

IN-SERVICE



Summer

Volume 93

August 2005

NØBGG—THE KEY IS SILENT

We measure our relative happiness by the friends and relationships that we have. It behooves us to go forth in life and touch as many as we can in this way.

At 6:30 p.m. Sunday, 22 May 2005, I went to the sanctuary of the Lamoni Congregation and sat down to pay respect for a life well lived. A potpourri of memories were mine to view, I recalled the day and saw the place of my baptism, wedding, and the blessing of our daughter. I was welcomed to worship in the name of Jesus, and heard the testimonies of how Larry Oiler lived his life. Larry gave this priority: God, family, and amateur radio. The spirit of truth was strong in the place, as I confirmed that this was exactly how Larry lived it. Way to go Larry, that's the way to do it. There came a point in the service that allowed for the congregation to speak, and I very much wanted to stand and tell of the phone call I got from Larry in February 2005, but I knew that I would be unsuccessful in being able to compose myself enough to give utterance. So perhaps I can complete the message here.

The Lamoni Radio Association bought a new transceiver-repeater in January 2005. Larry's voice on the end of the line said these words, and they apply to all of us in the association "I want you to know how much I love you guys. I want to be a part, and contribute to this in any way that I can, and I want to let you know how much you all mean to me." I responded by saying that all the components of the machine were paid in full, use the repeater up, Larry, monitor for users passing by.....Larry did, he got a new HT, and continued to be the vanguard of the Lamoni repeater just as he has done for over a decade. Larry was the regular net controller, and control operator for the Lamoni machine, and a regular on the 20 meter net.

In 1993 I had just passed my technician+ and was waiting to get my ticket in the mail (3 month wait in those days) and was chomping at the bit to work H.F. I invited myself over to Larry's one Sunday afternoon and he showed me how the 20 meter ASCRA net worked.

As the service progressed, I heard from others what I already knew, that Larry had a personal relationship with his heavenly father, he was an Elder that went to pray for the sick, that he loved to garden, and loved his family, he was a good husband and a good father, and an educator.

I found my thoughts returning to the day Larry called up the repeater with his new HT in March, he told to all in hearing range that he liked to listen to Bill Gaither - Gospel Music, and perhaps most notable of all he said for all to hear, that he was convinced that Jesus is the Christ! There is a little thin black book in my stack of three that speaks of the celestial world, and the requisite of those who are there is that they are valiant in their testimony of the Christ. Bob Farnham, KGØII, stood in the service, and recalled the times that he has had in work and in the amateur service with Larry, and invited Larry's grandson to check in to the net. The Sunday night net was taking place at the very instant that these things were being said, and Bob wished for us to hear these words of salutation...

God Bless and 73's, but Larry already counted himself blessed in his life and he was.....but so were we... and in this we define happiness when we experience gratitude to others.

Finally, I wish to speak my salutation:

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S. Jon Barney, AAØOS Lamoni

KCUR ANTENNA TUNE-UP

The night of Saturday June 25, 2005, at 10:00 pm I proceeded to start the retuning of the KCUR antenna. The goal for the night was for the Consulting Engineer to retune the antenna using a network analyzer and check the transmission line (coax) to the antenna using a Time Domain Reflectometer (TDR). KCUR has no backup antenna, so this work required being OFF-AIR. The procedure is to have a tower crew climb to the antenna (about 800 ft on the Public TV tower). When the crew approaches the antenna, transmitter power must be either reduced or eliminated. To complicate matters there is another FM station above us on the tower at about 900 feet. The group assembled at 10 p.m. The tower crew was instructed as to the procedures (even though they had done this many times). There was a possibility that there were some bad center conductor splices (called bullets) in the line.

I need to describe the system installed at KCUR before I go further with the article. The coax that goes up the tower is called "hard line" meaning that it is composed of copper tubes with flanges that are bolted together every 20 feet. This is about 3 inches in diameter. The center conductor is also a copper tube with the silver plated bullets that join the inner conductors together. The line contracts and expands with the change of outside temperatures in the different seasons. Because the inner conductor is protected from the elements, it changes dimensions at a different rate than the outer conductor. The whole length of line is securely fixed to the tower at only one point near the antenna. This is done because the tower (steel) contracts and expands at a different rate than the transmission line (copper). The rest of the line is supported by spring hangers that allow the line to contract and expand in length. Instead of an elbow at the bottom of the line, we use a piece of flexible coax (Andrew Helix brand) to connect the transmitter output to the vertical hard-line. The Helix is about 5 inches in diameter. This flexible coax makes the bend from horizontal to vertical.

