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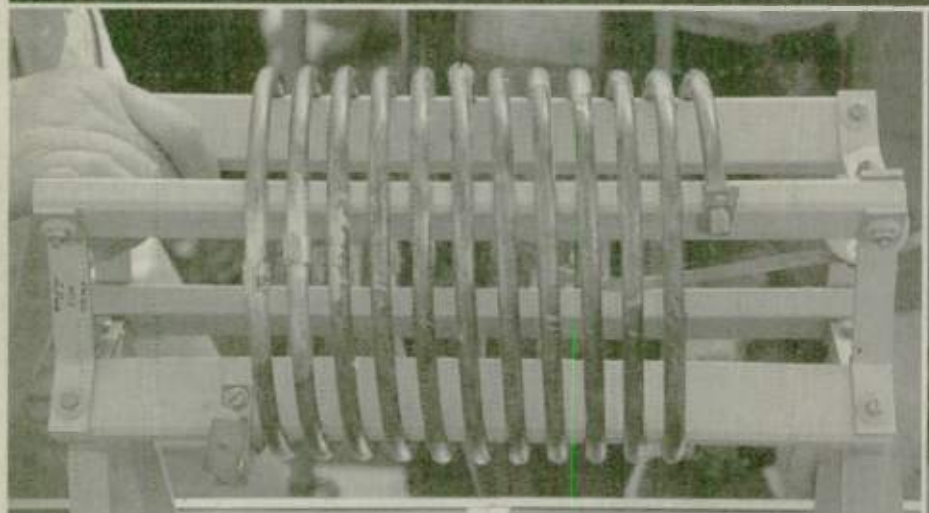
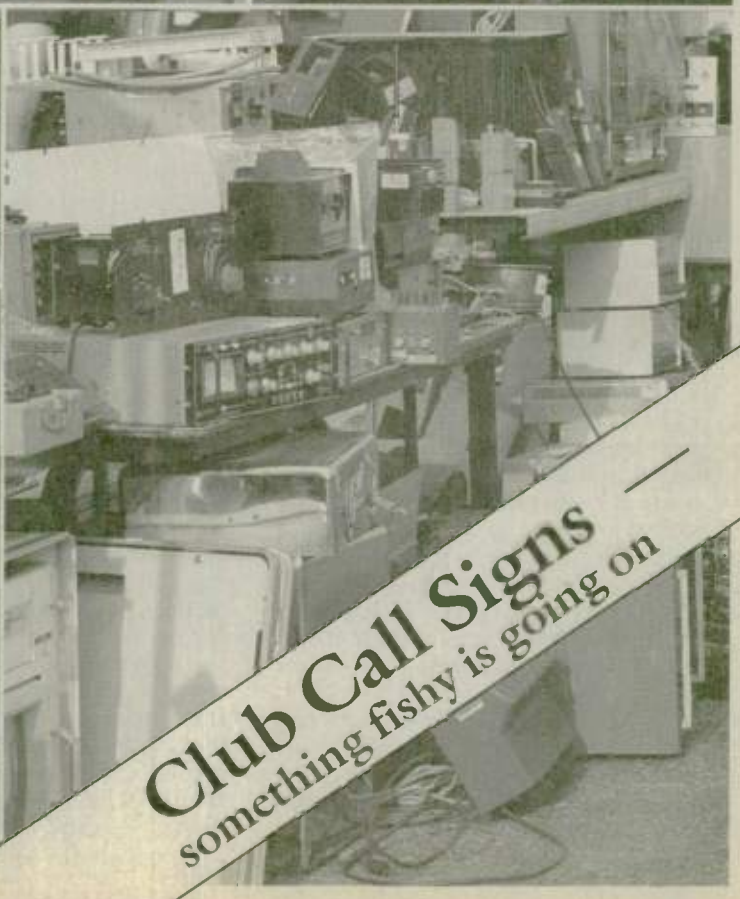
WORLDRADIO

Year 29, Issue 1 www.wr6wr.com July 1999 • $1.50

We were there, were you?



Dayton Hamvention



Club Call Signs
something fishy is going on

League to FCC — expedite restructuring

The ARRL has urged the FCC to act "without delay" on Amateur Radio restructuring and has suggested the Commission adopt the League's restructuring plan as its own in order to speed up the process. In a 19 May letter to the FCC, the League said the state of limbo created by the current FCC Amateur Radio restructuring proceeding, WT Docket 98-143, is stifling Amateur Radio's growth, as current and prospective amateurs await an FCC Report and Order.

The League asked the FCC to adopt the League's restructuring plan in a Report and Order "at the earliest possible time."

The ARRL told the FCC that its comprehensive plan of four license classes and two Morse code testing tiers — 5 wpm and 12 wpm — plus refarming of the Novice/Technician Plus HF CW subbands "constitutes a reasonable middle ground proposal." The ARRL's restructuring proposal formed the core of the League's comments to the FCC on WT 98-143, which the FCC refers to as the Part 97 Biennial Review.

Both the FCC and ARRL proposals would eliminate the Novice and Tech Plus licenses. The ARRL's letter stressed that "refarming" of the Novice class subbands was "the most critical portion of the League's comprehensive plan, or, indeed, of any license restructuring plan the Commission may adopt." The League said refarming was essential to make room for anticipated additional licensees using SSB HF subbands. In addition, the League said, refarming "is absolutely necessary to preserve and enhance the incentive self-training program" and to ensure more efficient use of limited HF allocations. Under the League's plan, General, Advanced, and Extra class licensees would get additional HF spectrum for phone operation.

The League said adopting its restructuring plan in toto was "the best means of accomplishing increased growth in the Amateur Service" and of continuing Amateur Radio's value as a "cornerstone of telecommunications development."

The League also took the opportunity to express appreciation for the support for the Amateur Service by both FCC Chairman William Kennard and WTB Chief Thomas Sugrue and to thank the FCC for the renewed enforcement efforts of Compliance and Information Bureau Chief Richard Lee and CIB Legal Advisor Riley Hollingsworth, K4ZDH. — *ARRL Letter*

K7IJ repeater back on the air

An agreement has been struck to let the San Francisco Bay area's K7IJ Grizzly Peak repeater system return to the air. The FCC's Amateur Radio Enforcer, Riley Hollingsworth, K4ZDH, announced a negotiated settlement 14 May at an FCC forum at the Dayton Hamvention. The K7IJ repeater system was shut down by the FCC 05 March after Commission officials determined it was out of control of the licensee, Bruce Wachtell, K7IJ, and primary control operator Blake Jenkins, N6YSA. The case involved evidence that had been developed by members of the Amateur Auxiliary.

Among other conditions, the K7IJ repeaters will have to provide for a "live, real-time control operator" at all times.

The shutdown followed complaints that Jenkins routinely allowed unlicensed individuals to use the repeater and that he and others engaged in prohibited practices on the air. Along with the shutdown notice to Wachtell, Warning Notices went to several K7IJ regulars alleging behavior that included airing cordless telephone and air traffic control conversations as well as profane language.

Hollingsworth has been discussing possible resolutions to the K7IJ situation with Wachtell and Jenkins for several weeks now. "If this doesn't work, we're gonna shut 'em down again without hesitation," he told the ARRL.

In addition to requiring a live, full-time control op, the five-point "K7IJ Repeater Agreement" requires the repeater operators to configure an audio stream to let the FCC monitor the repeaters at all times. Additionally, stations not known to the control operator now must identify at the beginning of their transmissions, not just after 10 minutes.

To deter unlicensed operators from using the machines, the control operator would have to announce that the repeater "does not welcome or tolerate unlicensed users." The control operator would have to turn off the machine and report it to the Commission if unlicensed operators persist. Licensed stations not abiding by FCC rules on the K7IJ repeaters would be asked to bring their operation into compliance.

"This is a good-faith agreement," Hollingsworth said. If the repeaters are operated in compliance with the conditions, Wachtell and Jenkins can avoid further enforcement action. On the air reports indicate the licensee and control operator are enforcing the terms of the agreement. "My impression is that the operation of the repeater on the 2-meter side sounded like any normal repeater," one observer reported. "Certainly not like the K7IJ before the shutdown." — *ARRL Letter*

3D launch near?

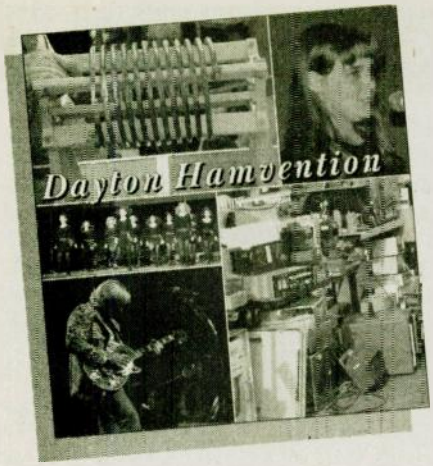
The long-awaited Phase 3D Amateur Radio satellite could be launched into space as early as this fall. A statement from Phase 3D Project Leader and AMSAT-DL President Karl Meinzer, DJ4ZC, delivered during the Dayton Hamvention revealed that AMSAT is "in the final phase of working out the details of an agreement" to launch Phase 3D.

Meinzer's remarks were read during the AMSAT forum by AMSAT-NA President Keith Baker, KB1SF. Meinzer said that since an opportunity to fly Phase 3D aboard the last Ariane 5 test flight fell through last summer, the Phase 3D launch team has been seeking a replacement launch. "We have been patiently negotiating with a number of different launch agencies, and it looks now as if this work is starting to pay off." He said he's optimistic that a launch contract can be finalized soon.

Phase 3D would remain "a standby passenger," Meinzer's statement said. AMSAT officials declined to identify the launch agency or vehicle. Meinzer's statement said Phase 3D could fly as early as October but stressed that the date is very tentative and depends on successfully working out the remaining contract details.

"It's mostly technical issues," Baker told the ARRL. He emphasized during the AMSAT forum that things are still tentative at this point. "The October date is the opening of a window that will stretch into the future," he said.

Phase 3D Integration Lab Manager Lou McFadin, W5DID, told the gathering that the spacecraft "is essentially complete." Additional integration and vibration testing will be completed this spring and summer. For more information, visit http://www.amsat.org. — *ARRL Letter*



On the cover

Something for every one can always be found at the Dayton Hamvention. New stuff, old "treasures," interesting speakers and a whole lot of fun!

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Dayton 1999

We start our coverage of the Dayton Hamvention with an overall view of the biggest Amateur Radio event in the world.
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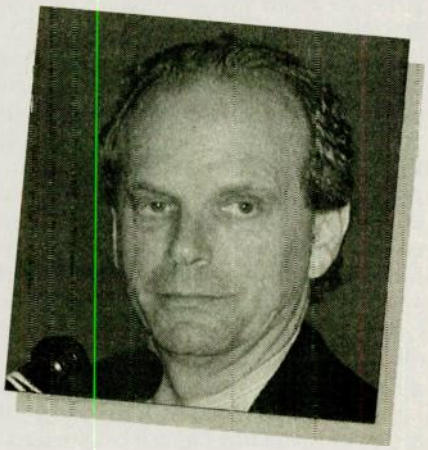
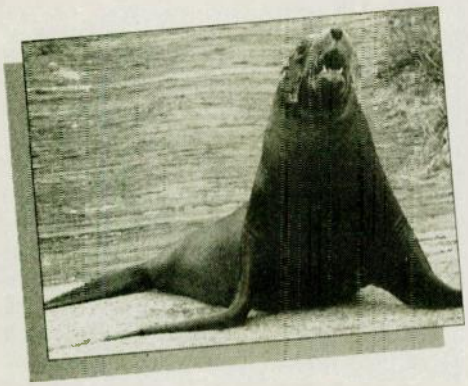


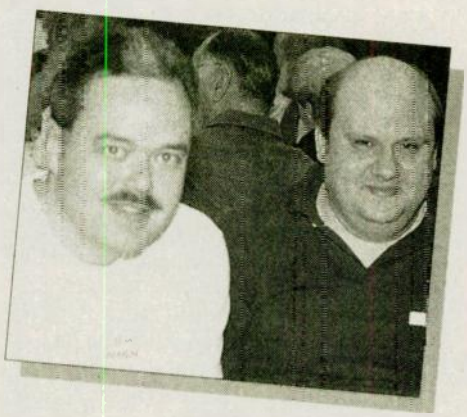


ZL9CI — conclusion

The setup is complete now the operating fun begins.
— page 11.

Fresno DX Convention

Our DX editor, N6JM, puts the finishing touches on the Fresno convention story.
— page 16.



Published monthly by **Worldradio**, *Inc., 2120 28th St., Sacramento, CA 95818 USA; 916/457-3655. Subscription Department:* **Worldradio**, *2224 Beaumont St., Ste. D, Sacramento, CA 95815; 800/366-9192. Periodicals postage paid at Sacramento, CA & additional offices.* ***POSTMASTER:*** *Send address changes to* **Worldradio, Inc.**, *P.O. Box 189490, Sacramento, CA 95818 USA.* **Worldradio** *(USPS 947000) is an international conversation. You're invited to participate. Our goal is to be a valuable resource of ideas and experiences beneficial to the Amateur Radio community. We publicize and support the efforts of those who bring the flame of vitality to this avocation. As readers, you are participants in an alliance of active radio amateurs concerned with reality, using radio as a communications tool to develop the skill, quality and full potential of Amateur Radio. We emphasize the positive aspects of this great activity, and desire your contributions dealing with dramatic, personal and humanitarian uses of Amateur Radio. Articles for consideration may be submitted through the U.S. Postal Service or e-mail to n6wr@ns.net.* **Worldradio** *is an independent magazine not affiliated with any other firm, group or organization. Permission is hereby granted to non-profit Amateur Radio club newsletters to reprint our articles with appropriate source credit. Any other use without written permission is a* ***violation of copyright laws and violators will be prosecuted.*** *If there is something useful, we wish to share it.* ***SUBSCRIPTION RATES:*** *$15* one year; $28* two years; $41* three years; $187* Life; *$10 extra per year for surface mail delivery to non-U.S. ZIPs. Please remit international postal money order. IRCs will be accepted. Club call: WR6WR. Visit* **Worldradio** *on the Web at www.wr6wr.com.* ***STAFF:*** *Publisher — Armond Noble, N6WR; Associate Publisher — Glen Rudesill, KF6OBS; Editor — Rick McCusker, WF6O; Associate Editor — Norm Brooks, K6FO; Advertising Director — Helen Noble; Advertising Manager — Brenda Evans; Graphics Director/Advertising — Dianne Dunning; Graphics/Layout/Web — Ashley Guy, KF6SXE; Circulation Manager — Marcia Watson; Proofreader/comma placement — Krystle Perigan*

Editor's Log

Adding their names to the list on the "Golden Scroll" of Lifetime subscribers this month are:

- **Bradford McKirryher, N1VWD Vergennes, VT**
- **Daniel Hawkinson, NØHFH Watertown, SD**
- **Bruce Thee, KK7OW Reno, NV**
- **Robert Devine, KC6AWX Novato, CA**

There's room for your name on the "Scroll!"

•

As I write this editorial, we're just starting to hear about the damage and loss of life in the tornadoes that struck Oklahoma and Kansas. Our thoughts are with all the residents of the area affected by this series of twisters. I am trying to obtain more information to share with our readers about how Amateur Radio operators are pitching in during this time of need.

Which brings me to my second point. In trying to obtain sources of information about this disaster, I tried to contact as many of our subscribers as possible near the disaster area. Primary source of contact would be by electronic mail, with the last resort being a telephone call.

As I went through the subscriber list, I picked out 37 subscribers who reside in the area. I wrote the call signs down and then went to the online QRZ database to find email addresses. Unfortunately, most of the subscribers I wanted to query have not listed email addresses with QRZ. I was able to obtain email addresses for 8 of our subscribers. I could have done a "people search" with names and addresses in one of the internet search engines, but that's very time consuming. When I need the information NOW, I would like to find it in one convenient place.

In this day and age of computerization, nearly everyone has a computer, and the vast majority of computer owners have the capability to go online, and have electronic mail service. As part of your responsibility as an Amateur Radio operator, you should take it upon yourself to keep QRZ and the other online databases informed of your current email address. Please take a couple of minutes and go online and update your information.

•

Is anybody reading this? Last month I alluded to the problems with the radio club and vanity call sign systems. Are we going to allow this practice to continue or are we goint to something about it? I assume we won't stand for this, so I have taken a major step for you and have taken action on behalf of all of our readers to correct this mess. You'll find the story on the back page of this issue.

•

Another interesting aspect to being your editor is the variety of letters, newsletters and publications from all over the world that find their way to my desk. I recently read the May 1999 issue of *RadCom*, the journal of the Radio Society of Great Britian. Roger Balister, G3KMA, wrote a very nice article on the Islands On-The-Air program, commonly refered to as IOTA. As part of his article, a complete listing of IOTA participants was printed with rankings by number of contacts with IOTA activated islands each amateur has. Topping the list of U.S. amateurs was Donald Chamberlain, W9DC, at number 10 on the list. In the sixth call area, our very own John Minke III, N6JM, your DX columnist is ranked at number 4. Way to go, John!

•

So, what's the big secret to successful QSL'ing? Last November I was in a contest and worked a total of 35 stations in the 6 remaining states I need for a WAS certificate on a particular band. I sent an SASE with my QSL card to all 35 of these stations and received two cards back. Am I doing something wrong? I've done my homework, followed all the good advice of our columnists and others who have written articles about QSL "etiquette" and I still get poor results. I have used the same technique since the November contest and have a return rate of less than 10%.

•

A good time was had by all of the ***Worldradio*** staffers attending the Dayton Hamvention. Lots of fun, comraderie and some interesting happenings at the world's biggest Amateur Radio shindig. If you've considered going but haven't done so yet, now is the time to plan for next year. Why? Next year promises to be the biggest ever! Not only will there be the fun and good times of the Hamvention, it will also be the ARRL National Convention. Every amateur should make the effort to get to Dayton at least once. I want to see you there next year!

We start our coverage of Hamvention with the most important happenings in this issue, and as Paul Harvey would say, "The rest of the story..." will be in the next issue. — *Rick, WF6O*

HF ENTHUSIASM

Yaesu, Choice of the World's top DX'ers

Over 40 years of experience in HF transceiver design has firmly established Yaesu as the choice of the world's top DX'ers. The knowledge that produced unequaled RF technology and design that is found in the State of the Art FT-1000MP can also be found in the miniature FT-100. The FT-100 while small in size 6.3"×2.1"×8.1"(160 W×54 H×205 D mm :w/o knob) is large in features and performance. This is accomplished by using the most advanced manufacturing techniques and component mounting technology. High Dynamic range RF front-end technology and Advanced Digital technology such as DSP sets a new standard of receiver performance for miniature HF transceivers. The single piece die cast frame, dual cooling fan system and revolutionary RF high power design technique keeps the FT-100 running cool and smooth in the most adverse operating environments. (TX Power output=100W HF, 50W VHF/20W UHF) The TX Equalizer offers crisp, clear and clean TX audio reproduction that until now was only found in top of the line HF base stations. The optional ATAS-100 (active tuning antenna system) ushers in a new age of mobile and field day operation (from HF to UHF frequencies). Add the optional ATBK-100 base kit (Good for limited space, simple setup.) and you've got a base station that ranks among the best in the world.

Features

- Frequency coverage:
  RX : 100KHz-961MHz (cellular blocked)
  TX: 160-6 m/144-148 MHz/430-450 MHz
- Power output : 100W (160-6 m), 50W (144 MHz), 20W (430 MHz)
- DSP Bandpass Filter, Notch Filter, Noise Reduction, and Equalizer
- IF Noise Blanker
- IF Shift
- SSB, CW, AM, FM, AFSK, Packet (1200/9600 bps) operation
- Detachable Front Panel
- Two Antenna Jacks (HF/50 and 144/430)
- VOX
- Dual VFOs
- Available IF bandwidths of 6 kHz, 2.4 kHz, 500 Hz, and 300 Hz (6 kHz, 500 Hz, 300 Hz filters optional)
- Built-in Electronic Memory Keyer
- Speech Processor
- Built-in CTCSS and DCS for FM operation
- Automatic Repeater Shift and Auto-Range Transponder System
- Smart Search™ Automatic Memory Channel Loading System
- 300 memory Channels
- Quick Memory Bank (QMB)
- Bright LCD with multi-function display
- Optional FC-20 External Antenna Tuner
- Compatible with ATAS-100 Active-Tuning Antenna System. Add the optional ATBK-100 base kit

FIELD COMMANDER

FT-100

Ultra-Compact HF/VHF/UHF Transceiver

YAESU

Choice of the World's top DX'ers

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Dayton Hamvention '99

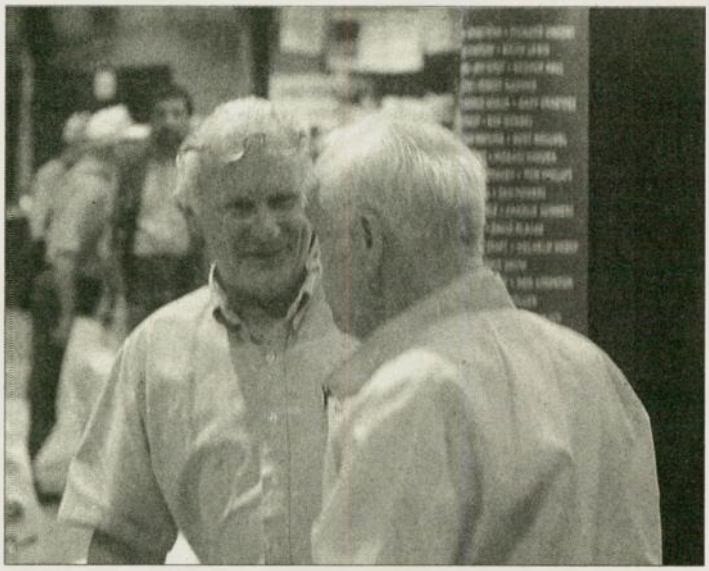
The world's biggest gathering of Amateur Radio operators went into the history books as one of the best ever. Perfect weather, interesting speakers, some surprises and lots and lots of gear for sale added up to a spectacular weekend for all.

The weather was predicted to be a little on the damp side, with rain showers predicted for the opening of the flea market. Fortunately, the rain held off all weekend. Last year, the problem with the weather was the heat and humidity. With temperatures in the mid-70s to very low-80s and a mild breeze, conditions were perfect for strolling around outside in the flea market area.

The flea market is a story in itself. With over 2,500 spaces (every one of them filled) there was a LOT to see out there. Anything, (and I do mean anything) you could even remotely associate with Amateur Radio was out there, for sale. There were radios, amplifiers, receivers, tubes, testers, paging systems, repeater systems, racks, tools, t-shirts, towers and everything in between offered for the amateur. You know those microwave antennas you see on cellular towers? Even those were offered for the budding cellular executive! About the only thing I didn't see out there was a lawn mower for the antenna farm.

The ***Worldradio*** booth was mobbed right from the opening bell. Last year, 20 minutes after the doors opened, we were saying to ourselves, "Where is everybody?" Not this year! It was a very enthusiastic crowd coming through the doors. A big difference was the air conditioning was working in the arena this year. A huge difference from last year, when conditions on the arena floor became brutal in the afternoon.

All of the major manufacturers had lots of staff and entire Amateur Radio product lines on display. One thing that sets this show apart from the others is the amount of assistance an amateur can get from knowledgeable staff. Having answers available to your questions can sure help you make up your mind between Brand X or Brand Z.



Mike Staal, of M² Antennas, discussing the finer points of antennas with one of the thousands of visitors to Hamvention.

Ken Miller, K6IR, Amateur of the Year.

One of the most anticipated forums presented was on Friday afternoon when Riley Hollingsworth, K4ZDH, took the podium and presented the audience with a talk about FCC enforcement. The room was standing room only, with several amateurs seated on the floor to hear his most interesting talk. Mr. Hollingsworth gave us his views on enforcement, and plans for future enforcement efforts. Due to ongoing litigation, he was not able to comment on recent cases making headlines in all of the Amateur Radio publications.

One subject eagerly anticipated by all was the FCC plan for restructuring Amateur Radio operations in the U.S. Everyone was disappointed to hear the plan is not ready, and wouldn't be commented on at Hamvention. At the end of the forum the audience gave Mr. Hollingsworth a well-deserved standing ovation.

Forums were presented in every subject you can imagine. There were forums for PACTOR, ATV, Antenna technology, QRP, Techniques of the best operators (says who?), Teacher's workshop, county hunters, SSTV, ATV, fox hunting, AMSAT, MARS, Youth in Amateur Radio, Bicycle Hams, RF safety and Amateur Radio and the Law. All of the forums were hosted by experts in their fields and were very interesting.

Saturday was the day for big crowds. Long lines were found at all of the food services and rest facilities. The exhibits closed at 5 p.m., but the action resumed one hour later at the Nutter Center for the annual banquet.

One problem with this year's Hamvention was the very short time to get from Hara Arena to the Nutter Center for the banquet. Going from the Arena, (we left at 5:10) and getting to the hotel to change clothes put me at

Forums for all interests drew large crowds. Standing room only at this FCC forum on Friday afternoon.

the Nutter Center 45 minutes after the banquet started. I missed the opening speeches (darn!) but was in time for the awards.

This year's honorees were: Ken Miller, K6IR, Amateur of the Year, Paul Lieb, KH6MHE, Special Achievement Award and Alfonso Torres, KP4AQI, Technical Excellence Award. Mr. Miller was honored for his leadership, vision and dedication to Amateur Radio which began when he was a child, and continues today with his leadership of the Grants-in-aid-Committee. This committee annually grants scholarships in the thousands of dollars category to Amateur Radio operators attending college who are in need of financial assistance.

