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WORLDRADIO

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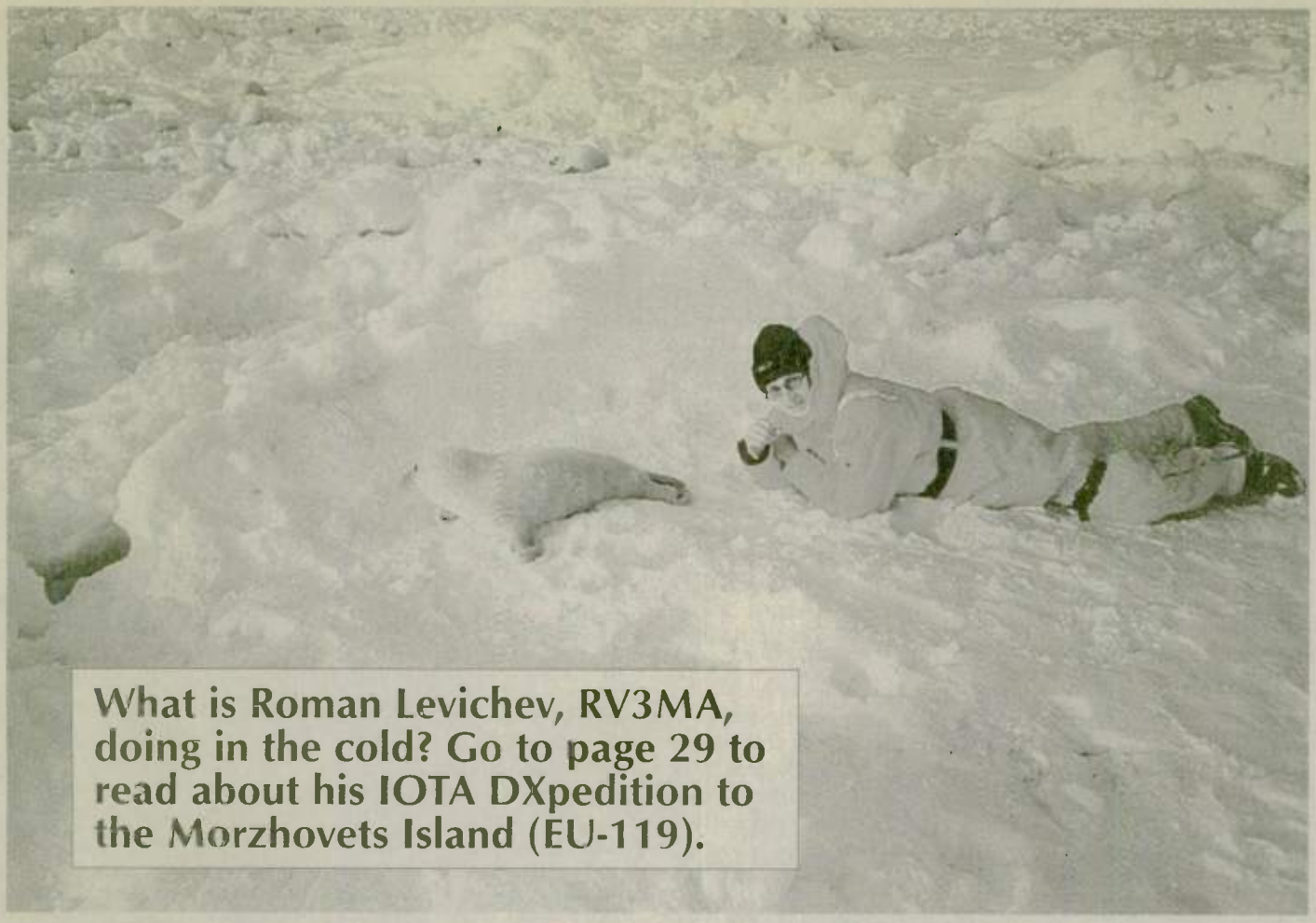

What is Roman Levichev, RV3MA, doing in the cold? Go to page 29 to read about his IOTA DXpedition to the Morzhovets Island (EU-119).

The newest Amateur Radio award see page 28

Worldradio presents Bob Heil's "The Science of Audio" see page 62

Russia to dump Mir

Russia now appears resigned to dump its Mir space station. After much waffling and after announced plans to commercialize Mir fell through, the Russian government voted to deorbit the aging space station that, for more than a dozen years, has been the pride of the Russian space program.

Current plans call for Russia to deorbit Mir in February. Yuri Koptev, the head of the Russian space agency, said the Russian government has agreed that Mir would be taken out of orbit and brought down into the Pacific Ocean in a predetermined area off Australia between 26 and 28 February.

Mir has been the focus of Amateur Radio activity from space by cosmonauts and U.S. astronauts, including several contacts with schools. Amateur Radio communication from U.S. astronauts was able to fill in details of a nearly disastrous fire and after a collision with a Progress rocket nearly decompressed Mir.

Koptev said an unmanned cargo ship sent to Mir early next year will fire its rockets to push the space station quickly into the atmosphere. Koptev said Mir was in too poor a state of repair to remain in orbit much longer.

The decision signals the end of an era for Russia's cash-strapped space program, and defeat for the private MirCorp, which had tried to raise millions of dollars to keep Mir in operation. American businessman Dennis Tito, who had hoped to travel to Mir as a "space tourist" under a deal with MirCorp and has already spent $1 million in training, will not be sent to the station, Koptev said. — *ARRL Letter*

Flower Girl's rescue

On Sunday, 22 October, several members of San Diego's Palomar Amateur Radio Club were approaching Lake Ramona when they noticed an old and very tired German Shepherd half trying to stand on the slick underwater muck while trying to tread water. The dog's name was Flower Girl and by the time the group of hiking Hams found her she was too tired to even put a paw on shore. And this is where Amateur Radio stepped in.

The hikers were split in two groups. After describing the situation to those on the west bank, two members of the east group waded into the water to help get Flower Girl out. A third person pulled from above. After what seemed an eternity, Flower was resting about 20 feet up the bank, receiving food and plenty of attention. But the problems had just begun.

Due to her advanced age Flower Girl suffers from hip dysplasia. Because of this, she could not walk on her hind legs without being in pain. Even if she could walk it would not be an easy trek. It would take a skilled hiker 20 minutes to reach the north or south ends of the lake even without the added weight of a 100-pound dog.

But as luck would have it, the west bank hikers found Flower's owners and relayed the news back by Ham radio. Flower's owners hiked to the scene and determined that the elderly dog would do best by swimming to a private access road where they could pick her up by truck. Rested, Flower got back in the water and followed her family, including their two other dogs, as they walked along the bank. The Hams were released with shouts of thanks from Flower Girl's owners.

Had the Palomar radio club Hams not found her, there is a good chance that Flower Girl would not have survived. — *W6VR, Newsline*

New AM-SAT NA president

Canadian amateur and ARRL member Robin Haighton, VE3FRH, has been elected president of AMSAT-NA. Haighton was elected without opposition at the AMSAT-NA Annual Meeting 29 October in Portland, Maine.

Haighton replaces Keith Baker, KB1SF, in AMSAT-NA's top slot. Prior to his election, he had served as AMSAT-NA's executive vice president.

An electrical engineer by profession, Haighton has been licensed since 1977. He previously held the call sign GD4INU. He's been a member of AMSAT since 1991, and, in 1997, he organized the AMSAT-NA annual meeting.

Haighton is one of two Canadian representatives to the Amateur Radio on the International Space Station (ARISS) project. He's been active in Canadian Amateur Radio affairs for many years, and is a life member of Radio Amateurs of Canada (formerly of the Canadian Amateur Radio Federation).

Baker surprised the Amateur Radio

community in September by announcing that he did not plan to seek another term. Baker remains an AMSAT-NA board member.

Ray Soifer, W2RS, has stepped back into the job of executive vice president vacated by Haighton. Soifer had served as international affairs VP for AMSAT-NA. — *RAC, AMSAT, ARRL Letter*

Young amateur receives AMSAT award

ARRL member Mahana Paige, W5BTS, was honored at the recent AMSAT-NA Symposium and Annual Meeting in Portland, Maine, for her efforts as a member of the Houston AMSAT Net team. The 11-year-old Technician licensee was recognized for helping out with the Houston AMSAT Net when her dad, Bruce Paige, KK5DO, is not available. The inscription on her award reads: "In recognition of your efforts as a member of the Houston AMSAT Net Team. The results have been significant. The Houston AMSAT net, with its emphasis on AMSAT News Service information, has been heard around the world via short-wave broadcasts, direct satellite feeds, North American VHF and UHF repeaters and real audio on the Internet. AMSAT looks forward to your further contributions and successes." It was signed by outgoing AMSAT-NA President Keith Baker, KB1SF. Mahana is in sixth grade. Her dad says her BTS call sign suffix stands for "born to shop." She's been licensed since January. — *ARRL Letter*

New North American 145 GHz record claimed

A new North American claimed record at 145 GHz was set 06 November when Brian Justin, WA1ZMS/4, and Geep Howell, WA4RTS/4, established two-way contact over a path of 34 km. Justin reports the CW signals were weak but able to be copied. The transmitter power on each end was around 5 mW. ICOM R-7000 receivers were used for IFs. WA1ZMS was on the Blue Ridge Parkway in FM07fm. WA4RTS was in Lynchburg, Virginia, in FM07ji. "No receive margin was to be had on the WA4RTS end, so we reached the limit of what we can do for now with the exception of weather conditions," Justin said. — *WA4ZMS/4, ARRL Letter*

WORLDRADIO

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Features

Departments

Next month: 10-10 International News, Amateur Satellites, Club Huddle, Computers & Basic Stuff, HF Mobile, Positively CW, Wires & Pliers.

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Editor's Log

When you compare the cost of a lifetime subscription to ***Worldradio*** or that "other" magazine from Newington, CT., it's not surprising so many astute readers are choosing us over them. After all, when you consider the variety of articles and features you see in ***Worldradio***, the choice is obvious. Besides, I sure don't want to spend over $800 for a lifetime subscription to that "other" magazine.

Not only that, consider the flavor of the articles you see in ***Worldradio***. We certainly have a good time poking fun at some of the stuff the "others" take deadly serious.

Keeping the above comments in mind, it's not surprising that the following 13 new lifetime subscribers have elected to join a distinguished group of Amateur Radio operators. Our newest additions to the ***Worldradio*** Hall of Fame, Lifetime Subscriber Wing:

- **William J. Webster, Jr. WB2TNC Lanham, MD**
- **Philip Karras, KE3FL Mount Airy, MD**
- **J.B. Campbellone, KD4HAK Homosassa, FL**
- **Doug Polzien, N8KSO Calumet, MI**
- **Michael Gorniak, N7AIN Braham, MN**
- **John Grigaliunas, KB9QPQ Tinley Park, IL**
- **Gerald W. Saboe, NØGS San Antonio, TX 78232**
- **Jim Clymer, Jr., WS6X Fresno, CA**
- **Don Clark, KA6AHK Pleasant Hill, CA**
- **John P. Latimer, WA6MWI Los Gatos, CA**
- **Gary Youngs, K6GLY Santa Clara, CA**
- **Dave Tyler, N7DRT Sequim, WA**
- **Robert D. Shankle, AL7NO Delta Junction, AK**

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Amateur Radio operators certainly have a lot to be thankful for. Phase 3D was successfully launched from French Guiana aboard an Ariane V rocket and is now undergoing tests. It should be on the air for all of us to play with very soon. The International Space Station is now manned and communicating via Amateur Radio with lots of folks here on Earth.

Both of these events are the culmination of years of effort by hundreds of Hams from all over the world. Each and everyone of us should at least say "thanks" to those involved in any way with these two events. Without their time and efforts, as well as the many, many supporters of these programs, Amateur Radio could not have stepped into the future!

But it also causes a problem with amateurs like myself. I have a Yaesu FT-847 for my main rig at the home QTH. I really haven't had the time to enhance my HF operation with satellite communications. Sure, the rig is very, very capable of utilizing all of the satellite modes — I just haven't had to time to learn to use all of them. So now I guess I'll have to break down and spend the money for a decent satellite antenna setup. One of my first thoughts when I obtained this FT-847 was, "Oh great — now I'll have to convince the XYL that I need some money to buy satellite antennas and an elevation and azimuth rotator." She just spent $1,500 on a new sewing machine, so I guess I can spend a few hundred bucks on a satellite antenna setup.

So now I ask you, our readers — what are you using for satellite antennas? I need to know! Let me know by e-mail: wf6o@arrl.net.

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Did you check out the electronic QSL site I told you about last month? Well, if not go to: www.qslcard.com. Exciting, isn't it? Now we need to get the ARRL to get off their rumps and accept electronic QSL's for DXCC and other award credit. Send an e-mail to: n1nd@arrl.org. That's Dan Henderson, the contest guru at ARRL HQ. Let him know that we demand acceptance of electronic QSL's.

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You, as one of our readers, have a duty to fulfill. We need you to tell all your friends what an outstanding magazine this is (known fact!). Every time you contact one of our advertisers, be it to purchase a product, ask questions or for technical support, be sure to tell them you saw their advertisement in ***Worldradio***. We have had several prospective advertisers say, "Nobody reads your magazine." Or they say, "Our advertisements in ***Worldradio*** don't work. No one sees our ad." Help us prove them wrong!

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I hope you all have as good a year in 2001 as I have had in 2000! — *WF6O*

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Since its introduction over a year ago, Yaesu's FT-100 HF/VHF/UHF Transceiver has been widely acclaimed for its outstanding performance and flexibility. Now the FT-100D builds on this success story, adding the convenience of factory-installed modules for today's Ham on the go!

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Shozo Hara, JA1AN, and Brad Field examine historical radios displayed at JARL headquarters.

JARL is 75 years old

Brad Field W8JJO/7J4GWB

Shozo Hara, JA1AN, is worried, he says. He's the new president of the Japanese Amateur Radio League. Ham radio is attracting too few young-people, — not just in Japan, but the world over. He wants the ranks of Amateur Radio, and of JARL, not to shrink, but to grow. He feels the need especially as JARL approaches an anniversary. In 1926, 37 Japanese Hams got together and organized it, so this spring, it will celebrate 75 years. Another problem, he says, is that twenty percent of Japanese amateurs do not belong to JARL.

But there are over two million licensed radio amateurs in Japan. I can think of more than one national Ham club that would be happy to have eighty-percent of the licensed amateurs as members. If we figure that about twenty percent of licensed Hams never transmit, the JARL numbers look very good.

I live these days in a small city near Tokyo. Last year, an old friend, Atsumi Kawaguchi, JA4CX, just elected as one of the new directors of JARL, invited me to come to Tokyo. Atsumi wanted me to have a look at the JARL headquarters and to meet Hara-san.

Brad Field, W8JJO/7J4GWB, at the control console for Japan's three Amateur Radio satellites.

Headquarters is an eight-story building not far from a small station on Tokyo's railroad circle-line. There they have much to be proud of — the control point for Japan's three, count'em, three-satellites up and operating as well as offices for

Kumiko Fujihara, JH4MVN, handles QSLs for JARL bureau.

the staff required for such a large and active organization. JARL produces the usual publications, a monthly journal; helps license application procedures for foreign and Japanese Hams; sponsors contests; conducts training seminars for Hams; prepares for emergencies, which in a country so afflicted with tornadoes and earth-quakes, come all too often; and all the other activities one might expect from a League supporting a large and active membership. It's no surprise that the building is now too small.

The QSL bureau now handles about two million cards every month. It is no longer manned by volunteers only. It has moved, as of February 2000, from its long-time address in Tokyo, to JARL QSL Bureau, Shobara Post Office, Shimane 699-0588. There is it run by a new manager, Kumiko Fujihara, JH4MVN. This bureau's system is in some measure a model for other national QSL bureaus. After a visit a few years ago by some big shots at IARU, similar arrangements for QSL cards appeared in other countries.

Hara-san started in Amateur Radio right after World War II. He edited, starting in 1946, a DX column in the Japanese magazine, *CQ Ham Radio*. The Japanese ban on Ham radio was not lifted until 1952.

He is pleased that JARL had finally got an additional allocation from Ministry of Posts and Telecommunications in the 160-meter band, fifteen kHz. above 1.810 in addition to the five kHz. sliver above 1.9075, all cw only.

Happy New Year! You've got mail!

As we roll merrily into the 21st Century, it is time to tie up loose ends, as well as look forward to the glowing future. The November 2000 column on restructuring (with a focus on the new Tech ticket) inspired a LOT of e-mail, so most of this month's column is dedicated to tidying up that topic. But it would hardly be a proper Millennium Rules & Regs without at least one New Year's (New Century's?) Resolution! THEREFORE, I resolve to write at least one column praising the ARRL for the many good deeds it does. Actually, that will be easy, as I have wanted to write about The Big Project (being spearheaded by my own former 3rd area representative, Kay Craigie (WT3P), the ARRL Vice President. Also known as "The Amateur Radio Education Project," this most worthy undertaking will put Amateur Radio into primary and secondary school classrooms as an educational tool. As a former high school teacher, general counsel to a large board of education, and long-time columnist on education law (and currently the "Law & Ethics" columnist for *eSchool News*, a publication dedicated to the use of computers, the Internet, and electronics in public schools), I believe that this ARRL initiative is brilliant. Support for The Big Project deserves to be on everyone's New Century Resolution list.

The Rules & Regs e-mailbag!

Mike (AD6AA) writes: "Nice article. I did well on the questions until you said that the CSCE was good for the General upgrade for only a year. I thought it was like it was before, once you got HF privileges just take the next test anytime. Soooooooooooo, new question, if the CSCE is only good for a year, do the Tech plus (newer ones) and Novice Hams have to take the Element 1 test over to upgrade to general?"

Thanks, Mike, glad you liked the column! The answer to your quandary is YES — everything is like it was before EXCEPT where things are different than before. The White Rabbit dives into the hollow tree then emerges in Wonderland... but you knew that. The reason is that the FCC rules limit the validity of the CSCE to one year. If you are a Technician and pass Element 1 and do not take and pass Element 3 within a year, you must re-take Element 1 when you take Element 3 to upgrade to General because the CSCE has expired.

You do NOT have to re-take Element 1 every year to retain your Tech HF privileges. WHY? Here is the tricky part. Everything is like it was before EXCEPT THERE IS NO MORE TECH PLUS. That means Techs who pass Element 1 do not have a different license to "prove" their right to operate on HF. They get a CSCE but it is just good for upgrade purposes. It is not formally established under the regs as an "HF privileges document" even though it works nicely as one if you are stopped by the HF Frequency Police.

Remember, if you were a Novice, you had to pass Element 1 to become a Novice, so post-restructuring Novices do not have to use a CSCE for Element 1. They have a license document to show they had passed the Morse code element.

Put it another way — to become a General, a Novice does not have to pass ANY code test, just Elements 2 and 3. Technicians who pass the Element 1 Test get a CSCE for Element 1, but that CSCE expires in one year. They do not

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VE Region under the sequential call system as of 18 November 2000. For more information about the sequential call sign system, see Fact Sheet PR5000 #206-S dated August 1996 or contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll free 888/225-5322

District	Group C Technician	Group B General	Group A Am Extra
Ø	KCØJEE	++	ABØPM
1	KB1FXC	++	AA1ZZ
2	KC2HDB	++	AB2KT
3	KB3FTO	++	AA3WD
4	KG4KLZ	++	AG4DZ
5	KD5MHN	++	AD5BE
6	KG6EDD	++	AD6TX
7	KD7KYH	++	AE7KG
8	KC8PIX	++	AB8JE
9	KB9PTP	++	AB9AR
N. Marianas	KHØLO	++	++
Guam	KH2UZ	++	++
Hawaii	NH7CU	++	++
American Samoa	WH8ABD	KH8DO	AH8T
Alaska	WL7CVE	KLØZA	++
Virgin Island	WP2AIM	NP2LM	++
Puerto Rico	WP3IP	++	WP3T

++ All calls in this group have been assigned
(NOTE: Advanced Class calls are no longer issued by the FCC. This category has been dropped.)

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become TECH PLUS, so the 5 wpm Element 1 does not become part of the license. In other words, part of the reason Technicians who pass the Element 1 test have to take it over after a year is because they do not get a new license that includes the code element. Things are indeed different now.

As I do with all e-mail I receive (davidsplitt@erols.com), I actually replied to Mike in October 2000 when I got his e-mail. He responded a few days later with this follow-up question: AD6AA: "OK, feel like I might become an expert on the repeater. HIHI. Now, when a Tech plus renews his license he becomes a Tech, is he still able to upgrade to General without the code test? I would guess yes."

Affirmative! Although I just can't see a Tech Plus who really wants to be a General just renewing his license to Tech. I think the FCC is counting on 99% of the Techs either upgrading or dropping out of Amateur Radio. From what I have seen, most are upgrading to General (the stats on upgrades to General are HUGE!), even the ones who don't necessarily want to do much HF. Why? Because it is so EASY. By the way, since the restructuring, my code speed has actually increased. STRANGE BUT TRUE!!

John (WA6PGA) sent an e-mail saying, "After 12 weeks 'back home' (as HB9CDP) this summer, I've just read your column about the Tech License. After having read it all, I still have a simple question that hopefully you can answer (given that there is SO much confusion out there, it's wonderful that there's at least ONE lone chap who knows what he's talking about!). My YF, Margrit (N6FQG) was a Novice and passed her Tech written exam back in 1986. She has a letter from the FCC that says her Technician Plus license was issued on 21 October 1986 (ahead of that magic 21 March 1987 date). What specifically does she do to get a piece of paper in her hand that says she's now a General Licensee? Thanks and keep up the Good Work!

John and Margrit, — here are the applicable FCC regs and my interpretation of how they apply to your situation.

ß97.21 Application for a modified or renewed license grant. (a) A person holding a valid amateur station license grant: (2) May apply to the FCC for a modification of the operator/primary station license grant to show a higher operator class. Applicants must present the administering VE's with all information required by the rules prior to the examination. The VE's may collect all necessary information in any manner of their choosing, including creating their own forms.

This means that you present the necessary evidence to a VE, fill out the proper application form and pay any applicable application fee. In order for Margrit to be entitled to a General Class license, she must have credit for Elements 1, 2, and 3. Credit for each exam element is based on the rules in ß97.505(a): "The administering VE's must give credit as specified below to an examinee holding any of the following license grants or license documents:

An unexpired (or expired but within the grace period for renewal) FCC-granted Advanced Class operator license grant: Elements 1, 2, and 3.

An unexpired (or expired but within the grace period for renewal) FCC-granted General Class operator license grant: Elements 1, 2, and 3.

(3) An unexpired (or expired but within the grace period for renewal) FCC-granted Technician Plus Class operator (including a Technician Class operator license granted before 14 February 1991) license grant: Elements 1 and 2.

An unexpired (or expired but within the grace period for renewal) FCC-granted Technician Class operator license grant: Element 2.

An unexpired (or expired) FCC-granted Novice Class operator license grant: Element 1.

A CSCE: Each element the CSCE indicates the examinee passed within the previous 365 days. [i.e., the elements marked on the CSCE]

An unexpired (or expired less than 5 years) FCC-issued commercial radiotelegraph operator license or permit: Element 1.

An expired FCC-issued Technician Class operator license document granted before 21 March 1987: Element 3.

An expired or unexpired FCC-issued Technician Class operator license document granted before 14 February 1991: Element 1.

Under ß97.505(b), "No examination credit, except as herein provided, shall be allowed on the basis of holding or having held any other license grant or document." There is the irony... Margrit has a valid Tech Plus license (Elements 1 and 2) but does not qualify for Element 3 because she does not have an EXPIRED pre-21 March 1987 Technician license. I know that might not make sense, but that is what the regs say. Bottom line — looks like Margrit still needs to pass the Element (General Class written) test in order to get a General Class license.

Dick Noe, KD5HXE, had another interesting story about his XYL. Through an unusual set of circumstances, she actually passed the 5 wpm code test before taking any written test, so she had Element 1 and no license. Dick wrote, "I just finished reading your article in the November ***Worldradio***, and I hope you clear up our problem. My wife passed the 5 wpm code in July '99 and received a CSCE for it. Now in May of this year she passed the Technician test. I'm getting conflicting answers about her current status. What are her privileges? Can she operate in the HF bands or is she limited to 6 Meters and above?

The "reverse order" of Dick's XYL's test-taking (as well as the narrow timing window) is causing the confusion. She passed the Tech test, so I assume she applied for and received her Technician license. If so, based on passing the 5 wpm Element 1 test, she has the same HF privileges as a Novice or an "old" Tech Plus licensee because she is a "Technician who has demonstrated Morse code proficiency." If she had received her Tech license AFTER the CSCE expired, the answer might have been different (but I don't think so). Anyway, I don't think there is any question that she had a valid CSCE when she passed the Technician test.

The bottom line — she keeps the limited HF privileges for as long as she

is licensed, but the CSCE was only good for an upgrade until July 2000, so she will need to take the 5 wpm test again when she takes the General written to upgrade (Element 3).

Eric R. Wolfe (WB3IHQ) sent praise and raised an intriguing question Eric wrote: "Great column in November ***Worldradio*** I enjoyed and learned. But didn't you forget to mention the remaining Conditional Class operators in your list of existing license classes?"

Well, Eric, I remember the Conditional Class (which allowed some far-flung licensees General Class privileges without going through the same downtown FCC office test process). There have been no Conditional Class licenses issued in many, many years, and I am pretty sure any that were issued would have expired or have been converted or renewed as something else. Certainly there have been none issued since the VEC system was adopted because the VE's did away with the need for the Conditional Class. I do not know of any current Conditional Class licensees. Does anyone out there know of anyone who claims to be a Conditional Class licensee?

Patrick Stowell, N9FNP, sent e-mail based on reading the column in a sample issue of ***Worldradio*** he received. He wrote, "I thought you had a good column on VE testing. I have been around Ham radio for about 49 years. I was 14 years old when I got in to my first Ham radio class. Back in the 50's if you did not upgrade your Novice class within a year, you lost your Novice class license and had to start all over again. I could not make the grade, so I did not get my Ham ticket until the 80's.

Well, I got my Novice class, then I upgraded to a Technician. To become a Tech you had to take a General class written test, then got a one by three call. When I upgraded to Advanced Class (then to Extra class), I kept my old 'Tech' call — N9FNP.

"My Question is this: If I am on 10 Meters (somewhere in the Novice segment of the phone band), how can I tell if I am talking to Tech who has passed a code exam or a (bootlegging) 'No-Code' Tech? They both have the same type of call sign. So how do you tell them apart? Seems to me the only way to keep the 'no code' within his or her bounds is to ask if he or she is a no code tech or a code tech."

I also got my first Novice license in the 1950's and then regained my license later (and like you, went from Advanced to Extra). I still do a lot of code, but back in high school, I was more interested in girls and music than Amateur Radio. The question about knowing whether you are talking to a Tech or a Tech who has passed the code test is intriguing. My first, sort of tongue-in-cheek response is, "What do you care?" We are Amateur Radio operators, not the Code Police or the Frequency Police. Hi Hi! But my more considered answer is this. The FCC eliminated the Tech Plus designation and its associated database for their ease of administration. They apparently did not think that HF-bootlegging Techs would be a serious problem. After all, the only real motivation to take the 5 wpm test is to move toward the General written test. Having a Tech with 5 wpm code does not really get you much in the real world, and the upgrade is fairly simple with the 13 wpm requirement gone.

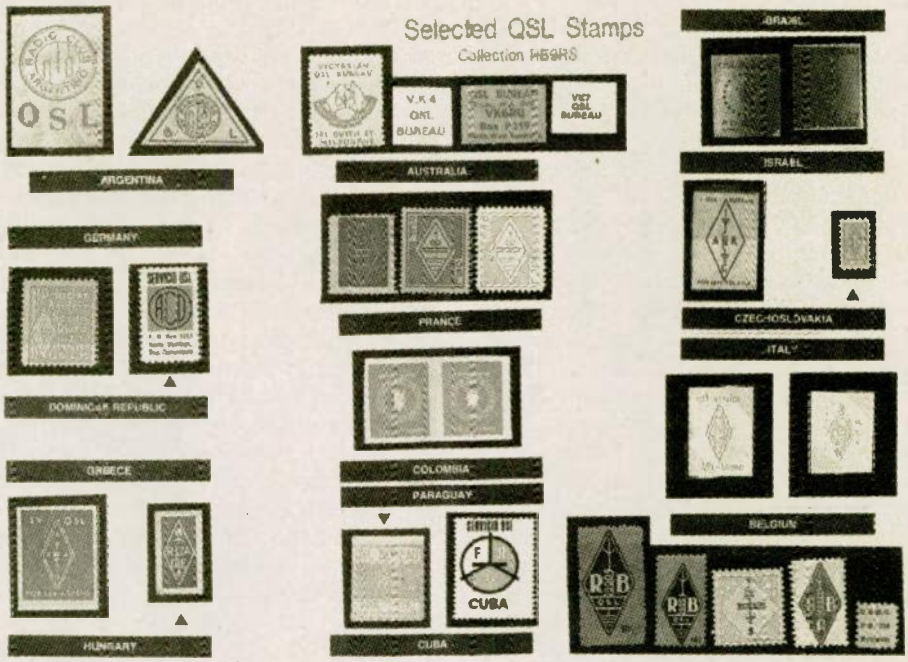
If the FCC does not care that much about a few Techs going down on HF to practice their code in the Novice band, why should the rest of us get all bothered? I am not in favor of gratuitous random law breaking, but at the same time I don't go 55 mph on the highway when everyone else is going 65 mph. Bottom line — it is not your job or my job to keep Hams "within bounds." When I hear stuff like that I think of those morons who sit on a DX frequency and holler things like "Up, Up Up" or "The DX is working split, you #$%%^@$%#$%^!!" They need to get a life. Moreover, they need to recognize the simple fact that they are usually causing more QRM than the guy who hit the wrong "split" button on his rig.

In summary, if you are personally worried that you might work a Tech on HF who has not passed the code test, don't work ANY of them. Stay out of the 'Novice' band segments. If it is on 10-meter phone — you can ask, but don't be surprised if the other guy gets insulted and tells you it is none of your business (do you work for the FCC?). That's up to you. Me? I've got better things to do than worry about someone who gets his jollies out of bootlegging Morse code on the HF Ham bands. Happy New Year and welcome to the New Millennium!

Our Putlizer award-winning Rules & Regs columnist can be reached by writing to: David Splitt KE3VV, 6111 Utah Avenue, N.W. Washington, DC 20015, or by e-mail to: davidsplitt@erols.com

QSL stamp collecting

Max C. de Henseler, HB9RS



For the stamp collectors not familiar with Amateur Radio communications, a definition of the abbreviation (signals) QSO and QSL is needed. In 1912, to overcome the language barriers faced by radio operators of all nations as they tried to communicate with other operators all over the world, a series of codes were internationally adopted, among them the "Q" code. What is a QSL ? A QSL is simply an acknowledgment of a contact established by radio between two Amateur Radio stations, which is called a QSO.

