

WorldRadio

ONLINE

Year 41, Issue 2

AUGUST 2011

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NEWS • FCC • DX • SATELLITES • CONTESTS • HAMFESTS • AERIALS • CW



DX: Russian Federation Puts New Callsign Prefixes in Play

A number of new prefixes are in use by stations in the Russian Federation. Here is a rundown of changes recently adopted by Russian telecommunication authorities.

- Russian prefixes with the numeral 2 are no longer limited to Kaliningradsk. Stations with RA2 and UA2-UI2 (with F and K as the first letter in the suffix) are in Kaliningradsk; otherwise, these prefixes will be used in European Russia.

- Stations with the following prefixes are in European Russia: R1, RA1-RZ1 (except RI1 as noted below), R2, RB2-RZ2, R3-R7, RA3-RZ7, UA1 and UA3-UI7. Also, stations with the prefixes R8, R9, RA8-RZ9 and UA8-UI9 (with F, S, T, W or X as the first letter in the suffix) are in European Russia.

- Except for those listed above, all stations with 8, 9 and Ø as the numeral are in Asiatic Russia.

- Russian Antarctic stations use temporary callsigns in the series RI1ANA-RI1ANZ and RIØØANT to RI99ANT.

- Franz Jozef Land stations use temporary callsigns RI1F, RI1FJ and RI1FJA-RI1FJZ.

- Malyj Visotskij island stations use temporary callsigns RI1M, RI1MV and RI1MVA-RI1MVZ. (*DX World columnist Kelly Jones, NØVD, will have more on the new prefixes in September's WRO – Ed.*) – (From R5AA)

FCC's Top Dog Does the 'Pop-In' at Dayton Hamvention®

FCC Chairman Julius Genachowski made a surprise visit to the 2011 Dayton Hamvention® on Saturday morning, May 21.

According to reports from Hamvention officials, Genachowski was flying to Dallas when his plane was diverted to Dayton due to weather issues. When he found it was difficult to get a hotel room for the night because nearly 20,000 amateur radio operators were in town for Hamvention, the FCC Chairman decided to visit the show before resuming his trip the next morning.

He reportedly spent about an hour and a half at Hara Arena, and show officials said he was impressed with what he saw. (*From CQ News Room*)

WWV to Discontinue Propagation Forecast Broadcasts

The Space Weather Prediction Center (SWPC) on September 6 will discontinue the broadcast of its propagation forecasts on WWV at 18 minutes past the hour and WWVH at 45 minutes past the hour, Irish Radio Transmitters Society News reports.

The messages will still be available at: < <http://1.usa.gov/kT8j04> >.

“The reason for discontinuing this service is entirely budget-driven,” Patrick V. Gajdys, of the SWPC, said. “As we begin

to receive reductions to our funding levels, we are forced to examine our entire program and make cuts. The WWV service costs are quite high and the information we provide on it is currently duplicated via the Internet service.

“A very large majority of our customers use our Internet feeds, so when comparing the two duplicate services it was clear to us that the WWV service was that most logical service to cut.” (*From IRTS*)

Radio Amateurs Answer Call for EmComm Help from SATERN

After a devastating EF5 tornado leveled a broad area of Joplin, Missouri in May, more than 50 amateur radio operators responded to a request to help the Salvation Army Team Emergency Radio Network (SATERN) to provide logistical support to the affected areas.

Just two days later, all personnel needs had been met. The hams helped to relay information to the Salvation Army's Joplin headquarters about inventory, requests for food and drink and maintenance problems. (*Details of SATERN's support in Joplin are being reported in the Public Service column of September's CQ Amateur Radio magazine. – Ed.*)

Senate's Companion Bill to HR 607 Protects Amateur Spectrum

In May, U.S. Senators Joe Lieberman (ID-Connecticut) and John McCain (R-Arizona) introduced in the Senate S 1040 — *The Broadband for First Responders Act of 2011*.

Unlike a previous version of the U.S. House of Representatives' HR 607, it does not call for auctioning any spectrum that would have affected radio amateurs' 70-cm band.

S 1040 has a similar overall objective to HR 607, which was introduced in the House of Representatives in February by U.S. Rep. Peter King (R-NY).

Both bills call for the allocation of the so-called “D block” of spectrum, 758-763 and 788-793 MHz, to facilitate the development of a public safety broadband network. (*More details on S 1040 and news of the modification of HR 607 appear in Terry Douds, N8KI's, Amateur Satellites column elsewhere in this edition. – Ed.*) – (From multiple sources)

Commissioner Calls It Quits to Take Comcast Post

FCC Commissioner Meredith Attwell Baker stepped down from the Commission on June 3 — about a month before the end of her term — to take a job with Comcast as its Senior Vice President of Government Affairs for NBC/Universal.

President Obama will have to name a Republican to replace her, as the law permits no more than three members of one political party on the five-member commission. (*From CQ Newsroom*)



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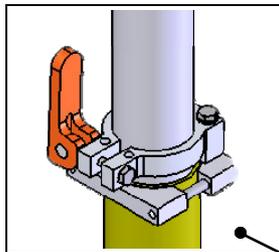
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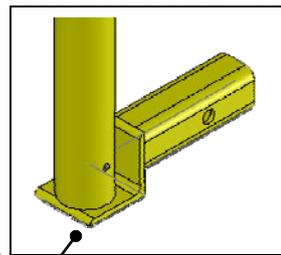
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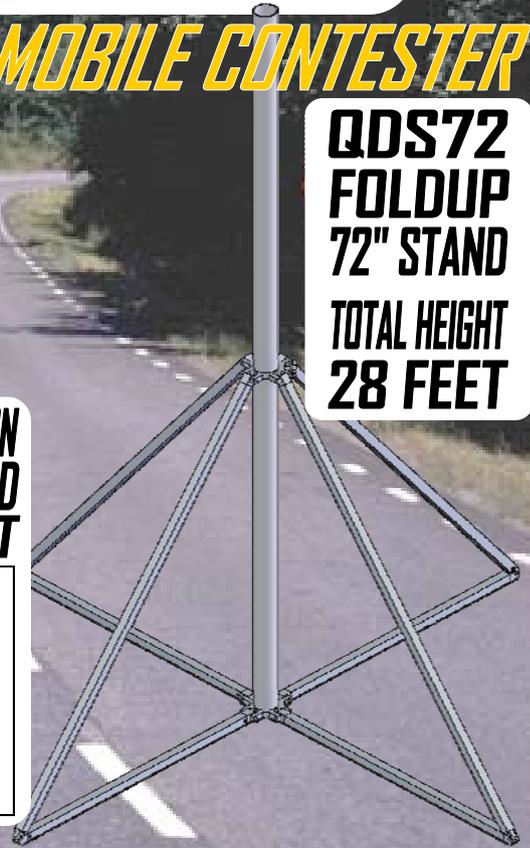


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WorldRadio ONLINE

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On the Cover: European Space Agency astronaut Paolo Nespoli, IZØJPA, who set an ARISS record for the number of amateur radio contacts by an astronaut during his or her stay on the International Space Station, conducts a ham radio question-and-answer session from the Zvezda Service Module with students in Bari, Italy. For more on IZØJPA's efforts, see this month's *Amateur Satellites* column. (Courtesy of NASA)



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Ad'ed Content: Peeling Back the Layers of WRO

One of the coolest things about the digital magazine is its many layers. Reading *WorldRadio Online* can be like peeling an onion — *without the tears*.

Look through this month's pages and you'll find Internet links to richer content in most features and columns — the Web site of that special event station you're chasing; the full text of some FCC legislation mentioned. A *YouTube* video. You get the idea.

Did you know the same is true for **WRO advertising**? Most of the ads appearing in **WRO** are directly linked to the manufacturer or retailer of the item you're salivating over.

Place your cursor on an advertisement, click, and if linked, you'll be transported through your web browser to the company's Web site. No matter if you're reading *live* online or have downloaded **WRO** to your desktop — if you have Internet access, you can dig as deep as you want into that newly-introduced transceiver, classic antenna or *whatever*.

To return to the magazine's pages after *looking inside* an ad:

- When reading **WRO** live online, press the *back arrow*, usually in the toolbar in the upper left of your screen.

- When reading from a download on your desktop, simply minimize the page. In other words, click the *minus sign* (-) in the upper right corner of your screen.

In either case, you're back to the *mag*.

Don't let your monthly onion go unpeeled. It's delicious inside — and we promise not to make you cry.

From Dayton, With Love

To everyone who navigated the huddled masses to stop by the CQ Communications booth at the Dayton Hamvention® in May: *Thank you*.

It was fantastic to meet so many **WRO** readers and to put names and faces to the call signs of the radio amateurs who have taken part in our monthly **WRO Live Online Chats**. (*You look nothing like we'd imagined!*)

You gave us some great story ideas and suggestions for making the magazine even more useful. We jotted them down and will be following up.

In this month's **WRO** we have a treat for you: A **photo essay** of moments at Dayton — to give a taste of the people and places that created the scene. In a word: *Wild*.

In it you'll find photos of some of the staff members who write and produce the many magazines, books, DVDs and other printed and digital materials produced by CQ Communications — **WRO** included. It's a great team and I'm very proud to be on it.

If you've never been to the Hamvention, we highly recommend you go. It's a weekend of tremendous fun and camaraderie, spiced with the surprises only Hara Arena can bring.

I'd like to thank my good friend **Jim Stafford, W4QO**, and **QRP Amateur Radio Club International** for inviting me to speak this year about *Trail-Friendly Radio*. It was a great honor, and the thoughtful questions and insights that came from the audience during the Q&A just blew me away.

We appreciate what a great weekend everyone at Dayton made it for us this year. And we're already excited about Hamvention 2012. Hope you are, too.

WRO Live Online Chat: August 7

If you haven't had an opportunity to take part in one of the monthly **WRO Live Online Chat** sessions, why not take the plunge?

We'll be gathering at **8 p.m. Eastern time (0000 UTC) Sunday, August 7** at our usual *chatsphere* rallying point, the **WRO Online Blog**: < <http://www.WorldRadioOnline.blogspot.com> >.

Simply come to the site at chat time and click on the *Cover It Live* window you'll see there. *Bingo*, you're in.

If you'd like, go to the site now and **sign up to receive an email reminder** when chat time is getting near.

Our data shows there are both chatters and lurkers. You're more than welcome to participate as either. The sessions are casual and friendly and all amateur radio-related topics are fair game.

Replays of previous chats are on the blog site as well. Take a look if you'd like to see how the conversations ebb and flow.

We hope to see you for this month's session. — *Richard Fisher, KI6SN*

WorldRadio Online

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Which *SteppIR* Product is Best for You?

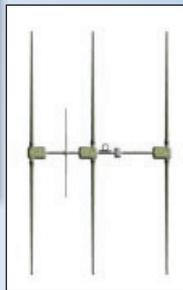
2, 3, and 4 Element Yagis

For the hams who are fortunate enough to have towers in their backyards. Gain and directivity is yours with a SteppIR Yagi.



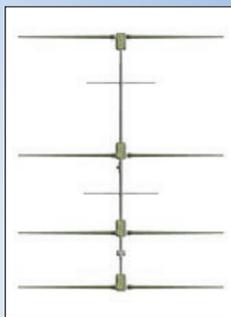
2 Element 20m-6m Yagi

2 element Yagi, 20m-6m continuous coverage; 57" boom, 36 ft longest element, 18.2 ft turning radius, 6 sq ft wind load, 30 lb; SDA 100 controller included.



3 Element Yagi 20m-6m

3 element Yagi, 20m-6m continuous coverage; 16 foot boom, 36 ft longest element, 19.7 ft turning radius, 6.1 sq ft wind load, 51 lb; SDA 100 controller included.



4 Element Yagi 20m-6m

4 element Yagi, 20m-6m continuous coverage; 36 ft longest element, 24.1 ft turning radius, 9.7 sq ft wind load, 99 lb; SDA 100 controller included.

Vertical and Dipoles

For the ham who may not have a tower, but a tree or two for a dipole. SteppIR verticals work great when there are no tall structures around to hang some wire. And, the low take-off angle can be your friend.



BigIR Vertical Antenna, 40m-6m

BigIR vertical antenna, 40m-6m continuous coverage, 32 ft length, 15 lb total weight, 2 sq ft wind load; EIA 222C wind rating when guyed; Comes with SDA 100 controller and 1.5" mounting pole; Does not include optional 80m coil.



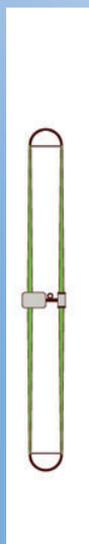
SmallIR Vertical Antenna 20m-6m

20m-6m continuous coverage, 18 ft total length, 12 lb weight, 1 sq ft wind load; EIA-222C wind rating without guys.



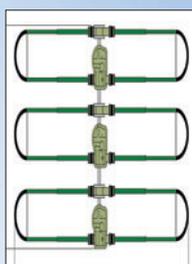
20m-6m Dipole

20m-6m continuous coverage dipole; 36 ft element length; Comes with SDA 100 controller.



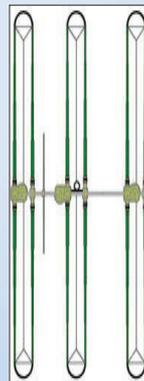
40m-6m Loop Dipole

40m-6m continuous coverage, 39 ft total length; SDA 100 controller included.



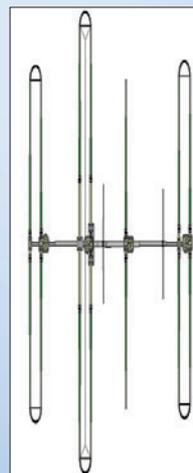
DB11 Yagi Antenna

DB11 Yagi, 18.5 ft element length, 11 ft boom, 10.8 ft turning radius, 61 lb, 5.9 sq ft wind load; 2 active elements on 20m; 3 active elements on 17, 15, 12, 10, 6m.



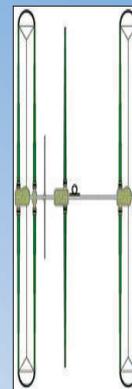
DB18E YAGI

Dreambeam DB18E, 3 el 30m-6m, 2 el 40m, three looped elements, does not include optional 6m passive element kit, 18 foot boom; Includes SDA 100 controller.



DB36 DreamBeam Yagi, 40m-6m

DreamBeam DB36 4 element Yagi, 40m-6m continuous coverage; 36ft boom, 48 ft longest element, 26 ft turning radius, 17.5 sq ft wind load, 160 lb; SDA 100 controller included.

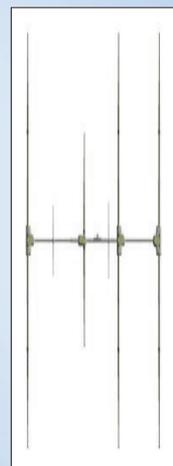


DB18 YAGI

Dreambeam DB18 yagi, 3 el on 20m-6m, 2 el on 40/30m, 18 ft boom; Does not include optional 6m passive element kit; Includes SDA100 controller.

MonstIR 4 Element Yagi 40m-6m

MonstIR 4 element Yagi, 40m-6m continuous coverage with full length elements; 34ft boom, 70 ft longest element, 39.7 ft turning radius, 23.9 sq ft wind load, 160 lb; SDA 100 controller included.



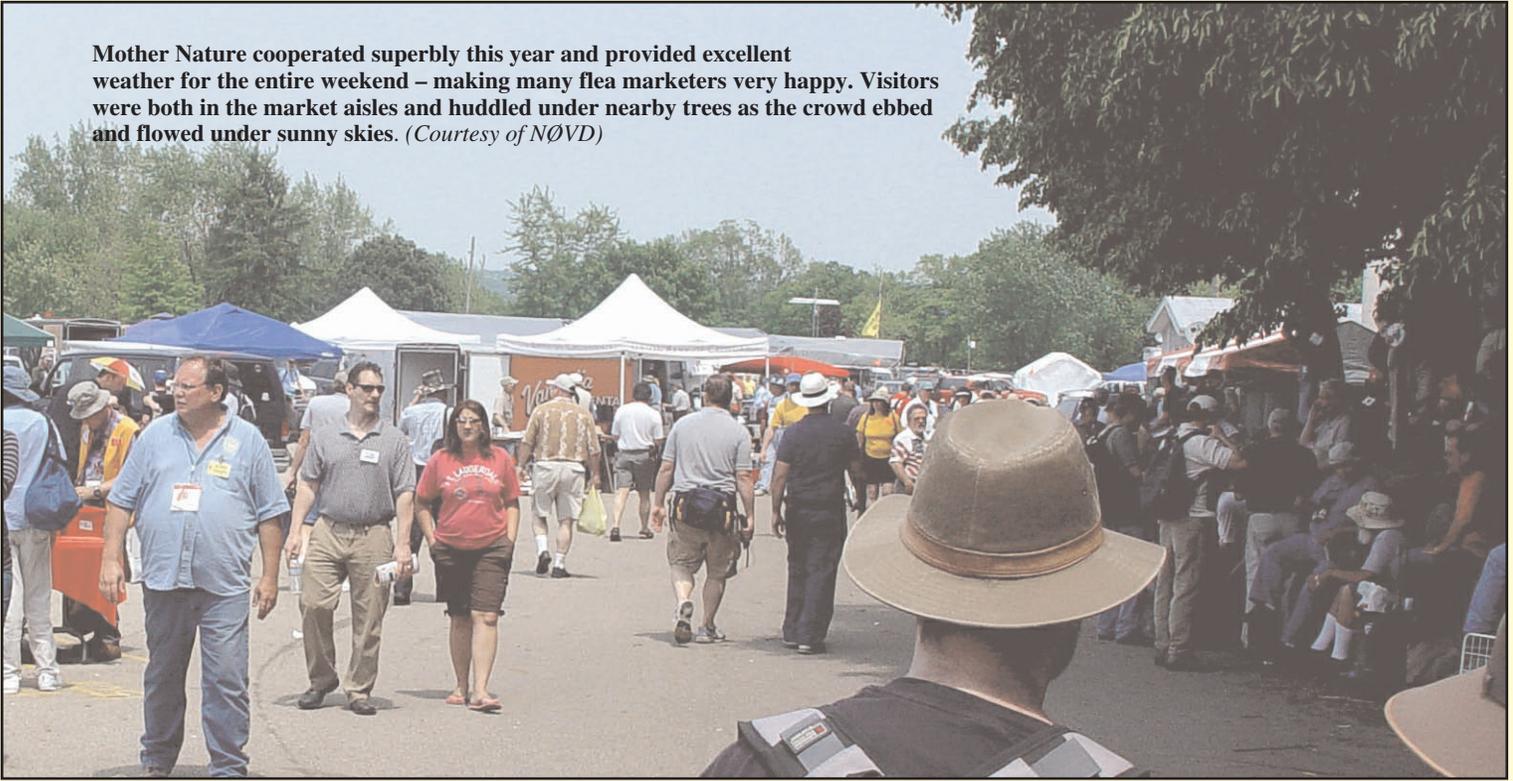
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Mother Nature cooperated superbly this year and provided excellent weather for the entire weekend – making many flea marketers very happy. Visitors were both in the market aisles and huddled under nearby trees as the crowd ebbed and flowed under sunny skies. (Courtesy of NØVD)

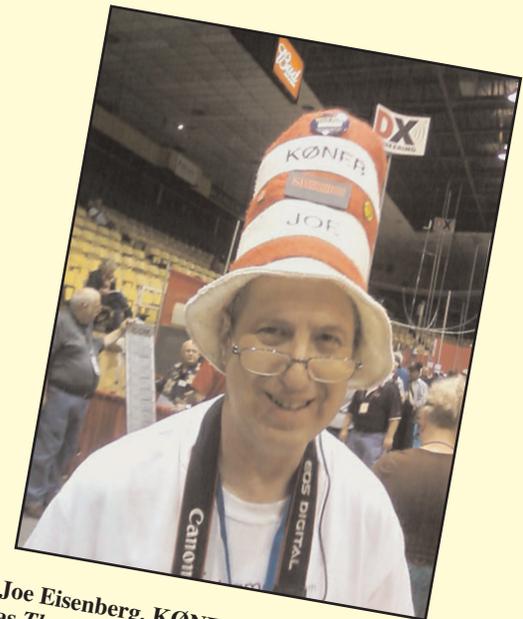


Lots of People and Faces in All the Right Places . . .