Mr. Lieb specializes in 144 and 440 MHz long distance communications using tropospheric ducting and can be found working stateside stations from the top of 8.400 ft. Mauna Loa, an active volcano on the island of Hawaii. He works everyone he hears, from Extra to Technician, and has introduced thousands of Amateur Radio operators to the joys of VHF/UHF DXing.

Mr. Torres, a professor at the University of Dayton, School of Engineering Management, was honored for his many technical contributions to Amateur Radio. He designed the first universal digital readouts for Amateur Radio equipment, a device for charging Icom HT batteries, a power line voltage monitor and the concept. design and development of the "through glass" antenna. Mr. Torres has recently developed a method to see RF radiation, which should be on the market soon. In addition to all of the above, he teaches many classes on RF, propagation, andtennas and related topics for many clubs in the Dayton area.

Each of the recipients made a short speech, and then it was on to the evenings entertainment.

First up, the Richens/Timms Irish Dancers. If you have ever seen a video or stage presentation of "Riverdance", you knew what to expect. Each of the dancers is a master of the technique, and they range in age from 14-20. They recently were named as World Champions for a troupe of their size and age category. Several of these fine dancers will be moving on to productions of "Riverdance" when they complete their educations. Their 25 minute performance was just a prelude to the main attraction.

After a 30 minute intermission to rearrange the stage, Joe Walsh, WB6ACU took the stage with his 10 piece band, and proceeded to bring down the house! His band was running amplifiers way over the legal limit, and he was filling the stadium with a 60 over 9 audio signal. Not only was he entertaining the banquet crowd, he was also playing to about 5,000 members of the general public sitting in the stands. His performance included songs he made famous as part of The James Gang, The Eagles and his solo career. Since his music was a big part of my formative years, I really enjoyed his show. I met him back stage before his performance, and reminded him I had sent a letter requesting an interview almost a year ago. He promised to get in touch with me for the interview. This banquet will surely go down as one of the most entertaining in Hamvention history!

Sunday was a day of shopping for last minute bargains, and preparing for the journey home. Needless to say, by the time 1 p.m. came around, we were worn out, and more than ready to get home.

What about next year? Yes, we will be there, in booth 49 on the arena floor, and we anticipate the biggest crowd in recent years. Next year will not only have the Hamvention, it will also be the National ARRL convention. Make your plans to fly, drive, ride the bus, take a train, hitchhike, bicycle or walk to Dayton. It promises to be the best Hamvention ever!

Our coverage of this year's Hamvention will continue next month with our columnists' views of the convention. — *Rick, WF6O*

Navassa DXpedition — not gonna happen!

What interest do Amateur Radio DX-peditioners and scuba diving aficionados have in common? Easy. They like to travel to remote, often uninhabited outcroppings of rock and do their thing. In a strange twist of fate for these disparate hobbies, they are also banned from visiting one of the most sought-after destinations.

Although I first received an Amateur Radio license in 1959, I waited until the early 1990s to become a certified open water scuba diver, probably in a vain attempt to stave off impinging middle age. A few years ago, I decided that a great way to combine these interests would be to travel to the Caribbean and other tropical dive sites where I could also operate as a portable DX station. Not content to set my sights on the easy, well-traveled destinations like the Bahamas or Caymans, I decided that the location should have both spectacular diving and be on the "most wanted DX" countries list. The choice was simple — Navassa Island.

A ham-shaped island located some 40 miles west of Haiti at the southern end of the Windward Passage, and almost directly south of Guantanamo Bay, Cuba, Columbus discovered Navassa in his meanderings through the Caribbean in 1504. What he found was two square miles of the top of an underwater mountain, made up of limestone and razor sharp coral. The natives, various species of sea birds, were unfriendly and extremely messy. Columbus, not being a farmer by trade or inclination, was unaware of the value of the encrustations deposited by the thousands of birds. So while he has been given credit for discovering America (which he did not do, at least according to the Scandinavians and historians), he missed out on taking credit for discovering one of the largest unclaimed sources of guano in the New World.

Title 48, U.S. Code

So how does all this fit into a column about the law? Well, if there's one law-making body that has cornered the market on at least one kind of guano, it's the United States Congress. Back in the 19th Century, when Congress was into amassing territory under the doctrine of Manifest Destiny (which some Native Americans might note with some irony, bears an odd resemblance to ethnic cleansing), they enacted a law entitled the Guano Islands Act of 1856. This legislation is still on the books as Title 48 of the U.S. Code. Under Section 1411,"Whenever any citizen of the United States discovers a deposit of guano on any island, rock, or key, not within the lawful jurisdiction of any other government, and not occupied by the citizens of any other government, and takes peaceable possession thereof, and occupies the same, such island, rock, or key may, at the discretion of the President, be considered as appertaining to the United States." Sort of like planting the flag and declaring, "I claim this uninhabited pile of — guano — in the name of the good ol' U.S. of A."

That is exactly what Peter Duncan, a ship's captain hired by the Baltimore Fertilizer Company, did in 1857. The neighbors in Haiti objected (and maintain claims on the island to this day), but under Section 1418 of the Guano statute, the President is empowered "to employ the land and naval forces of the United States to protect the rights of the discoverer or of his widow, heir, executor, administrator, or assigns." Haiti had no real navy, so its claims were essentially ignored. In 1889, the island's guano mining operations were assumed by the Navassa Phosphate Company, probably to the chagrin of local little leaguers who desperately wanted a sponsor who would allow them to wear GUANO in block letters on their uniforms. Competition in the fertilizer business doomed the guano trade in its infancy, and all operations were abandoned in 1898, after which the island became effectively uninhabited.

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VEC Region under the sequential call system as of 18 May 1999.
For more information about the sequential call sign sytem, 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 1-888/225-5322.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	ABØI	KIØPZ	++	KCØFUJ
1	AA1UK	KE1LK	++	KB1EBR
2	AB2GE	KG2QQ	++	KC2FCK
3	AA3SL	KF3DG	++	KB3DVI
4	AF4OR	KU4ZS	++	KG4DFQ
5	AC5SR	KM5VC	++	KD5HEM
6	AD6IS	KR6BE	++	KF6WGT
7	AC7AY	KK7SZ	++	KD7FLO
8	AB8EC	KI8IJ	++	KC8MMA
9	AA9XD	KG9PR	++	KB9USA
N Mariana Is	NHØM	AHØBC	KHØHY	WHØABM
Guam	++	AH2DK	KH2UF	WH2AOA
Hawaii	WH7B	AH6PT	KH7JZ	WH6DFZ
American S	AH8R	AH8AH	KH8DO	WH8ABI
Alaska	ALØN	AL7RM	KLØTD	WL7CVC
Virgin Is	++	KP2CP	NP2KK	WP2AIK
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Rules & Regs

There was an unmanned lighthouse on the island until 1976, when the U.S. Coast Guard determined that the lighthouse on Navassa was no longer of any value (sort of like its feelings about Morse code) and abandoned the lighthouse. Even though Section 1419 of the Guano Act said that "nothing in this chapter contained shall be construed as obliging the United States to retain possession of the islands, rocks, or keys, after the guano shall have been removed from the same," it seems as if the U.S. government has a hard time declaring its guano islands surplus. Besides, with Bill Clinton's term ending in a few years, it is unlikely that the American people would be ready for such a drastic reduction in the country's guano reserves.

Title 43, U.S. Code

Always ready to fill a vacuum in the land management arena, the Department of the Interior assumed responsibility for the civil administration of the U.S. insular area under the provisions of Title 43, U.S. Code, Section 1458. On 16 January 1997, Secretary of the Interior Bruce Babbitt signed Secretary's Order No. 3205, which delegated to the Director of the Department of the Interior's Office of Insular Affairs the Secretary's responsibilities for Navassa Island. As Navassa's civil administrator, the Director of the Office of the Insular Affairs exercises all governmental authority over the island, including executive and judicial functions (like American Samoa, there is no U.S. court with jurisdiction there). Secretary's Order No. 3205 established a policy for Navassa until the Department finishes an assessment of the island's value.

First things, first

One of the first things the Interior Department did was make it difficult for Hams, divers, and amateur guano pickers to travel to Navassa. Fearful of despoiling the environment of the semi-isolated island, Interior Department regulations required all travelers to the island to take new, never-used camping gear, shoes, socks, and other footwear in sealed containers. All gear except cameras (and, one can only hope, radios) had to be "frozen for at least 72 hours" before being taken to the island.

The directive specifically forbade any clothing or any other item that "is fuzzy and prone to pick up seeds," presumably so that foreign species such as tomatoes would not be accidentally introduced.

Then, after a scientific expedition by the Center for Marine Conservation in the late summer of 1998 found hundreds of botanical and biological species unique to Navassa, the Office of Insular Affairs halted all travel to the island. The Special Notice issued by Interior says that "in fulfillment of his responsibilities as the civil administrator of the United States insular area of Navassa Island, the Director of the Office of Insular Affairs advises all persons interested in visiting Navassa Island that, having made a preliminary review of the island's ecology, he has decided indefinitely not to allow visits to the island and its surrounding waters until he has received a further assessment of the island's environment and conservation status." For the immediate future, scuba divers who want to explore the pristine underwater coral cliffs or DXpeditioners who want to activate this rare DX "country" will have to wait or at least get their doctorates in biology.

Navassa — private property?

There is one more interesting twist in the legal status of Navassa. A man named Bill Warren claims to have paid the descendants of the island's original owners $2.5 million to buy their rights. Based on some obscure State Department documents and other law, he is claiming private ownership of Navassa. He wants to turn the currently uninhabited rock into a Caribbean resort, dive center, and nature reserve. He has a lawyer and has filed a lawsuit to assert his ownership.

All of these developments concerning Navassa raise some interesting issues for the ARRL in particular and the DX community in general. Obviously if Bill Warren's claim is adjudicated in his favor, and the island becomes a private resort, its DX "country" status would be in serious doubt. But, on a more philosophical bent, what if the island simply becomes inaccessible due to government fiat? Is it still really a viable DX entity? Should it be removed, at least temporarily, from the DX list until its status is resolved? On the other hand, should we expend any precious brain cells worrying about it? To paraphrase Humphrey Bogart's famous line on the tarmac at the Casablanca airport, "Sometimes the problems of a few DX lovers don't amount to a hill of guano."

ZL9CI — DXpedition to Campbell Island

Lee Jennings, ZL2AL

(Conclusion of the ZL9CI story. Part one appeared in the June issue of **Worldradio**)

On the air

What a blast! ZL9CI hit the air in style with over 11,000 QSOs in the first 24 hours. We opened with six stations operating on most bands to give everyone a good chance of working us. We were given a taste of how bad the weather can become in an hour or so when a storm dropped the temperature and hit the antenna system with 70 knot gusts of wind late in the afternoon. The bad weather resulted in dangerous conditions to transfer the team off the island to the *Braveheart* and we were forced to stay ashore for the night much to the joy of 160M and 80M amateurs around the world. Trey, N5KO, Declan, EI6FR, and Andrew, GIØNWG, were very popular on low band CW. 160 Meters was brilliant all night with Trey racking up 180 QSOs. Everyone was extremely tired the next morning, The pileups were astonishing, with a solid wall of signals from EU, NA or JA depending on where the antennas are pointed.

The high QSO rate produced plenty of tired grins and high fives when the logs were merged the next morning. Each day, the logs were compressed, sent by a PACTOR 2 link, (equipment provided by SCS of Germany) to ZL2DX in New Zealand who forwarded them on for access on the QSL log server. It is probably the first time that logs have been transferred by PACTOR from a DXpedition. Individual CW team members were working over 200 QSOs per hour on a regular basis. We put up a second 80-meter vertical so that we could run 40M, 80M and 160M at the same time. The CW setup hummed! Walking into the shack and looking at the CT screens hour by hour was amazing. The totals grew alarmingly, sometimes reaching over 6000 per day. At this time, after two days of operation, we had over 20,000 QSOs in the log.

One objective of this DXpedition was to give everyone, in every country, that elusive "new one" The 100W trap vertical stations seem to be able to work us as easily as the big guns. Europe was a priority for the DXpedition and we were able to lay down a good signal into EU most nights. The pileups were very, very well behaved with plenty of patience and good will flowing both ways. Internet feedback from the pilots showed we were right on the money with EU.

13 January was an excellent day. We hit 43,000 QSOs and 6,500 for the 24 hour period. We could feel the pileups getting larger instead of diminishing. The WARC bands were huge with amateurs wanting a new one. And then on 14 January at 4:30 a.m. somebody switched off the bands. The Aurora Australis, or sunspots, or Murphy hit us. It didn't really matter what it was. The bands were dead for about 12 hours. Nothing. Not even the broadcast stations were heard. Total wipeout. It was a much-needed rest for the operators.

40M SSB was activated and James ran extreme totals. 40M and 80M CW and SSB featured more in our schedule as we moved closer to our shut-down planned for 24 January. Our 6M beacon was heard in VK and the first 6M QSO took place with I.C. Griggs, VK2DN. The beacon operated continually every day listening for answers on 50.110 MHz. Jun worked many JAs and became an instant celebrity in Japan. The 6-meter beacon was monitored every day for replies. We worked ZL, VK and JA. But we were never able to work

Propagation is always a hot topic with the local inhabitants.

the U.S. on that band. 30M was an outstanding CW band, yielding thousands of QSOs from early morning until we closed down. We purposely left the lower bands until late in the DXpedition. Unfortunately, with the exception of the first night when we were forced to stay over, the opportunity of all-night LF operation never happened again.

At the end of the day, back on the *Braveheart* just after midnight, the conversation was "What's happening?" and "How was 15M tonight?" and "Did you hear that amazing pileup on 40M?" "Who's going to fill the generators in the morning? The banter lasted about an hour and then the guys slowly disappeared down below for sleep. The computer operations room was in the bow next to the anchor locker where we had a PACTOR terminal driving a small transceiver into a 40M dipole up in the rigging. Another laptop was used for writing e-mails. Sleep only lasted five or six hours until one of the ship's crew woke up the morning shift for breakfast. Breakfast was usually quiet. Most of the team needed another ten hours of sleep, but the pileups were just a fast Zodiac trip away in the dark to the island. We always knew what was in store for us. On 21 January we passed the 81,000 mark with four days left. By this time a numbing tiredness had overtaken most of the team members. You could tell that they had had enough. It was a bit like working the CQWW for weeks on end!

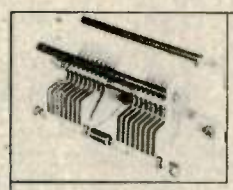
Totals and all that

It was suggested that we should "go for the record" by well meaning amateurs around the world. That meant concentrating on the record totals of the VKØIR DXpedition. The team discussed "That Record" about halfway through the DXpedition. The overwhelming opinion of all the team was to carry on as we were, allowing as many amateurs as possible to work us on as many bands and modes as possible. If we passed the VKØIR record, it was a bonus. The real objective of ZL9CI was to have fun doing what we were doing and to help as many as possible to obtain a "new one" We all agreed and never wavered from that objective. We received several messages of congratulations from the VKØIR team as we left the island. At the end, as we closed down, I was personally pleased that we didn't surpass the 100,000 QSO mark. I am glad we left the carrot dangling there for another team sometime in the near future.

Murry Woodfield, ZL1CN, was one of our most active operators.

Support

Lyndon Nerenberg, VE7TCP, set up KDA, a private reflector/bulletin board on the Internet for us. It is doubtful that we could have arranged all the details and solved the problems without it. We are deeply indebted to Lyndon. KDA has run for nearly two years. We must also pay tribute to our Webmaster and pilot Don, N1DG, and our other pilots Ron Lago, AA7DX; Rob Cummings; GIØKOW and Joe Aoki, JJ3PRT. Special thanks must go to Chris, ZL2DX, who was the other end of the PACTOR link in New Zealand. Chris downloaded all our logs and forwarded all our e-mail



The whole crew of ZL9CI — almost ready to do it again.

traffic to friends and family and kept us in touch with reality. Bob, ZL1RS, built our 40M Four Square array and researched the propagation possibilities for the Dxpedition. Support was given by ZL2TT, ZL2GI and other local New Zealand amateurs. The help from these dedicated and professional amateurs was incredible.

Midway into the operation, the team was informed by the ARRL that we were the recipients of the Colvin Award grant for 1999. The team was extremely pleased at receiving this award as we were carrying on DXpeditioning in the tradition of Lloyd and Iris Colvin who gave so much to the amateur community in the many years they traveled the world giving out "new ones" Our heartfelt thanks to the ARRL and the members of the amateur community for supporting this DXpedition.

Return home

Suddenly it was all over on 24 January. The end was swift and a bit sad, as it is with all DXpeditions. The ZL9CI team had achieved all of its objectives. Our New Zealand Pilot Chris, ZL2DX, on 20M had the pleasure of the last QSO. We were worried about the weather as the barometer had been dropping for 30 hours and very bad weather was on it's way. There were some anxious moments lowering the big yagis in the strong wind gusts that hit in the morning but that's all part of the fun. It took just nine hours to dismantle the antenna system, eight stations and ancillary gear and get it back on board the *Braveheart*. Perhaps it was a measure of how much we wanted to get home. Lee sent the last press release from Campbell Island a few hours before we left. The final logs containing 96,004 QSOs were uploaded to the log server as we sailed out of Perseverance Harbour with a magnificent rain cloud sunset off the stern of the *Braveheart*.

Statistics

Eleven operators from seven countries, six active stations operating 18 hours per day. Over 52,000 CW QSOs and over 41,000 SSB QSOs. EU accounted for nearly 1/3 of the totals, which fulfilled one of our objectives. We were surprised by the activity on 30M, netting just under 9000 QSOs, 10% of the total. 20M was the "King" band, followed by 15M. 10M and 12M never really "fired" for long runs as we expected it to. 95 QSOs were made on 6M. We hoped for more but radio propagation still remains a rocket science!

Equipment

Some of the equipment was loaned to the DXpedition by team members. The rest came from major and minor sponsors. The Yaesu radios operated flawlessly and were a delight to use in the pileups. We used three FT1000MPs, one FT1000, two FT920s, one FT990, two FT900s and an FT655. The Cushcraft Corporation donated several of their new 5-element XM series antennas with dual driven elements for wide bandwidth. Great antennas! Force 12 gave us a 3-element 20M yagi which gave us a pipeline into wherever we had it pointed and the Nagara 12M/17M WARC band antennas performed very well. The Gladiator 30M vertical was excellent. The Commander amplifiers are workhorses and performed perfectly without failure. The new Yaesu VL1000 Solid state amplifier is an amazing piece of gear and points the way to the future of solid state amplifiers. Other than a generator failure and a dose of "computer virus" we had luck on our side. Luck favors the prepared and DXpeditions are all about redundancy. It was a joy to have seven stations operating at the end with the option of putting another on the air if needed.

Acknowledgments

We are deeply indebted to the international amateur community and our commercial sponsors. and would like to say thanks to these organizations for their fantastic support. Without their extremely help, ZL9CI would not have happened. The wonderful emails inspired us to give as many amateurs as possible a chance to work Campbell Island. DXpeditions are like sky rockets. A lot of preparation precedes the launch. There is great anticipation as to what will happen when it explodes. It is a spectacular thing when it does, but only briefly, and then it's all over, ready for the next one. So it was with the ZL9CI DXpedition.

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Fresno DX Convention

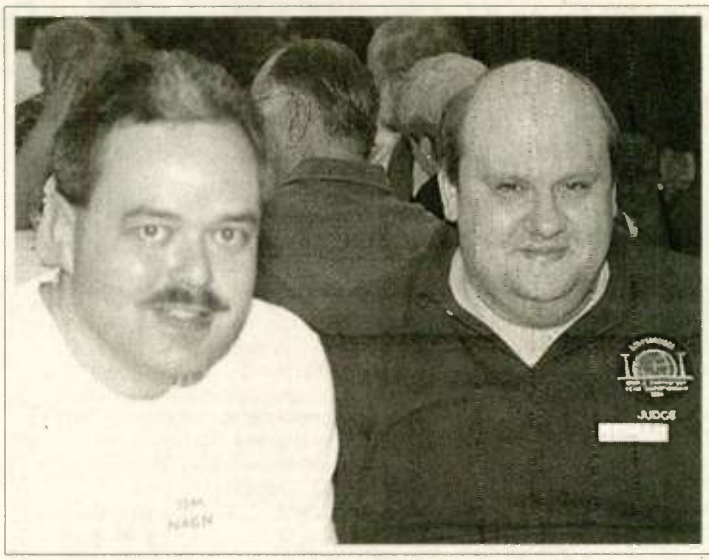
John F.W. Minke, III, N6JM

Once again the DXers of California gathered for their annual DX convention. This year, sponsored by the Northern California DX Club, it was held in Fresno at the Radisson Hotel and Conference Center the weekend of 9-11 April 1999. Alhough this event is mainly a joint convention sponsored by the Northern and Southern California DX clubs, the convention does attract amateurs from outside of California. Some of the many international DXers attending were; Neville Cheadle, G3NUG; Martin Atherton, G3ZAY; HB9JW, Peter Kuypers, PA3BXM, and Christian Bostrom, SM3BWJ. Approximately 520 persons were registered for this gala event. One DXer received special recognition, both in the brochure and at the Saturday evening banquet. That was none other than Chuck Bally, W7YU, who has attended every single one of these fine conventions!

DXers had been gathering since about noon on Friday with the typical eyeball QSOs as many had not seen each other since last year's gathering. Late in the afternoon the usual cocktail party was held for the attendees followed by dinner of their choice. There were a few special interest dinner gatherings, such as the Contesters, IOTA, and 80-meter dinners.

Intro of ARRL officials

As this is a recognized ARRL event the usual introduction of League officials was made. Brad Wyatt, K6WR, the Pacific Division ARRL Director, recognized those officials in attendance, which included: Fried Heyn, WA6WZO, Southwestern Division Director; Lew Gordon, K4VX, Midwest Division Director; Jim Maxwell, W6CF, Pacific Division Vice Director; Art Goddard, W6XD, Southwestern Division Vice Director; Jim Fenstermaker, K9JF, Northwestern Division Vice Director; and Jay Holladay, W6EJJ, Honorary ARRL President.



Tim Totten, N4GN, and from the IARL Paolo Cortese, I2UIY, conversing over breakfast, Sunday morning.

Brad also introduced attending Section Managers: Bill Sawders, K7ZM, Oregon; Jettie Hill, W6RFF, Sacramento Valley; Bob Vallio, W6RGG, East Bay; Phineas Icebice, W6BF, Los Angeles; Joe Brown, W6UBQ, Orange; Tuck Miller, K6ZEC, San Diego; and Cliff Hauser, KD6XH, Arizona. Other officials present included Jack Troster, W6ISQ, Pacific Division representative to the DX Advisory Committee and Wayne Mills, N7NG, Chairman of the DXAC. Representing Headquarters was Bill Moore, NC1L, of the DXCC Desk, and Dean Straw, N6BV, Technical Editor, now back on the West Coast.

IOTA program

Martin Atherton, G3ZAY, was responsible for narrating the IOTA program. Most recognize Martin, who has a stateside call of NU2L, by many of his IOTA DXpeditions, including his most recent ones in Australia where he signed with VK4CAY. There were three presentations in this program, the first by Lew Jenkins, N6VV.

Lew, along with Dan Ramsey, W7DR, recently operated as N6VV/P from St. Georges Reef (NA-184), an abandoned lighthouse off the northern coast of California near Crescent City. It took two years of preparation to get there, and Lew said he even joined the Lighthouse Society. All landings to the island were restricted to after 01 October due to the breeding of sea lions on the rock. And, by that time the winter storms begin to hit the California coast. When they did go, a helicopter had to be hired as landing there via boat was virtually impossible. Abandoned since 1975, the kitchen of the structure was as it was, dirty dishes in the sink.

Lew said that they brought along a 20-meter ground plane built by Force

This is what it's all about — eyeball-QSOs and good times — stateside amateurs and DXers having fun. In the middle, Thomas Rylander, SM3DMP, on the right — Kristian Bostrom, SM3BWJ.

12. During their stay on the rock they managed to collect 1,200 contacts. The amount of time spent was 20 hours, which included the travel times out and back, beginning on 17 October 1998. The CW contacts were handled by Dan. Lew says his next island will be made of sand! One other spot in this IOTA group, nearby Castle Rock, was activated several years ago, with the IOTA reference of NA-184 being assigned. A photo of the lighthouse is in the February issue of ***Worldradio***.

The next IOTA presentation was made by Art Phillips, NN7A, of the Northern Arizona DX Association, for one of many DXpeditions to Belize. Art discussed the operations from Turneffe Islands (NA-123) where he signed as V31JZ. Art said this was his seventh trip to that group.

The Turneffe Islands are coral islands just outside a barrier reef, which make up the IOTA group with the reference of NA-180, activated for the first time back in 1993. Art had operated from both island groups in 1996 and returned to the Turneffe Islands this past February. Most of the islands in this group are flooded at high tide. During his last operation Art said he made some 2,100 contacts with over 50 percent being Europeans.

The third IOTA presentation was the DXpedition to Little Diomede Island (NA-150) by Tom Attwood, W6IXP and Barry Bettmann, K6ST. The team spent many days just waiting for a break in the weather to proceed to the island. While they were waiting they did have the opportunity to get out to Sledge Island (NA-210) and activate the island as a brand new island group to the IOTA program.

After spending a week in Wales, on the mainland, the weather broke and allowed them to proceed to Little Diomede Island. Unfortunately for the stateside IOTA chasers the village was located on the wrong side of this steep island. Very few were worked and only on CW. They did manage to collect some 1,250 contacts, very few with the U.S. They do hope to return to the island and remedy the situation.

