NVARC
Nashoba Valley
Amateur Radio Club

SIGNAL

SPECIAL SERVICE CLUB
ARRL

de N1NC

April 2009 Volume 18 Number 4

This Month's Meeting

Next club meeting is Thursday April 16th. Election of officers for 2009 will take place.

The speaker will be on ARES and RACES by Terry Stader KA8SCP.

No volunteer has come forward to run the Monthly Adopt A Highway road cleanups. We have received the agreement letter from the state. It has to be returned to them before the road cleanups start in April. We need a volunteer prior to that time if we are to continue with this activity.

Meeting site info and maps on the back page and the NVARC Website.

Field Day June 27-28

Wear your badge to the meeting so new members can tell your name and you can introduce yourself to them. It may be worth your while.

Last Month's Meeting

The program was the application of VHF antenna modeling to the design of his VHF/UHF antennas by Les N1SV.

In attendance

Larry KB1ESR, Joel W1JMM, Peter N1PQ, Tom K1NNJ, Leo K1LK, Gary K1YTS, Dennis K1LGQ, Phil KB1JKL, Jim N8VIM, Darryl WA1GON, Dwight AA1MT, Johan, Skip KNKNR, Earl WR1Y, Les N1SV, John KK1X, Stan KD1LE.

FT8900 Programming

I have updated the "standard" frequency matrix for the FT8900 mobile radio programming software. The current frequency matrix is dated 090304. If your radio has been programmed in the last few years it has the date code in the alphanumeric display of memory location number one. If you tune to memory one and press the LOW button for two seconds the numeric frequency display will change to alphanumeric. The date code is year, month, and day. The previous version was 080225.

If you cannot select memory number one it means you programmed the radio yourself or it was programmed with the standard matrix before 2007.

I will bring the computer and programming cables to the meeting. If you want to get your rig memory updated bring it and the power cable.

Need a Ride?

Do you need a ride to the club meetings? Do you know someone who does? If you do please contact Bob W1XP 978-448-6559 and leave a message. We'll see that you get to the meeting.

ZAP Sideband

Skip Youngberg, K1NKR

Here is a story that's begged for publication for a long time. A while back the drinking age was 18 in New York. The bar at the Troy Bowling Alley was a "necessary" freshman year pit stop for anyone who was from out of state and a natural for any in-staters. 'Nuff said. The perpetrators/heroes of the story were Dan Muecke (formerly WA0DEV), Gary Ferdinand (then WA2PJL, now W2CS), and Frank Holt (who was an unlicensed American living in HZ3-land, who could and still does out-engineer any of us). I wasn't there. Honest.

Amplitude modulation was still dominant but SSB gear was obviously going to displace it. Hallicrafters gear, which generated SSB by crystal filtering, had almost pushed the early Central Electronics equipment, which generated SSB by phasing, completely out of the market.

People recognized the power efficiency of SSB. Half an AM signal's power was in the carrier; the other half in the two, identical sidebands. Transition to SSB and you're much, much better off. And even in those days hams recognized the spectral efficiency of SSB. Why use the bandwidth of the information-carrying sideband twice? Or the carrier "bandwidth" either—since the sidebands were offset from the carrier by the lowest audio frequency being transmitted? There had to be a better way!

Eureka—probably uttered with a Budweiser accent. Generate a conventional AM signal and filter the lower, or upper sideband get SSB. At this point the carrier is still there. And remember that AM carrier is still amplitude modulated. So filter out the other sideband and leave just the carrier. Voila! Zap Sideband.

At this point one of the trio pointed out that that won't work—modulation is modulation and bandwidth is determined by modulation. "Then how about turning carrier on and off…"

Yet Another Antenna Question

By Bob Reif, W1XP

A friend asked a question about what he might use for a multiband HF antenna. He was thinking that the sun spots were coming back and that he would like to have a rather simple antenna to use on 20 meters and above. An additional antenna for the lower bands would not be bad either. Well there are ten bands that can be considered HF bands. 160 meters is technically a medium frequency band, but is generally consider in the HF Amateur bands. So we have 160, 80, 60, 40, 30, 20, 17, 15, 12, and 10 meters. The frequency spread is four octaves, or greater that a sixteen to one frequency range. This large a frequency span can represent a considerable challenge to the antenna designer.