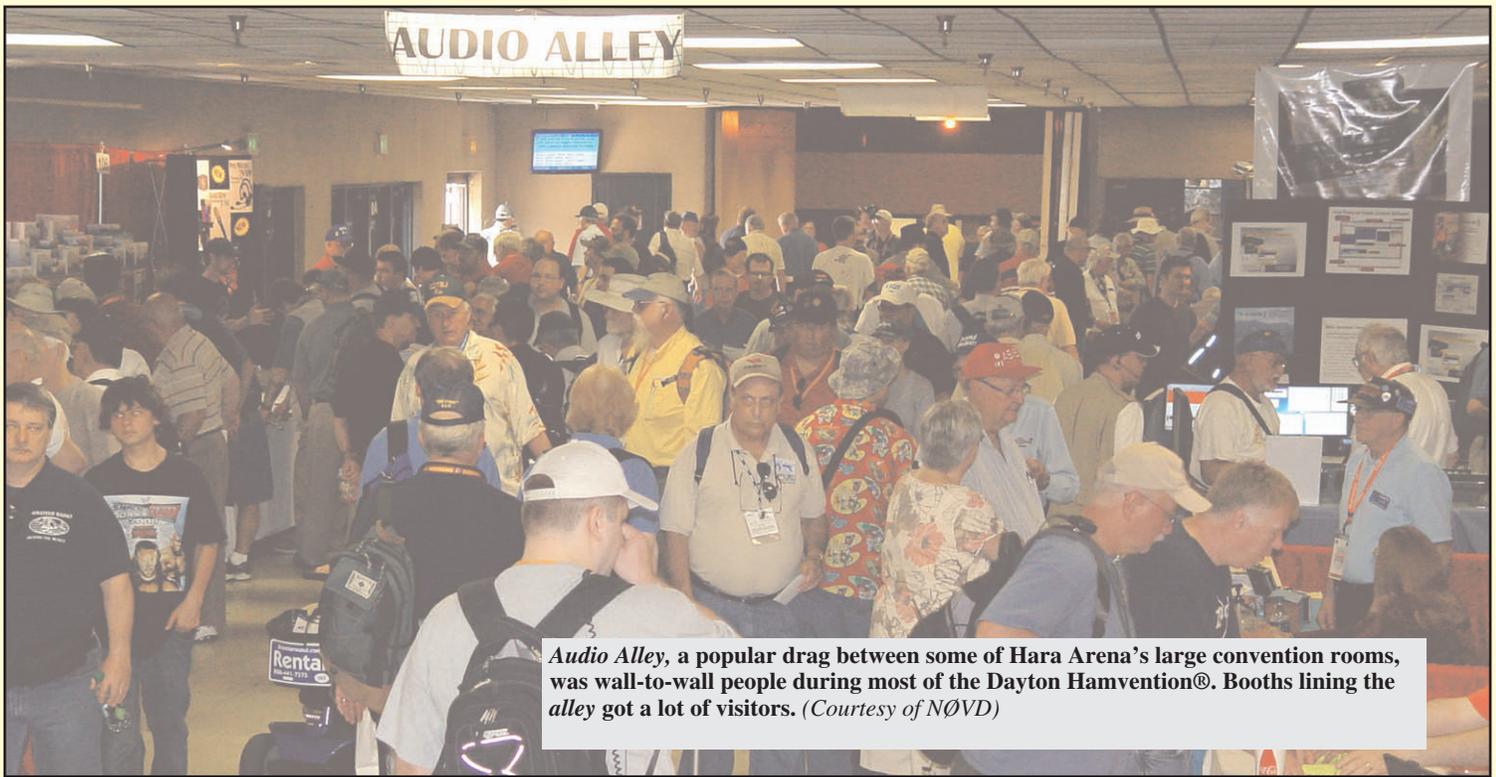
The 2011 Dayton Hamvention® was not only blessed with gorgeous weather, but a crowd that just wouldn't quit.



Members of the CQ Communications team staffing the booth at the 2011 Dayton Hamvention® included, from left, Dottie Kehrwieler, Production Director of CQ Communications; Richard Fisher, KI6SN, Editor of *Popular Communications* and *WorldRadio Online*; Rich Moseson, W2VU, Editor of *CQ Amateur Radio* and Editorial Director of CQ Communications; Chip Margelli, K7JA, Advertising Manager of CQ Communications; Gail Sheehan, K2RED, Managing Editor of *CQ Amateur Radio* and *CQ VHF*; and Jason Feldman, *Pop'Comm* and *WRO* Editorial Assistant. Joe Lynch, N6CL, Editor of *CQ VHF* manned the booth, as well. The team was led by CQ Communications Publisher Dick Ross, K2MGA. (Courtesy of KØNEB)



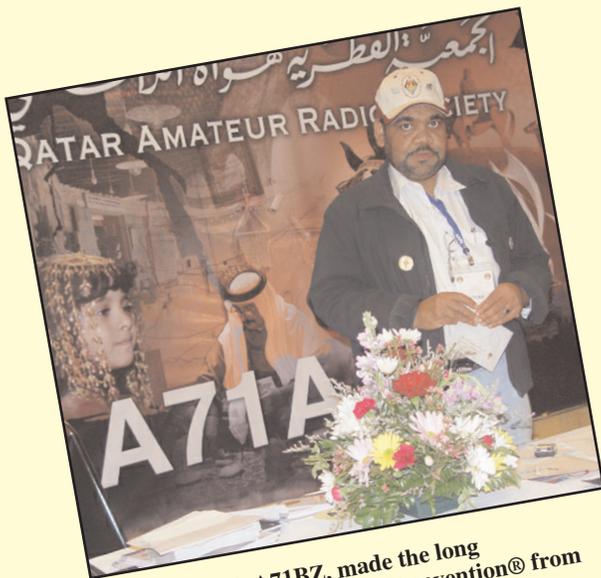
Joe Eisenberg, KØNEB, famously known as *The Cat in the Hat*, is an annual Dayton Hamvention® attendee who writes and speaks about homebrewing in his role as *Kit-Building* columnist for *CQ Amateur Radio* magazine. (Courtesy of KI6SN)



Audio Alley, a popular drag between some of Hara Arena's large convention rooms, was wall-to-wall people during most of the Dayton Hamvention®. Booths lining the alley got a lot of visitors. (Courtesy of NØVD)

. . . As Hams Converge on Dayton for the Fun of It!

Between the vendors, speakers, culinary delicacies and the ambience only Hamvention can muster, it was quite a show.



Ali Al-Ahmad, A71BZ, made the long journey to the 2011 Dayton Hamvention® from Qatar to promote the Qatar Amateur Radio Society and its club station A71A. (Courtesy of NØVD)



The Dayton Hamvention® Special Event Station, W8BI, got a good workout from Hara Arena the weekend of May 20-22. (Courtesy of KØNEB)

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- Optional RF μ -Tune Units for 160 m, 80/40 m and 30/20 m Bands

Optional, YAESU Exclusive, Fully-Automatic μ -Tuning Preselector System!

Fully automatic, Ultra-sharp, External μ -Tuning Preselector (optional) features a 1.1" (28 mm) Coil for High Q

On the lower Amateur bands, strong signal voltages impinge on a receiver and create noise and intermod that can cover up the weak signals you're trying to pull through. YAESU engineers developed the μ (Mu) Tuning system for the FT DX 9000/FT-2000, and it is now available as an option for the FT-950. Three modules are available (MTU-160, MTU-80/40, MTU-30/20); these may be connected externally with no internal modification required! When μ -Tuning is engaged, the VRF system is bypassed, but the fixed Bandpass Filters are still in the received signal path.



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Enjoy the ultimate in operating ease by adding the DMU-2000! Enjoy the same displays available with the FT DX 9000 and FT-2000: Band Scope, Audio Scope, X-Y Oscilloscope, World Clock, Rotator Control, Extensive Transceiver Status Displays, and Station Logging Capability. These extensive functions are displayed on your user-supplied computer monitor.



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DMU-2000
Data Management Unit (option)

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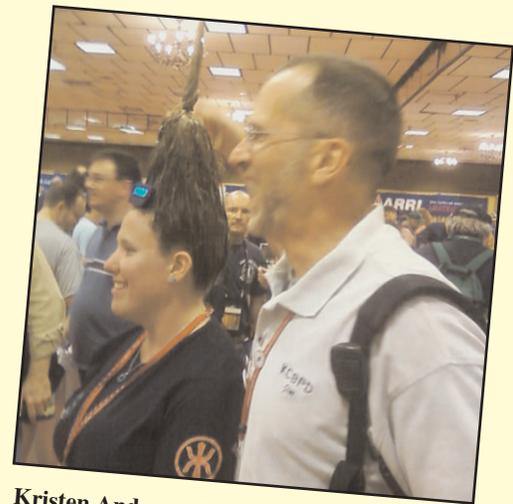
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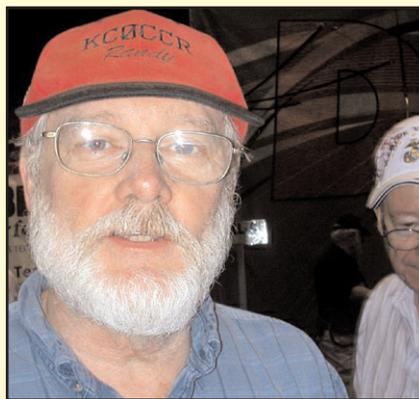
Amateur radio operators and other visitors jammed the aisles of Hara Arena during the 2011 Hamvention, trying to see everything over the weekend of May 20-22. (Courtesy of NØVD)



A not-so-subtle caution, **WARNING! MAY CONTAIN PEANUTS**, is hand lettered on the side of a cardboard box sitting atop copies of *QST* magazine in one of the Hamvention flea market booths. Who says there aren't at least a few nuts at Dayton every year? (Courtesy of NØVD)



Kristen Andrews, KB3OQV, of Washington, Pennsylvania, poses for a photograph with Jim Aylward, KC8PD, of Ravenna, Ohio as she captures a lot of attention at the Hamvention with her renowned antenna hair style. (Cell phone photo courtesy of KI6SN)



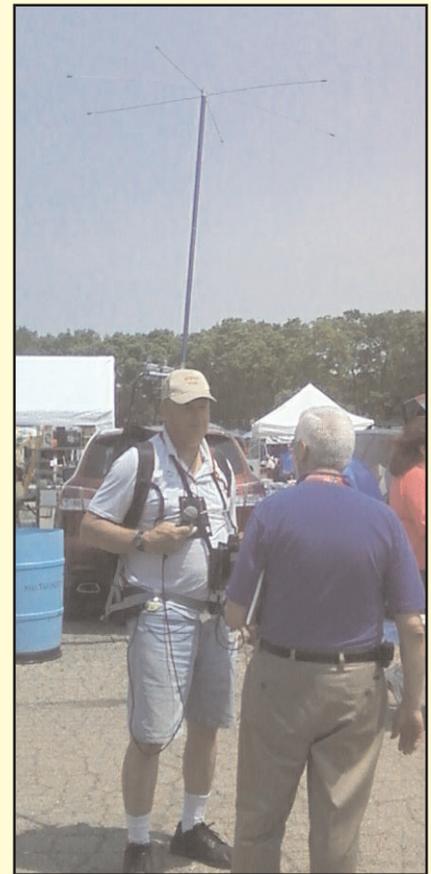
Randy Noon, KCØCCR, *WRO's Morse Code* columnist, stopped by the CQ Communications booth at Dayton to say *howdy* to his colleagues. (Courtesy of KI6SN)



Space Shuttle Commander Doug Wheelock, KF5BOC, of Houston, Texas – a featured speaker at this year's Hamvention – poses with *WRO Hams With Class* columnist Carole Perry, WB2MGP – the driving force behind the Hamvention's Youth Forum, attended this year by more than 300 people. (Courtesy of WB2MGP)



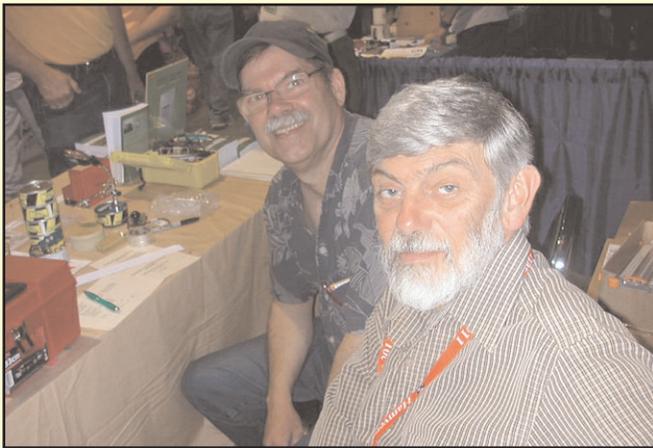
DX World columnist Kelly Jones, NØVD, takes a moment for a picture with girlfriend Christine McBride, who shortly after the Dayton Hamvention® took, and passed her Technician Class amateur radio exam. (Courtesy of KI6SN)



With an antenna towering over his head and a microphone in hand, Bob Kimbrell, WØAO, of Kansas City, Missouri, operates high-frequency pedestrian mobile in the flea market area of the 2011 Dayton Hamvention®. See a video of WØAO in action by CQ Amateur Radio editor Rich Moseson, W2VU, at: < <http://WorldRadioOnline.blogspot.com> >. (Courtesy of KI6SN)



Well, the banner pretty much says it all: *International Order of Krazies Technology Center – Yesterday's Technology . . . Tomorrow!!* Staffed by members of Local 146.415 or 442.850, the organization is *Back to the Future* in its most literal sense. (Courtesy of KI6SN)



The Rev. George Dobbs, G3RJV, member of the QRP Amateur Radio Club International Hall of Fame, founder of the QRP Club of Great Britain and editor of the QRP journal SPRAT, foreground, is joined by QRPme kit company founder Rex Harper, WIREX, at G-QRP's booth at Dayton. (Courtesy of KI6SN)



You didn't have to go far to find lots of nuts in the vicinity of Hara Arena, as well. Five Guys Burgers and Fries, near the University of Dayton, had its share over Hamvention weekend. There were goobers of all sorts in the restaurant. (Courtesy of KI6SN)

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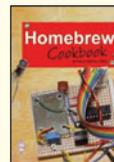


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For Big Guns and Little Pistols, Dayton Is a Ball for DXers

By Kelly Jones, NØVD

The third weekend in May: To any *normal* person it might mean planning for the Memorial Day holiday. Or perhaps getting some work done in the yard now that winter has given way to spring. Or taking in some Indy 500 qualifying action.

But we DXers are *not* normal — don't believe me? Ask your XYL. To us the third weekend in May can only mean one thing — Dayton Hamvention®.

Yes, that infamously rain-soaked weekend — the one where we all walk around like sleep-deprived zombies in awe. And this year was no different, except that there was no rain!

In my nearly 20 years of attending the Dayton Hamvention®, I have to say I believe this was probably one of the best, if not *the* best as far as the weather was concerned — and it was pretty good with respect to everything else that is *Dayton*.

Thursday: A DXer's 'Bonus Day'

The Hamvention officially runs from Friday through Sunday, but for the past several years, Tim Duffy, K3LR — along with others — has been organizing a very interesting conference-like day of events called *Contest University* < <http://bit.ly/iz23wI> >,

which is held on Thursday at the Crowne Plaza Hotel before the Hamvention opens.

I have wanted to attend this event since its inception, but have yet to do so. Perhaps one of these years I'll chew off the additional vacation day and become a student at CTU.

One particularly interesting facet of CTU this year was that several sessions were recorded and streamed live on the Internet — you can find the recorded sessions on the PVRC Web site: < <http://bit.ly/gsyKc8> >.

There was a live webcam at what is known as the *Contest Super Suite* < <http://bit.ly/kosCOz> > at the Crowne, as well. If you have never been at the Crowne after hours during the Hamvention weekend, you should treat yourself to *the mingle*. You never know who you'll run into — Big Guns and Little Pistols roam the halls, as well as DX operators from rare and exotic locations. Plus you'll have the opportunity to tell your best *fish story* — you know: the one that got away.

Friday: Let the 'Reunion' Begin

Friday is the official opening of the Hamvention. For me, it's a chance to make my rounds and chat with friends and DXers



As it was in years past, the DX Forum at the 2011 Dayton Hamvention® was SRO — standing room only. (Photographs courtesy of NØVD)

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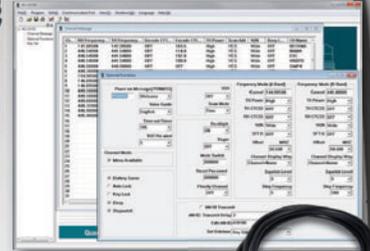
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The Spurious Emission Band was live and in concert during DX activities at Dayton. From left, Bruce Frahm, KØBJ, doing . . . well, *something*. Next, it's Scott Robbins, W4PA, on bass; Ward Silver, NØAX, mandolin; Sean Kutzko, KX9X, drums; Mark Beckwith, N5OT, on beer bottle; and Kirk Pickering, K4RO, guitar. To see a video of the band in action, visit: <<http://bit.ly/m0hoRI>>.

that I haven't seen or spoken with over the year.

It's interesting that over the years I have shifted from a *let's go to Dayton to look at the new gear* to a *let's go to Dayton to reconnect with old friends* mentality.

Of course it's always great to look at what the manufacturers have brought to market in the last year, but I now find Dayton more of a social event. In fact, my friend Geoff Howard, WØCG, eloquently summed it up as *a big family reunion*. I would have to agree — although this reunion's dysfunctional level tends to be a bit lower than perhaps a typical family reunion — maybe.

After making the rounds on Friday morning, I tend to spend a fair amount of time in the flea market — this year being no exception. And the weather on Friday was absolutely perfect for wandering around outside — as it was for nearly the entire weekend.

Flea Market: Less Quantity, More Quality

While the Hamvention flea market isn't what it was 20 years ago in terms of size, one thing I noticed this year was the *quality* of goods.

Two decades ago there was a saying that *if you can't find it at Dayton, it doesn't exist*. The Internet has certainly changed that. However, I noticed what seemed to be a resurgence in quality items that could

be found in the flea market this year. For example, walking just a few rows, I noticed several high-quality amps for sale — perfect for either starting out or upgrading your DX station. Five to 10 years ago it was difficult to find a single amp — let alone several in close proximity.

I also took note of other things that seemed reasonably priced and would be great additions for DXers on a budget. There were quite a few antennas ranging from verticals to large Yagis. I also saw several rotors, lots and lots of coax and

Alan Rovner, K7AR, left, and WRO Propagation columnist Carl Luetzelschwab, K9LA, are on watch at the ARRL DXCC card-checking booth at the Hamvention. WRO DX World columnist Kelly Jones, NØVD, somehow manages to get between them.



hardline, tower sections and even a couple of climbing belts and harnesses.

It has been several years since I've seen such *quality* in the flea market. Maybe it's a case of sellers not wanting to pay exorbitant fees to online auction sites. Or maybe it's a case of simply wanting to horse trade with other hams — I'm not entirely sure. But what I do know is that Friday's wander through the flea market was very enjoyable for me.

After-Hours Fun . . .

As I mentioned earlier, *after hours* is nearly as fun (if not more) as the Hamvention itself. Friday evening typically begins with the DX Dinner sponsored by the Southwest Ohio DX Association. This year's was moved from its mainstay location and had a great turnout despite the change of venue.

Each year the Southwest Ohio DX Association (SWODXA) and the DX Dinner sponsors give away a multitude of prizes. This year's winners include Seth Sjostrom, SMØXBI, taking home a new Alpha 8410 amp (I'd hate to see the shipping on that!) and Tore Anderson, SMØDZB, walking away with an ICOM IC-7000 HF rig. It was a clean sweep for the Swedes when it came to the grand prizes!

Also presented at the DX Dinner each year is the award for DXpedition of the Year. This year's was somewhat unusual in that it went to two DXpeditions — ZL8X (Kermadec Island) and VP8ORK (S. Orkney Island). I hope you had an opportunity to put both of these great



Craig Thompson, K9CT, and Joseph Pater, W8GEX, give their PJ7E presentation at the DX Forum.

DXpeditions in the log. They were seemingly everywhere on the bands and both were well deserving of the award.

Finally, one of the highlights of the DX Dinner is the *Top DXer Stand Down*. This is where we find out who in the room has worked the most DX countries (or entities as they are now known) over their DXing careers. Currently there are a maximum of 340 entities on the DXCC list.

In my 25 years of DXing, I've managed to put 344 countries in the log. However, that doesn't compare to the numbers of the *last ones standing*. Edwin Benkis, W2HTI, comes out on top with 390, including deleted countries. *Very impressive, Ed, and congratulations to you.* After the big DX dinner, many folks head back — or over — to the Crowne Plaza located in downtown Dayton. Many DXers and contesters tend to call the Crowne *home* for the weekend. It's a great place, as well, to catch up with friends, both old and new, and is known for its hospitality suites. You never know who you will meet mingling with the crowd — it's a great way to put a face to the callsign and also meet many DXers who travel from all corners of the world to attend the Hamvention.

Friday saw the second annual appearance of the *Spurious Emission Band*, as well, led by Ward Silver, NØAX. It had a large crowd and everyone had a great time. Interestingly enough, there seemed to be a direct correlation between the amount of alcohol consumed and how well the band sounded. IE: more *alcohol*

= *better sound*. To see a video of the band, visit: < <http://bit.ly/m0hoRI> >.

Saturday Brings It All Together

Saturday tends to come too quickly for many during the Dayton Hamvention®. In fact, it's often Saturday morning before *calling it a day* on Friday. This year was, once again, no different. Having packed what seemed like three days into one on Friday, Saturday tends to be just as busy, if not more so.

By most accounts Saturday tends to be

the biggest day of the event. Since some attendees are not able to take Friday off from work, many who are in driving distance make the pilgrimage on Saturday.

It's also the day I typically spend with the inside vendors. Having great weather this year seemed to break up the crowd a bit, as well. There have been some years when the rains never cease, causing the inside exhibit area of Hara Arena (the Hamvention event location) to become overcrowded to the point that it's difficult to move around. However, the bright sunshine seemed to really help in spreading out the crowd between inside and outside.

There were certainly a lot of interesting products on display this year. I took a close look at a couple of new HF rigs in addition to many accessories. Strolling through the inside vendor area is almost like being a kid in a candy store. Now if only money really did grow on trees. At least we can look — and touch!

Saturday also proved to be *interesting* in that at one point during the day all of the restrooms where closed. Have you ever been to an event with thousands of people and have no working restrooms? Let's just say *it's not pretty*. Although late in the afternoon, the *septic situation* was finally resolved and things returned to normal.

'Saturday Night Fever' for DXers

After the sun went down Saturday night, the Crowne Plaza was again *the*

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Must See: A Peek Inside the 2011 Dayton DX Forum

By Kelly Jones, NØVD

The DX Forum during the Dayton Hamvention® is one of the *must see* events during the Dayton weekend. It's an opportunity to get an inside look at several DXpeditions that took place over the past year. As usual, the forum this year was *standing room only*.

The 2011 schedule included presentations from PJ7E (Saint Maarten), the Northern California DX Foundation (NCDXF), PJ6A (Saba DXpedition), VP8ORK (S. Orkney Island) and a very interesting discussion by Dr. Rick Dorsch, NE8Z, about his visit and stay with Monk Apollo on Mount Athos.

The most interesting presentations for me were those of the 10.10.10 DXpeditions to Saint Maarten (PJ7E) and Saba (PJ6). The reason I personally found them interesting is that I was on Bonaire during the 10.10.10 event activating PJ4D. Hearing the stories about the trials and tribulations from the other islands underscored the point that even activating these *easy* new countries can be challenging.

