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October Meeting Wrap-Up

This month was full of surprises at the club meeting! Jeff Kerr, KC0VGC, opened the meeting at 6:14 p.m. and took a roll call. We had 15 members present and 1 visitor.

Jeff announced that Chris Cochran, KB0WZC, had resigned as President of the club after 8 dedicated years of service. With the resignation, bylaws state the unfulfilled term will be filled by the Vice-President and James Adkins, KB0NHX, has assumed that role.

Jeff then announced the club will be submitting a grant request to the Nixa Community foundation to purchase the remaining parts for the move of the local 6-meter receiver to the East TRS tower near Strafford. This will also allow us to move the 927.5375 repeater to that location and act

as a control station for the 53.270 repeater as well. As soon as funds are available, we'll be moving ahead with a structural analysis and then with installation, again when



funds are available.

The Tour de Bass is coming up on October 23rd, and we still need 6 more volunteers to work the assignment. Please contact James Adkins, KB0NHX, ASAP at kb0nhx@nixahams.net.

Nominations were then taken for secretary, and Jeff Kerr, KC0VGC, was nominated for re-election by Brian Umbenhower, K0OLD, and seconded by Jeff Morrissey, KB0WVT.

The treasurer's report was then read and the floor turned over to Ron Blessin, AF7A, who gave a wonderful presentation about how he won a vacation to England aboard the Queen Elizabeth II, which turned into a DXpedition. Thankfully he has a very understanding YL!

The meeting was adjourned at 7:20 p.m. As a reminder, the November meeting will be held at the Nixa Pizza Hut on Saturday, November 13, 2010 at 6:00 p.m. in the party room. We will be electing a new secretary for the club at this meeting, and enjoying some wonderful pizza & fellowship. Please make it a point to come out and visit with us

The End of An Era: October 6, 2010

Chris Cochran, KB0WZC, the club's first (and to date only) President announced to the club officers via e-mail that he planned to resign on October 6, 2010. Chris was an original founder of the club back in 2002 and saw the club through its

growth from 4 members up to the current 55 members. He gave sacrificially to the club financially when he purchased the 145.270 Motorola Micor repeater that we still use today, and also purchased a Ranger SRL-H VHF repeater that is pro-

grammed with the Nixa Fire Department frequencies so that they would have a backup in case of an emergency.

Chris has had 3 different Vice-Presidents, 2 different

Area Nets of Interest

Daily Nets:

- 146.835 - 7:00 a.m. Little Switzerland ARC Net
- 3.963 LSB 5:45 p.m. Missouri Phone Traffic Net
- 146.625 - 7:00 p.m. Douglas County Check-in Net (110.9 Hz)
- 3.585 CW 7:00 p.m. Missouri Section CW Net
- 3.803 LSB 10:00 p.m. Roundtable SSB Net

Mondays:

- 146.970 - 7:30 p.m. Lawrence County ARES Net
- 53.270 - 8:00 p.m. The 6-Meter Net (162.2 Hz - 51.570 input)
- 145.270 - 8:00 p.m. Missouri VoIP Net (162.2 Hz)
- 147.195 + 9:00 p.m. Taney County ARES Net

Tuesdays:

- 145.490 - 7:00 p.m. Sky Warn Check-in Net (136.5 Hz)
- 145.230 - 7:30 p.m. Christian County ARES Net (162.2 Hz)
- 146.805 - 7:30 p.m. Newton County ARES Net (127.3 Hz)
- 145.270 - 8:00 p.m. Bible Belt Christian Fellowship Net (162.2 Hz) *

Wednesdays:

- 146.820 - 7:30 p.m. EARS Club Check-In Net
- 145.210 - 8:00 p.m. Barry County ARES Net (162.2 Hz)
- 147.150 + 9:00 p.m. Combined KARC - TLARC Net

Thursdays:

