

# IN-SERVICE



Spring

Volume 100

May 2007

ASCRA members and friends at the general meeting October 24, 2007. Photo by guest speaker John Beck WBØRXL.  
From left to right across the picture:

- |                        |                           |                           |
|------------------------|---------------------------|---------------------------|
| 1. Fred Troeh NØELM    | 11. Steve Hampton NØWZH   | 21. Gloria Haworth        |
| 2. Mike Thayer KØJNW   | 12. Jimmy Bishop W4CYF    | 22. David Bland KBØGR     |
| 3. Gary Tickemyer WIØF | 13. David Gates N5LCL     | 23. Dwayne Campbell W7ABF |
| 4. Chuck Palmer NØONN  | 14. Tom Thatcher W2TFT    | 24. Becky Allen           |
| 5. Chuck Brady KAØGFC  | 15. Holly Hampton KE5EOM  | 25. Gene Chadwick KØBKZ   |
| 6. Tom Alexander K5RY  | 16. Brandon Gates         | 26. Jeff Winship NØOXK    |
| 7. Mike Wright KCØQID  | 17. Barbara Redding W5HKY | 27. Ernie Miles WB2UJL    |
| 8. Devona Martin       | 18. Terry Redding W6LMJ   | 28. Michael Hahn KGØXU    |
| 9. Gary Martin NØJHX   | 19. Mike Oiler K8QA       | 29. Robin Cross WØFEN     |
| 10. Doug Shaw WAØEMX   | 20. Tom Needham WA7TBP    |                           |

## MARCH 2007 GENERAL MEMBERSHIP MEETING

Thirty three ASCRA members gathered at the Gudgeon Park congregation in Independence on Saturday morning, March 24, the opening day of the 2007 World Conference of the Community of Christ. After Executive Director Robin Cross WØFEN and Secretary Doug Shaw WAØEMX shared greetings to the group, all attendees introduced themselves and shared comments with the assembly.

Robin then introduced the speaker of the day, John Beck WBØRXL, former general manager of Christian shortwave broadcast station HCJB in Quito, Ecuador. Brother Beck then gave a 40 minute presentation with Q&A on the founding,

development and history of this radio ministry, which has made numerous remarkable technical contributions to the radio art and to Amateur Radio.

John and his wife were in language school in 1983 and then in Ecuador from 1984 to 2004. John began as a producer in the English Language Service, responsible for The DX Party Line and Ham Radio Today programs – as well as general production and newscasts. He also held at various times the positions of English Language Service Director, Frequency Coordinator, International Radio Director, Station Manager and finally General Manager for all radio in Ecuador.

----Continued inside----

MEMBERSHIP MEETING (continued from front page)

HCJB may be interpreted in English as "Heralding Christ Jesus' Blessings" or in Spanish as "Hoy Cristo Jesus Bendice" which means "Today Christ Jesus Blesses". The HCJB ministry was founded by Dr. Clarence Jones, along with his wife Katherine. The station first went on the air on Christmas Day 1931. Dr. Jones was always quick to name Dr. Rueben Larson as a co-founder. Dr. Larson had been a missionary in Ecuador for several years and had established valuable contacts within the Ecuadorian government. On several occasions Dr. Jones stated if it had not been for Dr. Larson's foundational work, HCJB would never have been authorized. In addition to local and worldwide broadcasts, the VOICE OF THE ANDES Hospital provides medical ministry to the people of Ecuador. Over 300 people are often involved in providing the radio and medical ministries associated with HCJB. More about HCJB and its operating schedules may be seen on the Web at <http://www.hcjb.org>.

HCJB generates one of the most readable and monitored signals around the world on frequency bands from 49 to 13 meters. Many of the antenna arrays and transmitters developed by HCJB engineers (most of whom have been active ham operators) are known as ground breaking designs, adopted by many other radio stations and services throughout the history of HCJB. Not the least of these is the Cubical Quad antenna. HCJB regularly uses a four-bay six-element quad array for many of its scheduled transmissions. Impressive Curtain Arrays are also in regular use. The station's transmitter site houses all of the numerous transmitters and a unique 600-ohm feedline switching system. The most unique antenna used at the site was a huge steerable eggbeater or whisk-like driven array using a half dome reflector. While no longer in use, this antenna was used to overcome jamming by Radio Havana many years ago. I surmise that the worm hole it burned through the ether from Ecuador to Greenland may yet exist. Several photos of these fantastic antenna systems are shown in the column at right.