Adversity is always something to overcome. Craig Thompson, K9CT and Joe Pater, W8GEX, co-leaders of the PJ7E DXpedition, explained that even with the best laid plans, there is no fighting Mother Nature.

As it turned out, their main equipment shipment was delayed several days due to weather. Fortunately, they were able to get *something* on the air at the start due to quick thinking by the team and a little luck.

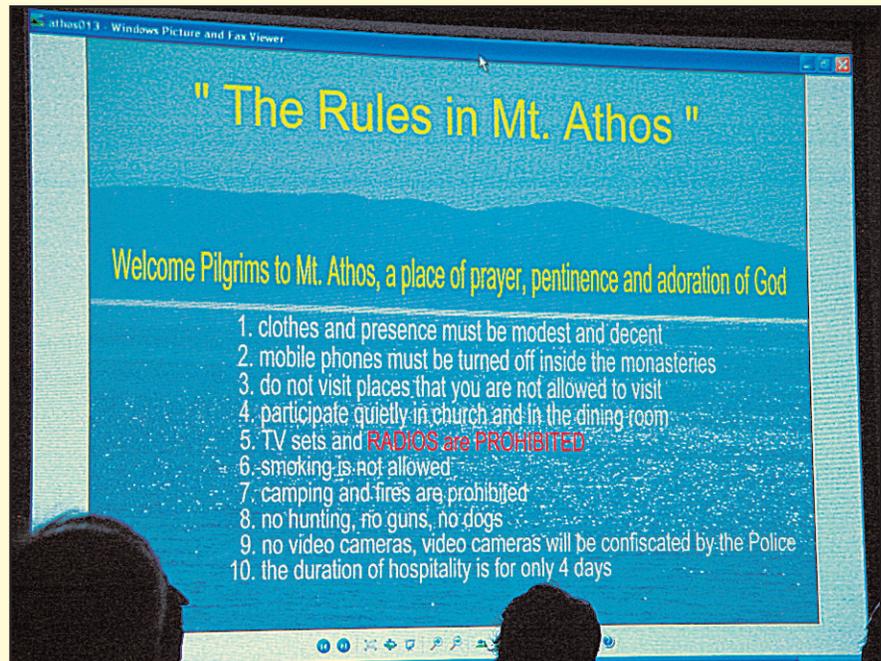
Bob Allphin, K4UEE, spoke about their adventure with PJ6A. While they didn't have any weather issues, watching the plane landing on Saba isn't for the faint of heart. It is one of the shortest runways in the world. Bob also explained that one of their goals was to minimize not only station interference on Saba, but with the other PJ islands as well.

He provided a lot of detail about how the *band plan* came to be and how in the end it was beneficial for all of the 10.10.10 activations — and for the DXers playing *PJ Bingo*, as it became known.

Glenn Johnson, WØGJ and Tim Totten, N4GN, gave a brief update about the Northern California DX Foundation (NCDXF) — a fantastic organization offering many things from DXpedition support to DVD *rentals*. Did you know that you can request a DVD (or VHS tape) from the NCDXF video library at no cost?

NCDXF is also responsible for the beacon network. This is a great tool for checking propagation when you think the band might be dead.

A talk on VP8ORK, whose team was a cowinner of the



In true *Mystery Science Theater 3000* (MST3K) style < <http://bit.ly/iPxbhQ> >, the *Rules of Mt. Athos*, are presented by Dr. Rick Dorsch, NE8Z, during the DX Forum.

DXpedition of the Year award, was presented by Ralph Fedor, KØIR. It's always amazing to see the kind of planning and effort that goes into a sub-Antarctic DXpedition. One miscalculation can spell disaster.

Ralph, as well as many of the team members, has been to the Antarctic region many times. The teamwork and camaraderie to pull off this DXpedition was simply amazing. It's no surprise they were awarded the *DXpedition of the Year* award.

Finally, NE8Z — better known as HC1MD or HC8MD — made a pilgrimage to Mt. Athos (SV/A) to visit Monk Apollo. Access to Mt. Athos is typically very restricted and the length of stay is very limited. However, Rick was invited to stay for up to a year and is able to renew his Mt. Athos *visa* — something that is nearly unheard of.

The stories of life on Mt. Athos were very intriguing. The monk's way of life at the monastery dates back hundreds of years. While technology is limited, one thing I found interesting is that many of the monks now carry cell phones. Apparently it makes it easier to stay in contact during their daily chores.

Aside from cell phones, though, much of their daily lives have remained unchanged for centuries. Having a rare inside peek at Monk Apollo's life and the monastery in general was truly fascinating.

If you'd like to hear an audio archive of the 2011 Dayton Hamvention® DX Forum, I have posted it to the *DX Central* Web site. You can find it at: < <http://bit.ly/jELHek> >.

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City DX Club always has a hospitality suite and runs a CW Pileup contest on Saturday evening. If you've never taken part in this competition, it's a total *hoot*. The way it works is that you sit in a room and they play a tape of CW callsigns for about five minutes. The catch is, the calls are all mixed together, on top of each other, with chips, bad fists and every other combination of interesting quirks you can think of — it's a pileup times 10.

This year was the 31st annual running of the competition. It also marked the first running using custom reporting and scoring software written by Chuck Sanders, NO5W. Participants were able to see their scores before they got up from the pile-up chair — thus eliminating the *hurry up and wait* process of years past to find out your score.

The interesting thing, however, is everyone in the hospitality suite was able to see the action in real time on a big screen TV. Talk about slick — it was indeed very cool!

In addition to the KCDX group's hospitality suite, there were many others throughout the Crowne Plaza where one could drop in, get a beverage of the non-antenna flavor, tell some bigger fish stories and just have an all-round great time.

Much like how Friday night spills into Saturday morning, Saturday night often spills into the wee hours of Sunday morning.

Sunday: Sadly, It's a Wrap

Hamvention Sunday is always bittersweet for me. I know that while there are still several hours left to pack in a few last minute items on my to-do list, I also know that once again the Dayton weekend is quickly coming to a close.

It seems each year there is less and less time to get everything done. I'm beginning to wonder: Are the days shorter than they were 20 years ago when I first started attending the Hamvention? Back then three days seemed like plenty of time to do everything. Now it feels like six days would not be enough! The one consolation prize I take home every year, however, is that much like Cubs fans, there's always next year.

You Gotta Go . . .

If you have never made the trip to the *Ham Radio Mecca*, I'd encourage you to give it some thought. This year felt like a good year for the event. By that I mean that the inside vendor area at Hara Arena was nearly filled — a change from some years past. And while the flea market is a bit smaller in scale from what it was 20 years ago, I think it held its own this year. And the weather . . . it was simply perfect.

The Dayton Hamvention® is one of the *hamfests* that everyone should attend at least once. And if you're a DXer of any size — big gun or little pistol — it should definitely be on your *bucket list*.

The dates for the 2012 Hamvention are May 18-20. I hope to see you there!

That's it for this month's column. I look forward to hearing your comments, complaints or whatever is on your mind. If you have a story or opinion you would like to share, please send it to me at n0vd@dxcentral.com. I'll do my best to include it in and upcoming column. Look for me on Facebook or Twitter and until next time, as well. See you in pileups!



Here's Some Help to Explain Those Unusual QSOs

By Carl Luetzelschwab, K9LA

I enjoy looking at QSOs that are unusual — in that they're not predicted by our propagation prediction programs — and trying to explain them.

Often I come away empty-handed, but the investigation forces me to better understand solar-terrestrial relationships and physical processes of the atmosphere — especially those in the ionosphere.

One such unusual QSO that ended up in my "what happened?" bin was discussed in the January 2009 column. This QSO was between Brian Edward, N2MF, in Jamesville, New York and the 3B7C DXpedition on the island of St. Brandon in the Indian Ocean, which is about 850 miles east of Madagascar. It was on 10 meters at 1218 UTC on September 22, 2007.

If you go back and look at the space weather conditions for September 2007, you'll find that we were still deep in our recent extended solar minimum period. The K indices were two and three for the day of the QSO, and less on the days preceding the QSO. The smoothed sunspot number for September 2007 was six and it was still headed down (to a minimum of two in December 2008). The smoothed solar flux was 72 in September 2007, and it was also still heading to its minimum. Thus my first thought was there was not enough ionization to support 10-meter propagation — especially on the N2MF end since he's at about 43 degrees North latitude.

Crunching the Numbers

The Voice of America Coverage Analysis Program (VOACAP) confirmed that the monthly median MUF (maximum useable frequency) for the path would be significantly lower than 28 MHz (about 17.5 MHz) on the N2MF end. But it would be around 28 MHz on the 3B7C end thanks to the robust equatorial ionosphere.

Applying the MUF variability factors for this path that are built into our propagation prediction programs (and tabulated, for example, in Supplement to Report

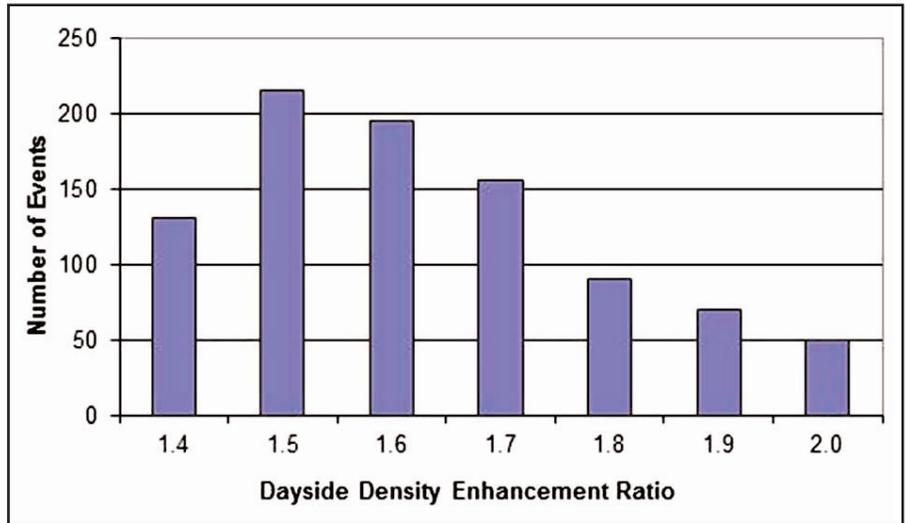


Figure 1. Density Distribution of the 890 European Events.

252-2, International Radio Consultative Committee, 1978), the MUF on one day in September could get as high as 22 MHz on the N2MF end and as high as 38 MHz on the 3B7C end. This calculation reaffirms that the MUF on the N2MF end did not even get close to 28 MHz on one day of the month when the normal day-to-day variation of the F₂ region is taken into account.

Thus our propagation predictions strongly suggested this QSO shouldn't have happened. Turning to measurements didn't provide any positive evidence because we don't have any ionosondes in the area where RF from N2MF's first hop toward 3B7C would have encountered the F₂ region of the ionosphere (about 1,500 km — 932 miles — east of N2MF in the Atlantic Ocean).

But a look at TEC (total electron content) data from GPS measurements around Newfoundland suggested that something could have been going on in the general area, and that something was an enhancement in electron density that could have enabled this unusual QSO.

That's as far as the analysis of this QSO was carried, and I set it aside in the

hope that one day something would show up in the technical literature that might shed light on this QSO.

Eureka!

Sure enough, an interesting paper was published in the *Journal of Geophysical Research* in late 2010. It was by Michael David and Jan J. Sojka, who were with the Center for Atmospheric and Space Sciences at Utah State University, titled: *Single-day dayside density enhancements over Europe: A survey of a half-century of ionosonde data*.

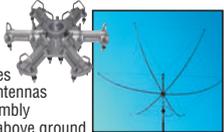
The authors collected ionosonde data from stations around the world from 1958 to 2006. The resulting database consisted of peak F₂ region critical frequencies (f_oF₂) at hourly intervals (when data was available — not all ionosondes have continuous data from 1958 to 2006). Due to the high density of ionosondes over Europe, the authors restricted their more in-depth study to ionosondes there.

As the title of the paper indicates, the authors were looking for single-day dayside enhancements of f_oF₂. They did this by calculating the 30-day centered medi-

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1.500	\$5.25	\$6.95	1.500	\$8.95	\$10.85
1.625	\$6.05	\$7.75	1.625	\$9.75	\$11.65
1.750	\$6.85	\$8.55	1.750	\$10.65	\$12.55
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an f_oF_2 value, and then comparing potential single-day enhancements to this value with certain criteria for the ratio (to eliminate the normal day-to-day variation of the F_2 region). They also always looked at data from a group of ionosondes, typically 10 to 20 on a single day, to eliminate an outlier at a single ionosonde.

Emerging Patterns

Of the 890 single-day dayside enhancements that were found on the European continent during the 49-year study period (1958 to 2006), the following patterns emerged:

1. Each of the 890 events was seen at a large number of European ionosondes (the enhancement was usually confined to 60-90 degrees of longitude)
2. The enhancements were up to two times the 30-day, centered median value in terms of the electron density (not the critical frequency), which means the enhanced F_2 region MUF would be the square root of 2 = 1.4 times the non-enhanced condition (see **Figure 1**)
3. Two thirds of the events had the

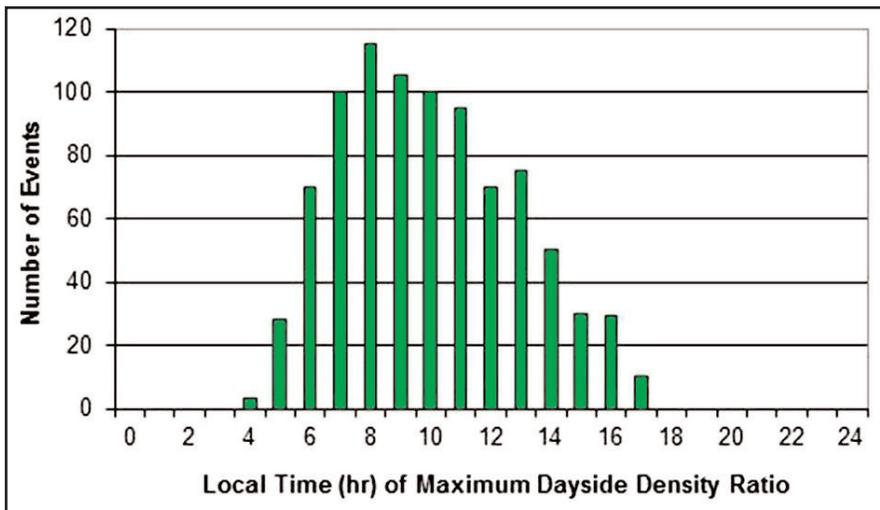


Figure 2. Diurnal Distribution of the 890 European Events.

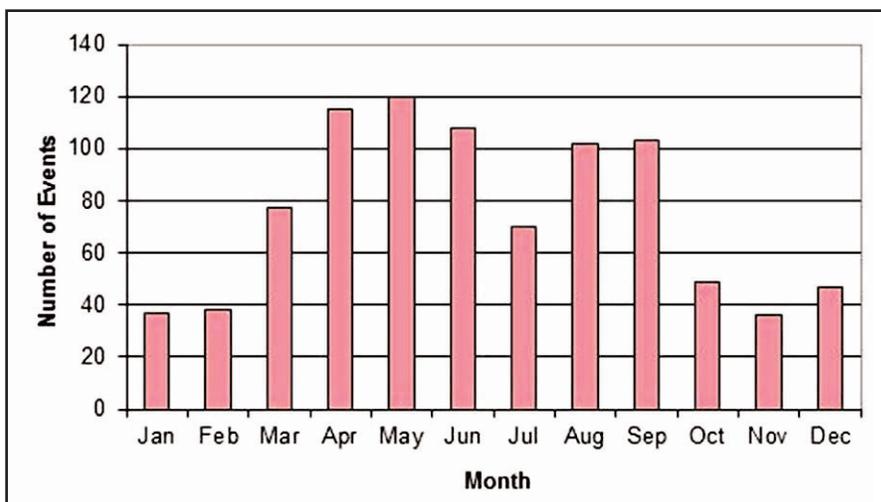


Figure 3. Seasonal Distribution of the 890 European Events.

strongest enhancement during prenoon local times, with a maximum in the early morning (see **Figure 2**)

4. Two thirds of the events occurred during times of mild to moderate geomagnetic field activity levels (K_p values not exceeding four during the 12 hours leading up to the event)

5. The events occurred most often during solar minimum periods

6. The events occurred most often during the equinox months (see **Figure 3**)

This N2MF-to-3B7C QSO, occurring in September 2007 about one and a half hours after N2MF sunrise, falls into the pattern of these single-day dayside enhancements — specifically items 3, 4, 5 and 6 above.

We're taking somewhat of a leap of faith here that these enhancements also occur outside of Europe. But there's no reason to believe they don't happen

worldwide (including over the oceans where it's tough to gather a good database at which to look).

Perhaps, More to Come

The authors state they are doing follow-up work with events in locations other than Europe, so this will be a good test of the worldwide nature of these enhancements.

The paper did not address a cause of these enhancements. The authors did pose the question: *Are these events a subset of the short-term positive phase of major geomagnetic storms in which the electron density is enhanced prior to the longer-term F_2 region depletion?*

Regardless of why and how these single-day dayside enhancements occur, consider yourself fortunate if you're in the right place at the right time when they do occur. And I hope you work a "rare one" when it does happen!

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Updates: The Good, the Bad, the Sad and the Alarming

By Terry Douds, N8KI

The headline on June's *Amateur Satellites* was: *Good News, Bad News, Sad News, Alarming News*. That pretty well summed it up. Some of those situations have changed — even for the better. So, to begin . . .

Hooray! 70cm Appears Safe for Satellite Operation

Last column's alarming news concerned the possible auction of our 70-cm amateur satellite frequencies by the FCC. A delegation of amateur operators led by Peter Portanova, WB2OQQ, AMSAT New York Area Coordinator from the Long Island/New York City area, met with U.S. Representative Peter King (R-NY) on May 19 to discuss his recent proposed legislation — H.R. 607 — and its impact on amateur radio.

Portanova, who resides in King's congressional district, worked for many months with only the assistance of the town government of Massapequa to arrange the meeting.

In addition, Portanova, who is NLI Local Government Liaison, the delegation included Mike Lisenco, N2YBB, ARRL Section Manager for New York City/Long Island; George Tranos, N2GA, NLI State Government Liaison (SGL); and Jim Mezey, W2KFV, NLI ARES Section Emergency Coordinator (SEC).

Portanova, Lisenco, Mezey and Tranos spoke about the importance of amateur radio emergency communications and Portanova spoke about amateur satellites and their contributions to Science, Technology, Engineering, Mathematics (STEM) education and disaster communication.

Barry Baines, WD4ASW, President of AMSAT, prepared a letter that was delivered to King by Portanova addressing concerns about HR 607.

Congressman King said he understands and appreciates the importance of amateur radio and the Amateur Satellite Service and their contributions to the community. He said he would see to mod-



A screen capture of an Internet video by Ecole Polytechnique Fédérale de Lausanne shows the tidy size of Switzerland's first cubesat, held in EPFL's Muriel Noca's left hand. The unit is a 10-centimeter (3.9 inches) cube. See the video at: < <http://bit.ly/jquOKr> >. (YouTube video screen capture)

ification of the bill so that the 420-440 MHz band would be excluded from the spectrum to be auctioned. The Congressman was very receptive to the group and listed Portanova as his point of contact.

"The Congressman went on to explain that it was never his intention to remove the 70-cm band from amateur use. He further asked us to *get the word out* and inform the amateur radio community that 70cm is not in jeopardy," Portanova said.

On May 26, Portanova learned that Congressman King had requested the House Committee on Energy and Commerce to remove Section 207 — the portion covering the auction of the 420-440 MHz and 450-470 MHz spectrum — from the bill.

Subcommittee Chairman Rep. Greg Walden, W7EQI, (R-Oregon), agreed — so the threat to amateur radio access to

the 70-cm spectrum appears to be no longer an issue.

Meanwhile, the ARRL has reported the Senate's companion bill to HR607 — known as S-1040, with similar objectives to the House bill — does not call for auctioning any portions of amateur radio spectrum.

There's certainly good news all around! If you have the opportunity, please thank these amateurs who went to bat for us all in expressing our concern to the legislators about HR607 and who helped save one of our most important pieces of spectrum to the Amateur Satellite Service.

International in Scope: ARISS Contact With Schools

More good news! Due to the tireless work of on-orbit astronaut Paolo Nespoli,



Space Shuttle, a video produced by NASATElevision and narrated by Star Trek's Captain Kirk (a.k.a. actor William Shatner), can be viewed on the Internet at: < <http://bit.ly/ieAr9c> >. (Screen capture from NASATElevision)

IZØJPA, who set an ARISS record for the number of contacts made by an astronaut during his or her time on the ISS, many school classrooms were contacted over the past months — not only with Italy, but Poland, Japan, Luxembourg, Australia, Argentina and Canada, as well. And let's not forget to mention Indiana and Texas in the U.S. (See IZØJPA on this month's cover. — Ed.)

I report this in the hope people realize amateur satellite operation, and the ISS in particular, is international in scope.

It is a worldwide effort to explore and learn for all mankind. We are blessed to be alive at this point in technological development where we have the opportunity to communicate with many people around the world, in hope that we can advance the opportunities for those who follow us.

ARISSat-1's Fits and Starts Aboard the ISS

ARISSat-1, we've got some problems. On April 11, shortly after my *WRO* column deadline, cosmonauts were to activate the ARISSat-1 satellite stored aboard the ISS by attaching it to the space station's external antennas to celebrate the 50th anniversary of Yuri Gagarin's first manned space flight.

However, the batteries used in the satellite have a small number of useable recharge cycles available and they were charged on Earth before sending them to

the ISS. Apparently the charge was quite low and when starting up the satellite, the team found the problem.

Since members felt the mission — launching the satellite during an extravehicular activity (EVA) on July 26 — was more important than the Gagarin celebration, they turned off the bird after six hours and no reception was reported from Earth.