Hard-line can have a problem where bullets lose their mechanical tension that keeps them in contact with the center conductors. When this happens we call it a bad bullet. This results in bad VSWR by acting like an open center conductor. A TDR is used to check the line for bad bullets.

The antenna is a center-fed 8 bay circularly polarized antenna. It has a gain of about 4. It accomplishes the gain by paralleling 8 vertically oriented "bays" or antennas so that their combined signals adds in all horizontal directions from the antenna. The antenna is never really tuned. No FM broadcast antennas are. Different manufacturers use different methods of matching the antenna to the line and therefore the output of the transmitter. The brand antenna (ERI) that KCUR employs has a novel method of matching. They use ferrite donuts (called slugs) of different sizes on the center conductor. These are held in place by very special tape that withstands the RF and the environment. The Network Analyzer is used to determine the existing impedance and determine the changes needed to get the VSWR down.

At KCUR the reflected power was very high. It was 280 Watts. The forward power was 27,000 Watts. To Amateurs

this sounds like a very reasonable amount. To a Broadcaster this is VERY high. This amounts to a VSWR of about 1.12:1. Later I will relate the results of our work.

The other FM station on the tower is much further up the band at 104 MHz. This helped in one way. The sensitive equipment wasn't bothered by their signal. But because their antenna was 100 feet above ours they had to reduce power to limit the exposure to RF the tower climbers would be exposed to. It was decided that reducing to half power of 20,000 Watts out of their transmitter (TPO) or 50,000 Watts Effective Radiated Power (ERP) was sufficient to limit the climbers' exposure. There is also a UHF public TV station on Channel 19 above them but this would not affect the equipment or personnel.

The tower climbers started their ascent about 11:30 p.m. It was after 1:00 am Sunday morning before they arrived at our antenna. The delay in ascending was due to the climbers needing to set many things up. If we had a bad bullet that needed replacement then I would need to use one of the heavy duty come-alongs they had rigged up. They had set one up so that I could use it to pull the line down to where we could open the line and expose the bad bullet. The other come-along was rigged so that if the line didn't go back up because of the spring hangers that I could winch it back in place. We had agreed to go off the air at midnight so there was no danger to the tower crew of RF exposure from the KCUR transmitter. The other station also reduced power at midnight. Between midnight and when the tower crew got to the antenna, we had time to disassemble the transmission line fittings just before it exited the building to go up the tower. We needed to have a location in the line where equipment on the ground would not affect the readings that were supposed to be from the antenna. In a side note, "N" connectors are used for all measurements because they do not introduce any "bumps" in the line.

Upon arrival the first job was to put an end cap and a dummy load on the transmission line. This allowed the Consulting Engineer to TDR the line. He copied the saved file to his laptop computer. The resulting plot showed each bullet. Thankfully there were no bad ones. This allowed us to proceed with the retuning (matching) of the antenna. It took about half an hour to reassemble the line to proceed. A "before" plot of the antenna was taken. The results of this measurement were used to calculate where and how much adjustment was needed. The required donuts were put in the new locations and the line was reassembled. Each disassembly and reassembly took between 20 and 40 minutes. This was done twice more. Each time a new set of measurements was taken which allowed a better "view" of what the antenna looked like. Each measurement plot was saved to computer. All the measurements and plots were sent as email attachments to ERI in Indiana. They were later e-mailed back to me at the Studio. We were not able to apply power to the antenna because it would expose the tower crew to RF. After the Consulting Engineer decided that the match was the best we could get, the climbers did a final assembly including installing o-rings covered in silicone and other details. Remember that this is all being done at night. There was some red illumination from the blinking red lights, but the work was mainly done by head-mounted lights like you might

see on a miner. The tower crew climbed down to about 100 feet below the antenna (700 feet up the tower). Only at this point could I turn on the transmitter and check the end results.

And the answer was: The new reflected power was down to 10 Watts. This translates to a VSWR of 1.04:1. This was greatly improved and I was ecstatic.

The KCUR transmitter has VSWR foldback in case of a problem on the line or antenna. This is usually only activated when the antenna ices up. The lower VSWR will allow more power to be delivered to the antenna under icing conditions.