The most common form of confirming a QSO is a written card containing the name, call, geographical location of the station sending the card and the other station's call. The QSL will also mention the date, the time, the frequency and the mode of transmission used, and a report on the readability, strength and tone of the signal. As it is said among radio operators that "a QSL is the final courtesy of a QSO," this QSL has to reach the operator you have contacted. This card is necessary as a proof of having established a QSO with another station for obtaining various awards, such as for having contacted all continents, all districts in a given country, etc. Before seeing how this can be achieved, let us see the magnitude of this exchange of QSL cards. There are some five million Amateur Radio operators around the world who could easily make hundreds of QSOs a month. This exchange of QSLs can be achieved in two ways. The first and very expensive is the "direct" way — that is finding the address of your correspondent in special directories in which Amateur Radio stations are listed by country and by call sign, and then go to the post office and mail your QSL card.

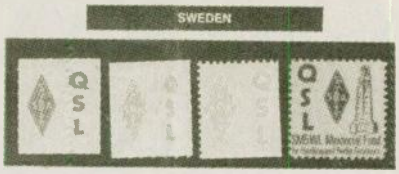
Sending QSLs "direct" can become very expensive. Therefore a cheaper way had to be found and the QSL Service Stamps were introduced. In the early days of Amateur Radio, operators had formed regional clubs or societies which grouped themselves into national societies, and finally, the International Amateur Radio Union (IARU) was founded by some 25 national societies in Paris in 1925.

Today, more than 200 societies are members of the IARU. From that date the contact and the activities between Hams of different countries became easier and national QSL Bureaus were established and QSL services were

offered to their members. The QSL bureau is usually a national radio association office were Hams can send a whole batch of their QSLs. Radio magazines with worldwide circulation, such as the *Short Wave Magazine* in London also served as a QSL bureau for their members. These organizations sort QSLs according to the country of destination, then sends them in bundles to the corresponding QSL bureau which will

distribute the QSLs to their members.

Most countries have QSL bureaus operating along the same lines, providing by far the least expensive way of exchanging QSL cards. However the expenses are to be covered by the users, either by a membership fee or by the purchasing of QSL STAMPS which will be affixed at the back of each QSL, as a proof of payment of a certain fee allowing the operator to use this service. Today, very few QSL Bureaus still use the colorful QSL stamps which have,



if not completely disappeared, been replaced by ugly rubber stamps.

From the date of the QSO reported on the QSL one can approximately state that Switzerland, Netherlands, Belgium and Germany were among the very first countries to issue QSL stamps in the early 1930's, soon followed by Hungary, Czechoslovakia and France. More than three dozen other countries followed in the 50's, 60's and 70's until the end of their use in the mid-80's.

Most stamps reproduced the emblem of their national society, i.e. a diamond shaped lozenge with usually a tuned circuit represented by the symbols used in circuitry for an antenna, a coil, a condenser and a ground, together with the initial letters of the name of the society. The American Radio Relay League (ARRL) was already using the diamond shaped logo when the IARU was formed, and as Hiram Percy Maxim, the president of the ARRL became IARU first international president, the diamond was adopted by the IARU, and then by most national societies.

Belgium and Switzerland appear to be the only countries that had, at one point in time, printed QSL stamps with a denomination value.

It might be interesting to know the story of stamps which became QSLs. In the 20's, listeners who wrote to American and Canadian broadcasting stations for verification of listenership would receive one of the station's QSL stamps together with a confirmation card. The stamps were printed in various colors displaying the American Eagle perched on top of a globe of the world with radio towers on either side. The Canadian stations printed a beaver gnawing away on a tree. Superimposed were the station call letters. These "EKKO" stamps, named after their publisher, could be placed in an specially printed album with spaces for "verified reception stamp" from all known stations.

What is your HAMdicap?

Grant Bingeman, KM5KG

When sailboats compete in a race, the bigger boats are handicapped in order to give the smaller boats a fair chance. The outcome of the race is based on the corrected times, not the actual times the boats cross the finish line. This helps to create a level playing field. The QRP afficionados like to rate their performance in miles-per-watt. That is, their figure of merit is the distance between the transmitter and the receiver divided by the power output of the transmitter. So the QRP player with the highest confirmed miles-per-watt wins some bragging rights. Again, this rating is a means to even the playing field, or a method to avoid comparing apples to oranges.

But I think the traditional units of miles-per-watt is a bit misleading for what we are trying to quantify. I say this because the electric field intensity* of the RF signal is directly proportional to the CURRENT in the transmitting antenna, which is proportional to the SQUARE-ROOT of the power delivered to the radiation resistance of the antenna. The use of miles-per-watt is fun and easy, but a yardstick graduated in field intensity makes more sense insofar as it is linearly related to performance and power is not. This is why when calculating dB; we always use a multiplier of 10 times the log of power ratios and a multiplier of 20 times the log of voltage and current ratios.

A recent CW QSO was made on 40 Meters with a path length of 595 miles where the transmitter output power was stated to be 35 milli-watts. This yields a figure of merit of 17,000 miles-per-watt, which is pretty impressive. But assume for the moment that our reference power is five watts. Relative to five watts, 35 mW is 143 times smaller (143 X 595 miles = 17,000 miles). However, the radiated field from that 35 mW station is only 12 times smaller than from a five watt station, all other things being equal (that is, the square-root of 143 is about 12). This value of 12 is a more realistic correction factor than 143, as we shall see in a moment.

Think of this number 12 as the handicap that should be given to the five watt station competing with the 35 mW station. The five watt station should have a signal 12 times stronger than the 35 mW station, all other things being equal. In other words, the actual path distance of 595 miles times the handicap of 12 should be the corrected distance (7,140 miles) given to the 35 mw station. Remember this is relative to five watts, the de-facto upper limit of QRP CW operation. I believe the linear relationship between current and signal intensity paints a better picture of the degree of RF communication difficulty than the non-linear relationship between power and signal intensity. The bottom line is the fact that the 35 mW signal is not 143 times weaker than the five watt station, but only 12 times weaker (22 dB). If we scale our performance with the following correction factor, I think it makes the game more fair:

F = sqrt (5/P) where P is your PA OUTPUT POWER in watts

But it takes two to make a QSO, so we really need to consider both transmitter powers. Thus the overall correction factor in that case would be:

F = 5 / sqrt (P1 P2) where P1 is the PA output power of transmitter 1 and P2 is the PA output power of transmitter 2

Let's say that the other QRP station was operating with a typical three watts. Then the overall correction factor in our 35 mW and three watt QSO becomes 15.4, yielding a corrected path length of 9,180 miles. Had the other guy been operating at five watts, we would be back at the 7,140 mile figure. This corrected path length is the score one would record if the QSO were part of a contest using my proposed linear yardstick.

Now this entire handicapping subject brings up another question — how do we accommodate antenna gain? That is, how do we handicap the guy with the steerable log-periodic antenna? First of all, we have to choose a reference antenna. Perhaps a half-wave dipole 20 feet off the ground is a good choice, because it is typical of many QRP amateur installations. Or to keep things simple, an isotropic radiator would make a good reference. Again, since it takes two to make a QSO, the gain of the transmitting antenna in the direction of the receiving antenna, AND the gain of the receiving antenna in the direction of the transmitting antenna should both be considered. The gain figure for each antenna should be a simple ratio of its

field intensity and the maximum value of the reference dipole's field intensity for a given power input, not expressed logarithmically (i.e., not in dB). The overall gain of the RF circuit or path should be the product of these two ratios.

We can use any of the moment-method antenna analysis programs to determine what the expected field intensity is for a given antenna and frequency at an appropriate elevation angle for sky-wave propagation. I leave this as an exercise for the "race committee" who write the handicap rules. However, we can temporarily assume a five watt reference antenna maximum field intensity of 13 milli-Volts per meter at a mile. Note that I have not specified the antenna polarization, as the electric field orientation can be unpredictably skewed during its trip through the "ether." However, some additional points should be awarded if the two antenna polarizations are orthogonal, because this should reduce the average received signal level. How much is up to the committee.

Since QRM and QRN are important factors in any QSO, one should also consider the directionality of the antenna. There is a general formula for this which covers all bearings in three dimensions, not just azimuthal front-to-back and front-to-side ratios. That is, directionality is a three-dimensional figure of merit. Directionality at both ends of the QSO should also be added to the handicap formula. Do not confuse this term with directivity.

As an example of applying gain correction, say your transmitting antenna puts out a field intensity half as strong as our reference antenna in the direction of the receiving site. And say that the operator at the receiving site has a really good antenna aimed right at you which can produce a field intensity eight times better than our reference radiator. Then the overall RF circuit advantage is one-half times eight, or four. This is what we would use to handicap the distance. So the following overall formula would produce a corrected distance of 1,785 miles in this case, that is, 595 miles times 15.4 divided by four. Had both stations been operating at five watts with half-wave dipoles aligned directly broadside to one another, then the overall path handicap would have been unity.

So now the overall correction factor looks like this:

$F = 5\ [(Gt\ Gr)\ \text{sqrt}\ (P1\ P2)]$ where Gt is the gain of the transmitting antenna and Gr is the gain of the receiving antenna.

G = E/13, where E is your antenna's five watt field intensity at a mile in mV/m

There are many other factors which can be cranked into the handicap formula as time goes on and the "race committee" convenes periodically to consider them (frequency, ground conductivity, receiver sensitivity and noise floor, sun-spot number, etc). Of course, there will always be those who want to bend the rules, and this is what fuels "race committee" meetings. And human nature being what it is, the official handicap formula will no doubt become very complicated in no time at all. Perhaps it might be easier to assign a handicap based only on the retail value of your equipment in year 2000 dollars! Assign a QSO point multiplier based on the ratio of $1,000 to the total cost of your equipment. Earlier we spoke of miles-per-watt; now we are talking about miles-per-dollar. It would be an interesting comparison, wouldn't it?

Of course, the overall concept of handicapping Amateur Radio contests is very dependent on the honesty of its operators. It might evolve that only stations and operators that are inspected by official observers (something like volunteer examiners) during a contest would be allowed into the handicap category. Then maybe those hidden boxes with a pair of 4-400's in each wouldn't get so much illicit use during alleged QRP operation. Some people will do anything to win!

My intent in writing these notes is simply to propose a more realistic measurement of RF communication circuit performance, avoiding comparison of apples to oranges. I realize it adds a certain complexity to the contest process, and maybe even takes a bit of the fun out of it, but let's at least agree that there are some sound principles here worth discussing. I suppose you could think of this article as an attempt to promote a standard HF circuit yardstick for Ham radio.

As a final note, I would like to point out that it is not logical to define QRP as five watts for both CW and SSB. John Devoldere, in *Low-BandDxing*, page 3-1, states that CW has a 10 dB advantage over SSB. Thus if we assign a QRP limit of five watts to CW operation, then it makes sense to assign a limit of 50 watts to QRP SSB.

*field intensity is measured in Volts or Amps per meter, whereas field strength is generally measured in watts per square meter.

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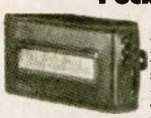

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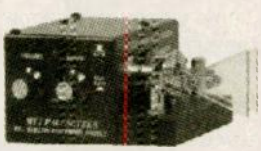

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"As I got older, my high frequency hearing loss was destroying my ham radio for me . . ."

-- Martin F. Jue, K5FLU
President and Founder
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I know I'm not the only ham who can't understand all the speech in a QSO caused by high frequency hearing loss. I developed a solution that I want to share with my fellow hams.

I almost gave up my ham radio hobby

I have been a passionate ham radio operator for over 40 years ever since I was a teenager. I loved every minute of it. Still do, but I almost had to give it up.

As I grew older (I'm 56 now) I found myself asking "*What did you say?*" so often it got downright embarrassing. I can hear pretty good most of the time. I just can't always understand what people are saying and my left ear is weaker than my right ear.

It got to where I was having trouble carrying on QSOs. I could hear, but I just couldn't quite make out all the words.

My hearing problem almost put a stop to my lifelong hobby.

There was no way I was going to give up ham radio . . .

Research showed me what to do

I searched the literature and spoke to hearing and speech experts.

According to their research on the intelligibility of speech in hearing English words:

1. The frequencies important for speech intelligibility are the consonant sounds from 500 to 4000 Hz. They contribute 83% of word intelligibility.

Frequencies from 500 to 1000 Hz contributes 35% of word intelligibility and 35% of sound energy.

Frequencies from 1000 to 4000 Hz contributes *48% of intelligibility* but has *only 4% of sound energy!*

2. In contrast, frequencies from 125 to 500 Hz contributes 55% of sound energy but only 4% to word intelligibility.

In other words, nearly half the speech intelligibility is contained in 1000 to 4000 Hz frequency range with only 4% of the speech sound energy.

On the other hand, the low frequencies 125 to 500 Hz have most of the speech energy but contribute very little to intelligibility.

How I improved my ability to hear and understand QSOs

The research showed me what to do.

First, drastically increase the speech energy above 500 Hz where 83% of intelligibility is concentrated.

Second, drastically reduce the speech energy below 500 Hz that contributes only 4% of intelligibility.

Amateur radio communications limit audio to about 300 to 2700 Hz.

I split the audio band into four overlapping octave ranges centered at 300, 600, 1200, 2400 Hz.

I could boost or cut each range by nearly 20 db to give me full control. This let me maximize speech intelligibility for most kinds of frequency loss.

My left ear is weaker than my right ear so I split the output audio into left and right channels with separate 2½ watt amplifiers. A balance control lets me equalize the perceived loudness to each ear. *Now both ears help in improving speech intelligibility!*

I couldn't believe my ears!

I built one and hooked it to my rig.

I boosted the high frequencies, cut the low frequencies, set the volume and adjusted the balanced control so I could hear each side equally loud.

I couldn't believe my ears! Speech that I could hear but barely understand before was now highly understandable. I got my ham radio back!

With this concept, you'll *understand* QSOs better and enjoy ragchewing and contesting more, even if you don't have high frequency hearing loss.

It helped me so much I wanted to share this with my fellow hams

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California Dreamin'

Henryk Kotowski, SMØJHF

If you are an Amateur Radio operator in one of the industralized countries like the USA, what do you dream of? Rare callsigns and distant places, far from civilization, super DX? But what do DX stations dream of? I am certain many of them dream of California. A symbol of wealth and success, big signals, numerous proficient contest operators, persistent DX chasers, a place with its own definition of a kilowatt. Though a part of the United States only for 150 years, it is the richest and fastest growing part of the country. This is a proof of a lot of dreams being carried out — and I don't mean DX stations' dreams.

I visited California in the spring of 2000 but it was not "dreams come true." I have seen so many places and I no longer dream of being anywhere. I simply go there. I aimed at Southern California for reasons of weather and the high density of Ham population there. Northern California can be as chilly as Sweden in the springtime.

Desert radio contesters NE6N: from left, Norm, K6XC. Don, W6EEN, Ulli, PA5AT, visitor from PI4COM.

Rick, N6ND, among his tall towers in Ramona near San Diego

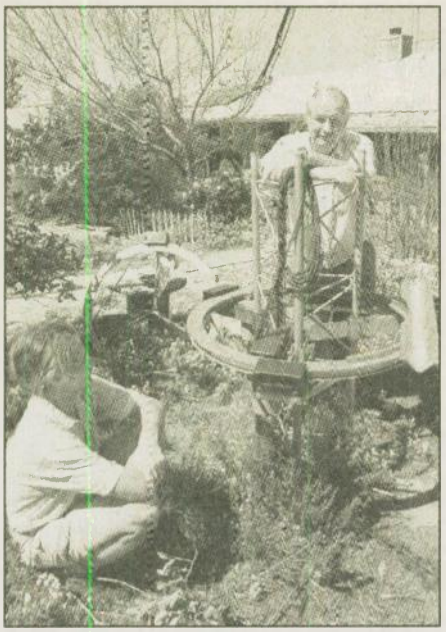
As soon as I arrived in San Diego I was invited to attend the March meeting of San Diego DX Club. These guys are practical and instead of just bragging about working the current DXepeditions, they asked local electric power company employees to discuss tracing sources and curing power line noise at this very club meeting. The meetings are held in a restaurant in Miramar, north of San Diego.

Not only did I get a ride to and from the meeting from Ed, W6KUT, but this vital Old Timer proved to be helpful in many ways. Like guiding me to N6ND's remote QTH to behold the impressive towers with stacked antennas. Ed himself has a pretty nice antenna farm in spite of living on a city lot. He invited me to an informal Saturday lunch with a few local big guns. It seems that there are many big guns in California, those who have worked all there is to work, those who have very well equipped stations, those who fear no poor propagation conditions. There is something magic about California hamming. It seems that everything comes easy there, everyone has to be successful.

Is the propagation so favorable there?

In order to check it out, I asked Don, W6EEN, if I could join his contest team during the *CQ* WPX Contest at the end of March. Don lives out in the desert, near Palm Desert. His contest group is called Desert Radio Contesters, NE6N. One thing is certain — big antennas grow well in this desert. Murphy struck radios, amplifiers, computers — but not the antennas. So we had some limited fun. Another foreign visitor also joined the group, Ulli, PA5AT, from the PI4COM team. Don holds his home and radio shack open to enthusiastic visitors.

California deserts and national parks are actually something that impressed me very much. I did avoid freeways, large cities, and crowded places. I did not even enter the outskirts of Los Angeles and the closest I got to downtown San Diego was Mount Soledad in La Jolla. Admiring the panoramic view over northern parts of the town, I spotted a shiny car with a set of various antennas. The licence plates showed K6LAP. Lewis was busy talking to Arizona on 40 Meters using his bumper mounted short antenna. But he willingly demonstrated how he could get better results through a remotely controlled station in Point Loma equipped with "real" antennas for HF. The station is accessed via a 440 MHz link. Even my friend and host, Paul, WA6PY, was impressed. Paul has lived in San Diego for a few years and is better known as SMØPYP, one of the most successful EME operators.



Rick, N6ND, discusses tower details with Paul, WA6PY, at Rick's QTH in Ramona

He builds and has always built everything himself — antennas, amplifiers and receivers. Due to intensive home remodeling his present antenna set up is modest. But his EME interest has not died and there are bigger things planned. It is worthwhile to mention that the local Ham community, including people like W6KUT, N6ND, K6LAP, welcome migrating amateurs and encourage them to pursue our hobby here. I am sure Paul, WA6PY, does appreciate this attitude a lot.

During a couple of weeks I had a chance to get acquainted with many aspects of hamming in California — from mobile, DXing and contesting, to moonbounce. I rounded off my California trip by attending the Visalia DX Convention. It was exhausting since I avoid crowds. It felt like a big West Coast pile-up, hundreds of call signs and faces that I tried to memorize — I missed my logging computer. The event was so well organized and worthwhile that I have changed my view on Ham conventions — I might attend others, too.

The image of California has been created by hardworking people, competitive and visionary. So if you're dreaming of California, take it into consideration.

The voice of Dunk Island — VK4DSN

Cmdr Allen Sherwood, USN (ret)
K6USN

I have been a Ham for 41 years ('back before the earth cooled', as my less diplomatic friends would say). I have long been an avid DXer and my military career took me to many interesting and occasionally exotic locations, where the locals might or might not shoot you. When I could, I took a radio. I've operated from many of the islands in the South Pacific, the battleship *Missouri* and the Goodyear Blimp. Each had its rewards and challenges. (For a good ground, nothing beats the keel of an Iowa Class battleship.)

I recently sold my home of many years and moved to a 'deed restricted' home in a new subdivision. Even in rural Northern California, the deed restrictions can be very daunting: no visible outside antennas. I got around that with a tall 'birdhouse' and a SGC Smarttuner. I can still work a surprising amount of DX with a simple wire antenna and 100 watts. Patience, along with the 'hunt-and-pounce' method, will snag even the rare ones when timing, propagation and luck are with you. Still, I reluctantly came to the conclusion that it was now easier to *be* DX than to chase it. Out came my mango-stained, well thumbed map of the South Pacific. There is, I suspect, a little 'Walter Mitty' in all of us. (Mitty was the James Thurber character that lead an unassuming life, but dared to dream great dreams.) You can make them come true on a mini-DXpedition! You are only limited by your imigination. (Well, okay, your pocketbook, your spouse, and your boss, but let's not sweat the details just yet.) Read on.

Up, up and away!

My walking fingers landed on Australia. Not difficult, as it dominates a large portion of the Southern Hemisphere, most of the rest being water. While not rare DX, I've never passed up a calling VK while tuning the bands. A quick trip to the web convinced me Australia was much too massive to do it all in one sitting. I narrowed my focus down to Queensland (the "Sunshine State). I could do some sightseeing of the primordial rain forests and some scuba diving on the Great Barrier Reef. Besides, the Australian dollar compared favorably 'for a very good exchange rate. Simply put a great place to go and at near bargain prices. 'Fair dinkum, Mate!'

Now, where to stay? From Cape Tribulation, on the Cape York Penninsula, to Brisbane, there were endless choices. I wanted an offshore island, something exciting and untamed that would be the gist for all the embellished sea stories I could spin at the weekly Rotary Club luncheon when I got back.

Since I was staying on one of the offshore Barrier Reef islands, I figured it might be novel enough to justify lugging the Ham gear through six airports and 20,000 miles. Getting a VK call was amazingly simple — one walk in to the Office of Telecommunications in Cairns, and 10 minutes later I was VK4DSN — as close to my U.S. call sign as the friendly staffer could get. No worries, Mate.

The Great Barrier Reef was discovered by Captain James Cook in 1770 (by running his ship into it unexpectedly) and extends for over 1,000 miles down the Eastern Coast of Queensland — its one of the Natural Wonders of the World. Numerous sand islands, cays and rainforest islands dot this long expanse of reef. I chose Dunk Island, largely because it had suitable accomodations and easy access by air or catamaran from the mainland, and, okay, because there are no Hams on the island. Besides, the name has some rustic appeal.

What gear to take?

My motto has been "travel light." My trusty IC 706 MK II and MFJ Random Wire tuner fit the computer case nicely, along with a Kenwood PS 20 that was easily tapped for 220v power. (I took the instruction manuals as a precaution. Some years before, while operating from ZK1, the Customs official asked me to "turn on" the antenna tuner, when I had informed him, in pigeon English, that it was a 'Ham radio". Convincing him that it was a 'radio' but didn't 'play' anything by itself almost caused me to miss the once a week flight out of Rarotonga, and it would have been a long, wet walk back to Tahiti.)

The DX antenna of choice was a bent roll of RadioShack #22 transformer wire, through the random wire tuner to a convenient palm tree only 12 feet away. The tiny antenna was below the balcony and surrounded by a grove of 30 foot tall palms. Several careless antenna tosses had missed the tree and landed in the undergrowth, destined to become 'ground radials'. (Australia is home to a vast assortment of poisonus snakes, spiders and boa constrictors and I was not about to upgrade to SK this early in the expedition).

While sporting a postcard perfect setting nestled in among the coconut palms, this was clearly not the ideal location to launch *rf* into the atmosphere. The location of the guest quarters did not allow for a long antenna nor a convenient place to run the antenna up a palm to 30-40 feet as I had so easily done in Palau or Saipan. To make matters worse, the A Index was a dismal 56 — with solar storm warnings!

Cross your fingers, count your toes....

It only took a few minutes to unpack the radio, plug in the power supply and the AC adapter plug (whew! Glad I remembered they have funny AC plugs down under).

After the aforementioned false starts on the antenna, I finally got it over a palm frond and snaked thru the balcony rail to the tuner. It's always a huge relief when the radio comes to life, not hors de combat from some heavy handed baggage handler in Sydney. Ten was, predictably, deader than last nite's anchovy pizza. A faint signal or two on 15 CW peaked above the noise floor. Twenty was pretty vacant, except for the Southern Cross Net on 14.226.5 - mostly VK's and ZL's. The band was dead to the U.S. and Europe was lost under the ever present S-5 tropical static. Time for a quick night time dip in the fabled Coral Sea. As I headed for the beach in the moonlight, an island local called out "Mind the water, mate. Don't become a shark biscuit". At that point, I decided to adjourn to my room and try the bands again. After all, I reminded myself, the world was waiting for Dunk Island to appear, and there were already enough shark biscuits to go around.

Walter Mitty was a Ham

The next morning dawned bright and suddenly, as it does in the tropics. I reconnected the antenna and - wow!- the bands were alive! The West Coast of North America was 7 hours ahead of Queensland, so grey line propagation was good to most of North America. When running low power to a very marginal antenna, and not sporting a rare DX call, CW is my mode of choice. Trust me, CW will make contacts when nothing else works. Many of my logged signal reports were Q5, S-4. My strategy was simple — call the loud ones. Let their stacked monobanders at 90 feet do all the work. I asked each station about his/her equipment and it was almost invariably a gain antenna. I didn't work any verticals, stealth wire antennas or Outbackers on tripods this trip, although sometimes I can. My station was right at the ragged edge of marginal, and I needed a lot of gain on the other end to make it work. When the grayline moved, the adventure picked up. Contacts were a struggle, and I averaged one every 5-7 minutes — not a DXpedition rate, to be sure, but a thrill to achieve my Long invisioned dream of working DX from an exotic South Seas island, where the sound of breaking surf competed with the CW signals in my headphones. When the band opened to Europe late in the afternoons, I had the thrill of working antipodal DX half a world away. I worked F5UKL twice on two consecutive afternoons. Andre was S8 for both QSO's. My first QSO was with OH3TO, Seppo, in Finland and my final contact, just 15 minutes before the airplane came to fly me reluctantly back to civilization, was EA5GNE in Spain.

Some observations for mini DXpeditions

Smaller is better. Take a radio that fits in a brief case, and that you can carry on board the plane. The tuner and wires, cables, etc. are hearty enough to brave the many perils awaiting checked luggage on international flights. I use a tuner and random wire antennas. First, because it fits my "keep it simple' philosophy and secondly, because random wires are cheap, readily obtainable even in the People's Republic of Trashcanistan, and above all, expendable. You can almost always drop a wire out the window even when you can't convince the hotel manager to let you on the roof. Use a small, lightweight keyer. If it takes a battery, take a spare. Radio Shacks are infrequent in the South Pacific. Once on Rarotonga I had to cannibalize a nice Vibroplex Brass Racer to make a manual key when the battery unexpectedly died. Taking a Swiss Army knife to probe the innards of an expensive keyer is not a pleasant experience, but one borne of necessity and dictated by poor planning. Likewise, take an ample supply of fuses and a roll of braid for a counterpoise. Several lengths with alligator clips allows you to find one that works satisfactorily. I carry my Outbacker (the one that breaks down into 3 sections) and clamp for balconies and rental cars. It has done duty as the primary antenna and works surprisingly well for its size. Add duct tape, some fishing weights and an all purpose Leatherman type knife — good for removing screens, opening sealed windows and performing lobotomies on errant keyers. Last but certainly not least, for the sake of your travelling companions and neighbors, a lightweight pair of headphones. CW is a thing of beauty only to the Chosen.

Last of all: don't forget to enjoy the place you went so far to see! I set aside a few hours each evening for the pursuit of Ham radio, and the rest of the time I slipped into the Aloha shirt and sunglasses and, like Clark Kent, blended in with the unsuspecting population.

Only my twitching key fingers gave away my real reason for being there. Yes Walter Mitty lives in all of us. See you on the next island, under the shade of a collibah tree, Mate

Backwoods fox hunt

Larry Hogue, W6OMF

What would you say if I told you that every time you used the UO-14 Satellite you would interfere with most of North America using UO-14. Doesn't sound good, does it?

Well, it was happening here in Northern California, and Greg, KO6TH of Alburn, CA asked the members of the Sunday night Western States/SideWinders on Two Weak Signal Net if they could help locate the culprit.

The interference wasn't actually the amateurs using the satellite; it was a simplex repeater that was causing the problem. You know one of those wonder items that repeat everything you put into them. Our wonderful amateurs within/around the CM98, CM89 CM99 area were getting into the simplex repeater every time they used the input frequency of UO-14, 145.975. First things first, as we know it.

Once Greg, KO6TH had asked for help, myself, W6OMF and Bob, K6HEW jumped into my trusty mobile and headed out to become the knight in shining armor. Little did we realize we were in for a challenge of all challenges.

The hunt begins

For a day and a half we searched. Sitting in Vacaville, CA the repeater was running about an S-5 with a Vertical at 50'. As we headed up I-5 north bound, it's signal strength varied between S-5 to S-8 with a bearing toward the north east; in the general direction of Grass Valley, CA. As we traveled north we found a slight swing to the East, but always in the general direction of Grass Valley, CA. So, we headed east and crisscrossed our way through the Sacramento Valley. One of our stops for another check of its heading was in the town of Nicolas, CA where our hopes soared, as the signal to my FT-51R handi was 20 over S-9. Traveling down the road three miles caused the signal to disappear. What! Yes, disappear. But wait, a mile further and it was back to an S-5 and again pointed easterly. We continued up and around Beale AFB towards Smartville, CA where it again disappeared and we had to end our day. Darn. The next day, Glenn, WA6KKK, a new resident of Grass Valley went in search of it and found himself all over the hills. His persistence in going out and looking lasted throughout the search and he has many miles to his credit.

A conversation with Arnold, KQ6DI, followed and he, in turn, brought it up at the Livermore Amateur Radio Klub meeting where Rich, KN6FW, was in attendance. Rich is one of those great amateurs that got into Fox hunting, and in fact, see his information at www.gst.net/~ahha and you'll see how deep he got into it. Rich, KN6FW, of Pleasanton was talking with Don, KD6IRE, of San Jose about the great opportunity and one thing led to another, and a date was selected to head out on a Fox hunt. Tuesday, 27 June 2000 was the date and a meeting at Bakers Square in West Sacramento was to be the rallying point. Tuesday came and at 0800 the parking lot of Bakers Square looked like an Amateur Swap meet. The trusty W6OMF vehicle along with three vehicles operated by Rich, KN6FW, Henry, KF6PCE, and Don, KD6IRE came armed with their MicroFinder Doppler units and antenna arrays. (You gotta see this system, hopefully you can get to www.wenet.net/~ahha/buildtenna/buildtenna.html it presents the best shot).

Bob, K6HEW, with the W6OMF truck came with maps and bearing information supplied to us by great amateurs, KN6NG, Tony, KE6JDS, Marc, and Paul, KA6CHJ. Glenn, WA6KKK, met us and gave us additional information on where he had been and what he had found. He suggested several spots for bearing information and the pack split up with a common frequency for simplex work. Of six different headings supplied to us, four crossed within a mile of one another and were centered just at the north end of a little town of Washington, CA.