This system had been previously tested in February and was operating successfully at that time. They didn't want to utilize one of the five rated charge cycles for this event.

According to reports following the failed opportunity, cosmonauts said the satellite signal was heard on the ham radio equipment on board the ISS — sad, because there were many operators excited and ready to receive the signals on Earth. It appears the satellite was not harmed in any way and was reported ready for its July deployment.

A Ohhh, No-51: Battery Situation 'Somewhat Grim'

The AO-51 command team has been having problems with the satellite in recent months. *Eclipse season*, where the satellite receives less and less sun during its orbits, was wreaking havoc on its batteries.

The bird was down for a great deal of time while the command team attempted to keep it operating as best it could. When



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the battery voltage drops too low it causes the IHU (Internal Housekeeping Unit — the CPU of the satellite) to crash. This means each time the satellite goes into an eclipse, it loses its mind — *literally*.

The command team has to reload the operating system software each time it comes back into sunlight — which it is trying to automate — but the orbit of the bird places it into a long-term cycle of eclipses that are not helping the batteries, and the situation is somewhat grim.

At press time, the batteries were holding better than they had been, but it was still a critical situation. The repeater is open when the satellite is working, but it will not be open on a scheduled basis. Check < <http://bit.ly/ieczV1> > for the latest updates.

FUNcube SDR Dongle

In *more good news*, AMSAT-UK has developed the FUNcube SDR Dongle. I've mentioned this in past columns. As a refresher, this is a Software Defined Radio (hence the SDR moniker) inside a USB dongle, which looks like a standard flash drive for a computer.

It allows the user, whether using Windows, Linux or a Mac, to receive signals from 64 to 1,700 MHz, at a reasonable cost — below \$200 to the U.S., including shipping.

It can be used with myriad software packages for decoding signals, such as Rocky, MØKKGK, Spectravue and LinRad. Standard USB drivers are already integrated into the various operating systems of the computers involved, so nothing special is needed other than the computer, an antenna and a software package.

Tetsu Satou, JAØCAW, has posted three videos showing the AMSAT-UK FUNcube SDR Dongle being used to receive satellites:

- Using FUNcube Dongle with DK3WN satcontrol fcd software, SDRadio software, and Delfi-C3 RASCAL software to decode telemetry: < <http://bit.ly/IOYLFm> >.
- FUNcube Dongle receiving the AO-51 satellite: < <http://bit.ly/kYdlm7> >.
- FUNcube Dongle receiving the UO-11 satellite: < <http://bit.ly/lhXI0S> >.

In addition to these three videos, you'll find many more on YouTube that have been uploaded by others utilizing this radio.

More Videos . . .

While talking about videos, there are two recent videos posted that show and discuss SwissCube, the first satellite being developed and built completely in Switzerland. See the videos at: < <http://bit.ly/jquOKr> > and < <http://bit.ly/k8r9Wr> >. Visit the EPFL Space Center at: < <http://space.epfl.ch/> >.

Another nice video detailing the history and operation of the Space Shuttle missions is entitled *Space Shuttle* and is narrated by Star Trek's *Captain Kirk* himself, William Shatner. You can find the video at: < <http://bit.ly/ieAr9c> >.

Finis

That's it for this month. Meanwhile, beam me up, Scotty, and I hope to talk to you all soon on the birds!

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DX Predictions

August 2011

Maximum usable frequency from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 1934, Middleburg, VA 20118). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Toyko, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio de Janerio. Smoothed sunspot number = 58.

Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in (parenthesis) for poor. UTC is hours.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SA
10	(14)	*15	*22	(11)	*19
12	22	*13	*19	19	17
14	26	*16	*17	22	*25
16	29	*18	16	23	*30
18	*30	15	15	22	*34
20	*29	*23	29	19	*36
22	*24	*26	*35	(14)	*36
24	21	*26	*37	(12)	*33
2	18	*25	*37	(13)	*27
4	*19	*23	*36	*18	*23
6	20	*22	*33	16	*20
8	17	*18	*26	14	*18

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SA
8	16	15	*25	(11)	*18
10	(19)	*13	*21	*18	*19
12	25	*14	*19	*22	*21
14	28	16	*17	*24	*27
16	30	14	16	*24	*32
18	*31	(13)	(15)	*23	*34
20	*29	19	29	*21	*36
22	*24	23	*35	*19	*36
24	*20	*25	*38	14	*34
2	*18	24	*37	*12	*28
4	*19	21	*36	*16	*23
6	18	*18	*31	*14	*20

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SA
7	*20	14	*23	*12	*18
9	22	(11)	*20	*18	*19
11	*29	*19	*18	*22	*21
13	*34	17	(17)	*24	*27
15	*36	14	(16)	*25	*31
17	*35	12	(15)	*24	*34
19	*31	18	(23)	*23	*36
21	*26	22	33	*20	*36
23	*22	24	37	*16	*34
1	*19	22	36	*14	*28
3	*16	18	*34	*12	*23
5	*22	16	*28	*14	*20

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3CX100A5	4CX250B	4CX7500A	833C
3CX400A7	4CX250BC	4CX10000A	845
3CX400U7	4CX250BT	4CX15000A	866-SS
3CX800A7	4CX250FG	4X150A	872A-SS
3CX1200A7	4CX250R	YC-130	5867A
3CX1200D7	4CX350A	YU-108	5868
3CX1200Z7	4CX350F	YU-148	6146B
3CX1500A7	4CX400A	572B	7092
3CX2500A3	4CX800A	805	3-500ZG
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A CW ‘Shaggy Dog Story’ to Keep On Hand

The following account is adapted from a yarn spun by K9STP (SK) — One of those gifted CW individuals and a fine elmer. – Ed.

Adapted by Randall Noon, KCØCCR

I had been looking forward to Saturday afternoon all week, and now here it was. Outside the weather was overcast, chilly and uninviting. Inside there was a pot of good coffee and the shack was cozy.

To go with the java steaming in a 2007 Dayton Hamvention® mug, there was a well-stacked ham sandwich, neatly cut into triangular halves, perched on a paper plate imprinted with clown faces.

The computer was a few feet away. The callsign look-up site QRZ.COM was on the screen. The power supply indicators were all lit. The antenna tuner was set. Static hissed from the headphones.

As Joliet Jake might have said to his brother Elwood: *The band is open, we got 5 watts of power, half a pot of joe, it’s overcast . . . and we’re wearing sunglasses. Hit it.* < <http://bit.ly/IABoTB> >.

The mission this afternoon, however, was not to save the *Saint Helen of the Blessed Shroud Orphanage* in Calumet City < <http://bit.ly/iN1KO4> >. It was to work slow-speed CW operators in the 7.100 to 7.125 MHz portion of 40 meters, the old Novice CW subband.

While Technician Class operators and the small remnant of Novice Class operators are now permitted to use CW from 7.025 to 7.125 MHz on 40 meters, some operators just learning CW prefer to work the 7.100 to 7.125 MHz portion of the band.

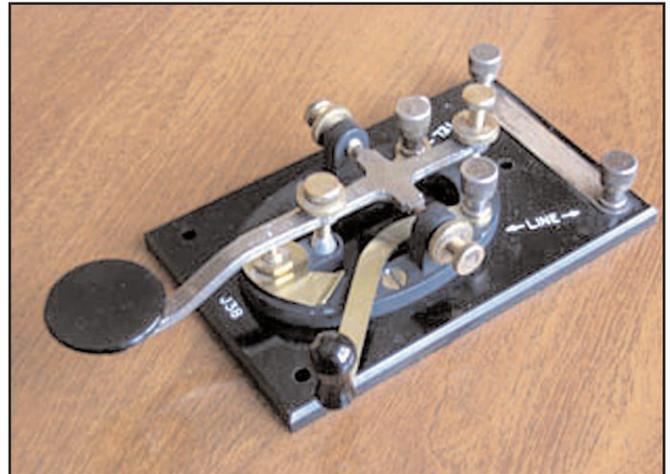
There are a several reasons why this is so. Not many high-speed CW operators frequent this area of the band. They tend to stalk DX at the low end of the band and lay siege in frenzied pileups until their QSL ransom demands are met. Consequently, the intimidation factor in the higher part of the band is low.

Forty-meters is open during the day and often stays open late into the evening. This is a plus for operators with less expensive CW mono-band transceivers who can’t change bands.

Along with that, a 40-meter, half-wave wire dipole is easy to construct, is not overly long, perhaps 66 feet or less in total length, and doubles for use on 15-meters on the third harmonic. In short, all amateur license holders can work this part of 40 meters with simple, inexpensive equipment.

However, the primary reason slow-speed CW operators frequent this part of the 40-meter band is that it still retains its traditional Novice subband character. A lot of straight key operators and easy-going, rag-chewers enjoy the relaxed CW speeds usually found here, which is just above the RTTY trills and just below the phone subband where some operators endlessly discuss who had the frequency first.

This old Novice subband reminds me of the last lines spoken at the end of each *Beverly Hillbillies* television show: “Set



“Because the response was admirably concise, it did not take long even at 5 to 7 wpm. As I looked at my stenographer’s pad, I noted what the other operator did not say. . . .” (Courtesy of KCØCCR)

a spell; take your shoes off; y’all come back now, y’hear?” < <http://bit.ly/kEEWb6> >.

So, not only is this a no-pressure, relaxed place in the 40-meter band to do CW, but I also gratefully recall how nice it was when operators were patient with me when I was first learning my way around a key.

So, true to the FISTS credos, *Accuracy transcends speed*, and *When you’ve worked a FISTS, you’ve worked a friend*, I had plans to spend the whole afternoon listening for slow CQs and spending whatever time it took to complete some relaxed QSOs.

In less than one sip of coffee I heard a slow, tentative CQ on 7.145 MHz

CQ CQ CQ DE KF8### KF8### KF8### K

The CQ call was being sent at perhaps 5 to 7 wpm and the callsign was a group D, 2 x 3, which is most likely a Technician Class operator in this part of 40 meters. I matched my speed to the speed of the CQ as best as I could and promptly responded.

KF8### DE KCØCCR KCØCCR KN

There was a short pause. Then the following response came over.

KCØCCR DE KF8### TXS OM. RST 569 569. OP JOE JOE. QTH ROSS ROSS, OH OH. HW? -- KCØCCR DE KF8### K

Because the response was admirably concise, it did not take long even at 5 to 7 wpm. As I looked at my stenographer's pad, I noted what KF8### did *not* say.

He *didn't* say, "Your RST is 569 569," "My name is Joe Joe," "My QTH is Ross Ross, Ohio Ohio," or "How is my signal?" If he had, the length of his transmission time would have easily doubled or tripled.

KF8###'s fist was clean and well-spaced. The important contact information

was politely repeated twice. Everything needed for a confirmed QSO was there in his first reply in case the band mysteriously dropped, as it sometimes does.

While the total words-per-minute sending rate was perhaps five to seven, I noticed that the individual character speed was closer to 18 wpm. This is the usual technique when a person learns code by the Farnsworth Method, where a person learns CW characters at about 18 wpm, but spaces the characters apart such

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Do you have a favorite Morse key, bug or paddle you'd like to see featured in WRO's Pounding Brass? Send a photograph with a brief description and why it is special to you to: < WorldRadioOnline@gmail.com >.

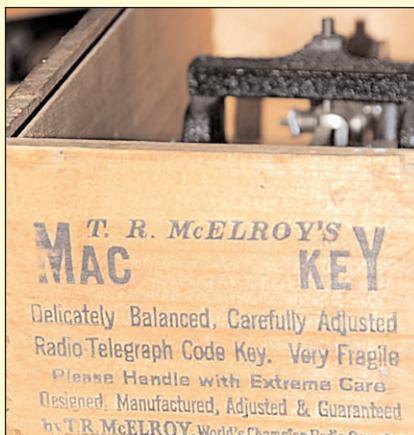
"I did a *double take* when I turned to page 42 of the April 2011 *WorldRadio Online*," writes **Alfred Watson, WG1D**, of Sturbridge, Massachusetts.

"What struck me at first glance was the similarity of the W6CLF J-36 Bug and the old bug I have. However, mine is an old Mac Key made by the T. R. McElroy Co.

"In addition to the bug, I even have the original box it came in, showing the original price of \$5.95 and the labeling on the end of the box."

Printed there is: "*Delicately Balanced, Carefully Adjusted Radio-Telegraph Code Key. Very Fragile. Please Handle With Extreme Care. Designed, Manufactured, Adjusted & Guaranteed by T. R. McElroy, World's Champion Radio Operator.*"

On CW, WG1D says he prefers a double-paddle electronic keyer. If you'd like to contact him, write: < ahwatson@charter.net >. (Photographs courtesy of WG1D)



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that the overall sending rate is perhaps 5 wpm in the beginning.

As aural recognition of the characters improves with practice, the spaces between characters naturally close and the overall sending speed increases without having to change the sound of the characters as they were first learned.

It is common that CW beginners often send faster than they can receive. When transmitting, characters are mentally matched to CW sounds, which are then executed by the hand almost as soon as the mental match has been made. When receiving, however, a person has to hear the CW, recognize the CW pattern and then mentally match that pattern to the correct character. This is why when CW tests were required, a person usually only had to receive CW. It was presumed that if a person could receive CW at 5, 13 or 20 wpm, he or she could also send at those speeds.

On the other hand, it is also common that a practiced CW operator using a straight key often can receive faster than he or she can send. With practice, a CW operator stops performing the intermediate mental translation steps from sound to character. The sound *is* the character. No translation thought process is needed. Consequently, the operator can receive faster than he or she can send.

With all that in mind and suspecting that the ink on KF8###'s license had been dry for a while, I took a chance, slightly pushed up the speed to 9 or 10 wpm, and sent the following:

KF8### DE KCØCCR -- R SOLID JOE. RST 589 589 SUM QRN. QTH HIAWATHA HIAWATHA, KS KS. OP RANDY RANDY. FISTS 6588 6588. UR SIG FB. RIG? -- KF8### DE KCØCCR K

There was a slightly-longer pause at the other end this time. Then the following came over at about 13 wpm:

KCØCCR DE KF8### -- R SOLID RANDY. SRI NO FISTS. FT-897D, 100 W, MFJ 941E, FULL G5RV UP 30 FT ALIGNED N ES S, HIMOUND HK 705 STR KEY. LTRAIN, WNDY, 42 F. U? -- KCØCCR DE KF8### K

Again, I was impressed with the conciseness of the reply despite the fact that I had to significantly quicken the speed of my note taking. KF8###'s speed had more than doubled, yet he hadn't said PSE QRS (please send slower), or asked for anything to be repeated. This emboldened me to send the following at 15 wpm.

KF8### DE KCØCCR -- R JOE.
MFJ 9040, 5 W, MFJ 971, 40 M
HORZ ZEPP UP 25 FT, AMECO K1
STR KEY. SKIES GRAY ES 38 F.
GUD DAY TO WRK CW. --KF8###
DE KCØCCR K

With the usual preliminaries out of the way, KF8### didn't hesitate. His chatty reply at 18 wpm came over as soon as I had finished.

KCØCCR DE KF8### -- R
RANDY. FUN QRP SETUP U HV.
USE FT-817 ES BUDDIPOLE WHEN
PORT. WISH WX NICER TODAY
FOR PORT OPS. WL GET FIST NM
AT DAYTON THIS YR. GOING TO
DAYTON? NICE ST PARK FOR
CAMPNG NOT FAR FRM DAYTON
ES NOT FULL THEN, HUESTON
WOODS. --
KCØCCR DE KF8### K

I was scribbling as fast as I could. What once had been well formed cursive letters now looked like Gregg's short-hand squiggles across the page. While there have been a few gifted individuals who can pound out 35 wpm with a hand key, most brass pounders top out at about 22 to 25 wpm. I am in the latter category. I looked over my note pad and began my CW riposte at maybe 20 wpm.

KF8### DE KCØCCR -- STILL
SOLID JOE. WL CHECK OUT PARK.
C, DAYTON THIS YR. WL CAMP
AND WK PORT. MEET FOR LUNCH
IN HALL WHERE CHOC CHEESE-
CAKE ON A STICK SOLD? --
KF8### DE KCØCCR K

As I finished my message, my hand quickly shifted from the key to the pencil like a quick draw artist. With no break between my last character and KF8###'s first, the following came over at about 22 wpm.

KCØCCR DE KF8### -- SOLID
RANDY. AS

"Ok," I thought, "perhaps KF8### has max'ed out and the "AS" signifies that he needs a breather." However, no sooner had that thought crossed from one ear to the other, when KF8### came back over the air at a brisk 24 wpm.

KCØCCR DE KF8### -- SRI FER
AS. CHNGED TO RT HAND.

Spice Up Your CW Social Life – Attend a QSO Party

QSO parties are fun and great way to work CW. Here is a list of some of the upcoming QSO parties — some of which are CW only. Check out the requirements on the Web sites if you plan to submit an entry.

Even if you don't enter, work a few of the contesters to help out their scores. (To determine contest periods in these listings applicable to your local time or to UTC, visit the TimeZone Converter at: < <http://bit.ly/m0gxu6> >. – Ed.)

U.S. Counties QSO Party

July 30, 7 a.m. to 7 p.m. (Central time), and July 31, 7 a.m. to 6 p.m. (Central time). Operate on 80, 40, 20, 15 and 10 meters: < <http://bit.ly/j08JEp> >.

NCCC Sprint Ladder

August 5, 9:30 p.m. to 10 p.m. (Central time). That's right, just 30 minutes of fun. Operate on 160, 80, 40 and 20 meters: < <http://bit.ly/kXTDy1> >.

North American QSO CW Party

August 6, 1 p.m. to 7 p.m. (Central time). Operate 160, 80, 40, 20, 15 and 10 meters: < <http://bit.ly/jv0ox6> >.

Maryland-DC QSO Party

August 13, noon to midnight (Eastern time); and August 14, noon to 8 p.m. (Eastern time). There is a premium for CW QSOs. < <http://bit.ly/ig2dru> >.

Kansas QSO Party

August 27, 9 a.m. to 9 p.m. (Central time) and August 28, 9 a.m. to 3 p.m. (Central time). Kansas is celebrating 150 years of clear skies, roaming buffalo, Dorothy and Toto: < <http://bit.ly/mktWqZ> >.



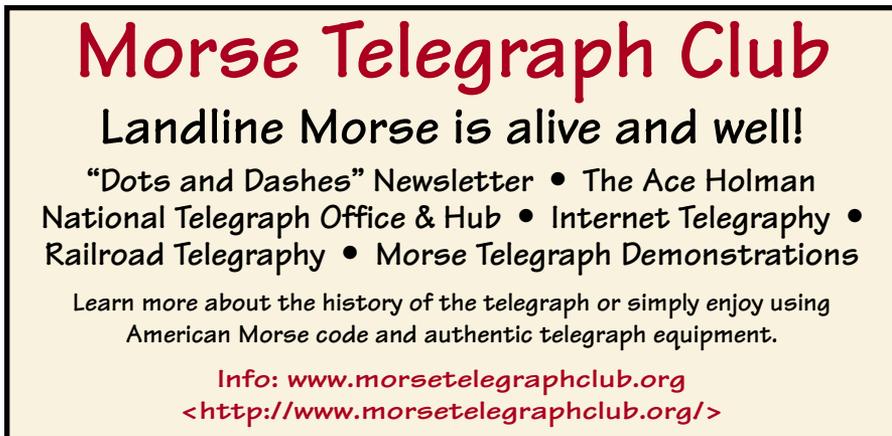
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How to Help a Disabled Friend Pick the Right Radio

By Patrick Tice, WAØTDA

What is a good radio for a person with a disability? Here is how to help a friend decide.

Assisting a person with a disability effectively depends on so many different factors, not the least of which is what kind of disability the operator might have and what kind of amateur radio operation he or she might enjoy.

One of the most common questions is about which radio is best for a blind operator. Much less common are questions about how a person with very limited muscle control or mobility can control a radio.

Generally speaking, these two categories of disability-related questions make up the bulk of the inquiries we get about accessible radio equipment. Much farther down on the list are questions about how to stay on the air when one is losing one's hearing. I have to confess this is somewhat surprising to me because more and more of us in the baby boomer generation are experiencing hearing problems.

Perhaps it is because there are other options already out there for operating digital modes or by using simple solutions like good headphones and audio shaping filters to enhance the voice part of the audio spectrum. In any case, I have always been fond of using off-the-shelf solutions whenever possible.

Let's discuss how to find out what a person with a disability really needs and learn about some of the basic features that manufacturers already include in some of their transceivers.

Step 1: Find Out the Person's Operating Goals

Of course, amateur radio is one of those *big tent* activities that has so many different facets that you have to begin by narrowing down what type of operation a person might prefer. People with disabilities are no different than anyone else in that they will have definite preferences



Handiham Volunteer Matt Arthur, KAØPQW, knows blind operation and helps other operators make the right decisions about choosing their station equipment. (Courtesy of WAØTDA)

for single sideband operation, CW, digital modes, QRP (low power), amateur radio satellites, emergency communications and many others.

I don't know about you, but I don't have time to explore each and every facet of amateur radio, so I have to set some priorities. If I prefer operating 75- and 40-meter SSB traffic nets over working DX or VHF repeater operation, that is an important thing to know when considering how to choose radio equipment and configure my station.

That is why the first thing I always ask a person with a disability who comes to me wanting to know which radio is best is: "Please tell me a little bit about what kind of operating you like to do."

If you don't ask that question, you might spend 20 minutes extolling the virtues of an excellent blind-friendly VHF/UHF FM mobile radio when in fact the person you are talking to is more inter-

ested in weak signal VHF Morse code operation.

As I talk to a person about the type of amateur radio operation they prefer, I can generally get a sense of what priorities they put on different types and modes of operation. This is often a good time to ask if they have a budget in mind for setting up their station. It would be great to have the resources to set up a complete station from the get-go, but if the budget is tight, you will need to find that out in order to help your friend decide which equipment should get top priority and what will have to go on the wish list for later.