John Beck

When asked for input to this article, John could not remember what the typical gain figures were for the various antennas. But he did remember that the 500 KW transmitter into the steerable at certain frequencies gave it well over 2 million watts of ERP. He tells me his reaction to the marketing department was always the same, "Who cares!?" He would rather know if they are scratching where the listeners are itching. John would ask, "Tell me if the broadcasts are achieving Changed Lives for God's Kingdom and then I can feel good about my efforts. Otherwise (as Edward Murrow once said) it's just wires and lights in a box."

HCJB Cubical Quad antenna

As John elaborated to me, "ERP almost becomes meaningless at these frequencies and power levels. As you know, propagation becomes increasingly more efficient the higher you go in the SW bands. Our 13 meter band quad had much less ERP with a transmitter power input of only 30 KW, than one of the HC-100's at 100 KW into a curtain or the steerable at a lower band (let's say 49 meters). Yet with a given set of propagational circumstances, the quad would consistently out perform the lower frequency combination. That's what made the job of frequency manager so fascinating.

HCJB Curtain antenna

"We had to predict what all of the variables for the next broadcast season might be and then adjust our plan during the season to get our signal into the target area on a consistent daily basis. We ended up devising a CPR analysis. C = defined if we could achieve adequate coverage in the target area. P = defined penetration – or the listener's desire to stay with our programming and not tune out. R = defined the measurable results or impact we had in the lives of the listeners. Each parameter was increasingly difficult to quantify due to our lack of adequate resources for audience research in the target area."

John's wife, Katherine AAOIS, served as musician (piano), Alliance Academy school nurse, and instructor for birthing classes. They have six children. Nathan and his wife Vera serve as missionaries in the Czech Republic along with two grandchildren. Amy and Amber are elementary school teachers in the Raymore, MO, school district. Anne and her husband Nathaniel will be serving as missionaries in Lima, Peru, after he finishes his medical doctor training. Laura is in college and eight year old Angela is in second grade. Send any questions, comments or greetings to John c/o [wa0emx@arrl.net](mailto:wa0emx@arrl.net).

HCJB Eggbeater antenna

Doug Shaw WAØEMX, ASCRA Secretary

## MARCH 2007 ASCRA BOARD MEETING

The ASCRA Board of Directors met for the annual meeting Saturday afternoon, 24 March 2007, at the Gudgell Park Community of Christ facility in Independence, MO. Ten of the 12 directors attended: Chuck Palmer NØONN; David Gates N5LCL; Doug Shaw WAØEMX; Ernie Miles WB2UJL; Fred Troeh NØELM; Michael Hahn KGØXU; Robin Cross WØFEN; Terry Redding W6LMJ; Tom Thatcher W2TFT; and new Board member, Barbara Redding W5HKY. Due to unavoidable conflicts Mike Oiler K8QA and Muirl Robinson W8QK could not attend.

Terry Redding offered an opening prayer. Secretary Doug Shaw then formally presented the Ballot Tabulation Committee report of the recent Board of Directors election results. The Board then elected the following officers for the 2007-2008 term:

President: Michael Hahn KGØXU, Independence, MO.  
Secretary: Doug Shaw WAØEMX, Raytown, MO.  
Treasurer: Chuck Palmer NØONN, Independence, MO.

President Hahn reappointed Robin Cross WØFEN of Kansas City as Executive Director for the coming year. The Board then passed a motion of support. Robin is Chief Engineer of KCUR-FM, National Public Radio station operated by the University of Missouri - Kansas City.

Secretary Doug Shaw presented the minutes from the previous Board meeting of 29 April 2006, which were approved. Treasurer Chuck Palmer reported that ASCRA is operating in the black for the first time in several years. Robin Cross then presented the Executive Director's report, which was incorporated into the biennial report to the First Presidency of the Church. This may be posted on the web site at a future date and possibly summarized in a future issue of IN SERVICE.