I have somewhat complicated the problem from the original question by including the lower bands in this article, but that was done in the interest of providing a hopefully useful discussion of the antenna issue. There are many commercial antennas on the market that will provide coverage of most if not all of the ten above listed bands. Some sell for close to a kilo-buck, and some for about $150, with many in between. They may not include all of the above listed bands, and some may include 6 meters in the specified frequency coverage. Drop the 160 meter requirement and the number of choices goes up. Most of the higher priced antennas are multi-band verticals. In fact there are some very effective antennas available especially for the higher of the bands. The lower end of the price range is multi-band wire antennas. This is more in line with what my questioner had in mind for his higher band antenna. Basically he wants a single antenna that will get him on the higher bands when (and if? HI) the sun spots come back. So I decided to take a look at the pattern of one of the popular multiband antennas the G5RV. This antenna is 102 feet long and has a section of ladder line at the feed point. It is then fed with coax at the end of the ladder line section. I've use one myself as an 80, 40, and 30 meter antenna. I have never used it on the higher bands as I have a tri-band beam for 20, 15 and 10 and dual band yagi for 17 and 12 meters. So I decided to model it and see what it had to offer at the higher bands. The pattern plots were not a great surprise. The main lobe starts to break up into multi-lobes above 20 meters. But the pattern is not bad on ten meters. On 15 meters there is a null broadside to the antenna but the peaks on either side are good. The angle of radiation at a height of 50 feet is good for DX on the higher bands. I then took a look at the SWR of the antenna. No surprise at 20 meters or 80 and 40 meters for that matter. But 15 and 10 meters are a real disappointment. The same can be said for 30 and 12 meters. See figure 1 and table 1 for a list of the SWR at spot frequencies from 80 meters to 10 meters. Using an arbitrary 15 to 1 or less SWR, there are five of the nine bands that have some coverage by this antenna. This is the basis for the Y or N in the third column of the table. Certainly with a good wide range antenna coupler you will be able to match into the antenna and it will radiate but the losses will be high. Shall we say even excessive?

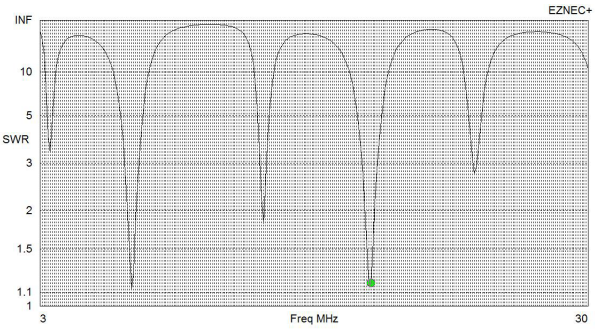

Figure 1 G5RV SWR 3-30 MHz

Table 1

SWR of G5RV at 50 feet above poor Ground

Frequency	SWR	Useable
3.5 MHz	3.3	Y
5.4 MHz	32	N
7.0 MHz	4.6	y
10.1 MHz	85	N
14.0 MHz	1.8	Y
18.1 MHz	12	Y
21.0 MHz	31	N
24.9 MHz	7.2	Y
28.1 MHz	46	N

I took a look at an antenna half the size of the standard 102 ft G5RV and as you would expect lost 80 meters and did pick up 10 meters. Ten meters is now taking the place of 20 meters in the SWR performance. But the only bands with low SWR are 40, 20 and 10 meters. See figure 2 and table 2.