Once the line was finally reassembled, the internal pressure started to build back up. I usually keep it at about 5 psi. At one point the pressure was down to 1.5 pounds. We use a "bottle" of nitrogen to pressurize the line. The bottles look like acetylene tanks for welders. The nitrogen keeps moisture from condensing inside the line and allows a higher power to be carried.

In all, the long night's work was a success. Holly, ka0vtb, had convinced me to postpone the work so that it wasn't occurring on Fathers Day. I put it off for a week not thinking that it was Field Day weekend. Alas, I wasn't able to participate in Field day as fully as I would have liked to. I guess that there is always next year. I know that I won't need to do this next year.

Robin Cross, w0fen
Chief Engineer, KCUR-FM 89.3 MHz

MITCH BLAKESLEY

Mitch Blakesley, KBØRHF, age 55 of Lamoni, Iowa, son of Vere LeRoy and Margie Beulah (Argo) Blakesley, was born January 27, 1950 in Leon, Iowa. Mitch passed away late Monday night, May 9, 2005.

Mitch grew up in Leon and graduated from Leon High School in 1969. He graduated from Graceland College in 1975 with a B.A. in Art Education. While attending Graceland, Mitch sang with "Emporium," a group that made records and traveled to give concerts. He also served in the Older Youth Service Corps in Los Angeles. During college Mitch was baptized into the Reorganized Church of Jesus Christ of Latter Day Saints. The ice had to be broken for his baptism in Maine. Mitch was a long-time member of the Lamoni Community of Christ.

Mitch met Janeen Kay Sweeney while they were both part of the Native American Cultural Appreciation Team in Arizona. They were married on May 25, 1979 on the Blakesley Farm at Pleasanton, Iowa. To this union two children were born, Jacob Luther and Jessica Leah. The family lived on the farm for five years before moving to their home in Lamoni for the past 21 years.

Mitch and Jan have spent the past 26 years teaching for the Lineville-Clio School. Mitch loved teaching in Lineville - the kids, the families and the community. He was very dedicated, teaching junior high American history, shop, hunter and gun safety, and art. He was a "fix-it" person at Lineville and also an electrician.

His first years of teaching were in Amsterdam, Missouri, and schools near Warrensburg, Missouri. Mitch drove a school bus for a short time after he and Jan were married.

Mitch enjoyed historic muzzle-loading guns, old 50's toys, motorcycles (he was looking forward to restoring his Triumph motorcycle), camps and trade groups concerning the Revolutionary War and Mountain Men, bartering and garage selling, and telling wild tales. He held a brown belt in karate, he was a Boy Scout leader, and an amateur radio operator. He was a member of ASCRA and the Lamoni Amateur Radio Association, holding a Technician class Amateur Radio license.

Mitch was involved for a long time in scouting, starting when his son, Jacob, was a cub in 1989. Mitch and his wife started with cubs and moved on into Boy Scouts. He was Assistant Scoutmaster for most of that time, attending meetings, camps and retreats throughout much of the 90's and beyond. He served as scoutmaster from 1998 through 1999.

The most important thing to Mitch was his family and kids. He enjoyed fishing with Jessica and listening to her sing. He enjoyed watching movies with Jacob and working father-son projects together. Mitch liked being at home. He was very proud of both his children. They followed in their father's footsteps in attending Graceland. Jacob attained the rank of Eagle Scout on May 21, 2000, and graduated from Graceland on May 15, 2005 with a B.A. in Studio Art. Jessica is a current Graceland student, majoring in Music Education and Elementary Education.

Mitch was preceded in death by his parents Vere and Margie Blakesley, father-in-law Charles Sweeney, brother-in-law Kenneth Sweeney, and Cousin Randy Leeper. He is survived by his wife of 26 years, Jan Blakesley of Lamoni; son Jacob Blakesley of Lamoni and fiancée Rachel Goodson of Holt, Florida; daughter Jessica Blakesley of Lamoni; sister Elvalena Hayton and husband Earl of Leon; brother Rex "Bud" Blakesley and wife Rosalie of Ankeny, Iowa; uncle George Blakesley and wife Joyce of Des Moines, Iowa; mother-in-law Clara Sweeney of Madison, Wisconsin; sisters-in law Kathy Tucker and husband Dave of Boone, Iowa, Charlene Sweeney of Madison, and Ilene Lawson of Madison; and many nieces, nephews, cousins, other relatives and friends.