- 3.963 LSB 7:00 p.m. Region D ARES HF Net (SW MO area)
- 145.270 - 7:30 p.m. Nixa ARC Check-in Net (162.2 Hz)*
- 147.225 + 8:00 p.m. Greene County ARES Net
- 145.350 - 8:00 p.m. Four-State ARC Net (103.5 Hz)
- 52.525 9:00 p.m. Joplin 6-Meter FM Simplex Net

Fridays:

- 146.910 - 8:00 p.m. SMARC Friday Night Net (100.0 Hz)

Sundays:

- 146.775 - 8:00 p.m. SWMO D-Star Net (w/ wide area links)
- 147.345 + 9:00 p.m. Stone County ARES Net (162.2 Hz)

* Nets also on 53.270, 224.280, 444.275 and 927.5375 machines

The End of An Era: October 6, 2010 (continued)

Secretaries, and 4 different Treasurers during his 8 years of dedicated service to the club. Through all this change, Chris remained the solid rock that always kept the club's reputation positive and helped to keep the club professional in all aspects. I can say from personal experience Chris made the right decisions in the best interest of the club regardless of whether or not it would be the popular thing to do. He pushed the club officers for incorporation with the State of Missouri to protect us individually and also took care of the paperwork to get the club its original 501(c)4 status and limited sales tax exemption with the Missouri Department of Revenue.

Chris was not a President that sought out the spotlight, rather one quite happy to sit quietly in the

shadows and trust his officers to take care of the business they were responsible for completing. He took care of all the necessary items of the club, such as checking and re-newing the club's Post Office box, filing the IRS Form 990's every



year, making sure the club insurance policy was up to date, building and updating the club's website and making sure our domain www.nixahams.net remained in our

possession. He also help with raising funds for club projects and encouraged people to get involved in that process, which was never more evident than during the 53.270 project in 2005-2006.

Instead of looking for reasons a task could not be completed, he looked for ways to complete the impossible. He was a leader that didn't always take the club where they wanted to be, but where he knew they ought to be.

His tireless efforts with the club's HF station install, seen at left about 80' above ground hanging over the top of the fire department ladder truck, will NEVER be forgotten! Please drop Chris an e-mail and let him know that his leadership was appreciated and will most certainly be missed.

Huge upgrades to 53.270 repeater on the way!

By: James Adkins, KBONHX

The 53.270 / 51.570 repeater was first installed in June 2006 by the club, and thus Phase 1 of the 2-phase project was completed.

After several years of obtaining necessary equipment, we set out to begin Phase 2, which includes making the Republic site a high-power (1000w to 1500w) transmit only site and adding 5 to 6 remote receiver sites.

Over time, items have been asked for to complete the project, items have been purchased on e-bay or from other sources when a good deal could be found, and lots of behind the scenes work to secure tower sites has occurred.

Finally, we received permission to install the new Local receiver 495' AGL at the County East TRS trunked radio system site, south of Strafford. The 2-bay array will be fed with 7/8" heliax and the top bay at 495'. The DB-436A UHF Yagi that will link back to the transmitter site in Republic will be installed at 60' AGL. During this process, we were fortunate to be able to utilize the 927.5375 repeater as the remote control "back door" for the receiver, and an Andrew DB-809KE-SY 9 dBd omni will be mounted on the west side of the tower at 400' AGL, fed with 1-5/8" Andrew AVA7-50 heliax. Since it is Virtual Air heliax, it is the equivalent to running 2-1/4" foam heliax! The 927.5375 will also be able to be linked to the 442.275 for the weekly net once the install is complete via a DB-436C yagi mounted at 50' AGL.

Currently, the antenna installation plans & rack mount plans have been approved by the Greene County Commission, City of Springfield, Springfield City Utilities, and the Trunked Radio System Board and a structural analysis of the site has been purchased for the site. Pending a "passing" structural

analysis, we'll be given the green light to have the antennas and feedline installed by a professional tower crew pending funding. One grant has been submitted to purchase the remaining equipment needed for the Local receiver, and other grants are being sought to pay for the install.