At the conclusion of the IOTA sessions Martin reminded the attendees of the IOTA Millennium Award, with all contacts beginning 01 January 2000.

3B7RF DXpedition to St. Brandon

George Wagner, K5KG, discussed the preparation to the DXpedition to the St. Brandon Archipelago. This was a USKA affair spearheaded by Karl Graetzer, HB9JAI, who wanted to celebrate his 75th birthday and 50 years in Amateur Radio with a DXpedition to a remote island. The Saint Brandon Archipelago was just the thing.

In December 1997 George was asked if he was interested in being part of the DXpedition, and of course he accepted. The only other American DXer on the team was Wally Marshall, W7SE, who was responsible for all propagation reports. The trip was well organized and planned, except, says George, they forgot to bring a ladder and a sledge hammer.

Transportation to the island was provided by the Raphael Fishing Company, represented by the call the DXpedition team hand picked — 3B7RF. This event took place in May last year and they had five stations on the air. The only other radio activity from the island is that of a meteorological station and a Coast Guard station.

DXAC Forum

Pacific Division DXAC representative, Jack Troster, W6ISQ, narrated the

Kurt Binbschedler, HB9MX, one of the many visitors from DX land.

final morning session of the convention. Included in the forum with him were panel members: Jim Maxwell, W6CF, Pacific Division Vice Director; Bill Moore, NC1L, of the DXCC Desk; and Wayne Mills, N7NG, Chairman of the DXAC.

Prior to any discussions Jim was interested in making a countdown, but different from the usual type where all DXers remain standing until their total DXCC count is reached. This year all members of the Honor Roll were asked to stand and to sit down when their age was reached, beginning with all those 90 years old and older. By the time they reached 35 it was interesting to see the number under that age. The youngest was age 33 with 335 DXCC entities to his total.

Bill then discussed the administration of the DXCC program. He said that the present turnaround on application is six to eight weeks. There is a staff shortage, but there are no immediate plans to catch up in the manpower. When applications are received in the shipping department the process begins with the funds being sent to the comptroller. It is suggested that registered mail be used as it is traceable if lost. He also said the same for certified, priority and courier service.

When completing the application forms be sure to include all information each time you file. They receive thousands of application forms and need this information. When listing the cards, please arrange them by band, then mode. Alphabetical order after that is optional. Be sure to package them securely, but do not wrap them separately as above. Do not include a return envelope.

There have been questions regarding application fees. This is clearly outlined in rule 15. It would also be a good idea to have a copy of the latest DXCC rules when applying for an award and/or endorsement.

Bill said the computer system that they use is a System 38 Gonzo with a FoxPro 2.6 database. This system allows easier tracking and printing. Those of you who have made a recent endorsement will see this.

When making submissions you should consider this wisely. The closing date for the Honor Roll is 31 March and the closing date for the Annual Listing is 30 September.

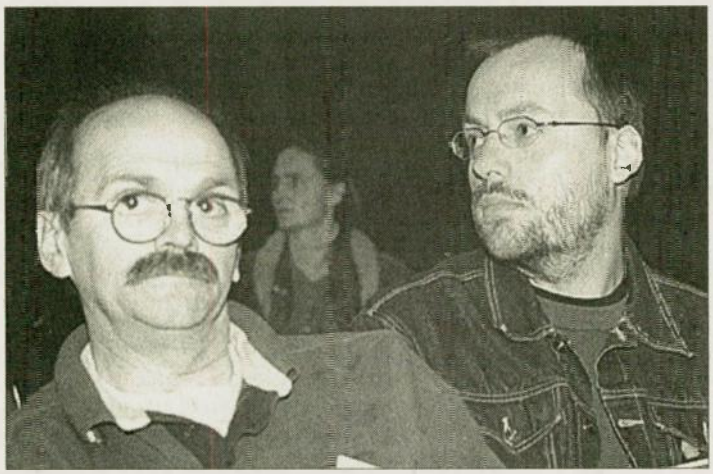
Jim Maxwell then discussed the operations of the DXAC and some misconceptions DXers have. They are not an operating arm from headquarters. They cannot answer questions regarding DXCC status. The committee was created many years ago to get more information to the Board of Directors so they could make better decisions. The DXAC reports to the Board of Directors, not to the DXCC Desk.

Wayne Mills followed up wth his comments and said the agenda for the committee is set by the MSC, the membership services committee. He then discussed DXCC 2000, mainly the card checking and how to make better use of the checkers. All cards will become field checkable, (such cards now not field checkable include those for 160 Meters, where 18 MHz can be confused with 1.8 MHz).

Wayne said of the DXCC 2000 program that there are no major changes. There will be four new awards created: 20, 15, 17 and 12 Meters. There will be no more deleted countries. When a entity no longer meets the qualifying criteria it will just be removed and treated as if it never existed. The last deleted country was Southern Sudan (STØ). With the new system nothing else is lost and all cards and awards will count back to 1945. As for the rules, Wayne said rule 7 was changed and there was a significant change to rule 12 regarding ethics.

Finally, the floor was open for questions. Rusty Epps, W6OAT, had a question regarding the recent withdrawal of credit for certain 9U stations in Burundi. Apparently, there were forged signatures on these licenses. The Burundi government had discovered this and contacted the DXCC Desk initially. Another question was wether the DXCC program is Y2K approved. Yes, they are.

There also were those who questioned contacts made on the three WARC bands. They do count and there are 12 and 17-meter endorsements to the Five-Band DXCC. All 30-meter contacts are creditable, but only for entity or mode. There are no 30-meter credits as for band credit. Any other questions regarding the DXCC program can be sent via e-mail to dxcc@arrl.org. You can check the web page at www.arrl.org/awards/dxcc/.



Peter Kuypers, PA3BXM, and fellow European DXer Rene Voortwist, PA3GPX, attending the convention.

Recent DXpeditions

The afternoon session began with two DXpeditions presented by Tim Totten, N4GN. The first was the BQ9P Pratus Island DXpedition where the team collected some 36,013 contacts with 15,002 of that with unique calls. Because the island is a Taiwanese military base it was unusal that foreigners were allowed access to the island.

Tim also discussed the H4ØAA DXpedition to the newly created DXCC entity of Temotu Islands, (see ***Worldradio***, September 98.) Both were supported with slide presentations.

6Y2A DXpedition

For some unknown reason the convention committee deviated this year from the norm and presented two simultaneous sessions. While the interesting subject of electronic QSL proposal was being present there was the session regarding the 6Y2A entry in the *CQ* Worldwide DX Contest this past November. The session was combined

into a single session from what the brochure had listed. The first half was presented by Ken Silverman, K2KW, followed by Dean Straw, N6BV, with the technical portion.

Contesting is a serious matter with DXers and the entry of 6Y2A was no exception. The team participated as a multi-multi entry and went all out. The favored entry in this category was the 5V7A team, but 6Y2A proved otherwise and won with a new record. The 5V7A team was second followed by the J6DX team for third place.

Ken credited the success of the operation to teamwork and each member knowing his role in the teamwork. He also mentioned of the pre-contest reconnaissance trip so they would know what to bring.

They used vertical antennas on all bands. On 40, 80 and 160 Meters they used two-element types, where the other bands there were four elements. A total of 28 vertical elements were installed for this contest. They also had a couple of yagi-type antennas, but they were not the main antennas. Ken mentioned that some of the radials had arced over. This unconventional use of vertical antennas was very effective near salt water. A total of ten operators made up this team. They used computer logging with CT9.37 and also included a hot standby computer.

Dean Straw, N6BV, discussed the technical portion of the operation. The antennas were designed by Tom Schiller, N6BT, of Force 12 fame. Dean had spent ten days working evenings on antenna studies, and even had his 84-year-old father helping him. The antennas were constructed so that they all fit into six golf bags weighing under 70 pounds. Dean explained the loading method of these antennas, referred to as deltoid loading. A sample of one of the 160-meter elements was set up in the hotel lobby. The element weighed only 25 pounds and was 57 feet high.

Bernie McClenny, W3UR.

Contest Forum

The Contest Forum was the final session of the convention and included the usual rebellious crowd of Jim Pratt, N6IG; Dick Norton, N6AA; Bob Wilson, N6TV; Jim Neiger, N6TJ; and Bob Cox, K3EST. As in previous years this forum was intended to be humorous rather than delve into serious contest matters. It was a nice way to prepare for the cocktail hour!

Saturday evening banquet

Tom Schiller, N6BT, was Master of Ceremonies. Following the dinner, the usual introductions were made. The clubs made their usual award presentations such as DXer of the Year, Bob Fabry, N6EK for the northern club, and Larry Shapiro, K6RD, for the southern club. Additional introductions were made, mainly the same DXers as those made during the ARRL forum that morning.

Then the main banquet speaker was introduced. Bernie McClenny, W3UR, flew out from Maryland to speak at the convention. His subject was the newly created entity of Palestine.

Bernie is the DX editor for *QST*, and also edits and publishes his internet *The Daily DX*.

Bernie mentioned that John Kanode, N4MM, had announced in November 1998 that the IU would soon assign a ITU call sign block and a country code for telephone calling. This became a reality this past February when the prefix of E4 was assigned to Palestine. The history of the Palestine situation dating back to 1945 was given by Bernie. He said he made a few telephone calls to some of the DXers working on the upcoming E44DX DXpedition and was invited to go. Thus Bernie became a member of the DXpedition team.

Upon arrival in Israel he got the "third degree" from customs officials when he told them he was going to Palestine. Then things eased a bit when they found a leopard skin underpants in the luggage. Becky, his wife, had packed it as a joke.

The E44DX team operated from the Palestine Hotel in the Gaza Strip where they made 33,775 contacts which had exceeded their goal of 30,000 contacts. Of that total 10,662 were made on 20 Meters.

The next morning included the Breakfast Buffet and included the XZ1N DXpedition to Myanmar by Dan Brown, NA7DB, of the Central Arizona DX Association.

The convention next year will be hosted by the Southern California DX Club and will be in Visalia the weekend of 7-9 April. If you plan on going, the Holiday Inn is now taking reservations. Hope to see you there!

A "screwdriver" mobile antenna

Ace Jansen, N3AHA

It was my pleasure to have the opportunity to evaluate the Nott Ltd. Broadbander 3 (BB3) screwdriver antenna. Screwdriver antennas have been around for the past eight years, originating from Don Johnson, W6AAQ. In 1991, Don and Ben Herr, WB6MNX, decided an electric screwdriver would make a good drive mechanism for a directly tuned mobile antenna. Don's antennas were popularized in his book, "*40+5 Years of HF Mobileering*" and again in "*Everything You Forgot to Ask About HF Mobileering*." Put simply, a screwdriver antenna allows a mobile operator to change frequency bands without leaving the car by remotely tuning the antenna from the driver's seat. It also allows amateurs to operate their mobile antenna for MARS, CAP or any other frequency outside the amateur bands assuming your radio has that capability.

BB3 construction

The BB3 antenna manufactured by Nott Ltd. uses a copper or chrome mast which is 2.125" O.D. With a wall thickness of .040". A battery operated Black & Decker screwdriver is modified to slip inside near the bottom end of the tubing. A coil is wound of tinned #16 copper wire on grooved 1-1/2" PVC pipe with eight turns per inch and a total length of about 19". This is enough inductance to tune the antenna from near 3 MHz to near 30 MHz on a typical mobile installation.

The screwdriver has a length of 1/4" all-thread rod attached to it, which drives the coil up or down via a threaded metal disk in the bottom end of the coil. For contact between the copper tube and the coil, beryllium copper finger stock is soldered into the top end of the tube, so as the coil emerges from the tube (being driven by the screwdriver) it has a very low resistance contact for minimal contact loss.

An aluminum disk in the top of the coil is threaded 3/8" (24 female), which is the standard thread for antenna whips. Either a stainless steel or quality fiberglass whip may be screwed into the disk. The coil is enclosed in a PVC weather cover which protects it from weather, dirt, insects, etc. This cover moves up and down with the coil as the antenna is tuned.

Included with the BB3 antenna is a toroidal transmission line transformer. On the lower frequencies, it functions as a transformer, but at higher frequencies, RF energy couples through it capacitively until 10 Meters where it pretty much couples straight through. The main point is that it works very well in matching 50 ohm coax to the antenna.

Whip length also affects impedance matching as it provides the top loading which reflects back to the antenna input. For 80 Meters, a 96 or 102" whip works best in most applications. From 20 Meters up, a whip as short as 63" works quite well and still allows operation in the upper end of the 75-meter band.

The BB3 has high radiation efficiency because where the RF current is the highest, the antenna is made of large diameter copper tubing. That feature and the coil being self-shielded help to reduce loss resistance. Low loss resistance invariably means an efficient, high Q, narrow bandwidth antenna.

BB3 installation

Now that you know all about the BB3 hardware and how it works, I'd like to share my experiences with installing a BB3. Let me first say I'm not the most mechanically inclined fellow. Therefore, it probably took me longer than normal folks to install the antenna. First thing to do is figure out where to mount the antenna. The best place for a mobile antenna is always the middle of the vehicle's roof. Since my van is already about 6' tall, I knew that option was out. I then looked for a spot on the side of the van. I wanted the antenna to be towards the back of the van since I already had a Hustler installed on a ball mount in the middle of the van on the driver's side. I ended up installing on the driver's side of the van near the rear. (This turned out to be a good spot mostly because I could see the antenna from the driver's side window and could see the antenna rising and lowering.)

Not wanting to challenge myself to construct a mount, I used Nott Ltd.'s Universal Mounting Bracket (UMB). It is perfect for mounting the BB3 to a vertical vehicle surface. It's made of high quality 1/4" aluminum 3" x 3" angle. The UMB is predrilled for the BB3 insulator set (isolates the BB3 from the mount) and mounting bolt. Two holes are predrilled for mounting the transformer on the mount right next to the BB3 base. There's a hole predrilled for grounding the remote control cable and ground wire from the matching transformer. Here's where Murphy first delayed my installation. I drilled the holes in the van so I could connect the mounting bracket to the side of my van. My van's sheet metal is very thin — it won't hold a heavy BB3 antenna.

I was off to find a metal shop in the area to fabricate a 3/16" aluminum 8" square plate. I had the plate slightly bent to match the bend in the side of my van and had holes pre-drilled for the UMB bolts. I was able to continue the project. I mounted the bracket to the van with the plate and it was sturdy. I next drilled two holes below the mount, making sure that I also was below the interior plate. These holes were for the control cable and the coax. The hole sizes were a little tricky, because I had to account for the size of rubber grommets to protect the two cables from the sheet metal.

Installing the actual antenna was

pretty simple. The antenna sat on the mount using the antenna base insulator kit (two insulator disks, a plastic sleeve to place over the mount bolt, a fender washer, a metal washer, and a lock washer). I then tried to take out the pre-installed brass screws so I could install the transformer. That's when Murphy slowed me down again. The mount had been installed on the van for a few winter weeks (including snow) before I began to work on the antenna again. On a very cold day, I tried to back out the brass screws already installed on the mount and all three of the screw heads sheared off. I had to drill out most of the screw left remaining in each hole then run to the hardware store (again!) to purchase a bit to thread the new hole, some new stainless steel screws, washers, and nuts.

The rest was pretty straightforward. I installed the transformer on the mount, grounded the transformer to the mount, and electrically connected the transformer to the base of the antenna. The remote control box cables were connected to each other at the base of the antenna, and also connected to the vehicle battery. I added some coax seal to the remote control cable connection that was outside the van. I also grounded the remote control box to the vehicle chassis. I connected a coax from the antenna back to the radio. Lastly, I connected a heavy duty ground cable from one of the interior mount bolts to the vehicle chassis.

As far as a whip, Nott Ltd. recommended a short whip of about 60" or a longer whip of 96"-102". The longer whip is necessary for the serious lowbander (75 Meters). Whips are not sold with the BB3, so I purchased a Francis Hot Rod Model CB26 66", fiberglass whip from a CB Store for $16. At this point, I crossed my fingers that I had made all the appropriate connections and was giving the antenna a good RF ground. Well, remote control box, here goes nothing...

Operation

Hey, it's moving! It's really moving! (Little things excite me!) The screwdriver was actually raising and lowering the antenna. The remote control box has a switch for raising and lowering the antenna. It's very simple to operate: flip the switch to up or down, then push a button to activate the screwdriver. The vehicle battery provides the juice required to operate the screwdriver.

Now it was time to check it out on the bands. I have a Yaesu FT-900 with built in SWR meter and antenna tuner. I made sure the tuner was off and found a frequency on 20 Meters. With the radio in MOX (tune-up) mode, I used the control box to move the BB3 until I saw the SWR dip indicating a resonate frequency. I made a quick contact; receiving a 5-7 on a fading band. I then tried the same test on 75 Meters and made a marginal contact from Virginia to Minnesota. I had finished the antenna less than a week away from the Virginia QSO Party.

The contest was my first chance to really test the BB3. I had planned to use a Hustler multi-band antenna for the contest, but having the BB3 gave me a back-up antenna for the high frequencies and a primary antenna for 40 CW and 75 Meters. I made a ton of contacts on 40 CW over the weekend and 75 netted some close-in contacts. Although my Dad, K2HVN, heard me in New Hampshire on 75 Meters, I never heard him.

Since the contest, I have removed the Hustler antenna and have been operating solo with the BB3. I primarily operate on 20 Meters, so I have the BB3 tuned for 14.260 MHz. That allows me to operate pretty much the entire band, as I measured a 1.5:1 SWR over a 210 kHz bandwidth. I use the radio's antenna tuner on the low end of 20-meter CW and it works very well. I've had several stations tell me I have a very nice mobile signal.

I did make a three-hour interstate trip recently and tried to change bands (20 Meters to 40 Meters to 20 Meters) while driving interstate speeds. I survived; however, I did not feel very safe. To catch the SWR dip, you really have to watch the radio's SWR meter. At interstate speeds that's too long to look away from the road. Also, oftentimes, I'd see the SWR dip, but couldn't react quickly enough to stop raising or lowering the BB3 until I was a little past the SWR dip. That meant I had to toggle the switch back and forth to make it perfect. Although one of the BB3's main selling benefits is not having to leave the car to change bands, I found changing bands while driving unsafe. I strongly recommend this antenna, but I even more strongly recommend you change bands when the vehicle is stopped.

Changing bands using the BB3 is not instantaneous and it also requires a little more attention (see note above and measurements below), but it opens many new bands that were not an option while driving down the road. For example, I can now operate 40 CW and 40 SSB without getting out of the car. I also have all the WARC bands available at my fingertips.

BB3 measurements

I tuned the BB3 for a dip in the middle of each band and measured the results for SWR and also the broadbandedness of the antenna at an SWR of 1.5:1 and 2:1. I used an MFJ-259 SWR Analyzer and the SWR meter in my rig. The SWR Analyzer was more

precise and those findings are what is reported below:

	SWR	1.5:1	2:1
3.900	1.2:1	7 kHz	17 kHz
7.150	1.7:1	0 kHz	36 kHz
14.175	1.2:1	210 kHz	420 kHz
21.225	1.2:1	360 kHz	15m band+
28.300	N/A	N/A	N/A

I measured the BB3 at its highest point as a resonate frequency of 3.604 MHz and at its lowest point as 29.520 MHz. I was not able to get a resonate frequency on 10 Meters at 28.300 MHz. When I lowered the antenna to its lowest position, I did find a resonate frequency at around 29.4 MHz. However, I believe this was a bogus reading since the SWR dip was very narrow. Nott Ltd. warns that it's important to install the BB3 so the bottom of the coil is above the roof line or at least the upper one third of the lower mast should clear the body sheet metal. My coil only starts to clear the body sheet metal at 40 Meters and the bottom of the coil doesn't clear the roof line until 75 Meters. This could be my problem. Also, I noticed a lot of fluctuations in my SWR Analyzer on 10 Meters. I probably should do a little more work on providing a better RF ground.

During past measurements on 40 Meters using the radio's SWR meter, I had measured a 1.5:1 SWR bandwidth of 30 kHz and a 2:1 bandwidth of 70 kHz.

I also measured the amount of time it took to raise and lower the BB3 from each of those frequencies:

	lowering	raising
3.900	start 0:00	1:18 mins
7.150	0:45	0:28
14.175	1:00	0:08
21.225	1:06 mins	0:02
28.300	N/A	start

It takes slightly longer to raise the antenna than to lower it. For example, it takes 15 seconds to go between 40 and 20 Meters and approximately 20 seconds to go from 20 to 40 Meters.

I also measured the distance the antenna needed to be raised to find resonate points at these frequencies:

3.900	16 ½"
7.150	5 ½"
14.175	1 ½"
21.225	½"
29.520	0"

Suggestions

Again, I strongly recommend changing frequencies and watching for an SWR dip when your vehicle is stopped. You can move the BB3 coil to the approximate resonate frequency by marking the BB3's lower mast with a permanent marker. This will get you in the ballpark for a specific band. This allows you to move the coil without transmitting and only transmitting when you need to tweak the resonate frequency on that band. There is also a Screwdriver Antenna Memory (SAM) kit being designed by Dane Westvik, KO6YD. This will add a tuning preset feature to the BB3. The SAM control panel will replace the up/down switch with a new panel containing a 2-digit LED display, a mode button and a VFO style tuning knob with integrated push button. This product is currently not available, but may be offered with the BB3 in the near future.

Amplifier?

Some of you mobile operators may be wondering if you can run power with this antenna. The BB3 is rated at a maximum continuous power input of 200 Watts and PEP power of 400 Watts on SSB voice peaks. Although Nott Ltd. recommends against exceeding this power limit, a mobile linear amplifier can be used. Nott Ltd. warns about PVC dielectric heating at 40 Meters. If the BB3 is fed with a 1 KW CW signal on 40 Meters for several minutes, PVC meltdown may occur. Nott Ltd. believes an amplifier can be used if the remote antenna tuning is performed with no more than 100 Watts, and then the amplifier is turned on after the antenna is efficiently tuned. I'm looking forward to trying my Amertron mobile amplifier with the BB3 sometime in the future (I haven't used the amp yet).

The company

Nott Ltd., previously the T.J. Antenna company, is owned by Ron Nott, K5YNR. Nott Ltd. is a manufacturer of high quality commercial broadcast antennas and detuning equipment. Nott also designs and manufacturers lightning prevention systems. They represent Rohn towers, Scala antennas, Copperweld bimetallic wire products, and Luncole XIT Electrolytic Grounding Systems. Nott Ltd. has been in business for over eight years and has sold products around the world. For amateurs, Nott Ltd. manufacturers the Broadbander BB3, the BB3 Base Station antenna, the Park 'n Talk Whip, and mounting brackets for their antennas. Nott Ltd. purchased T.J. Antenna Company in June 1977 and made a multitude of small mechanical improvements over the past two years. In the last five years, T.J. Antennas and Nott Ltd have sold over 1,500 BB3 mobile antennas.

Summary

This was my first experience using a screwdriver antenna and I was very impressed. If you want to operate mobile on multiple (unlimited HF) frequencies without leaving the driver's seat, this antenna is the antenna for you and I strongly recommend this antenna. I found the installation challenging; however, you have to keep in mind I'm mechanically challenged. It's a big antenna and requires a very sturdy mount and like most HF mobile antennas, you will probably turn some heads. When I had questions about the antenna or its installation, a quick call to Nott Ltd. found informative folks ready to help me. I'm completely comfortable recommending Nott Ltd. as a company for you to purchase your first or next HF mobile antenna.

The BB3 antenna system is $299.95 in plain copper finish and $334.95 in chrome finish. For more information, contact Nott Ltd. by mail at 4001 La Plata Hwy, Farmington, NM 87401; by phone: 800/443-0966 or 505/327-5646; by internet at www.tjantenna.com; or by email at k5ynr@tjantenna.com. For information on the SAM Kit, check out KO6YD Designs at their web site (http://www.jps.net/ko6yd/co/sam.htm). Happy mobiling!

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 ***Worldradio*** *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.***

Special Events

150TH ANNIVERSARY

Kendall ARS (KARS) will operate K5B from Boerne, TX, as part of the 150th anniversary of the founding of Boerne. The station will operate on 24 July 1300U — 2300U, on 7.255 and 14.250 MHz. Certificates are available by sending a QSL card and 9 X 12 SASE to David McDaniel, 412 Cedar Pl., Boerne, TX 78006.

ON GOLDEN POND

TESARO ARC will operate W1G from Bowman Island, on Squam Lake, NH, in celebration of the filming of "On Golden Pond" on Squam Lake 1600U 31 July — 1600U 1 August. This is also U.S. Islands contest weekend, and W1G will be participating. Primary freqs: 14.255 — 14.265 MHz. Additonal freqs will be each band, 25 up from the bottom of SSB and CW portions. Certificates are available for a QSL card and an SASE to: Darrel Daley, K1KU, P.O. Box 445, Putney, VT 05346-0445.

COAST GUARD AUXILIARY 60TH ANNIVERSARY

Amateurs who are members of the Coast Guard Auxiliary will operate special event stations from Coast Guard facilities 17 July in all 16 Districts of the Coast Guard Auxiliary 0900 to 2100 local time to celebrate the 60th Anniversary of the Coast Guard Auxiliary in the general portions of the 80 to 10-meter bands using CW and SSB and 146.52 Simplex for local contacts. Special QSL cards may be obtained from each District by contacting the station you contacted and including a SASE. Contact Charles Redmon, KK6SY, 693 Ocean View Ave, Upland, CA 91784-1188 for a special 8" x 11" certificate for contacting ALL sixteen Districts.