As the search continued with four vehicles covering the hills of the Sierras we constantly were plagued with reflections. Some areas would give us hot spots that matched any signal strength we had received. At times we would take our beams and turn to four or five different headings and get the same signal strength. Reflections would show up

extremely strong with the beam Vertical or horizontal. (Hills is a relative term here as the elevations varied between 2000 and 6000 feet.)

The day of fox hunting was frustrating. Logging roads seem to head everywhere, except in the direction we wanted to go. Using Rich's interferometer, we were able to get four reasonably good bearings. The bearings all converged in the area near Graniteville, CA, which is seven miles north east of Washington, CA. Unfortunately, once we had the converging bearings, we were out of daylight, gas, 15 miles and one ridge away. Henry had enough gas to make one pass through the town, and reported later that it must be in Graniteville! These fox hunters are a dedicated bunch, and not finding the fox was unsettling. Henry went back Wednesday afternoon for about four hours, and got bearings from every high spot he could find. Rich went back Thursday afternoon, and looked until Friday morning. Friday afternoon, Henry went back up there, and got there not long after Rich had left (he hadn't know that Rich had been up there until he got home). Henry had narrowed down the location of the repeater to three logging roads just east and north of Graniteville. Just as he finished checking out the second road, the repeater quit working. He decided to look up the third road anyway, and figured that anyone moving in the area would be suspect. As Henry started up the third road, he met a Jeep coming the other way with a solar panel, antenna and other parts of the repeater in the back.

We found it... ...or maybe not.

The repeater when found was at an elevation of 5250 feet, and was situated such that it was line of sight, or almost line of sight to many of the places where we took bearings, including Vacaville (totally line of sight at 100 miles), Grass Valley, Bullard Bar Dam (line of sight to the high spots above the dam), Hwy 20, and the spot on Magnus Orchard Rd., where Rich took one of the better bearings with the interferometer.

Bring out your favorite Northern California Map and look up the town of Graniteville, CA. It is located on the San Juan Ridge and is on page 80 if you have a Delorme Northern California Atlas and Gazetteer. The road on the ridge at this point is called Graniteville Rd, of course. Follow the road through Graniteville and just East of town you will cross Poorman Creek. Stop at the creek and look North about 200 yards. That's it! The place to beat all places... Look at that terrain, steep canyons, ridges after ridges with roads that only a 4-wheel driver could love... For those exact locations: 39deg 26.688min North, 120deg 43.761min West.

The individual with the equipment was an older man and appeared to have known that "someone" was looking for the repeater. This person supplied no real information and his non-verbal gave us the idea that it would not show up again. Enough said.

Many people were involved with this little project and I would wish I could remember all. Just know that many, many miles and time were involved in this hunt. Between the price of gas and the long distances driven I don't think I could ever repay you all, but I do know the amateur community really appreciates your great effort. Our thanks to Bob, K6HEW, Arnold, KQ6DI, Glenn, WA6KKK, Rich, KN6FW, Don, KD6IRE, Henry, KF6PCE, and many others that monitored and gave us useful information about the repeater.

Inside Amateur Radio

The following story has been excerpted from Inside Amateur Radio, *by the late Lenore Jensen, W6NAZ. The book can be purchased from Worldradio Books, P.O. Box 189490, Sacramento, CA 95818. Price is $9.00 plus $2.00 shipping and handling. CA residents please add 70¢ sales tax.*

Mission of morale

Jim Reynolds, W7FPX, in 1976, was assigned to the Sinai Field Mission in the desert "buffer zone" between Egypt and Israel.

Approximately 170 U.S. personnel were assigned the responsibility to operate an electronic surveillance system which would report any violation of the peace accord.

Jim says, "I was one of the first contingent to go to this lonely spot. It was obvious that Amateur Radio could provide important morale services to those who would be seperated from their families back home."

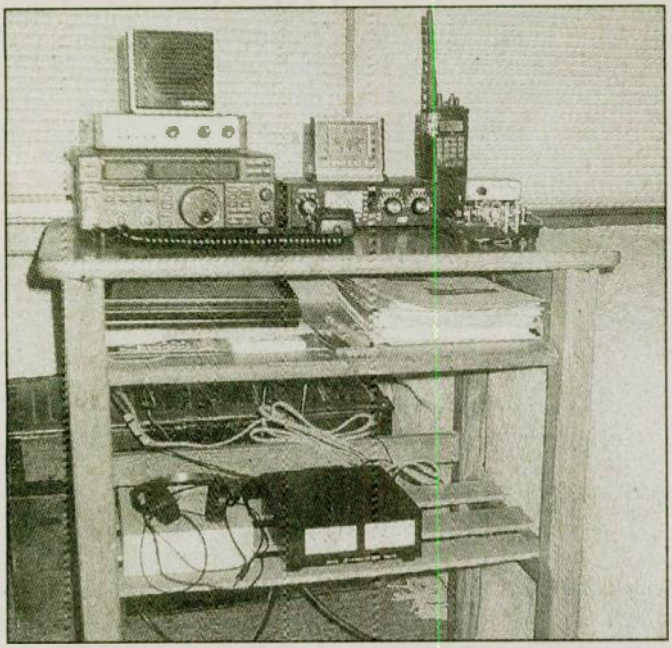
It wasn't to be easy, however. He began a letter-writing campaign to secure official permission to establish a Ham station with "third party" privileges so that phone patches could be run through U.S. amateur stations. Happily, all organizations — the governments involved, the Federal Communications Commission, the U.S. State Department, the U.N., the contracting company — cooperated and eventually a fine station was set up in the 'hobby and crafts' building.

Mel Broe, K4SQT, and Phil Pector, W7JXE, were enthusiastic first members of the Sinai Field Mission Radio Club and soon more licensed operators joined in. They all took turns operating when free from work.

"Because we were in a 'rare area' Hams worldwide were anxious to contact us and, of course, we were delighted to talk to them. However, whenever we found a station stateside with a strong signal, we immediately stopped our general hamming and asked that a phone patch be run for one of our personnel to his family. Because it was so very difficult (and expensive) to call by commercial means, this was a bonanza for the guys in the lonely desert. Over the years, many thousands of such phone-patch conversations were transmitted back and forth across the ocean. If you've ever been in an isolated position, you know what hearing a voice from home can mean."

Station Appearance

Send Worldradio a picture of your shack and the staff will choose a winner to receive a free one-year subscription to Worldradio! Stations will be judged by neatness (wires tucked away, etc.) and accessibility of equipment. Monetary value of equipment is not a consideration.



Lee Groce, N4AAD

I live by the amateur's code of consideration, loyalty, progressiveness, friendship, balanced duties, and patriotism. To me, the public service aspect of Amateur Radio and helping people obtain their license is a very important part of the hobby.

When I returned home from surgery in May 1998, I was unable to get to my radio room in the lower part of my house, so I had a friend help assemble my Field Day/emergency HF transceiver in my bedroom. It is a rather modest setup with portability in mind.

My station consists of a Yaesu FT-840, an MFJ-945E antenna tuner, an RAC keyer mounted on a homemade tune switch and connected to a Bencher Key. The Astron 25 amp switching power supply, Timewave DSP 59+ filter, MFJ World Clock, Yaesu headphones and Radio Shack speaker complete my setup. I use a G5RV dipole for HF and have a "slinky" antenna for restricted areas.

An ADI AT-600 2M/440 MHz HT is also pictured on a student desk which keeps my log, atlas and manuals neatly in place.

I enjoy casual ragchewing on CW and SSB, as well as contesting and DXing.

My main HF transceiver is a Yaesu FT-767GX, and my packet setup is a Kantronics TNC connected to a Kenwood 2M rig.

I use a Yaesu FT-5100 2M/440 MHz transceiver to control our 442.800 MHz repeater. I am the repeater trustee.

Lee is also a member of the Yadkin Valley ARC and the ARRC. He's currently trying to earn his WAS and DXCC Awards.

Silent Keys

Alf Almedal, LA5QK

Former IARU Region 1 Executive Committee member and HF Chairman Alf Almedal, LA5QK, of Sola, Norway, died 11 November. He was an ARRL member and a former president of the Norwegian Radio Relay League. Services were set for 17 November in Sola. — *LA2RR, ARRL Letter*

Gerald W. Mason, W1KRF

Jerry Mason, W1KRF, of Freeport, Maine, died 2 June 2000. He was 78. A Ham since the age of 15, an ARRL member, Mason was among the hundreds of New York and New England amateurs who provided emergency communication during the disastrous September 1938 hurricane, flood and tidal wave that surprised the region. The storm wreaked havoc along the Long Island and Southern New England shoreline, destroying homes, buildings and vessels with its high winds and extensive flooding and claiming more than 600 lives. During the storm, Mason was among a group of Hams that kept hard-hit Westerly, Rhode Island, in contact with the outside world via Amateur Radio for more than 48 hours. The station moved about town finally ending up at W1KRF's QTH. The team handled some 800 pieces of emergency traffic. The efforts of Mason and other Ham radio heroes of the famous storm were chronicled in a compelling cover story in the November 1938 *QST*. — *Rosalind Mason Harris/David W. Harris, KC1XR, ARRL Letter*

Sue Miller, W9YL

Sue Miller, W9YL, of Waldron, Indiana, died 10 November, reportedly after suffering a heart attack. Sue Miller was the XYL of well-known SSTVer Don Miller, W9NTP, operator of Wyman Research Incorporated. — *W9IH, ARRL Letter*

Piero Moroni, I5TDJ

A well-known figure in the moonbounce community, Piero Moroni, I5TDJ, died 14 November after a lengthy illness. An electronic engineer, he had been licensed since 1952 and had been active in EME work since the mid-1970s, the first in Italy, operating mainly on 432 MHz. Joe Reisert, W1JR, called Moroni "a great friend, a true engineer's engineer, and a dedicated weak signal operator" who made his mark both on HF with Honor Roll DXCC and on 432 EME. — *ARRL Letter*

Anthony W. Borgia, K6DR

Anthony "Tony" Borgia, K6DR, died in Fairfield, California, 2 November. Tony was a long-time member of the QCWA, and a charter member of the Sacramento Old Timers Amateur Radio Society.

He was a veteran having served 26 years in the U.S. Army, and retired as a civilian employee at McClellan AFB in Sacramento, CA. Tony was a well known contester, and Hams all over the world were familiar with the call sign K6DR. He was also a member of the Masonic Lodge, the Carmichael Elks Lodge and was an avid golfer and enjoyed playing the organ.

Don't call them "lids"

I believe ex-president George Bush first used the phrase "a gentler and kinder nation." This phrase is the crux of this article. I have always, since becoming an amateur, been kindly offended (yes, I have been called one also) by the word "Lid," often referred to by operators who sometimes don't follow the proper steps when holding a QSO. A large majority of operators today started their radio interests on the CB band and it's hard at first to get away from CB lingo such as "landline," "10-4," "handle" etc.. I think we should make these people welcome on our amateur bands, and please don't call them "Lids" because they mess up once in a while. I'm sure we all have heard the saying "Those who live in glass houses shouldn't be throwing stones." Now, how many out there have never made a mistake, and always used the proper procedures when holding a QSO? If we are all truthful, the answer to this question would be zero.

The next time we might think about calling someone "Lid", lets recall our operating errors and zip our lip. I think we should all follow ex-President Bush and adopt the phase "gentler and kinder amateur bands." If we all try, we can make the word "Lid" obsolete, and at the same time make those people who make mistakes welcome. If you have to say something, do it in a kind way and point out the operator's mistake. I'm sure he/her will appreciate it.

Jim Ayers, AC5OT
Lumberton, MS

Lightning protection...

Just a comment or question for Vernon Gibbs from his article about lightning protection in the December issue.

On the third page he says to tie the third-wire AC ground lead and the white wire together in the radio room. I believe that connecting the ground lead and the white lead together is against most electrical codes.

Just thought I'd check. We get some whoppers of electrical storms here and I am very interested in his ideas for protecting the shack.

Thanks and keep the good magazines coming.

Ken Claar, W7LAR
(from e-mail)

10-10 International...

Today I received another complmentary issue of *Worldradio* — Thanks!

A gripe that I have with your magazine is the 10-10 International News. The 10-10 club was supposedly started to help maintain activity on the 10-meter band. However, the 10-meter band does not need help during the high solar activity period or during the low period.

As far as I am concerned, it is a way to obtain the good life for the select few who initiated the idea.

A case in point is a European station that was DXing 10-10 members only. And this is not an isolated case.

Ten meters is open to all Ham radio operators except the Technician (no code) and this should include all 10-10 stations worldwide.

Now a column on 10 Meters would be acceptable.!

I have other peeves, but the 10-10 concept is the most offensive to me.

Robert Hilton, N9SJV
Fort Wayne, IN

(Ed. I'm sorry... I wasn't aware that you have to be a 10-10 International member to use 10 Meters. Isn't that what Mr. Hilton is trying to imply, or am I suffering from too much CW between the ears again? Or maybe I'm not quite clear on the concept. Can someone out there clarify this for me?)

QSLs...

Rick OM, after reading your tales of woe time-after-time, regarding your difficulties in obtaining those much sought-after DX QSL cards, I just had to put my two cents in.

So that you know that I know wherof I speak, a little background: I was first licensed in 1961 and was fairly active on HF CW until 1968. Using the ARRL QSL bureau, during that time I amassed about 25 DX countries confirmed, all on 40 meter CW. Marriage and my career kept me pretty much inactive until 1996. At that time, I decided that I was going to go for all the awards that I had missed out on in my early years of hamming.

Since 1996, I have confirmed 210 DXCC "entities". This has enabled me to obtain W-100-N, and CATZ as well as various DXCC and CQ certificates using 10 through 40 meter CW (I'm also a member of FISTS).

When I work a new country, I send a self-addressed envelope (SAE) and either an IRC (International Reply Coupon-available at the U.S. Post Office) or a "green stamp" (U.S. $1.00 bill) along with my QSL card. I had a stamp made with my address to use on the SAE, although sometimes I prepare the SAE on my computer. It goes without saying that the information on the QSL card needs to be accurate, using UTC time. I also believe that a good-looking QSL card helps get a response, although not necessarily a faster response. Because of higher postal rates, some countries (i.e., Germany) require $2.00 postage. There is a Ham on Easter Island (XQØ) who specifically requests a direct QSL with $2.00 U.S. postage, for example.

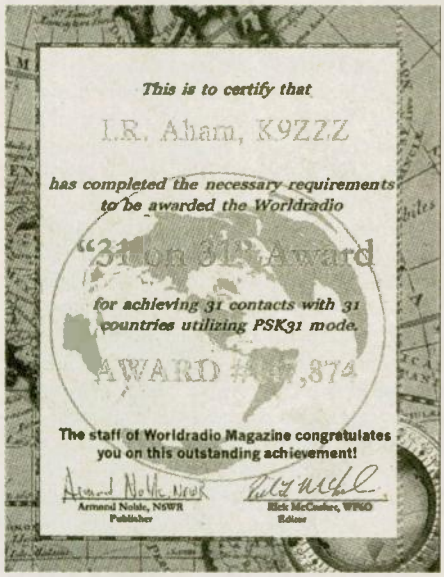
The downside is that some DX stations take six months or a year to return QSLs even when QSLing direct. I assume that they must wait for QSLs to be printed and/or they have a high volume of cards to respond to. Typically, it takes six months to a year to get cards via the bureau. Also, there are DX stations who will pocket the postage and respond via the bureau. I look at it as "foreign aid" — HI. The longest response that I recall took three years via the bureau. On the other hand, I worked a BA4 (Shanghai) on Sept. 4, mailed the card direct on Sept. 6 and received his card direct on Oct. 10. It's a crap shoot.

When I get that new country confirmed, any further contacts with that country only get my QSL via the bureau, unless it's a new, hard-to-get prefix (I participate in the *CQ* WPX program, too).

I hope I haven't bored you with info that you already know, but I wanted to get that off my chest.

73, good luck and good hunting !

Russ WA2VQV
(from e-mail)



31 on 31!

Here's the new award for those operating the newest mode in Amateur Radio, PSK31.

Rules

1. Contacts must originate using PSK31. Spots by DX nets or by packet cluster cannot be used. You can't be in QSO in another mode and say, "by the way, I sure would like to switch to PSK31 so I can count this contact towards the new prestigious and most coveted ***Worldradio*** 31 on 31 Award."

2. Contacts must be two-way.

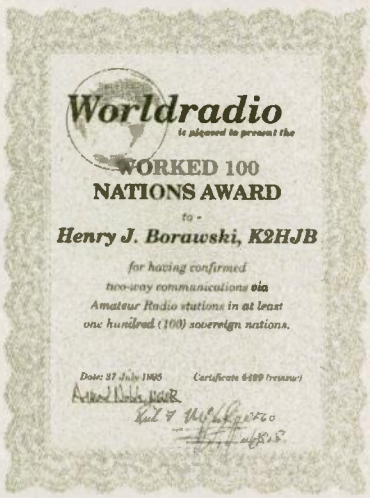
3. Contacts must be made with 31 different nations, and your own nation does not count. A nation is a country having it's own government — (not some little possession or territory of another country) and has a unique call sign prefix assigned by the ITU. The nation must have a permanent population. In other words, a DXpedition to a small, unpopulated island that's claimed by France doesn't count.

4. Contacts with amateurs using a recriprocal license are not valid for this award. The contact must be with an amateur licensed by the other country.

5. Contacts must be made with land-based, permanent stations. Contacts with mobile, portable or maritime stations do not count.

6. Contacts made after 31 March 1999 count towards this award.

7. To apply, send a list of your contacts, or a photocopy of any QSL cards (don't send the originals!), along with a statement of verification signed by two other amateurs of General Class or higher to: ***Worldradio*** 31 on 31 Award, 2120 28th St., Sacramento, CA 95818. Enclose $3.10 (for an 8 X 10 unfolded certificate) as a check, money order, credit card number or three (3) IRC's. Please include your complete address with telephone number or e-mail address.



100 Nations Award

In an effort to encourage personal communications among peoples around the world via Amateur Radio, ***Worldradio*** offers the Worked 100 Nations Award to those confirming two-way amateur communications with permanent stations in 100 distinct countries having a permanent, native population.

The purpose of the Worked 100 Nations Award is to demonstrate the unique opportunity Amateur Radio offers for communications between international borders to further worldwide understanding.

The W-100-N is not a radio sport award as such, but a token of achievement in communication. At the same time, it offers all Amateur Radio enthusiasts several features not found in other awards.

1. W-100-N virtually eliminates the need to work geographic areas heard only during DXpeditions. Almost all national entities have amateur stations consistently on the air.

2. W-100-N, then, will be of perennial interest. The advantage to those stations having worked a national entity long absent from the air will be minimal.

3. W-100-N is difficult to achieve, yet is within reach of all moderately well-equipped stations whose operators utilize good communication skills.

Rules

1. The Worked 100 Nations Award is available to any licensed Amateur Radio operator who can prove confirmation of two-way communications with government-authorized Amateur Radio stations in at least 100 different nations of the world.

2. No contacts with stations using reciprocal calls will count toward this award, such as N6JM/UL7.

3. All contacts must be with land-based stations. Contacts with ships, at anchor or otherwise, and aircraft cannot be considered.

4. All contacts shall be made from the same country.

5. Only contacts made on or after 01 January 1978 will count.

6. The application shall include the following:

a. Letter requesting W-100-N.

b. List of contacts in alphabetical order by prefix showing nation, station call, date, band and mode.

c. A signed statement by two other licensed radio amateurs, General class or above that they have inspected the required QSL cards.

d. A fee of $5 to cover the cost of the award.

7. All applications and requests shall be addressed to:

W-100-N Award Manager
Worldradio
2120 28th Street
Sacramento, CA 95818

8. There are no special endorsements to this award; however, endorsements may be made if the achievement bears such recognition. All modes and bands may be used.

Upon approval of an application for W-100-N, a certificate will be issued and the issuance of the award will be noted in a future issue of ***Worldradio.***

W-100-N

582. William M. Lueck W9BOK
All 15M CW
583. Yukio Hoshino JA1CKE
584. William D. Peterson K2WP

CATZ

31. Morris C.R. Ford KB1ALE
All CW

East Timor (4W)

The recent DXpedition to East Timor (OC-148) by Dennis Motschenbacher, K7BV, and Dick Wolf, N6FF, was a success. The two of them collected some 13,000 contacts with their primary goal to provide a new country for DXers on 160, 80, 40 and 30 Meters. About 5,400 contacts were made on those bands. On 160 and 80 Meters the call 4W/N6FF was used while they used Dennis's call (4W/K7BV) on all other bands.

Noise was a big problem on all bands. However, they found the source and were able to reduce the noise on 40 Meters by seven S units. What they found was that the power line connections in the shack had no solder or wire nuts and were just twisted together, which caused considerable arcing.

In the evening the locals would start using electrical power which caused their ampliers to go off so the team would switch to the emergency generator.

The final tally by bands for this operation came out as follows: 160M, 439; 80M, 1033; 40M, 2011; 30M, 1908; 20M, 1550; 17M, 1227; 15M, 1375; 12M, 855; 10M, 2250; and 6M, 267 contacts. There were several Japanese DXers who worked them on all ten bands!

QSL requests will be handled by Steve, KU9C, with the cards printed by Wayne, W4MPY, which is to be a photo type card.

China (BY)

The Daily DX says that Merv, K9FD, has gone to Huizhou City (BY7), China, and expects to be there for some time. He'll be taking several pieces of gear, including four bays of 9-element beams for 2-meter EME. Once his station has been set up he plans to be active on 2 Meters through 160 Meters. Merv will be the only Chinese station on EME and the second one to operate that mode from China. He will also be on all modes including CW, SSB, RTTY and PSK. Topband DXers will be glad to know that Merv plans activity on 160 Meters as China is rare on that band.

IOTA DXpedition — Russian style! Last March Roman Levichev, RV3MA, made an IOTA DXpedition to Morzhovets Island (EU-119) to visit newborn seals and play with his radio. Not like some of those agreeable locations with the palm trees and bikini clad young things running around. No, only snow and seals. Here is Roma at his operating position. (Photo courtesy of RV3ACA).

San Ambrosio Island (CEØX)

Tedd Mirgliotta, KB8NW, in his world-famous *Ohio/Penn DX Bulletin*, reports that Marco Quijada, CE6TBN, the Team Leader for the San Ambrosio Island DXpedition 2001, said the following operators will be included: CE6NE,

CE6SAX, CE3AQI/NP4IW, OH1EB, OH2BH, OH2RF, DJ9ZB, KØEU and CE6TBN. The island is in the DXCC entity San Felix & San Ambrosio.

They will be on the air as CEØXT from San Ambrosio (IOTA SA-013). CEØX is ranked #34 on the ARRL DXCC Most Needed List. Activity will begin the second full week of February 2001 on 160, 80, 40, 30, 20, 17, 15, 12 and 10 Meters on SSB, CW, RTTY and PSK. There will be three or four one-kw stations. QSL manager is CE6TBN: Marco A. Quijada, P.O.Box 1234, Temuco, Chile. Any support is welcomed. Please visit the DXpedition's Web site at: http://www.qsl.net/ce0xt.

Comoros (D68)

Don't miss the upcoming DXpedition to Comoros Island (AF-007) this February. Don Field, G3XTT, Publicity Officer for the D68C DXpedition, says the operation will be roughly 8 to 28 February 2001. Don, G3OZF, has operated as D68/G3OZF while on a survey trip for the D68C operation doing some invaluable work in getting everything lined up for the upcoming operation.

Since the last announcement, the following have joined the DXpedition team: Tim, G4VXE; Yoichi, JP1NWZ; and Rob, PE9PE. Rob will be especially welcomed by 6-meter, VHF and satellite operators. He will be ensuring that D68C is available via the amateur satellites.

For additional information refer to the D68C web page at: www.dxbands.com/comoros. Yaesu is a major sponsor, and additional sponsorship is being sought, especially from DX groups and foundations, to help with the high cost of shipping three tons of equipment to the site.

Svalbard (JW)

The Daily DX reports that Per, LA3FL, expects to start a six-month contract with the North Norwegian Weather Bureau on Bear Island (EU-027) and Hopen Island (EU-063) on 17 November. He will stay on Bear Island, which has a population of nine, for three months. Next, Per will transfer to Hopen Island, which has a population of four, in January 2001, returning home in May 2001. He plans to take a small rig and be active as JW3FL in his spare time.

Kingman Reef (KH5K)

On or about 20 October 2000 the Kingman Reef 2000 team arrived at Kingman Reef (OC-096) and unloaded all equipment to the reef. Gale force winds and squalls hampered their efforts and prevented them from setting up the antennas for about 24 hours.

The wind and high tide had driven the water clear up to the top of the reef at times waking the operators who were asleep on the sand with water in the sleeping bag. So, those of you who sat in your comfortable shacks and complained, just think about what the team went through to give you a new one.

At approximately 0330 UTC the team came on the air signing with K5K with antennas at that time for 10, 15, 20 and 40 Meters and by the third day the winds began to slack off and were able to erect the remaining antennas. By then there were five stations operating around the clock. They had equipment problems with amplifiers failing limiting them to run barefoot on some bands.

They finished the operation at 1600 UTC with 80,600 contacts, with quite a few of them from Europe. Part of the operation took place during the *CQ* Worldwide DX contest. At 0400 UTC on 31 October, they took down the 17, 12 and 10-meter antennas and operated on 15, 20, 40 and 80 Meters for the last 12 hours.

Joe, W1JR, had some interesting observations of the Kingman Reef operation and said the following: "K5K has

been QRV 24 hours a day, usually with 3-5 stations on the air at a time! Just look at the internet spots! They are being heard in W1 land more than 12 hours a day on some band between 160 Meters and 10 Meters. You have to have your rig in the off position to not hear them somewhere!"

I might add that most seasoned DXers had already worked Kingman Reef from previous DXpeditions which left those needing an all-time new one a better chance to get this one in their logs. That was the case here and sure was a nice feeling to not worry about it. I was able to complete my tally for all nine bands, 10 through 160 Meters. So, if you didn't make at least one contact, you indeed had your rig in the off position!

Chad (TT8)

The Ohio/Penn DX Bulletin also reports that Christian Saint-Arroman, (ex-6W1QV and other former calls), is now active for the next 16 months as TT8DX from Moundou (south of the country) close to Cameroun and Centrafrique. Activity will be 80-6 Meters SSB. He runs a TS690s with a 1500-watt linear for HF and 400 watts for 6 Meters, and HF2V and 7-element beam for the upper bands. QSL to F5OGL via bureau or direct.

IOTA

Roger Balister, G3KMA, RSGB IOTA Manager, notes the following operations that have provided acceptable validation material:

AF-089 TRØA/P	Mandji Island (Sep 2000)
AS-117 JH4TEW/4	Tashima & Yokoshima (Aug/Sep 2000)
AS-117 JA4GXS/4	Otsushima (Aug 2000)
AS-134 BI3H	Shijiutuo Island (May 2000)
AS-148 DSØDX/4	Wi Island (Jul 2000)
AS-148 DS2AGH/4	Wi Island (Aug 2000)
AS-151 BI2J	Juhua Island (Aug/Sep 2000)
EU-147 RA1QQ/1	Kishkin Island (Jul 2000)
EU-147 RA1QY/1	Kishkin Island (Jul 2000)
EU-147 UE1RRC/1	Kishkin Island (Jul 2000)
EU-178 ES1QX/8	Kihnu Island (Jun 2000)
EU-178 ES4BG/8	Kihnu Island (Aug 2000)
EU-178 ES4ABO/8	Kihnu Island (Aug 2000)
EU-181 LZ1NG/1	Sveti Anastasiya Is. (Aug 2000)
EU-183 YP1W	Sacalinu Mare Is. (Sep/Oct 2000)
EU-184 OH8T	Hailuoto Island (Aug 2000)
EU-186 TA/SP6TPM/M	Gokceada Island (Jul 2000)
EU-187 SV9/IZØCKJ/P	Gavdos Island (Jul 2000)
EU-187 SV9/IWØFQZ/P	Gavdos Island (Jul 2000)
NA-213 K4USI/P	Dauphin Island (Aug 2000)
NA-216 KL7AK	Cove Is., Kudiakof Is. (Aug 2000)
OC-075 YB5NOF/P	Bintan Island, Riau Islands (Jul 2000)
OC-107 YB5NOF/P	Singkep Island, Lingga Islands (Jul 2000)
OC-210 YB5NOF/8	Sangihe Is., Sangihe Islands (Mar 2000)
OC-234 VK6BM	Browse Island (Sep 2000)

The list includes operations where validation material was volunteered, i.e. not specifically required for credit to be given. In all cases, cards now submitted will be accepted by checkpoints if they meet normal standards. This means that the island name must be on the card.

The month of October 2000 saw another good period of IOTA activity as shown in the following list. Also, be sure to search your *CQ* Worldwide logs if you participated in the contest. As for last month, this month again is only a portion of what was on.