The Board then revised and approved the budget for the coming year:

IN SERVICE	500.00
New Member Development	100.00
PO Box	40.00
Copies	20.00
License Fees	20.00
Miscellaneous	20.00
Printer for IN SERVICE	160.00
TOTAL	860.00

The Board discussed problems with publishing and mailing the newsletter after Editor Fred Troeh moves to Arizona from Iowa. The Arizona jurisdiction has no Non-Profit USPS account, while the mission center in Iowa has graciously allowed ASCRA to mail IN SERVICE under their auspices. Alternatives will be developed by the editor and others as needed.

The Board then amended the Bylaws pertaining to the election of members to the Board of Directors to allow voting by fax or E-mail, in addition to returning paper ballots as in the past. The Board also made clarifying revisions to the Ballot Tabulating Process and the selection of director(s) in case of ties in the

votes received. A PDF of the revised Bylaws will be posted on the ASCRA website and is available on request from the Secretary.

After some discussion, the Board reached a consensus that the Executive Council address reinvigorating membership activity by redefining awards programs and other means as deemed appropriate. Some of the options considered have been or are being developed and will be reported to the membership when implemented.

Doug Shaw moved and Barbara Redding seconded a motion directing the Executive Director to issue a Certificate of Appreciation to Bob Farnham KGØII recognizing his service to ASCRA as a member of the Board and as a past president, which carried unanimously. The Board then approved a motion to adjourn following a benediction by Michael Hahn

Doug Shaw WAØEMX  
ASCRA Secretary

## ASCRA QSO PARTY DATA NEEDED

We have received no reports from any ASCRA stations that contacted any others during our informal WORLD CONFERENCE QSO PARTY. The deadline for reports is now extended to July 14th. Please report any ASCRA contacts date, time, and frequency during the party which ran from 24 March through 01 April 2007. Including estimated signal reports (R1-R5) will be helpful to know as well. Participants who send an SASE with their report to the ASCRA Secretary will be issued a certificate of participation.

In addition to any non-net QSOs, all stations who checked into the 20 Meter Net on either March 25th or April 1st are certainly eligible. Anyone who acted as 20M Net Control or assisted in relaying check-ins or others' comments on March 25th or April 1st nets should send the list of stations they heard, as all of these are eligible QSO party participants. If you don't have all the detailed contact data but can at least provide an estimated count of ASCRA stations contacted by frequency band (estimated times are okay) we will still send a certificate of participation via your SASE.

Why are these data important? It is not just for the wallpaper. The data will help us learn what times and frequencies are used for successful communication between ASCRA stations. This knowledge can assist us during emergencies when such contacts become more important. It may also help determine future net scheduling. Meanwhile, good hunting. Continue to use the suggested QSO party frequencies +/- (see IN-SERVICE, FEB 2007 issue) to listen for other ASCRA stations on the hour and half hour throughout the year. You may be pleasantly surprised at whom you meet.

Doug Shaw  
ASCRA Secretary  
[wa0emx@arrl.net](mailto:wa0emx@arrl.net)

## FROM THE PRESIDENT

Once again, ASCRA had the opportunity to meet together in general membership and board meetings this year in association with the World Conference of Community of Christ. What a rich experience it is to come together and greet each other in warm embraces and with shared interests. Elsewhere in this newsletter you will find summaries of the general membership meeting and the board meeting.

When we participate in these activities we are visibly aware of how we are changing, both as individuals and as an organization. ASCRA is not the same organization it was when I joined less than twenty years ago. I would not expect it to be. In this day and age, change happens at speeds unimaginable to us – even when we are living through it! Even though it is correct, the clique – the only thing that is truly consistent is change – it is always hard to deal with it. That is true in ASCRA as well.

After many years of leadership as president, Ernie Miles, WB2UJL, stepped down and passed that responsibility to Bob Farnham, KGØII. In too short of time, Bob indicated that he needed to step down in order to pursue further education and to do that with his undivided attention. I know I speak for the whole board and for ASCRA when I say that Bob provided an enthusiastic energy to his time as president. He wanted ASCRA to come into the twentieth century in its operating capabilities, both as individual members and as an organization – especially through the headquarters station, WØSHQ.