Funeral services for Mitch were held May 13, 2005, at the Lamoni Community of Christ, and the Hamilton Cemetery near Pleasanton.

Edited by Bob Farnham, KGØII

PA SYSTEM UPGRADE

I am sure that because we Hams are of a more technical nature that we get assigned the duties of the PA system in your local congregations. When I started attending the Raytown Congregation the PA system was in poor shape. I am in the process of upgrading it. The first problem was that the level could not be turned up high enough for everyone to hear without feedback. Now, some feedback is a good thing but the sonic kind is very annoying.

I found a device that seemed to be just the thing to cure this problem. It is called a feedback eliminator. There are several brands out there, but the least expensive and most versatile is the Behringer DSP110. This is Swiss Army Knife. Not only does it have a feedback eliminator, but also compression, digital delay, noise gate, and a low cut filter. If you purchase one of these for your PA system, READ THE INSTRUCTIONS.

In my Congregation, I found that turning on the feedback eliminator and the compressor worked very well. I also turned OFF all other features including the delay, noise gate, and filter. The addition of the compressor helps for those that move around while speaking. I left the compressor in the factory position of 50 on a 1 to 100 scale.

If you have separate mixer and amplifier this device can be inserted between them effectively. It has both unbalanced and balanced inputs and outputs. In our case there was no "patch point" where I could insert one in the entire audio path. The solution was simple but more expensive. I purchased three because we have pulpit, wired, and wireless Mics. Each Mic goes to the eliminator first and then goes to the mixer. The Behringer DSP110 costs around \$80. There is a rack-mount version also available for about \$100. It is the Behringer DSP1124P. I purchased ours from Steve Thomas at Broadcast Supply Worldwide at (877) 564-0568. I am not getting any "bonuses" for recommending this device or who to buy it from. There are several other broadcast or musician supply houses that can sell this device. The Raytown Congregation is very happy with the results. There is still much work to do on the sound system but we are off to a good start.

Robin Cross, wØfen
Chief Engineer, KCUR-FM 89.3 MHz

ASCRA 20-M NET

This is my list of check-ins on the ASCRA 20-M net from 4/26/05 to 6/26/05 held 3:30PM CST, Sundays on 14.287 MHZ. Complain if I goofed.

Ernie, WB2UJL

~~~~~  
NØELM, Fred Troeh  
WØFEN, Robin Cross  
WAØIBS, Andy Ferrar  
KGØII, Bob Farnham  
WAØLVG, Mike Morris  
WBØOZT, Ron Schwerman  
WØSHQ, ASCRA Robin, Operator  
KØTGU, Mary Jo Hallberg  
KGØXU, Michael Hahn

W2TFT, Tom Thatcher  
WB2UJL, Ernie Miles

K4KAL, Keith La Borde  
W5QPT, Ellis Thatcher

NE6Y, Ken Zadwick  
W6LMJ, Terry Redding  
W6RWH, Hale Collins

K7NCG, Jim Fish  
KI7ZU, Dave Glower

W8QK, Muirl Robinson  
K8QA, Mike Oiler

WA9YWK, Keith Petersen  
~~~~~

THANKS TO OUR AUTHORS

Thanks to Robin, Jon, Bob, and Ernie for providing the material for this issue of IN-SERVICE. We need to hear from more members for future issues. Tell us your news or give us a description of you equipment. We would like to hear about any special experiences you or your friends have had relative to ham radio. If you have a picture to share, that makes it all the better. Send your articles to frtroeh@iastate.edu or mail them to Fred Troeh, 4117 Quebec St., Ames, Iowa 50014.

Fred Troeh, NØELM

PRESIDENT'S REPORT

June 5, 2005

Our association remains strong and dedicated to the principles of Amateur Radio. Here are some of the activities ASCRA members facilitated or assisted during the past year:

1. Service to the public as a voluntary noncommercial communication service; particularly with respect to providing emergency communications:
 - a. Assistance with Florida Hurricanes 2004 – W6LMJ
 - b. Devil's Head national monument – 6/6/2004 and 9/19/2004 - KCØMHT
 - c. Moonlight Bicycle event – 7/25/2004 – KCØMHT
 - d. SIANOMO bike ride 9/11/2004 – Lamoni Amateur Radio Association (LARA)
 - e. Annual Poker Chip Motorcycle Race and Colorado Half Iron Man Triathlon – 9/12/2004 – KCØMHT
2. Contributing to the advancement of the radio art, including advancing skills in both the communications and technical aspects of the art:
 - a. New repeater – LARA
 - b. EchoLink – Central Stakes Chapter & LARA
 - c. APRS – KCØMHT & LARA
 - d. ARRL Field Day 6/25
 - e. SETIatHome – 12 members participating
 - f. 20-meter net: 30 or so unique stations check in
 - g. LARA 2-meter net: 15 or so check ins on average
3. Expanding the reservoir of trained operators, technicians and electronics experts:
 - a. Spec 2004 (2 new licensees)
 - b. Winter Term 2005 – (6 new licensees) Spec 2005
4. Enhancing international goodwill:
 - a. WorldService Corps proposal – KCØMHT & KGØII
 - b. 20-meter net: 30 or so unique stations check in
 - c. WØYO-L EchoLink, providing world-wide access to the WØSHQ repeater in Lamoni
 - d. N4OLT Internet Remote Base, providing world-wide access to HF

As you can see, we have accomplished many things, and we have several exciting projects in progress. Participation of ASCRA members is important in these activities; both in terms of time and financial support. ASCRA's budget for 2004-2005 is \$765. \$500 of that is the estimated cost of sending the In-Service to you. The remainder covers such things as copies, other postage, our P.O. Box 73 post office

box, license fees and bank charges. The budget for the 2005-2006 will be approved at the upcoming Board of Directors meeting. In addition to the above budget categories, there are several projects we would like to advance that will also require financial support. ASCRA has no dues structure to provide the revenue to support even such a modest budget as we have. Instead, we rely on the generosity of our members. Indeed, we are all in this together. ASCRA is over 300 members strong. If we all provide a portion of the needed revenue, then the responsibility for supporting the association can be easily shared. On behalf of your fellow members and the Board of Directors, I thank you for your willingness to participate in ASCRA. It is you that keeps our association strong.

Respectfully submitted and 73 de kgØii

Bob Farnham, President

ASCRA SETI scores

as of July 21, 2005:

Bob Farnham (KGØII) - 8530
Hale Collins (W6RWH) - 5506
Rod Schall - 4198
Bill Collins (WB6OTG) - 3505
Robin Cross (WØFEN) - 1368
Jeff Winship (NØOXK) - 1057
Ralph Stetson (KD1R) - 959
Terry Redding (W6LMJ) - 732
Joe Ayers (AD6VD) - 600
Holly Cross (KAØVTB) - 247
Ernie Miles (WB2UJL) - 145
Gene Chadwick (KØBKZ) - 21

All ASCRA members, whether currently participating in the SETI@home project or not, are invited to join those listed above in the search for E.T. To join the SETI@home project, go to the home page at <http://setiathome.berkeley.edu> and click the link for "Download SETI@home." There are versions of the program available for UNIX, Windows, Macintosh and other kinds of computers. Download and install the appropriate version for your machine. When you run it for the first time, it will set up some basic configuration for you, and you are ready to begin searching for E.T.

To join the ASCRA group, go to the ASCRA group at http://setiathome2.ssl.berkeley.edu/cgi-bin/cgi?cmd=team_lookup&name=ASCRA. If you forget or lose this link, you can also go to the ASCRA web site at <http://www.ascra.org> and click the link there for "ASCRA's page for SETI@home." Once you are on our SETI@home page, click the link for "Join" to join ASCRA's SETI@home group.

73 de kgØii
Bob Farnham

Report from the ASCRA Board of Directors Meeting

This is the first In-Service since the June 5, 2005 ASCRA Board of Directors Meeting. Our meetings are normally scheduled to coincide with the biennial Community of Christ World Conference. This year was no exception. With this year's special conference to select a prophet-president for the church, our directors meeting was scheduled for Sunday, June 5 following the conference. My June 5 President's Report is included elsewhere in this In-Service. It was written prior to the June 5 meeting, so I am happy to provide this update of some highlights from the meeting.

Ernie Miles, WB2UJL and Fred Troeh, NØELM were unable to attend the meeting in person. All other directors were present as well as guests Barbara, W5HKY and Sarah Lynn Redding, KC5YYT. Terry Redding, W6LMJ dialed into his company's phone conference bridge using a cell phone to enable Ernie and Fred to participate in the meeting. The speaker audio from the cell phone was good enough that Ernie and Fred could be easily heard by all at the meeting. We had a terrific discussion that ranged from such matters as recruitment and support for new members, membership involvement, and the budget to sustain the organization.