AF-018 IH9/KR7X	Pantelleria Island	27 Oct
AF-019 IG9/I2ADN	Lampedusa Island	10-27 Oct
AN-006 EM1KY	Galindez Island	19-31 Oct
AS-005 RAØBY	Dickson Island	18 Oct
AS-008 JQ1SUO/1	Shi-kine Island	07-08 Oct
AS-015 9M2/JI1ETU	Penang Island	01-05 Oct
AS-023 JE6EMW	Amani Archipelago	02 Oct
AS-024 JR6USF	Yaeyama Islands	07 Oct
AS-025 UAØIA/Ø	Paramushir Island	01-31 Oct
AS-026 HL4HLD	Cheju Island	21-30 Oct
AS-028 UAØQBA	**Kotelney Island**	21-22 Oct
AS-032 JA6CTW	Yaku Island	01-27 Oct
AS-036 JA4LVZ/6	Tushima Islands	06 Oct
AS-045 HL5FUA	Ullang Island	03-27 Oct
AS-053 HSØ/1K4MRH	Phuket Island	01-22 Oct
AS-056 JA6GXK	Danjo Islands	20-25 Oct
AS-103 BV9AAC	Penghu Island	03 Oct
AS-112 A45ZN/P	Suwadi Island	01 Oct
AS-117 JH4TEW/4	**Honshu Coastal Islands**	01-31 Oct
AS-137 BA4DW/5	Zhou Shan Islands	01-04 Oct
AS-147 JJ8XNA	Hokkaido Coastal Islands	08 Oct
EU-008 GM3VLB/P	Shuna Island	04-05 Oct
EU-010 GMØEEY	Outer Hebrides	20-21 Oct
EU-011 GBØSM	St Mary's Island	01-06 Oct
EU-012 GM3WOJ/P	Shetland Islands	24 Oct
EU-016 9A2GF	Brac Island	18-22 Oct
EU-028 IA5/DK4UH	Elba Island	08 Oct
EU-029 OZ/DL7VRO	Sjaelland Island	22-27 Oct
EU-030 OZ/DL2MX	Bornholm Island	18-20 Oct
EU-031 IC8SDL	**Isle of Capri**	10 Oct
EU-037 SM7CRW	Oland Island	03 Oct
EU-042 DL7OK/P	Amrum Island	22-25 Oct
EU-045 IBØ/IKØGDG	Isolotto del Liscoli	01 Oct
EU-047 DJ9IN	Norderney Island	07-08 Oct
EU-049 SV8DTD/8	Lemnos Island	24-31 Oct
EU-055 LA2BKA	Reksteren Island	01-31 Oct
EU-057 DL5KUD	Reugen Island	08-27 Oct
EU-063 JW5RIA	Hopen Island	02-23 Oct
EU-072 SV8/GØLXC	**Skopelos Island**	04 Oct
EU-075 SV1TP/P	Poros Island	05-06 Oct
EU-088 OZ1DWJ	**Kattegat group**	26 Oct
EU-093 EA5/DK5IM/P	Tarbarca Island	01-10 Oct
EU-096 OH1LU/P	Kustavi Island	22 Oct
EU-120 GB5LI	Lundy Island	08-09 Oct
EU-123 GM3VLB/P	Horse Island	05-06 Oct
EU-125 OZ/DL4FCH	Romo Island	01-03 Oct
EU-127 DAØTT/P	Helgoland Island	07 Oct
EU-128 DL7VRO/P	Fehmarn Island	23-24 Oct
EU-131 IK3PQH	Lido Island	21 Oct
EU-136 9A5ID/P	Zabodaski Island	05 Oct
EU-137 SM7NGH	Ven Island	03-05 Oct
EU-138 SM/DL5RFF	Hasloe Island	31 Oct
EU-151 EA5KB/P	Peneta del Moro	21 Oct
EU-155 IK4RQJ/4	Piallazza Island	05-08 Oct
EU-171 OZ4PAX	Vendsyssel Island	01-30 Oct
EU-172 OZ7AX/P	Fyn Island	20 Oct
EU-174 SV8/G3IZD	Thasos Island	02 Oct
EU-177 7S5Z	Aspoja Island	27 Oct
EU-179 UR3GA	Orlov Island	18-27 Oct
EU-183 YP1W	Sacalinu Mare Island	01 Oct
OC-027 FOØELY	Nuku Hiva Island	20-23 Oct
OC-033 FK8HZ	Loyalty Islands	10 Oct
OC-035 YJØAZG	New Hebrides	02-06 Oct
OC-049 A35YL	Tongatapu group	23-31 Oct
OC-057 FOØDEH	Maupihaa Island	02-26 Oct
OC-065 YJØAYL	Reef Islands	03 Oct
OC-066 FOØBOG	Rangiroa Island	26 Oct
OC-067 FOØFRA	Bora Bora Island	25-31 Oct
OC-070 YE8XM	Ambon Island	07-22 Oct
OC-082 ZK1NDK	Penrhyn Island	29-31 Oct
OC-083 ZK1MHM	Aitutaki Island	10 Oct
OC-121 3D2RW	Mamanuca Group	20-23 Oct
OC-129 DU6/K9AW	Negros Island	05-21 Oct
OC-130 DU8BOF	Mindanao Island	05-20 Oct
OC-137 VK4CY	Lamb Island	03 Oct
OC-141 VK8KTC	Groote Eyante	04 Oct
OC-149 H44NC	New Georgia Islands	07 Oct
OC-150 YC9ID	Tenggara Barat Islands	09-10 Oct
OC-152 FOØWEG	Tubuai Island	21-31 Oct
OC-166 YC7IPZ	Tarakan Island	01-05 Oct
OC-169 A35ZG	Ha'apai Group	31 Oct
OC-195 VK7FLI	Flinders Island	18-19 Oct
OC-210 YC8TXW	Sangihe Island	07 Oct
OC-212 VI2BI	Broughton Island	06-10 Oct
OC-233 VK7TS/P	Briny Island	23 Oct
OC-235 DU9BCD	Camiquin Island	01-02 Oct
OC-236 YC8TXW/P	Lembeh Island	20-22 Oct
OC-237 YB3ZMI	Madura Island	21-23 Oct
SA-008 LU8XP	Terra del Fuego	01-08 Oct
SA-012 PY7QP	Margarita Island	29 Oct
SA-016 PR8CBS	Sao Luis Island	01 Oct
SA-026 PP5BRV	Santa Catarina Island	21 Oct
SA-064 CE7AOY	Isla Las Huichas	05 Oct
SA-068 8R1AK/P	Leguan Island	08 Oct

Antique QSL Department

Here are three more cards from Don Leslie, W6FMX, from those shown in last month's column, and made during

the 1930s when he resided in New Jersey, using his first call, W3EGS.

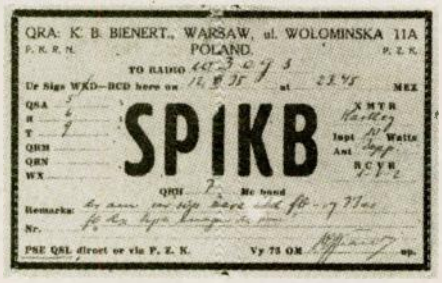
On 12 November 1935 Don worked SP1KB, operated by K.B. Bienert in Warsaw. The QSL card indicates that the transmitter was running 10 watts, and the circuit was a Hartley for this 40-meter contact. The antenna was a Zepp. Now, how many of you DXers remember the Zepp? Better yet, how many know where the name derived from?

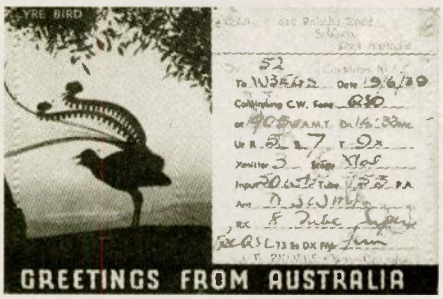
James W. Hall of Aberdeen, Scotland, was the operator of GM3QH, who Don worked back on New Year's Day in 1939. Trouble was already brewing in Europe and before the year would be over this fellow would be off the air for the duration. This call is no longer in the call database as are most GM3 two-letter suffixes.

Later that year Don worked VK6RU in West Australia on 20 Meters. The operator, J.E. Rumble, indicated he had worked 52 DX countries. I'm sure Jim has worked many more as he is still listed. In fact, I have a QSL card from him for a 10-meter contact back in March 1978. Six months later I started writing this column!

Propagation book

Bob Brown, NM7M, has just released his new book, "Long-Path Propagation, Revisted in Year 2000," an update of his earlier book, Long-Path Propagation, written almost ten years ago. The update expands the original discussion, a year-long study on 20 CW, to include new information on long-path propagation and the other bands, 10 Meters to 160 Meters. It consists of ten chapters, 91 pages and 67 figures and should be of interest to DXers, new and old.





The price is simple, $15 U.S. funds for both foreign and domestic DXers. S&H is included in the price. Bob would appreciate advance notification of orders by sending an e-mail to bobnm7m@cnw.com and include a return address in a form suitable to make a mailing label. Payment should be in U.S. funds, by check or money order to: Robert R. Brown, 1105 27th Street, Room AW-110, Anacortes, WA 98221-2710.

Please note that all proceeds beyond the cost of printing and mailing will be donated to his favorite charity, the Handi-Ham System of the Courage Foundation in Minneapolis, MN.

QSL information

Rys, SP5EWY, says membership in PZK, (the Polish national Amateur Radio society), is only 20 percent of the Polish amateurs. And, if you are not a member, you cannot use their bureau system. How do you know if the Polish station you just worked can accept cards via the bureau?

Even our ARRL is that way. You cannot send cards out through the bureau, but you may receive cards through the bureau system, member or not.

Tom, DL8AAM, has some interesting observations on confirming Amateur Radio contacts in Germany. Tom says, "German amateurs, (who are members of the society), normally prefer the "Ham-Way of QSLing," which means via the BUREAU! Direct QSLing is often not the way we prefer, mostly dislike, or some even refuse to send a direct QSL at all! There are no extra fees to the usual membership fee to the society, now 120 marks a year which includes a monthly magazine, and to use the bureau, (including domestic QSLing).

"If a German DXer does not confirm via the bureau, the chance of getting a direct QSL is not much greater. If he wants to QSL, you will receive it via the bureau. There are very, very, very, few who confirm the unpleasant way, (meaning direct only, and I think they must be share-holders of their snail-mail company, or ?).

"When I acted as a QSL-manager for some IOTA DXpeditions in the past, I started to confirm via the bureau at first. The direct QSLs were sent out about six months later after finishing all of the bureau QSLs. This meant that all collectors got their cards at the same time, (6 months 'penalty', not by intention, for the direct request, which means that nobody is in a better or worse situation, all got their cards, nobody much earlier or later.

"I for myself now also send ONLY via bureau, stopped to use the commercial way of QSLing some years ago. I still confirm direct requests if provided an SASE or SAE plus funds. If an unfriendly manager does not accept this way, he has to live with his conscience.

"It is also a problem that many DL-OPs refuse to give out their addresses referring to the very strict German law for personal data, (making it illegal to transfer private data like addresses or even names, without the

DX Prediction — January 2001

Maximum usable frequecy 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/Tokyo, Oceania—Australia/Melbourne, Europe—Germany/Frankfurt, and South America—Brazil/Rio de Janeiro. Smoothed sunspot number = 134. Chance of contact as determined by path loss is indicated as bold ***MUF** for good, plain MUF for fair, and in *(parentheses)* for poor. UTC in hours.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(14)*	12	***19**	***12**	***18**
10	*(13)*	12	***18**	*(11)*	***18**
12	24	11	***17**	*(11)*	***26**
14	29	11	***25**	***21**	***37**
16	32	*(12)*	24	***20**	***40**
18	***32**	*(11)*	*(22)*	16	***42**
20	***30**	*(11)*	30	13	***43**
22	***25**	22	***35**	12	***40**
24	***17**	22	***38**	***12**	***30**
2	***16**	15	28	***11**	***24**
4	***15**	13	22	***11**	***21**
6	*(14)*	13	20	***11**	***19**

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(14)*	***12**	***18**	*(11)*	***18**
12	*(14)*	***12**	***18**	*(11)*	17
14	*(22)*	***11**	***17**	*(11)*	***34**
16	28	10	***24**	18	***40**
18	***30**	14	*(22)*	*(14)*	***42**
20	***29**	14	30	*(12)*	***43**
22	25	***27**	***35**	*(12)*	***41**
24	***22**	***26**	***39**	*(11)*	***35**
2	***17**	***23**	***36**	11	***24**
4	***15**	14	***25**	11	***21**
6	*(15)*	14	22	11	***19**
8	*(14)*	***13**	***20**	***12**	***18**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	17	***12**	18	***11**	***19**
9	17	11	***18**	***11**	***18**
11	***31**	11	***17**	19	***26**
13	***38**	***12**	***24**	***23**	***34**
15	***41**	*(12)*	27	***22**	***39**
17	***41**	*(11)*	*(22)*	***20**	***42**
19	***34**	*(11)*	27	14	***43**
21	***29**	19	33	***13**	***40**
23	***22**	19	38	***12**	***31**
1	***20**	14	27	***12**	***25**
3	***19**	13	22	***11**	***22**
5	***18**	*(12)*	20	***11**	***20**

OK of the owner. So you will find a larger amount of German call signs in no callbooks or lists! Even the DL telecomm authority is not allowed to publish these entries in any list when they refused to do so!

"Summary: use the bureau, the HAM-way of QSLing....hi See you in the bureau! QSL IS! 73, Tom - DL8AAM"

Thanks go to the following contributors for this month's column: DL8AAM, G3KMA, SP5EWY, RV3ACA, N1DG, W6FMX, K6GNX, WC7N, Western Washington DX Club (WAØRJY), WebCluster (OH2AQ), *425 DX News* (I1JQJ,), *The OPDX Bulletin* (KB8NW), DX-News (NJDXA), *The Low Band Monitor* (KØCS), The Daily DX (W3UR), and QRZ DX (N4AA).

— John F.W. Minke, III, N6JM, can be contacted by sending a letter to: 6230 Rio Bonito Drive, Carmichael, CA 95608. You can also reach him by e-mail at: n6jm@pacbell.net.

QSL Managers

2EØAPH	G3WRO
3A/IZ1DFI	IZ1DFI
3B8/DL7DF	DL7DF
3CA/KØCA	pirate
3D2AD	YT1AD
3D2AU	Z32AU
3D2RW	ZL1AMO
3E1PSK	HP1EFR
3E8PSK	HP8AJT
3V8ST	DL1BDF
3W1A	pirate
3W2B	XW2A
3W2LWS	WA1LWS
3W3SK	JA5UHG
3W7CW	SP5JTF
3Z9XCN	SP9XCN
3ZØLP	SP9PTA
4D68RG	DU9RG
4D68RG	DU9RG
4K9C	PA3EPG
4L1TH	F6FNU
4L1TL	F6FNU
4L1UN	IK7JTF
4L4KL	DL8KAC
4L7AR	F6FNU
4L7O	DL7BY
4LØG	4L1DA
4M5I	IK6SNR
4S7RO	DJ9ZB
4S7WHG	G3SWH
4U1WB	KK4HD
4W/K7BV	KU9C
4W/N6FF	KU9C
4X/UT5UDX	UT2UB
4X6TT/PP5	N2AU
5A/UYØMF	UX9MZ
5B4/DL1IAV	DL1IAV
5B4/RA3DJA	RU3FM
5C8M	DL6FBL
5H5A	pirate
5K9AQ	HK3PXA
5N2BHF	OE6LAG
5N4ØEAM	IK7JTF
5NØNAS	K1WY
5R8FL	F5TBA
5R8O	5R8FL
5T5U	JA1UT
5WØDW	K6BAZ
5X1AN	DK9LM
5X1GS	WB2YQH
5X1Z	SM6CAS
6K2ØØØDX	HL1XP
6Y5WJ	GØNAN
7N4HTS	DG4ZX
7Q7CE	IN3VZE
7Q7KZ	JA2LZF
7S5Z	SMØUXX
8J1RL	JG3PLH
8P9FX	G3RFX
8Q7QQ	HB9QQ
9AØØØZ	9A2DM
9AØCW	9A2WJ
9AY2K	9A1A
9E1C	IV3OWC
9E1S	IV3TRK
9G1AA	PA3ERA
9G1OO	PA3ERA
9G5EE	PE1LUC
9G5FH	G4BWP
9G5MD	F5VCR
9G5MF	KC7V
9G5RF	GM3YTS
9G5SX	G3SXW
9G5VT	K5VT
9G5WP	PE1PFN
9G5XA	G3XAQ
9H3SSS	DL6MDG
9J2BO	W6ORD
9K2/N6BFM	W8CNL
9K2/OK1TYM	OK1TN
9K2K	W6YJ
9K2LOW	9K2RA
9K2ZZ	W8CNL
9K9C	OK1TN
9K9X	9K2HN
9K9Z	W8CNL
9M2/G3PMR	G3PMR
9M6AAC	N2OO
9M6BAA	G4SHF
9M6BAA	G4SHF
9M6C	9M6BRC
9M6CTT	JA8CCL
9M6ERT	K7AR
9M6LJT	JM1LJS
9M6NNT	N7NU
9M6NXT	N4NX
9M6RET	W7RR
9M6TA	N4PN
9M6YAT	W7YAQ
9N1HA	N5VL
9N7MC	JA9CNC
9N7NC	JA9CNC
9N7RB	W4FOA
9V1GA	JA4BJO
9V1YC	AA5BT
9Y4/DL2RVS	DL2YY
9Y4SF	WA4JTK
A22ZS	ZS6ZS
A35BQ	I6BQI
A35MO	OM2SA
A35TO	OM2SA
A35YL	DL7AFS
A35ZG	DL7AFS
A47JOTA	A47RS
A51AA	F2VX
A52B	JR7TEQ
A52DX	JF1PJK
A52FH	F8RZ
A52JA	JK1AFI
A52W	JH1NBN
A52XX	JA1PCY
A5ØCDX	pirate
A61AJ	W3UR
A61AO	N1DG
A92GJ	N1SHM
AA9WZ/KH2	JA1OZK
AB8EW/KH2	JH2SON
AH6PN/HR6	W7TSQ
AX2GAMES	VK2PS
AX4SEP	VK4BLE
B7K	W2AY
BT4ARDF	LZ1ZF
BV5BG	IK7JTF
C56/G3SEM	G3SEM
C6A/KI6T	KI6T
C6AFP	N4JQQ
CE3F	CE3FIP
CE8/KD6WW	KD6WW
CL6BIA	N3ZOM
CM6YI	W3HNK
CN2MP	EA9AM
CN8WW	DL6FBL
CO2WL	EA3ELM
CO6XN	HK6DOS
CO8LY	EA7ADH
CO8ZZ	DK1WI
CP4BT	DL9OT
CP6XE	IK6SNR
CQ2K	CT1BWW
CT3/DL2DXA	DL2DXA
CT3AS	DJ8FW
CU3DX	CU3EJ
CU6/DJ6SI	DJ6SI
CU6/DJ8CR	DJ8CR
CW1ØMPD	CX1UU
CX2ØØØ	CX2ABC
D2BB	W3HNK
D44AC	EA8URL
D44CF	SMØJHF
D4A	I2MQP
DL2GG/YV5	DJ7AO
DU1/DK3GI	DK3GI
E21CJN	W3PP
EJØTA	DL5NAM
EA3URT	EA3AXD
EA8/DL8MEV	DL8MEV
EA8AH	OH1RY
EA9CD	EA9AZ
EG3OPS	EA3AFR
EG4CV	EA4CTF
EK6LV	IK2DUW
EK6TA	DJØMCZ
EK8WY	IZ8CLM
EM1KY	UT7UA
EM5U	UT2UB
EO55U	UT2UB
EO5U	UT2UB
EO6F	UXØFF
EP2MKO	UA6HCW
EP4PTT	RZ6LS
ER/UNØN	IK2QPR
ER2ØØØL	ER1LW
ER6A	ER1IW
ER8C	ER1DA
ES9C	ES5RY
EU6YL	DL8KAC
EW6AC	DL8KAC
EW6GF	DL8KAC
EW6MM	DL8KAC
EY2A	K6VNX
EY8/N6ZZ	K6VNX
EY8/W6XD	K6VNX
EY8CQ	DJ1MM
EY8MM	K1BV
EY8TM	F6FNU
EZ8CQ	I2JSB (others)
EZ8CQ	WØFS (USA)
EZ9A	EZ8CW
FG/N2WB	N2OO
FJ/AA6YQ	AA6YQ
FK8HC	VK4FW
FM/F2JD	F6AJA
FM/G3TXF	G3TXF
FM5BH	W3HNK
FM5WD	W3HNK
FOØF/5JJW	F5JJW
FOØBOG	F5SIH
FOØDEH	ON4QM
FOØDER	3D2AG
FOØELY	JA1ELY
FOØFRA	CT1EAT
FOØPOM	SP9FIH
FOØSCH	W6UFT
FOØTOH	JA1OEM
FOØWEG	SP9FIH
FP/AC8W	AC8W
FP/K8DD	K8DD
FP/N8KR	N8KR
FP5BZ	F5TJP
FP5EJ	K2RW
FS/K4ZA	K4ZA
FS/N4ZC	N4ZC
FY/DL5CF	DL5CF
FY/W7XU	W7XU
GB6ØBOB	GØDBX
GCØEZQ	GWØKJZ
GD4UOL	G4UOL
GJ1Y	NØKV
GU4YWY	G4YWY
HBØ/HA5RT	HA6NL
HBØH/B9AON	DJ2YE
HC1OT	NE8Z
HC8GR	N5KO
HF6WR	SP6ZDA
HFØPOL	SP3WVL
HH2LQ	VE2EH
HH2SJR	KZ5RO
HKØEHM	WD9DZV
HP3XBH	W4WX
HSØAC	G3NOM
HSØZAR	K3ZO
HV5PUL	IWØDJB
HVØA	IKØFVC
HZ1AB	K8PYD
IG9A	I2MQP
II9P	KR7X
II3A	IV3RAV
II4M	I4MES
II7LE	IK7DXP
IIØBP	IKØZSN
IMØBMU	ISØAGY
IQ7J	IK7JWX
IR5ONU	I5KKW
IRØAD	IØNNY
IRØMM	IØYKN
IT9/KA2UWX	IT9CUP
IY4W	I4JED
IY4W	I4JED
J28EX	FB1BON
J28LP	F8UNF
J28NH	F5IPW
J28VS	F4DBF
J3/K1TH	K1TH
J3/W1AIM	W1AIM
J3/W6FC	W6FC
J69BB	NI7T
J6R	K3LP
J79GU	DL7VOG
J8/NO2R	W2EN
J8/W2EN	W2EN
J8/WA2VUY	W2EN
J8ØWW	W2EN
JD1BCK	JM1JUK
JK7TKE/JD1	JK7TKE
JW1CCA	LA1CCA
JW5RIA	LA5RIA
JW7VK	LA7VK
JW8VS	F4DBF
JW9XGA	LA9XGA
JX7DFA	LA7DFA
K1HP/KH2	JE2EHP
K3G	NM3S
K5K	K4TSJ
KA6WHA/C6A	KA6WHA
KC4AAA	K1IED
KH2/JH2ABL	JH2ABL
KH2/JH2KDP	JH2KDP
KH2/JJ2MST	JJ2MST
KH2/JL2WNA	JL2WNA
KH2/JQ2PTN	JQ2PTN
KH2/JR1ERU	JR1ERU
KH2F	JA2TBS
KH2TX/KHØ	JA2KTX
KH4/NH6D	N6FF
KH6ND/KH5	K4TSJ
KHØ/JA1VND	JA1VND
KHØ/NH7V	JI3NST
KHØM	JF1VXB
KHØT	JA1SGU
KHØV	JJ1KZI
KØDI/KP2	KØDI
KP2/K6RO	K6RO
KP2/KG6OK	KG6OK
KP2/NUØQ	NUØQ
KP2A	W3HNK
KR6CZ/KH2	JA2VFW
LO7H	LU7HN
LOØD	F6FNU
LP1F	LU5FC
LV5V	LU5VV
LY4ØBA	LY3BA
LY4ØKB	LY3KB
LZ2ØØØA	LZ2HM
M6T	G4PIQ
MB2HFC	G4BWP
MJ/KU4CG	KU4CG
MJ/NØKV	NØKV
N6ØØBFM	W8CNL
NH8D/KH4	N6FF
OD/JY4NE	KB6NAN
OD5/OK1MU	OK1TN
OD5IU	LX1NO
OD5PN	LX1NO
OD5TE	K3IRV
OH1N	OH1BOI
OHØN	OH1BOI
OHØPM	OH2PM
OK8YD	DL1YD
OO4CLM	ON6HC
OY3QN	OZ1ACB
P29AM	NU5O
P3A	W3HNK
P43P	I2MQP
P4ØW	N2MM
PJ2/DF8AN	DF8AN
PJ2/PAØVDV	PAØVDV
PJ7UQ	W3HNK
PJ8/K4ZA	K4ZA
PJ8/K7ZUM	K7ZUM
PJ8/N4ZC	N4ZC
PV3DC	PY3AFE
PW7BZ	PT7BZ
PW7Z	PY7BEL
PY5M	VE3HO
PZ5JR	K3BYV
R1AND	DL5EBE
R1ANF	RK1PWA
R1ANZ	RU1ZC
R1FJV	UA3AGS
R2/OZ5IPA	OZ5AAH
R3/UT5UDX	UT2UB
RA9AC	RK9AD
RAØBA	UA3DX
RAØBK	DL8KAC
RI4M	RN4LP
RK9KWB	DL8KAC
RN9AA	RK9AD
RS7SW	ON6TZ
RU4SS	K7INA
RUØLM/Ø	UAØMF
RW3XZ	DL8KAC
RW9OWD	UA9OW
RX4CY	DL8KAC
S21YE	G4VLV
S21YJ	SM4AIO
S21YP	G3REP
SM/DL5RFF	DL5RFF
SN2ØØØC	SP9PKZ
SN6ØØUJ	SP9PKZ
SØ7CRS	JA1UT
SØ7U	JA1UT
SP2ØØØS	SP5ZCC
SPØZCC	SP5ZCC
SU1ER	WA3HUP
SU9ZZ	OM3TZZ
SY2A	SV2ASP
SY2T	SV2CWY
T2DX	W4WET
T32R	K4TSJ
T88JJ	JA3ART
T88QG	JA1OGT
T88TU	JK7TKE
T88WX	JA1WSX
T94KU	YO3JW
T99ZZ	DL3BZZ
TA3DD	KB2MS
TF1JAM	TF3KET
TF3JAM	TF3KET
TF5JAM	TF3KET
TF8GX	K1WY
TF8JAM	TF3KET
TG4/F6BFH	F6BFH
TG9IGI	I2MQP
TG9NX	N4FKZ
TI3DD	WB2MI
TI5WFM	JA6WFM
TJ1GD	SP9CLQ
TL8CK	F6EWM
TM1TF	FB1BON
TM1V (test)	FB1BON
TM5PF	FB1BON
TMØF (test)	FB1BON
TOØSIX	FO3BM
TS7N	DL6BCF
TT8DX	F5OGL
TT8JLB	F5BAR
TU2ZR	SM3DMP
TU5GD	N5FTR
TZ6JA	JA3EMU
UA9APA	RK9AD
UAØACG/Ø	UAØACG
UAØAOZ/Ø	UAØAOZ
UAØBA	UA3DX
UAOCW	W3HNK
UAØIA/Ø	US7IIA
UAØMF	W3HNK
UAØZY/p	4Z5AV
UE9APZ	RZ9AWA
UE9AZA	UA9AB
UE9XAB	UA9XEN
UE9XAC	UA9XK
UF3CWR	UA3DX
UK8LA	RW3RN
UKØA	UK9AA
UN4P	DL8KAC
UN5A	DL8KAC
UN7EG	DL8KAC
UN7ER	DL8KAC
UN7PCZ	DL8KAC
UNØNF	DL8KAC
UP25ØA	DL8KAC
UP55A	DL8KAC
UPØA	DL8KAC
UR3GA	UR7GG
US8IDV	UX8IXX
UT5UDX	UT2UB
UTØU	UT2UB
UV5U	UX1UA
V26A	WB3DNA
V26AK	N2TK
V26AU	DL6LAU
V26B	WT3Q
V26EW	N2ED
V26J	W3LT
V26O	N5NJ
V26OB	DL8OBQ
V26OC	N3OC
V26SZ	N5CK
V26TZ	W3HNK
V26U	W2UDT
V29K	N2TK
V31GE	AKØA
V31KY	KOØU
V31TD	AC0L
V31YN	DJ4KW
V47KP	K2SB
V63DQ	JA7KAC
V63DX	JA7HMZ
V73CW	AC4G
V73GI	K3VN
V73JK	V73AX
V8A	JH7FQK
V8PNA	N4PN
VB2R	NB1B (US)
VC5C	VE5SF
VI2BI	VK2EO
VI2FFG	VK2FFG
VI5RAS	VK5FV
VK6BRP	K3MLA
VK6DIR	VK6NE
VK7FLI	VK7BE
VK9LEH	AA4EH
VP2EF	AC8G
VP2EK	W8ILC
VP2EP	W8GEX
VP2EV	W8GEX
VP5/LA4DCA	LA4DCA
VP5/LA9HW	LA9HW
VP5/WA2VYA	WA2VYA
VP5DX	NU4Y
VP8DBQ	M1AIB
VP8DBR	GØSWC
VP9/IKØFVC	IKØFVC
VQ9GB	K7GB
VQ9QM	W4QM
VU2ABE	JA4DOB
VYØTA	VE2BQB
WP2Z	KU9C
WP3A	W4DN
XE2MX	K6VNX
XE3/WØAH	W2GR
XF2UQZ	XE1UQZ
XQØY	KD6WW
XT2AJ	F5JRY
XT2AW	DF2WO
XT2DE	F5JRY
XU7AAP	N2OO
XU7AAV	G4ZVJ
XU7ABD	EA4URE
XU7ABF	XW2A
XU7ABL	JA1ELY
XV9TH	SK7AX
XW4XJ	Z21KD
YB3ZMI	IZ8CCW
YB7N	WB7B
YB9ZBI	YC9BU
YBØECT	K5ZE
YBØHXH	W4JS
YC7IPZ	YC8TXW
YC7URA	YC9BU
YC8RRK	YC9BU
YC8RSW/P	YC8TXW
YC8UFF/P	YC8TXW
YC9ID	YC9BU
YC9XJ	YC9BU
YE8XM	YC9BU
YI1DKS	IK2DUW
YI9OM	OM6TX
YJØAYL	DL7AFS
YJØAZG	DL7AFS
YJØDX	VK4JSR
YS1EJ	W4GJ
YS2EJ	W4GJ
YU13ØZ	YU1AVO
YU3ØAA	YU1AA
YU7RTV	YU7BPQ
YZ3ØAA	YZ1AA
Z31GB	NN6C
Z33Z	Z31RB
Z34A	Z31ET
Z35M	Z32KV
ZA1M	IK2HTW
ZA1Z	HB9BGN
ZB2CN	DJ9MH
ZB2X	OH2KI
ZC4GL	KF4UCH
ZC4JP	GØWSA
ZF2AH	W6VNR
ZF2RV	WJ7R
ZK1AGL	KB5GL
ZK1BQI	I6BQI
ZK1NDK	JR2KDN
ZK1NJC	JR2KDN
ZK1YRE	IT9YRE
ZK2VF	W7TVF
ZL/DL7IO	DL7IO
ZL4IR	W6WC
ZL6QH	ZL2AOH
ZM8CW	ZL3CW
ZS6AL	W4SMG
ZW8U	PY8AZT
ZX5J	VE3HO
ZY1TER	PU1TRA

3DAØRSWillie, Box 3744, Manzini, Swaziland

3W3SKShim Kuroda, Ky-Ha Port, Nui Thanh, Quangnam Province, Vietnam

4D68SAN P.O. Box 3000 QCCPO, 1170 Quezon City, Metro Manila, Philippines

4L1DADavid Devdariani, Shartava st.7, 380122 Tbilisi, Georgia

4U1VICVienna International Amateur Radio Club, Vienna International Centre, P.O. Box 200, A-1400 Vienna, Austria

4Z5AVMichael Krimer, P.O. Box 2288, Eilat 88122, Israel

8A3MP.O. Box 4025, Surabaya 60401, Indonesia

A92ZECapt. J. Gostel, PSC 451, Box 1198, FPO AE 09834, USA

ATØJHP.O. Box 15, Secunderabad 500003, India

BA4DWDavid Y. J. Zhou, P.O. Box 040-088, Shanghai, 200040, China

BD4EDEd X. Y. Huang, P.O. Box 085-299, Shanghai, China

BD7NQP.O. Box 599, Foshan GD 528000, China

CT1EATFrancisco Costa, P.O. Box 172, 7801-902 Beja, Portugal

CU3EJLeonel Gaspar Cardoso Avila, Canada das Almas 49, 9700-014 Angra do Heroismo, Azores, Portugal