Included in the approval was the OK for us to install and operate the 1500-Watt repeater amplifier at the Republic



Andrew DB212 antenna (single bay) for 53.270 local RX site (we'll use 2)

site. The amplifier, a Bext T-1500 broadcast amplifier that is in the process of being modified for 6-meter use, uses single-phase 220 vac.

City Utilities will allow this amplifier to be powered by their UPS and generator during power outages. In fact, the current single-site 250-Watt repeater will be left in place as a "hot standby" that can be put into service at anytime simply by use of DTMF commands over the air, or via the Internet and the proposed Site Sentinel I6 remote controller for the Bext T-1500 amplifier. The amplifier will be a "smart" amplifier, and between the WD7S triode control board and the Site Sentinel I6, many safety features will be used to protect our equipment, including automatic lowering of power when icing conditions occur causing grid current to rise. E-mails will be sent to control operators advising when a problem is detected at the site as well!

Two other remote receive sites are currently in the process of getting final

approval. One is the Northwest site, located near Nevada and the other is the Southwest site, located near Granby. Both of these sites will be equipped with a UPS to power the equipment until a 35kw propane generator with 1000-gallon propane tank reserve kicks on, making the repeater system on that can be relied upon even during long power outages. In fact, during the last ice storm, the 6-meter site in Republic was without power for almost a week and we never knew it!

In addition to these sites, a Northeast site, near Urbana, and a site in the Branson area are both still being sought.

Currently, the club has all the antennas, heliax, connectors, ground kits, hoist grips and lightening arrestors (both coax and AC) needed for the 5 sites. We also have the necessary radios and controllers along with cooling fans. Only minor odds & ends are needed and those will be obtained as sites are approved for installation.

Our biggest expense left to overcome is the expense of the antenna and feedline installation at the County East TRS site, with a cost of nearly \$5,000. The Granby and Nevada sites can be



installed by tower climbers that I have already contacted that are willing to do the work at no charge if we supply the equipment.

So, if you haven't gotten on 6-meters yet, now's the time to get into the action. Most every HF rig today has 6-meter FM capability, and a simple J-Pole works well (though large!) as does antennas such as the GP-52 by Arrow for only \$39.95 which can fit in most attics with no problems!

Catch you on the new 6-meter machine soon!

This Month Below 50 MHz

By: Kent Doucey, NOIRM

Finally, it looks like Solar Cycle 24 might come to life! It's trying to make a good start anyway. There has been enough activity the last couple of weeks to really make the 15 and 10 meter bands start shaping up. At the time of this writing the current solar flux is 87, the A index is 9 and the K index is 2. The first week of October seemed to decline with no sunspots and the flux numbers fell by 3 points. Shortly after that things began to look up. By the week of October 22 average sunspot numbers were up by 44 points and for just a few days the solar flux rose to numbers over 90.

Even though the flux numbers are back in the 80's everything points for good conditions to continue. These conditions have been great for the higher frequencies such as 15 and 10 meters. While writing this I'm listening to a station from Africa on 10 meters! 15 meters has also been great into Africa and Europe.

Also watch for those good 40 meter openings starting just prior too sunset, and running into the night.

Another thing that showed more activity this month was our DX spotting! I can't say enough about the amount of activity from everyone. Some of are regular operators this month spotting were K0RO, K0ABC, KD0AA, and NOIRN. A new face was WE0G from Centerview Missouri. Keith spotted ZS6TQ on 15 meters on 26th, thanks for the great spot and home to see you more. Another operator we are starting to see more of is Dave, W0DR from Clinton Missouri. On the 13th Dave spotted PJ7E on 15 meters, great information Dave, keep up the good work. W0DR sent me a few photos of his

antenna farm and its no wonder we see some great spots from him. Another great spot from a familiar station was KB0NHX. James spotted working KP2US on 10 meter FM from his mobile station. Great spot, hope to see more HF spots from James. I just want to say thank you to everyone for passing on your information. I know it's really appreciated and watched by a lot of people. It's not only nice to see what everyone is picking up but it's a good way to keep up with band conditions with a local prospective.