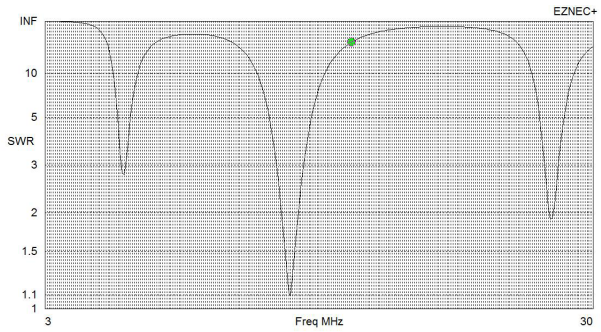

Figure 2 Half Size G5RV 3-30 MHz

Table 2

SWR of half size G5RV at 50 ft above poor Ground

Frequency	SWR	Useable
7.0 MHz	3.2	Y
10.1 MHz	44	N
14.0 MHz	5.3	Y
18.1 MHz	27	N
21.0 MHz	91	N
24.9 MHz	67	N
28.0 MHz	1.9	Y

So I tend to feel the half sized antenna is a disappointment. Again a good tuner will get some power into the antenna and it will radiate. But I think the penalty of using both antennas is the desire to use 50 ohm coax feed line. Extending the balanced low loss feed line to the wide range antenna coupler seems a better approach than going to the coax at the end of the "window line matching transformer". Now the high SWR is on the much lower loss high impedance balanced line. Running the balanced line all the way to the coupler may be a problem. Especially the problems presented by the un-shield balanced line which should be kept some distance from other conductors. You may use two parallel lengths of coax to extend the balanced line where it may prove difficult to keep the balanced line away from other conductors. This "shielded balanced line" will have less losses than a single piece of coax. The shields of the two coax cables can be tied together and grounded at the coupler. Either 50 or 75 ohm cable may be used. RG 58, RG 8X are fine for 100 watts. If you are running much more power or want to keep the losses lower the use of RG 8 or RG 213 are recommended. Now it isn't a G5RV anymore, but it should work better, especially on the bands were the SWR on the G5RV is so high. With the 102 foot flat top and the balanced feed line the antenna will cover all 9 bands between 3.5 and 10 meters. The radiation pattern for what it's worth will be the same, but the losses will be less on all bands.

The G5RV will still be a good and effective antenna on 80 and 40 meters and especially 20 meters, the band for which Mr. Varney (SK) designed it so many years ago. The advantage being the lower SWR on the coax on 80, 40 and 20 meters is probably within the matching range of most internal automatic antenna tuners.

Now when I started thinking about the multiband antenna question my friend asked, I didn't really think it was going to go here. But that's the best thing about questions. You never know where the answer will take you. Till next time. 73, Bob W1XP

PSLIST

Every event needs communications volunteers

April
18 Townsend Lions Canoe Race
19 Adopt-a-Highway
26 Groton Road Race, Ralph KD1SM

May
17 Parker Road Race, John KK1X

July
3-5 Longsjo Classic, Ralph KD1SM
25 Alzheimer's Memory Ride, Ralph KD1SM

We are starting to fill in the 2009 events calendar. Seen www.n1nc.org/Events

Board Meeting

The following are likely to be discussed at the April Board meeting. The newsletter need to be closed out the night before for printing. Important issues will be brought to the regular meeting.

Elections coming up in April. If you're interested in taking a position see one of the current officers.

Field Day is two months away. We need to start planning and get a Coordinator.

Ralph looking for volunteers for the Groton Road Race.

Gary K1YTS will be having a table at Nearfest. Anyone wishing to sell items or help at the table should contact Gary.

Discussion of upcoming meeting presentations.

Ralph submitted the Treasurers report for the newsletter. Starting up the book raffle with some new books.

Need more local content needed for the newsletter. They can be general interest, reviews of equipment, stories on activities, or subjects like how you got into Ham Radio.

Road Cleanup needs better turn outs. Do we want to sign up in the spring? We need someone new to run the cleanup for 2009 if we are going to continue. We have received the letter from the state but have no volunteer.