PACKARD CENTENNIAL

The Warren (Ohio) Amateur Radio Association will be operate W8P, a special event station over the 04 July weekend, Sat. Noon - 8 p.m. and Sun. 8 a.m. - 8 p.m. CDT. Check frequencies 50-100 kHz down from the upper edge of the 80, 40, 20, and 15-meter phone bands as well as around 28.450 MHz. CW operation will be at 50 kHz above the bottom edge of the 80, 40, 20, 15, and 10-meter bands. A certificate featuring one of the earliest Packard automobiles will be given for each contact made. Send QSL and $1.00 (cash or stamps) to: WARA, P.O. Box 809, Warren, OH 44482. For info: Bill Craiger, K8UV, phone 330/889-2602 or email to wb8ujv@onecom.com

MAHLON LOOMIS

Stratford, NY. The Fulton County Dr. Mahlon Loomis Committee will operate W2ZZJ 18 July to commemorate the 173rd anniversary of the birth of Dr. Loomis, the American radio pioneer, born at Oppenheim, New York, on 21 July 1826 1300-2000 UTC on the General phone portion of 75, 40, and 20 Meters, and on the Novice 10-meter phone band and local 2-meter FM repeaters. For parchment certificates and extensive literature, send QSL, contact #, and a #10 SASE (55¢) to: George P. Sadlon, W2ZZJ, 5738 ST HWY 29A, Stratford, NY 13470.

APOLLO 11 MOON LANDING ANNIVERSARY

The Spaceage Radio Society will operate W3O from 0000U 16 July to 2400U 24 July to commemorate the 30th Anniversary of the Apollo 11 moon landing. Frequencies will be: CW — 3.545, 7.045, 14.045, 21.145 and 28.145 MHz. Phone — 3.945, 7.245, 14.245, 21.345 and 28.445 MHz. For a certificate send contact information to Bruce Boston, KD9UL, 815 E. Third St., Beardstown, IL 62618.

LITTLE HOUSE ON THE PRAIRIE

Huron Amateur Radio Club/Lake Area Radio Club of Watertown special events station commemorating the Laura Ingalls Wilder Pageant of "Little House on the Prairie" fame. Saturday, 03 July, Noon - 8 p.m., and Sunday, 04 July, 8 a.m.- 8p.m. CDT with call sign W NOZ. Freqs: 50.165, 28.465, 21.340, 14.265, 7.265, and 3.880 MHz. Confirmation QSLs and/or Certificates upon request & SASE. Unfolded certificate, send 9x12 SASE. Folded — use business envelope. Send requests to: Huron Amateur Radio Club, P.O. Box 205, Huron, SD 57350-6539.

TRANSCONTINENTAL RAILROAD

Laramie, Wyoming: N7UW, University ARC will be operating from Ames Monument, the highest point on the old transcontinental railroad, from 1500U 17 July - 2200U 18 July 1999 on 80, 40, 20, 15, and 10 Meters. QSL, SASE & contact number to: University ARC, N7UW, P.O. Box 3625, Laramie, WY 82071.

EXPERIMENTAL AIRCRAFT ASSOCIATION FLY-IN

The Fox Cities ARC (Appleton, WI) will operate W9ZL from the world's biggest fly-in EAA Airventure '99 held at Wittman Regional Airport in Oshkosh, WI.

SSB and RTTY operation 30 July, - 1 August 9 a.m. - 4 p.m. local time in the General portions of the phone bands. A special 8x10" certificate is offered for contacts with proper QSLs. QSL to: Wayne Pennings, WD9FLJ, 913 N. Mason, Appleton, WI 54914.

PRO FOOTBALL HALL OF FAME

Canton Amateur Radio Club will operate station W8AL, in conjunction with the annual Pro Football Hall of Fame Festival. Freqs: 7.265, 14.265, 21.350, 28.350. Dates and times (UTC): 1300U 30 July - 2400U 01 August. For certificate send 9x12" SASE to: WQ8J, Donald E. Perry, 968 Culverne Ave., NW, Massillon, OH 44647.

Vanity call sign rescinded

The vanity call sign of a South Carolina amateur has been rescinded. Richard Whiten, WB2OTK, had been issued the call sign W2OTK on 10 February. The notification was part of a much longer letter from Riley Hollingsworth to Whiten regarding his alleged failure to respond to notices from ARRL Official Observers. No specific reason was given for the rescinding of the W2OTK call sign, but the FCC did permit Whiten's license expiration date to remain as 15 October 2001. — *FCC, Newsline*

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.*

Left: Joel's mobile installation looks factory installed. Above: The screwdriver antenna is mounted on a left rear frame.

Joel Kornreich, K2QBV

Take off the High Sierra screw driver antenna, put it in the trunk, and nothing shows that this Lexus has an HF installation. The Icom IC-706 Mk II is flush mounted in a custom-made plastic receptacle along with a Radio Shack digital SWR/Watt meter. This module with the two components slides inside the space where the ashtray was without any harm to the car or visible signs of reconstruction of the dash. A cutout of black plastic matching the dashboard is cut to fit over the equipment which gives this the appearance of a factory installation, and a permanent part of the dash structure. No wires, no mounts, neat and clean, just like the XYL ordered.

The antenna, a High Sierra screwdriver is mounted on a type III mobile trailer hitch welded to the screw on the tie-down plate under the car. Take down and storage of the antenna in the trunk takes less than 60 seconds.

Letters to the Editor

Kurt, a phoney?

I thought I'd offer my thoughts on the Kurt/Lil Pistol debate. I got my license, Tech plus, in November 1996 and first got on the air in August 1997. I finished the upgrade path to Extra at the end of February 1999. I do most of my operating using CW on HF.

My first difficulty is the use of pseudonyms. Because of my experience in the online world, I have a strong tendency to ignore information offered under a pseudonym. I have found that if a person isn't willing to put their name on something, then they probably have something to hide about what they are saying. Often it is untrue, hurtful or both.

Kurt recently argued that much of what he does is to de-gas the advertising hype about a product. I must admit this is often the case, but since the product is only identified as "a large antenna maker's ad in a recent *QST*" it is of no use to me. Most large antenna makers advertise in *QST*, so deciding who is the culprit is next to impossible. But the real problem with this type of content is it's negative. It tells me what the antenna (if I could identify it) can't do, not what it can do. I would much rather see the column be one that provides information on how to build, choose or erect an antenna. I'd love to see some relatively detailed information on the pros and cons of various types of antennas. I'm sure Kurt and Lil have a wealth of practical experience designing and using antennas. I just wish they would share it.

David Ruth, KC2AFK
Millbrook, NY

David, David, David;

The first problem is you called Lil Paddle, "Lil Pistol." She certainly isn't a "Lil Pistol."

In my ramblings about antenna companies, I try to steer my readers along the straight and narrow path to truth by pointing out the inconsistencies in their advertisements. One manufacturer of a three-element tri-band beam will claim an outrageous gain figure by using "dBi" while another with an almost identical antenna will use "dBd" and still another will use "dB." If you had been a serious student at the Kollege of Kurt, you would know which one is the honest-to-god figure you should always look for.

As far as my use of a pseudonym goes, I use it to protect my privacy. If I used my real name, my phone would be ringing at all hours of the day and night with questions from puzzled amateurs seeking antenna advice. I have seen the use of phony names online, and I agree with you. Some of them have lots to hide! I have a large following that has seen the light, and the crowd just keeps growing. In fact, I am rather insulted by your comments about me.

As far as taking the column to a lower plateau and writing articles about antenna projects, there are many, many publications that can guide you to a correct antenna design, and even give you tips on what works and what doesn't Yes, I do have a very extensive knowledge of antennas and theory, and almost all of it has been published. have you looked at a copy of the ARRL Antenna Handbook*?*

I do offer my congratulations to you on the rapid advance from Tech plus to Extra.

Now, I will let my readers take over from here with comments about your letter. I have to get back to cutting down the weeds at the massive KNS antenna range.

— Kurt

Silent Keys

LAWERENCE WILSON, W6SXR

Lawrence E. Wilson, W6SXR, died 20 February 1999 in Carmichael, CA. He served as Warden of San Quentin and Soledad prisons, devoting his life to making sure inmates served their time with as much dignity as possible. One of his innovations was introducing visits at San Quentin for all mothers of inmates on Mothers Day. Larry went so far as to visit and call businesses to drum up jobs for inmates on release. He established educational programs so inmates could receive a high school diploma while incarcerated.

He was born in Broken Bow, Nebraska and worked his way through the University of Nebraska as a musician. Larry participated in the first live music program at the Lincoln, NE. radio station.

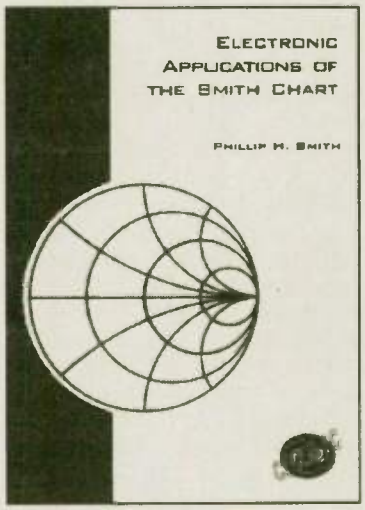
As an Amateur Radio operator, he participated in earthquake and flood emergency communications whenever the need arose. He was also a volunteer with the Grey Bears, a senior service organization distributing food to needy seniors in the Santa Cruz, California area. He lived in the Santa Cruz area after his retirement. — *AI6Y*

The Smith Chart

Electronic Applications of the Smith Chart

by Phillip H. Smith

This is an updated edition of the original, classic reference book by the legendary Smith Chart inventor himself. This book describes how the Smith Chart is used for designing lumped element and transmission line circuits and includes tutorial material on transmission line theory and behavior, circuit representation on the chart, matching networks, network transformations and broadband matching. It also includes a new chapter with example designs and a description of *winSMITH (see below).*



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W-100-N

The following deserving DXers have been awarded *World-radio*'s Worked 100 Nations Award:

550. Kenneth H. Kerwin, II K6UXO - All CW - 30 Apr 1999

551. Earle R. Drake W1KBV 30 Apr 1999

I have reviewed some applications that have been based on an old list. The Soviet Union, since the breakup, has become more than a single nation. However, any contacts for these nations must be made after the breakup date. Any contacts made before that date will count only as the U.S.S.R. and only one will count. An exception is Estonia, Latvia and Lithuanian, where all dates count.

Rodriguez Island (3B9)

The Midway-Kure DX Foundation DXpedition to Rodriguez Island came on the air as planned on 31 March as 3B9R. By 0400 UTC on 6 April they had already passed out some 20,000 contacts. Two days later this total was increased by another 15,000. The threat of a cyclone had caused some concern regarding an early shutdown and getting off the island. However, the operation continued to 2200 UTC on 10 April, the expiration of their license, with a total close to 45,000 contacts in the logs.

The nine team members represented several countries and included: Bruce Butler, W6OSP; Garry Shapiro, NI6T; Ned Stearns, AA7A; Frank Smith, AHØW; Kimo Chun, KH7U; Jari Jussila, OH2BU; Victor Kaplanska, XE1VIC; Yugi Yoshitana, JA3IG; and Jacky Mandary, 3B8CF.

The Miss Rodriguez Island Beauty Pageant was on the island during their stay and was held on 09 April. The group volunteered to be their Special Event Station.

After about five years of being off the air, Robert Felicite, 3B9FR, is now active again. He had stopped by during the DXpedition activities and did some operating. Robert was really excited over operating again, and with the help of the DXpedition team he is now back on the air. He is using an R7 antenna

that was given to him by the departing DXpedition team. Ned, AA7A, fixed his radio.

North Korea (P5)

Much to the surprise of all was the appearance of P51BH on the bands approximately 0600 UTC on 21 April 1999. This was the DXer's friend, Martti Lane, OH2BH, giving an Amateur Radio demonstration to the officials of North Korea. As this was only a demonstration, his operating time was limited.

David McAulay, VK3EW, reported that his contact with Martti on 21.295 MHz was his last DXCC entity needed to make them all. He celebrated with the biggest bottle of champagne he could find.

The DXCC Desk released the following announcement regarding the operation of P51BH on 21 April 1999.

"North Korea Activation. Countless DXers have been eagerly waiting for North Korea. This country is the rarest of them all — for good reason. North Korea is isolated from the rest of the world, and visits are allowed only for special purposes. Transmitting by radio from North Korea has been, and still is, a highly sensitive issue.

"Martti Laine, OH2BH, who first activated North Korea in 1995, appeared as P51BH around 0530U on 21 April 1999, on 14 MHz CW. He then QSY'd to 14.195 around 0640 UTC and later to 21.295. The short operation ended just before 0800Z.

"This is not a DXpedition, and Martti will make only sporadic QSOs while showing the equipment and the concept of Amateur Radio to those who have the power to decide.

"If you did not make a QSO this time, please do not worry, since intermediate steps of this kind are always needed, and at best, they may lead to more activations."

Audio from this operation may be heard on 9K2HN's home page at: http://www.qsl.net/9k2hn

To support this promising event, Bernie McClenny, W3UR, reports, "I got an e-mail from Jarmo, OH2BN, who reports that Martti will be leaving North Korea on Thursday morning and he probably will not be on the air any more. He will be heading back to Beijing, China, and will release more news once back in BY. It might be a good idea to keep an ear on 21.295 21.025 14.195 and 14.025 just in case."

Lets hope Martti can succeed in opening the door to Amateur Radio for this one. In fact, Martti has provided the DX community with the following report: "Greetings from North Korea. P51BH was a genuine station. As I said in the book, for those who believe, all the good things will come.

"And that happened to 263 happy DXers throughout the world. I have just returned from my sixth visit to North Korea, with many cherished friendships and many totally new. It is just amazing how friendly those people are and how much they enjoy life in spite of their needs in many areas.

"As planned, I arrived there on 20 April, with departure set for Thursday, 22 April. From the site I was located at, it was an 8-hour drive from the closest airport on bumpy roads. So, out of the three days, I spent my fair share in a 4WD vehicle, seeing the landscape of this mysterious land.

"While discussing the future of Amateur Radio in a longer term perspective, an immediate allowance was made to test the equipment and show the people present the boring content carried by our DX contacts — but carried for a good cause. I am most grateful to those who shared their excitement with us by saying hello to my friends in North Korea (thanks to W6OSP, KH7RS, SM3EVR and WH6CZD).

"The operating was done on the telecom center premises, with North Koreans climbing a 150-ft. tower to hoist the antennas. The antennas were

left right there together with the Yaesu FT-847 equipment. It is just a matter of switching the power on, when the time is ripe, to allow North Korea to join the ranks of Amateur Radio. The telecom facilities were located a 60-minute or so drive from the guesthouse, and access to the facility was obviously only during office hours.

"Many would ask this fundamental question: why was it not pre-announced and why was only a limited amount of specific information released? During these several years of DX missionary efforts, it has become obvious that if you are able to work on a project in peace, the best overall results will be achieved.

"Many major efforts are typically hampered by competing forces who have a hard time accepting the success of others. It was only a few years ago that North Korea was just about to hit the airwaves when one competing body launched an attack to undermine a potentially successful endeavor.

"Although the current DXCC rules (Rule 12) provide specific protection against that kind of behavior, it is still an issue that we all would like to eliminate from our true promotional schemes designed to further Amateur Radio in our dealings with the authorities of countries of intense DX interest.

"The operating was done between 1436-1640 Korean Time.

"First JA QSO was JA2DO, Europe OH5ME-F, Oceania KH6WU and the United States W6WKE.

"The operation covered 14 MHz CW and SSB plus 21 MHz SSB. The documentation will be sent to the ARRL shortly, and QSL cards will be released from the OH2BH Finland address as soon as possible.

"Best regards from sunny Beijing, Martti J. Laine, OH2BH/BY1"

At the International DX Convention in Fresno a petition to delete this country was circulated with many attending DXers signing it, including this DX editor. However, after the recent activity of Martti as P51BH, this should be thrown out. And, no I did not work P51BH.

Mount Athos (SV/A)

Monk Apollo, SV2ASP/A, shows up on the bands every now and then and in April began making more time available to give out Mount Athos as a new one for many a deserving DXer. He had been concentrating on 10 Meters near 28.475 MHz between 1400 and 1600 UTC. His operating habits also include the WARC bands as he had been found on 18.158 MHz.

Kiribati (T3)

Bernie McClenny, W3UR, of *The Daily DX* mentions the fall DXpedition to Kiribati by the Berlin DX Group that will include: Tom, DJ6TF; Wolf Kunicke, DL2NWK; Tom Lindner, DL2RUM; Tom Hubert, DL7BO; Sigi Presch, DL7DF; Frank Rutter, DL7UFR; Rudi Zerbe, DL7VFR; and Marianne Zerbe, DD6UYL. Their first stop will be in West Kiribati (T3Ø) with the operation commencing on or about 19 October 1999. They expect to have six rigs and four amplifiers to make up three operational stations on the air around the clock.

On or about 28 October four of the operators will run over to Banaba Island (T33) with half of the equipment and be active through 02 November. The entire operation will end on 11 November. No call signs have been issued as of this writing.

Belau (T8)

Hiro Hayakoshi, JH3FJG, and Kenji Fujiwara, JI3DLI, plan to operate from Belau this summer. As reported in *DX News Sheet*, they will sign with T88JR and T88DX between 20 and 25 July, and will be active on CW and SSB, 80 through 6 Meters. Some FM activity is planned from the appropriate bands.

Cook Islands (ZK1)

According to *The Daily DX* husband and wife team Wolf Dattenberg, DL2SCQ and Ann, DL1SCQ have announced their intentions of operating from the Cook Islands this August. Wolf will sign with ZK1SCQ and Ann with ZK1SCR. They will be operating from five (5) different IOTA groups with the two Cook Island DXCC entities. Their schedule is:

Rarotonga	OC-013 04-08 August	South Cooks
Aitutaki	OC-083 10-12 August	South Cooks
Mangai	OC-159 14-17 August	South Cooks
Manihiki	OC-014 20-25 August	North Cooks
Palmerston	OC-124 28-31 August	South Cooks

This includes all of the IOTA groups in the South Cook Islands.

Campbell Island (ZL9)

There have been a few impatient types out there wondering why they have not received their QSL cards for this operation. Ken Holden, ZL2HU, reports that the QSL cards were printed in Japan courtesy of Yaesu and arrived in New Zealand early in April. Ken requested that those processing the cards to have all direct requests received prior to 31 March to be completely processed and mailed on 30 June. This amounts to some 9,200 envelopes. All cards received via the bureau system or those without the customary SASE will be processed when time permits. They l began processing all direct requests received after 31 March following the first bunch received.

Marion Island (ZS8)

Deryck Yelverton, ZS6DE, has received the call of ZS8D for his operation from Marion Island. He was not scheduled to appear on the air until around the middle of April. If everything has gone as planned he should be on the air by now.

IOTA

If you run across 8J1RL, that's a Japanese club station located on Ongul Island (AN-015) in Antarctica.

The following IOTA operations have provided acceptable validation material and are valid for IOTA credits:

AF-040 5Z4LI	Lamu Island	Feb 1999
AF-076 5N4B	Bonny Island	Apr 1998
AS-137 BI5X	Xiaoyangshan Island	Oct 1998
EU-105 F6CBL/P	Batz Island	Sep 1998
EU-110 9A1CZZ/P	Brioni Islands	Nov 1998
NA-071 HP3/F5PAC	Boca Brava Island	Feb 1999
NA-072 HP1/F5PAC	Taboga Island	Feb 1999
NA-088 HP4/F5PAC	Colon Island	Feb 1999
NA-202 HP2/F5PAC	Grande Island	Feb 1999
OC-005 VK9NR	Norfolk Island	Nov 1998
OC-139 VK5ASK	Kangaroo Is.	Nov/Dec 1998
OC-222 YC8TXW/P	Obi Islands	Jan 1999

The following is our selection of April 1999 activity:

AF-024 S79YL	Mahe Island	11-30 Apr
AF-024 S79ZG	Mahe Island	12-30 Apr
AF-024 S79FAG	Mahe Island	13-30 Apr
AF-024 S79GT	Praslin Island	23-30 Apr
AF-028 7OØSI	Socotra Island	01 Apr
AN-006 EM1LV	Galindez Island	25 Apr
AN-015 8J1RL	Ongul Island	07-26 Apr
AS-015 9M2/JI1ETY	Pinang Island	10 Apr
AS-015 9M2TO	Pinang Island	02-29 Apr
AS-017 JS6PXB	Okinawa Island	01 Apr
AS-017 JS6PSV	Okinawa Island	11-13 Apr
AS-017 JR6BY	Okinawa Island	13 Apr
AS-023 JO6TIT/6	Amami Archipelago	23 Apr
AS-024 JR6USF/6	Yaeyama Is. (Kohama)	03-11 Apr
AS-026 HL4HLD	Cheju Island	13-21 Apr
AS-028 UAØQMU	Kotelney Island	04-29 Apr
AS-028 UAØQBA	Kotelny Island	02-14 Apr
AS-032 JI3WSZ/6	Yaku Island	23 Apr
AS-036 JG1SZE/6	Tsushima Island	24-25 Apr
AS-036 JA6CM/6	Tsushima Island	04 Apr
AS-037 JA6LCJ/6	Koshiki Islands	09-10 Apr
AS-037 JA6JPS/6	Koshiki Islands	09-10 Apr
AS-040 JH6TYD/6	Naru Island	16-17 Apr
AS-042 RV3MA/Ø	Sredniy Island	09-16 Apr
AS-042 UA3SDK/Ø	Sredniy Island	01-19 Apr
AS-045 HL5FUA	Ullang Island	11-27 Apr
AS-047 JH1HUK/6	Kita Daito Island	24 Apr
AS-049 JI3DST/6	Tokara Archipelago	28-30 Apr
AS-053 HSØ/IK4MRH	Phuket Island	13-29 Apr
AS-067 JA4PXE/6	Kusagaki Island	29-30 Apr
AS-079 JA5CKD/6	Miyako Island	01-27 Apr
AS-081 HLØZ/5	Hansan Island	10 Apr
AS-083 UAØQJG/9	Belyy Island	15-24 Apr
AS-083 RA9LI/9	Belyy Island	03-25 Apr
AS-100 4ZØA	Achziv Island	10 Apr
AS-103 BV9AAC	Penghu Island	13-28 Apr
AS-103 BV9AYA	Penghu Island	16-26 Apr
AS-117 JR4GPA	Honshu Coastal	11 Apr
AS-118 9K2F	Faylaka Island	22-29 Apr
AS-141 BI5D	Dongtou Island	29-30 Apr
EU-008 GB2IOC	Isle of Colonsay	16 Apr
EU-008 GM3VLB/P	Raasay Island	06 Apr
EU-009 GM4CHX/P	Orkney Islands	01-03 Apr
EU-009 GMØHTT	Orkney Islands	11-21 Apr
EU-010 GMØHBF/P	Grimsay Island	10-18 Apr
EU-010 MMØBBP/P	Pabbay Island	04-05 Apr
EU-010 GM3VLB/P	Pabbay Island	03-05 Apr
EU-012 GMØEKM	Shetland Islands	04 Apr
EU-012 GM4LBE	Yell Island	21 Apr
EU-016 9A5ST/P	Drvenik Island	02-17 Apr
EU-027 JW4CJA	Bear Island	12-13 Apr
EU-028 IA5CNE	Elbe Island	18-19 Apr
EU-031 IC8COJ	Ischia Island	24 Apr
EU-031 IC8/IK2PZG	S Anna Rock	02-05 Apr
EU-031 IC8/IN3XUG	Ischia Island	01-09 Apr
EU-032 TM2A	Aix Island	11-16 Apr
EU-034 ES1RA/Ø	Muhu Island	09-12 Apr
EU-034 ES1QD/Ø	Muhu Island	10-12 Apr
EU-034 ESØNW	Hiiumaa Island	04-11 Apr
EU-036 LA8LA	Hitra Island	22 Apr
EU-037 SM7DLZ	Oland Island	25 Apr
EU-042 DK8OL	Isle of Sylt	08-25 Apr
EU-046 LA1CI	Ringvassoey Island	01-24 Apr
EU-046 LA5QFA	Vanna Island	07 Apr
EU-047 DLØKBM	Borkum Island	02-23 Apr
EU-047 DAØIMD	Borkum Island	24 Apr
EU-048 TM2HT	Houat Island	02-04 Apr
EU-049 SV8DTD	Lesvos Island	10-18 Apr

DX Prediction — July 1999

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 939. Vienna, VA 22183). 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 = 140. 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	*(20)*	*23	*23	18	*21
10	24	*18	*21	*22	*21
12	29	*19	*19	*26	*26
14	32	*23	*18	*28	*32
16	*35	19	18	*29	*37
18	*36	*(18)*	17	*29	*40
20	*35	23	34	*27	*42
22	*29	26	*41	*23	*41
24	25	*28	*44	*20	*37
2	*22	*29	*44	*17	*31
4	*24	*28	*41	*17	*26
6	25	25	*35	*21	*23

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(21)*	*21	*22	18	*25
12	27	*17	*20	23	22
14	31	*20	*19	26	*30
16	34	*23	18	*28	*35
18	*35	20	17	*27	*39
20	*35	*27	*35	24	*42
22	*29	*30	*41	19	*40
24	25	*30	*43	16	*36
2	22	*30	*44	14	*30
4	*24	*29	*42	*21	*25
6	*30	*27	*36	*25	*22
8	25	*25	*24	*21	*20

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	24	*21	*28	17	*21
9	27	19	*22	*22	*23
11	*34	23	*20	*25	*25
13	*39	*25	*(19)*	*28	*32
15	*42	21	*(18)*	*29	*37
17	*42	*(17)*	*(17)*	*30	*40
19	*39	22	*(25)*	*28	*42
21	*32	25	38	*26	*42
23	*27	*28	*42	*23	*38
1	*23	*28	*43	*20	*32
3	*19	26	*43	*16	*27
5	*28	*25	*35	*21	*23