Picture of Barney Fourie, ZS6TQ, at his station in Hoedspruit, South Africa

Here are some stations to watch out for on the air coming up. 5Z4EE will be active from Kenya on 160 through 10 me-

ters. CP4DR and CP4DL will be working from Bolivia on 80 through 10 meters SSB and CW. Working from Marion Island will be ZS1HF on 40, 17, and 15 meters. 9M2MRS will be working from West Malaysia, AS-015 mostly on CW, bands unknown. VP5/NIWON will be QRV from Turks and Caicos Islands until November 3rd. These are just to list a few.

Well I hope everyone had time to enjoy at least some of the CQWW SSB contest the last weekend of the month of October. This was the big one for phone and a great opportunity for HF activity. Some upcoming contest for November starts with the Arkansas QSO Party on November 1st from 0800 until 2000 local time.

The ARRL Sweepstakes CW is on November 6th from 2100 Zulu until 0300 Zulu November 8th. The DARC 10 meter digital contest runs from 1100 Zulu until 1700 Zulu on November 7th. Lastly the CQWW CW contest is November 27th at 0000 Zulu until 2359 Zulu on November 28th.

One of the big things for HF operators in October was the Dissolution of the Netherlands Antilles. If you were on the air at all you probably noticed all of the activity from the West Indies stations. Beginning on October 10th there was 2 entities dropped from the DXCC list and 4 added. Curacao, Saint Maarten, Saba and Eustatius, and Bonaire were added to the list at 0400 Zulu on October 10th 2010. Confirmations for these new entities will be accepted for DXCC credit after January 1, 2011. These were very popular stations since the 10th, they were drawing huge pile ups. I noticed that several of these were spotted on the club reflector so I hope you were able to pick some of them up.

Well I hope by the time you read this everyone has their outside antenna projects at least close to being completed. It's not going to be long that the weather is going to be more conducive to sitting inside at your operating position. If you get time try out a new band or mode, or take time to work a HF contest. Keep an eye on solar conditions and watch for those band openings on 15, 12, and 10 meters. A hint is to download and watch a grey line map. Study how propagation is affected by our sunrise and sunset times, and also from another part of the world's sunrise and sunset. It might help you pick out the right time and band to grab a new one you have been looking for. 73 and good DX until next month.

Schedule of Events

- **November 13, 2010:** Nixa ARC VE Testing Session—4:30-6:00 p.m. Pizza Hut—US 160 & RT CC in Nixa
- **November 13, 2010:** Nixa ARC October Club Meeting—6:00 p.m.-7:30 p.m.—Pizza Hut—US 160 & RT CC in Nixa

November 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

The Creation of a Dual-Band Portable Station

By: Jim Adkins, KC0IYI

I was thinking about getting my equipment ready for Tour de Bass and realized that I would be stationary at a rest stop this year and wanted to

be able to monitor the 442.275 repeater as it is going to be used for talk around among other Nixa ARC members participating as sags and for rest stop operators. I decided to use my Yaesu FT-8800R dual band radio for the task. Then, I began gathering what I needed to put together a portable setup that I could easily carry by a handle wherever I needed to take it. I decided against going out and buying everything I thought I needed and started looking around my garage for items I could use.

I simply screwed the power supply, radio and removable face plate to a board I had. I did have to cut a wooden mount at a forty-five degree angle to hold the faceplate at an angle so I could easily read it. I got a dual band stinger from KB0NHX and screwed it onto a mag mount I already had. The final touch was the handle which I manufactured using an eighteen inch piece of Andrew half inch heliax. I screwed it to each side of the front end of the board. Plus, it also helps protect the faceplate mounted at the front. Isn't it great that a person can have so much fun with stuff just laying around the house!