During its meeting, the board of directors authorized that Bob be awarded a Certificate of Appreciation for his years of leadership on the board and as President of ASCRA. It is my intention to present this award to Bob in person in the future. Thank you, Bob.

I have great examples to follow and emulate as I move into the role of president of ASCRA. Knowing I can never duplicate that, I can only make this simple promise: I will always attempt to give my best effort as I continue to serve ASCRA.

In the minutes of the board meeting included in this newsletter, you will read about various activities that were discussed. Of great concern is how ASCRA can be more inclusive in its activities and in its calling to be “In Service.” The Executive Council (president, secretary, treasurer and executive director) were encouraged to meet together and deliberate on this particular issue (there being many others) and report back with ways to grow ASCRA and impact the lives of its members.

I am asking that we all take responsibility for moving ASCRA into the future. We need to hear from you who are members. Perhaps you are the only ASCRA member in your community or congregation. Perhaps you are not a member of the Community of Christ. Whoever you are, wherever you are, we need your ideas and thoughts. ASCRA has great potential if we work together.

There are no easy answers to these questions. At times ASCRA seems to be all about the members in Independence, Missouri, or just about the board of directors. An organization that is as diverse and dispersed as we are makes it difficult to find the best ways for it to function and live out its purpose in our time. The truth is, it has always been this way for us. Yet we are different than we were just a year ago, so we move forward into the unknown, struggling into the invisible future. Change – it’s the only thing we know for sure about our future – it will be something different that it is now. Come join us!

Michael Hahn, KGØXU  
Independence, Missouri

## RECERTIFICATION OF ASCRA

I received a letter from the First Presidency of the World Church in February requesting our intention to re-certify association with the Church. I have been working on the document for a little while. It was due by May 14 and was delivered on time.

The requirements for ASCRA recertification are:

1. Any changes in the officially approved By-Laws
2. An updated address list of ASCRA officers and Members
3. A summary report regarding the ASCRA activities during the 2004-2007 inter-Conference time period
4. A list of proposed activities for the next biennium

Robin Cross  
wØfen  
Executive Director, ASCRA

## 20-METER CHECKINS

May 23, 2007

These are the checkins recorded and passed to me by several that have cared for the 20-M net since the last report in January. Complain if we overlooked you. The 20-M net is held 3:30PM CST, Sundays on 14.287 MHZ.

Ernie, WB2UJL

NØAIX, Larry Ragan  
KCØCHR, Robert Jackson  
WØDZX, Dave Atkins  
NØELM, Fred Troeh  
KAØGFC, Chuck Brady  
KGØII, Bob Farnham  
WAØLVG, Michael Morris  
KCØQNA, Don C. Burgess  
NØWZH, Steven Hampton

KØCD, Philip Schweitzer  
NØDCC, Mark Logsdon  
KCØEHR, William Compton  
WØFEN, Robin Cross  
WAØIBS, Andy Ferrar  
WØJGY, John Luce  
KCØØMHT, David Cook  
NØUXR, David Deas  
KCØZDC, John Sanger

KD1R, Ralph Stetson

WA1TPP, Herbert Berlin

W2DAI, Martin Valerian  
KC2LFI, Timothy Lincourt  
WB2UJL, Ernie Miles  
KA2YDD, Allan Fagan

W2DO, Ronald Diego  
W2TFT, Tom Thatcher  
VP2VW, Worrell Bertrand

N3ATQ, Scott Tyson  
W3HEN, John Seither  
M3OYM, Paul Rigden  
VE3SCP, Scott Price

AB3CQ, Bryan Gorman  
KB3NWO, Mark Tyson  
VA3RZ, Gordon Raymond  
VE3WTR, Edgar Grajales

W4CYF, James Bishop  
KE4FTA, Gregory Flanagan  
KA4RUR, Frederick Carslick  
KE4GWE, Dan Gilbert

KV4EG, Frank Hinson  
VE4HUM, Greg Humphries  
KI4TNG, Domingo Vasquez

KD5AIE, Cathy Seither  
KE5FUD, Charlie Hoy  
W5QPT, Ellis Thatcher  
K5UAO, Leo Pellerin  
W5W, Randolph Henderson  
W5ZML, Richard Short