D44BSP.O. Box 308, Praia, Cabo Verde

DF6HZKurt Kobbenrodt, Frankenstr. 9, D-73630 Remshalden, Germany

DL5EBEDominik Weiel, Johannes-Meyer-Str.13, D-49808 Lingen, Germany

DL6FBLBernd Och, Christian-Wirth-Str. 18, D-36043 Fulda, Germany

DL7DFSigi Presch, Wilhelmsmuehlenweg 123, D-12621 Berlin, Germany

DL8KACVlad Engel, Staadter Weg 51A, 51766, Engelskirchen, Germany

ER1LWWiacheslav Lysy, P.O. Box 112, Chisinau, MD 2012 Moldova

EZ8CWVitaly Dotsenko, P.O. Box 73, Ashgabat, 744020, Turkmenistan

F2VXGerard Debelle, 4 Le Haut d'Yvrac, 33370 Yvrac, France

F5BARJean-Luc Bouchet, Chemin de l'Artaude, 14 Verger de Beauvoir, 83220 Le Pradet, France

F5IPWJoel Ricaud, 32 avenue de la vallee du Lys, 37260 Artannes, France

F5OGLDidier A.Senmartin, BAS - P.O. Box 19, 35998 Rennes Armees, France

F8RZJean Raynaud, bourg de St Hilaire, 16300 Barbezieux, France

FB1BONPatrice Brechet, P.O. Box 281, 85305 Challans CX, France

FR5FDPatrick Lebeaume, 40 rue Louis Desjardines, Bois de Nefles, F-97411 Saint Paul, France

France

G3WOSChris Gare, Old White Lodge, 183 Sycamore Road, Farnborough, Hampshire, GU14 6RF, UK

HR1AABP.O. Box 1734, 11101 Tegucigalpa, Honduras

IK2QPRPaolo Fava, Via Bertani 8, 46100 Mantova - MN, Italy

IN3VZEEly Camin, Corso 3 Novembre 136/2, 38100 Trento - TN, Italy

IØYKNNuccio Meoli, Via della stazione snc, 04010 Cori - LT, Italy

ISØAGYElio Melini, P.O. Box 7/c, 09045 Quartu Sant'Elena - CA, Italy

IT9YRENando Rubino, P.O. Box 30, 96012 Avola - SR, Italy

IZ8CCWP.O. Box 360, 87100 Cosenza - CS, Italy

JA1VNDTsutomu Horikoshi, 656 Yoshii, Yoshii, 370-2132 Japan

JA4DOBAbie Kenneth Alexander, Norabie Cottage, GPO Box 73, Shillong - 703 001, Meghalaya State, India

JA6UHGMasafumi Nabekura, 1-305, Nishiki-Cho 16, Naka-Ku, Yokohama City, Kanagawa 231-0812, Japan

JA7AOTokro Matsumoto, 3-62 Okachimachi, Yuzawa, 012-0856 Japan

JA7HMZShoji Igawa, 17 Shirogane, Yokobori, Ogachi, 019-0204 Japan

JA7KACKosaku Sasaki, 3800-42, Shimotsuruma, Yamato, 242-0001 Japan

JE1DXCMasayoshi Mihara, 4-22-23 Motobuto, Urawa 336-0004, Japan

JF1VXBHidenobu Nakamura, 23-139 Chojabara, Kasuya, 811-2311 Japan

JG3PLHTakumi Kondoh, 1-23 Shinke-cho, Sakai City, Osaka 599-8232, Japan

JH1NBNYoosuke Uchiyama, 924-4 Yokokawacho, Hachioji, 193-0823, Japan

JH4TEWKazuo Shimizu, #302 Akebono-so, 2-8-15 Shiromachi, Mihara 723-0014, Japan

JI1PLFSuehiro Osada, 8-4-14-803 Shimorenjaku, Mitaka-city, Tokyo 181-0013, Japan

JI3DSTTakeshi Funaki, 2-18-26 Hannan-Cho Abeno-Ku, Osaka-City, Osaka 545-0021, Japan

JK7TKEKoji Fukui, 1840-5 Izumi-cho, Tokorozawa 359-1112, Japan

JM1TUKKazuyoshi Nasu, 3-12-11-201, Oda Kawasaki-Ku, Kawasaki 210-0846, Japan

JR2KDNYuichi Yoshida, 4th Floor Kato Building, 529 Rokugaike-cho, Kita-ku, Nagoya 462-1112, Japan

JX3EXT.J., Box 8099, Jan Mayen

K1IEDLarry F.Skilton, 72 Brook Street, South Windsor, CT-06074, USA

K1Vc/o G.N.A.R.C., 324 Main Ave Box 115, Norwalk, CT 06851, USA

K4TSJDudley's DXers of NE Georgia, 2011 New High Shoals Rd., Watkinsville, GA 30677, USA

KB5GLSilvano Amenta, 5028 Hearst Street, Metaire, LA 70001, USA

LA7DFAPer-Einar Dahlen, Royskattv 4, N-7670 Inderoy, Norway

LA7DFAPer-Einar Dahlen, Royskattv 4, N-7670 Inderoy, Norway

LA9XGATor-Atle Sandal, Hamnaffot 6, N-4200 Sauda, Norway

LU5FCJesus Rubio, San Juan 2894, Rosario 2000, Santa Fe, Argentina

LY3BAG. Lucinskas, P.O. Box 34, Birzai, LT-5260 Lithuania

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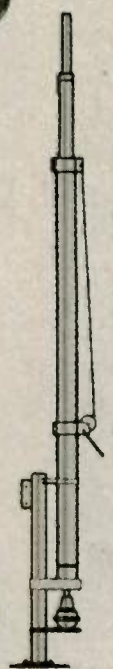

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Wideband noise from DTV

I guess its now safe to say: "Welcome to Amateur Radio in the 21st century!" And with the new century a new problem may be coming for repeaters and weak signal operators.

Let me ask if you are suddenly suffering strange interference on your favorite 6-meter repeater. Maybe the noise floor at your location suddenly has come up a few db making 6-meter weak signal communications a bit more difficult. If so, you might want to find out if one or more new digital television receivers have come on the air in your town.

The world's conversion to digital technology is bringing with it many unforeseen problems. According to a report in the *CGC Communicator* electronic newsletter (a broadcasting trade publication edited by Bob Gonsett, W6VR), other radio services in Cleveland Ohio are having problems with such a transmitter operating on VHF Channel 2. That transmitter is reportedly producing broad band noise from 54 MHz down to 45 MHz or thereabout.

Commenting on the report, Fred Vobbe, W8HDU, of WLIO television says to keep in mind that high power digital television transmitters are going to cause some more intermodulation products especially on sites where station transmitters will be grouped together on the same tower and diplexed into the same antenna.

Also adding his observations to the CGC article, is Peter Moncure, the President of RadioSoft, who says that his company is very interested in this interference possibility. According to Moncure: "Though the comparatively slow rolloff of out-of-band interference with frequency is well documented in similar forms of modulation, IM is not."

Moncure says that he is not aware of any studies of IM even between adjacent NTSC-DTV multiplexed facilities. He asks that any reader of the CGC *Communicator* (or any other publication) who has evidence (direct or anecdotal) of multi-DTV IM, please e-mail his company privately. You can reach Peter at pmoncure@radiosoft.com .

In the meantime, as Peter Moncure (and arguably other RF engineering consultants) begin research on this issue, indications are that digital television being assigned to the lower VHF channels, could cause harmful interference to other operations for a couple dozen MHz below. Also, a DTV transmitter operating on one of the UHF channels (14 to 20) could cause headaches for operations in the spectrum from 440 to 512 MHz. This includes the repeater subband of the 70 centimeter amateur band. (*CGC Communicator*)

Enforcement: Connecticut AM repeater interference

The owner of an AM repeater was asked by the FCC last fall to justify the existence of his machine. Not because it runs AM, but rather due to the interference it is creating to FM repeaters in several states.

According to FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth, K4ZDH, that's the reason he has written to Alan Koepke, asking about the operation of his K1JCL machine:

"We opened an investigation into the operations of a repeater system in Connecticut after allegations that it operates on AM and has switched the input and output frequencies for which it was coordinated causing interference to coordinated repeaters in New York and Massachusetts," said Hollingsworth on his FCC Enforcement Log broadcast over the RAIN website (http://www.rainreport.com).

Among other things, Hollingsworth directed Koepke to provide proof that his repeater is coordinated and operating in accordance with the coordination parameters. Hollingsworth also directed Koepke to explain his justification, if any, for reversing the input and output frequencies from the general band plan for such repeater operation.

According to Hollingsworth: "A repeater that isn't abiding by its coordination, if it has any, is still an uncoordinated repeater. And that's what we are interesting in finding out. We're also concerned about both 6 Meters and 2-meter repeaters in this investigation."

Riley Hollingsworth has also asked Koepke to explain the justification for using AM equipment with IF (intermediate frequency bandpass) stages wider than the FM repeater channel spacing as provided for by the general band plan. Koepke was given 20 days from receipt of Hollingsworth's letter to respond. As of late October, Koepke's response is not known as the FCC has not released any further information in this matter. (*FCC, RAIN, Newsline*)

Budget laser TV or laser ATV

Kerry Banke, N6IZW, has AM modulated a cheap "pointer laser" with his own TV picture. According to the 16 October 2000 *CGC Communicator*, Kerry found

that about 0 dBm of RF was needed to do the job.

He writes, "The receiver end was even more simple. I took a Pin photo diode and connected it directly across the antenna input terminals of a TV set. I set the modulator and TV for CH-2 initially and immediately received a great picture when I aligned the laser spot onto the detector a few feet away." (*CGC Communicator*)

NFCC election results

Some old faces and one new face will grace the National Frequency Coordinators Council for the next year. Returning to the NFCC leadership are President Owen Wormser, K6LEW, Vice President Nels Harvey, WA9JOB, as Vice President and Secretary Dick Isley, W9GIG. Newcommer Dave Baugn, KX4I, rounds out the group that will lead the NFCC through 31 August 2001. Wormser and Harvey will also serve as Chairman and Vice Chairman respectively of the National Frequency Coordination Board. (*NFCC*)

Papers wanted

The Southeastern VHF Society will host its fifth annual conference on 20-21 April 2001 at the Holiday Inn Brentwood, in Nashville, Tn.

This is the first call for papers to be published in the conference Proceedings. Papers may be hard copy, or preferably, on diskette in MS Word 7 or compatible format. Pictures are best in black and white. Be sure to number figures, graphs, drawings and pictures so that we can match them with the references in the body of the article.

Papers should be submitted to Dick Hanson, K5AND, at 7540 Williamsburg Dr., Cumming, Ga. 30041; tel 770/844-7002; fax 770/889-8297; e-mail k5and@ga.prestige.net, for review. The deadline for submission is 20 February 2001.

More details on guidelines may be viewed on our website at www.svhfs.org/svhfs. (*SEVHFS, K5AND*)

Amateur Radio conventions

As we enter the new millennium, we are going to shift gears a bit and take a hard look at where Ham radio conventions have been, where they are today and where shows seem to be headed. Actually, it is being done for us by an amateur well known and very respected in the Northeastern U.S. His name is Harold Smith, K2HC, and he is the General Chairman of the Rochester and Buffalo Hamfests.

While Rochester continues to be a successful show, Harold freely admits that Buffalo has not lived up to expectations. And right after the last Buffalo outing, Harold received the following from what he termed as a "dissatisfied attendee." The writer of this message requested to remain anonymous but wrote:

"I was first licensed in 1963 and have been going to local hamfests for many, many years. Over the last few years, I have attended both the Rochester and Buffalo hamfests and am appalled and disappointed at the trend. Both hamfests are mere shells of what they used to be.

"While I was unable to attend the Rochester Hamfest this year, I did attend Buffalo, and it was absolutely the worst.

"While I was at the Buffalo hamfest this year, I had to keep checking what my ticket said, since I could have sworn I was in the Bazaar tent at the Erie County Fair.

"I go to hamfests for 'Amateur Radio' related exhibits and booths, as well as computer related exhibits and booths, since computers are so integrated in today's Amateur Radio. Leather belts, ceramic doo-dads, and car windshield cracks booths have NO place at a hamfest. Major "Amateur Radio" dealers have steadily disappeared.

"Please put the 'Amateur Radio' back in the hamfests. I have to say that after this year's hamfest, I will have to think twice about attending next year. I know that I am not the only local Ham who holds this opinion and I know many who have already stopped attending for the same reason." signed: A Concerned Amateur

(Note: The writer of this message requested to remain anonymous.)

It took a while, but after giving this note quite a bit of thought, Harold not only responded to this amateur's concerns. He also posted the original letter and his answer to the Rochester Hamfest website — www.rochesterhamfest.org. After reading what he had written, I asked for permission to reprint both

FM, Repeaters & VHF

items here in ***Worldradio*** because there is a lot to be learned from the words of both of these Hams. Harold Smith's response is as follows:

"Thank you. Your message says precisely what has been happening to hamfests, not only at Rochester and Buffalo, but nationwide — in Miami, Orlando, Baltimore, Dayton, Dallas, and Huntsville to name a few.

"I have been general chairman of the Rochester hamfest since 1963 and of the Buffalo hamfest since it was inaugurated in 1990. The Rochester event has grown steadily over the years.

The mid 90's were most successful at Rochester. With the excellent facilities at the Erie County Fairgrounds, I had hopes that the Buffalo event would grow and surpass Rochester. Like Rochester, the mid 90's were also the most successful at Buffalo.

"The Rochester and Buffalo hamfests are operated as a service to the Amateur Radio community — not as money raising events. We hope to cover expenses. There have been times at both events where we failed to meet the expenses. Fortunately, there has been an adequate reserve to cover such situations.

"We are able to bring in nationally known speakers and major manufacturers in the exhibit areas. Non-amateur merchants do order booths at the shows. We are not in a position to tell them to go away. We need their booth revenue to help pay the bills.

"Most people have no idea how much it costs to operate a major event such as Rochester. It starts at around $25,000 just to rent the grounds and Dome Center in Rochester — bare bones. Everything else is extra — and there are lots of extras.

"Having said that, here is the problem — because of the advancing age of the Amateur Radio population, many active people are now inactive. They are not on the air, They are also not attending events such as hamfests. They have: '... been there and done that.'

"And so, attendance declines. As attendance declines, dealers and other exhibitors tend to stay home as well. As that happens, attendance declines even more. It is a 'Catch 22' problem. It has been so bad, there have been failed and canceled hamfests throughout the nation.

"Unfortunately, most of the dealers and exhibitors are not astute businessmen. They need to show attendance at a hamfest on their advertising budget, not their direct sales budget. An appearance at a hamfest is absolute advertising. If you see someone in person, you may consider buying his product.

"The major manufacturers and dealers have held formal meetings at the Dallas and Huntsville shows to discuss this very problem. I attended those meetings. While they all know what is happening, none of them would commit money or work to solve the problem. The meetings ended with no resolution.

"We cannot force any merchant to attend a hamfest. We cannot force any amateur to attend a hamfest. We (the hamfest committee staff), work our butts off trying to make our event world class. We do not set out to create a failure.

"The amateur population is facing an emergency situation. When the lights go out or there is a disaster of some sort, amateurs are on the spot to make things better. Hamfests are an amateur disaster at this time. Amateurs themselves are the only ones who can fix the situation.

"Next spring at Rochester, 1-3 June, the amateur population of upstate New York and southern Ontario should send a message to the Amateur Radio industry (the people who make their living from Amateur Radio). The amateur population should turn out in record numbers. If that happens, the merchants working the event will go home very happy. Those people talk to their contemporaries at other shows. You can bet the number of merchants at Rochester in the year 2002 will exceed all existing records.

"The problem can be fixed. You, and all those who find fault with the hamfest decline, must to be willing to contribute one day — attending a hamfest. I have contributed nearly every day for decades. I cannot fix the problem alone. I need your help."

Regards,
Harold Smith, K2HC
General Chairman

Do you think Harold has evaluated the problem in a way that all of us can understand? Do you have any other ideas that can help to revitalize hamfests, Ham radio conventions and even radio clubs? If yes, please address any comments directly to Harold Smith, K2HC, by e-mail to harold@rochesterhamfest.org and copy them to me at billwa6itf@aol.com.

Well thats it for the first column of the new millenium. See you in March with our plans for the 2001 Dayton Hamvention in May and other nifty tid-bits. Till then — 73.

Jerry Wellman, W7SAR

Keeping track of your volunteers

The search for a 2-year-old boy ended tragically last month when the boy's body was discovered by a volunteer searcher. The boy was left sleeping in a vehicle while the father went to scout a deer hunting area in some rugged Utah mountains. Apparently the boy woke up, unfastened restraints holding him in a safety seat, and tried to find his father. When the father returned and noticed the boy missing, he quickly notified the sheriff and a large-scale search began.

During the next several days, the temperature in the mountainous area would drop below freezing and snow would blanket the area. After an intensive ground and air effort, the sheriff ended the official search effort, but relatives and friends continued to search. One of these searchers himself became lost in the rugged, snowy terrain and stumbled across the boy's body. Knowing he could not lead authorities to the location, he carried the body several miles as he tried to find his way out of the area. No one knew this searcher was lost in the area until he walked out on his own.

In the aftermath, some criticized the friends and family that began an unorganized search effort, for no one knew that one of their helpers was even lost. Yet, this volunteer did what the organized effort could not, and located the missing boy's body. Certainly the family was able to put an end to this tragedy, so it's difficult to find fault with what happened.

The sheriff ended the search when he felt, based on experience and wisdom, that the boy could not have survived the sub-zero temperatures and snowfall.

When the volunteer "self-recovered" he was suffering from hypothermia and other effects of exposure. One source told me he was lucky to have survived. Consider the tragedy of the event had this volunteer died trying to locate the boy's body. Please don't take my comments wrong. We're all volunteers. It's how we go about volunteering that concerns me. When I teach Boy Scouts a survival class, the first principle I teach is to tell someone exactly where they're going and when they'll be back. The second is to carry appropriate gear so they won't find themselves in trouble — which happens when weather changes, or someone is injured, or something unexpected happens such as taking a wrong trail.

From a management perspective, it's critical that someone take charge of search efforts, even if done by family and friends. Most of the SAR management courses I have attended or have taught strongly stress volunteer safety and having a failsafe method of keeping track of everyone involved. The man who had been lost in the area during this search could have been accounted for if he had let someone know where he was going or if the family had established some kind of a sign-in system for volunteers.

Whenever people are used for a public service event, it's important for every organization to keep track of its own people and ensure they're accounted for. I consider it a prime net control duty or resource net manager's responsibility to maintain an accurate status chart for people involved. Civil Air Patrol uses a pre-printed sign-in roster, incident command uses a "t-card" system, and most fire departments use a "personnel accountability" system. The bottom line is that you use something reliable and account for everyone involved from your group. Even though an incident commander may track your people, if you've called them out and sent them to assist on a mission, you should also assure they return safely.

I would also recommend you conduct some basic survival training for members of your group. The courses I teach have been culled from actual events and are simply designed to cause people to think. I give them a scenario, show them on a map where they have become "lost," and then lead them through a series of problems designed to cause them to think. The scenario describes what resources they might have and they're asked to think how each item might help them survive. My scenarios include mountain, desert, water, hiking, driving, winter, spring, summer, and combinations of each. You could easily come up with your own and base them on events in your own locale. Mine are not too complex as I focus on basics such as letting someone know where you're going and spending time to plan the trip.

My visit to the coast

I've just returned from a trip to Southern California and I must extend my compliments to the west coast! Our trip involved some driving between Anaheim and San Diego and I was able to monitor several VHF and UHF repeaters. I was impressed with the politeness observed. It was fun to listen and pass the time by scanning various repeater frequencies. I was also impressed by the way other drivers treated me as well.

Traffic on I-5 certainly doesn't compare to Utah's Interstate and it's somewhat intimidating if you're not used to it. Several times I would find myself in the wrong lane and needing to cross four lanes to exit. It was neat to have people notice my signal and allow me to change lanes. We were in a rental car so drivers didn't know it was some "dumb Utah driver" so it was nice to know there are some quality drivers in California. A tip of the hat to the drivers and Amateur Radio operators that made the drive pleasant!

Antenna decision

While in Anaheim, I was able to visit one Amateur Radio shop and I found a nifty little antenna that I'd had my eye on for some time. It was a spiffy, slender dual-band model and I was sure it would improve my trusty Yaesu 811's coverage. As soon as I got home I replaced the original rubber duck with the new one and proceeded to try the local UHF machine. No luck.

At first I thought the repeater was down, but a quick test with the base station let me know the machine was healthy.

I then moved around my "test center" (the basement shack) and noticed that my signal was into the machine once in a while, but unreadable. I put the stock rubber duck back on the radio. The result was a full-quieting signal. I'm going to do some more testing and may even purchase a similar antenna from a different manufacturer. My point is that we should never trust the advertising or assume the newly purchased goodie works better than something else — always test! I would hate to take my new antenna to the field and discover there that it doesn't work well. Admittedly my test is not in a controlled signal test lab, but I can stand in the same spot, switch antennas and discover one works a whole lot better than another one does.

Always test your gear before you need to use it in the field or under circumstances that depend on a good signal! When you build something or change what you currently use, be sure you test it first. When I first take something into the field, I keep the "old" item on hand in case the change makes things worse.

Emergency kits

I notice that Kenwood is marketing a portable emergency kit that contains equipment for a field station. I'm impressed that they are marketing this kit and would guess it gets high marks based on what's packaged with it. This has always been the essence of Amateur Radio, that we can respond quickly and effectively establish a field communications station.

Several of you have sent me ideas and I'm impressed with the time and effort many put into having field kits ready to roll. The challenge is to develop such a kit and then keep it ready to go at a moment's notice. Often we get all geared up and ready and let our equipment migrate to other uses if the calls to action don't quickly come. It's difficult to keep gear packed and ready and then need it for day-to-day use. I've been able to locate a number of older radios and then use alkaline battery packs in order to put an emergency kit together.

My kit includes a simplex repeater, an old mobile, a power supply, instruction manuals, and an easy to load carrying case. You might consider having your group's members donate some of their older rigs that could be put to good use in a cache of ready-to-go gear. For field use, you need to have something dependable and ready to go when unpacked. It works best if the gear doesn't need extensive set-up time and if you don't need to charge the batteries monthly.

MURS

Last month I told you that the FCC had created the Multi-Use Radio Service that was effective as of 13 November. I had a slight brain cramp and listed four frequencies and there are five authorized: 151.820, 151.880, 151.940, 154.570, and 154.600 MHz. I apologize for leaving one out! As uses for this service develops, I predict it will be of great use to public service groups.

The rules allow 2 watts ERP (effective radiated power) and external antennas, unlike the Family Radio Service (UHF) which limits output to half watt and does not allow any antenna except that which is attached to the radio. MURS rules seem to allow data, telephone interconnect, perhaps a repeater, and who knows what other applications. There are groups currently pushing that the lowest frequency (151.82) be used as a calling channel. It has merit but we'll wait and see how MURS develops. (It gives a whole new meaning to saying "meet me on 82" or "meet me on 94.")

The service does not require a license and can be used for personal and family communication needs. Business communications continue to be allowed as well. If you plug the frequencies in your scanner you'll hear various business uses including such transmissions as those from drive-through windows at fast food restaurants. Several manufacturers such as Midland and Maxon have type-accepted MURS units on the market and I'm sure others will soon follow suit. In the next months I'm sure competition will bring prices to the "very affordable" range such as what we've seen with FRS units.

Until next month, be safe and have fun! Best wishes from Salt Lake City!

Jerry Wellman, W7SAR, can be contacted by writing to: P.O. Box 11445, Salt Lake City, Utah 84147, or by e-mail to: jw@desnews.com.

No more illegal amp sales on eBay

Eleven meter operators may moan, but finding an illegal power amplifier on the eBay internet auction site may soon be impossible. The FCC says it has reached an agreement with the eBay auction site that's aimed at curtailing the sale of clearly illegal radio equipment.

FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth says eBay has agreed to cooperate in removing advertisements in which the item for sale "is clearly non-certified" under FCC rules. Hollingsworth said most of the equipment involved falls into the CB category, including illegal amplifiers.

Hollingsworth agreed to publicize the initiative at the urging of the ARRL Regulatory Information Branch's John Hennessee, N1KB. "I've got a whole folder of people who have been complaining about this and will be delighted to know that the Commission is taking action," Hennessee said.

Hollingsworth said a review team within the Technical and Public Safety Division of the FCC Enforcement Bureau is screening eBay ads each week. He said the practice could be extended to other auction sites if the FCC learns of similar problems.

Hollingsworth credits complaints from the Amateur Radio community with getting the new system in place. "I've been collecting complaints for a year, but the amateur community really generated it," he said. Hollingsworth says he sees about 10 complaints a week about auction site radio gear advertisements — sometimes several about the same ad. He cautions that complaints should be based on clear-cut FCC rules violations, such as attempts to sell illegal linear amplifiers.

Amateurs can send items to: fccham@fcc.gov

Hollingsworth says that if necessary the FCC will monitor other Internet auction sites as well. — *ARRL, Newsline*

Ace Jansen, N3AHA

How long does it take get 3,076 counties?

Back in March 2000, I wrote an article about the average age of county hunters when they achieved *CQ* magazine's USA Counties Award (USA-CA) for contacting all 3,076 counties. At the time, the number of USA-CA recipients was 990 and I had researched and collected 880 birthdates. Since 7 of those 990 USA-CA holders were club stations, I had found 89.5% of the birthdates I needed to accurately state the average age of amateurs when they received their USA-CA award. I calculated the average age as 53.4. I recognized the 10 youngest and 10 oldest to achieve USA-CA and the 10 youngest and oldest USA-CA holders in January 2000. I also provided a decade breakout of the number of USA-CA holders and their average age.

One of the questions I was unable to answer is how long does it take to make radio contact with all 3,076 counties? In March 2000, I said it was too hard to calculate how long it takes to achieve USA-CA, because I would have to somehow ask all the county hunters when they started. It was hard enough collecting the birthdates! But, as I looked at providing additional statistics, I realized I could calculate how long it took to contact all counties between awards, i.e. how much time elapsed between the USA-CA and the 2nd time award. You see, a good number of county hunters continue collecting county contacts a 2nd, 3rd, even 9th time.

USA-CA

This is the award offered by *CQ* magazine. County hunting started in the 1950s when Clif Evans, K6BX, and the Certificate Hunters Club offered the County Hunters Award (USA-CHA). This later morphed into *CQ* magazine's USA-CA award in 1961. K6BX was CQ magazine's first county hunter awards custodian. The first to achieve USA-CA was Clif Corne, Jr, K9EAB, who finished in 1965. N9STL received the most recent award in November 2000. There are 1,011 holders of USA-CA with seven of those awards belonging to club stations. Since January 2000, 21 additional stations have received USA-CA and I collected 19 of their birthdates. The average age of USA-CA recipients actually bumped up slightly to 53.5. The youngest recipient it still KK6BB, #774, 15.1 years old, with his brother, N6MJ, a close second receiving #911 at 16.1 years old. The oldest USA-CA recipient status still belongs to WØAWP receiving USA-CA at 85.5 years old.

2nd Time Award

Jack Scroggins, WØSJE, proposed the 2nd Time Award in the January 1975 Mobile Amateur Radio Awards Club (MARAC) newsletter. Jack was the first to qualify for the 2nd Time Award receiving #1 in May 1975. He accomplished the 2nd time just 4.9 years after receiving USA-CA. K4XI received the most recent award, #274, in September 2000 — just 2.3 years after he received USA-CA. 27% of USA-CA holders continued after USA-CA to work counties a 2nd time.

Two of the 274 2nd time recipients are clubs. I had birthdates for 261 of the 272 awards recipients or 96.0%. So the results should be fairly accurate. The average age of the county hunter when they received the 2nd time was 59.6. The five youngest recipients were KB4XK, #160, 34.3 years old; N8ESR, #127, 34.9 years old; KJ5PQ, #191, 37.5 years old; KØVPP, #90, 39.3 years old; and K7CLO, #16, 39.4 years old. The oldest 2nd time recipients were W5FS, #194, 83.7 years old; W9VPE, #200, 82.5 years old; N2CWG, #265, 82.1 years old; W9MYY, #257, 82.0 years old; and WA4KER, #221, 81.1 years old.

I can calculate the amount of time it takes county hunters to receive the 2nd time award after USA-CA. The average amount of time was 5.8 years. Five county hunters contacted all counties in less than one year, 44 took between 1-2 years, 56 took between 2-3 years, 74 took between 3-6 years, 46 took between 6-10 years, 41 took between 10-20 years, and eight took longer than 20 years.

The shortest amount of time needed to accomplish the 2nd Time Award was 225 days by N9HRX, #136.

3rd Time Award

Dave Manescu, W6CCM, first talked about offering a 3rd Time Award in November 1978. W7KOI received the first 3rd Time Award 24 February 1984, just 8.9 years after receiving the 2nd Time Award. There were six 3rd Time Awards issued on 24 February. KG5UZ received the most recent 3rd time award in November 2000, just 5.7 years after receiving the 2nd Time Award.

The average age of the 3rd time recipient was 62.4 years old. The average amount of time it took 2nd timers to contact all counties a 3rd time was 3.4 years (there's a trend — the amount of time is decreasing!). Now, 10 county hunters contacted all 3,076 counties in less than 1 year, 40 took between 1-2 years, 57 took between 2-4 years, 39 took 4-10 years, and 4 took longer than 10 years.

The shortest amount of time needed to accomplish the 3rd Time Award was 206 days by NT9V (who incidentally is N9HRX's husband — isn't that bad form to take a record away from your wife?) to receive 3rd Time Award #41. The longest time needed to contact all counties a 3rd time belongs to W2CUE who took 12.1 years to receive award #69.

4th Time Award

The first 4th Time Award was issued to N9BDM in October 1989 and he received the award just 275 days after receiving the 3rd Time Award. WB2HXZ received the most recent award, #88, in October 2000. 8.7% of USA-CA holders have achieved 4th time status, while 32.1% of the 2nd timers and 58.2% of the 3rd timers have contacted all counties a 4th time.

I had birthdates for 86 of the 88 4th timers or 97.8% of the required data. The average age of the 4th time recipient was 64.2 years old. The youngest recipient was KB4XK, #62, 39.5 years old.

The average amount of time it took 3rd timers to contact all counties a 4th time was 2.6 years — I think these guys are getting the hang of it by now. Five 3rd timers contacted counties a 4th time in less than a year, 35 took between 1-2 years, 20 took between 2-3 years, and 28 took between 3-8 years.