Adopt A Highway

We need someone to run the road cleanups if we are to continue. Stan has managed the cleanups since they started more than ten years ago. We will need a volunteer before we commit to MassHighways in the spring.

Also we need a minimum of six people by MassHighways rules for a cleanup. We would like eight as that allows us to cover our 2 miles in an hour. The rules say we need to work in pairs. With four pairs each group walks one quarter mile out and back. With that plan we are easily done in an hour. Think about it this way. If everyone in the club did one cleanup a year we would have our eight people for the eight cleanups just doing one cleanup each. No more cleanups until April.

Stan

Treasurers Report

Income for March was $40 in membership renewals and $5.17 in bank interest. There were no additional expenses this month, leaving a net income of $45.17 for the month.

Current balances:

General fund	$4,094.52
Community fund	$2,699.41

April marks the start of NVARC calendar cycle; this is the month the Club was established (in 1992), so many membership renewals come due this month. As of 7 April we have 43 members who are current with their dues and 33 renewals outstanding. Please check the member roster that is circulated at the monthly meeting if you do not remember your renewal date. Your membership date also appears on your newsletter mailing label. You can always ask Ralph if you are in doubt.

Please also remember that the Club gets a commission on any new ARRL memberships or membership renewals that you submit through Ralph. Checks should be made payable to NVARC so that our commission can be deducted before we forward your membership to Newington.

Ralph KD1SM

ARRL Letter

NEW VIDEOS PROMOTING FIELD DAY, AMATEUR RADIO TECHNOLOGY, AVAILABLE FROM ARRL

Two new video Public Service Announcements (PSAs) -- one promoting ARRL Field Day and another showing the technical side of Amateur Radio – are now available from the ARRL Web site. "These videos are great for PIOs <http://www.arrl.org/pio>, clubs and hams in general to use in promoting the fun side of Amateur Radio," said ARRL Media and Public Relations Manager Allen Pitts, W1AGP.

"The Field Day PSA is meant to be posted on Web sites, added to e-mails and shared via the Internet," Pitts explained. "While not broadcast quality resolution, it was intentionally made small enough to go through almost all e-mail systems and able to be seen on almost every computer. The PSA spotlighting Amateur Radio technology is meant for broadcast and cable TV; it is more general than the Field Day video and media outlets can use it all year long.

This video complements the WeDoThat-Radio campaign <http://www.wedothat-radio.org/> and the Technology Pillar, one of the ARRL's five pillars."

Pitts said that the Field Day video is the League's first experiment in "viral" video. "We've seen how a good video can spread quickly via the Web and reach people. So we created a special Field Day Internet video for this year. Let's see what happens." Amateurs can download the video from the Field Day Web page <http://www.arrl.org/fieldday> and then send it to friends, e-mail lists, Web sites -- just about anywhere!

"Please do not modify it or change the ending!" Pitts requests. "Since the files can go all over the country -- and world -- the ending needs to be able to direct anyone, anywhere to the closest Field Day site near them. Just be sure your local group is listed on the ARRL Field Day Locator <http://www.arrl.org/contests/announcements/fd/locator.php> and they will find you." Since the technology PSA is targeted for commercial TV uses, it is a high resolution, 43 meg, MOV type file; it can be downloaded from the ARRL Web site <http://www.arrl.org/pio/videos/ARRL30secPSA2009.mov>. Because this version is meant for professional use, it has a formal 60 second lead-in followed by the 30 second PSA. A very low resolution preview version (not meant for distribution) is also available <http://www.arrl.org/pio/videos/LowRes2009.wmv>.

To get a copy of the technology video on a disc, please send Pitts an e-mail <mailto:apitts@arrl.org>, letting him know which TV stations or cable systems will be showing the video, and which format is needed.