EU-049 SV8DTL	Lesvos Island	21-27 Apr
EU-049 SV8DCY	Lesvos Island	06-28 Apr
EU-057 DAØDHS	Ruegen Island	04-11 Apr
EU-057 DL5RFF/P	Ruegen Island	02-21 Apr
EU-060 J41YLS	Euboca Island	03-04 Apr
EU-062 LA6WEA	Alsten Island	04-19 Apr
EU-067 SV8EUA	Syros Island	19 Apr
EU-074 F5SGI/P	Brehat Island	25-28 Apr
EU-075 SV1TP/P	Poros Island	08-12 Apr
EU-082 U1ZA/A	Kildin Island	02 Apr
EU-093 EG5OTA	Tabarca Island	23-24 Apr
EU-096 OH1LU/P	Reposaari Island	04 Apr
EU-110 9A1CZZ/P	Brioni Islands	15-18 Apr
EU-120 G4RZQ	Isle of Wight	19 Apr
EU-122 GB2MRI	Rathlin Island	24 Apr
EU-127 DLØDWD	Helgoland Island	27 Apr
EU-128 DL1BKK/P	Fehmarn Island	24-25 Apr
EU-131 IK3PQH	Lido Island	29 Apr
EU-133 R1ASP	Kotlin Island	03-23 Apr
EU-136 9A6DCR	Krk Island	04-28 Apr
EU-146 PA/ON5JE	Schouwen-Duiveland Isl	03-06 Apr
EU-150 CQ2I	Insua Island	03-04 Apr
EU-154 ED3IDB	Buda Island	17-18 Apr
NA-031 KA3UNQ/P	Prudence Island	23-24 Apr
NA-036 VE7GDJ	Vancouver Island	19 Apr
NA-037 KL7FBI	Semichi Island	02 Apr
NA-040 KL1SLE	St Lawrence Island	07-08 Apr
NA-047 VYØXYL	Baffin Island	01-03 Apr
NA-051 VE7QCR	Queen Charlotte Is.	13-18 Apr
NA-051 VE7ISL/P	Maude Island	10 Apr
NA-051 VE7TLL	Queen Charlotte Is.	16-18 Apr
NA-055 WB1BQJ	Mount Desert Island	14 Apr
NA-057 HQ6RCH	Little Key Island	17-18 Apr
NA-058 K2OLG/M	Jekyll Island	16 Apr
NA-058 K4HBH	Jekyll Island	07-19 Apr
NA-062 W2SF/P	Lower Matecumbe Key	25-29 Apr
NA-062 K2ZR/4	Key West	04-08 Apr
NA-062 KB8OEJ/4	Key West	25-26 Apr
NA-065 N6FD/7	Fidalgo Island	03-27 Apr
NA-075 VE7BLC	Saltspring Island	18 Apr
NA-110 K2JHS	St Halina Island	15 Apr
NA-110 AA4V/P	Isle of Palms	03-24 Apr
NA-128 VE2DDK	Orleans Island	10-18 Apr
NA-138 N5VL	Amelia Island	23 Apr
NA-140 W3YN	Kent Island	12-14 Apr
NA-141 K2OLG/M	Orchid Island	08-19 Apr
NA-180 V31GI	Little Water Caye	01-03 Apr
OC-011 V63KU	Moen Island	02-25 Apr
OC-022 YC9BU	Bali Island	08 Apr
OC-027 FO5QG	Nuka Hiva Island	11-25 Apr
OC-059 V63AO	Kosrae Island	03-29 Apr
OC-090 DU1/DL2GAC	Buslanga Island	10-13 Apr
OC-128 DU1IMA	Palawan Islands	03-29 Apr
OC-129 K9AW/DU6	Negros Island	07-23 Apr
OC-129 DU6BG	Panay Island	27 Apr
OC-129 DU6AIS	Panay Island	10-11 Apr
OC-129 DU7MHA	Cebu Island	04-21 Apr
OC-130 DU8DJ	Mindanao Island	08-25 Apr
OC-130 4F9EAQ	Mindanao Island	05-30 Apr
OC-137 VK4LV	Bribie Island	05-19 Apr
OC-137 VK4YI	MacLeay Island	17-19 Apr
OC-138 VK4CAY	Thursday Island	02-03 Apr
OC-141 VK8NSB/P	Groote Eylandt	03-18 Apr
OC-145 YC8YZ	Ternate Island	10-26 Apr
OC-147 YC9YKI	Yapen Island	08-21 Apr
OC-148 YC9NBR	Timor Island	11 Apr
OC-148 YC9MKF	Timor Island	08-14 Apr
OC-149 H44NC	New Georgia Is.	10-24 Apr
OC-151 YC9LQA	Flores Island	11 Apr
OC-169 A35RK	Ha'apai Island	24 Apr
OC-201 ZL1BXA	North Is. Coastal	26-30 Apr
OC-203 ZL4IR/P	Stewart Island	20-30 Apr
OC-210 YC8TXW	Sangihe Island	02-13 Apr
OC-210 YC8RRK	Sangihe Island	02-26 Apr
OC-210 YC8RBC	Sangihe Island	01-23 Apr
OC-228 VK4CQY/5	Granite Island	05 Apr
OC-228 VK5AFZ	Granite Island	05 Apr
SA-008 LU1XSI	Terra del Fuego	18 Apr
SA-008 LU8XW	Terra del Fuego	22 Apr
SA-015 4M5I	Los Monjes Archipelago	13-14 Apr
SA-026 PP5ZYZ	Santa Catarina Island	11 Apr
SA-026 PP5OW	Santa Catarina Is.	09-25 Apr
SA-029 PY1NEZ/P	Itacuruca Island	10-11 Apr
SA-037 4M5I	La Blanquilla Is.	16-20 Apr

IOTA Contest

The July RSGB IOTA Contest could be a source of some new IOTA island groups for you. The following, in addition to those listed in past issues, promise activity during the contest:

NA-086 Cayo Coco T47???

Lighthouse Day

Jim Weider, K2JXW, reminds DXers of Lighthouse Day this coming August. Jim suggests obtaining one of those one by-one special event calls if interested in participating in the National Lighthouse event on the weekend of 07-08 August or the International Lighthouse event 21-22 August. For details on obtaining one of these calls visit the League web page at www2.arrl.org/arrlvec/1x1.html. Jim also suggests visiting his web page at www.waterw.com/~weidner/ld.htm.

The Western New York DX Association will get in the festivities and will be signing with the special event call of K2L from the Buffalo Lighthouse during this period. There will be a special QSL available for all contacts made on 22 August and a regular card for other dates (8-21 August). All requests should be sent via WB2YQH, P.O. Box 73, Spring Brook, NY 14140. And, please be sure to include an SASE.

DX News Sheet

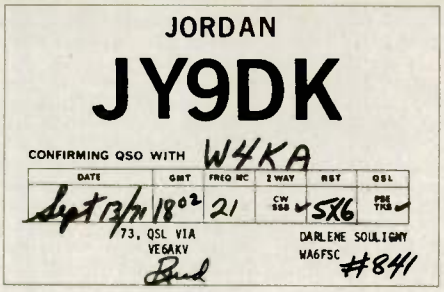
Effective 30 June 1999 the *DX News Sheet* will cease publication. Originated by the late Geoff Watts over 35 years ago, this publication was assumed by the RSGB several years ago when Geoff's health no longer permitted this activity.

According to Neville Cheadle, G3NUG, to whom I spoke at the Fresno DX convention, the circulation of the DX newsletter had dwindled down to a mere 700 subscribers, making made it no longer feasible to continue publication. This loss was blamed on the Internet and packet access alternative sources of DX information. The present editor, Chris Page, G4BUE, was offered the responsibility of assuming ownership of the publication, but said he was not in the position to do that.

The DX News Sheet, published weekly, will be sadly missed. I used the *DX News Sheet* as a source of material dating back to 1978 when I assumed the duties of DX Editor for ***Worldradio***.

Antique QSL Department

The first old-time QSL card has been in our files for six years and is an example of some of the unique cards of the past. The call G4KY was assigned to Sydney C. Harvey, who evidently was a London police officer. Marvin Fein, W2AH, provided this interesting card and had worked Syd in 1947. The note: "The strongest 20-metre signal here yet!" was penned across the top. He was running 120 watts with an 813 final. The card was twice the size of a normal QSL card. And what has become of Syd? A check was made with the Callbook and all we found was a S.C. Harvey, G4NMR, if that is indeed the same person.



The next two cards come from the collection of Leo Haijsman, W4KA, and date back to the early 1970s. Leo worked Darlene Souligny, WA6FSC, who was operating as JY9DK back on 13 September 1971. Darlene was a widow traveling about the world working DX at the time. She made many a deserving DXer happy with a new one during that era. Darlene later met and married Joe Magen, HC2OM, SK. Darlene, WD5FQX, now resides in Arkansas.

The other card is a typical DXpedition card. A three-day trip was made during the autumn of 1972 by three DXers: Jerry Feldner, KZ5JF; Pete Witcosky, KZ5PW; and Fred Lawson, K6JAN, where they signed with KS4KZ from Serrana Bank, now a deleted country. And, two of the operators were from another deleted country, Canal Zone.

QSL information

Floyd Gerald, N5FG, Manager of the 5th U.S. Call Area QSL Bureau, is the only one who offers the possibility of checking envelope status online. Check their webpage at www.mdxa.org.

Floyd also mentioned that William Vaughn, KB5IPQ, a QSL manager for several stations, is not an ARRL member, and will not answer QSL requests via the bureau.

Thanks go to the following contributors for this month's column: G3KMA, OH2BU, ZL2HU, AHØW, W2AH, K2JXW, WB2YQH, N4GN, W4KA, N5FG, N7NZ, Western Washington DX Club (WAØRJY), Mile Hi DX Association (WMØG), American Radio Relay League (NC1L), WebCluster (OH2AQ), *425 DX News* (I1JQJ,), *The OPDX Bulletin* (KB8NW), *DX-News* (NJDXA), The *Low Band Monitor* (KØCS), Island/DX News (N5VL), *The Daily DX* (W3UR), QRZ DX (N4AA), and *DX News Sheet* (G4BUE).

There has been some interesting stuff on the bands, in spite of the poor conditions at times. Have faith, it will improve. — *John F.W. Minke III, N6JM, can be reached at: P.O. Box 310, Carmichael, CA 95609-0310 or via e-mail: n6jm@pacbell.net.*

Canada proposes basic ops on 10 Meters

Canada's equivalent of the FCC says that it agrees with a Radio Amateurs Canada proposal to expand the 10 Meter operating privileges of that nations entry level license holders. Industry Canada suggests allowing the holders of its Basic Amateur Radio Operator Certificates and five word per minute Morse code qualifications to operate all modes from 28.000 to 29.700 MHz.

Radio Amateurs of Canada had submitted the proposal to Industry Canada at an Amateur Radio Advisory Board meeting held in May 1998. At the time, Radio Amateurs Canada said that many Canadian radio amateurs believed that such an easing of licensing requirements would be an important step for the growth and stability of the Amateur Radio service.

After a year of reviewing the idea, Industry Canada appears to agree. — *RAC, Newsline*

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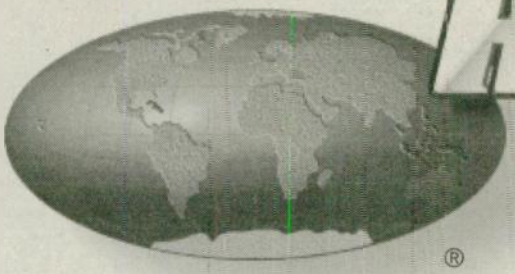

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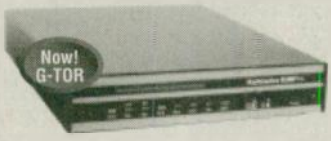

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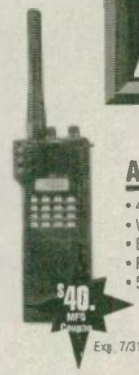

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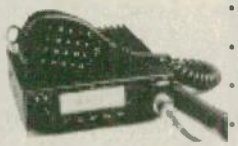

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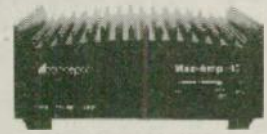

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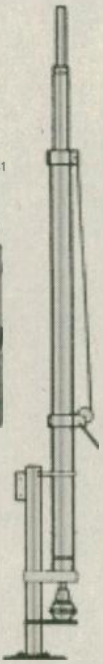

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A61AP IK7JTF
A71/9K2AI IK7JTF
A71BY F5PYI
A92FZ W3HC
A92GJ WH6CXQ
A92GJ N1SHM
AL7QT OZ4LP
AM1JJ EA1JJ
AP2KSD IK7JTF
AP2MAM IK7JTF
AX3ITU VK3DYL
BAØAA Zhang, P.O.Box 202, Wulumuqi, People's Republic of China
BA4DX BA4CH
BA4TB 9A2AJ
BD4ED BY4BHP
BI5D P.O.Box 1713, Guangzhou City, 510600, People's Republic of China
BI5D P.O. Box 1713, Guangzhou city 510600, People's Republic of China
BV2UB JH2FBI
BV5BG IK7JTF
BV9AYA BV2KI
BY1DX OH2BH
CEØZAM CE3ESS
CEØZIS Eliazar Pizarro Rojas, Box 1, Juan Fernandez Island, Chile
CE2EZE RW6HS
CE9R CE3HDI
CF3UZ VA3UZ
CG3MM VA3MM
CI7A VE7SV
CM8VP , AD4Z
CN6LISaid Sidate, P.O.Box 242, Rabat, Morocco
CN8NK EA5XX
CN8SN IK7JTF
CN8VK IK7JTF
CO2JX XE1CI
CO8LY EA7ADH
CQ2S CT1AXS
CQ5D CT1EDG
CQ6C DJØMW
CT1DSC CT1CJJ
CT1EGW N2AU
CT3FF RW6HS
CT98EGW N2AU
CU3AV KB5IPQ
CY9/K4LT K4LT
CY9/K8RF K8RF
CY9/W6RGG W6RGG
CY9RF K8RF
D2GG CT1GG
D2RV AA4HU
DAØBUG DK5IM
DJ2MX Mario Lovric, Am Oelberg 11, D-61231 Bad Nauheim, Germany
DJ2OOO DL8DZ
DJ4IJ/HH2 DJ4IJ
DJ4IJ/HI8 DJ4IJ
DL1DA/HH2 DL1DA
DL1DA/HI8 DL1DA
DL2HBX Ulrich Ann, Essenroder Str.12, D-38527 Grassel, Germany
DU1EIB RW6HS
DU1SSR Jose Sonny C.Chong, 2N Romualdez Street, BF Homes, Quezon City 1120, Philippines
E21EJC HS1CKC
E4/G3WQU Peter McKay, UNIFIL, P.O.Box 75, Nahariya 22100, Israel
E41/OK1DTP OK1TD
EA8/ON8RI ON8RI
EA9/JI6KVR EA5KB
EA9/JI6KVR JJ6LXX
ED2RCA EA2ABM
ED3IDB EA3ESZ
ED3REC EA3ESZ
ED4MSR EA4SS

ED4SDM EA4ABW
ED5URL EA5URL
ED7CRN EA7AJM
ED7TZC EA7AIC
ED7VG EA7HY
ED8WPX EA8PP
EG5UV EA5GMI
EI3IMD EI2WW
EI9FN G3YOG
EK6CC N8BGD
EK6CF DJØMCZ
EK6LP IK2DUW
EK6TA DJØMCZ
EK7DX F5LGQ
EK8WV RW6HS
EK8YC IK2DUW
EL2WW ON5NT
EL2WW ON5NT
EMØRSE DJØMAQ
EM1U UT7UA
EM4E UR4EYT
EM4U VA3UZ
EN5J KG6AR
EN6Q UA9AB
EO1I UT1IA
EO5FI UX3FW
EO6AHG RW6HS
EP3HR I2MQP
ER1DAValery Metaxa, P.O. Box 9537, Kishinev, MD-2071, Moldova
ER1OO RW6HS
ER2OG RW6HS
ER3DX RW6HS
ER3DX Anatoly Nimirsky, P.O. Box 9, Rybnitsa-4, MD-5540, Moldova
ER50CE ER1DA
ER5AL RW6HS
ER9V ER1DA
ET3VSCClaudio Vascotto, P.O.Box 20011, Addis Abeba, Ethiopia
EU1TT WF5E
EU2ØØA EU4AA
EU4AA Pavel A.Anatsky, P.O.Box 67, Lida 231300, Byelorussia
EV2ØØAM EW4WW
EV2ØØM EW4EW
EW2ØØM EW4MM
EW4EW Nikolaj Boltach, P.O.Box 99, Lida 231300, Byelorussia
EW4MMCazimir Kopachel, P.O.Box 88, Lida 231300, Buelorussia
EXØV N6FF
EX8A RW6HS
EX8MAN Nick, Box 947, Bishkek, Kyrgyzstan
EX8QA RW6HS
EX8QB IK2QPR
EY4AA UA9AB
EY6TM F6FNU
EY8VV RW6HS
EY9/RA3OO DJ1SKO
EZ7ST UA9LM
EZ8AI RW6HS
EZ8AZ Alexander O. Redzhepkuliev, P.O. Box 6, Ashkhabad 744005, Turkmenistan
EZ8CQ Alex, P.O.Box 76, Ashgabat 744001, Turkmenistan
F6KPQ Club Radioamateurs de Lanester, Chemin de Parc Ar Groez, F-56600, Lorient, France
FG/JA1WPX JA1WPX
FG5FR F6FNU
FK8VHT F6AJA
FM/OH2RF OH2RF
FM5BH F6HEQ
FO5QA Guy Genin, Pension Colette, Tikehau, Tuamutu, French Polynesia
FP5EK RW6HS
FR/5R8GF TK5BP
FR5ZQHenri Namtameco, Rampe de Saint-Francois, 5052 Tour La Chaumiere, F-97400 Saint-Denis, Reunion, Via France
FR5ZQ/T FR5ZQ
FR5ZU/T JA8FCG
FR5ZU/T VE2NW
FT5YG F5LBL
FT5ZJ F2YT
G4PIQAndy Cook, Fishers Farm, Colchester Road, Tendring, Essex, CO16 9AA, England
GB2FIO GMØAXY
GD4VGN DL4FF
GJ/PA0KHS PAØKHS
GJ4/PA0KHS PAØKHS
GJ4IFE PAØKHS
GJ5DPU PAØKHS
GJ5DPV PAØKHS
GJ5DPW PAØKHS
GJ5DPX PAØKHS
GJ5DPY PAØKHS
GS2MP ZS5BBO
GU5DPU PAØKHS
GU5DPW PAØKHS
H22H 5B4MF
H4ØOO JK7TKE
H44OO JK7TKE
HA/W0YR AA9DX
HA3LN Csaba Nagy, Nagybereny Virag U.4, H-8656, Hungary

HBØ/DL1RWB DL1RWB
HBØRF HB9RF
HC8KU DK5VP
HC8L N2AU
HG3G HA3LN
HH2/KB0QNS KB5IPQ
HH2LQ VE2EH
HI/G4ZVJ G4ZVJ
HI3/K4ZLE K4ZLE
HK3DDD Edilberto Rojas Mosquera, P.O. Box 170151, Bogota, Colombia
HK3JBR F6AJA
HL1/JI1EFP JQ1NGJ
HL9JF KB5IPQ
HQ6RCH HR2JAW
HR2A KB5IPQ
HR2JAW Jorge Alvarez Welchez, Apartado Postal 2592, San Pedro Sula, Honduras
HR2KOS KB5IPQ
HR2RDJ KB5IPQ
HSØ/JA8GIJ JA8LCJ
HSØZAA NY2E
HSØZAR K3ZO
HV5PUL Luca Della Giovampaola, Responsabile Tecnologia Informatica, Pontificia Universita' Lateranense, Piazza S.Giovanni in Laterano 4, 00120 Citta' del Vaticano
HZ1AB K8PYD
HZ1CCA IK7JTF
II2V I2ARN
II2V I2ARN
II3GM IV3EHH
II3L IV3KAS
IQØXXV IKØZAR
IQ3X IV3SKB
IQ5Z IZ5AXA
IQ7R IK7XNF
IR3HSP IV3EHH
IR3P IV3EHH
IR3PN IV3EHH
IUØAIR IOCUT
IU2C IK2ULH
IY9TC IØKHP
IY4IMD IZ4CUK
IY4W I4ALU
IY5PIS IK5QPZ
J28BS F6KPQ
J28DB F4AAQ
J37LK KB5IPQ
JH8YZBHokkaido Contest Club, P.O.Box 48, Tomakomai 0530-0000, Japan
JI3DST Takeshi Funaki, 2-18-26 Hannan-Cho Abeno-Ku, Osaka-City, Osaka, 545-0021, Japan
JJ1DWBMisao Tanzawa, 3-1-5 Yakata, Kofu, Yamanashi 400-0017, Japan
JM1LJSHideyuki Kai, 4-22-15, Takata-higashi, Kohoku-Ku, Yokohama-City, 223-0065, Japan
JT1FCQ DL7JK
JT1Y I0SNY
JW4CJA LA4CJA
JW5NM LA5NM
JXØLMJ LA7DFA
JX5AA RW6PA
JY9BD PAØKHS
JY9NE N3FNE
JY9QJ DL5MBY
JY9QJ DL5MBY
K4WW Shelby E.Summerville, 6506 Lantana Ct., Louisville, KY 40229-1544, USA
K5KWG/UN7 Z32KV
KB5IPQWilliam P.Vaughn, 374 Paul Road, Boyce, LA-71409, U.S.A.
KC4/KC7GJJ K4MZU
KC4/KH6JNF K4MZU
KC4/KJ3Z K4MZU
KC4/KL7RL K4MZU
KC4/VEØHSS K4MZU
KC4/VE7MKZ K4MZU
KC4AAA K1IED
KC4AAB K4MZU
KC4AAC K4MZU
KC4AAD K4MZU
KC4AAF K4MZU
KC4AAG K4MZU
KC4USB K4MZU
KC4USL/AM K4MZU
KC4USV K4MZU
KC4USX K4MZU
KHØ/JN1WTK JN1WTK
KHØXX JP1NWZ