Your ASCRA officers for the next year are:

Bob Farnham, KGØII – President
Robin Cross, WØFEN – Executive Director
Doug Shaw, WAØEMX – Secretary
Chuck Palmer, NØONN – Treasurer

One of our discussion items related to the unexpired term of Hale Collins, W6RWH, who stepped down as a director. The board decided the position will be filled at the next election. This prompted a lively discussion of how we nominate and elect directors. As you know, only one nomination is required for an individual to be on the ballot for ASCRA directors. We want to make the nomination process as accessible as possible, so we clarified the opportunity that members may nominate themselves for the ballot, and a self-nomination will qualify as the one nomination that is required! At our biennial meetings, we plan to highlight the election process, and invite attendees who are willing and able to serve as directors if elected. We are also planning to post the list of nominees – with short autobiographies – online so that all members can make more informed election decisions. Through these efforts, we are hoping to increase the participation of members in the nomination and election process. In the last election, only 15 nominations were received, and this election also marked the

first time in ASCRA's history that nominations were received only for incumbent directors whose terms were expiring!

In other action, the board approved an \$860 budget as follows:

In-Service	\$570
New Member Development	140
Copies	50
P.O. Box 73	40
State licenses (including repeater coordination)	40
Miscellaneous	20
Total	\$860

The "New Member Development" category is new for 2005. This item is intended to pay the \$14 ARRL/VEC examination fee for up to ten first-time ham radio license candidates. ASCRA participates in several ham radio licensing classes including the annual Graceland Spectacular and Graceland University's Winter Term to name a couple. This very modest budget will support participants of these courses who are taking their very first FCC license exam. If a candidate is upgrading or retakes a test, then the candidate would pay the fee.

While modest, the budget is another opportunity for members to be involved. I would like to expand the number of VEC license exam fees for first-time candidates that we can support. This will encourage other ASCRA members to conduct ham radio licensing classes and exam sessions. I would also like to offer support to the World Service Corp and other missionary efforts for licensing and portable equipment. And I would like to engage other projects, such as funding for additional EchoLink nodes. All of these worthwhile projects require financial support that is not currently budgeted. Last year, the budget was supported by a dozen or so members. Our organization currently has 320 members. Surely we can do better than having only a few members supporting the entire budget. As you know, ASCRA has no formal dues structure. If a quarter of the individual members contributed only \$25, we would meet this year's budget! I am pleased that your Board of Directors is contributing the lion's share to meet the annual budget. Even so, we appreciate everyone's participation. If you are like me, you regularly receive requests for donations from many worthy organizations. Please join with me in generously choosing ASCRA for your tax-deductible contributions.

73 de kgØii
Bob Farnham, ASCRA President

Association of Saints Church Radio Amateurs, Inc.
Request for Nominations to the Board of Directors
for the 2006-2007 term.

The following current board members serving until 2006 are NOT eligible to be nominated:

Robin Cross, WØFEN
Ernie Miles, WB2UJL

Bob Farnham, KGØII
Chuck Palmer, NØONN

Michael Hahn, KGØXU
Doug Shaw, WAØEMX

All other members, including the following directors whose terms are expiring, are eligible for nomination:

Hale Collins, W6RWH
Muir Robinson, W8QK

David Gates, N5LCL
Tom Thatcher, W2TFT

Terry Redding, W6LMJ
Fred Troeh, NØELM

You may make up to six nominations. More than six will invalidate all your nominations.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Please confirm willingness to serve prior to nominating.

Please send your nominations to be received no later than Saturday, October 8, 2005 to:

Doug Shaw, WAØEMX
Secretary, ASCRA, Inc.
11312 East 55th Terrace
Raytown, MO 64133-2965

or E-mail: wa0emx@arrl.net

Any donations (tax deductible) will be gratefully received to help support ASCRA operating expenses, including the IN-SERVICE newsletter. Donations may be sent to the ASCRA treasurer:

Chuck Palmer, NØONN
700 South Fuller Ave.
Independence, MO 64052-4027

or include them with your nominations and I will forward them to Chuck.

If you have any changes for the database (upgrades, new post office or e-mail addresses, phone numbers, etc.), please send them to frtroeh@iastate.edu or mail them to:

Fred Troeh
4117 Quebec St.
Ames, IA 50014

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Change Service Requested