Special thanks go to the volunteers of the national ARRL PR Committee who took the concept and helped bring it to reality. For the Field Day video, Kevin Pauley, KB9WVI, did the excellent video editing (right down to synchronizing shots with the music); Don Carlson, KQ6FM, did the voiceover work. Staff creativity came from Pitts -- who produced and created the video -- and ARRL Contest Branch Manager Sean Kutzko, KX9X, who did the music. The Delta DX Association in Louisiana, W5RU, with Bob McBride, AE5RN, and Albert DuPont, W5AFD, were a major help, providing action video clips and permissions from their last Field Day. The technology video was also designed by Pitts with extensive volunteer help. Special thanks go to Matt Aaron, KG4WXX, who guided the extensive video editing and to Don Carlson, KQ6FM, who did the audio work.

GERMAN AMSAT TEAM TRANSMITS, RECEIVES SIGNALS FROM VENUS

On March 25, a group from AMSAT-DL bounced radio signals off the surface of Venus, marking the first time Amateur Radio operators have bounced radio signals off another planet <http://www.amsat-dl.org/pic/gallery2/main.php?g2_view=core.DownloadItem &g2_itemId=7561>. According to AMSAT-DL President Peter Guelzow, DB2OS, the Earth-Venus-Earth (EVE) transmission is another step in preparing for a mission to Mars. According to an AMSAT-DL press release, the team's transmitter was generating about 6 kW CW on 2.4 GHz.

Guelzow said that signals were sent from a ground control station at the IUZ Sternwarte observatory in Bochum: "After traveling almost 100 million kilometers and a round trip delay of about 5 minutes, they were clearly received as echoes from the surface of Venus. This was the first German success to receive echoes of other planets. In addition, this is the farthest distance crossed by radio amateurs, over 100 times further than echoes from the moon (EME reflections)."

The EVE experiment was repeated on March 26 for several hours with "good echoes" from Venus, Guelzow said. "Morse code was used to transmit the well-known 'HI' signature known from the AMSAT OSCAR satellites."

For receiving the EVE reflections, Guelzow said that the team used a fast Fourier transform (FFT) analysis with an integration time of 5 minutes. "After integrating for 2 minutes only, the reflected signals were clearly visible in the display," he said. "Despite the bad weather, signals from Venus could be detected from 1038 UTC on until the planet reached the local horizon."

Guelzow explained that with the EVE reflections, the high power amplifier "has therefore passed this crucial test as a final key component for the planned P5-A Mars mission. By receiving generated echoes from Venus, the ground and command station for the Mars probe has been cleared for operational use and the AMSAT-DL team is now gearing up for building the P5-A space probe. AMSAT-DL wants to show that low-budget interplanetary exploration is possible with its approach."

Development, design and construction of this first German Mars mission have been achieved by AMSAT-DL and its partner organizations, Guelzow explained. "Already a third of the total project costs were performed. More work shall follow during the mission. AMSAT-DL would like to demonstrate that

their approaches to low-cost space missions are feasible." -- Information provided by AMSAT-DL

HAMS ASSIST WOMAN INJURED IN DESERT

It was a sunny day, not a cloud in the sky, when Hal Whiting, KI2U, Todd Kluxdal, Kluxdal's father and Whiting's two sons decided to go out to the Poverty Mountain area in Arizona to search for airplane crash sites. Whiting, who lives in St George, Utah, and Kluxdal, who lives in Mesquite, Nevada, took two vehicles that day. According to Whiting, they always take two vehicles, just in case a problem pops up: "We always have two spare tires, extra gasoline and a tow rope. We take enough food and supplies to stay two or three days." In addition to the extra equipment, Whiting took the one thing he never goes without -- his ham radio.

"It was a bit after lunch, about 73 miles into our trip," Whiting told the ARRL," when we were flagged down by a man wanting to know if we had a satellite phone, since he couldn't get coverage on his cell phone." Whiting didn't have a satellite phone, but he asked the man if this was an emergency. Whiting said that the man told him that one of his friends had been injured when her ATV rolled on top of her. "I told him I could call for help on my ham radio," he said. The injured woman was knocked unconscious by the fall, but had regained consciousness and was speaking coherently, but was in pain.