KH2/N3SIY KB5IPQ
KH2/N4GFO KB5IPQ
KH2/NH6D N6FF
KH4/NH6D N6FF
KH6/KJ7LY DJ4QA
KH6T N2AU
KH6X N2AU
KH6XT N2AU
KL7IYD KB5IPQ
KL7Y N2AU
KP2J RW6HS
KP3EM RW6HS
KP4BZ K2OC
L21DK LU1DK
L22JCW LU2JCW
L24AAV LU4AAV
L25FCI LU5FCI
L27DCE LU7DCE
L27EC LU7EC
L28EEM LU8EEM
L38EZU LW8EZU
LO1F LU4FM
LO7H LU7HN
LR6D LU6DK
LT5V North Patagonia Dx Group, P.O.Box 37, 8332 General Roca, Rio Negro, Argentina
LU4AAV Horacio Cilmi "Hoc", Navarro 5078, 1419 Buenos Aires, Argentina
LU7EC Lucas Mariano Elichagaray, C.P. 2703, Carabelas, Buenos Aires, Argentina
LU7VFJ Julian R.Tocce, P.O.Box 37, 8332 General Roca, Rio Negro, Argentina
LU8VCC Alex Rocca, P.O.Box 37, 8332 General Roca, Rio Negro, Argentina
LX/PAØABC PAØKHS
LX/PAØDUO PAØKHS
LX/PAØGWL PAØKHS
LX/PAØINE PAØKHS
LX/PAØKHS PAØKHS
LX/PAØTV PAØKHS
LX/PAØVVH PAØKHS
LX/PA3ABA PAØKHS
LX/PA3ADJ PAØKHS
LX/PA3AIR PAØKHS
LX/WD6GET PAØKHS
LY2ER RW6HS
LY4AA N6FF
LY8X LY1FF
MØAIU PAØKHS
M6T G4PIQ
M7T G4PIQ
M8T G4PIQ
MDØBPI N6TQS
MSØAPF MM1AUF
N1SHMLarry L. Laflamme, 474 Second Avenue, Berlin, NH 03570, USA
N5DWest Jackson County ARC, P.O.Box 1822, Ocean Springs, MS-59564, U.S.A.
N5TU Earl Morse, 33626 Comanche Trail, Magnolia, TX 77355, USA
ND1V Robeert R.Wright, 1409 Eaglestone Arch, Chesapeake, VA-23322, U.S.A.
NH7A N2AU
OD5EH RW6HS
OD5NO RW6HS
OD5PI IK7JTF
OD5SE RW6HS
OHØ/OK1FJD OK1FJD
OHØ/OK1UFM OK1UFM
OHØ/OK1URY OK1URY
OHØ/OK1XDF OK1XDF
OHØEA OH2KMG
OHØZ OH1EH
OH1EH Ari Korhonen, Kreetalankatu 9 As 1, SF-29200, Harjavalta, Finland
OH2RF Pertti Turunen, Suikapolku 1 A 2, SF-00370 Helsinki 37, Finland
OJØ/LAØCX LAØCX
OJØ/LA1SJA LA1SJA
OJØ/LA3KIA LA3KIA
OJØ/OH0RJ OHØRJ
OJØVR OH1VR
OK1JR Stan Matejicek, Moskevska 1464, 101 00 Praha 10, Czech Republic
OL5Q OK1HRA
OT9A ON7LR
OX3LG OZ1PIF
OX3LG OZ1PIF
OX3LX OZ1PIF
OX3UB OZ1PIF
OZ1PIF Peter Frenning, Ternevej 23, DK-4130 Viby Sj., Denmark
P2ØX P29NB
P29KPH K5YG
P3A W3HNK
P4ØN KW8N
P49M VE3MR
P51BH OH2BH
PA6LIB/2 PAØKHS
PA6OMG PAØKHS
PA7CN Cornu J.Nuijten, Halsterseweg 16, 4661 Halsteren-KN, The Netherlands
PI4NYM PAØKHS
PI4NYM/FDM PAØKHS
PI6LIB/1 PAØKHS
PJ8/K6IPA K6IPA
PJ8/N6ZW N6ZW
PPØF PP1CZ
PPØMAG PP1CZ
PP4P PP1CZ
PR1ØØCZ PP1CZ
PR59B PP5LL
PUØF PP1CZ
PW1Z PP1CZ
PYØB PP1CZ
PYØF/PP1CZ PP1CZ
PYØFA PY4KL
PYØMAG PP1CZ
PY2GE Jose' Jorge don Santos Pereira, R.Luis Delfino 177, 09000 Sto Andre, SP, Brazil
PZ1DG P.O.Box 4076, Paramaribo, Suriname
PZ1DV W9GW
R1AND RW1AI
R1ANW K4MZU
R1ASP RA1AD
R1FJC RW6HS
R1FJL UA3AGS
R1FJL UA3AGS
R1VW PAØKHS
R1W PAØKHS
R1W/PA3DQW PAØKHS
R3EXPO UA3AA
R3RRC/Ø RW3GW
RAØBY RW6HS
RAØFAC RW6HS
RAØFAN RW6HS
RAØFF N6FF
RAØFN Cheslav Davidenko, Ul.Yuzhno-Zelenaya 80-22, 694900 Uglegorsk, Sakhalin Island, Russia
RA1QQ N.A.Sherdov, P.O.Box 24, Cherepovets, 162627 Russia
RA6WA RW6HS
RA6WF RW6HS
RF6QAI RW6HS
RF9C RK9CWW
RIØOAA RW6HS
RI1OA RW6HS
RI3B RW6HS
RI6O RW6HS
RI8AJ RW6HS
RI8BAM RW6HS
RI8BDN RW6HS
RI8OAA RW6HS
RI9C UA9CDV
RK9AWT UA9AB
RK9AYY UA9AB
RLØO RW6HS
RL2O RW6HS
RM6A W3HNK
RP6HWF RW6HS
RP6Y RA6AX
RP9ATZ UA9AB
RSØF UAØFZ
RT1U VA3UZ
RUØLX RW6HS
RVØAM RW6HS
RV3MA/Ø RV3ACA
RW6HS Vasilij M.Kasayanenko, P.O.Box 0, Stavropolskij Kraj, G.Novopavovsk, 357830 Russia
RW9USA UA9AB
RW9UZZ UA9AB
RX1CQ/1 RA1ZM
RY1U VA3UZ
RY2U VA3UZ
RY9C UA9CGA
RZ9A UA9AB
RZ9AZA UA9AB
RZ9DX RW6HS
RZ9WZ N2AU
SØ7UN ZP6CU
S21B W4FRU
S21YH 7M4PTE
S79FAG DL7AFS
S79GT GMØGAV
S79ZG DL7AFS
SNØAPT SP8YCB
SNØFPC SP3KHJ
SP5AUC Tomazs Piotr, P.O.Box 11, 00800 Warsawawa, Poland
SUØERA WA3HUP
SU9ZZ OM3TZZ
SV8/F6AUS F6AUS
SV8/I2WIJ I2WIJ
SV9/LA4XFA LA4XFA
SV8/PA2JWN PAØKHS
SW8L SV8CRI
T22JY JA1JQY
T22KJ JA2KJW
T22TK JA3MCA
T22VE JA8VE
T32RT W6UC
T88DX JI3DLI
T88JR JH3FJG
T88LJ JM1LJS
T88MT JJ1DWB
T88YH 7N1KAE
T93Y W6MD
T94KU YO3JW
T97M K2PF
T98P 9A4SP
T99KK PA1AW
TA1AZ RW6HS
TA1TAH TA1A
TA2DS WA3HUP
TA3DD KB2MS
TA3DD KB2MS
TA4A W3HC
TF8GX K1WY
TI5/K3LU W3CV
TJ1GD SP9CLQ
TJ1HP F6FNU
TJ1PD N5DRV
TK/DL8NBH DL8NBH
TK/PA3DQW PAØKHS
TK5XN F2YT
TL8CK F6EWM
TL8TP Henri Vignier, B.P.780, Bangui, Central African Republic
TMØAR F5TJC
TMØIMD F6KLS
TM1CMI F8UFT
TM1CW F5KBM
TM2WLH F5HKS
TM5EUR F5EMN
TM5S F6KOP
TM9FFP F6KUC
TN2FB F3FB
TP5ØCE F6FQK
TR8CA F6CBC
TT8AM IK7JTF
TT8FC EA4AHK
TU5IJ I2AOX
TX8D VK4FW
TZ6DX K4DX
UAØAOZ K1WY
UAØB/UA9CDE RW6HS
UAØBC RW6HS
UAØBCU RW6HS
UAØFAA UAØFZ
UAØFAA Slava, P.O.Box 43, Yuzhno-Sakhalinsk 693000 Russia
UAØFZ Vlad Kovalev, P.O.Box 43, Yuzhno-Sakhalinsk, 693000 Russia
UAØI/UV3DDC RW6HS
UAØIAS Vlad Kolodkin, P.O.Box 11, Palatka, Magdan Reg, 686110 RUSSIA
UAØKCL/Ø RA3DEJ
UAØQBA EV6A
UAØQBQ RW6HS
UAØQJG/9 RA3YA
UAØUBQ/UA8V UA8AB
UAØY/UA9YC RW6HS
UA2FBR RW6HS
UA2FFM RW6HS
UA2FGU RW6HS
UA3SDK/Ø RU3SD
UA4FHW Edward L.Yudin,Rakhmanihova 33-48, Penza, 440060 Russia
UA7A UA9AB
UA9AB Gene Shcumat, P.O.Box 17, Troitsk, Chelyabinskaya obl., 457100 Russia
UA9AJ UA9AB
UA9AN/UI UA9AB
UA9BA UA9AB
UA9BA/50 UA9AB
UA9CDE RW6HS
UA9FGR N2AU
UA9UST UA9AB
UD6DFF UA9AB
UD8DWC RW6HS
UD8F UA9AB
UE4HCI RK4HYG
UE6AAF UA6AF
UE6ADI RW6HS
UE9AWA UA9AB
UE9AZA UA9AB
UF6QAT RW6HS
UF6QBA RW6HS
UF6VAI RW6HS
UG/UV3ZZ UA9AB
UI8IAW RW6HS
UI8OAA RW6HS
UI9ABL RW6HS
UI9B/RB3MO RW6HS
UI9BWO RW6HS
UJ3I RW6HS
UJ8JKK RW6HS
UJ8RA UA9AB
UJ9A UA9AB
UK5OA RW6HS
UK7R UA9AB
UK8ABT RW6HS
UK8ADL RW6HS
UK8AJ RW6HS
UK8AX UA9AB
UK8BAM RW6HS
UK8BN RW6HS
UK8BWO RW6HS
UK8CK RW6HS
UK8FC RW6HS
UK8GBS RW6HS
UK8GK RW6HS
UK8IAO RW6HS
UK8IG RW6HS
UK8IT RW6HS
UK8IWK RW6HS
UK8IWW RW6HS
UK8OAN RW6HS
UK8OB RW6HS
UK8OM IK2QPR
UK8ZAB RW6HS
UK8ZAH RW6HS
UK8ZAV RW6HS
UK8ZAX RW6HS
UK8ZC RW6HS
UK8ZK RW6HS
UK8ZR RW6HS
UK8ZU RW6HS
UK9AA Fedor Petrov, P.O.Box 58, Tashkent 700000, Uzbekistan
UK9AAN UA9AB
UK9ADT UA9AB
UL7B/4K4CDE RW6HS
UL7OB RW6HS
UL7TX RW6HS
UL7VV UA9AB
UMØMO RW6HS
UM4BWO RW6HS
UM51BWO RW6HS
UM5BWO RW6HS
UM8AWP RW6HS
UM8OM RW6HS
UM8QA RW6HS
UM9AA RW6HS
UNØN IK2QPR
UN2L UA9AB
UN2O RW6HS
UN4L UA9AB
UN54P UN5PR
UN5PRRomeo Y. Loparev, P.O. Box 73, Temirtau 472300, Republic of Kazakhstan
UN7AD RW6HS
UN7AM RW6HS
UN7AO RW6HS
UN7EG DL8KAC
UN7FW IK2QPR
UN7LT UA9AB
UN7QX RW6HS
UN7SK RW6HS
UN7TX RW6HS
UN7VV UA9AB
UN7VX IK2XYU
UP5ØV UA9AB
US8D VA3UZ
UT4UXW VA3UZ
UT4UZ VA3UZ
UT7QF UA9AB
UT7UA P.O.Box 88, Kiev 252191, Ukraine
UU2JZ KG6AR
UU8I RW6HS
UW8V/UA0UBG UA9AB
UW9AR UA9AB
UX3FW Yurij Kucherenko, P.O.Box 60, Izmail-centre, 272630 Ukraine
UZ9AXB UA9AB
UZ9AYA UA9AB
V21CW K2ACW
V29TT N2AU
V31DX N2AU
V31GI PA3GIO
V47XC GØIXC
V51VB DL1XX
V63YT JE1SCJ
VAØXN/P VE3XN

Whoops!

We listed KD4WW as the QSL manager for 3E1CSW in the May issue. The correct manager is KD6WW. Our apologies for any confusion.

Whose repeater is this, anyhow?

Just this morning an interesting posting crossed the Repeater Owners Remailer. It was from a Ham involved in the operation of a club repeater and it dealt with a demand by his state's ARES Coordinator that repeaters performing ARES functions strictly conform to his guidelines. Mark's note said in part:

"Our local repeater is owned and maintained by a club, and the club supports local ARES operations with a weekly net conducted by the local EC (emergency coordinator). We also expect that, in times of emergency, the repeater will be used to convene nets as necessary.

"Now, the ARES coordinator is proposing or promoting the following restrictions for use of the repeater during nets:

1) No ID's
2) No messages
3) No courtesy tone
4) No autopatch or autodial (disabled in the controller)"

The writer then went on to describe his personal feelings on this demand. Meantime, what crossed my mind was a single sentence: "Whose repeater is this, anyhow?"

My next thought was: "Who elected the ARES Coordinator as the local 'repeater-god' decision maker in how privately owned Amateur Radio stations shall be used in the FCC-governed United States Amateur Radio service?"

Yes, it is true that today's microprocessor controlled repeaters can be programmed to do just about anything a remote radio relay system is capable of. And, as one respondent noted, it is possible to develop specific operatonal modes to handle just about any situation. His system has three:

The Normal mode, where the system ID "This is the W7??? repeater, the XYZ club system. Use 123 Hertz PL," to access. It also has a normal beep, normal autopatch access and CTCSS access is on.

In the Weather Alert mode, the voice ID states: "W7??/R WEATHER ALERT." In this case the 'courtesy beep' is a DTMF tone (to activate weather alert receivers). The CTCSS access is turned off and the autopatch switches to a different access code, known to control operatorss, and ARES/RACES officers.

Finally, this system also has an 'ARES/RACES/Net/Drill' mode. Here the machine switches to only a CW ID; CTCSS access is off when the autopatch is switched to its restricted access as in Weather Alert Mode. In this instance, the courtesy reset is the letter "S" sent in Morse. The machine is usually linked to other repeaters and areas during these drills.

While this is a great technical solution, it does not solve the underlying issue. That of an outsider placing demands on one or more repeater owner-operators to operate a repeater to his or her specifications so that the repeater, its owner and its user base can remain as volunteers.

What is very apparent to this writer is that whoever that ARES Coordinator is, he or she has forgotten the meaning of the word "volunteer." The coordinator fails to remember that he or she is only the, 'ARES Coordinator' because that persons peers recognize him/her as such. He or she also fails to remember that without the grass-roots support of those volunteers in the field, the state's ARES operation and his/her job can come to a rather abrupt end.

Simply stated, nobody (other than the FCC), even an ARES Coordinator or the president of the ARRL, has the right to tell any of us how we can or can not operate our individually owned and operated Amateur Radio station as long as we operate within the constraints of the Part 97 Amateur Service Rules and Regulations. And, whether you know it or not, a repeater that carries your call sign is legally your station in the eyes of the FCC. You are legally responsible for all aspects of its operation. You are the one the FCC will contact if there is a problem. You and you alone determine the parameters that all other stations that you 'permit' to be retransmitted must adhere to so that you will permit their signs to be repeated. In the simplest terms, unless you agree otherwise, you are the boss!

In my humble opinion, there is only one proper answer that any repeater operator should give to a request or blanket demand such as this: "Sir/Madam — Mind your own business or go put up a repeater of your own. This one is mine; I am legally responsible for its operation and I will run it my way."

Southern California bandplan

It's the first major revision to a bandplan for any popular repeater subband in over two decades and once again it's Southern California that is at the head of the pack. Members of the Southern California 440 MHz FM community met Saturday 01 May at Harvey Mudd College in Claremont to determine what bandplan they will employ going into the next century.

The last change in the Southern California 70 cm. bandplan took place in the early 1970s when 5 MHz splits were adopted. The band was fully occupied at that time and it is even more crowded today. The waiting list currently shows about 100 systems holding forth, waiting for channel assignments on the band.

Of the 600+ systems operating on 70 cm FM in Southern California, 357 were represented at the meeting. They agreed to adopt a 20 kHz channel spacing in place of the 25 kHz spacing in current use.

But there is one caveat. For 20 kHz inter-system spacing to work, all users of the repeater spectrum will be required to adhere to strict compliance with the 16KØ modulation mask. This is due to the reduced guard band between channels.

Of the 50 extra channels created by the new plan, 8 are to be set aside for use as follows:

Use	Old Plan	New Plan	Freq.
Open repeater channels	8	12	Various
Test pair channels	1	2	446.66,.68
Remote base intertie	0	1	449.46
Simplex channels	2	4	Near 446.0

The input frequencies associated with the simplex and remote intertie chan-

nels are to be used for simplex remote and control applications. Some meeting attendees expressed the view that even more open channels are required, but the demand for closed and private channels is such that a compromise figure was adopted.

The additional test pair is expected to relieve somewhat the extreme overcrowding that exists on the present test channel. The remote intertie channel is to be a place where remote stations can work one another without interference to or from low elevation local stations. *(ED: much like 146.460 MHz on 2 meters.)* Most simplex activity takes place on repeater outputs on this band, but it was agreed that a couple more itinerant simplex channels would be put to good use. The other 42 new channels will go into the pool to satisfy the needs of those on the waiting list.

As a general rule, repeaters will move as follows to implement the new plan:

Old Freq.	New Freq.	Notes
44x.x00	44x.x00	no change
44x.x25	44x.x20	down 5 kHz
44x.x50	44x.x40	down 10 kHz
N/A	44x.x60	new channels
44x.x75	44x.x80	up 5 kHz

Some repeaters will be required to move to entirely new frequencies, however, to resolve outstanding co-channel or co-site problems, or to achieve other band planning goals, such as avoiding the operation of high-elevation systems below 446.2. Notice should be out in such cases by some time in July. Systems on .x25 and .x75 channels are free to move right away, and should do so by 01 August. Those on .x50 channels are to move after that, when notified that the channel is clear. The intent is to fully implement the new plan by 01 May 2000.

Also implemented at the meeting was a new 'Arbitration Committee,' consisting of 10 members serving rotating two-year terms. five members are to meet quarterly to hear cases in which systems are not able to accept a decision of the SCRRBA Technical Committee. If arbitration fails, such cases will be referred to the Official Observers in the form of an interference complaint. The uncoordinated system bears the burden of resolving the interference in such cases, per FCC regulations.

There is one negative and in this day of crowded band conditons there is simply no way around it. 20 kHz will render many older 'user radios' obsolete. In other words, Hams who have been clinging to dear life with pre '90s gear will probably be forced to treat themselves to a new radio. Or, if they have the skill, to modify their older radios with narrower IF filters and lower overall transmit audio deviation. But as my friend Larry Levy wrote in his 1960s poem: "A Primer on Solid State Poetry," "Progress takes its costly toll, as onward technology must swiftly roll." In this case the technology of today makes it possible to fill the demand for the additional channels.

The only question left, is whether or not the rest of the nations coordinators will follow SoCal's lead and switch the 70 centimeter repeater subband over to 20 kHz spacing or opt for some other standard? Only time and repeater coordination policies around the nation will provide an answer.

Our thanks to the Southern California Repeater and Remote Base Association for the material in this story.

The best repeater in town

This one took a bit of time to get into print, but Pete, KA9SWI, says the best repeater in Brown Co., Indiana, is also its first 2-meter repeater. It is on 147.300/.900 and requires no CTCSS access tone at this time. It is on the second highest site in Indiana. The system will eventually be used for severe weather reporting, search and rescue, and other community services as needed.

Pete says the machine IDs as KA9SWI and is open to one and all. So, the next time you are in beautiful Brown County, Indiana, give it a try.

Farewell to the golden era

I received the following e-mail just as I was getting ready to leave for the 1999 Dayton Hamvention. It came from Milt Jensen, N5IA, who for more years than I can remember, has been running a linked repeater network across the Southwestern United States known as The Zia Connection.

Milt's note was actually an announcement of the demise of this system, Rather than try to interpert the whys and wherefores, let's let Milt tell the story for himself:

"Milt Jensen, N5IA miltj@aepnet.com
"Subject: The ZIA Connection
"QST... Virden, NM, 9 May 99
"Fellow Amateurs,

"Seventeen years ago a concept in VHF-FM communications made its on the air debut after some four years of planning, building, testing, and installation.

"In July of 1982, The Zia Connection started operation with a nucleus of three repeaters, Guthrie Peak, Jack's Peak, and Mt. Lemmon. A full time linked repeater system with no operator controls was new, unique, and more importantly, operated with excellent audio quality and quick keying.

"During the ensuing years additional sites came on line expanding the system to the extent that most amateurs have become accustomed to utilizing the last ten years or so. Perhaps the only significant change from day one until today was the implementation of CTCSS access in the late 1980s.

"It is with considerable regret, but at the same time with much relief, that I am making this public announcement that The Zia Connection will cease to exist and operate over the course of the next couple of months.

"A number of factors have brought me to this decision. In a nutshell, I do not have the time or financial ability to properly operate, maintain, and make upgrades to the system. This inability has been noticeable the last couple of years as various repeaters have suffered considerable down time. That type of operation is not what I want for the system and therefore the only proper thing to do is cease to operate.

"At this time I want to give proper THANKS to two individuals who have been at my side from the initial concept to this day — Joe Montierth,WA7ZNY, and Martin Raue,WB5LJO, have been my right and left hand supporters in word and deed for this entire period. Without their efforts, The Zia Connection would have never appeared in the manner that you know it, and would not have existed for this length of time.

"At the same time, I must thank my ever-supporting (I think) wife. She, together with our seven children, undoubtedly suffered most from my dedication to the system. Some of my kids have never known a time when The Zia Connection didn't exist.

"There have been many others, too numerous to list, who have helped in many ways through the years. And certainly there are a few who have yearly sent a cash donation to assist in defraying a portion of the expenses.

"THANKS TO ALL who have made this effort a rewarding experience for me and my supporters. The Zia Connection will now become a portion of Amateur Radio history and I certainly hope that all the memories will be positive.

"The dismantling of the system will begin this coming weekend. The eastern part of the system will be the first to go. I am negotiating with some individuals who want to retain the Benson Ridge repeater as a stand-alone or possibly linked only to El Paso.

"The western part of the system will go away the latter part of the month of May. Again, I am negotiating with certain individuals who desire to maintain the Guadalupe Mtn./Quartzsite repeater as a stand-alone.

"The center portion of the system in eastern Arizona and western New Mexico will essentially remain intact although major changes will be made to the linking method, locations, CTCSS access, and call signs.

"This system will be renamed and will operate under the auspices of an organized club. Although the system will be open to all amateurs, membership in the sponsoring club will be expected from anyone other than the casual transient operator. The primary intent is to provide the highest level of communication capability within the entire operational area. Some additional repeaters will be added to provide coverage where now there is limited or no coverage.

"Again, THANKS for all the memories. After 39 years of licensed Amateur Radio activity, it is still as much fun for me today as it was way back then.

"Milt Jensen, N5IA"

I guess I speak for a lot of the people out in the West when I say: "Thank you Milt for a job well done."

Bill Pasternak WA6ITF, can be contacted by mail at 28197 Robin Avenue, Santa Clarita, CA 91350. His 24 hour/day voice and fax line is 661/296-7180. He can also be reached by email at newsline@ix.netcom.com or billwa6itf@aol.com.

Jerry Wellman, W7SAR

How to present Amateur Radio to officials

Enough of the madness! In six months, we'll have lived through the change from 1999 to 2000 — but until then, enough already!

I was in a hardware store recently and, get this, a rack of tools was advertised as Year 2000 compliant. At first I thought it a joke, but the minimum-wage clerk assured me that these tools came from the manufacturer as Y2K certified. My next thought was "how many dumb customers really believe this?" But I'm sure to many, it's important enough to buy such a set — as if a hammer or screwdriver knows the difference. Egad!

And that's not all. Other products also carry the Y2K "certification" as if there was any governmental or private agency with such authority to determine such status. It's madness! But it must sell because of all the dollars spent trying to convince someone that a computer monitor, a mouse, a tire, or (get this) a food product is better because it's Y2K compliant.

Before I declare this column Y2K compliant I would hope that you're among a seemingly vast minority that understands what this is all about. I hope that you might bring a sane look at reality to your circle of influence concerning Y2K. If all else fails, please point out that Amateur Radio is hereby declared Y2K compliant. (By the way, this is the last you'll hear about Y2K in this column until next January — and then it will be to point out how all was well.)

The Image Changes

I fondly remember the first walkie-talkie I bought. It was a six-channel Wilson, it cost me a small fortune, worked well, and was attached to my belt whenever possible. I loved the attention it brought when someone noticed that I was carrying a radio. It was even better when I could use the radio and show anyone close by that I was an important person — I was licensed, I had a radio, and I was part of this vast hobby known for humanitarian service.

Last week my cell phone died and business took me some distance from home. Not wanting to be out of touch, I carried my tiny UHF portable. I asked my wife to listen during my commute so I could let her know I'd arrived safely and have someone to call if my 1984 Fiero broke down. So here I am in a software training class and I get a message to call the office. I ask where the nearest phone is and the class instructor points to my radio and says, "Why don't you use your cell phone?"

When I tried to explain that it was an Amateur Radio transceiver, he looked at me with this blank stare, clearly not comprehending. Finally he directed me to a phone so I could make my call. I believe he just didn't want to have me make long-distance calls on his office phone.

During a break in the class later that day, I tried to talk Amateur Radio again with him as he was a fellow techie and seemed to like gadgets. He said, "Isn't Ham radio where you need big antennas and have radios with tubes in some messy closet?" He then described images in his mind of what Amateur Radio is all about. He had no concept of a tiny radio being Ham radio. He had never thought about how we offer service at ground zero of a disaster.

I got to thinking and wondered how many of our friends and associates think we're carrying around funny looking cell phones. Maybe they think we're wannabe cops or have no idea what it is we're carrying. They just know it makes noise, but we've either got the volume down or we're wearing an earphone so they don't understand that we use it to converse and make friends.

As I talked with the class instructor, it was clear that he'd never had someone take the time and show him what our hobby was all about. His vision was of glowing tubes, arcing power supplies, and strange antennae. Once we got beyond that image, he asked how he could get his license and my hope is now that he and I will visit on the air some day soon. Until our discussion last week, he had a skewed concept — one you and I need to make every effort to correct.

Consider also that he was not a public safety official, but how many police officers or agency officials share an improper image of what we can do. If they don't understand, they'll certainly not call you. But consider what they might think of someone carrying a portable radio.

I received e-mail from an operator bemoaning the fact that he had been turned away from a search mission. He was extolling the virtues of his ability to be of great benefit to the effort, but he said they were not allowing volunteers to help. I would bet that from his perspective he failed to notice that volunteers were being used, but came from within an established system, not what we call the 'convergent volunteer.'

Put yourself in a line officer's shoes and think about his or her perspective. You show up with a radio. You might have an ID card you prepared on your home computer. You might even have a badge showing your name and call sign. You might even have a police-type leather belt with assorted devices hanging on it. What does the officer think? Are you a police scanner enthusiast and drawn to excitement? Are you trying to impersonate an agency official?

If my computer system were down and someone showed up at the door with a fancy toolkit, there's no way I'd simply invite them in to work on my system — no matter how well qualified they looked. I'll grant you that operating skills are essential. I won't buy into the assumption that being a good DX operator in any way matches an understanding of how a public service agency operates. I've been forcefully told that I should write and recognize the skills of the DX operator and promote this expertise as of value to an ARES operation. I'm willing to listen, but it will be a hard sell to convince me that knowing how to point a beam toward a far away place and the ability to work a pile up equates to knowing how the Incident Command System works.

Can you envision me calling the county emergency services officer and suggest having the ability to contact rare foreign stations is something beneficial during a hazardous materials evacuation? But truly folks, that's what some of you write and tell me by way of an excuse to avoid affiliating with and training with an ARES group or other public safety group.

