T).

West Point technicians can connect directly to the handset jack on the front of the transceiver, which is set to a locally published frequency. Calls can be monitored on any dispatch console, received on a radio via a SINCGAR talk group or patched to any talk group using the P25 system's IP-based console. During the training period, any personnel with a tactical radio can tune to the assigned frequency and communicate with a dispatcher. Because SINCGARs can be configured in re-transmission modes, a communications net can be established to re-transmit the tactical signal. This configuration greatly increases coverage. The process of integrating the radio is fairly simple. First, the pin-outs on the connector have to be researched. Once that is completed, a connector is obtained, and some simple connections to the DVU are established.

Another unique challenge for West Point was the integration of an ICOM model IC-706MKIIG radio. This unit is designed for amateur radio use but, on request, ICOM will configure the unit to operate on all bands. The unit operates from 1.8 MHz to 450 MHz at power ranging from 2 W to 40 W. West Point decided to integrate this unit into its system in anticipation of unexpected future operational requirements. For instance, West Point can tune this unit to the marine band, MURS, FRS, citizens band or amateur frequencies.

Throughout the year, West Point also hosts several ROTC and academic events where outside agencies bring their own communications equipment. The ICOM radio can be tuned to the outside agency nets, and the traffic can be monitored at a console or patched to any relevant talk groups. The transceiver can operate in simplex or half-duplex modes, with sub-audible tones. Of course, this only can be accomplished when no re-broadcasting rules are violated. Like the SINCGAR, the ICOM operates on VOX signaling and was fairly simple to integrate into the gateway using the supplied accessory jack on the rear of the unit. West Point uses a STICO tri-band antenna for the VHF and UHF transmissions.

West Point also dedicated two of the DVUs to use conventional repeaters. These repeaters were programmed into each of the base's nearly 1400 subscriber radios to serve a backup in case of a system wide failure; however, they will be used primarily in conjunction with the trunked radio system. Again, West Point hosts several outside organizations during the year; often those organizations have their own equipment, but they are unable to obtain the proper authorization to use their local frequencies on post. In these instances, West Point can disclose these repeater frequencies to them. They can then be patched into any relevant talk groups though consoles. The conventional repeaters can also be patched together through the DVUs. This feature enables West Point to increase its conventional coverage for those not on the trunked radio system.

A Nextel unit occupies another one of the slots. This unit can be used to receive a P2T call, which can be patched to any one of West Point's nearly 200 talk groups. A Nextel car kit was used to obtain the TX and RX audio and the P2T. This unit works fairly well, but does have one drawback — it can be used for incoming calls only.

USCG SECTORS

http://oms.auxodept.org/sectorization1.htm

For those who listen to USCG comms, here is a link that shows a map of where the various Sectors are located.

SCANNING INFO LINKS

Each week we receive about a dozen questions on various scanning topics. While we enjoy assisting all of you, we also realize your eagerness to receive a response. Often our responses can take several days, depending on how much free time we have. Here’s a list of the web sites we use to research many of your questions:

Frequency Questions:
FCC Search Engine
http://svartifoss2.fcc.gov/reports7/

NY Scanning Forums
http://www.radioreference.com/forums/forumdisplay.php?f=53
http://www.n2nov.net/
http://www.n2nov.net/phpbb/

NJ Scanning Forums
http://www.radioreference.com/forums/forumdisplay.php?f=52
http://www.n2nov.net/
http://forums.scan-nj.com/

Urban DX'er would like to thank all those who contributed to this month's issue!