"I picked up my mic and put out a call on the 146.910 repeater, one of four repeaters run by Dean Cox, NR7K," Whiting said. "I called for assistance a couple of times when Mac Magee, N6LRG, in the Arizona Cane Beds, answered."

"Mac lives about 50 miles away from the accident site," Whiting said. "It's funny -- it's usually Washington County hams who are on the repeaters, since that's the direction they're pointed in. But Mac lives in Mohave County. And the accident happened in Mohave County. We were lucky, since if the call was answered by a ham in Washington County, there would have been a delay in them getting the info to the proper authorities in Mohave County, but with Mac answering, all our information went right to the proper place."

That morning, Magee told the ARRL that he came into my shack "and for some reason, turned on the 2 meter rig and it happened to be on the 146.910 repeater. I usually have a problem with the repeater 'hearing' me, so I rarely use it. About 11:20 Arizona time, I heard someone call and say they had emergency traffic and needed help. I fully expected a bevy of hams to answer the call, since so many are in range of that machine, but after his second call, and no answer, I took it."

Magee said that the calling station had been flagged down by another motorist. "He told me there had been an accident in the vicinity of Poverty Mountain," he said. "I really had no idea where that was, but I began to write down details. As soon as I had basic info, I called 911. The Mohave County Sheriff Office answered; I explained who I was and what the call was about."

The dispatcher asked Magee for the coordinates to the site, and Magee relayed the request to Whiting. "I looked at my GPS and gave Mac my coordinates, but he said the dispatcher wanted the coordinates from the accident site," Whiting said. "So I got in my 4-wheel drive and drove down the ridge to the site, about 5600 feet above sea level, and got the coordinates. I had to drive back to the ridge, another 1000 feet up, to call Mac back, because I couldn't get a signal down there."

Whiting told the ARRL that in addition to his ham radio, he also carries a set of FRS radios. "I gave one of the FRS radios to Todd and he drove his Jeep down the ridge to the accident site," he said. "I kept the other one and Todd was able to relay me information about the injured woman's condition and I was able to relay that information to Mac who in turn relayed it to the 911 dispatcher. Mac put the mic right up to the phone so the dispatcher could hear exactly what was going on."

Magee said the 911 dispatcher requested more information: "While Hal was replying, I held the phone up to my radio speaker. When he finished with the details, I asked them if they copied that. The dispatcher said he did, and they held me on the line. Hal and I talked a while as he gave more data. When the dispatcher returned, they said a chopper was being dispatched from Phoenix! Well, we finished that call after they had the actual accident site GPS coordinates that Hal had passed on."

With emergency help on the way, Kluxdal returned to the ridge and he and Whiting and his group went on their way to go check out an airplane crash site, the original intent of their trip. "The family members told us to go on and get on with our trip, so we did, after making sure they were all okay," Whiting said. "So we left to go to the crash site, about 3-4 miles away. As we were getting ready to return, we saw the helicopter overhead, taking the injured woman to the hospital in Las Vegas. We returned to the top of the ridge and a sheriff's deputy was there and he told us that our GPS coordinates were off, but only by 20

feet! He said that the helicopter crew was real happy that they were so on-target."

Whiting said they were glad to have been able to help. "This is a remote area," he said. "There's only one way in, one way out with no shortcuts to get in and out. There are only dirt roads, and it can get very muddy when it rains a lot. I was out that way two weeks ago and got stuck in the mud there, but it was all dry this past weekend."

Whiting said he learned a few things after this trip: "I am glad I had my radio equipment with me, and I am glad there was someone listening on the repeater to take the emergency call. Having the spare FRS radios created an efficient means for relay with a non-ham person, and having the GPS equipment provided a very effective means for the helicopter rescue team to locate the accident, since they did not want the road designation information but the exact patient coordinates. It would have been useless to have my equipment if there had not been someone listening. This proves that there is a good reason to keep your radios with you and in good operating condition."