Remember that the image a public service group or agency has of Amateur Radio is what YOU place there. If your introduction is a complex HF home station talking to Pacific islands, that's the image that will be remembered. If you show you can talk to foreign stations, that will be remembered. If you saunter in with your police look-alike belt and badge, that's the image that sticks. If, on the other hand, you offer to assist with communication needs and demonstrate during an exercise you can fit into an emergency response role and meet the needs, you'll be invited again and again.

Recent disasters

Our newspaper system receives hundreds of photos each day via satellite from several agencies such as Associated Press and Reuters. Following a disaster somewhere in the world I like to poke through the day's photos. For me, a certified news junkie, the satisfaction is seeing the photos that don't make the day's edition.

We also have a satellite system and I like to view the various TV station and network raw feeds from disaster spots. It's interesting to see what doesn't make the evening broadcast, for like a newspaper, there is always more news that can be printed or transmitted. A TV or newspaper editor decides what will be of interest to the viewer or reader and that may or may not include disaster images.

I was so pleased when a tornado aftermath photo included several volunteers, one of which was holding what I clearly noted was an Amateur Radio. Unfortunately the photo was a general cleanup shot and wasn't about communications so there was no identification of who the fellow was holding the radio. It was just nice to know you're out there, you're not often getting recognized for the service you do, but you're willing to get involved.

It's rare that the general media portrays the support side of the effort, but my hat is off to you who willingly get involved. Thank you for caring enough to take the time to help others.

Presenting yourself

A reader asked for some advice in giving a presentation to city officials as to what Amateur Radio is all about. Several things came to mind.

First, be quick. You've got about three minutes to capture interest or you've lost the battle. Tailor your first three minutes to grab their attention. Your best bet is to research local hazards and disaster potential and develop a possible scenario. Then explain what unique ways you can help them. Be specific.

Second, stick to non-technical facts. An agency isn't going to know what a yagi or a dipole is. They will appreciate that you can send error-free messages over somewhat secure channels. They'll not understand the words "packet" or "node."

It's always good to involve your audience with an extremely brief scenario, such as asking the mayor how he or she would communicate with their own family if an earthquake hit right now. You could have your own family standing by directly if they're licensed operators or you could have an operator ready with a phone patch and give an example of how Amateur Radio works.

As you contemplate a presentation, ask yourself what do you want to convey to your audience and what your audience is expecting from you. Again, if they are considering you as a cop wannabie, avoid reinforcing that image. If they think you need big antennas and glowing tubes, demonstrate how your little radio operates through a wide area repeater network.

Don't be shy. Remember you're the expert or they would not have you presenting to them. But don't be arrogant. You'll find great satisfaction in service and it's OK to tell your audience your motivation for wanting to be involved.

Good luck as you discover ways to serve others. I salute your willingness to teach and be taught and your efforts to be ready to respond. I thank those of you who have the opportunity to respond and valiantly represent this hobby we dearly love. Until next month, best wishes from Salt Lake City!

— Jerry Wellman, W7SAR, can be reached at: P.O. Box 11445, Salt Lake City, UT 84147 or via e-mail: jw@desnews.com

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The pursuit of a lost hobby

Jack Handler, KB2BCC
kb2bcc@bestweb.net

The year was 1984. George Orwell and Big Brother seemed imminent, but I passed the 5 wpm code test. As a Novice I was not permitted 2-meter operation, but I was elated with my new CW friends. What a dramatic difference from the Chicken Band (CB), from which I had just been weaned! I soon discovered Ham Flea Markets — an alternative to the faded Canal Street Electronics Surplus Bazaar.

I bought my first rig, a Ten-Tec Century 21 CW-only transceiver, from my long-time friend and mentor John, KA2TMU, and will always remember my first (on-the-air) QSO; my reward was the joy of accomplishment and perseverance. An Amateur Radio license is a special achievement, a privilege to be proudly earned; the Ham's contribution to Amateur Radio is a testimony to this fact.

As the years went on I busied myself with many radio projects and found much satisfaction working with radio gear and electronics — the Transoceanic, ARC 5, Viking II, and the Heathkits, with a passionate regard for tubes (those romantic widgets of yesteryear). I had acquired a collection of obsolete, unwanted equipment. My apartment looked like a section of Methuselah's attic — his Ham shack!

Eventually, I upgraded my license to Technician class. The year was 1987, and grumbling about the new no-code Tech License was a major preoccupation for amateurs, who rag-chewed day and night. My 2-meter rig was a Kenwood HT (TR-2500). The excitement of being in the group and taking part in the technical and swap and shop nets was paramount to my affinity for electronics. I continued with hobby radio until the onset of multiple-sclerosis became apparent: a delicate ear, vision problems, tremors, fatigue, as my legs continually betrayed me. Survival issues soon precluded the pursuit of hobbies. I was thrown into a medical Odyssey which became a labyrinth void of direction.

The progressive and disabling effects of MS reared their ugly heads and I was declared totally disabled. I spent many hours immobile as my body refused to ambulate. Talk-radio, rock and pop standards, those marvelous mavens of melodious memories... I've listened to them all. But the broadcast band was not where I wanted to be.

"Where's my rig?" I exclaimed.

The next day (18 Feb 1995), with the help of friends, I descended to the basement. We uncovered Lafayettes, Eicos, Yaesus, Ten-Tecs and Kenwoods.

I grabbed my 2-meter rig and shouted, "KB2BCC listening!"

I had found a new way to be a part of the world, a lost hobby.

For more information on MS (Multiple Sclerosis), visit the National Multiple Sclerosis Society home page at www.nmss.org. This page also has information about the popular MS Walks and Bike Tours, activities in which amateurs can participate as volunteer communicators! Crank up that public service interest in your club and volunteer!

For information on the Courage HANDI-HAM System, please contact: Courage HANDI-HAM System, 3915 Golden Valley Road, Golden Valley, MN 55422; Tel: 612/ 520-0512; Fax: 612/ 520-0577; handiham@mtn.org; www.mtn.org/handiham.

HANDI-HAMS needs volunteer readers to put Amateur Radio materials onto cassette tape for the blind. We provide the tape, the material to read, and some basic instructions. You need to have a cassette recorder. Can you help? Contact Patrick Tice, WAØTDA, at wa0tda@arrl.net.

Send it to us!

Send your news, articles and ideas to:
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2120 28th St. • Sacramento, CA 95818
or
e-mail to: n6wr@ns.net

Visit Your Local RADIO CLUB

For information on how to get your club listed in *"Visit Your Local Radio Club,"* plus receive many other benefits, write to: Club Liaison, *Worldradio* 2120 28th St. • Sacramento, CA 95818

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 12/99

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. 5/00

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). 2/00

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: call 146.835(-). 5/00

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m. Amer. Legion Post #746, 1709 Bruce Dr., Anderson, CA. Net every Tue., 7:30 p.m. on 146.64. http://www.snowcrest.net/bgorski/index.html 10/99

Beach Cities Wireless Society. P.O. Box 4016, San Clemente, CA 92674. Meets 2nd Thurs./monthly, 7:30 p.m., Ole Hansen Beach Club, 105 W. Avenida Pico, San Clemente. Rptr. 146.025(+) PL 110.9. 8/99

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. 5/00

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 07:30, Baker's Square Rest. in Richmond, CA. Info: Stan Clark, KB6SEI, (510) 724-0158. 2/00

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle School cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m.http://www.downeyarc.org. For info: Larry Vaughn, kd6nzw at kd6nzw@downeyarc.org 5/00

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. 3/00

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/99

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., Sharp Health Care, 25500 Med. Cntr. Dr., Murrieta, CA 92562. Rptr: KE6UES 146.805(-) PL 100. Info: Norb Dean, AD6F, (909) 767-0449. E-mail: norbjudy@pe.net 7/99

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(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (925) 373-1386. 2/00

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Scout bldg. at Pacheco Pk., 7th St. & Pacheco Blvd. 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. Web site: Home.inreach.com/AB6KF 6/00

Marin Amateur Radio Club (MARC). W6SG. Box 9456, San Rafael, CA 94912-9456. Meets 1st Fri./7:30 p.m., Kaiser Hosp., Bldg. 2, Terra Linda, CA. (except Dec.; Sun. a.m. Club at Alto Building, 27 Shell Road, Mill Valley. 9/99

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Church, Telegraph Road. & Teloma Dr., Ventura, CA. For info: Jim Casper, N6PIQ, (805) 649-1445. 4/00

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. For infol: (916) 483-3293. 9/99

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net at noon on rptr. W6AK/R 146.91(-). Steve Cates, KC6TEV, (916) 391-7341 or Les Ballinger, WA6EQQ, (916) 393-4775. 2/00

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 Restaurant, El Camino Ave. & Watt Ave. For info contact Paul Wolf, W6RLP (916)489-8112. 12/99

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, Sun. net 7:30 p.m. 28.415. 6/00

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. 8/99

This month...Boulder Amateur Radio Club (BARC), from Boulder, CO, are winners of an MFJ Antenna Analyzer to share with its members. The club's name was selected at random from our *"Visit Your Local Radio Club"* listing.

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, at 91 Fwy/Lakeview. Info: Ray Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/00

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Lane, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/99

Nevada County ARC. Meets 2nd Mon./monthly, 7 p.m., Salvation Army Bldg., 10725 Alta St., Grass Valley, CA. Net Tues. 7 p.m. 147.015. Contact Linda Johnson,KE6HWE,lindasue@mail.telis.org (530) 273-2008. 8/99

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., (except 3rd Tue.) & Thur., 145.190(-) (PL 162.2 Hz) & 224.400(-) MHz. For info contact: Earl Mead, K6ESM, (916) 331-1115. E-mail: nhrc@K6IS.org or http://www.k6is.org 4/00

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 Bud Barkhurst, WA6VPP, (714) 744-6361. WWW.W6ZE.ORG 2/00

Southern Sierra ARS. Meets 2nd Thurs./monthly, 7 p.m., Veteran's Hall, 125 East F St., Tehachapi, CA. Contact: Caroline, KD6KMN, (805) 822-5995. 147.06(+), 224.42(-), 145.090(S) Packet. 1/00

Tri-County Amateur Radio Assoc. P.O. Box 75, Claremont, CA 91711-0075. Meets: 2nd Mon./monthly, 7:30 p.m., Brackett Airport Adm. Bldg., 1615 McKinley Ave., La Verne, CA 91750 (so. side of Bracket Airport). Info: Chuck, KQ6NX at kq6nx@juno.com or (909) 949-8145 3/00

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. 11/99

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. 8/99

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. Gerald Grossardt, (707) 447-0869 5/00

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., Presidio Rec. Cntr., 11100 Apple Valley Rd., Apple Valley, CA Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 2/00

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. 145.440(-) PL 136.5. For info: Jane, KD6ODV, (714) 531-6707 12/99

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., W. Dist. R. C. Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 146.67(-) except mtg. night. Website: http://www.qsl.net/wa6rc Voice Mail: (310) 478-7555 7/99

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. 9/99

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Denny's Restaurant, 4120 Chiles Rd., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 12/99

Yuba-Sutter Amateur Radio Club, (YSARC). P.O. Box 1169, Yuba City, CA 95992. Meets 2nd Thurs./monthly, 7 p.m. Location announced at Mon. net, 7 p.m. on 146.085. 3/00

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:30 p.m., NIST Bldg., 325 So. Broadway, Rm 1107, Boulder, CO. Talk-in: 146.70(-) & 100Hz CTCSS. Info: (303) 380-6540, e-mail:BARC@pobox.com or www.thisistrue.com/barc.html 8/99

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: Bob Dargel, KA1BB, (860) 739-8016. 8/00

Western CT. DX Club. Meets 1st Tues/monthly, 8 p.m., Brookfield Com. Cntr. (on Pocono Rd. across from Brookfield P.O.) Info: contact Victor at: victoras@EROLS.com 8/99

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Marchman Tech. Ed. Cntr., 7825 Campus Dr., Bldg. C, Rm C122, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 11/99

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. 12/99

Vero Beach ARC, W4OT. P.O. Box 2082, Vero Beach, FL 32961. Meets 2nd Thurs./monthly, 7:30 p.m., Emerg. Mgmt., Indian River County Adm. Bldg., 1840 25th St. Net Mon., 7:30 p.m. 146.64. 3/00

GEORGIA

Cherokee Capital ARS. Meets 2nd Tue.monthly, 7 p.m., Ashworth Middle School, Calhoun, GA. 146.805(+). Info: Felton Floyd, AF4DN, (706) 629-0369. 12/99

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. 4/00

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. 8/99

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. 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, Pizza Hut, Puainako Twn. Ctr. 7/99

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elementary. School, 615 Auwaiolimu, Honolulu. 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. 12/99

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/ 8/99

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. 8/99

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. 8/99

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: (312) 974-3291. 2/00

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+). 4/00

Wheaton Community Radio Amateurs, (WCRA). P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Wheaton, IL. Rptrs: 145.39(-) (107.2), 224.14(-), 444.475(+) (114.8). Info: Ron Hensel, K9ZZE, (630) 365-0213, k9zze@aol.com 8/99

INDIANA

Land of Lakes ARC. Meets 4th Tues./monthly, 7 p.m., Steuben Co. Annex Bldg., Angola, IN. For info: Theresa J. Limestahl, KB9NNR, (219) 495-5403. Call-in 147.180 PL 131.8. E-mail: llarc-k9hd@yahoo.com 7/99

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 6/00

MARYLAND

Maryland Mobileers Amateur Radio Club (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 4/00

MASSACHUSETTS

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 3rd Thur./monthly, 7:00 p.m. at Wakefield Public Library, 345 Main St., Wakefield, MA, Sept. to May. Info: Jim Chamberlain, N1AKG, (781) 944-5098. 5/00

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 7:30 p.m., Civil Air Patrol Bldg., Lenawee Co. Airport, Cadmus Rd., Adrian. ARES net Sun., 9 p.m. 145.37(-). Info: Neil Griffith, KC8DAR, (517) 263-5774. 6/00

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/00

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. 10/99

MINNESOTA

St. Cloud Amateur Radio Club. Meets 3rd Thurs./monthly, 7 p.m., Radio Club Bldg., 401 4th St. N., Waite Park, MN 56387. Info: (320) 255-1410, 146.94 or 147.015 or www.wØsv.org/ 3/00

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202. 11/99

MISSOURI

Macon County ARC. P.O. Box 13, Macon, MO 63552. Meets last Thur./monthly, 8 p.m., Macon R-I High Sch., rm.167. Net every Thurs. at 8:30 p.m. 146.805. E-mail: nøpr@onelist.com 12/99

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 8 a.m., Country Inn, SE cor. W. Sunset, Valle Verde, Henderson NV. Club info: Jim Frye, NW7O, (702) 456-5396 or Bill Scarborough, WA6ASI, (702) 269-9551. 8/99

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Carson Valley United Methodist Church, 1375 Centerville Ln., Gardnerville, NV. Contact: George Uebele, WW7E, (702) 265-4278, 147.330 MHz. 1/00

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 8:30 a.m., JM Restaurant & Grille, 1885 S. Virginia, Reno. Info: (702) 356-8200. Call on 147.30(+) MHz. 5/00

NEW HAMPSHIRE

Port City Amateur Radio Club, (PCARC), W1WQM. P.O. Box 1587, Portsmouth, NH 03802. Meets 1st Wed./monthly (Sept.-June), The Edgewood Ctr., 928 So. St., Portsmouth. Rptr. 146.805(-) PL 127.3, 110.9, 88.5. 10/99

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. 6/00

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. 8/99

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. 12/99

Genesee Radio Amateurs, (GRAM). Red Cross Office, 220 East Main St., Batavia, NY 14020. Meets 3rd Fri./monthly, 7:30 p.m.,147.285(+) W2RCX. 4/00

Hall of Science Amateur Radio Club. 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. 2/00

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9:15 a.m. Thurs. 3853 MHz. 5/00

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Info: W.S. Black, KB2YAP, (516) 289-5587. 5/00

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(+). 2/00

NORTH CAROLINA

Mecklenburg Amateur Radio Society. Meets last Tues./monthly (except Dec.), 7:30 p.m., East Baptist Church, 6850 Monroe Rd., Charlotte, NC. Talk-in 146.94(-). Net 9 p.m. nightly. Contact: John Coving- ton, W4CC, (704) 334-3900, e-mail: w4cc@w4bfb.org, website: http://www.w4bfb.org 12/99

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. Web page: www.qsl.net/SCARC/ 5/00

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(-). 12/99

Toledo Mobile Radio Association. P.O. Box 273, Toledo, OH 43697; (419) 243-3836. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. 147.270(+) Net every Sun. 8:30 p.m. Website: www.tmrahamradio.org 3/00

Van Wert Amateur Radio Club, Inc. P.O. Box 602, 1220 Lincoln Hwy., Van Wert, OH 45891. Meets 1st & 3rd Sat./monthly, 8 p.m. Call-in: 146.85(-). 3/00

Western Reserve Radio Assoc. P.O. Box 81252, Cleveland, OH 44181-0252. Meets 2nd Wed./monthly, 7:30 p.m., Jenkins Communications Cntr., Main St., Olmsted Falls, OH. Info: Cliff Bade, W8CJB, Sec., 146.73(-), 444.900(+) MHz. 8/99

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. 1/00

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thur./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 147.06(+) MHz. Info: (541) 389-7194. 9/99

Hoodview Amateur Radio Club. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Community College/Gresham, Rm 1001. Rptrs: 147.28(+), 448.475(-5) (tone 167.9) 5/00

Keno Amateur Radio Club. P.O. Box 653, Keno, OR 97627. Meets 3rd Thurs./monthly, 7 p.m., Keno Fire Stn. Rptr. 147.32(+) K7ENO. Info: Tom Hamilton, WD6EAW, Telephone/FAX: (541) 883-2736. wd6eaw@cdsnet.net 12/99

PENNSYLVANIA

Butler County Amateur Radio Assn. P.O. Box 1787, Butler, PA 16003-1787. Meets 1st Tues./monthly, 7:30 p.m., Boy Scout Cntr., 830 Morton Rd., Butler, PA. Call-in W3UDX/R 147.36(+). Net 10:10 p.m. nightly. 12/99

Mercer County Amateur Radio Club, 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. 6/00

VIRGINIA

Mt. Vernon Amateur Radio Club, (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., Mt. Vernon Governmental Cntr, 2511 Parkers Ln., Alexandria, VA. Contact: Bob, KT4KS, (703) 765-2313 or 146.655. 10/99

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: Carl Clements, Pres. (757) 484-0569. http://www.series2000.com/users/wa4nvi/parc/htm 4/00

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 2/00

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Dr. off N. Hampton, Village 2 Commons, Graybeale Bldg., Virginia Bch, VA . 2/00

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. 5/00

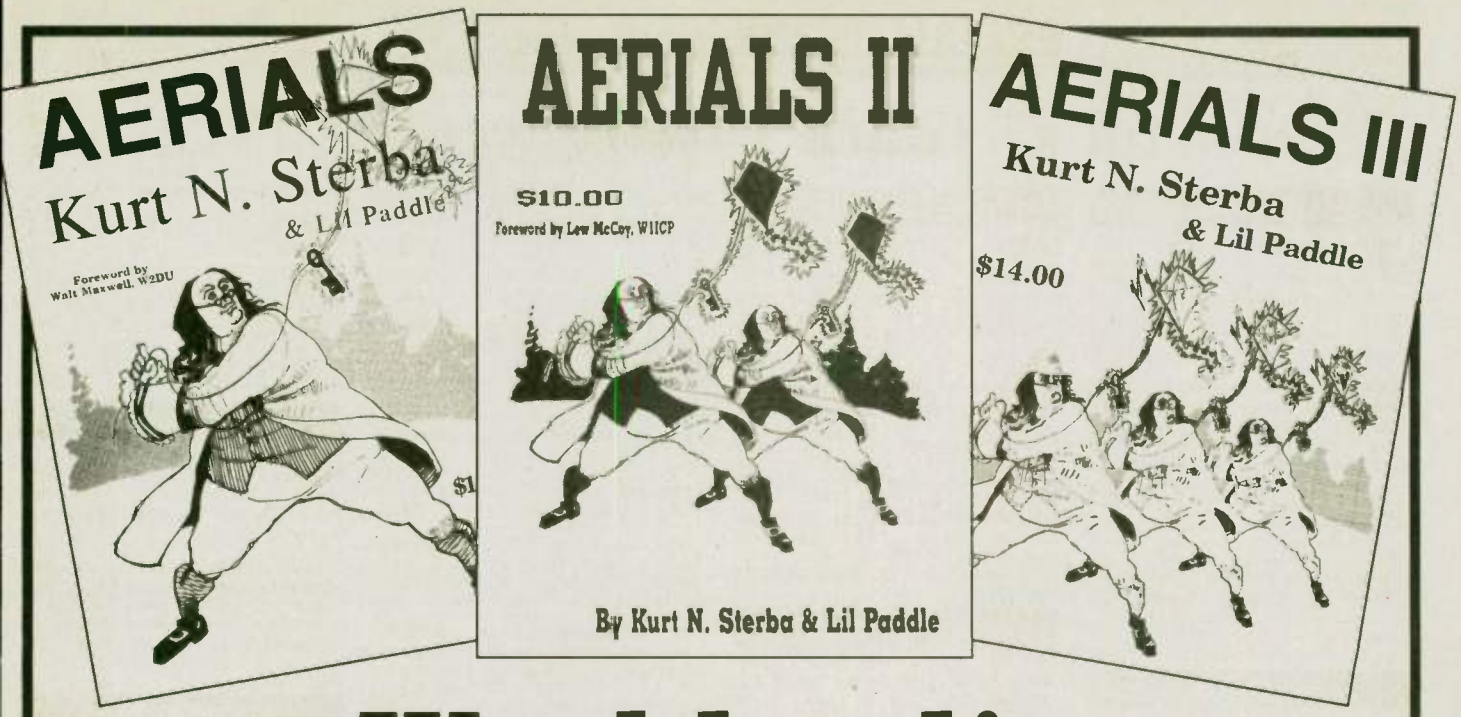
WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., Saint John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. Info: D. Tennant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 7/99

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7 p.m., The American Red Cross, 111 Veteran's Memorial Blvd., Huntington, WV. 5/00

NATIONAL

Bicycle Mobile Hams of America. 46 states/6 nations membership. Annual Forum at Hamvention. Net: 14.253, 1st & 3rd Sun., 2000 UTC. Info, sample newsletter: SASE to BMHA, Box 4009-W, Boulder, CO 80306. 2/00



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The Victor C. Clark Youth Incentive Program

Hello again everyone! I was looking around the American Radio Relay League web site (ARRLWeb, located at http://www.arrl.org), and found a very interesting program that the ARRL offers to groups who plan to promote Amateur Radio to youth under the age of 18! I was given permission by the ARRL to feature this program, and use the information from the ARRLWeb. If you think this program might be of any assistance to you and your group, read carefully and act now!

At the request of the family of the late Victor C. Clark, W4KFC, the ARRL Foundation established the Victor C. Clark Youth Incentive Program, with the objective of providing support for the development of Amateur Radio among high-school age (or younger) youth. Funded by endowment and contributor support, the program makes minigrants available to groups that demonstrate serious intent to promote participation in Amateur Radio by youth and enrich the experience of radio amateurs under the age of 18.

Groups that qualify for minigrants will include, but not be limited to, high school radio clubs, youth groups, and general-interest radio clubs that sponsor subgroups of young people or otherwise make a special effort to get them involved in club activities. Minigrants, not to exceed $500 per grant, will be made for such projects as securing equipment for antennas for club stations, purchasing training materials, supporting local service projects that bring favorable public exposure, and similar activities. Preference will be given to projects for which matching funds are raised locally.

An applicant for a mini-grant must write a brief, but complete proposal including such items as:

- Names, call signs (if applicable), addresses and telephone numbers of sponsors
- Objectives of the proposed program
- Existing resources if relevant (e.g. status of school club station, etc.)
- Concise, realistic statement of financial need
- Description of local resources (e.g. matching funds, specific financial and/or equipment/material contributions)
- Commitment of relevant local non-ham group (e.g. school, school science coordinator and/or principal, school board)
- Any relevant supporting documentation including letters of support, letters of intent, pledges and the like
- Timeframe; local evaluation process; criteria for evaluating program effectiveness/success.

The ARRL Foundation is eager to assist worthy local Amateur Radio youth efforts through the Victor C. Clark Youth Incentive Program. We look forward to receiving your proposal in the near future. Our address is: The VICYIP Program, The ARRL Foundation, Inc, 225 Main St, Newington, CT 06111. Please, no proposals by email. — *ARRLWeb*

ARRL Youth Skeds Database

After reading up on the Victor C. Clark Youth Incentive Program mentioned above, I also found an excellent online database that allows young amateurs to set up schedules with school stations, youth club stations, or any other young amateur in the world! The American Radio Relay League's Youth Skeds Database is located at http://www.arrl.org/ead/youthskeds. Anyone may enter their call sign, station location, and the time and date they are going to be operating into this database. That information will be stored on the database and other amateurs from around the world can find it by doing a simple search!

If you are planning on operating at a Boy Scout or Girl Scout camp, with your Amateur Radio youth group, or are just interested in making contact with other young amateurs, turn on your computer and check out this excellent tool!

TAROC — youth group serving Canada!

Teen Amateur Radio Operators Canada (TAROC) is Canada's new Ham radio youth group, based on the Internet! TAROC currently has 25 members (as of the date this column was written), and is working to bring Amateur Radio into the lives of other young ones, as well as helping to improve our hobby. Mike Roberts, VE7KED, of British Columbia is TAROC's Western Manager, and Dennis d'Entremont, VE1DCD, of Nova Scotia is the Eastern Manager. Head on over to the TAROC web site at http://www.qsl.net/taroc for club information, newsletter, pictures and news!