The shortest amount of time needed to accomplish the 4th Time Award was 167 days by NT9V, #20. NT9V's 167 days remains as the shortest amount of time to contact all counties.

5th Time Award

W9ABM received the first 5th Time Award in June 1992. The most recent recipient of the 5th Time Award is K8OHC receiving #43 in September 2000. Just 4.2% of USA-CA holders have continued to the 5th time while 15.7% of the 2nd timers, 28.5% of the 3rd timers, and 48.9% of the 4th timers.

I had birthdates for 41 of the 43 5th timers for 95.3%. The average age of the 5th time recipient was 64.9 years old. The youngest recipient was AK8A, #19, 47.7 years old; NZ8Q, #33, 48.5 years old; K1BYE, #27, 50.8 years old; N7AKT, #5, 52.3 years old; and KZ2P, #21, 52.7 years old. The average amount of time it took 4th timers to contact all counties a 5th time was 2.2 years — how low can they go? Four 4th timers contacted counties a 5th time in less than a year, 19 took between 1-2 years, 16 took between 2-4 years, and four took greater than four years.

The shortest amount of time needed to accomplish the 5th time award was 231 days by NT9V, #7.

A question some may ask is not only how long does it take to contact all counties, but how long does it take to contact all counties four times. Since I can't calculate the amount of time to achieve USA-CA, I can calculate the amount of time it took from USA-CA to the 5th time. The shortest amount of time was NT9V (was there any doubt) who took just 2.7 years to contact all counties 4 times (1st time to 5th time). That's an average of 246 days per award.

Bingo

The Bingo award, or Master County Hunters Award, is a little different than just a straight county award. In order for contacts to count for this award, either the contact must be with a USA-CA holder or a letter in the callsign suffix must match the first letter of the county name. So this award takes a little longer to accomplish.

W7KOI received the first Bingo Award in July 1983. KA3MMM received the most recent award in October 2000, #195. 19.3% of USA-CA holders have received the Bingo Award.

Of the 194 Bingo recipients, only one has been issued to a club station. I had birthdates for 191 of the 193 Bingo holders for 98.4%. The average age of the Bingo recipient was 61.1 years old. The youngest recipient was KB4XK, #83, 35.2 years old. The oldest recipient of the Bingo Award was W9VPE, #123, 83.3 years old.

The average amount of time it took to accomplish the Bingo Award was 7.1 years after USA-CA. The shortest amount of time needed to accomplish the Bingo after receiving USA-CA was 134 days by W4GFN, #52. This does not mean that he contacted all counties in 134 days, since he used some of the USA-CA contacts to qualify for Bingo.

6th - 9th Time Awards

Since this column is already too long, I will evaluate the 6th-9th Time Awards in another column. However, I'll whet your appetite — NT9V has contacted all counties nine times, three others have contacted all counties seven times, and seven others have contacted all counties six times.

I hope you found this column interesting and will recognize a couple callsigns. County hunting is a lot of fun and as you can see — very addictive. Check out the county hunter nets on 14.336 MHz and 14.0565 MHz to figure out why!

Until March, happy hunting. 73 Ace N3 aha!

Dad wasn't happy at all!

Rick Slater W3EJD

I was just looking at some messages when I ran across one which brought back a flood of memories. The writer wanted to know about Allied Radio Corp., and that name was something I had been trying to recall in recent days.

Way back in the 50's, Dad had an electronic parts catalog from Allied, headquartered in Chicago, and used to order almost every electronics purchase from them (there was no RadioShack yet). When I became interested in Amateur Radio, most of my early construction projects were built up out of parts we ordered from Allied.

You'd fill out a long order sheet with each individual part on a separate line, hope you hadn't forgotten anything, and then drop the order in the mail. After what seemed like a huge amount of waiting, the mailman would deliver a package from Allied, which contained all of those wonderful parts. It was a bit like Christmas for a 15-year-old kid.

The most ambitious project I recall was the construction of a 750 volt DC power supply, complete with mercury vapor rectifiers and a separate 250 volt regulated section controlled by VR-250's. I couldn't afford an aluminum chassis (they were very expensive in 1955) so I ordered a steel one instead. The package finally arrived, and I couldn't wait to begin building the power supply for my very first SSB linear amplifier. I started right away.

While Dad was off at work, I used his tools to drill the holes in the chassis and mount the tube sockets, transformers, and soldering strips. In the process, I managed to totally dull many of his drill bits, because they were intended for wood.

Dad wasn't happy at all.

But he did replace his drills with tempered steel drills intended for metal, and I suppose he did that in self-defense.

Later on, I'd put on headphones and fire up my rig in CW mode late at night when I was supposed to be asleep. The mercury vapor rectifiers would emit bright blue flashes of light and make the otherwise darkened room flicker as I keyed the rig. It made CW operation a special experience. Dad would step out on the screened-in porch to smoke a cigarette and see the flashes reflecting from the tree leaves. He never mentioned it to Mom.

Since the TV flickered with my keying too, I don't see how she could have been ignorant of the fact that I wasn't asleep. I guess each of them figured that, if they didn't officially notice that I was breaking curfew, then they could pretend it wasn't happening.

Anyway, one thing I recall from those days is that everything wonderful seemed to come from Allied Radio Corporation by mail order. Once I got my Amateur Radio license, the local wholesale electronics store would finally sell parts to me, and so Allied wasn't used much any more. The last thing I ordered from them was a 100 milliwatt CB walkie-talkie that I used to bug the campus police at Oklahoma State, but that's the subject of another story.

ISS crew checks out Amateur Radio gear

The International Space Station crew of U.S. astronaut and ISS Expedition 1 Commander William "Shep" Shepherd, KD5GSL, and Russian cosmonauts Sergei Krikalev, U5MIR, and Yuri Gidzenko has checked the International Space Station Ham gear.

Two initial Amateur Radio test passes were conducted via R3K at the Gagarin Cosmonaut Training Center in Star City near Moscow, with Russian ARISS delegate Sergej Samburov, RV3DR, at the controls. AMSAT Russia President Eugene Labutin, RA3APR, and Vladimir Zagainov, UA3DKR, also were on hand for the commissioning pass.

A subsequent test pass via NN1SS at the NASA Goddard Space Flight Center was equally successful. The crew reiterated its interest and support for Amateur Radio activities on the ISS. School Amateur Radio contact schedules and casual QSOs are pending at this point, however, as the crew tackles a very busy work regime in space.

Shepherd reports that all equipment aboard the ISS appears to be operating well, although he and the other crew members have complained about the noisy air conditioner.

Students at the Burbank School in Burbank, Illinois, were tentatively scheduled to have the first Amateur Radio contact with the Expedition 1 crew. Another 18 schools are under consideration for ARISS school contacts.

Tentative operating frequencies are: worldwide downlink for voice and packet, 145.80 MHz; worldwide packet uplink, 145.99 MHz; Region 1 (Europe/Africa) voice uplink: 145.20 MHz; Region 2 and 3 voice uplink, 144.49 MHz. Crew members may use their personal call signs or one of the "club station" call signs issued for ISS use--NA1SS, RZ3DZR, or DLØISS.

The Keplerian elements bulletin from ARRL now includes data for the ISS. For more information, visit http://ariss.gsfc.nasa.gov/. — *ARRL Letter*

Visit Your Local RADIO CLUB

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., APS Shure Building, 2124 W. Cheryl, Phoenix, AZ. Info:www.goodnet.com/indirect/www/ara 12/00

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-) rptr. PL162.2. 5/01

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., Tucson Med. Cntr., Grant & Beverly St. in the AZ Rm. of the Volunteer's Bldg. (1st bldg. on the left going north off Grant). 2/01

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: 146.835(-). 5/01

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m., VFW #9650, 3210 W. Center St., Anderson, CA. Net every Tues., 7:30 p.m. on 146.640 freq. Website: www.snowcrest.net/bgorski/index.html 2/01

Clairemont Rpt. Assoc. Meets bi-monthly brkfst mtg, 3rd Sat./odd no. months, Westminster, CA. Info: send SASE to P.O. Box 7675 Huntington Bch, CA 92615 or W6UTE in Call Bk. Net ea. Tue., 7 p.m. 145.220(-)PL 103.5 in So. CA 3/01

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 6:30 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/01

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 08:00, Denny's, El Cerrito, CA 145.110 PL 82.5 Info: S. Clark, KB6SEI, (510) 724-0158. 2/01

Cupertino ARES (CARES). Meets 1st Thurs./monthly, 7:30 p.m., Cupertino City Hall, CA. Net ea. Tues. 7:45 p.m. on 147.57 simplex. EC - Jim Oberhofer, KN6PE. www.zoy.net/CARES 6/01

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m. http://www.downeyarc.org. Info L. Vaughn, kd6nzw at kd6nzw@downeyarc.org 6/01

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Albany Sr. Cntr., 846 Masonic Ave., Albany, CA. Info: S. Primbsch, (510) 741-8227. 145.11(-) MHz. 9/01

El Dorado County Amateur Radio Club. P.O. Box 451, Placerville, CA 95667. Meets 4th Tues./monthly, 7:15 p.m., Federated Church, 1031 Thompson Way, Placer- ville. Web: hhp://edcarc.tripod.com. Net: Thurs., 7:30 p.m. 147.825(-) PL 82.5 6/01

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 7:30 p.m. at 345 Cherry St. (Library Rm.), Chico. 5/01

Golden Triangle Amateur Radio Club. P.O. Box 1335, Wildomar, CA 92595. Meets 4th Mon./monthly, 7 p.m., Beverly Health Care, 24100 Monroe Ave., Murrieta, CA 92562. Rptr: W6GTR 146.805(-) PL 100. Info: H. Wijma, AC6VN, (909) 693-2383. E-mail: ac6vn@cs.com. Web: http://www.qsl.net/gtarc 9/01

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). Info: LARK Sec., P.O. Box 3190, Livermore, CA 94551-3190. (925) 373-1386. 2/01

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Los Banos Police Admin. Annex Bldg., 535 J St. Info: M. Germino, AD6AA, (209) 826-0903, E-mail: AD6AA@arrl.net. Net 147.060(+) PL 107.2 every Thur. 7 p.m. Rpt. KB6NMP 147.06(+) PL 107.2 & 444.00(+) PL 241.8. http://www.qsl.net/lbarc/ 6/01

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, 91 Fwy/Lakeview. Info: R. Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/01

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 7:30 p.m., Our Savior's Lutheran Ch., 1035 Carol Ln, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/01

North Hills Radio Club. Meets 2nd Tue./monthly, 7:30 p.m., SMUD Bldg., Don Julio & Elkhorn, Sacramento, CA. Nets 8 p.m. Tue., (except 2nd Tue.) & Thur., 145.190(-) PL 162.2 Hz. Info: B. Griffin, (916) 729-7117. E-mail: dixdood@aol.com or nhrc@k6is.org 4/01

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. Talk-in 146.550 (S). Contact Parry Hoffman, K6LDC, (714) 636-4345 WWW.W6ZE.ORG 2/01

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Ch., Telegraph Rd. & Teloma Dr., Ventura, CA. Info: J. Casper, N6PIQ, (805) 649-1445. 6/01

Redwood Empire DX Assoc., W6KB. P.O. Box 455, Santa Rosa, CA 95402. (707) 544-4944. DX & contest club. Dinner mtg. 3rd Wed./monthly, 6:30 p.m., Carrows Rest., Hwy 101 & E. Washington, Petaluma. www.redxa.com 12/00

River City A.R.C.S. Meets 1st Tues./monthly, 7:30 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. Info: (916) 492-6115.10/01

Sacramento ARC. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net, noon on rptr. W6AK/R 146.91(-). T. Preston, KC6EO, (916) 722-9358 or L. Ballinger, WA6EQQ, (916) 393-4775. 4/01

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Rest., 1000 Howe Ave., Sacto. CA. Info: Paul Wolf, W6RLP (916)489-8112. 12/00

Shasta Cascade Amateur Radio Society, (SCARS). P.O. Box 493549, Redding, CA 96003. Meets: 3rd Wed./monthly (Sep-May), 7:30 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 3/01

Sierra Foothills ARC. P.O. Box 1005, Newcastle, CA 95658. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 94.8. 6/01

Sonoma County Radio Amateurs, Inc. W6LFJ. P.O. Box 116, Santa Rosa, CA 95402, (707) 579-9608. Meets 1st Wed./monthly, 7:30 p.m., Agilent Tech., 1400 Fountain Grove Pkwy , Santa Rosa. Net ea. Tues., 7 p.m. W6SON. Rptr. 146.73(-) PL 88.5. www.cds1.net/scra 12/00

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 8/01

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8:00p.m., 50.150. FM Rpt. Net Thurs., 7:30 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 12/00

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 3rd Tues./monthly, 7:30 p.m., NW Modesto Police Station, 2005 Evergreen, Ste. 600. Net 1.2+4 Tues. 7:30 p.m. 145.390(-) PL 136.5 2/01

Tehachapi-Southern Sierra ARS. Meets 2nd Thurs./monthly, 7 p.m., except July, 125 East F St., Tehachapi, CA (Veteran's Hall). Info: KD6KMN, (661) 822-5995. www.ssars. net, 147.06(+), 224.42(-) PL 156.7. Pkt 145. 090(S) connect to W6PVG-7. ARES nets 7 p.m. 147.51(S) Mon. 1/02

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County Sch. Adm. Bldg., Weaverville, 7:30 p.m. Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. http://www.tcoe.trinity.k12.ca.us/~tcarc 2/01

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th, San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m. 8/01

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St., Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Jim Bullington, (707) 446-4347 8/01

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., The Lewis Cntr, 20702 Thinderbird Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 3/01

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. Office, 17210 Oak St., Fountain Valley, CA. Info: Jane, KD6ODV, (714) 531-6707 2/01

Westside Amateur Radio Club - Los Angeles. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., ARC Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 147.195+, PL100, except mtg. night. Website: http://www.qsl.net/wa6rc Messages: (310) 848-1354 11/01

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. 2 NW Willits http://www.saber.net/wars. Talk-in: 145.13(-), PL 103.5. 12/01

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Davis Explorit! Science Cntr, 3141 5th St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 3/01

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:00 p.m., NIST rm 1107, 325 So. Broadway, Boulder, CO. Talk-in:146.70(-). Info: (303) 380-6540, e-mail: BARC5Ø@arrl.net or www.thisistrue.com/barc.html 8/01

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: B. Dargel, KA1BB, (860) 739-8016. 8/01

FLORIDA

South Brevard Amateur Radio Club. P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Public Library, 540 Fee Ave., Melbourne, FL. 12/00

GEORGIA

Cherokee Capital ARS. Meets 2nd Tue.monthly, 7 p.m., New Echota Methodist Church, 488 Red Bud Rd., Calhoun, GA. 146.805(+). Info: Felton Floyd, AF4DN, (706) 629-0369. 1/01

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4BD, 706/673-2291. 5/01

Gwinnett Amateur Radio Society, (GARS). P.O. Box 88, Lilburn, GA 30048. Meets 3rd Thurs./monthly, 7:30 p.m., Gwinnett Central Baptist Church on Gwinnett Dr., Lawrenceville, GA. 147.075+ PL 82.5. Contact: Mike Swiderski, K4HBI, (770) 449-0369. 8/01

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721. Meets 2nd Sat./monthly, 2 p.m., Keaau Community Ctr., behind Fire Station on Old Volcano Rd., Keaau. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Hilo Hawaiian Hotel - Queen's Court Restaurant. 11/01

Emergency ARC, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Am. Red Cross, 4155 Diamond Head Rd. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88,146.98(-), 146.94(-). Info: (808) 256-6001, WH6CZB. www.qsl.net/earc/ 12/00

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Botanical Garden., Kaneohe, HI. Info: (808) 235-3042. http://www.chem.hawaii.edu/karc/ 8/01

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 8/01

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Fire Stn. #3, 6015 S. Cass Ave, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP rpts., 145.25(-) 107.2PL, 442.55(+), 114.8PL, 224.68(-). www.w9dup.org 11/01

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 8/01

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 7:30 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.65 MHz. Info: (708) 226-1570. 10/01

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 8/01

Schaumburg ARC. P.O. Box 68251, Schaumburg, IL. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (847) 798-5248. http://members.aol.com/sarcradio 11/01

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+) PL 103.5. Web: http://www.qsl.net/w9mks E-mail: w9mks@qsl.net 6/01

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 7/01

MARYLAND

Maryland Mobileers ARC (MMARC). P.O. Box 935, Severn, MD 21144. Meets 1st Fri./monthly, 7:30 p.m., Baldwin Hall, Generals HWY, Millersville. Info net each Mon. 8:30 p.m. on 146.805(-), tone 107.2 Hz. http://www.qth.com/mobileers 7/01

MASSACHUSETTS

Genesis Amateur Radio Society. P.O. Box 1234 Plymouth, MA 02362. Meets last Mon./monthly, 7:30 p.m. at Plymouth Airport, So. Meadow Rd. Tues. net: 146.685, W1LM, 8 p.m. 7/01

MICHIGAN

Chelsea Amateur Radio Club, Inc., WD8IEL Meets 4th Tues./monthly, 7 p.m., Key Bank, 1478 Old Chelsea-Manchester Rd., Chelsea. Info: Bill Altenberndt, WB8HSN, (734) 475-7938 Rpt: 145.450(-). 5/01

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/01

Hiawatha Amateur Radio Assoc. of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m., 108 Stratofort, K.I. Sawyer AFB, MI. For info contact: Richard Schwenke, N8GBA, (906) 249-3837. 11/01

MISSISSIPPI

West Jackson County Amateur Radio Club, Inc. Meets 3rd Tues./monthly, 7 p.m., Ocean Springs Court Room, Ocean Springs, MS. 1/01

MISSOURI

Macon County ARC. P.O. Box 13, Macon, MO 63552. Meets last Wed./monthly, 7 p.m., Macon R-I High Sch., rm.167. Net every Thurs., 8:30 p.m. 146.805. E-mail: nøpr@arrl.net 1/01

NEBRASKA

Ak-Sar-Ben ARC of Omaha. P.O. Box 24551, Omaha, NE 68124-1551. Meets 2nd Fri./monthly, 7:30 p.m., Red Cross, 81st & Spring Sreet. http://www.qsl.net/k0usa 7/01

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 9 a.m., Country Inn, 1990 West Sunset, corner of Valle Verde, Henderson, NV. Info: J. Frye, NW7O, (702) 456-5396 or B. Scanborough, WA6ASI, (702) 269-9551 8/01

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Minden Med. Cntr, Hwy 395 & Ironwood Dr., Minden, NV. Info: George Uebele, WW7E, (775) 265-4278, ww7e@arrl.net, Rpt. 147.330 MHz. 1/01

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed. 6/01

The Garden State Amateur Radio Assoc., (GSARA). Meets 1st & 3rd Wed./monthly, 8 p.m., MARS Bldg., Fort Monmouth, NJ. Info: B. Buus, W2OD, (732) 946-8615. 12/00

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/01

NEW YORK

Amateur Radio Association of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2SEX. 2/01

Genesee Radio Amateurs, (GRAM). P.O. Box 572, Batavia, NY 14021-0572. Meets 3rd Thurs./monthly, 7:30 p.m. (except Jul Aug Dec), Salvation Army Com. Cntr, 529 East Main St., Batavia, NY. URL: http://hamgate.sunyerie.edu/~gram 6/01

Hall of Science ARC. P.O. Box 150131, Kew Gardens, NY 11415. Meets 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Voice mail (718) 760-2022. 3/01

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. K. Moon, N2IFG, (716) 652-0923. 6/01

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. W. Black, KB2YAP, (631) 289-5587 7/01

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 11/01

Westchester FM Repeater Ass'n. K2JQB Rptr. 146.91 MHz. Meets 3rd Thurs./monthly, 7-9 p.m., Yonkers Pub. Lib., 1500 Central Pk. Ave., Yonkers, NY, near S.E. cornor of Tucahoe Rd. Free Parking. Info: M. Grossman, K2CON at (718) 544-2370 or E-mail: K2CON@ hotmail.com 6/01

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 2/01

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Ph: (704) 888-4815. www.mdsmm.com/scarc/ 5/01

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Vo-Ed School, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 1/01

OREGON

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 2nd Sat./monthly, at Bliss' Route 66 Restaurant at Hwy 101 & 12th St. Net Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 6/01

Hoodview ARC. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Com. College/Gresham, Rm 1001. Rptrs: 147.28(+), 448.475(-5) (tone 167.9) http://www.wb7qiw.org 5/01

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Court House, Rm. 310, Roseburg, OR. Info: K6AZW/R 146.90(-) (PL100) or (541) 784-3621. 8/01

PENNSYLVANIA

Mercer County ARC, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.Ø5. 6/01

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 1st Thurs./monthly, 7 p.m., Sugar Land Community Ctr., 226 Matlage Way., Sugar Land, TX. 12/00

VIRGINIA

Mt. Vernon ARC, (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., INOVA Mount Vernon Hospital, 2nd floor, ENG Conference Cntr. Rm. Info: Bob, KT4KS, (703) 765-2313. E-mail: mvarc@juno.com. Web: www.mvarc.org/. Net: Tue., 8:30 p.m. 146.655-. 10/01

Ole Virginia Hams ARC, (OVH). Meets 3rd Mon./monthly, 8 p.m., Northern Virginia Electric Coop. Tech Cntr, 5399 Wellington Rd., Gainesville, VA. Info: Mary Lu, KB4EFP, (703) 369-2877. http://www.qsl.net/olevahams 3/01

Portsmouth ARC. Meets 4th Thur./monthly, 7:30 p.m., Am. Red Cross Chapter house, 700 London Blvd., Portsmouth, VA. Talk-in 146.850. Info: C.I Clements, Pres. (757) 484-0569. http://www.series2000.com/users/wa4nvi/parc/htm 6/01

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Rptrs 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 3/01

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Drive off North Hampton, Village 2 Commons, Graybeale Bldg., Virginia Beach, VA. 2/01

Woodbridge Wireless, Inc. (WWI). Meets 2nd Tues./monthly, 7:30 p.m., Canteberry Woods Comm. Cntr.(corner of Springwoods & Chaucer), Lake Rige, VA. Talk-in 147.24(+). For info: http://www.pwcweb.com/wwi/ 7/01

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) (103.5 CTCSS) rptr. Doors open 9:30 a.m. 5/01

WEST VIRGINIA

Jackson County ARC. Meets 1st Thurs./monthly, 7:30 p.m., St. John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) Info: Valerie Hunter, WB8ZOC. P.O. Box 62 Cottageville, WV 25239. 7/01

Tri-State Amateur Radio Association. Meets 3rd Tues./monthly, 7p.m., Museum of Radio & Tech., 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890. 6/01

WYOMING

Sheridan ARC. Meets every Sat. at Bubba's, 7:30 a.m. exit 23 off HYW I-90, Sheridan, WY. Club call: W7GUX, 146.22/82. Info: G. Roelfsem, K7GR 8/01

University ARC. Meets 1st Tues./monthly, 7:30 p.m., Univ. of WY, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61. 12/01

NATIONAL

Bicycle Mobile Hams of America. 46 states/6 nations membership. Annual Forum at Hamvention. Info, sample newsletter, e-mail address to: hartleyal@aol. com or, SASE to BMHA, Box 4009-W, Boulder, CO 80306-4009. 2/01

Hands-on fun

No matter what the age is of the group you'll be teaching or instructing in Amateur Radio, it is good to remember that "hands-on" lessons are what most students will retain and enjoy. As a teacher of 6th, 7th, and 8th graders, I've learned through the years just how valuable the hands-on demonstrations are — especially to children.

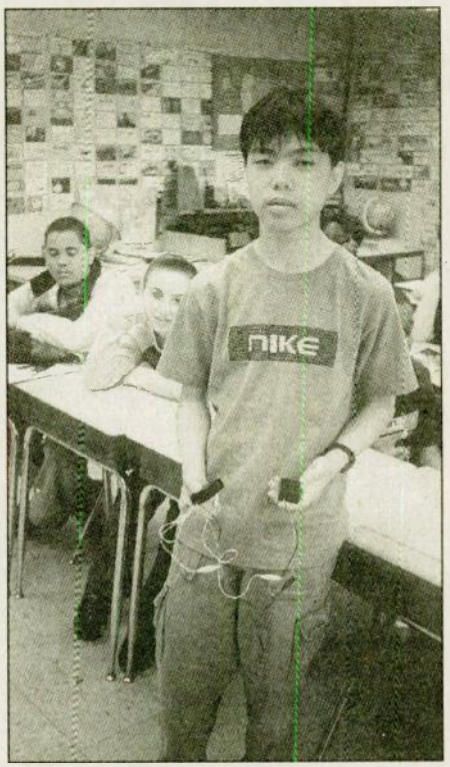
This term I suggested to my classes that they could pick any topic we were studying and together with three other students, each child could do a demonstration to one of my other classes. At first they resisted the idea of having to speak in front of another class. However, after practicing a few times, they came to realize that the materials they were using were like props that helped them not to be so nervous. It's always terrific when teachers can help children develop speaking skills; either on the radio or in front of a group.

The class had two weeks to prepare an interesting presentation. I allowed some class time to be spent on the groups meeting to "brainstorm" with each other. I could sense the enthusiasm mounting as the research began. The charts and diagrams that were submitted were excellent. Here are two of the activities that were very well received by the children.

"How Do Batteries Work?" was presented by three 6th graders. Richard had colorful, large illustrations of the inside of a battery and explained that a dry cell battery consists of a zinc container, a chemical paste, and a carbon rod. A chemical reaction involving these three materials produces electricity. The battery stops working when all the materials dry up inside the battery. In rechargeable batteries the chemical reaction can be reversed.

The three students did an excellent job pointing out the many battery operated products we all depend on everyday. One of the suggested assignments was to make a list of ojects around the house that required batteries. Many of the students admitted they were surprised by the number.

The following items were used in this hands-on demo: an LED, two dishes, vinegar, two pieces of zinc (silver coins



Danny demonstrating a hands-on experiment with batteries.

may work), 2 pieces of copper (pennies may work), and wires. In this activity the vinegar acts like the paste inside a battery. Lemons or pickles work like batteries just as well as vinegar. The metals and vinegar react together to produce electricity.

Set up the circuit with a piece of zinc and copper in each dish of vinegar. When the LED didn't glow at first, we connected it to the wires in the other direction, using alligator clips. The most fun came when some of the kids tried this demo with pickles and lemons. As educators, we can never forget that having fun is the best motivation to learn.

Susan's part of the demonstration was to present a brief background on the "First Batteries." Her report included information about Galvani, an Italian scientist in 1791 who noticed that a leg from a dead frog twitched when touched by metal instruments. Electricity was flowing between the metals and the fluids in the leg. This same effect was seen by another scientist, Volta, who went on to invent the first battery, He used stacks of zinc and copper disks, separated by fabric soaked in saltwater.

The second demonstration that was equally successful had lots of charts and illustrations to go along with it. Making clear and informative charts is a whole unit by itself with the 6th grade. This one was called "Sockets and Switches." Materials needed are: two wires with alligator clips, a bulb (2.5V) and socket, a battery (1.5V) and holder.

One of the more verbal students, Brian, reminded the class that electricity can only flow along an unbroken path. The battery pushes electricity all the way around the circuit. The voltage written on a battery tells you how hard the battery will push electricity around a circuit. If you double the number of batteries in a simple circuit, you double the voltage pushing the electricity around.

First the kids screwed the bulb into the socket. Next, they put the battery into its holder, then connected the wires to form a circuit. The next step in this interesting demo required an extra wire with alligator clips, tape, foil, and a thick piece of cardboard. They proceeded to add the extra wire into the circuit. Then the kids made a switch by taping pieces of foil to the cardboard so that they overlapped. Next they connected the foil to the circuit with the free alligator clips. They could then make the bulb flash by touching the pieces of foil together,

Take a guess what this demonstration was the introduction to in my ham radio class. Child oriented, hands-on demos are the best actvities to use in a classroom. The kids become active participants in their own learning process.

Carole Perry, WB2MGP, can be reached at: wb2mgp@ix.netcom.com.

Bob Heil, K9EID

Improving your transmit audio

Tuning around the various bands today, one will discover that there seems to be a lot of talk about improving the audio quality of SSB stations. In years past, about as far as most of the stations would dive into the audio side of things was if the microphone plug would match the pins of the new transmitter. Today's Amateur Radio operator has many avenues to travel regarding their transmit audio. Yes, the pin outs of the transmitter's front panel has to match the microphone but there is so much more to be aware of and at the same time, cautious about. Almost all of the transceivers today have +8 to +10 volts DC showing up on one of the microphone pins. ICOM goes even a step further — they phantom power their microphones and place that +8 volts DC right on the same wire that carries the microphone audio.

Think about this for a minute — that one wire is carrying + DC voltage from the transmitter to the microphone as well as carrying the audio signal generated by that microphone to the transmitter. One has to be very careful not to short that microphone pin as it will no doubt cause great damage to the +8 volt supply in the transmitter. Doing that will usually allow lots of smoke to be let out of your nice new transmitter!

This phantom power is placed on the mic line to power the f.e.t. (field effet transistor) electret microphone elements. Electret elements have become very popular because they are VERY inexpensive, small in physical size and some of them do sound fairly good. On the other hand some elecret elements are just simply not acceptable for the Amateur Radio bands. The majority of these are mushy and very narrow banded. They are very difficult to make work over a wide frequency range.

Many of the beautiful audio signals heard from some of today's stations is accomplished by using very high quality studio microphones into an outboard equalizer so that the response of the microphone can be adjusted to sound just about any way one would want to sound. A two band equalizer will allow you to adjust the low end response under 100 Hz. and, at the same time, adjust the treble or high end repsonse around 4 kHz. for its proper balance to that low end response. Julius Jones, W2IHY, has a new eight band microphone equalizer that divides the spectrum into eight bands of equalization — 50, 100, 200, 400, 800, 1600, 2400 and 3200 Hz. You are able to adjust all eight of these critical frequencies to sound just about anyway you need, depending upon your microphone, transmitter, your voice and the room acoustics. With all of these factors it is a very critical adjustment to make things sound just right.

The only way to determine that 'just right' is to listen to yourself on another receiver. You can't use the built in monitor. Joe, your buddy on 75 Meters, can't tell you, and listening to his rig over a phone line doesn't cut it. A tape or CD recording doesn't make it, either. The only way to acurately hear what you sound like to the outside world is to listen to yourself in another reciever while you transmit into a dummy load. Listen to yourself in a high quality headset. NOW you will now exactly how you sound to the outside world.

Always remember that your SSB signal starts with the microphone and many of the 'matching' microphones are not as high quality as one would expect. Most of the major manufacturers never build their 'matching' microphones. They are built by O.E.M. (original equipment manufacturer) companies that build microphones for thousands of audio companies, large and small. The quality usually can be easily be improved simply by selecting a high quality microphone developed exclusively for SSB communications. Add to that, a 'Juilius' box or discover that your new DSP radio has wonderful transmit audio but you never paid any attention to that section.