Whiting, who was first licensed in 1976, is the ARES Assistant Emergency Coordinator for Washington County. A CAD Manager and Aerial Photographer for Bulloch Brothers in Mesquite, Nevada (he and Kluxdal are co-workers), he is currently teaching an Amateur Radio licensing class to 13 prospective hams at the Dixie Regional Medical Center in St George.

Magee said that before this incident he had never been involved in an actual emergency. "I have established emergency communications networks, in particular for the LDS Church in Newbury Park, California, where I was the Stake Emergency Communications Coordinator." He told the ARRL: "Our communications group won the first worldwide test of the system back in the late 1980s. This is like ARRL Field Day, but involved mostly LDS members and facilities, then under the name of Mercury Amateur Radio Association (MARA) <http://www.mara.net/>. I feel very pleased in knowing that I had the opportunity to serve in this rescue incident and that every penny I spent on my system, radio and antenna was certainly worth it. In these days of extensive cell phone service and coverage, isn't it satisfying to know that ham radio can still be of use for public service?"

ARRL RELEASES REVISION OF "EXPERIMENTAL METHODS IN RF DESIGN"

The revised first edition of "Experimental Methods in RF Design" is now available from the ARRL <http://www.arrl.org/catalog/?item=9239>. Co-written and updated by Wes Hayward, W7ZOI, Rick Campbell, KK7B, and Bob Larkin, W7PUA, "Experimental Methods in RF Design" explores wide dynamic range, low distortion radio equipment, the use of direct conversion and phasing methods and digital signal processing. Use the models and discussion included in the book to design, build and measure equipment at both the circuit and the system level.

Readers are immersed in the communications experience by building equipment that contributes to understanding basic concepts and circuits. The updated version of "Experimental Methods in RF Design" is loaded with new, unpublished projects. Presented to illustrate the design process, the equipment is often simple, lacking the frills found in current commercial gear. The authors understand that measurement is a vital part of experimentation. Readers are encouraged to perform measurements on the gear as they build it. Techniques to determine performance and the measurement equipment needed for the evaluations are discussed in detail and include circuits that the reader can build.

Contents of "Experimental Methods in RF Design" include:
* Basic Investigations in Electronics
* Amplifiers, Filters, Oscillators and Mixers
* Superheterodyne Transmitters and Receivers
* Measurement Equipment
* Direct Conversion Receivers
* Phasing Receivers and Transmitters
* DSP Components
* DSP Applications in Communications
* Field Operation, Portable Gear and Integrated Stations

A follow-up to the widely popular "Solid-State Design for the Radio Amateur" (published in 1977), "Experimental Methods in RF Design" includes a CD-ROM with design software, listings for DSP firmware and supplementary articles. It is available from the ARRL for $49.95.

HAMS TO ACTIVATE MIDWAY ATOLL AS K4M IN OCTOBER 2009

Earlier this year, US Fish and Wildlife Service (USFWS) announced that they would open Midway Atoll <http://www.fws.gov/midway/> to Amateur Radio operations for two weeks only, from October 5-19, 2009 <http://www.arrl.org/news/stories/2009/01/27/10596/>. Tom Harrell, N4XP, of Monroe, Georgia, and Dave Johnson, WB4JTT, of Aitkin, Minnesota, have

put together a team of 19 operators from all over the world to activate Midway Atoll for a 10 day period as K4M <http://www.midway2009.com/>. This the first time that USFWS has allowed amateurs to operate from the wildlife refuge since 2002.

"Midway ranks as Number 24 worldwide and Number 13 in Europe on DX Magazine's Most Wanted List <http://www.dxpub.com/>," Harrell and Johnson said. "Activity will be on 6-160 meters with 5 to 6 stations. At least one station will be active on 20 meters around the clock for those who need it for a new country. Major efforts will be made to meet the demand to the most needed geographical areas, the low bands and RTTY." The team has posted a list of planned frequencies on their Web site <http://www.midway2009.com/kh4freqs.html>.