By the way, I always have a computer at hand when I am talking on the phone, so I have already looked up the person's callsign and license class. If you don't have a computer at the time you talk, just go ahead and ask what license class he or she holds. This will have a bearing on what their amateur radio priorities might be.

Be sure to ask what the antenna situation is like. You will have a better idea about what kind of recommendations to make later on in the conversation if you know if the person you are helping lives in a single-family home with a large yard or in a condominium with restrictive covenants.

Step 2: Lay Out Some Choices

Now that you have some ideas about the operator's amateur radio goals, you can start making some suggestions.

Something to keep in mind is that lots of radios have accessibility features that you might not have even recognized before. One of them is keypad frequency entry. While this is not ordinarily considered an accessibility feature for people with disabilities, it can make a real difference for a person who is blind because he or she can directly enter a frequency and thus be able to set the radio's frequency without being able to see the frequency display.

A large, high-contrast frequency display makes it easier for just about anyone to read, but a person with low vision may find this feature to be a vital part of the design.

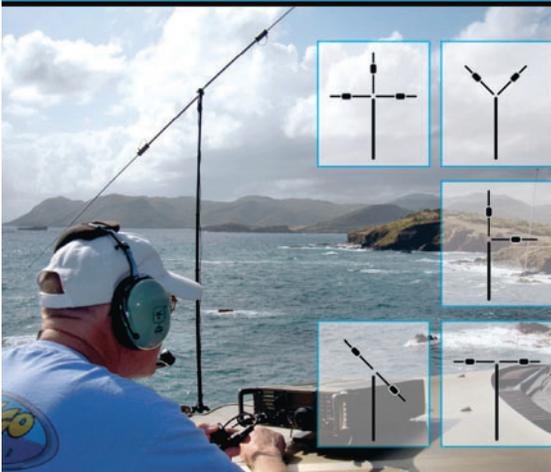
A front-firing speaker helps all of us hear the radio better without having to resort to headphones or an accessory speaker. Larger knobs and buttons designed for *human beings* make it easier for anyone to use a radio, and a person with a mobility impairment or muscle disorder may find this kind of radio to be the only one they can reasonably control.

More radios from ICOM and Yaesu are coming with speech frequency announcement capability already installed. You just press a button near the main tuning knob and the frequency display is read out in a clear voice.

Of course this feature is useful in mobile operation when a driver wants to maintain a view of the road ahead instead of looking at a radio, but blind operators also find it a huge convenience.

Another feature that is often overlooked for accessibility is the built-in antenna tuner. An operator who is blind or a person with severe arthritis may find it inconvenient or downright impossible to tune a manual antenna tuner, but automatic tuners do the job easily and quickly. What I am getting at here is that there are some universal design features that can make operating


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a radio easier, whether the operator has a disability or not.

Let's summarize some of the basic things to look for in a radio that might be considered universal good design:

- Thoughtfully laid out front panel with direct keypad entry.
- Front-firing speaker.
- Large, easy to grasp controls and good-sized buttons.
- Large, high-contrast frequency display.
- Built-in voice frequency announcements.
- Automatic antenna tuner.
- USB or other data port allowing rig control via computer.

Of course, not every radio will have every desirable feature. Some, such as the ICOM's IC-7200, have all of these features except one, an automatic antenna tuner. You can easily recommend the addition of an external automatic antenna tuner from companies like MFJ or LDG, among others.

Other radios, such as the Kenwood TS-480 SAT, offer voice frequency and menu announcements, but only with the addition of an optional module. Some

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people can run their computers with special accessibility software, and may be interested in controlling the radio that way.

Step 3: Help Your Friend Narrow the Options

By now you know a fair amount about your friend's amateur radio goals. You have discussed any restrictions that might be placed on antenna installation and you have thoughtfully considered budget limitations.

You have, in short, collected a fair amount of data about the person you are assisting. Unless you are extraordinarily knowledgeable about many different models of amateur radio gear, you probably — like me — have to do a little bit of research. If that means telling your friend that you will get back to them the next day or in a couple of hours, or whatever time frame you deem necessary to do your research, that is perfectly okay.

The one thing you must be sure to do is to follow through and get back to your friend when you say you will with good information. Nothing is more frustrating than people who say they're going to do something and then never seem to get it done.

Although I sometimes need to do research on these types of questions, I find that I usually know enough to at least make a preliminary recommendation during our initial conversation. Sometimes this is good enough, and the person I am trying to help will tell me so and take it from that point on their own.

It is important to remember that people generally like to feel empowered by being able to make their own decisions. When I am asked to help a person decide what kind of a radio will work for them, I consider myself more of a facilitator in their decision-making rather than an authority whose decisions must be followed.

Okay, so you now have in your mind what systems engineers call a *decision tree*. You are able to follow the branches of the tree, helping to guide your friend by allowing him or her to make the right decisions at each branch.

For example, if you are working with a blind person who wants to operate VHF-UHF FM, you know early on in the *decision tree* that you are not going to follow the HF branch. Instead, you will be asking about what kind of VHF/UHF operation your friend would like.

If it is fixed or mobile operation, you are going to be talking about a radio like the Kenwood TM-V71A with an optional VGS1 voice module.

If it is portable operation with a convenient, small radio, you are going to be talking about handheld transceivers like the Kenwood TH-F6A or the Wouxun KG-UVD1P.

Step 4: Manage Expectations

But what if early on in the *decision tree* you encounter unrealistic expectations? Let's say you're talking with a guy and he tells you he has an Extra Class ticket and is very interested in making contacts on HF. He is unable to do any antenna work, is on Social Security disability with a small budget, and lives on the 10th floor of a condominium building. This is the sort of situation that requires your gentle guidance toward managing expectations.

Yes, sometimes it is possible to put a mobile antenna on a condominium balcony, but in this case is that really the best solution? An alternative might be to operate HF via an Internet remote base HF station like the ones provided by the Handiham

System or the W7DXX system. Another alternative might be to operate through an EchoLink or IRLP repeater system. If your friend is open to trying digital modes like PSK-31, it may be possible to make a reasonable number of contacts with low power and a very modest antenna system.

While these options might not be exactly what your friend has in mind, the reality of the situation is that a full range of HF operations on a small budget from an antenna-restricted location is just not that practical. Helping your friend to understand this limitation and then to offer alternatives is the best bet for managing expectations and helping your friend to get the most out of amateur radio.

Step 5: Follow Up to Make Sure Your Friend Got On the Air

People with disabilities are as individual and different from each other as any of us. Some are real go-getters and will take the lead, assertively planning and building their amateur radio stations to the best of their ability, even asking for volunteer help and directing the project. Others will be more passive and perhaps be shy about asking for a radio club member to help them unpack and connect a radio. This is where the follow-up call is important, because it is where you will find out whether or not your friend was able to act on and implement his or her plan to build a station and get on the air.

Any radio club worth its salt has a team of volunteers who will be able to help club members complete station and antenna projects and get on the air. The follow-up call is a good time to suggest these radio club resources to your friend.

Step 6: GOTA!

Yes, GOTA stands for *get on the air*, just as it does on ARRL Field Day. What you want to do is make sure your friend is actually getting on the air and using his or her new station. Take an active role in promoting your club's repeater system, and invite your friend to take some time to check in to nets that you know he or she could reach on the air.

Ensure your friend is active by pointing out on-the-air activities such as contests, special events, informal and formal nets, emergency communications training and more.

In Closing . . .

Helping a person with a disability make some decisions about station equipment and operation can be a very rewarding activity. Not only will you feel good and learn something yourself about how people with disabilities get on the air, but you will have also helped another operator enjoy amateur radio and made your local amateur radio community even stronger, perhaps even gaining a new member for your radio club.

The non-profit Courage Handiham System is a resource for people with disabilities who want to learn amateur radio. Contact us to find out more, join or support our work at:

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Adventure in the Colorado Rockies — Raspberries, Anyone?

By Shel Radin, KFØUR

(Shel Radin, KFØUR, a veteran low power operator and avid outdoorsman, seized the opportunity for some trail-friendly radio during a hike in the Colorado Rockies with non-ham friends. He told the story in a local club's newsletter a few years ago. "The target audience was VHFers and UHFers who don't get on the high frequencies much," and hadn't had much experience in the field. Shel has lived in Colorado Springs since 1991. – Ed.)

My XYL, Judy, and I were invited by our friends Rob and Jody to go on a hike up to the top of Raspberry Mountain, just outside of Divide, Colorado, where they live.

Always enjoying the Colorado countryside, we gratefully accepted. It's one of the pleasures of life and living in Colorado.

One of the other pleasures is owning an Elecraft KX-1 trail-friendly rig. I've had it for a little while — purchased at the Dayton Hamvention® a few years ago. Mine is set for 20, 30 and 40 meters, although the new 30-meter module also provides 80 meters. It's a 4-watt, CW rig with a built-in keyer, digital display, antenna tuner, *plus, plus, plus*. It's a 10-ounce joy to operate.

The other components I use are a 12-volt, 2-amp/hour gel cell, a solar panel and charge controller that keeps the battery topped off so I maintain 4 watts. I use a Palm mini-paddle, as well.

Rob, who is not a radio amateur, mentioned his residence is at 9,400-foot elevation. The top of Raspberry Mountain is 10,600 feet. My mind immediately thought of operating portable HF with my KX-1 from the top. I always wanted to do that. (Visit < <http://bit.ly/kPrK3X> > for details on Raspberry Mountain. – Ed.)

I've used the KX-1 on local trails, but had not taken it to the top of any mountain yet. So we decided to go on a Sunday afternoon, packed the rig in my backpack and headed for Divide.

If you Google Raspberry Mountain, you'll find that a trailhead exists off of Route 67, going toward Cripple Creek. However, little did I know until we got to Rob and Jody's place that the trail is also accessible from their property. *Very cool. We didn't need no stinking trailhead!*

We left their back door, headed through their woods and with their guidance, met up with the trail in a short time.

The trail to the top is a 3-mile circuitous one, but not very hard. It's a great hike that gradually takes you up 1,200 feet. Along the way, you get some great glimpses of fabulous views through the trees.

After an hour and a half, we reached the top. At the summit you climb up a few steps on some very climb-able boulders, and *wow*, what a view. You have 360 degrees of unobstructed



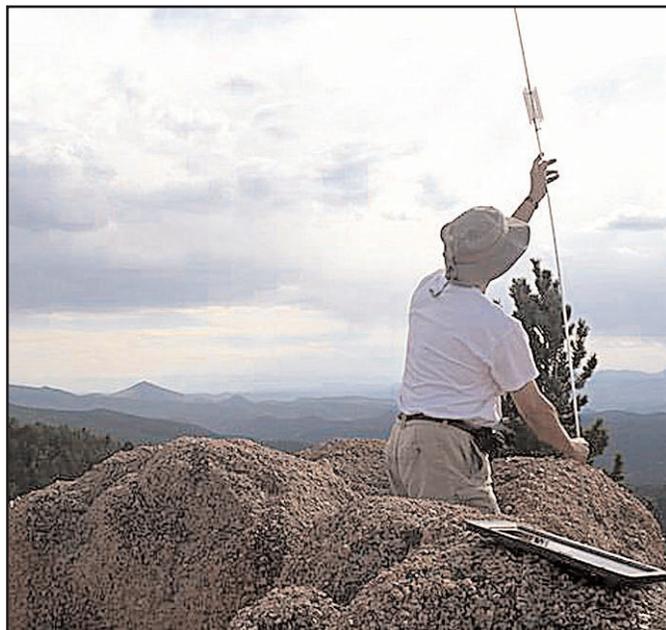
Shel Radkin, KFØUR, and his friend Rob, check out the bands at the top of Raspberry Mountain in the Colorado Rockies. (Photographs courtesy of KFØUR)



The summit of Raspberry Mountain provides a 360-degree view of the surrounding natural beauty.

views, including the west side of Pikes Peak, about 10 miles away, the town of Divide way down there to the north, and other places I don't know the names of — yet. We stood in awe for a while simply enjoying the view.

When I'd had enough awe, I started to set up my rig and see who I could contact. By now it was late afternoon, and we wouldn't be spending all that much time at the top. Assuming I wouldn't have any trees to host an end-fed Zepp, I opted to bring and use my portable homebrew vertical that just sticks in the ground. It's 1-foot long collapsed and is 12-feet tall,



KFØUR puts up his 12-foot-tall, center-loaded, trail-friendly vertical for some CW T-FR action.



Taking time out to play with the camera's automatic timer, Shel, Judy, Rob and Jody flash triumphant smiles on their hike up Raspberry Mountain on a Sunday afternoon.

center loaded with ground radials when set up. It has always worked great.

After just a few minutes, I was on 20 meters. After listening up and down a quiet band for a while and then calling CQ near 14.060 — the QRP (low power) calling frequency — I decided to move to 40 meters. Twenty meters just wasn't cooperating and my 4 watts needed some help.

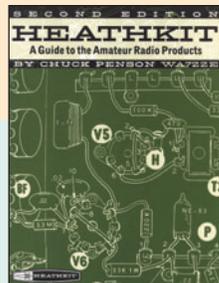
On 40 meters, I found activity. *Much better.* Almost immediately, I had a QSO with a fellow in Texas who heard me answer his CQ. *Just me, my 4 watts and killer views.* It doesn't get much better than that.

Now, I probably should mention that I view QRP hiking somewhat like fishing on a lake. Meaning, just being there is often enough, regardless of whether you catch anything (fish or QSO), but catching a fish or QSO makes it that much better!

I brought along an extra set of earbuds and an audio splitter so Rob and Jody, neither of whom are hams, could listen to the QSO. They don't know CW, but I translated it out loud for them, letter-by-letter, as I wrote it down. They thought it was cool. What can I say? CW is cool.

After that QSO, we decided to start our hike down, so we would get back to Rob and Jody's before dark. I was very satisfied with my one QSO, as it's not the number of QSOs, but the sheer joy of the whole experience.

The hike down was as beautiful as it was going up, plus I had the new memories of being at the top and operating. It's hard to describe. And at the time, this was all at the sunspot minimum. I can just imagine what it's like as the new solar cycle is ramping up. *Can't wait to go back.*



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WA6MHZ, El Cajon, California: '... Even More Radios. It's Madness!'

Pat Bunsold, WA6MHZ, of El Cajon, California, is, no doubt, a busy guy. When WRO put out a call on Facebook for Station Appearance candidates, he responded almost immediately by sending a photograph along with a short, no-nonsense list of his gear. Clearly, there's little time for elaboration. 'MHZ's plate is full, as is his amateur radio experience. Read on, and you'll see why.

Are you as proud of your station's appearance as WA6MHZ? Or do you find your messy radio shack quite comfortable and the perfect retreat for some on-air relaxation? Send digital photographs of your station with details to: < WorldRadioOnline@gmail.com > and we'll consider them for publication in Station Appearance in an upcoming edition of WRO.

If there's a YouTube video to accompany the still pictures, let us know and we'll set up a link.

His signature line says "Pat Bunsold, WA6MHZ, Curator, Crest Radio Museum" in El Cajon, California. A visit to a Crest Internet site reveals a remarkable collection of communications gear displayed in a most unconventional way. *But we're getting ahead of ourselves.*

Answering a call for *Station Appearance* candidates on WRO's Facebook page < <https://www.facebook.com/WorldRadioOnline> >, 'MHZ sent the accompanying photograph with nothing more than this: ICOM IC-736 for HF (high-frequency operation); Heathkit SS-9000 and power supply for a second HF station (vintage); Kenwood TS-450S for digital HF; Yaesu FT-736R for 6 and 2 meters; 222 and 432 MHz SSB; Kenwood TM-700 for 2 meters/450 MHz FM; Heathkit SB-200 for QRO (high power) HF. Not shown is a new ICOM IC-575H for 6-meter SSB."



A photograph submitted for WRO's Station Appearance by Pat Bunsold, WA6MHZ, provides only part of the 'MHZ story when you consider the mountain of radio gear he oversees as curator of Crest Radio Museum.
(Courtesy of WA6MHZ)

Mount a Google search for *Crest Radio Museum, El Cajon, California* and you'll have a clue why he might not have a lot of disposable time to wax eloquent about his station. The curator has his hands — and museum — pretty full, it appears. Check out: < <http://bit.ly/i0yMV6> >.

Crest features “almost 600 vintage amateur, CB (Citizens Band), broadcast and shortwave radios with a focus on the his-

tory of 2-meters,” according to its web posting. Scroll the PDFs of the pictures and you'll find a remarkable collection of radios, and descriptive captions:

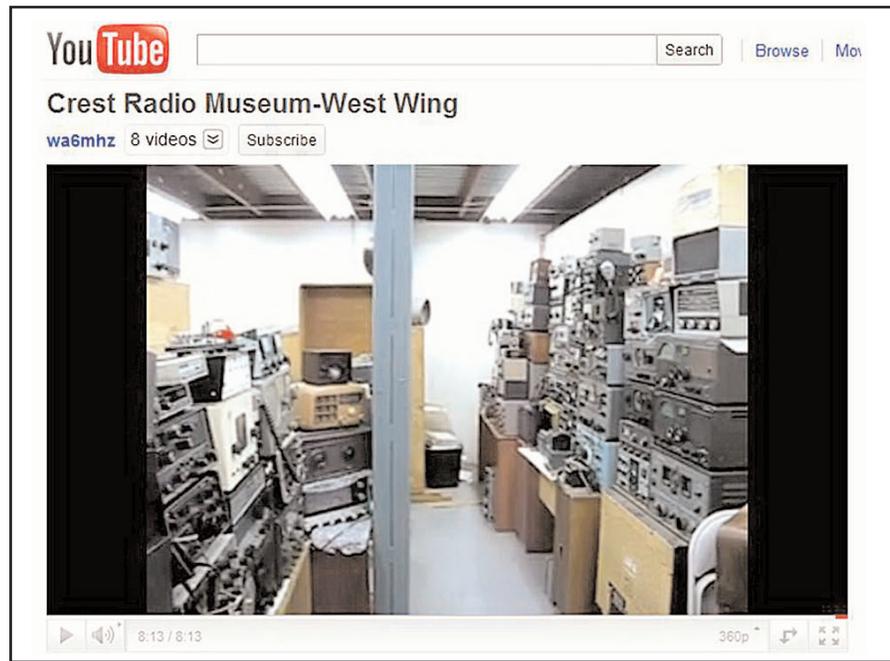
- *Stacked floor to ceiling! EVERYWHERE!*
- *And even MORE radios. It's madness!*
- *You name it. It's here . . . somewhere.*
- *There better NEVER be an earthquake.*

• *Radios from World War II — I wanted a B-17 for the museum but settled for the radios in it.*

We know nothing more about the museum than the information provided in Crest's PDF on the Web. But if you're getting the impression this is not your typical vintage gear display, you're probably right.

To see for yourself, take a video tour of the west wing of Crest Radio Museum courtesy of WA6MHZ on YouTube at: < <http://bit.ly/1A9MqW> >.

— Richard Fisher, KI6SN



WA6MHZ takes viewers on a tour of the west wing of the Crest Radio Museum in El Cajon, California in this video < <http://bit.ly/1A9MqW> > uploaded to YouTube on May 22, 2009. (Screen grab from YouTube)

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The Best-Laid Plans: There's More to Them Than Filling in the Blanks

Commentary

By Bill Sexton, N1IN/AAM1RD/AAR1FP

There is another unhappy event in aviation history that merits at least a mention in the run-up to 9/11's 10th anniversary next month. It still touches our lives 76 years afterward.

The story is a bit complicated but here it goes: In the autumn of 1935 the Army Air Corps was choosing a design for the world's first heavy (four-engine) bomber, and three emerging giants of the young U.S. aircraft industry had lunged at the challenge.

Going into the final trials at Wright Field, Dayton, on Oct. 30, Boeing's Model 299 claimed the lead over the Martin and Douglas entries on speed, range and bomb-carrying capacity. The shiny aluminum 299 was huge for its time, with a curious window-paned nose where the forward gunner sat.

It began the final test with a flawless takeoff run. But seconds into climb, 299 abruptly stalled and crashed. The Air Corps pilot and an observer, Boeing's chief test pilot, lost their lives in the flames.

End of story? No, just the beginning.

It did seem like the finish for Boeing in its first bid to build for the Army. Douglas got the order for 133 B-18s.

Later, however, investigators determined the 299's design was not at fault. They concluded the pilot had failed to check his elevator control before taking off. It was still locked in the safety position to prevent movement on the ground.

Lesson Learned: The two fliers did not die in vain. With its design vindicated, Boeing went on to build an astonishing 12,731 of its B-17 four-engine bombers — the immortal "Flying Fortress" of World War II.

And high technology acquired a new tool: the preflight checklist. Never again would a pilot be expected to remember the myriad details of starting up and taking off.



Major Ployer P. Hill, second from right in this photo with aviator colleagues, was Chief of the Flying Branch of the Air Materiel Division at Wright Field when the Air Corps' first heavy bomber underwent trials. Hill joined the Army in 1917 while aviation was a Signal Corps responsibility but got his wings too late for World War I combat. (Courtesy of Hill Air Force Base)

Today we find checklists hidden in plain sight just about everywhere: The maintenance chart that comes with a new car. The blanks you fill in to make an online flight reservation. Or the most dramatic of all, those operatic countdowns preceding every space mission.

MARS offers a classic instance in its *EEI Report* (for "Essential Elements of Information"). To help the sender gather all the data that commanders might need, this standardized form ticks off seven specific areas of "ground truth," such as status of transportation, medical facilities, electric power and so on.

Now don't go away! This column is not about bureaucratic form-filling, much less aviation safety. Those issues are only mentioned to set the stage for a much larg-

er subject — one that wins far too little attention from emergency managers and communicators.

That subject is planning, of which the preflight checklist is a prime (if rudimentary) example. And of course planning was central to 9/11 — the mind-boggling imagination of its perpetrators, and the assumed lack of it in America's defenses before and response measures afterward.

Too little attention? Federal Emergency Management Agency (FEMA) staffers might object to any suggestion that planning was or is neglected. Massive scripted exercises had been conducted regularly. Only last October the agency devoted 124 pages-worth of attention in its *Comprehensive Preparedness Guide (CPG) 101 Version 2.0*.