Well — it is time to get out the book and discover if your new transciever has an on board microphone equalizer and if it does, how to adjust it. One of the most important features of the latest DSP systems is the carrier offset controls. By moving the carrier frequency a few hundred cycles either way off center will deliver an entirely different sound of transmit audio and yet, very little, if any, of this is talked about in the instruction books. Even the wonderful little ICOM IC-706 has this feature and yet, it's seldom mentioned. Looking under Q4 will expose the carrier balance; + 200 Hz through - 200 Hz. This adjustment can only be done by listening to yourself in another receiver as you move that carrier frequency.

Many operators purchase high quality broadcast and studio dynamic microphones only to bring them home and discover that they are balanced line output using all three pins of the XLR broadcast connector. There are two methods of connecting that into your unblanced Amateur Radio input. One is a center tapped audio transformer that would take the ground, hot and return of the XLR and pass it through the secondary windings of the transformer that puts the signal into a simple ground shield and hot audio. These transformers are difficult to locate and usually a bit pricey. The easiest way to unbalance a balanced line is connect pins 1 and 2 to the shield and the hot audio lead to pin 3. At the same time it is always best practice to connect pins 1 and 2 to the shell ground which actually placed the shield to the chassis ground of the circuit when the XLR is plugged in.

The down side of studio and broadcast microphones is usually their very low gain, compared to that higher gain microphone we are used to seeing in the Amateur Radio world. Because of this lower gain, it becomes a common practice to use a small studio mixing console to give you the proper gain as well as two or three band equalization. Using a small mixing console also allows you to drive the product detector directly, by-passing the usual eight pin microphone input of the transmitter. Almost every transmitter has a direct input on the back panel through its accessory connector. Using a high quality studio microphone, studio mixing console/EQ and driving your transmitter straight into the product detector will deliver superior SSB audio that is far and above any of the 'stock' audio chains that the manufactures just can't seem to get away from in today's equipment.

Come and join our Amateur Radio cruise

Poet Matthew Arnold, who lived from 1822 to 1888, said it so very well:

Come, dear children, let us away;
Down and away below.
Now my brothers call from the bay;
Now the great winds shorewards blow;
Now the salt tides seawards flow;
Now the wild white horses play,
*Champ and chafe and toss in the spray.**

*(The Forsaken Merman, Stanza I, 1849)

While the QCWA does not expect to worry about wild, white horses on the Ham radio cruise it has planned and to which it invites all radio amateurs everywhere, we do expect to share a marvelous time of sun, fun, and fellowship starting on 27 October 2001, and lasting for eight days on the Holland America's *Westerdam*. This great flagship of the line will be sailing from Fort Lauderdale on 27 October for Nassau and Half Moon Cay in the Bahamas; San Juan in Puerto Rico; Phillipsburg on St. Martin; along with St. John and St. Thomas in the U.S. Virgin Islands. On board will be a great group of QCWA members and spouses, friends, and (we hope) a goodly number of other radio amateurs who would like to work Mobile Marine (off shore) and Maritime Mobile (in international waters). We plan at least one fully equipped amateur station for those who would like to work some short haul and long haul DX, along with some Amateur Radio operating forums for those who are interested. Everyone joining us on this QCWA sponsored (but open to all Amateurs) cruise will be mailed a complementary video of their eight-day adventure so as to commemorate our planned excursions for sightseeing and shopping. (Discount shopping on the duty-free islands of St. John and St. Thomas [just before Thanksgiving and Christmas], and depending on your gift list, could pay for much of your trip!)

Guaranteed to be an exciting Amateur Radio oriented trip with plenty of activities planned for spouses and those who just want to relax, eat (there are 13 restaurants on board), swim, sunbathe, dance, shop and sightsee or enjoy a break at their own pace, the QCWA hopes lots of folks will take advantage of the extraordinarily bargain rates they have negotiated for this cruise. Based on double occupancy, staterooms (including all meals) begin at $649 for an inside room with two lower beds and go on up to $979 for a deluxe outside suite with two lower beds. (Port charges are extra, as in all cruises, and unfortunately cannot be negotiated.)

We do expect that there will be a cash rebate on each cabin, however, and tipping, normally a last-day cruise expense, is not required on Holland America cruises. You are the guest of Holland America Cruise Lines, and providing the finest service available is their goal.

Several special event perks are on the agenda for the cruise, including an on-board complementary cocktail party, a luncheon visit to the Virgin Islands Amateur Radio Club on St. Thomas, and another visit to the San Juan Amateur Radio club and station. We are also hoping to influence the Holland America Line to add to their regular evening programs the presence of Amateur Radio licensed entertainers who could then socialize with us during the day.

While the cruise program is not totally complete at this date, the QCWA cruise sponsors, all working under the direction of Larry McCalvey, WA9JMO, are committed to making this 2001 Cruise the most exciting and enjoyable Amateur Radio Cruise and grand Caribbean adventure ever.

The Travel Agent we are working with is Edythe White at the White Travel Service in West Hartford, CT, who can be reached at 800/547-4790. Or, if you would prefer to talk to Larry McCalvey personally, try him at 262/639-7327 or wa9jmo@wi.net.

Page 7 of the winter 2000 issue of the QCWA Journal also includes an extensive description of the cruise in detail, and QCWA members should consult that issue to see the table of prices for all of the available discounted accommodations. Amateurs who are not yet members of QCWA are most welcome to participate in the same discounted prices however, and ought to contact either Ms. White in West Hartford (making mention of the QCWA Cruise Convention, which is what we are calling it for the benefit of the cruise lines' understanding) or Larry for additional information. A 27-minute video may also be borrowed, showing sights and sounds from all of the projected ports of call. Larry has copies, as does the author of this column. Drop either of us a line if you'd like to see one. It will be many more moons, we are sure, before you will again find another eight-day cruise at these prices, and with an Amateur Radio oriented program and guest group of this nature. Plan now to join us, please, beginning on 27 October 2001, in Ft. Lauderdale, Fl. "Come One, Come All!" as Sir Walter Scott once wrote in his Lady of the Lake.

And, by the way, for those who might be interested and eligible in becoming one of us, the Proud, the Many, and the Elite - the QCWA - our Internet Home Page is to be found at http://www.qcwa.org and on the side-bar there you can download an application as a portable document file. Or, if you prefer, write to QCWA Headquarters at 159 E. 16th Avenue, Eugene, OR 97401 - 4017.

Until next time, 73 and Happy Cruising!

The Yaesu FT-817 QRP transceiver

Those QRPers who have been clamoring for a full-featured HF/VHF/UHF multi-mode transceiver with all the bells and whistles seem to be getting what they've wished for in the latest addition to Yaesu's product line — the FT-817.

Touted as "The Ultimate Backpacker," Yaesu's list of performance specifications and mode/frequency capabilities show it to be nothing short of a tiny package of pure QRP dynamite — and for less than $800. That's a very good thing. Not since the unveiling of the Elecraft K2 has the QRP community been so excited.

If you're inclined to draw a comparison between the FT-817 and K2 though, please don't. You'll find distinct packages of apples and oranges.

The FT-817 is no kit. In fact, we're wondering at KI6SN just how Yaesu managed to pack so much capability into such little space. It's truly remarkable.

The FT-817 covers 160 through 10 Meters HF, and 6 Meters, 2 Meters and 430 MHz VHF in a unit just 5.31 inches wide, 1.5 inches high and 6.5-inches deep. Weighing just 2.5 pounds, including alkaline battery cells and an antenna, it's looking like a backpacker's dream machine.

Its many features, though, lead me to believe that this radio is going to occupy a lot of operating positions from home base, as well.

The FT-817 is capable of SSB, CW, AM, and FM transmission, with some added attractions on the receive side: FM broadcast, AM aircraft, public safety reception, and wideband FM. It's also configured for packet and other digital modes — including PSK-31.

When news hit just before the NorCal-sponsored West Coast QRP Symposium at Pacificon last October that Yaesu was readying the FT-817 for release, the low power world went wild.

According to Yaesu literature, "Using a new-technology, all-band MOSFET power amplifier, the FT-817 provides 5 watts of power output when using a 13.8 volt DC source. When using Alkaline batteries or the optional FNB-72 Ni-Cd Battery Pack, power is automatically set to 2.5 watts. Via menu, this can be changed to 0.5 watts, 1 watt, or up to 5 watts." Now, that's pretty neat.

Yaseu's new FT-817 is a full-featured, multi-mode HF / VHF / UHF QRP transceiver designed for field or home operation.

There are 208 memories in this rig, and you can "append an alpha-numeric 'tag' to each memory to aid in channel identification." The LCD (liquid crystal display) front panel can be set for either blue or amber readout. And if you want to operate longer in the field, you can switch it off all together to save your batteries.

For VHF operation on 10, 6 and 2 Meters, and 430 MHz, there's built-in CTCSS and DCS encoder/decoder systems for repeater operation.

There's even a spectrum scope that gives the operator a visual record of activity on either side of his operating frequency.

The CW operator will find a built-in keyer with adjustable weighting, CW monitor pitch and NORMAL/REVERSE frequency tuning. "You can even use the microphone's UP and DOWN keys to send CW via the keyer," Yaseu says.

Stay tuned for more information on this radio. We're eager to bring you reviews of its performance and how the FT-817 plays in the field, the campsite and from home.

If you'd like more information, visit Yaesu's Internet website: www.yaesu.com, or contact Vertex Standard, U.S. Headquarters, 17210 Edwards Rd., Cerritos, CA 90703.Telephone 562/404-2700.

NJ-QRP PSK31 "Warbler" kit

In the June 2000 *QST* article "A Panoramic Transceiving System for PSK31," Dave Benson, NN1G, along with co-author Skip Teller, KH6TY, told readers how to combine free software and a simple transceiver kit to inexpensively break into the digital world on 20 Meters.

Operators marry the Benson kit with a personal computer and an antenna and, voila! They're on the air talking digitally — computer to computer.

Now, with the cooperation of the New Jersey QRP Club, QRPers have another option for PSK31: it's the PSK-80 "Warbler" QRP transceiver kit. For about $40 and a bit of time at the homebrewing bench you can be up and running in no time on 80 Meters.

Described as a "little brother" to the 20-meter version featured in *QST*, the NJ-QRP "Warbler" takes "advantage of inexpensive crystals from a popular 80-meter frequency to create the PSK-80."

"We named it 'The Warbler' for PSK's characteristic two-tone warble sound, as well as for the club's state bird — the mosquito!," the club's Internet website announces.

The kit includes a doublesided printed circuit board 3 X 4.5 inches, plated through, solder masked and silkscreened.

Specifications include fixed 1 kHz coverage from 3.580 to 3.581 MHz, four watts output and "no drift, no VFO tuning, no muss, no fuss!"

The kit is interfaced with your computer's sound and serial interface. A 20-page instruction manual details construction, set-up and the theory of PSK31 operation, with a special bonus section: "PSK31 and DigiPan Primer."

Benson's design uses two surface mount SA612 double-balanced mixers. The PSK-80 "Warbler" is $35 plus shipping ($3 U.S., $5 Canada and DX). Checks or money orders should be made out to "George Heron, N2APB" and sent to: 2419 Feather Mae Court, Forest Hill, MD 21050. For the latest information on availablity, check the Internet sites of the NJ-QRP Club (www.njqrp.org) and Benson's Small Wonder Labs (www.smallwonderlabs.com)

The "Squirt" antenna kit

Joe Everhart, N2CX, a member of the NJ-QRP Club, wanted to reap the benefits of operating the club's PSK-80 "Warbler" kit but didn't have the space for a contentional 80-meter dipole antenna.

You might recall 'CX's Gusher multiband antenna design of several years ago.

It's no surprise, then, that he went to work on designing an antenna that would both fit the frequency and his lot. The result is the 80 Meter "Squirt" reduced-size dipole.

In addition to being a perfect companion for the PSK-80 "Warbler" transceiver, the "Squirt" is also a general purpose 80-meter antenna suitable for use with power outputs up to 15 watts — the limiting factor being a small 200 pF trimmer capacitor used in a tuning unit to achieve resonance.

"The kit is a homebrewer's delight," according to the NJ-QRP Club web site. "Not being satisfied to just make a plain ol' dipole available for the discount the club was able to get on the twinlead and wire, (N2CX) went yet another mile to create a simple built-in tuner that would allow this shortened dipole to be useful and efficient on 80 Meters."

The 80-meter "Squirt" antenna kit comes complete with all the wire needed for the dipole's legs (33-34 foot lengths of wire are supplied for each leg), 45-feet of 300-ohm twinlead for the feeder, the 200 pF tuning capacitor, a T68-2 toroid, and wire, binding posts, nylon tie, BNC connector and assorted hardware to complete the antenna.

There is also a comprehensive assembly and reference manual written by the designer himself.

The 80-Meter "Squirt" antenna kit is $19 plus shipping ($5 U.S., $7 DX and Canada). Checks or money orders should be made out to: George Heron, N2APB and sent to: 2419 Feather Mae Court, Forest Hill, MD 21050. For the lastest information on availablity, check the Internet site of the NJ-QRP Club (www.njqrp.org).

Richard Fisher, K16SN, can be reached at: 1940 Wetherly Way, Riverside, CA 92506 or via e-mail at: K16SN@aol.com.

Carl Luetzelschwab, K9LA

Downloading and using the free VOACAP software

In my June 2000 column, I said that the VOACAP propagation prediction software that's available off the web for free would be the topic of a future column. That's the purpose of this month's column — where to get it, how to install it, and how to use it. Actually, I've been meaning to do this column for quite awhile. In fact, Danny Richardson K6MHE, suggested this topic in a December 1997 e-mail (I should easily win a procrastination award for putting this off for three years).

In the June column I gave a web site from which VOACAP could be downloaded. The bad news is that this URL doesn't work anymore. But the good news is that Gregory Hand of the Institute for Telecommunication Sciences (ITS) maintains VOACAP on the ITS web site. ITS is under the National Telecommunications and Information Administration (NTIA), which is part of the U.S. Department of Commerce.

To download VOACAP, follow the directions in Table I. Instead of going right to the page that downloads the software, I've listed it step-by-step so you can read each page to get a better overall picture of what ITS does and what else they offer.

I strongly suggest reading the two manuals. Both are many pages long. The technical manual explains how propagation programs were developed and gives the details on how they work. It is very technical in nature, and you'll learn a lot by reading it. You'll see many of the topics I've discussed in my columns over the months. The user's manual gives details on how the software is implemented, along with definitions of terms, descriptions of antenna options, and other user-critical topics.

What you've downloaded is itshfbc.exe, which is the 32-bit Windows NT/95/98 versions of the software (note the caveat about NT on the page after doing step 3). Download it into a sub-directory (I called mine VOACAP). The file is about 5Meg, so it may take awhile. When it's downloaded into your sub-directory, execute it and follow the directions. The end result is an icon on your desktop named ITS HF Propagation.

```
    URSI Coeff(Daily)          ~METHOD 20   VOACAP 00.1004W  PAGE   1

Jan,15 2001          SSN = 130.                  Minimum Angle= 3.000 degrees
K9LA                 ZF                      AZIMUTHS          N. MI.      KM
41.00 N   86.00 W - 19.50 N   80.80 W     166.79  349.46     1318.0    2440.7
XMTR  2-30 IONCAP #23[samples\SAMPLE.23     ] Az=166.8 OFFaz=360.0    0.100kW
RCVR  2-30 IONCAP #23[samples\SAMPLE.23     ] Az=349.5 OFFaz=360.0
3 MHz NOISE = -145.0 dBW      REQ. REL = 90%    REQ. SNR = 10.0 dB
MULTIPATH POWER TOLERANCE =  3.0 dB   MULTIPATH DELAY TOLERANCE =  0.100 ms

23.0 26.3 24.9 28.3  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0 FREQ
      1F2  1F2  1F2    -    -    -    -    -    -    -    -    - MODE
     10.8  8.4 12.5    -    -    -    -    -    -    -    -    - TANGLE
      8.7  8.6  8.8    -    -    -    -    -    -    -    -    - DELAY
      369  309  411    -    -    -    -    -    -    -    -    - V HITE
     0.50 0.71 0.18    -    -    -    -    -    -    -    -    - MUFday
      148  148  163    -    -    -    -    -    -    -    -    - LOSS
       12   12   -5    -    -    -    -    -    -    -    -    - DBU
     -126 -127 -143    -    -    -    -    -    -    -    -    - S DBW
     -171 -170 -172    -    -    -    -    -    -    -    -    - N DBW
       45   44   29    -    -    -    -    -    -    -    -    - SNR
       -9  -16    8    -    -    -    -    -    -    -    -    - RPWRG
     0.96 0.99 0.81    -    -    -    -    -    -    -    -    - REL
     0.00 0.00 0.00    -    -    -    -    -    -    -    -    - MPROB
     0.58 0.75 0.40    -    -    -    -    -    -    -    -    - S PRB
     24.8 14.7 25.0    -    -    -    -    -    -    -    -    - SIG LW
     10.2  9.0 20.7    -    -    -    -    -    -    -    -    - SIG UP
     26.6 17.6 26.8    -    -    -    -    -    -    -    -    - SNR LW
     11.8 10.7 21.6    -    -    -    -    -    -    -    -    - SNR UP
     -2.6 -4.6 -1.6    -    -    -    -    -    -    -    -    - TGAIN
     -2.6 -4.6 -1.6    -    -    -    -    -    -    -    -    - RGAIN
       19   26    2    -    -    -    -    -    -    -    -    - SNRxx
*****END OF RUN*****          VOACAP 00.1004W
```

Figure 1 VOACAP Prediction, K9LA to ZF, Jan, SSN=130, 2300 UTC

There are also versions for DOS and versions for 16-bit Windows 3.x, but with limitations (as explained on the page after doing step 2). I did not download the DOS or Windows 3.x version, and I have no experience with them.

Assuming everything goes ok in the installation procedure (big assumption sometimes, isn't it?), you should actually end up with three generic propagation programs: VOACAP, ICEPAC, and REC533. VOACAP is, of course, what we were after. It is the Voice of America's version of IONCAP tailored for their international short wave broadcasting needs. ICEPAC is a pleasant bonus — it's IONCAP with a better model of the high latitude ionosphere, specifically the mid-latitude trough, the auroral zone, and the polar cap as described in my March 1998 column. Running VOACAP and ICEPAC are very similar, so my comments apply to both. REC533 is the International Telecommunications Union (ITU) international HF planning model, and I will not address it.

VOACAP and ICEPAC also have area coverage versions (VOAAREA and ICEAREA — contour plots of signal strength as in the June column) and signal-to-interference in point-to-point modes (S_I VOACAP and S_I ICEPAC). I will not address these subsets. OK, let's get into running a propagation prediction using VOACAP. We'll run a prediction from K9LA to ZF (Cayman Islands) for this month at 2300 UTC.

When you click on the VOACAP icon after opening ITS HF Propagation, the "VOACAP Point-to-Point data input" screen will come up. Here's where we set up all the parameters for the path we want.

For Method, let's go with Method 20 — complete system performance. We'll

see later what it gives us. For Year, select Current Year (it should come up with 2001). For Coefficients, go with CCIR (Oslo). For Time, input 2300UTC by selecting 2300 to 2300 in 1 hour increments. For Groups, input 1.15 for January 15, and input SSN = 130. For Transmitter, input 41.00N and 86.00W and name it K9LA. For Receiver, input 19.50N and 80.80W and name it ZF.

Next is Path. It shows the short path distances (kilometers, nautical miles, and statute miles) and the heading from the Transmitter (K9LA) to the Receiver (ZF). Toggle it for the long path distances and heading.

For Frequencies, input 24.9 MHz and 28.3 MHz. Note that there are default frequencies ≠ since this is a Voice of America program, these default frequencies are in the international short wave bands.

For System, select the default noise (-145dBw at 3 MHz in a 1 HZ bandwidth, which is about -114dBm at 24.9 MHz in a 500 Hz bandwidth, and 1dB lower at 28.3 MHz), select a 3.0 degree minimum elevation angle (it's hard to generate energy at extremely low elevation angles), select the default 90% required reliability (more on this later), input 10dB required SNR (signal to noise ratio), select the default 3dB multipath tolerance, and select the default .1ms time delay tolerance.

For Fprob, stick with the default values. Essentially these are fudge factors to vary the monthly median critical frequencies.

For Tx Antenna (which is at K9LA), select Sample.23 (horizontal dipole with .5 wavelength elements at .25 wavelengths above ground) in the TxAnt field and click "at RX" to point it on the heading to ZF identified in the Path parameters. Set the power to .1kw (100w). Likewise, select Sample.23 for the Rx Antenna (which is at ZF), and click "at Tx" to point it toward K9LA.

Ok, everything is inputed. Now it's just a simple matter to click on "Run" and then "Circuit" to run the prediction from K9LA to ZF. What you get is a header with all the parameters you selected and the prediction. The actual prediction should look like Figure 1.

The first column is the time. The second column is the predicted monthly median MUF — 26.3MHz for this path. Note that MUFday, which indicates the number of days in the month that the MUF should be at least 26.3MHz, is .50 as it should be, as this is the monthly median The third column is 24.9 MHz and the fourth column is 28.3MHz. Let's focus on the 28.3 MHz prediction.

The MODE says it's one hop via the F2 region. The TANGLE says the elevation angle needed out of K9LA for this mode is 12.5 degrees (our assumption of 3 degrees minimum is ok). The DELAY says it takes 8.8 milliseconds for the RF to get from K9LA to ZF via the 1F2 mode. The V HITE is the virtual height of the reflection point in the F2 region. The MUFday of .18 says 10M should be open on about six days (.18 times 31) of this January month (unfortunately we don't know which specific days of the month these are) at 2300 UTC with SSN = 130. The MUFday is lower than .50 because 28.3 MHz is higher than the 26.3 MHz monthly median. Also note that the MUFday for 24.9 MHz is .71 - it's higher than .50 because 24.9 MHz is less than the monthly median of 26.3 MHz.

The LOSS is the median system loss in dB. The DBU is the predicted median field strength at ZF in dB above 1uv per meter. The S DBW is the median signal power at ZF in dB above 1 watt. Likewise, N DBW is the median noise power at ZF in dB above 1 watt. The SNR (signal to noise ratio) is the difference between S DBW and N DBW. The REL is the probability that the SNR (29dB) exceeds the required SNR (we went with 10dB). There are some more parameters listed, but I'll let you dig into the user's manual (pages 24 and 25) to decipher them.

So enjoy VOACAP. Add more frequencies, change the dates and times, change the SSN, change the method, etc. Pretty soon you'll be running predictions to help with your personal Amateur Radio activities. One last thing — if you're doing predictions on paths that go through high latitudes, it's probably best to use ICEPAC. ICEPAC only requires one more input parameter than VOACAP — the q index. Check out Figure 52 in the user's manual to convert the Boulder k index to the q index.

Carl Luetzelschwab, k9LA, can be reached at: 1227 Pion Rd., Ft. Wayne, IN 46845 or you can e-mail him at: k9la@gte.net.

1. go to http://elbert.its.bldrdoc.gov
2. click on High Frequency (HF) propagation models ICEPAC, VOACAP, REC533
3. click on HFWIN32
4. click on README.txt to download some general information about the software and PC requirements
5. click on here in the "Technical Manual" line to get the technical manual
6. click on here in the "Original User's Manual" line to get the user's manual
7. click on here in the "install from your hard drive" line to download the software to your PC

Table I Downloading the Software

Traffic reporting Ham loses license

The FCC warned Joseph E. Mattern, the now, former WW4WJD, of Orlando, Florida, to stop collecting traffic reports on local repeaters.

The regulatory agency claimed that Matten had extensively used repeaters in his area to discuss business dealings. The FCC told Mattern to cease operating on repeaters where the repeater owners did not want him.

On 20 September the FCC again wrote to Mattern. This time he was told that he would have to re-take the Technician Plus Class amateur examination under the supervision of the Commission's Tampa office. While Mattern did appear for the re-examination, he failed both portions of the test. As a result, on 26 October Mattern's Amateur license was canceled and he was ordered off the air. — *FCC, Newsline*

Kurt repeats himself

Every now and then Kurt receives a letter from a reader complaining that he (loveable Old Kurt) keeps writing about the same old subjects over and over. Enough is enough!

Well, Kurt wants to point out that enough is not enough and he'll give a concrete example from a recent issue of *QST* to prove it.

How many times has Krusty Old Kurt explained that, if you put up a vertical antenna, you need to put radials under it? If it is a quarter-wave or shorter vertical you must use radials or it won't work correctly. If it is a halfwave vertical it may work without them but it sure will work better with them. How many times has Kurt explained this? Ten times? Twenty times? Thirty times? Who knows?

So, Weary Old Kurt read a recent letter to *QST*'s "Doctor is In" wherein a reader described the antenna he has been using for a number of years. It was a trap vertical "mounted three inches above the ground and with no radials."

The good Doc set him straight saying, "The real problem is that your system doesn't have ground radials."

Why are these radials necessary? Simple! A short vertical is like half of a dipole. The dipole has maximum RF current at its center. And the short vertical has maximum current at its base.

The current in one side of the dipole flows into the other side. But the short vertical doesn't have another side. So where does the current go? Into the ground, that's where.

The problem is that ground has a fair amount of RF resistance. The current flowing through that resistance heats the ground and is lost to your signal. Radials, made up of low resistance wire, cut that loss. The RF flows through the wire instead of the ground and is not lost as heat. The more and longer the radials the less the loss.

How many do you need? AM broadcast stations use 120. For the average Amateur Radio station 16 is plenty. Even four is a lot better than none. Always use some radials. Kurt told you so.

Dipoles

There is another subject that Kurt has written about over the years. That is non-resonant antennas. An antenna does not have to be resonant to work well. All you have to do is use an antenna tuner to convert whatever appears at the transmitter end of your feedline to the 50 ohms resistive your transmitter was designed to work with.

So what does Weary Old Kurt read in a recent issue of the British QRP magazine? "Many beginners on H.F. begin by using a dipole. There is nothing wrong with this and a dipole can give good results, but it is by nature a single band antenna." Wrong, wrong, wrong!

For one thing, a dipole is resonant on its fundamental frequency and on odd harmonics of that frequency. How many readers of this column have used a 7 MHz dipole as a resonant 21 MHz antenna? Works fine. The nit-pickers will point out that the 21 MHz resonance is not exactly three times the 7-Mhz fundamental but the difference is small and the bandwidth wide enough that it can be used on both bands without a tuner.

But how about other bands? All you need is that trusty little tuner and you can operate on all the bands. So if you have a dipole already in place and want to work other bands just get a tuner and go with it.

Kurt has an old friend who has his Ph.D. and has operated for years. He says that when he tuned his receiver to the antenna's resonant frequency the signals just jumped out of the noise. Don't you believe it. Kurt sure doesn't. There is nothing magic about a resonant antenna other than the fact that its impedance is purely resistive. This makes it a good match for coaxial cable and with a resistance suited for a modern transmitter. But that's it. There is no

other magic to a resonant antenna. Just use your tuner with your antenna on any frequency you like. You'll get out just fine.

Antenna gain

Kurt has written much about antenna gain as expressed in dBi (compared to the theoretical isotropic antenna) and dBd (compared to a dipole).

A longtime reader wrote to Kurt complaining that a antenna manufacturer uses dBi to state the gain of his new antenna. And then they state gain with the antenna one wavelength over the ground. "Why," he asks, "can't they just give the gain over a dipole and let it go at that?"

Kurt agrees that the use of all these gain factors is confusing, especially to the newcomer and to the amateurs who are not that interested in the technical aspects of the hobby. As a matter of fact, some manufacturers follow this route to confuse and to make their antennas sound better than they are.

But the world is changing and getting more complex. For example, Kurt still has his 8th edition of the Handbook published in 1931. The chapter on antennas does not contain the words "Gain" or "Decibel." Things were simple in those days.

By the 20th edition in 1942 both words appeared in a greatly expanded chapter on Antenna Systems. Gains were given in dB with, almost always, an explanation in words that the gain was referred to a dipole. Sometimes it was just understood to be reference to a dipole.

The problem is that dB is just a ratio. When you say that an antenna has so many dB gain the statement is meaningless until you reveal your reference. "Five dB over a dipole" does have meaning as does "Seven dB over an isotropic antenna." But all these words take up valuable space so we've come to use dBd and dBi to keep the word count down but still be precise in what we say.

The difference is that a dipole has a gain of 2.15 dB over the isotropic antenna. So if the gain is given as dBi and you want to know how much better the antenna will be over your dipole you need to subtract 2.15 from the stated gain.

DBi and dBd both assume the antenna is in free space, that is, ground is not present. If ground is nearby, as it is in the practical case, the gain of a dipole can increase. At the correct height and over seawater the additional gain may be 6 dB! Some manufacturers like to add this gain in, so look for footnotes like "at one wavelength" or "at 74 ft."

All this means that in today's more complicated world it is important to understand dBi, dBd, ground reflection and other basic antenna parameters.

There is no question that computers have made the use of these precise terms more important. With programs like Kurt's favorite, EZNEC, (which you can see at http://eznec.com) you can model your antenna, change it and see the effect, check it over different types of ground, and find out more than Hams back in the "good old days" could ever hope to know about their antennas. It can be fun; try it!

Got a question for Kurt? Send it to 2120 28th Street, Sacramento, CA 95818.