The co-leaders said that travel to the atoll is only allowed by chartered aircraft: "Because of the size of the aircraft, the team is presented with unique challenges. As such, the aircraft will only be able to carry the team, requiring the equipment to be shipped by boat some months ahead."

In January, the USFWS started a program to encourage visitors to experience Midway's wildlife, history and culture, as well as non-wildlife-dependent activities -- including Amateur Radio. To ensure the safety of the wildlife on the Refuge, Midway Atoll Refuge Manager Matt D. Brown said that Amateur Radio operations will be permitted for two weeks only, and only within a designated area on the north side of Sand Island. Brown also said that while portable generators will not be permitted, there is 120 V power available at the operation site; any modifications to the island power grid/infrastructure must be approved in advance and be paid for entirely by the radio operators.

Brown said that the K4M team will also be required to attend a refuge orientation shortly after their arrival designed to enhance visitor safety, wildlife protection and overall enjoyment of the wildlife refuge. "Although determined to be a wildlife-compatible activity," Brown said, "this [Amateur Radio] opportunity is being conducted on a trial basis." Brown has the authority to discontinue the activity at any time, based on wildlife protection and conservation goals.

Midway is located in the North Pacific Ocean (near the northwestern end of the Hawaiian archipelago) -- approximately 1250 miles northwest of Honolulu -- about one-third of the way between Honolulu and Tokyo. At less than 150 miles east of the International Dateline, Midway Atoll is truly "midway" around the world from the Greenwich meridian. The atoll is an unincorporated territory of the United States and is the only atoll/island in the Hawaiian archipelago not part of the State of Hawaii. Midway Atoll National Wildlife Refuge is owned and administered by the USFWS on behalf of the American people and has international significance for both its historic and natural resources.

In 1988, Midway became a National Wildlife Refuge, at the time subject to the primary jurisdiction of the Navy. In 1993, the Navy decided to close the Naval Air Facility after more than 50 years of continuous operation. On May 20, 1996, custody and accountability for Midway Atoll transferred from the Department of the Navy to the Department of the Interior. President Clinton signed Executive Order 13022 on October 31, 1996, effectively superseding earlier orders assigning responsibility for Midway to the Navy. A new code of regulations governing activities at Midway Atoll National Wildlife Refuge was published in the Federal Register on March 10, 1998.

When Midway became a national wildlife refuge, it joined a network of more than 500 separate units of the National Wildlife Refuge System, encompassing nearly 93 million acres, throughout all 50 states and several territories and possessions. Refuges represent the only Federal lands set aside and managed principally for the conservation of fish and wildlife.

2009 Flea Markets/Conventions

April
18 RASON Auction Norwich CT
18PAWA Hamfest Portland ME
19 MIT

May
1-2 NEAR-Fest V Deerfield NH
17 MIT
29 Hartford Hamfest
30 Southern Berkshire ARC

June
6 Bangor Hamfest
20 NARLFEST Newington CT
21 MIT

July
19 MIT

August
16 MIT

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Tell them you saw it in the Signal. Advertisers should contact the NVARC Treasurer for information.

Contest, DXpeditions and Special Events

The information for a DXpedition can be quite detailed and may include bands, dates, number of stations, and times of day they plan to work certain continents so I can not list it all here. But if a country or prefix is of interest you can get more information at www.425dxn.org.

Contests 2009

March
15 North American Sprint Contest RTTY
28-29 CQ WW WPX Contest SSB

Nashoba Valley Amateur Radio Club

PO Box # 900
Pepperell Mass 01463-0900

http://www.n1nc.org/

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Meetings are held on the 3rd Thursday of the month
7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.900 + 100Hz Repeater battery power
147.345 + 100 Hz Repeater
53.890 – 100Hz Repeater battery power
This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most IBM-PC formats are OK.

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