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**“It wasn't raining when Noah built the ark.”
– Howard Duff, actor (1918-1990)**

MARS leadership would doubtless agree, pointing to the huge collective effort that goes into writing and updating the Oplan (Operation Plan) that every region and state must possess — and then crank up fresh ones for every incident or exercise that comes along.

Well, that's precisely the point. All too often the physical construction of planning documents claims so much training time that there's little if any left for learning the *art* of planning, which is the fun part.

Case in point: Of the 58 pages of text in the current *Army MARS National Oplan*, 46 pages are devoted to the line-by-line physical format of reports. Since this Oplan is not a public document, you'll have to take my word that it offers little help on the creative side of planning; that is, collecting information, mining it for vulnerabilities, assessing available resources and scrutinizing the entire array of possible responses to each and every threat. Without all that, a perfectly formatted plan is no plan at all.

Planning under pressure: General Dwight D. Eisenhower, the master architect of D-Day in World War II, insisted that the *process* of planning is what's important, not the document that results.

A new book on Ike's presidency shows how his knack for planning got the U.S. through one white-knuckle crisis after

Time for a Fresh Game Plan for Homeland Security?

The success of U.S. forces taking out Al Qaeda's top leadership calls for revising this country's anti-terrorism strategy, according to homeland security consultant and Washington think tank executive Stephen Flynn.

“Al Qaeda's senior leadership infrastructure has essentially been dismantled, undermining its ability to conduct sophisticated large-scale operations in North America,” he wrote in the May-June issue of *Foreign Affairs*, published just before the killing of Osama bin Laden.

“Now, attacks on U.S. soil are likely to be perpetrated by homegrown operatives who act alone or with one or two accomplices, Flynn said. “Such operations are difficult to detect and intercept. Yet lone gunmen and suicide bombers can inflict only limited damage . . .

“Mother Nature generates far more frequent and disastrous incidents,” he said.

Flynn's much-quoted 2007 book, *The Edge of Disaster*, warned of American vulnerability to both manmade and natural catastrophe. He is the new president of the Center for National Policy, which counts incoming Defense Secretary Leon Panetta and former Secretary of State Madeleine Albright among past leaders.

Flynn criticized federal strategy for failing to harness civil society and the private sector in its counter-terrorism planning and also initiating “intrusive passenger screening” at airports before winning public acceptance. Overall, in Flynn's view, “The United States has made a mess of homeland security.”

– Bill Sexton, NIIN / AAMIRD / AARIFP

another during one of the most fraught years of the Cold War. In *Eisenhower 1956* (New York, Simon & Shuster, 2011), historian Dwight A. Nichols includes this portrayal of the presidential approach:

Eisenhower's favorite planning aphorism was, “Plans are worthless but planning is everything.” In any emergency, he counseled, “the first thing you do is to take all the plans off the top shelf and throw them out the window and start once more.” That did not mean (the historian writes) that the planning process was pointless. On the contrary, he believed it was essential to plan so you are prepared “to do the normal thing when everybody else is going nuts.”

Nichols mined Ike's salty comment from a national defense conference held in 1957. That was the year after the President had to cope with (a) the invasion of Egypt by Israeli, French and British forces, predictably followed by (b) Arab sabotage of Europe's supply of middle eastern oil and (c) Soviet threats to intervene militarily, which could (d) bring the U.S. into the war; and then (e) the near-simultaneous Soviet invasion of Hungary and (f) veiled threats of Soviet nuclear attack should the U.S. involve itself on the freedom fighters' side. All this in an election year (g) while Ike was (h) battling a Democratic-controlled Congress and (i) recovering from a heart attack.

Those 12 months did indeed have Washington “going nuts,” but Ike's shrewd plan-building held firm, stiffened by his deeply-felt and often-expressed dread that some small such event — such as that which sparked World War I — might trigger World War III.

Why we're all involved: This is supposed to be a column about emergency communications, not history, but there really is good reason for MARS members to immerse themselves in the theory and practice of plan building. It's not a skill reserved for generals, governors and state MARS directors only.

Although I've never heard the idea expressed quite this way, in one particular sense MARS bears closer resemblance to a police department than a military unit.

Consider this parallel: Arriving on an emergency call, the cop on the beat, by immediate perceptions, decisions and action (or inaction), pretty much determines how the situation will develop from then on. The departmental brass may intervene at some point, but their ability to alter the subsequent narrative is limited.

You can see how the initial Incident Notifications from a disaster could shape the immediate response depending on their completeness, clarity and timeliness. Individual communicators *do* have a decisive role to play.

Yet of the 33 Allied Communications Publications that variously deal with messaging, *not one* is devoted to the individual writing skills and techniques that distinguish a professional-level communication.

ACP 121G declares, “The need for brevity and clarity in message preparation cannot be over emphasized. To avoid misinterpretation and further explanatory messages, the message must state exactly what is meant and must not be vague or ambiguous.”

But how to do it? The ACP's prescription would make a great introduction for specific *do-and-don't* examples of what is meant by brevity and clarity. Instead the ACP veers off into



“It began the final test with a flawless takeoff run. But seconds into climb, 299 abruptly stalled and crashed. The Air Corps pilot and an observer, Boeing’s chief test pilot, lost their lives in the flames.” (Courtesy of Hill Air Force Base)

Yet Another Checklist: The ‘TABACO’ Test

Operational communications should be subjected to six assessments before transmission:

1 - Timeliness: An Incident Notification (EEI) or Oplan message must be considered in the same terms as a fire alarm. It is of little use after the fire is out. Delays must be avoided in both preparation and transmission.

2 - Authority: The sources of operational data, especially ground truth (“verification of photointerpretation by observers on the ground”) must be trustworthy. Unproven or questionable information, if deemed useful for speculative consideration, should be clearly red-flagged.

3 - Brevity: Confine the text to essentials. Avoid repetition. Delete unnecessary words and phrases (“at this time,” “as far as can be ascertained,” “as best as can be ascertained”).

4 - Accuracy: Emergency communications should use restrained language and avoid any tendency to enlarge the scale or impact of an event. Given the pressure and confusion prevailing in an actual incident, where possible, a knowledgeable second person should read the text back and challenge doubtful or unclear content.

5 - Clarity: Simple, direct language and short sentences are best. A brief summary followed by detail in chronological order is most easily comprehended where format requirements permit it. Complex information should be presented in logical sequence. Obscure words or acronyms (“JISCC”) should be defined if not avoided entirely.

6 - Omniscient: Are all bases covered? The old newspaper mantra is useful for checking completeness, not necessarily in this order: “Who” (status of responding units, in place and/or en route); “What” (description of the event or change since the previous report or planning document; “When” (the timegroup at which this report is effective or when prospective changes of status are predicted); “Where” (GPS coordinates); and “How” (how to get there: the best route for reinforcements to use). Transportation blockages and alternate approaches should be described in full detail and status updated promptly.

If any significant element is not available, say so and then go after it for the next update. – Adapted (and updated) from the Army MARS “MARS 101” training course, 2009.

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General Dwight D. Eisenhower, the master architect of D-Day, insisted that the *process* of planning is what's important, not the document that results.

a discussion of punctuation and abbreviation. FEMA's CPG 101 is more helpful:

"Rather than concentrating on every detail of how to achieve the objective, an effective plan structures thinking and supports insight, creativity, and initiative in the face of an uncertain and fluid environment. (Planning is) often considered to be both an art and a science in that successful planners are able to draw from both operational experience and an understanding of emergency management principles, but also are intuitive, creative, and have the ability to anticipate the unexpected."

My reading of that passage alongside Eisenhower's maxim goes like this: Our basic training, including learning those boring — if necessary — reporting templates, is only the prelude. Far more important is constant participation in exercises: matching wits with one challenging scenario after another and thereby polishing the *process* espoused by Eisenhower. Not quarterly drills. Not monthly. Constant.

For a widely dispersed organization such as MARS, military desktop exercising (not to be confused with the callisthenic kind) offers a natural on-air training tool. Participants in such competitive brainstorming develop their responses to changing conditions thrown at them in real time. That's arguably the most practical way to prepare, as General Eisenhower had put it, for "do(ing) the normal thing when everybody else is going nuts."

Ike is still leading: You can see the general's influence in the Army Field Manual 5-0, *Army Planning and Orders Production* (2005 edition [since revised], approved for public release). It reads:

"A plan is a continuous, evolving framework of anticipated actions that maximize opportunities and guide subordinates through each phase of the operation. A plan may be a formal, articulated document or an informal scheme . . . Understanding the art of planning is primarily gained through operational training and experience. Effective planners understand and master both the science and the art of planning." (Emphasis added).

"Operational training and experience" — that phrase brings to mind how the needless death of Major Ployer P. Hill, the Boeing 299 pilot at Wright Field in 1935, led to development of the preflight checklist. Is there any "plan" more universally applied in today's world?

Sadly, his loss also illustrates the price of inadequate planning, as did the flawed response on 9/11/2001.

At least Major Hill is not forgotten. The U.S. Air Force Air Materiel Command installation in Ogden, Utah perpetuates his name: Hill AFB, and a monument bears this epitaph: "His eyes envisioned and he dared to fly tomorrow's airplane with a spirit that met all tests unafraid . . ."

Here's FEMA's Take on Plan-Making

A planning team's main concern is to include all essential information and instructions in the EOP (Emergency Operations Plan).

FEMA does not mandate a particular format for EOPs. In the final analysis, an EOP's format is acceptable if users understand it, are comfortable with it, and can extract the information they need. In designing a format for an *all-hazards* EOP, the planning team should consider the following:

Organization. Do the EOP section and subsection titles help users find what they need, or must users sift through information that is not relevant? Can single plan components be revised without forcing a substantial rewrite of the entire EOP?

Progression. In any one section of the EOP, does each element seem to follow from the previous one, or are some items strikingly out of place? Can the reader grasp the rationale for the sequence and scan for the information he or she needs?

Consistency. Does each section of the EOP use the same logical progression of elements, or must the reader reorient himself or herself in each section?

Adaptability. Does the EOP's organization make its information easy to use during unanticipated situations?

Compatibility. Does the EOP format promote or hinder coordination with other jurisdictions, including the state and/or Federal Government? Can reformatting the EOP or making a chart of the coordinating relationships (i.e., a "crosswalk") solve problems in this area?

Inclusivity. Does the EOP appropriately address the needs of those with disabilities or other access and functional needs, children, individuals with limited English proficiency and household pets and service animals?

— *Developing and Maintaining Emergency Operation Plans (CPG 101 version 2.0, Nov. 2010)*



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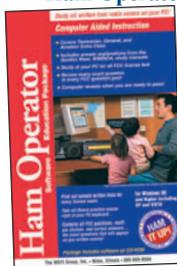
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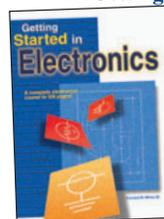
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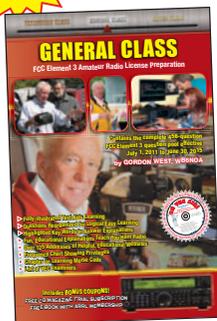
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Let's Talk to the Public About Ham Radio

By Devere "Dee" Logan, W1HEO

Radio hams love to talk. And they love to talk about amateur radio. So it seems reasonable for us to seek opportunities to talk to people about our amazing hobby and public service. We certainly have a great topic, but for some, the thought of giving a speech may create a panic attack.

Not to worry! After all, we know the subject well. To calm our nerves we just need a few tips on preparing and delivering a talk. So let's go over some of the basics, and soon we'll be ready to talk to the public about amateur radio. Solid preparation is the best confidence builder.

It All Starts With Planning

Establishing the objective of a talk needs to be the first step in the planning phase. It could be defining amateur radio and its many interesting aspects while emphasizing the fun and public service benefits. We should know our audience and how best to communicate with it.

Since describing the remarkably wide world of ham radio in detail could take hours, your talk needs to stick to basics. Assuming that your audience probably knows *little or nothing*

about hams, think about presenting *the big picture* while avoiding excess details.

Think like a reporter: Cover the "who, what, where, when, why and how," that are commonly found in most news stories.

One definition of ham radio that we've used goes like this: "Amateur radio is a worldwide network of people united by a common interest in wireless communications. There are some 700,000 licensed radio *hams* in the United States and nearly three million people around the world who enjoy this hobby and public service.

"It's a lot of fun, but also has a serious side by providing communication in emergencies."

Watch the Clock

Try to keep your presentation to 20 minutes. *Why?* Because Ronald Reagan said so. Former presidential speech writer Peggy Noonan says in her book, *Simply Speaking*, that Reagan knew that 20 minutes is more than enough time to say the most important thing in the world.

"The Gettysburg Address went only three minutes or so,"



A video, slide show or Power Point presentation — such as this one used in a training session by SKYWARN® instructors — can add a dynamic factor to your speech or presentation. Make your own visuals, or use a presentation that has been produced for use in spreading the word about amateur radio.

(Courtesy of Lake County, Florida SKYWARN®)



Amateur Radio: Wireless Window to the World is a production of the nonprofit Ham Radio Promotion Project. The video gives an overview of amateur radio. For details on obtaining a copy, visit: < <http://www.neoham.org> >. (Courtesy of Ham Radio Promotion Project)

she said. “The more important the message, the less time required to say it.”

A 20-minute speech is about 10 typed pages long, double spaced. Which is why your speech should be written, not ad-libbed. You probably don’t want to read it, but it’s good to have text handy as a reference should you need it. Lacking a written talk can result in a wandering presentation that drifts off the subject and adds wasted minutes. It can also bore an audience.

Keep It Interesting

Amateur radio is a really interesting hobby, so giving dramatic examples of its fun aspects might convince your listeners to become licensed hams themselves. Hams enjoy some pretty exciting activities such as talking to people worldwide with a home radio station, communicating by satellite, contacting the International Space Station, bouncing signals off the moon, providing emergency communication and so on. Few hobbies offer this fantastic variety of options. So it’s easy to generate enthusiasm as you describe them.

Most of us aren’t natural comics, but we do benefit from keeping our talks light, with a touch of humor. No need to be a standup comedian, but try to avoid making your speech too serious. After all, there are lots of really fun things to do with ham radio. *Smile a lot.* Be enthusiastic. Communicate your great love for ham radio and you’ll be on the way to recruiting new licensees.

Add visual interest to your presentation by including a radio demonstration with a handheld radio or even a portable station. Using slides in a Power Point format can help visualize various activities, but try to keep the number of images within reason. Lengthy slide shows can be deadly!

A Speech Alternative

Don’t want to write a speech? Then how about showing a video that introduces the public to amateur radio? There is a 15-minute DVD called *Amateur Radio: Wireless Window to the World* produced by the nonprofit Ham Radio Promotion Project (HRPP). It does a good job of introducing people to our hobby

“Amateur radio is a really interesting hobby, so giving dramatic examples of its fun aspects might convince your listeners to become licensed hams themselves.”

in an entertaining way. (Columnist “Dee” Logan, *WIHEO*, has had a long affiliation with HRPP and co-produced “Wireless Window” with Frank Benesh, *K8IFH*. – Ed.)

Information on obtaining the video is found at < <http://www.neoham.org> >.

By using the video, no prepared speech is necessary. Simply follow the showing of the video with a question-and-answer period.

Find An Audience — Or Have An Audience Find You

There are numerous community groups that regularly invite guest speakers, and many would love to have a ham radio presentation. Civic clubs, youth groups, scout troops, school clubs, senior centers and many more include speakers as their main programs.

We radio hams should advertise the fact that we can provide guest speakers. Program chairmen would be delighted to find us, since we can provide them with one more program topic! A simple brochure can be developed that lists the topics, titles and background of speakers that can be circulated to various organizations in the community.

A news release describing the speech also can be provided to the sponsoring organization for use in their newsletters or to distribute to local media. Press coverage will help spread the word among others whom may be interested in booking the same speaker for their event.

Getting Ready

Prepare for your speaking engagement by rehearsing your talk — *aloud* — so you’re comfortable with it. Work on an attention getting opening that’s delivered with enthusiasm. Try it out on a friend and ask for feedback. Anticipate some questions and be ready with possible answers. Good luck!

Amateur Radio Public Relations in Action

- The Midland (Michigan) Amateur Radio Club is providing volunteers who help students at a local middle school build crystal radios during an after-school activity. Another project is building a Morse code practice set. The school ham station, WX8JER, participated in this year’s ARRL School Club Roundup according to Pat Mullett, KC8RTW, the club’s public information officer.

- Don’t toss your old radio magazines. Recycle them! Stan Zawrotny, K4SBZ, suggests leaving copies in a doctor’s or dentist’s office, car service centers or clinics. He attaches club information fliers to the inside covers.

Now, It’s Your Turn

What’s your club doing to promote ham radio? Drop us a line and let us know. Add a photo, too. Reach us at: < deverelogan@gmail.com >.

A 'Great Eight' Promotion Campaign Checklist

By Devere "Dee" Logan, W1HEO

Lists provide a useful way to help ensure that certain things are done and not forgotten. Airline pilots use them, shoppers use them and even radio amateurs use them. Written lists help us to establish priorities and keep us on track. Good lists result from careful consideration of what goes in and what stays out.

So, do you have a promotion and recruitment list? If not, here are a few ideas to think about as you create your own "great eight" list as an individual or radio club.

Goals: List an overall objective of your promotional efforts. Example: To introduce individuals to amateur radio, or to conduct a radio club recruiting campaign. Keep the goals broad, with *wiggle room*.

Strategy: Decide how you will reach your goal and implement your communication efforts, including person-to-person approaches or group presentations and specific audience targets.

Tactics: Develop some basic detailed steps that can be used in telling individuals or audiences about amateur radio. Plan certain techniques and the types of communication materials needed.

Messages: Agree on several overall talking points and develop a few ways of communicating the fun and public service aspects of ham radio. Printed pieces or suggested scripts are typical tools.

Audiences: Identify those individuals or groups to be targeted by your promotion campaign. Prepare a contact list with multiple communication routes. For example: telephone, email or U.S. mail.

Media: Prepare communication materials such as outlines of talks, news releases, handouts, slide shows, Internet postings and a promotional video such as the *DVD Amateur Radio: Wireless Window to the World*: < <http://www.neoham.org> >.

Staffing: Assign individuals to carry out the campaign, including listing of contact information and follow-up details.

Evaluation: Plan to review the results after a certain period of time to identify the techniques that work or don't work.

The Publicity Notebook

If you're not familiar with the basics of public relations and publicity, the ARRL has developed a self-study course, PR-101. It covers everything from basic news releases to Web sites and video work.

You complete the course on your own schedule, then take a final exam online, and even print your own certificate of completion. Interested? Check the League's Web site.

The Ham Radio Promotion Project also provides a 50-page publicity handbook ("Toolkit") to radio clubs, which joins this nonprofit organization that provides a variety of publicity and recruitment tools. Information: < <http://www.neoham.org> >.

A Twitter resource is < <http://www.twitter.com/reporterconsxn> > for reporters needing *experts* to provide information for various stories post requests. You might be able to help. Showcasing ham radio, Jay Kolinsky, NE2Q, points out that many hams first discovered our hobby when exposed to shortwave radio, a scanner, a crystal set or meeting a ham and seeing their equipment in action. So the Greater Norwalk Amateur



Rochester Amateur Radio Association member Tim Barrett, K9VB, explains to a dad and his sons how a keyboard is used to automatically send CW during a presentation at the Rochester Museum and Science Center. (Courtesy of W1HEO)

Radio Club decided to introduce the public to shortwave by installing a receiver in the Norwalk (Connecticut) Public Library.

Jay reports that a 40-meter, inverted 'V' antenna was installed on the roof, with headphones used to avoid disturbing library patrons. A sign was put up inviting people to listen to shortwave, and we trust, to radio hams as well.

Jay says the radio club is planning some future shortwave events at the library, including talks and demonstrations of shortwave reception and ham radio transmissions.

Libraries are good places to showcase amateur radio, and relating it to careers in electronics. A successful program was presented by the Indian Hills Radio Club at the Wickliffe (Ohio) Public Library that featured distribution of a bibliography of library books that included amateur radio publications.

A live, on-air demonstration of sideband QSOs and the showing of the promotional video *Amateur Radio: Wireless Window to the World* was also presented.

Any locale that attracts people should be considered for a demonstration site, which makes libraries, museums and shopping malls logical targets.

Len Crellin, KC2PCD, a director of the Rochester (New York) Amateur Radio Association, tells us that RARA has a display at the Rochester Museum and Science Center each year. "We attract thousands of families and many curious children," he points out. "We hope there are some future hams being made there. We utilize hands-on experiments, code practice and both FM and HF stations to demonstrate actual on-air conditions."

Ham Radio in School

Good things can happen when radio clubs work with schools to enrich learning through practical lab work, kit building, licensing classes, demonstrations and helping students to get on the air. For four years, the K4AMG Memorial Amateur

Paul Macanos, K2DB, explains ham radio as a hobby for the entire family — all part of an exhibit at the Rochester (NY) Museum and Science Center.
(Courtesy of WIHEO)



Radio Club of Chesapeake, Virginia, has provided mentoring to students in the broadcast radio class at the city's Center for Science and Technology.

Richard Siff, W4BUE, club president, explains that the club provides the school and students with access to the members' expertise and skills in electronics and wireless communications. The club also donates electronic equipment for classroom and home use.

The club has documented some of its activities on video. Teachers, students, parents and ham radio volunteers appear in various scenes, including participating in the ARRL School Club Roundup, building an FM receiver kit, learning soldering skills and more.

Several students show their enthusiasm when explaining why they enjoy ham radio with its international reach. Parents also show their pride in their students' achievement by becoming licensed.

W4BUE says that the radio club spent about 400 volunteer hours at the school on projects and mentoring, and was able to raise almost \$3,500 for amateur radio equipment given to the students.