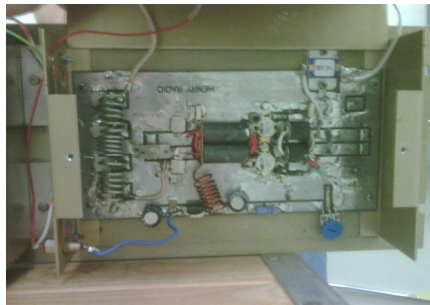


Jim Adkins, KC0IYI, setup for his portable station used at the Tour de Bass bike ride October 23, 2010

Technical Committee Update

In October, work continued on the Henry 200w 224.280 amplifier. After we removed it from the tower site, James Adkins, KB0NHX, returned home with it to dissect it. Thanks to some silver solder and help from Randy Vanscoy, K0RLV, we got it pieced back together. The amplifier has 4 transistors in the output, that are fed and recombined using a Wilkinson combiner. One leg of the output coax had come un-soldered, along with a cap, air core inductor, and several other components. We believe the failure was due to a combination of two of the 3 fans failing and a high SWR from improper notch tuning from the factory on the new TX RX duplexers. We re-tuned the duplexers after taking the amp out of service, getting a 92 dB notch instead of only a 72 dB notch of the RX frequency on the TX side of the duplexers. This allowed Kent Doucey,

N0IRM, to work the repeater reliably on his HT from Galena on a paltry 1.5-watts! We purchased 3 new fans for the amplifier. These fans move much more air than the originals and keep it



Pic of inside of 53.270 Henry amp

nice and cool. We suspect the finals have been weakened, but they make 170w solid with no problems. James kept the amplifier keyed down for 30

minutes continuous into a dummy load with no overheating and no extra loss of power. Looking at the amplifier over the air, and terminated into the service monitor, it maintained a clean signal the whole time also.

James & Kent also went to the 53.270 site and replaced all the fans on that 250w amplifier. Only 1 fan was still working, not bad for 24/7 operation for the last 4-1/2 years! Audio levels were verified as well as PA power output, which is 140w out of the duplexers, and 2.5w reflected. We also verified Internet is still not hooked up for us at the site. Also on that day, a trip to the 145.270 site was made to re-set the wireless Internet radio, which brought EchoLink back on line. This also needs to be done at Cox to bring IRLP back up. James is working on a remote reset circuit to rectify these outages so re-sets can be done remotely.

Nixa ARC Repeaters

6-Meters: (Republic)

53.270 / 51.570 PL 162.2 Hz

2-Meters: (Nixa)

145.270 / 144.670 PL 162.2 Hz

1.25-Meters: (Springfield)

224.280 / 222.680 PL 162.2 Hz

70-Centimeters (Springfield)

442.275 / 447.275 PL 162.2 Hz

33-Centimeters (Republic)

927.5375 / 902.5375 PL 162.2 Hz

October 2010 Treasury Report

Beginning Balance: \$319.35

Debits		Credits	
\$ 6.90	Price Cutter—picnic items	\$500.00	Chris Cochran community service hours
\$36.00	Club P.O. Box	\$500.00	Chris Cochran board of directors grant
		\$500.00	Jeff Morrissey board of directors grant
		\$ 0.39	Dividend
\$42.90	Total Debits	\$1,500.39	Total Credits

Ending Balance: \$1776.84

A Band Opening on UHF

One evening, I was working Jeff Kerr, KC0VGC, on the 145.270 repeater direct from Lee's Summit with my 25w base station, and omni up only 20 feet. I was impressed the repeater was coming in at S5. This after talking with Kent Doucey, N0IRM, on 80m running QRO! Jeff recommended we try UHF, so I put the Nixa 442.275 repeater into my base station, a Yaesu FT-736R, and unbelievably it was pegging my S-meter

at 60 over 9! Jeff and Kent could both hear me direct on the repeater input, even down to 12.5-watts. I was hearing them direct as well. Mark West, KB0TPZ, also joined in on the fun as I turned my power output down to 1/2 of a watt and still brought the repeater up, though I was noisy. We did find that by only running 1-watt, I was full quieting again! Wow, band openings like this

don't come around too often. We decided to try the 224.280 also, even though I only have a pair of horizontal omni-angles on 220. Couldn't hit or hear it, but I was still hearing the 442.275 at S5 on the cross-polarized, non-resonant 220 antennas!!!! This just goes to show, you never know what you'll stumble into on the bands above HF.