Contests Chart

Dave Goodwin, VE2ZP/VE9CB

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
ARRL RTTY Roundup	1800Z 6 Jan 2359Z 7 Jan	80-10M RTTY	1pt/QSO	Canadian Provinces, Territories, US States, DXCC regardless of band	RST QTH	Single Op: high power, low power Multi-op, single tx: high power, low power	1mo. ARRL RTTYRU@arrl.org
Japan International DX CW - Low Bands	2200Z 12 Jan 2200Z 14 Jan	160-40M CW	1pt on 40M 2pt on 80, 160M Work JA only	JA Prefectures (50) JAs will send 2-digit prefecture number	RST Ser#	Single Op: Both bands, single band Multi-op	1mo. Box 59 Kamata, Tokyo 144
North American QSO Party - CW	1800Z 13 Jan 0600Z 14 Jan	160-10M CW	1pt/QSO	Canadian Call areas, US States, other NA countries	Name QTH	Single Op Multi-op, two tx All entrants must run 150w or less	1 mo. K6ZZ or e-mail to cwnaqp@ncjweb.com
Hungarian DX	0000Z 21 Jan 2359Z 21 Jan	160-10M CW	6pt/HA 3pt/DX 0pt/NA	Hungarian Provinces (20) and HA DX Club membersworked on each band. HA stations will send a 2 letter province abbrev. HADXC will send mem #	RST Ser#	Single op: All band, single band Multi-op: Single tx, Multi-tx	28 Feb Box 79 Paks H-7031 Hungary
NA QSO Party - SSB	1800Z 20 Jan 0600Z 21 Jan	160-10M SSB	1pt/QSO	Canadian Call areas, US States, other NA countries	Name QTH	Single Op Multi-op, two tx All entrants must run 150w or less	1 mo. WA7BNM or ssbnaqp@ncjweb.com
ARRL VHF Sweepstakes	1900Z 20 Jan 0400Z 22 Jan	50MHz to microwaves	1pt/50 or 144MHz QSO 2pt/220 or 432MHz QSO 4pt/903 or 1296MHz QSO 8pt/above 2304MHz Don't use 146.52 or any repeaters	Grid squares worked on each band	Grid Square	Single Operator: High Power, Low Power, QRP portable (max 10w out) Rover (single or multi-op, operating from at least two grids) Multi-op Limited Multi-op (max four bands)	30 days ARRL or e-mail to JanuaryVHF@arrl.org
Maritime CW	1100Z 28 Jan 2200Z 28 Jan (1500-1800 off time)	80M CW	1pt/QSO	Counties in New Brunswick (15), Nova Scotia (19) and Prince Edward Island (3)	RST Ser# County Prov Name	Single op only. This contest is open to amateurs in the three Maritime provinces only.	30 days VE9DH
CQ 160M CW	2200Z 26 Jan 1600Z 28 Jan	160M CW	2pt/VE 5pt/NA 10pt/DX 5pt/Mar.Mob.	Canadian Call Areas, US States, other DXCC Countries.	RST QTH	Single Op Multi-op	1mo. K4JRB or CQ mag. E-mail: cq160@contesting.com
REF CW (France)	0600Z 27 Jan 1800Z 28 Jan	160-10M CW	15pt/France+terrs 5pt/F.terrs in NA	Departments of France (96), F6REF/00 on each band	RST Ser#	Single op: All bands, single band Multi-op SWL	15 Mar BP 7429 37074 Tours Cedex
UBA SSB (Belgium)	1300Z 27 Jan 1300Z 28 Jan	80-10M CW & SSB	10pt/ON 3pt/Eur. Union 1pt/other	ON Provs (8) + ON Prefixes + DXCC countries in European Union	RST Ser#	Single Op: All bands, Single band Multi-op, single tx SWL	30 days ON7LX
Vermont QSO Party (USA)	0000Z 3 Feb 2359Z 4 Feb	160-10M CW & SSB	1pt/QSO Stns in VT work everyone, Others work VT stnts only	VT counties, VT club stations. VT stations count VT, NH and ME counties, US states, Canadian provinces and territories, DXCC countries on each band; Bonus QSO points: QSOs with W1OFW 2,000; W1OFW/M 5,000.	RST QTH	Single op high power, Single op QRP Club	1 Mar KE1BV
New Hampshire QSO Party (USA)	0000Z 3 Feb 2359Z 4 Feb	160-2M CW, SSB and FM	1pt/QSO Stns in NH work everyone, Others work NH stnts only	New Hampshire couunties (10) NH stations count NH couties, US states, Canadian provinces and territories +1 if you work any DX stations	RST QTH	Single tx: High Power, low power, QRP mutli-tx: High Power, low power, QRP 50MHz and above; NH Club	1 Mar WB1ASL
Maine QSO Party (USA)	1300Z 3 Feb 0700Z 4 Feb	160M-70cm CW, SSB andFM	1pt/Fone QSO 2pt/CW QSO x5 for QSOs with ME clubs	Maine counties (16) ME stations count ME counties, US states, Canadian provinces and territories, DXCC	RST QTH	Single op: High power, low power Multi-op Club QRP; Mobile	30 days Portland AWA Box 1605 Portland ME 04104
Freeze Your B___ Off QRP Field Day	1600Z 3 Feb 0400Z 4 Feb	80-10M CW and SSB	1pt/QSO	US States, Canadian Provinces and Territories, DXCC countries, plus special multipliers: x4 for Field-day-type location, x2 for alternative power, x2 for running less than 1w, x indoor temperature multiplier - x2 from 50-64F, x3 for 40-49F, x4 for 30-39F, x5 for 20-29F, x6 for below 20F	RST QTH Name Power indoor temperature	Single Op: home or field Multi-op: home or field Novice and Technician-class licensees	7 Mar AB7TT
Delaware QSO Party (USA)	1700Z 3 Feb 0100Z 4 Feb 0500-1300 off time for all	160-10M all modes	1pt/Fone 2pt/CW, RTTY, digital	none	RST QTH	one category for all entrants Info by e-mail: n9gg@dxer.com	30 days FSARC, Box 1050 Newark DE 19715 deqsoparty@fsarc.org
North American Sprint SSB	0000Z 4 Feb 0400Z 4 Feb	80-20M SSB	1pt/QSO	Canadian Provs/Terrs US States NorAm DXCC Countries	Ser# Name QTH	Single op all bands only Entrants may combine their scores to form a "team".	1mo. K7GM or e-mail to ssbsprint@ncjweb.com
Maritime SSB	1100Z 4 Feb 2200Z 4 Feb (1500-1800 off time)	80M SSB	1pt/QSO	Counties in New Brunswick (15), Nova Scotia (19) and Prince Edward Island (3)	RS Ser# County Prov Name	Single op only. This contest is open to amateurs in the three Maritime provinces only.	30 days VE9DH
CQ/RJ WW RTTY WPX	0000Z 10 Feb 2359Z 11 Feb	80-10M RTTY	1pt/QSO own country 2pt/QSO own continent 3pt/QSO other continent x2 on 40, 80, 160M	Total of prefixes worked, regardless of band	RST Ser#	Single Op All Bands: High power, Low Power (150w out) Single Op Single Band Multi-op: Single tx, Two tx, Multi-tx SWL All entrants may use DXCluster or other DX alert systems	17 Mar W6/G0AZT 1826 Van Ness San Pablo CA 94806 edlyn@global.californi a.com
PACC (Netherlands)	1200Z 10 Feb 1200Z 11Feb	160-10M CW & SSB	1pt/QSO Work Neth. Only	Neth. provinces (12) on each band	RST Ser#	Single Op: Mixed mode, CW only, SSB only, QRP Multi-op: Single or Multi-tx	31 Mar PA3BFM
YLRL YL-OM Contest SSB	1400Z 10 Feb 0200Z 12 Feb	80-10M SSB	1pt/QSO YLs work only OMs OMs work only YLs	ARRL Sections, Canadian Provinces and Territories, DXCC countries worked on each band Total score x1.5 for low-power (200wPEPmax)	RS Ser# QTH	Single operator only	30 days KC4IYD
North American Sprint CW	0000Z 11 Feb 0400Z 11 Feb	80-20M CW	1pt/QSO	Canadian Provs/Terrs US States NorAm DXCC Countries	Ser# Name QTH	Single op all bands only Entrants may combine their scores to form a "team".	1mo. AG9A or e-mail to cwsprint@ncjweb.com

Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA. ARRL - 225 Main St, Newington CT, 06111 USA. Callsign - Callbook Address

Bands: The 30, 17 and 12M bands are never used in any contest.

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Hamfest

FLORIDA

The Ft. Myers ARC Hamfest will be on 12-13 Jan. 2001. Adm: $5. Tailgating: $5. Tables: $15, elec $5. Sat, 9 a.m. - 4 p.m., Sun 9 a.m. - 2 p.m. Vendors, Dealers, Tailgating, free parking, good food. Talk-in: 147.345. For more info: G. E. Sammons, WA4DQE, 3667 Kelly St., Ft. Myers, FL 33901. Phone: 941/936-9431. Email: wa4dqe@juno.com.

ILLINOIS

The Wheaton Community Radio Amateurs Midwinter Hamfest, will be on 28 Jan, from 8 a.m.-1 p.m. at the Hawthorne Race Track(3501 S. Laramie, Cicero, IL). Adm: $5 advanced, $7 at door. Tables available. VE exams, door prizes. Talk-in: 145.390. For more info: W.C.R.A., P.O. Box QSL, Wheaton, IL 60189. http://www.wheatonhamfest.org. Email: info@wheatonhamfest.org.

INDIANA

Michiana Valley Hamfest Assn. South Bend Hamfest, 8 a.m. - 2 p.m. 14 Jan. at Elkhart County Fairgrounds, Goshen, IN. Tables $8/ea, power $10. Adm. $4 adv. Setup 6 a.m. Sunday. TI: 145.290(-). For info: Dennt, KA9WNR, 219/291-0252, or write: Michiana Valley Hamfest Assn., 21970 Kern Rd, South Bend, IN 46614-9295.

MISSOURI

Missouri Valley & Ray-Clay ARC's Northwest Missouri Winter Hamfest, 20 Jan. 8 a.m. - 3 p.m. at the Ramada Inn, St. Joseph MO (I-29 and Frederick Ave, exit 47 on I-29). Adm. $2 ea., or 3 for $5/adv, $3 or 2 for $5 at door. Swap tables (all indoor) #10 ea for first two tables. Major exhibitors, free parking, FCC exams. TI: 146.85 and 444.925. For info: Northwest Missouri Winter Hamfest, c/o Neal or Carlene Makawski, WBØHNO/KAØIKS, 3704 Meadowoak Lane, St. Joseph, MO 64503. E-mail: nem3238@ccp.com; phone: 816/279-3406.

NEW YORK

Ham Radio University 2001, will be held on 21 Jan., from 9 a.m.-4 p.m., at Babylon Town Hall Annex, Phelps Lane, Babylon, NY. Adm: $2. Table: free for clubs. There will be technical forums on a wide variety of topics. For more info: Phil Lewis, N2MUN, n2mun@optonline.net or call 631/226-0698. Website: http://www.arrlhudson.org/nli/hru2001.htm. Talk-in: 146.685, 136.5 PL.

NEW MEXICO

The Sixth Annual Albuquerque Winter Tailgate Ham Radio Swapfest, will be held on 27 Jan., at Del Norte High School South Parking Lot(Corner of Montgomery Blvd. And San Mateo Blvd.) Adm: FREE.Tailgating available. For more info: Tom Ellis 505/291-8122, k5tee@arrl.net. Gary Horlbeck 505/299-3280, kh6jtm@abq.com.

PENNSYLVANIA

The Phil-Mont Mobile Radio Club, Inc. Annual Ham Radio Auction-Fest on January 10, 2001, 7:00 p.m., at the Franklin Institute Science Museum, 20th St. & Benjamin Franklin Parkway, PA. Refreshments and admission free. Sellers (only) pay $2 reg. Fee + 10% comm. To club ($30 max). Talk-in: 147.03 (91.5 PL), 224.96. For additional info contact: PMRC, Box 88, Abington PA 19001. Or call Russ, W3CH, at 610/631-3401 (#4), russ@hdj.com, http://www.phil-mont.org.

Information in "New Products" is supplied by the manufacturers to acquaint **Worldradio** *readers with new products on the market.*

New Products from Heil Sound

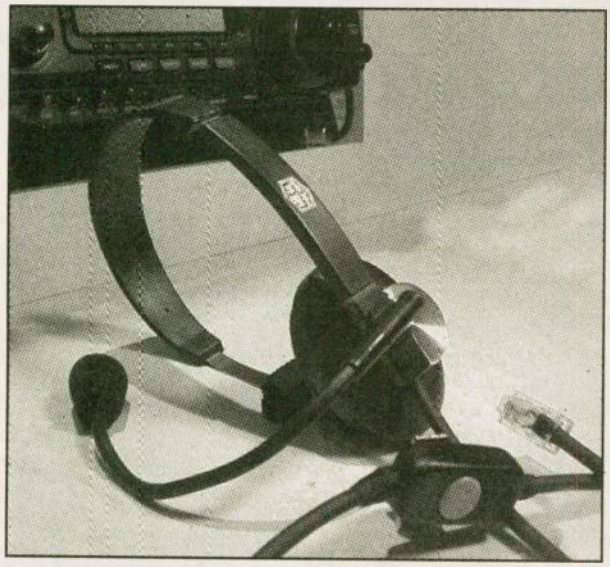
The fine folks at Heil Sound are making lots of progress in their quest for better sounding audio for Amateur Radio operators. Heil Sound now has four new blockbuster items that fill huge needs with prices that are well under $100. In addition to their long line of fine products, Bob Heil and company have come up with four new items sure to be a hit with Hams.

BM-10

IT'S BACK! By popular demand, the unique design that started it all back in 1985 is back in production. Lightweight foam pads make for a comfortable open headset operation. It is available with the HEIL HC-4 (red ear pads) or the HC-5 (Blue ear pads) $89.00

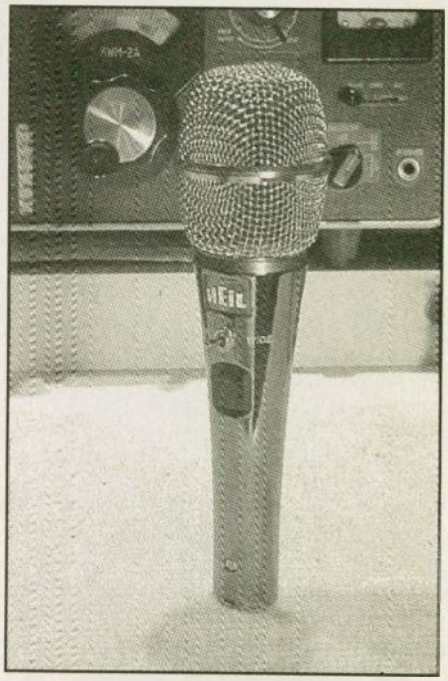
HMM

A commercial quality dual-element hand microphone, this new HEIL hand microphone is loaded with both the HC-4 and the HC-5 DX and rag chew elements in a noise canceling cavity. Rear panel switch selects either element. A special HMM-iC is available for ICOM only use. loaded with the new HEIL elecret element. $78.00



HS-706

A lightweight, single side headset with a high gain elecret microphone producing extremely articulate audio that makes your IC-706 come alive! A pendant type PTT button is mounted in-line terminated with the mating modular connector. $59.00



Mono band mobile whip antennas

MFJ now has monoband mobile Ham-tenna™ whips available for six HF bands plus 6 Meters. They're small, lightweight, efficient and easy-to-use.

Each is ruggedly constructed using a heavy duty 3/8 inch, 4 foot long fiberglass rod, a nearly industructible .125 inch diameter PH-17-7 stainless steel whip, chrome plated brass fittings and mounts on any 3/8 X 24 female mount. Its sleek, low profile construction has low wind lading and its semi[rigid fiberglass eliminates the need for springs or guys. A black anti-static jacket protects the loading coil.

Each of these antennas can handle 600 watts PEP. Each antenna comes with an Allen wrench and complete tuning and matching instructions.

These monoboand antennas are available for 75, 40, 30, 20, 17, 15, 10 and 6 Meters. Suggested retail price for each antenna is $19.95.

HM-i

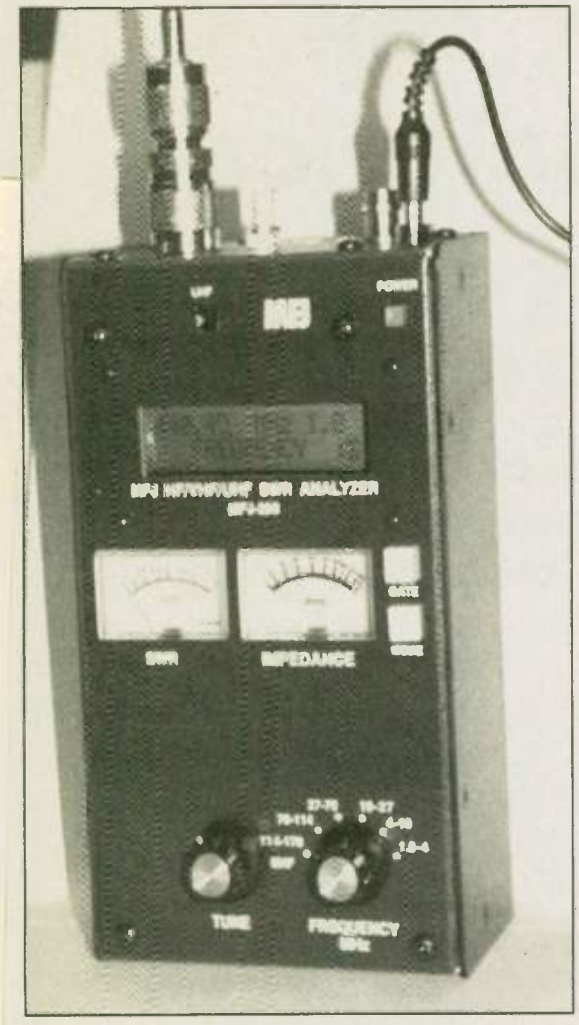
A studio condensor microphone exclusive for ICOM users. After years of development, HEIL SOUND introduces this great new product that only works on ICOM transceivers. (Won't work on your Kenwood or Yaesu!) No more audio problems trying to match various dynamic microphones to your ICOM. This great new product is receiving rave reviews from all of the test stations. A 'Narrow/Wide' switch allows the operator to select one of the two different sound qualities from this great new elecret studio condensor. $95.00

New MFJ clock

Looking for a clock for the shack that's easily readable in both day and night lighting? The MFJ-117 12/24 hour clock has the biggest and brightest LEDs of any clock available. These giant 2.5 inch LEDs are nearly the width of you HT and are easily readable from across the street! This wall or desk mounted clock is switchable for either 12- or 24-hour display.

The MFJ-117 clock has front panel buttons for setting hour and minutes, and has a battery backup (9-volt) to keep the clock accurate even if the power fails!

It's 12 inches wide and 7 1/2 inches high and comes in an attractive silver color with bright red LEDs. Suggested retail price is $59.95.



MFJ-269 SWR Analyzer

Everyone is familiar with the outstanding MFJ-259 Antenna Analyzer that made measuring and adjusting antennas a piece of cake. Now MFJ has improved on the design and has introduced the MFJ-269 SWR Analyzer.

The MFJ-269 covers all of the HF bands, plus VHF and UHF! Other new features are a built-in Ni-Cad/Ni-MH charger circuit, battery saver, low battery warning and reduction drive tuning.

This new analyzer gives you a complete picture of your antenna. You can read antenna SWR and Complex Impedance from 1.8 to 170 MHz as either series equivalent resistance and reactance or as magnitude and phase. It also reads parallel equivalent resistance and reactance. You can determine velocity factor, coax loss in dB, length of coax and distance to a short or open in feet. You can read SWR, return loss and reflection coefficient at any frequency simultaneously as a single glance. You can read match efficency and inductance in uH and capacitance in pF at RF frequencies. You can also measure SWR and loss of coax with any characteristic impedance from 10 to over 600 Ohms.

Just plug in your antenna coax, set the frequency and read SWR, return loss and reflection coefficient simultaneously. Read the coax cable loss in dB and match effenciey. You can adjust dipoles, verticals, Yagis, quads and other antennas and determine their SWR, resonant frequencies and bandwidth.

This new analyzer is fully portable and you can take it anywhere you need it — remote sites, the top of your tower or even on a DXpedition.

Power is supplied by 10 "AA" cells mounted internally or by using an MFJ-1315 110VAC converter ($14.95).

Suggested retail price of the MFJ-269 SWR Analyzer is $359.95.

There are lots of additional accessories available.

All of these MFJ products come with the famous No Matter What one-year limited warranty. Should anything go wrong, MFJ will either repair or replace the product for one full year. To order, or for you nearest dealer, call 800/647-1800, e-mail: mfj@mfjenterprises.com, fax 662/323-6551 or write to: MFJ Enterprises, Inc. P.O. Box 494, Mississippi State, MS 39762. You can also see any of these products on the web at: www.mfjenterprises.com.

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As a service to our readers, *Worldradio* presents a feature listing of those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for December, please have the information to us by mid-September. *Worldradio*, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams." List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

p/r pref=pre-register preferred but w/i OK
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w/i=walk-in only
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Date	City	Contact	Notes
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1/04/01	Tucson	David, K7IOU 520/749-2884	p/r pref
California			
Hotline	Carmichael	Info Hotline: 916/492-6115	w/i
1/14/01	Citrus Heights	Joe, KF6OQY 916-797-3149	p/r
1/25/01	Colton	Harold, AB6RN 909/825-7136	p/r pref.
1/27/01	Culver City	Scott, K6PYP 310/459-0337	w/i
1/20/01	Long Beach	Don, 562/420-9480	p/r pref.
1/13/01	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
1/13/01	Santa Barbara	Nancy, WR6V 805/967-4473	p/r pref.
Hotline	Santa Rosa	Hotline - Recording, 707/579-9608	w/i ok
Hotline	Sebastopol	Recording, 707/579-9608	
Colorado			
call	All Colorado	Exam recording 303/360-7293	
Florida			
call	St. Pete	Mark, NP3R 727/528-0071	w/i pref.
Idaho			
1/13/01	Boise	Rich Dees, W7BOI 208/888-1343	w/i pref.
1/24/01	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
1/02/01	Lewiston	KB7LTY 509/758-8374	
Illinois			
Anytime!	Burr Ridge	Deni, W9DS 630/986-0061	p/r
1/13/01	Oak Forest	David, NF9N 708/226-1570	p/r pref
Nebraska			
1/30/01	Omaha	Brian, KM0Y 402/533-2610	w/i
New Jersey			
1/13/01	Cranford	W2OU, 732/885-8460	w/i pref
Hotline!	Cranford	24-hour hotline 973/377-4790	w/i pref.
1/10/01	Ft. Monmouth	Mike, KC2Q 732/774-1095	w/i only
New York			
1/07/01	Yonkers	Emily, AC2V 914/237-5589	w/i
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tba	Brevard	Harrison, KO4RV 704/877-4757 or 704/883-9096	
Ohio			
1/27/01	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref
Oregon			
Call!!	Astoria	AA7OA, 503/338-3333	p/r
Tuesdays	Bend	Bill, K7ZM 541/389-6258	p/r only
1/27/01	Crescent City	KE6WHH 707/464-3418	
1/13/01	Dallas	Robert, W7LOU, 503/623-1141	p/r
1/10/01	Eugene	Riley, W7EUD 541/345-2407	p/r pref
1/24/01	Florence	Hal, N7HL 541/997-2323	p/r pref.
1/26/01	Grants Pass	Bill, WX7U 541/476-2703	p/r pref.
1/20/01	Gresham	Patsy, W7PAT 503/668-4305	w/i only
1/25/01	Klamath Falls	KC7HEX 541/883-5050	p/r
1/06/01	Lincoln City	Carl, K7EWG 541/994-3113	p/r pref.
1/13/01	McMinnville	Mike, W7MJ 503/843-4042	p/r pref.
1/10/01	Myrtle Creek	W0QOT 541/863-7692	
1/10/01	Roseburg	Mel, AB 7DC 541/672-5884	p/r pref.
Pennsylvania			
1/06/01	Erie	Norma, W3CG 814/655-9124	w/i pref.
1/04/01	Philadelphia	Dusty, ND3Q 215/448-1139	p/r pref
Rhode Island			
1/27/01	Slatersville	Bob, WB1P 401/333-4787	p/r pref
Texas			
1/20/01	Austin	Jim, AB5EK 512/327-6184	w/i
Wisconsin			
1/27/01	Appleton	George, W9MDP 920/730-0967	

Limited AO-40 use possible in near future

AMSAT-NA President Robin Haighton, VE3FRH, says plans are in place to make AO-40 available for a limited period of general amateur use "possibly within a week or two." Launched 16 November, the next-generation Amateur Radio satellite formerly known as Phase 3D remains, for now, in a geostationary transfer orbit while initial housekeeping and checkout procedures are under way.

Just when and how the "limited operation" will occur is up to the ground controllers, Haigton said. The provisional operation would involve "one or two bands at a time," he said. Since the satellite's solar panels will not be deployed until AO-40 is in its final orbit, full power will not be available.

Details of the limited test period will be announced via AMSAT bulletins and via the AO-40 telemetry beacon on 2 Meters, which also is transmitting text messages. (For more information on receiving AO-40 telemetry, visit the AMSAT-NA "AO-40 Telemetry" page, http://www.amsat.org/amsat/sats/ao40/ao40-tlm.html.)

From all indications, most AO-40 systems are working properly at this point, with the possible exception of the 70-cm transmitter. According to a status report from Phase 3D Project Manager Karl Meinzer, DJ4ZC, "a problem with the 70 cm transmitter" led controllers to shift the telemetry downlink from 70 cm to 2 Meters (145.898 MHz). Meinzer said AO-40's two 2.4 GHz transmitters were operated and are okay.

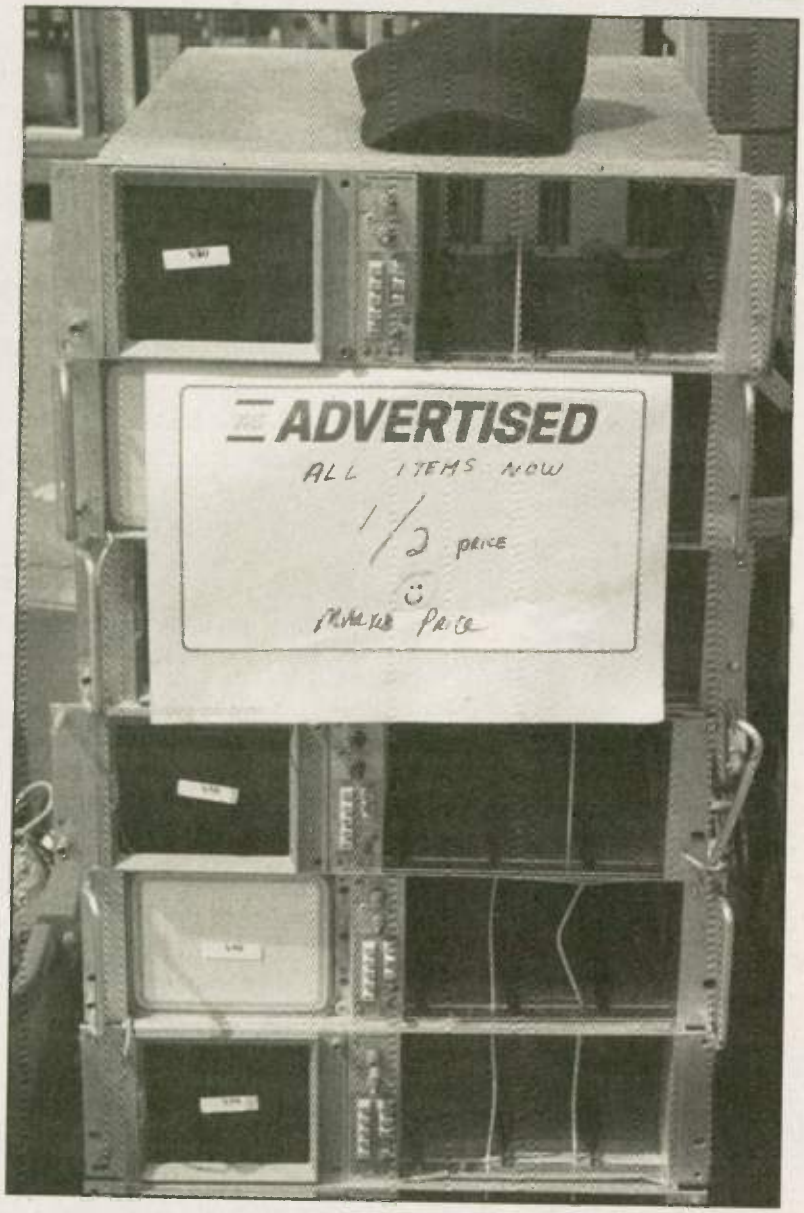
Haighton said the most likely configurations for the limited test period would be Mode U/V (Mode B), 70 cm up and 2 Meters down, and Mode L/S, 1.2 GHz up and 2.4 GHz down, SSB and CW.

AMSAT says there's still a lot of work to do until AO-40 will be fully ready for general Amateur Radio use. AO-40's geostationary transfer orbit puts it some 500 km from Earth at its nearest point, and 35,000 km at the farthest.

AMSAT says that AO-40's attitude is being changed to prepare for the first motor burn. Meinzer's report says the 400-Newton motor will be used to put AO-40 into a 50,000 km apogee. The first orbital maneuver should be completed in a few days. Other orbital adjustments will follow over the next 270 days.

AO-40's solar panels will not be deployed until the satellite is in its final orbital configuration. Once that happens, the satellite should become available for full Amateur Radio use. — *ARRL Letter*

The Mart



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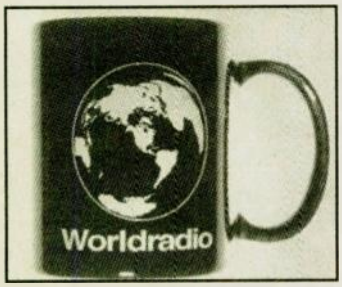

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EMCOMM 2000

Jerry Boyd K6BZ

On 22 July 2000 an emergency communications training conference was held at Bishop Quinn High School near Redding, California. The event was co-sponsored by the ARRL Sacramento Valley Section Amateur Radio Emergency Services (ARES) and the State of California Office of Emergency Services Auxiliary Communications Service (ACS). While it was intended for Amateur Radio operators and others involved in ernergency communications (EMCOMM) primarily in the 20-county Sacramento Valley area, its appeal was much greater than that.

Amateur Radio operators from adjacent ARRL Sections, and from several states outside California attended. Those in attendance represented ARES, RACES, ACS, SKYWARN, MARS, and other volunteer emergency communications units. Participants had an opportunity to meet, firsthand, those with whom they might be working side-by-side in a future disaster. There was an opportunity to exchange information, techniques, and ideas. Topics covered included: the role of an Emergency Coordinator; working with government agencies and public officials, how to construct effective VHF and HF emergency antennas, an overview of the Incident Command System; working with volunteers; the Psychology of Disaster; and, Amateur Radio "mutual aid."

The presenters included: Bill Pennington, WA6SLA, the Sacramento Valley Section Emergency Coordinator — South and Inland Region ACS Radio Officer for State OES; Dave Thorne, K6SOJ, Section Emergency Coordinator-North and Assistant ACS Officer for State OES Mutual Aid Region III; Dick Cloyd, WO6P, District Emergency Coordinator, Sacramento Valley Section District 2. Robert "Buck" Buckley, W6HOR, Emergency Coordinator for Trinity County; and Jerry Boyd, K6BZ, Section Manager, Sacramento Valley Section and ACS Officer for OES Mutual Aid Region III.

Based upon feedback received from this original offering, EMCOMM is slated to become an annual event held each year at a different location in Northern California. Participation is open to any Amateur Radio operator, or other communicator involved in emergency communications. For information about future offerings please contact the program coordinator, K6SOJ. Door prizes for this event were provided by ***Worldradio***, Ham Radio Outlet, and the American Radio Relay League.

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