Hams and Emergencies

Recent disasters around the world have involved hundreds of radio amateurs in emergency communication efforts. Floods, earthquakes, fires and tornadoes have presented hams with challenging situations in which their communication skills have been on display. This volunteer aspect is one of the most important values of our radio service, and is often documented in news reports as a normal part of press coverage worldwide.

An example occurred during an earthquake in Chile. As described in the

“Recent disasters around the world have involved hundreds of radio amateurs in emergency communication efforts.”

newspaper *El Mercurio*, “In the most critical hours when the emergency communications failed, the extensive net of ham radio operators from Putre to Puerto Natales was functioning. Through radio waves they were able to contact areas where either regular phones or cellular phones were dead.”

The article also quoted the President of the Chilean Ham Radio Club who emphasized that hams “have a great sense of social responsibility, offering their services to the community at once.”

Gustavo Corvera, a Chilean amateur, is described in the story as having driven to the earthquake site with another operator, staying there five days, connecting isolated areas by radio and mainly finding missing persons for their desperate families.

This example underscores the value of performing vital emergency communication services that speak volumes about the value of the amateur radio service.

Such reporting — not advertising — provides a powerful level of public recognition and support. As always, actions speak louder than words.

Devere “Dee” Logan, WIHEO, is an accredited member of the Public Relations Society of America and a member of its College of Fellows. He may be reached at: < deverelogan@gmail.com >.

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Digital Repeaters: It's Time to Talk 'Turkey' – Part II

By Bill Pasternak, WA6ITF

A repeater is a repeater and it must live within repeater subbands. Thus sayeth the Federal Communications Commission.

Without any finger pointing, there were some who believed that D-Star and P25 did not fit the “legal” description of a repeater because there was a slight inherent delay due to the Analog to Digital (A/D) and Digital to Analog (D/A) conversions that are an inherent part of any digital audio system developed to date.

If this was the case, then there was no reason to restrict digital audio repeaters to repeater subbands. And in some areas of our vast nation, coordinators began recommending digital audio repeater inputs and/or outputs in spectrum outside the repeater subbands that were traditionally considered off limits to such devices.

Also, there were cases where hams bought a D-Star (or constructed a P-25) system, and self-coordinated themselves to any set of frequencies they desired without any regard for other activity in that band space. This angered the users already there and in the end the matter was brought to the FCC to solve.

As reported in this column, the FCC quickly ruled that inherent audio delay from A/D and D/A did not mean a digital audio repeater was *not* a repeater and that these devices were required to operate within the confines of the spectrum in which the regulatory agency permits amateur service relay devices to function.

On 2 meters — which is our most heavily repeater populated band — this meant that, like their analog cousins, digital audio repeaters had to confine operation to 144.5 to 145.5 MHz and from 146.0 to 148.0 MHz. Talk about putting digital voice repeater owners, want-to-be digital voice repeater owners and local frequency coordinators into the proverbial corner with no place to go.

Complicating the situation even more is the fact that there are really two groups of repeater operators: Those already on the air and those who have been waiting

In Part I of this two-part series, Looking West columnist Bill Pasternak, WA6ITF, explained how repeater coordinators set the table for the digital age. In Part II, he examines the challenges that lie ahead.

a long time to find a spot to bring their new machine to life.

In the hinterlands where few repeaters provide service, new machines are usually welcomed with open arms. However, the reality is that in most cases repeaters serve densely populated areas that long ago ran out of channel pair allocations, and in some cases have waiting lists for new machine applications going back a decade or more.

While it's true that overall usage of FM repeaters is down considerably from years past, the fact is that individuals and clubs that maintain repeaters are not yet ready to throw in the towel and exit stage left.

The Problem of the Paper Repeater

Another problem that we have talked about in past columns is that of so-called “paper repeaters” — machines that may have existed at one time but no longer do, or never did exist. These are what I lump under the term “ego boxes.” Repeaters that never were meant to do anything more than build the ego of the individual or group that proposed such a system in the past, but rarely put it into service or never had any intention to put the hardware in place.

In most cases these people hold onto their channel allocations through the threat of litigation against the coordinator and/or a new repeater that sets up on what is obvious to all to be a vacant channel pair.

Lets face it, to the average middle-income homeowner ham, the last thing he or she wants is to have to fight a baseless nuisance lawsuit that could put him or her into bankruptcy. Paper repeater owners

know this and for years it has been the threat of such litigation that has held both frequency coordinators and new repeater owners at bay.

In some places over the last 40 or so years, the “threat” materialized into legal actions because the “new guy” or the coordinator refused to back down, depart and leave the unused “paper repeater channel pair,” unused.

'But I'm Digital and Deserve Preferential Treatment'

But it gets even more complex. While there may be a waiting list for new repeaters in a given geographic area, those hams wanting to be among the first to put up a digital audio machine tend to believe they deserve to be moved to the head of the waiting list. *Why?* Because they are, in their minds, introducing a new technology that the world is waiting to embrace.

Another group, and the seeming majority, is made up of those individuals and clubs that already operate one or more analog FM repeaters and want an additional channel pair to add digital audio to their repeater harem. They argue that replacing their existing analog FM repeaters with D-Star or P25 will cause them to lose users and that they find this to be unacceptable.

They also argue that their longevity in the analog FM arena means they have a greater chance of success than some *newbie* wanting to put up yet another FM box.

Solving the Problem May Require the Coordinator to See A Lawyer

The solution? Actually that's easy. But

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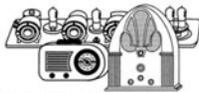


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and if he or she wants to convert to digital audio, that's fine. But they will not be granted an additional channel pair allocation for a digital voice machine.

Also, they must understand their fear of losing their existing user base is of no concern to a frequency coordinator. His, her or their only obligation is to recommend frequencies that will best serve the needs of a given community with minimum intersystem interference.

The number of users on a system is irrelevant and if their current users go elsewhere after the digital switchover, well, that's the chance you take.

Don't Trample On the Rights of Other Spectrum Users

Another obligation of a coordinator is not to usurp spectrum used by others within the repeater subbands — such as simplex operations — as a way of squeezing in more repeaters.

Over the years that has been tried and usually has led to outright on-the-air wars between those already using nonrepeater paired simplex (direct) channels and repeaters setting up shop on such frequencies such as a repeater input on 146.52 MHz and an output 147.57 MHz. These are frequencies nationally considered as reserved for point-to-point communications and for decades have been considered by all as off-limits to repeater operations.

It's known that such concepts are being openly discussed in some regions, but if the coordinators thinking of such assignments stop and take a look at history, they will see that doing so will only lead to bitterness in the overall ham radio community and an eventual *de facto* vote of no-confidence from all involved.

Once a coordinator loses the support of the ham radio public, it quickly disappears into the oblivion of ham radio failures, leaving only chaos in its wake. So to any coordinator even remotely considering this: I advise you to stop before it's too late. Stop before you create a true crisis situation. You do not want to go down in ham history as the group that destroyed the ham public's confidence in voluntary coordination just to placate another *repeater-owner-want-to-be*.

No One Should Be Given Preferential Treatment

As for the problem of the newcomer

(or long-time repeater owner) who believes he or she has a right to preferential treatment because that person (or group) is introducing a new technology to the ham radio community: Well, in my book, that individual or group is not entitled to burst ahead of all the others who have waited patiently for years and in some cases decades for their chance at repeater ownership. Rather, as the digital newcomer, you get in the very back of the line and wait your turn. If it takes a decade or two, just remember that others have been waiting a lot longer. Maybe your destiny is not that of a digital repeater owner/operator but more that of a user like the majority of us.

You Can't Change the Laws of Physics

As noted earlier, there is a very obvious downturn in the number of hams using repeaters — even in heavily congested RF corridors like my hometown of Los Angeles.

It would seem that the real problem is not one of adding more new repeaters — analog or digital. Rather, it's getting those systems we now have revitalized, with members of the ham community using them 24 hours a day. That's how things were in the 1970s, 1980s and through the turn of the century.

The congestion is not on the air among those using repeaters. It only exists in the world of those wanting to put a new machine into the mix.

Spectrum is finite and no repeater coordinator or *want to be repeater owner-operator* can defy the laws of physics. You can fit just so many signals into a finite space in a given region.

Once the saturation point has been met, you either take radical action, such as proposing going to narrower bandwidths if acceptable to the overall ham community, or you just stop coordinating until a repeater closes up shop and you can assign the channel pair to the next person waiting in line.

The one thing you *do not do* is to usurp the rights of others.

And So It Goes . . .

It's understood that just about nobody is going to like what I say, but it really needs to be said.

And as my friend, the late newsman George Putnam would have said: "That's one reporter's opinion. I welcome yours."

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The Rules Say...

John B. Johnston, W3BE

What is the FCC's Database Authority?

Q I can't find anywhere in Part 97 the FCC's authority to make public our licensee database. So, if it really has that authority, where is it?

A. Read Section 303(p) of the Communications Act of 1934. It states that the FCC — from time to time, as public convenience, interest or necessity requires — shall have authority to cause to be published such call letters and such other announcements and data as in the judgment of the FCC may be required for the efficient operation of radio stations subject (to the) jurisdiction of the U.S. and for the proper enforcement of the Act.

Q. Is amateur radio a hobby or a service?

A. It is intended as a communication service for radio hobbyists. SEC. 3. [47 USC 153](2) of the Communications Act of 1934; No. 1.56 of the international Radio Regulations (RR); and FCC rules 47 CFR Sections 2.1(c) and 97.3(a)(4) all agree that the term *amateur service*, as used in the rules, means:

A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

In places where it is regulated by the FCC, nevertheless, certain *professionals* are also authorized access to our radio spectrum. Read BE Informed Nos. 3 < <http://bit.ly/lwOH1O> > and 44.1 < <http://bit.ly/gYNalr> >.

Q. What does that term *service* mean?

A. Section 2.1 states that — as used in the rules — it is one of the numerous radiocommunication services listed therein that involve the transmission, emission and/or reception of radio waves for specific telecommunication purposes.

Q. There is yet another statement of purpose in Section 97.1. Which takes precedence?

A. Section 97.1 states:

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

The Communications Act takes precedence over agency rules. There is, however, no discrepancy there. Section 97.3(a)(4) is the statement of purpose for our amateur service; Section 97.1 is the statement for the basis and purpose for our rules.

Q. Do our rules require us to serve the public?

A. No. Section 97.1(a) simply says that recognition and enhancement of our value to the public as a voluntary non-commercial communication service, particularly with respect to providing emergency communications, is one of the five principles for which our rules are designed. Most countries reportedly regard amateur radio as a recreational activity.

Q. Why do we have a basis and purpose for our rules?

A. Section 97.1 came from a contentious rulemaking proposal released on April 21, 1949, in Docket 9295. The FCC stated that the amateur service would very much benefit from, and needed “. . . a new overall plan or blueprint to provide scope and direction for the immediate and long range development of the service.” The wording initially proposed differed from the adopted statement in two ways.

First, the principle of improving international good will did not appear. It was added later.

Secondly, the principle of increasing the reservoir of trained operators, technicians and electronics experts was conditioned as being needed for the “growing radio industry in peacetime” and the “vastly increased demands of both the radio industry and the military services in times of national emergency.”

As strange as it may sound today, the statement of purpose was not well received by our amateur service community.

Q. What were our objections?

A. There were six objections presented to our regulators at an oral argument held in Washington, DC, on June 2, 1950:

- It was not in consonance with the regulatory procedures of other government administrative agencies;
- Amateur radio cannot be blueprinted by the government;
- Amateur radio's progress in the past would have been hindered under such a regulatory theory;
- Amateur radio needs only minimum regulation to ensure compliance with treaties and to keep amateurs within our bands;
- Although it might be a means of strengthening amateur radio in some respects, the statement was potentially dangerous to amateur interests at international conferences;
- It went beyond the FCC's field of regulation and got into actual management of amateur affairs.

In spite of our objections, the statement was adopted on January 29, 1951. By 1980, however, our amateur community apparently decided that those feared six objections were really

not too many. When our regulators proposed in Docket 80-729 to delete Section 97.1 from the rules, our amateur service community argued for its retention so as not to reduce the traditional scope of the rationale for our service.

Amazingly, within less than three decades, we had come to not only embrace the once-feared statement of purpose, but were declaring it to be *traditional*.

Q. Can I be cited for violating Section 97.1?

A. Yes, it is possible that a citation might be forthcoming were you to operate your station in some outrageous manner that clearly contravened Section 97.1. As a practical matter, however, a citation would more likely be issued for violating the operating rules or technical standards.

Don't lose any sleep over the possibility of a citation for, say, not contributing sufficiently to the advancement of the radio art or for failing to advance quickly enough your communications or technical skills.

Q. What is my obligation under Section 97.1?

A. To help make certain that our amateur service achieves the basis and purpose for our rules. Most of us are confident that we are doing a great job. Because much of what we do requires some technical background to even comprehend, let alone appreciate, we are sometimes disadvantaged when trying to prove how well we are fulfilling each of those purposes. We are unable, for example, to produce charts annually illustrating how we enhanced international goodwill by X-percent.

Q. Isn't our compliance with the rules proof in itself that our amateur service is fulfilling its purpose?

A. Yes, our reputation for compliance with our regulator's operating and technical rules is, in itself, our basic argument that we are helping fulfill the fundamental purpose for our amateur service. That is why our maverick 1 percent who create 99 percent of our bad repute is a threat to defending against spectrum challenges.

Whenever one party is authorized to use highly valuable public spectrum, sooner or later other parties are going to claim they can do a better job of using that spectrum in the public interest. We have to be well prepared to prove that it continues to be the highest public concern for persons interested in radio technique solely with a personal aim and without pecuniary interest to have direct access to the radio spectrum.

It is not in our best interests, moreover, to help make the case for the parties competing for our spectrum. We should be very careful when offering to use our amateur stations for types of communications for which other radio spectrum has already been allocated to another radio service. We can inadvertently help create the false impression that the competing service has a greater need for our spectrum than does our amateur service.

Q. I read your comments concerning moving emergency communications off the amateur bands and placing them nearby i.e. MARS, etc. With everything currently going on with emergency communications such as more stringent training requirements, required waivers, background checks and more, I believe you are right on the mark. RACES, Civil Defense (CD) or a new entity such as CERT should be given specific spectrum. Do you expect the FCC to take action on your suggestion?

A. At the very least, our regulators would have to dismiss



Dave Hayes, VE3JX, our WorldRadio Online QCWA columnist. Photo was taken at the 2011 Orlando Hamcation.

the petition. Although it was filed June 7, 2010, that hasn't been done so far. On the other hand, neither has it been assigned it an RM number nor have comments been requested from the public. For details, read BE Informed No. 54 Disaster Radio Service: < <http://bit.ly/mB9csn> >.

Q. Is there anything anyone can do to help this along?

A. You might try contacting your representatives for their assistance. The highest priority at most government agencies is answering inquiries from Congress.

Read the Rules - Heed the Rules

Visit < <http://www.w3BEinformed.org> > for links to rules and information sites. E-mail your questions about the amateur service rules to < john@johnston.net >.

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Muskegon Area Amateur Radio Council meets the 1st Thursday of every month at 7 PM at our clubhouse at 2888 Scenic Drive. Visit our website: <http://w8zho.org> 01/12

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AUGUST

INTERNATIONAL LIGHTHOUSE-LIGHTSHIP WEEK-END — The Amateur Radio Lighthouse Society is sponsoring the **International Lighthouse-Lightship Weekend** August 6-7. Operating guidelines and scoring details can be found at: < <http://illw.org> >. This annual QSO party is held in conjunction with International Lighthouse-Lightship Week, August 1-8 and National Lighthouse Day, August 7. Further lighthouse information is on the ARLHS Web site at: < <http://arlhs.com> >.

WINDOW ROCK, ARIZONA — **Special Event Station N7C**. Commemorating the **Navajo Code Talkers of World War II**. August 12 to 14. Operating on 14.265 and 7.265 MHz. QSL information via N7HG and N7C.

HUNTINGTON, WEST VIRGINIA — **Tri-State Amateur Radio Association Hamfest and Computer Show**, August 13, 8:30 a.m. to 1 p.m., Veterans Memorial Field House, 2590 5th Ave., Huntington, West Virginia. ARRL-sponsored exams. Talk-in: 146.76, (PL 131.8). Admission: \$6. Table fee: \$10 each. Information: < <http://www.qsl.net/tara/> >. Contact: Judy Taylor, WD8EOP, (304) 525-4237.

ALLIANCE, OHIO — **Special Event Station W8LKY**, Alliance Amateur Radio Club, is celebrating **Alliance Carnation Days**, Alliance, Ohio. August 20 from 1400Z to 2100Z on 7.045, 7.240+/-, 14.045, 14.200, 21.250. For certificate, write: AARC-W8LKY, P.O. Box 3344, Alliance, OH 44601.

MONTEZUMA PASS, ARIZONA — **Special Event Station W7SVD**. Operating August 27 from Montezuma Pass, high in the Huachuca Mountains of southeastern Arizona at Coronado National Memorial. Commemorating the **establishment of the National Park Service in 1916**. Portable operation will be from 1500-2300 UTC on 7.225, 14.275, 21.285 and 28.350 SSB; 7.050, 14.050, 21.050 and 28.050 CW, PSK31 and JT65 on 40, 20, 15 and 10 meters. Send QSL and SASE to: W7SVD, 1955 Santa Teresa Dr., Sierra Vista, AZ 85635. Additional information: < <http://www.w7svd.net> >.

STATE OF HAWAII — **2011 Hawaii QSO Party**. 0400 UTC August 27 to 0200 UTC August 28. Operate 1.8 MHz to 28 MHz, Phone, CW, RTTY and PSK31. Exchange: Hawaii Stations — county and islands. Non-Hawaii — S/C/P. **NOTE**: Kalawao County, Battleship Missouri (**KH6BB**), and Coconut Island. (**ALØHA**) will be active. Logs due October 1. Information: < <http://www.karc.net/HQP> >.

SEPTEMBER

FORT BOWIE NATIONAL HISTORIC SITE, ARIZONA — **Special Event Station W7SVD**. Operating September 10, high in the Chiricahua Mountains of SE Arizona commemorating the surrender of Apache Chief Geronimo September 6, 1886 and honoring the U.S. Army Fallen Soldiers. Operation from 1500-2300 UTC on 7.225, 14.275, 21.285 and 28.350 MHz SSB; 7.050, 14.050, 21.050 and 28.050 MHz CW, PSK31 and JT65 on 40, 20, 15 and 10 meters. Send QSL and SASE to: W7SVD, 1955 Santa Teresa Dr, Sierra Vista, AZ 85635. Additional information at: < <http://www.w7svd.net> >.

CHICAGO, ILLINOIS — **Radio Expo 2011**. Hosted by **The Chicago FM Club**. September 10-11, Boone County Fairgrounds. Radios, computers, electronics. 8 a.m. to 3 p.m. both days. VE Testing both days. Advance tickets \$8. At the gate: \$10. Tickets good for both days. Talk-in: 146.760/147.255 (PL 114.8) and 146.550 simplex. For more information, e-mail: < cfmc.radioexpo@yahoo.com >, or call (224) 353-9721.

NEWTON, CONNECTICUT — **Western Connecticut Hamfest**, September 11 at Edmond Town Hall, 45 Main Street (Route 6), Newtown, Connecticut. Exit 10 off Interstate 84. Contact Joe de Groot AB1DO, (203) 938-4880. Web: < <http://www.danbury.org/cara/Hamfest.html> >. (Talk-in 147.30+ PL100).

LOXAHATCHEE, FLORIDA — **Special Event Station K4MIA**. Operating September 10-18, 0000Z-2359Z. Sponsored by the PBSE Radio Society, **commemorating National POW/MIA Recognition Day**. Operating on 21.300, 18.150, 14.265, 7.185 and 3.885 MHz SSB. PSK, 14.070. QSL via Michael Bald, 6758 Hall Blvd., Loxahatchee, FL 33470. SASE required for return QSL card this year. Remember our POWs/MIAs September 16. See QRZ for copy of QSLs.

OCTOBER

DENISON, TEXAS — **Special Event Station W5I**. October 15 from 1500Z-2300Z in celebration of the **121st birthday of Dwight Eisenhower**, 34th President of the United States. Frequency: 14.250 MHz. For QSL card, send QSL and SASE to David Booth, 409 Umstead, Colbert, OK 74733.

NEW YORK AND NEW JERSEY SHORES — **The Hudson Lights**, September 17. Members of the Nutley Amateur Radio Society, W2GLQ, will **activate six light houses** on the New York and New Jersey shores of the Hudson River. Operating SSB on 12, 15, 17 20 and 40 meters. All event information including QSL route can be found on < [QRZ.com](http://www.qrz.com) > under W2GLQ. Callsigns: **W2A**, Statue of Liberty, ARLHS USA 810 and Robbins Reef ARLHS USA 695; **W2B**, Little Red, ARLHS USA 408; **W2C**, Tarrytown, ARLHS USA 836; **W2D**, Stony Point, ARLHS USA 293; **W2E**, Esopus, ARLHS USA 276.

EVERETT, WASHINGTON — The Western Washington DX Club is hosting the **2011 Pacific Northwest DX Convention** on August 12-14 at the Everett Holiday Inn, 3105 Pine Street (15 miles north of Seattle). Featured programs will include the South Orkney Island DXpedition by N6MZ, the Saba Island DXpedition by K4UEE; and QRP contesting and DXing from the Pacific Northwest by K6UFO. Other programs will be announced on the organization's Web site. This year's activities include a Saturday dinner banquet, Sunday brunch, commercial exhibits, ARRL forum, hospitality room, DXCC card checking, door prizes and raffle prizes. Costs for the event are \$30 for registration, \$40 for the Saturday dinner banquet, and \$25 for the Sunday brunch buffet. Cutoff date for dinner and brunch registration is August 9. The Everett Holiday Inn < <http://www.hieverett.com> > is offering special convention rates through July 17. Latest info and registration form is available at: < <http://www.wwdxc.org/convention> >.