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NIXA AMATEUR RADIO CLUB, INC.

Those saying it can't be done should stay out of the way of those doing it!

We're on the Web!
www.nixahams.net

The Nixa Amateur Radio Club, Inc., call KC0LUN, was founded in April 2002.

The club assists in providing communications for many different public service events. We work with Greene and Christian County ARES and the National Weather Service by providing communications for Sky Warn spotting. We also work with Greene County ARES and other organizations in providing communications for the MS-150, and American Diabetes Association fundraiser bike rides. We hold special event stations for local hams to participate in, such as the annual Sucker Days celebration and the annual ARRL Field Day drill for emergency preparedness. We encourage our members to not only participate in our club events, but to also be members of their local ARES and RACE's groups, and the Christian County CERT team.

The club provides 5 repeaters that are open for all hams to use. These repeaters are part of a sophisticated linked system which allows all repeaters and VoIP nodes to be linked together simultaneously for nets or emergency events and announcements. We also provide VoIP modes, such as EchoLink and IRLP for our members to explore. Currently, we are working on a club HF station to be installed at the Nixa Fire Department General HQ Emergency Operations Center.

The club holds "The 6-meter Net" on the 53.270 repeater weekly on Mondays at 8:00 p.m., which covers all radio bands 6-meters and below. We also have a weekly check-in net on the 145.270 repeater on Thursdays at 7:30 p.m. The net is simulcast on all 5 Nixa ARC repeaters, IRLP and EchoLink. Feel free to check in on any band! The 145.270 repeater also hosts the "Bible Belt Christian Fellowship Net" held on Tuesdays at 8:00 p.m.

Visit www.nixahams.net for more exciting information!

Nixa Amateur Radio Club Elected Officers

President: James Adkins, KB0NHX

- James started serving the club as Secretary when the club was founded, and then moved into the Vice-President position. James and his wife, Kim, KCØGKP, have two children, Sierra and Kolton. James works as a technical field engineer and repairs two-way radio and repeater equipment daily. In the past, James delivered pizza while attending college. James' primary interests in ham radio include maintaining the club repeaters and promoting amateur radio. He enjoys operating HF through 1200 MHz from his home station.
- E-mail: kb0nhx@nixahams.net

Vice-President: Kent Doucey, NØIRM

- Kent was appointed to Vice-President by the board after the resignation of Chris Cochran, KBØWZC, as President in October 2010. Kent and his wife Wendy have 3 children: Richard, KDØHGY, Britney, and Katie. Kent has been a law enforcement dispatcher and deputy sheriff in the past and currently serves on the Stone County 911 board. Kent enjoys HF SSB and digital operations and building HF antennas. He writes the "Below 50 MHz" article for the newsletter and volunteers on the club's technical committee.
- E-mail: n0irm@nixahams.net

Treasurer: Jeff Morrissey, KBØWVT

- Jeff is a charter member of the Nixa Amateur Radio Club and took over the treasury job almost 2 years ago. Jeff has a daughter, Brooke, KCØYVF, and son, Garrett. Jeff works in management and has a background in computer networking. Before ham radio, Jeff was an Internet guru and ran a BBS from his house. Jeff's primary interests are SkyWarn spotting, being active with Christian County CERT, and other emergency communications support.
- E-mail: kb0wvt@nixahams.net

Secretary: Jeff Kerr, KCØVGC

- Jeff obtained his license in 2005 and began to immediately make an impact with the club and was elected as secretary shortly thereafter. Jeff and his wife Dee have two daughters, Emily, KCØYOO, Stephanie, and a son Brandon. Jeff works in PC Networking and considered computers his hobby before amateur radio. Jeff's primary interests include 6-meters and HF SSB as well as 900 MHz FM.
- E-mail: kc0vgc@nixahams.net