KD5FHF, Bryan Broden  
KC5NOI, Mike Skinner  
AA5TU, Robert Du Bois  
AD5VS, Dykes Cupstid  
KD5YZU, Rabe Erik

VE6CB, Francis Meredith  
W6FOG, Robert Hayes  
KF6QGF, Warren Weinstock  
KA6RLP, David Logan  
W6RWH, Hale Collins

VE6DCI, Douglas Irwin  
W6LMJ, Terry Redding  
AE6RH, Ronald Midwin  
KG6TGC, Greg Mahoney  
KH6XF, Thomas White

AD7AM, Verniel DeWitt  
KE7CSF, John Brackemyre  
W7EC, William Stahlhut  
K7DRT, Dave Tulloss  
KA7VMA, Dick Wynes

N7BKE, James Pratt  
WB7CLR, George Magras  
K7NCG, Jim Fish  
WA7TBP, George Needham  
KA7ZHO, Dennis Morefield

KC8IQF, Ron Hornibrook  
N8GJK, Garold Kauffman  
W8QK, Muirl Robinson  
KC8TRL, Bryan Lewandowski

K8QA, Mike Oiler  
KC8QDP, Curtis Duncan  
KC8TFG, James Altimore  
AA8TS, Larry Smith

KB9AVX, Scott Baker  
KC9FMC, John Smith  
K9IGU, James Havranek  
KC9JTY, Paul Easter (W9PA)  
N9LFP, Bernie Smith  
KA9TEN, Russ Spann

N9DII, Constantine Gianniou  
WD9GNJ, Brad Peters  
KC9JXG, Dwight Shilling  
KB9KUZ, Randy Swemline  
WB9SMM, John Leekley  
K9YV, Steve Fagan

# AMPLIFIER RAMBLINGS

(continued from last issue)

Amplifiers are fairly simple devices but may still need regular attention. Tube amps should be blown out with an air hose every so often to clear away the dust that accumulates. The whole amp can be taken to your local gas station and, if it has an air compressor, then can be blown out without dis-assembly. It is better if the cover is taken off and then blown out. This also gives you the chance to learn and look for any problems. A little lubrication on the fan may be in order.

Problems in tube amplifiers fall into two common areas. A tube failure can mean anything from an open filament to a grid to cathode short. Either can be cured simply by plugging in another tube if nothing else has failed. The other common area of tube amp failure is the power supply. The most common problem is simply old age. The capacitors in the power supply dry out over time and must be replaced. This is not as easy a repair as replacing the tube but with a good soldering gun can be accomplished by most Hams. If you are not inclined to DIY repair there are several shops specializing in amplifier repair. For example, eHam.net is the first place to look.

Tube amplifiers for Hams usually use two types of tubes. Triodes have 3 active elements and hence the TRI. Tetrodes have 4 active elements and this would be why they have TETR in the name. Triodes are usually in grounded grid configuration. This means the cathode is driven with the incoming power and the grid is grounded (or almost at ground potential). Tetrodes are usually wired in common cathode. This means that the cathode is at or near ground potential and the control grid is driven by the transceiver. What is the difference? GG amplifiers are most common. They are used more because they are less likely to put out extraneous signals and much easier to design. They also do not need any power supply for the suppressor grid since they don't have one. Triodes as a whole have less gain than tetrodes which means more driving power is needed. This is not a point to worry about. Most transceivers have more than enough power to drive most Ham amplifier designs.

Operating an amp needs a little bit of information. I won't go over the usual dip-load-dip-load procedure as it is covered in many publications and web sites. Some older transceivers are capable of over-driving any amplifier. There were some tube type transceivers that were intended to operate without an amp. The Swan 500 comes to mind. The 500 was the input power and it would put out over 350 Watts. Most newer solid state transceivers will only put out 100 Watts. This is about right to drive a Heathkit SB-200 or SB-220. Still the ALC connection should be made between the amp and the transceiver. ALC stands for Automatic Level Control. This keeps the transceiver from over-driving the amp. If an amp is over-driven then you get "splatter" and nearby Hams will not be very happy. Your signal will be very wide on the Ham bands.