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CONTEST CORNER

CONTEST: ARRL UHF Contest
DATE & TIME: 1800Z 6 Aug – 1800Z 7 Aug
BANDS/MODE: 222 MHz and up
POINTS: 3 Pts. 222 or 432 MHz QSO; 6 Pts. 902 or 1296 MHz QSO; 12 Pts. 2.3 GHz or higher
MULTIPLIERS: Grid Squares per band
EXCHANGE: Grid Square locator
ENTRY CATEGORIES: Single op, Low or High; Rover
ENTRIES: Deadline 6 September Paper logs to: ARRL UHF Contest 225 Main St., Newington, CT., 06111
 Cabrillo logs to: augustuhf@arrl.org
 Rules at: www.arrl.org/august-uhf

CONTEST: TARA Grid Dip
DATE & TIME: 0000-2359Z 7 Aug
BANDS/MODE: 160-6M RTTY & PSK31
POINTS: 1 Pt. per QSO
MULTIPLIERS: Grid locators once per band
EXCHANGE: Name + 4-digit grid locator
ENTRY CATEGORIES: PSK categories: QRP <5W; Low 5-20W; High 20-100W; Rover 100W max! RTTY categories: QRP <5W; Low 5-100W; High - Legal Limit; Rover - Legal Limit
ENTRIES: 1 Sep Fill out online form at: www.n2ty.org/seasons/tara_grid_score.html E-mail: gridmanager@n2ty.org
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CONTEST: 10-10 International Summer
DATE & TIME: 0001Z 6 Aug - 2359Z 7 Aug
BANDS/MODE: 10M Phone (SSB, AM or FM)
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MULTIPLIERS: Prefixes
EXCHANGE: Call + Name + QTH + 10-10 #
ENTRY CATEGORIES: QRP (<10W); Individual; Club
ENTRIES: Deadline 22 August Dan Morris, KZ3T 131 Valencia Ln., Statesville, NC 28625
 E-mail: dbm72941@roadrunner.com
 Rules at: http://www.ten-ten.org/Forms/QSOPartyRules_082710.pdf

CONTEST: North American QSO Party
DATE & TIME: 1800Z 6 Aug - 0600Z 7 Aug
BANDS/MODE: 160-10M CW
POINTS: 1 Pt. per QSO
MULTIPLIERS: State/Provinces/Territories/NA Countries
EXCHANGE: Name + State/Province/Territory/NA Country; non-NA sta's give name only
ENTRY CATEGORIES: Single op; Multi op, 2 XMTRS – Note: 100W limit for all categories!
ENTRIES: 14 Days Bruce Horn, WA7BNM, 4225 Farmdale Ave., Studio City, CA 91604
 Cabrillo upload: www.ncjweb.com/naqplogssubmit.php
 E-mail: cwnaqp@ncjweb.com
 Rules at: www.ncjweb.com/naqprules.php

CONTEST: WAE DX
DATE & TIME: 0000Z 12 Aug - 2359Z 13 Aug
BANDS/MODE: 80-10M CW
POINTS: 1 Pt. per QSO
MULTIPLIERS: WAE Countries
EXCHANGE: RST + serial #
ENTRY CATEGORIES: Single op - Low (<100W); Single op - High (>100W); Multi op
ENTRIES: 30 Aug Electronic log submissions only!
 Cabrillo or STF logs to: waecw@dxhf.darc.de
 Additional help for handwritten log conversion: <http://contestsoftware.com/e/home.html> E-mail: waedc-info@dxhf.darc.de
 Web: www.waedc.de
 Rules at: http://www.darc.de/uploads/pics/WAEDC_2010_v1.1.pdf
 (NOTE: 2011 rules not posted at time of submission)

CONTEST: Maryland-DC QSO Party
DATE & TIME: 1600Z 13 Aug. - 0400Z 14 Aug. & 1600-2359Z 4 Aug.
BANDS/MODE: 160M - 440 MHz SSB; 80-440 CW/Digi; 6M-70cm FM
POINTS: 10 Pts Club; 5 Pts. Mobile; 4 Pts. QRP; 3 Pts. CW/Digi; 1 Pt. all others; 50 Pts. QSO with W3VPR
MULTIPLIERS: X1 for each MD County/DC/City of Baltimore (25 possible); MDC sta's count 25 counties + states + DX Country
EXCHANGE: State/Country/Province - MDC sta's give County/City of Baltimore/DC
ENTRY CATEGORIES: Club, Mobile, QRP, Standard (Multi-ops are counted as Clubs)
ENTRIES: 14 September SASE & Logs to MDC QSO Party P.O. Box 308 Davidsonville, MD 21035
 Rules at: <http://mdcqsoparty.w3vpr.org/Documents/MarylandQSOPartyRules2011v2.pdf>
 E-mail: mdqsop@w3vpr.org
 Logging software available – see rules site for links

CONTEST: SARTG WW
DATE & TIME: 0000-0800Z + 1600-2359Z 20 Aug; 0800-1600Z 21 Aug
BANDS/MODE: 80-10M RTTY
POINTS: 5 Pts. own country; 10 Pts. same continent; 15 Pts. other continents
MULTIPLIERS: DXCC countries on each band
EXCHANGE: RS(T) + serial #
ENTRY CATEGORIES: A = Single op, single XMTR, all band; B = Single op, single band; C = Multi Op, single XMTR, all-band; D = SWL; E = Single op, single XMTR, all-band, low power (<100W)
ENTRIES: 10 Oct. SARTG Contest Manager Ewe Hakansson, SM7BHM Pilspetsvagen 4 SE-291 66 Kristianstad Sweden
 Cabrillo to: contest@sartg.com
 Rules at: <http://www.sartg.com/contest/wvrules.htm>

CONTEST: North American QSO Party
DATE & TIME: 1800Z 20 Aug - 0600Z 21 Aug
BANDS/MODE: 80-10M SSB
POINTS: 1 Pt. per QSO
MULTIPLIERS: State/Provinces/Territories/NA Countries
EXCHANGE: Name + State/Province/Territory/NA Country; non-NA sta's give name only
ENTRY CATEGORIES: Single op; Multi op, 2 XMTRS – Note: 100W limit!
ENTRIES: 14 Days Bruce Horn, WA7BNM 4225 Farmdale Ave., Studio City, CA 91604
 Upload Cabrillo: www.ncjweb.com/naqplogssubmit.php
 E-mail: ssbnaqp@ncjweb.com
 Rules at: www.ncjweb.com/naqprules.php

CONTEST: Run for the Bacon
DATE & TIME: 0100-0300Z 14 Aug
BANDS/MODE: 160-10M CW
POINTS: 1 Pt. non-member QSO; 3 Pts. FP member; 5 Pts. FP member different continent
MULTIPLIERS: States/Provinces/Countries
EXCHANGE: RST + State/Province/Country + FP #; (non-members give power)
ENTRY CATEGORIES: Single band; All band
ENTRIES: Online submission only at: www.fpqrp.com/autolog.php

CONTEST: ARRL 10 GHz & Up
DATE & TIME: 0600 your local time 21 Aug – 2359 local time 22 Aug
BANDS/MODE: 10 GHz and up
POINTS: 100 Pts. Per QSO + distance in kilometers (Note: Strongly suggest you check the rules Web site for scoring examples)
MULTIPLIERS: None
EXCHANGE: Six character maidenhead locator
ENTRY CATEGORIES: 10 GHz only; 10 GHz and up
ENTRIES: 19 Oct. Note: Identical contest takes place in September, Deadline is for both contests). ARRL Contest Branch 225 Main St., Newington, CT. 06111.

E-logs by E-mail to: 10ghz@arrl.org

Official forms at: www.arrl.org/contests (Note: Cabrillo is not required for this contest)

Rules at: www.arrl.org/10-ghz-up

CONTEST: Ohio QSO Party

DATE & TIME: 1600Z 27 Aug - 0400Z 28 Aug

BANDS/MODE: 80-10M SSB/CW

POINTS: 1 Pt. SSB; 2 Pts. CW

MULTIPLIERS: Ohio counties (88 possible); OH sta's count Ohio counties/States/Provinces

EXCHANGE: Ohio sta's give serial # + county; US & Canadian sta's give serial # + State/Province; DX sta's give serial # + "DX"

ENTRY CATEGORIES: Single op, QRP (<5W CW, <10W SSB) Low (<100W); High (>100W); Multi op; Mobile; Rover

ENTRIES: 30 days Paper or floppy disc entries by mail to: Ohio QSO Party c/o Jim Stahl, K8MR 30499 Jackson Rd., Chagrin Falls, OH 44022-1730

Cabrillo (preferred) to: logs@ohqp.us

Rules at: http://www.ohqp.org/adminRules.htm

CONTEST: SCC RTTY Championship

DATE & TIME: 1200Z 27 Aug - 1159Z 28 Aug

BANDS/MODE: 80-10M RTTY

POINTS: 1 Pt. own country; 2 Pts. own continent; 2 Pts. different W, VE, VK, ZL, ZS, JA and PY call area, LU provinces and Asiatic Russia UA9/UA0 oblasts; 3 Pts. other continents

MULTIPLIERS: Different 4-digit numbers representing op's licensing year, once per band

EXCHANGE: RST + year first licensed; Clubs give RST + year license issued to club

ENTRY CATEGORIES: Single op, Low (<100W); Single op, High (>100W); Single op, assisted; Multi op, single XMTR

ENTRIES: 15 Sep. Electronic logs only!

Cabrillo (preferred) or ASCII by E-mail: rty@hamradio.si

Rules at: http://lea.hamradio.si/~scc/rtty/htmlrules.htm

Logs by disk: Slovenia Contest Club, Saveljska 50, 1113 Ljubljana, Slovenia

CONTEST: Kansas QSO Party

DATE & TIME: 1400Z 27 Aug - 0200Z 28 Aug + 1400-2000Z 28 Aug

BANDS/MODE: 80-2M, All Modes

POINTS: 2 Pts. Phone; 3 Pts. CW or Digi; 100 Pts. QSO with KSØKS or KCØAHN

MULTIPLIERS: Non-Kansas sta's count KS counties (105 possible); Kansas sta's count States/Provinces/DXCC

EXCHANGE: Kansas sta's give RS(T) + county; All others give RS(T) + State/Province/DX

ENTRY CATEGORIES: Single Op QRP (<5W), Low (<100W), High (>100W); Multi-op, one-XMTR, any power; Youth; Kansas Mobile

ENTRIES: Deadline 30 Sep.

Cabrillo (preferred) to: logs@KsQSOParty.org

Paper logs (limit of 50 QSO's) or mail submission: Kansas QSO Party c/o Randy Wing, NØLD, 13038 SW 186th St., Rose Hill, KS 67133-8559

Rules at: www.ksqsoparty.org/rules

CONTEST: Hawaii QSO Party

DATE & TIME: 0400Z 27 Aug - 2200Z 28 Aug

BANDS/MODE: 160-10M SSB/CW/RTTY/PSK

POINTS: SSB = 2 Pts. 10/15/20/40M, 4 Pts. 80M, 6 Pts. 160M; CW = 2 Pts. 10/15/20M, 4 Pts. 40M, 8 Pts. 80M, 12 Pts. 160M; RTTY/PSK = 3 Pts. 10/15/20M, 6 Pts. 40M, 12 Pts. 80M, 18 Pts. 160M

MULTIPLIERS: HI QTH ID's (9 possible), each band

EXCHANGE: HI sta's give RS(T) + County; W/VE sta's give RS(T) + State/Province; DX gives RS(T) only

ENTRY CATEGORIES: A = Single XMTR, QRP; B = Single op, CW; C = Single op, digital; D = Single op, low (<150W); E = Single op, high; F = Multi op, multi stat's;

ENTRIES: 1 Oct. E-mail submission of text formats to: awards@karc.net

Rules at: www.karc.net/OperatingEvents/HawaiiQSOParty/

HIQSOPartyRules.html

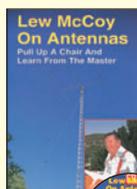
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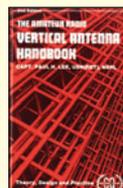
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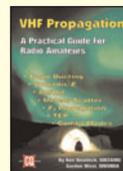


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VE EXAMS

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p/r pref. = pre-register preferred but w/i OK
p/r = pre-registration only-no w/i

w/i = walk-in only
w/i pref. = w/i preferred to p/r

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Mesa	3rd Mon	Steve KY7W, 480-804-1469, kj7wk@cox.net	w/i	Stagecoach	2nd Sat	Jack, AC6FU, 775-577-2637 ac6fu@arrl.net	
Phoenix	4th Sat	Gary Hamman, 602-996-8148, K7GH@arrl.net		NEW JERSEY			
ARKANSAS				Roselle	4th Sat	Gerry, AA2ZJ, 732-283-2795, aa2zj@arrl.net	
Sherwood	1st Sat	James Cope, KE5OVE, 501-796-3910	w/i	Winslow	4th Tues	Mark, K2AX, 609-820-1523, JTRA@comcast.net	
CALIFORNIA				Pennington	9/17	Don, AA2F, 609-737-1723, aa2f@arrl.net	
Highland	8/20	Ed , WU6I, 909-864-0155, wu6i@arrl.net	p/r pref.	NEW YORK			
LaVerne	Last Sat	Frank, K6FW, 909-628-8661, k6fw@arrl.net	p/r	Bethpage	2nd Tues	Bob, 631-499-2214, w2ilp@optonline.net	p/r
Long Beach	3rd Sat	Louise, N6ELK, 562-429-1355	p/r	Canandaigua	1st Wed	Squaw Island ARC, David A. Foster, 585-398-0216, www.siacr.us	w/i
Manteca/Tracy	4th Sat	David, N5FDL, 209-835-6893, n5dfl@arrl.net	p/r	Valhalla	Call	Stanley, WA2NRV, wa2nrv@weca.org	
Redwood City	Call	Al, WB6IMX@arrl.net, www.amateur-radio.org	w/i	Yonkers	Call	Paul, AC2T, 914-237-5589, w2yrc@hotmail.com, www.yarc.org	w/i ok
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Melbourne	1st Sat	John, AA8IS@earthlink.net, 321-412-2779	w/i ok	Lincoln City	1st Sat	Carl, w7li@arrl.net, 503-965-7575	w/i ok
North Port	Call	Bill Norris, KC7TSG, 941-426-0214	w/i pref.	McMinnville	Call	Mark, AC7ZQ, 503-843-3580	w/i only
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MICHIGAN				Racine	1st Sat	Robert, W0WLN, 262-886-8551	w/i pref.
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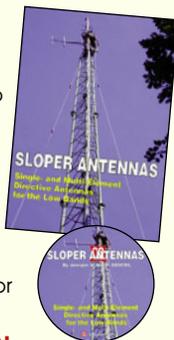
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Keeping Our Poise About the Counterpoise, and More

By Kurt N. Sterba

Jerry Marsh, AA7UF, of Olympia, Washington, has a question for Krusty Olde Kurt:

I was at a ham event recently and a commercial vendor suggested that a counterpoise was different than radials. This company's portable vertical antenna comes with a counterpoise. I guess I had always thought that a counterpoise was simply a single radial.

Could you comment on this? Also what are the issues of having the counterpoise (or radials) above ground verses on the ground?

The Krusty One Enlightens:

There is some confusion about radials and counterpoises.

To clarify this, here are the three main methods of providing the ground that short verticals need.

- **Ground Radials.** These are installed just below ground. The coax feeder to the transmitter has its center conductor connected to the antenna. Its shield connects to the ground radials.

- **Counterpoise.** This is a radial mounted above ground, but close to the ground, so that it has high capacitance to ground. Again, the coax center conductor connects to the antenna. The shield connects to the counterpoise. There is no connection to actual ground, just through its large capacitance to ground.

- **Elevated Radials.** These radials are high enough above ground to have low capacitance to ground. The coax center conductor connects to the antenna and the shield to the radials. The radials are connected to actual ground. There are far fewer radials needed than with ground radials.

To the Dictionary

The counterpoise was used extensively in the early days of radio when mostly very low frequencies were used. The term *counterpoise* is composed of two words:

Counter: *In opposition.*

Poise: *A state of balance or equilibrium.*

Figure 1 can help make this easier to remember. At **Figure 1(a)** we see a teeter-totter or weight balance. It sits level with the ground.

If we put a transformer on one side, that side drops to the ground as in **Figure 1(b)**.

If we put an equal weight on the other side (*in opposition, counter*) it looks like **Figure 1(c)** in a state of balance (*poise*).

In the case of a short-vertical antenna, we know that the max-

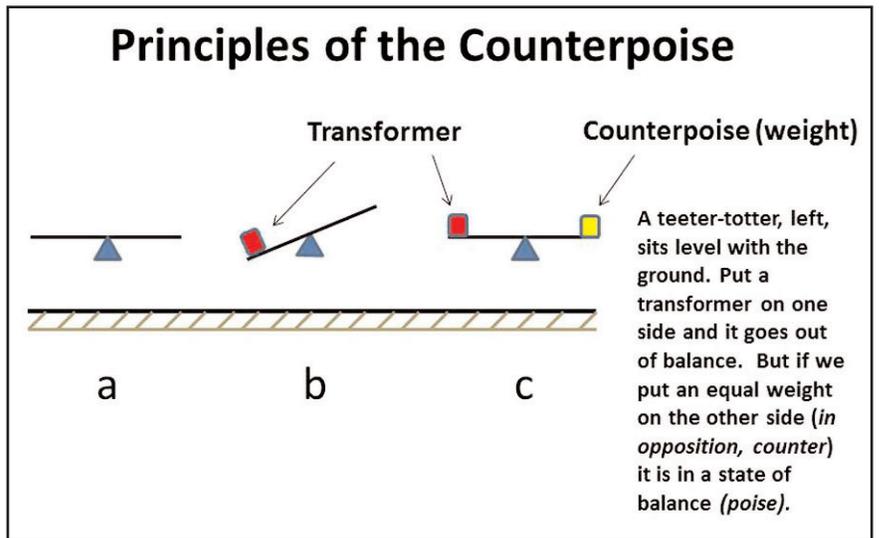


Figure 1.

imum RF current is at the base. But there cannot be any current there if it has no place to go — **Figure 2(a)**.

After we connect the counterpoise to the base — **Figure 2(b)** — there is a place for the current to go and our antenna radiates merrily along.

Usually we connect our feed line between the counterpoise and the antenna as in **Figure 2(c)**. The center conductor and the shield currents now have a place to go. You don't have to feed it at the base — you can raise the feed point on the antenna to get a better match to the coax.

Kurt prefers to feed at the base and use an RF transformer to get a good match. Actually, ground radials serve the same purpose but they work in a different manner and so are not considered counterpoises.

The Pros and Cons

What are the virtues of the three different ground systems?

Ground radials are the ones most extensively used. The main drawback to ground radials is all the work it takes to bury them. In rocky soil it may be impossible to lay them down.

Once in place, though, they work well. There is plenty of design information available so you can plan in advance the number and length of radials you should use in your particular backyard and what ground resistance you will get. Also they are out of sight and out of the way. You can use your backyard for all the normal household activities: playground, grassy lawn and so on.

The Counterpoise is little used. Little design information is

Critical Distinctions and Connections

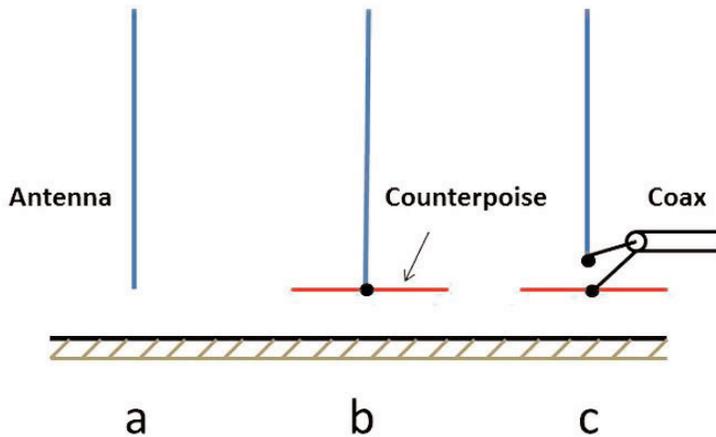


Figure 2.

to be found in the amateur literature. Worst of all, once you put those radials above, but close, to the ground you can't use the backyard for anything else.

You can't walk on it, you can't mow the grass or weeds, and it is useless as a playground. This is the main reason you don't often see counterpoises. In addition

to all that, you have an ungrounded antenna system. This is bad news in regions that have lightning or wind-blown static electricity.

There is no path to ground for the charges except through your equipment.

Elevated radials have become popular in recent years. Primarily because

experiments have shown they need far fewer radials to be effective. They can be high enough in the air that you can walk *under* them so you can still do most backyard activities.

At a symposium of the Institute of Electrical and Electronic Engineers back in the 1980s, tests were reported that as few as four elevated radials work as well as 120 ground radials.

Their radials were 6.5 feet above ground. There are some disadvantages: Both HOAs and XYLs may consider them unsightly. If you reach up and touch them, you can get RF burns.

What to Do?

It is up to you to decide which of the three ground systems to use. Each has advantages. The operator with a small lot and the lucky few with acres at their disposal have completely different needs.

Krusty Olde Kurt thinks that ground radials will be the choice in most situations.

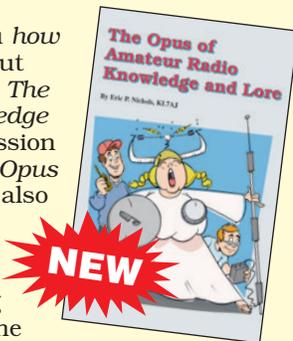
Kurt welcomes questions of general interest from readers and will answer them in his column. Write to him at: < WorldRadioOnline@gmail.com >.

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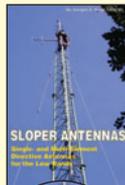
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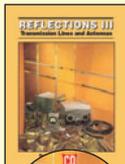
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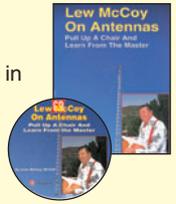
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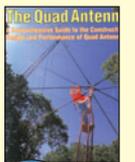
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