Most tube amps have a switch with positions named CW and SSB. This usually just changes the plate voltage on the amplifiers tube. That sounds simple, but when you change one voltage on a tube everything else changes as well. The most common result of higher voltage on the tube plate is more output. It also allows the tube to accept more driving power. This can mean that running in the SSB or Phone position while using SSB may produce less splatter. The ALC will not need to work as hard to keep the transceiver power down. Nothing is gained by running an amplifier in the low power or CW position. The tubes are still working just as hard to put out less power. The plate current is nearly the same but, since the plate voltage is lower, the amp has less output. The intent of the CW position is to keep the CW or Morse code power output within legal limits.

Other points to ponder. If you are using RG-58 coax which is fine for transceiver only output, then it will need to be replaced. Everything after the amplifier must be able to handle the higher power. By using

Ohm's law we can prove this. The coax is still 50 Ohms. We either have higher voltage across the coax or higher current through it to produce the higher power. Either way a heavier coax must be used.

A place that has several upgrades for amplifiers is Harbach Electronics. He builds high quality kits for several purposes. His prices are reasonable but sometimes delivery is slow because of being a one-person operation. He has keying interface kits spoken of earlier for several amplifiers. His web site is: <http://www.harbachelectronics.com/>

Some older brands of amplifiers are not currently made. Drake, Henry, Amp Supply, Collins, Dentron and Heathkit immediately come to mind. They built good to excellent amplifiers. Replacement parts may not be immediately available but this is not a reason to avoid one of these. Currently produced amplifiers such as Acom, Alpha, Ameritron, Commander, Emtron, Icom, Ten-Tec, Tokyo Hy-Power, and Yaesu are all good to excellent. Then there are amplifiers that are discontinued but the manufacturer still makes other models and supports all models.

Robin Cross, wØfen

## NEW 40-METER NET

May 23, 2007

ASCRA is attempting to attract check ins to a new 40-M net which is held 4:30 PM CDT, Sundays on 7.233 MHZ, This is the first report of the 40-M net checkins gathered from net control and those that assisted.

Please put up a 40 M dipole and join us.

Ernie, WB2UJL

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W0DZX, Dave Atkins  
WA0IBS, Andy Ferrara

W0FEN, Robin Cross

AB1FC, Alex Rock

W2EBH, Edgar Uderwood  
W2TFT, Tom Thatcher

WB2MJB, Dan Baral  
WB2UJL, Ernie Miles

W3HEN, John Seither

VA3RZ, Ray Else

W4CYF, Jim Bishop  
K14HEE, Bob Hawkins  
KU4UO, Nancy Plunkett  
KI4WI, Brian Striggow

KI4FVE, Robert Potkay  
AG4MS, George Webb  
KE4WHY, Bob Northern

KD5AIE, Cathy Seither

K5RY, Tom Alexander

W6LMJ, Terry Redding

WB7SWW, AL Lee

K7NCG, Jim Fish

KD8FAK, Scott Brooks  
W8QK, Muirl Robinson  
KB8FHS, Nick Nelson

KC8LYH, Karl Weitzman  
N8JP, Jay Parks  
N8HTW, Vern Rose

NW9B, Russ Whitener

W9RWZ, Gene Gardner

## ASCRA E-MAIL ADDRESSES REQUESTED

If you have an E-mail address, please send it to the Secretary at [wa0emx@ar1.net](mailto:wa0emx@ar1.net) and/or the editor at [fitroeh@peoplepc.com](mailto:fitroeh@peoplepc.com) We are slowly building our Email distribution list for more timely communication with ASCRA members regarding administrative and operational news and activities. TNX.

Doug Shaw WAØEMX and Fred Troeh NØELM

## SORRY WE ARE LATE THIS TIME

With the editor's move to Maricopa, Arizona, combined with flooded basements and other diversions affecting at least two of our authors, this issue of IN-SERVICE is later than intended. Please excuse the delay and bear with us.

Please the peoplepc e-mail address or the mailing address shown at right to contact me about ASCRA matters such as this newsletter or the membership roster. The older e-mail address still works for receiving e-mail but not for sending it.

Fred Troeh NØELM, editor

## IN-SERVICE

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