LYRA web address changed

The League of Young Radio Amateurs (LYRA) has moved their excellent web site to http://www.excellweb.com/users/lyra. If you aren't familiar with this club, LYRA is an Internet-based Ama-

teur Radio group run by and for young Hams under the age of 19. LYRA is over a year old now, and currently has 105 members from all over the U.S. Brian Kiepura, KC8ESL, is the current President of the club, and Jake Lauser, KK7GP, is the Vice-President. If you are a young amateur, be sure to join! Did I mention the dues you have to pay? There are none! It's free!

IYCC — Helping to unite young amateurs from all over the world!

The International Youth Communications Council (IYCC) is a council of Amateur Radio youth groups and clubs from around the world whose goal is to promote Amateur Radio, and help foreign countries create Ham radio clubs for their youth. This council was co-founded by Mike Roberts, VE7KED, and Christopher Arthur, KT4XA. Affiliated organizations of the IYCC are the League of Young Amateurs (LYRA), and Teen Amateur Radio Operators Canada (TAROC). If you are interested in this Council, or have any thoughts of starting an Amateur Radio club for the youth in your country, please visit the IYCC web site at http://www.qsl.net/iycc today!

That's all, folks!

That's all for this issue of the Youth Forum. You've just read about an excellent source of support from the ARRL to help your local youth group, and a great way to set up schedules to make contacts with other young Hams. Also, I featured a few online Amateur Radio clubs. Granted these clubs are just based on the Internet; have no doubt that they will significantly improve our hobby by bringing the future of Amateur Radio together — the youth.

As always, please mail or email comments, suggestions or topic ideas, as I enjoy receiving input from the Youth Forum's readers. I hope everybody has a great summer!

HF propagation conditions are getting better by the day, so be sure to get on the air and work all the DX out there. If you aren't yet licensed to operate on HF, take some time out and study for the easy 5 words per minute CW test. You'll be glad you did so you can join all the fun on HF!

Until next time, 73!

— Brian Mileshosky, N5ZGT, can be reached at: 1021 Dakota S.E., Albuquerque, NM 87108, or via e-mail: n5zgt@swap.com, and the web: www.swap.com/~n5zgt

Amateur "Hi"

Ever had a funny or strange experience with Amateur Radio, on or off the air? If so, type it up (or print neatly) and send it to us for consideration in our monthly AMATEUR "HI" contest. You could win a free year's subscription to ***Worldradio****!*

A dark night in Liberty, MO

James Ballard, KØOGU

John, Fred and I all worked for the long distance part of the telephone company. Each of our jobs was different, but we all worked together. Fred, WØUIE, and I, KØOGU, both were General class operators at the time. John had held a Novice license, but it had expired. At that time they were only valid for one year.

Fred and I kept after John to get a license. Then one day he took a day off. He went to the FCC office in Kansas City, MO and passed tests up through Advanced. He told a friend he went for Advanced to show Fred and me up. He then sat down and built himself a transmitter but didn't get on the air with it.

Fred and I accused him of being afraid of TVI. After about a year, we were successful in getting him to agree to a schedule.

The night came, Fred and I were on frequency waiting for John. When he came on, John had a good clear signal.

He gave Fred's call, WØUIE, and then my call, KØOGU. Before he could get his call out, the power went off all over the city of Liberty, MO. This was not unusual for the town. The next day we accused John of causing the power outage. That was many years ago.

John is now a silent key, Fred has his Advanced ticket and I'm now an Extra. The lights still go out in the town of Liberty often, but John never got on the air again.

RAC treasurer resigns

Radio Amateurs of Canada Treasurer John Watson, VE3GTX, has become the latest to resign from the RAC Executive. Watson's resignation comes just a week after RAC's president and secretary stepped down for unrelated reasons. The announcement of Watson's resignation came from RAC Acting President Doug Leach, VE3XK. As with Doherty's resignation, no reason was given for Watson's departure.

Watson had served since 01 January 1999. He was appointed by former RAC President Patrick Doherty, VE3PD, and he assisted Doherty in implementing cost-cutting measures designed to address a decline in RAC membership and revenues in 1998. Watson also developed a detailed budget for 1999.

"Following a significant loss in 1998, the RAC financial situation is turning around, after a low at yearend," Leach said.

On 01 May RAC Secretary Joe MacPherson, VE1CH, stepped down citing the pressure of new outside responsibilities.

There are approximately 45,000 amateurs in Canada. All RAC Executive officers serve as volunteers. — *ARRL Letter*

Ace Jansen, N3AHA

Mobile operating in a contest

Yeeha! Back in March, I had a great time operating during the Virginia QSO Party. I was able to operate mobile from 29 Virginia counties and made 850 SSB and CW contacts. A friend from church, John Foote, W3GX, helped me by doing most of the driving while I did most of the operating. Fortunately John and I survived the pace as we sat in the van for about 26 hours and drove more than 800 miles.

We achieved our goals to set a record for mobile operation during the Virginia contest and to win the mobile contest category. We came up with some creative ways to help us boost our score and now it's time to pass on our lessons learned. Here are some tips for you if you plan to operate mobile in a state QSO party. Actually most of these tips will help you if you're planning a mobile county hunter trip anytime.

By all means, follow the rules for the specific contest; some prohibit contacts on nets, some prohibit 2-meter QSOs, some prohibit self-spotting (which I assume means packet), some limit operating hours, etc. We followed the rules and we took advantage of the internet to drum up interest in our mobile trip. First, I sent an email on the county hunter e-mail reflecter and posted a note on the county hunter forum (www.delve.com/ch/) and county hunter.com web page (www.county hunter.com) asking what Virginia counties the county hunters needed. I got about 15-20 responses over a two-week period. Next, I counted the number of folks needing a specific county and wrote that number on a county map of Virginia. This helped me to see the distribution of most needed counties across the state. I also focused on county hunters needing only one or two counties to finish up all counties in Virginia. I then mapped out my trip trying to maximize the number of county hunters I could help while maximizing the number of counties I could operate from in a 25-26 hour trip.

After I knew my trip plans, I went back on the same county hunter email reflector and county hunter web pages and announced my trip plan. This alerted the county hunters who monitor the internet an opportunity to know my plans and provided them with an opportunity to try and be on the air when I was in the county they needed. I planned an hour in each county, so I was able to project an hour window when county hunters should look for me in a specific county. I also announced what frequencies I thought I would operate on CW and SSB. This is similar to DXpeditions announcing their planned operation, times and frequencies.

Of course my pre-contest work wasn't all trip planning, I also needed to get the van, radio and antennas ready for the trip. I had planned to have three antennas; my old trusty Hustler multi-resonators for 15, 20 and 40 SSB, a new Nott screwdriver antenna for 40 CW and 75 Meters, and another new 5-band antenna system from E-Field. I thought having a tertiary back-up was good. I had the Hustler and Nott screwdriver antenna ready to go and tried to resonate the E-Field antenna the morning of the contest. Murphy: "Strike one!" I could not get a couple of the E-Field resonators to resonate in their perspective bands, but decided to start driving anyway.

They're off!

We were barely out of my neighborhood when I realized the Hustler antenna was not resonating. I determined that the E-Field resonators were too close to the Hustler resonators causing a shift in the Hustler's resonant frequency (which also didn't help me to resonate the E-Field antennas either...aha!). I decided to take off the E-Field antenna...everything was okay and I was on the road again. (Note: I'll provide a review of the E-Field antenna in a future column...this time testing it with no other antennas on my van)

Another five minutes down the road and I couldn't find my map that I so carefully highlighted my road itinerary. Murphy: "Strike two!" I went back home and searched for ten minutes then gave up. Fortunately, I had the list of counties I planned to run and could reconstruct the route...even better this time to net a couple more counties.

On the way to getting to our pre-determined start point, we ran counties and tried to help county hunters with counties we didn't plan to run during the contest. Unfortunately, this caused us to be way behind schedule, so we started the contest about an hour away from where we had planned. This netted another county we didn't plan to run, but it threw off all my calculations for when and where I was supposed to be in a county. Murphy: "Strike three. Next batter!"

The first day, we didn't operate too much on the SSB county hunter's net frequency, not feeling that it was the most contest-kosher way to operate. But after re-reading the rules, we did not see anything that prohibited operating on or near the county hunter nets. When possible, we made contacts on the nets and it did improve our QSO count. The county hunter nets normally take relays, but since we were operating the contest, we did not take any relays while operating on the nets. It was a challenge to get county hunters to tell us their state and contest QSO number which they're not used to saying during a normal net exchange. But once they realized that we were operating a contest, contacts were quick and efficient. Operating on the CW net frequency didn't quite feel like we were on a net, because it was less structured — the county hunters were on the frequency, but there usually wasn't a control station. One drawback to operating on the nets was I exchanged signal reports also, which wasn't required for the contest, but expected on the net.

Prior to the contest, I had the previous record mobile score and determined that a new record was possible. I used the rules to project how many contacts (SSB and CW), multipliers, and the number of counties we needed to run to set a new record. Assuming a certain number of contacts, I quickly determined that a single multiplier was worth a ton of points. Towards the end of the contest, a multiplier was worth about the equivalent of 600 contacts. Finding another multiplier was definitely easier than making another 600 contacts. For that reason I spent time every hour searching the band for someone in a new state, new country, or new VA county that would increase our multiplier count. We had time to operate from more counties or even make more contacts in the counties we ran, but it wouldn't boost our score nearly as much

as finding a new multiplier. If you are trying to boost your total score, you need to understand the rules and scoring policy. It will most likely be counter to normal logic of operating from more counties or making more contacts.

Another way we increased our multipliers was to use 2 Meters in the counties we drove through. The rules prohibited contacts on repeaters. That, to me, means you can't count a contact on a repeater; however, it didn't say we couldn't initiate a contact on a repeater, move to a 2-meter simplex frequency and count that contact. So as we drove through counties, we searched for a repeater, then asked anyone listening to move to simplex and make a contest exchange. This was another one of our creative ideas of boosting our score.

We claimed a score that broke the previous record by 60%. In the process, we had a lot of fun, helped a bunch of county hunters and contest participants, and set a record for someone else to break. Hopefully you will take some of these ideas and establish a goal to set a record in your state QSO party. Remember, all contest rules are different, so beware! Good luck!

The 1999 MARAC National Convention

This year's convention will be held 30 June - 03 July in beautiful Post Falls, Idaho. Hopefully you Northwesterners reading this in mid to late June will consider taking a trip over to Idaho. Post Falls is in Northern Idaho, just east of Spokane, Washington. Templin's Resort, on the north bank of the Spokane River is where the conventioneers will gather. For early arrivers, there will be a barbecue and pot-luck on Tuesday the 29th at the home of Dennis Hall, KK7X, in Rathdrum, Idaho, just North of Post Falls. There will be free burgers and chicken and horseback riding and hiking on a nearby private trail. Some of you may know that Dennis is a very active mobile operator from his 18-wheeler.

Registration will begin on Wednesday the 30th with yet another barbecue and entertainment. The drawing for the pre-registration prize (Icom IC-706 Mk II mobile radio) will be conducted at that time. Also planned on Wednesday is a cruise on Lake Coeur d'Alene and a trip to the Silver Valley. If that doesn't float your boat (pun intended), outlet shopping is just five miles from the hotel with shuttles running hourly.

There's lots of time to discuss counties, show-off mobile radio and antenna installations and talk about the county that got away. The main event is the annual awards banquet on Saturday. The banquet is where MARAC announces the Mobile operator of the Year, Net Control of the Year, and County Hunter of the Year. There are also plenty of door prizes at the banquet.

For more information, contact Ken, W7LQT, or Avon, W7WBZ, 1035 N. Highland Ct., Post Falls, ID 83854.

3 Cheers for You's 2!

Here are the latest recipients of the worked all counties award, *CQ* magazine's USA-CA.

971 K2JG 04-14-99

970 W7HOR 03-19-99

Until September, hope your logs are full of new counties, you consider operating mobile in a state QSO party, and you joined the conventioneers in Idaho. Happy Hunting, 73, Ace N3 aha!

—Ace Jansen, N3AHA, 42857 Hollywood Park Places, Ashburn, VA 20147; email: jansens@tidalwave.net.

Is CW dead? *(conclusion)*

The text of Part 1 in the May issue ended with this paragraph: "Amateur First Grade applicants took written tests on radio laws, regulations and the proper adjustment and operation of equipment. The code sending and receiving tests, originally 5 wpm, increased to 10 wpm by 1919. Candidates for Amateur Second Grade, in contrast, certified to Radio Inspectors by mail that they could meet these requirements, but were unable to attend an examination. We now continue the text from the sidebar "Postscript: 80 Years of Licensing," from The FCC Rule Book; Complete Guide to the FCC Regulations Governing Amateur Radio," 1995 by The American Radio Relay League. (Incidentally, the quoted material from 80 Years of Licensing" was researched and written by Neil D. Friedman, N3DF.)

"Until 1933, station and operator licenses were issued as separate diploma-sized certificates. The type of station license held (originally General, Special or Restricted) determined permissible operating wavelengths and power.

"In 1923, the Department of Commerce created the Amateur Extra First Grade, a license so special it was printed on pink paper! Only Amateur Extra First Grade licensees thereafter qualified for 'Special' station licenses, which had distinctive call signs and conveyed CW privileges on wavelengths longer than 200 meters.

"Qualifications for the new class included two years experience as a licensed operator and a written examination that, among other items, required the applicant to diagram a transmitter and receiver and then explain their principles of operation. The code tests were given at 20 wpm, the speed required of Commercial First Class operators.

"As amateur interests shifted to short waves, the Amateur Extra First Grade's popularity declined. Only six such licenses were issued in 1926 and the class was discontinued the following year. Reinstated in 1928 with new privileges (described below) added in 1929, the class attracted several hundred licensees most years until its permanent deletion in 1933.

"The Radio Act of 1927 transferred the power to issue station licensees to the Federal Radio Commission (FRC) while preserving the authority of the Commerce Department's Radio Division to issue operator licenses. Months later, the Radio Division redesignated the Amateur First and Second Grade classes as Amateur Class and Temporary Amateur, respectively. To First Grade licensees, the change meant little more than a new name. Temporary Amateur differed from the previous Second Grade, however, in that the former expired in one year and (after 1932) could not be renewed. Hams could no longer indefinitely avoid taking an examination.

"In late 1929, the Radio Division began endorsing Amateur Extra First Grade licenses for 'unlimited radiotelephone privileges.' Initially, the endorsement authorized voice privileges on the 20-meter band. In 1932, the Endorsement became available to other amateurs having at least one year of experience, upon passing a special test on radiotelephone subjects. At the same time, phone use of 75 Meters was also reserved to holders of endorsed licenses.

"The Radio Division merged with the FRC in 1932. A year later, the FRC completely revised the amateur regulations. Station and operator licenses were thereafter combined on a single, wallet-sized card.

"The amateur's basic license was endorsed as Class A, B or C. All three classes required code tests at 10 wpm (13 wpm after 1936). Class A conveyed exclusive phone use on 20 and 75 Meters. It required one year of prior experience and a written examination on radiotelephone and radiotelegraph theory and amateur regulations.

"Classes B and C conveyed all privileges other than those reserved to Class A. The written test for those classes was less comprehensive than for Class A with regard to radiotelephone theory. The two classes differed in that Class C written examinations were furnished by mail to applicants residing at least 125 miles from the nearest FRC quarterly examining point. Class C code tests were administered by Class A and B licensees acting as volunteer examiners.

"Amateur Extra First Grade licensees qualified for Class A privileges upon renewal. Amateur Class licensees were grandfathered into Class B. Temporary Amateur licenses could not be renewed, however, so holders of this Class had to qualify anew in Class B or C upon expiration of their licenses.

The birth of the FCC

"The Federal Communications Commission (FCC) succeeded the FRC with the passage of the Communications Act of 1934. It revised the regulations in 1951 to create the license-class names that are familiar today. Advanced, General and Conditional licenses replaced Classes A, B and C, respectively. The Advanced class was closed to new applicants in January 1953, although renewal of existing licenses continued. A month later, the 20 and 75-meter 'Class A Phone Bands' were opened to General and Conditional licensees.

"The same rule-making action created the Amateur Extra, Novice and Technician classes. The Extra class originally required two years' experience as a Conditional (or Class C) licensee or higher, code tests at 20 wpm and a theory examination more comprehensive than previously given for Class A. No exclusive privileges were reserved for the new class.

"The Technician ticket originally conveyed all amateur privileges above 220 MHz. Novices were originally restricted to CW operations on portions of the 11 and 80-meter bands, and voice at 145-147 MHz, at 75W input, using only crystal-controlled transmitters. The first Novice licenses expired after one year

and could not be renewed. After 1954, Novice and Technician exams were obtained from the FCC by mail and administered by volunteer examiners. In 1976, the system changed again: Potential Technician-class licensees were required to appear before an FCC examiner, although many existing Technician licenses were grandfathered.

"A glimpse at our current regulations reveals that the licensing system has undergone many changes since 1951. Although it is beyond the scope here to examine them all, some of the most important have been the establishment of license upgrading incentives and the reopening of the Advanced class to new licensees in 1967; elimination of activity and code speed requirement for renewal; the expansion and realignment of Novice and Technician privileges, notably in 1976; the increase of the Novice power level, the removal of the crystal control requirement and the merger of Conditional licenses into the General class in 1976; the extension of license terms to ten years in 1983; and Novice Enhancement in 1987.

No-code Technician class

"On 04 February 1991, the FCC removed the code requirement from the Technician-class license, creating the first codeless license in the U.S. Ever since the early days, the amateur service has been in a constant state of evolution, and there is every reason to believe that Amateur Radio of the future will look quite different.

(Ed: One of my inspirations for this story is the saying attributed to Alphonse Karr [1808-1890] "Plus va change, plus c'est le meme chose" (The more things change, the more they remain the same).

The demise of manual and machine-keyed CW is only a phase in the past and future of on-off (binary) modulation as differentiated from analog modulation. The Morse code was invented in the 1830s and was used, along with several other codes, for transmission of alpha-numeric information by wire (and later, via submarine cable). Most of these codes are described in Reference 1, below. Perhaps the most familiar of these codes was the Baudot code, which became synonymous with the teletype-writer. For a time after World War II many amateurs used WWII surplus Teletype© machines for radio transmission using frequency shift keying of their transmitters and FSK adapters for reception. Nowadays this field has become highly sophisticated. My 1996 copy of the *ARRL Handbook* has a 34-page chapter (Chapter 7) on Digital Signal Theory and Components; and that doesn't include the latest entry in the field, PSK31.

Bibliography

1. "Ports O'Call, Volume 4," published by the Society of Wireless Pioneers in the mid-1970s, particularly an article "Codes of the World." An article assembled by SOWP member Donald DeNeuf, now deceased.

2. "From Semaphore to Satellite," published by The International Telecommunication Union , 1965.

4. "Two Hundred Meters and Down," The Story of Amateur Radio; Clinton B. DeSoto, then Assistant Secretary, ARRL 1936.

5. FCC/WT Docket 98-143, In the Matter of 1998 Biennial Regulatory Review — Amendment of Part 97 of the Commission's Amateur Service Rules. Notice of Proposed Rule Making. Adopted: 29 July 1998, Released: 10 August 1998.

FCC affirms fine

The FCC has affirmed a $7,000 forfeiture imposed on a company called CB Shack for alleged violation of Section 2.815.

Secton 2.815 is the federal regulation that bans manufacture, import, sale or lease of external power amplifiers or amplifier kits for any frequency or frequencies between 24 and 35 MHz.

No word if the company plans any further appeals. — *FCC, Newsline*

A millennial QRP event: Celticon 2000

First there was Pacificon, the Concord, CA-based convention that's home to the Northern California QRP Club-sponsored West Coast QRP Symposium — without doubt, the premiere QRP event west of the Mississippi River.

Then came Atlanticon, the New Jersey QRP Club's east coast QRP symposium held in Baltimore for the first time in March. A resounding success, there's every reason to believe it's destined to become the eastern-U.S. QRP equivalent of Pacificon. And that's a very good thing. But the good news gets even better.

It appears QRP symposium fever is spreading across the Atlantic next year with the QRP Club of Great Britain's recent announcement of a millennial QRP gathering at Celticon 2000, 01-03 September 2000 near Dublin.

"Why not combine a holiday in Ireland with a QRP convention?" asks G-QRP's CEO and Celticon-QRP organizer the Rev. George Dobbs, G3RJV. There will be "a full program of lectures and workshop sessions," he said. "We hope to attract QRP traders to sell a range of kits and components."

It's not too early to begin making your plans. In the "-con" game of Pacific and Atlantic, you can bet Celtic is going to be a winner. Especially knowing that the Rev. Dobbs' name is attached to the QRP portion of the convention.

The Marino Institute of Education, site of Celticon 2000 in northern Dublin, is near the airport and has extensive conference facilities and single and twin accommodations. Day tickets for the convention will also be available.

"There is frequent bus service from the gates into the center of Dublin," the Rev. Dobbs writes, which is "ideal for wives and family members to enjoy Dublin during the QRP events."

The radio station at the institute will be on the air with a special call sign.

For information about booking, contact Sile Boylan, Marino Institute of Education, Griffith Ave., Dublin 9, Ireland. E-mail: sboylan@mie.ie.

NC20s on their way

NorCal's Doug Hendricks, KI6DS, reports from Dos Palos, CA, that the first shipment of NC20 transceiver kits earmarked for third-world radio amateurs has been sent to England.

Great Britain is the first stop for the kits on their trek to worldwide distribution — a mammoth task, indeed.

The kit, reviewed in May's ***Worldradio*** QRP column, was designed by David Fifield, AD6A, and initially sold by NorCal. For each 20-meter QRP transceiver kit purchased, the club set aside another to be given free to QRPers in developing nations.

Five hundred kits were sold. Distribution of the additional 500 kits is now in the works, but "will be a slow process, due to the method being used," Hendricks said.

G-QRP's Rev. George Dobbs, G3RJV, has oversight of the philanthropic side of the program and "is going to have each kit hand-carried into the countries and delivered to the recipients," Hendricks said. "Otherwise the risk is too high that they will just disappear."

"It is a huge undertaking to distribute the kits," Hendricks said, adding he is "most happy and grateful George and the G-QRP Club have agreed to undertake this huge job."

QRP-Canada mailing list

QRP operators in the northern reaches of North America have developed an Internet mail group called QRP Canada — "the small list with the big heart."

Modeled on the popular U.S.-based QRP-L Mail Group, veteran QRPer Bruce Rattray, VE5RC+VE5QRP, of Regina, SK, shares QRP Canada list administration duties with Dave Marling, VE1VQ, and Bob Greenfield, VE5DSC.

Rattray reports that the mail reflector has well over 100 subscribers "from Canada, USA, Falkland Islands, Germany, England, Spain, Netherlands, Scotland and Chile" since startup.

In addition to providing the forum for QRP information exchange and community, the mail group is sponsoring the Canadian QRP Spring Bouquet award. QRPers making the necessary contacts to qualify will receive a beautiful certificate designed by Mary Cherry, WN6HYX, of Cherry Graphics.

The group's web site has full details about the award, the organization and the mail reflector. Go to: www.rac.ca/qrpcan.htm

To subscribe to the list send an e-mail to: listproc@lists.gpfn.sk.ca

In the body of the message type: subscribe (space) qrp-canada (space) your first name (space) your last name (space) your call sign.

If you don't have a call sign, just leave that part blank.

After subscribing you'll receive a welcoming e-mail with details on how to access and utilize the list's many features. There are provisions for receiving the list in DIGEST form if you so choose.

The web site has the organization's elegant logo, and a sample copy of the colorful Spring Bouquet certificate. There are also links to many other QRP-related sites.

Rattray can be contacted via e-mail at: rattray@gpfn.sk.ca

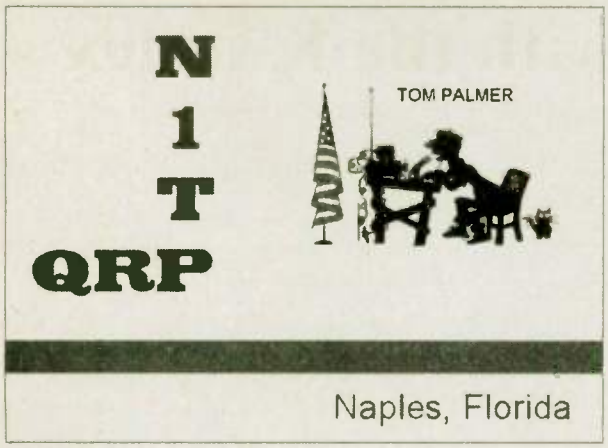
ARS' "Bumblebees" taking flight

The Adventure Radio Society's annual "Flight of the Bumblebees" has almost 100 QRP field operators buzzing as they prepare to take flight from 1700 to 2100 UTC on 25 July.

Each year ARS solicits volunteer operators who tote their QRP gear, under their own power by hiking, rowing, kayaking, bicycling, and climbing to interesting and beautiful operating sites around the country.

During the four-hour sprint, the challenge is for home-based operators to contact as many "bees" as possible. But contacts between homebased stations are certainly encouraged as well.

In turn, "bees" work as many home-



One of the many QSL cards received since my call for QRP cards for the column. More examples will be featured in future issues.

based stations as they can, as well as other "bees" in the field.

First held in 1997, the "flight" has quickly become a last-Sunday-in-July tradition.

The ARS-designated "bee" field operators are easily identifiable by the "/BB" they've been directed by the organization to attach to the end of their call sign.

Contest operation is suggested near the QRP CW calling frequencies on 40 Meters (7.040), 20 Meters (14.060), 15 Meters (21.060) and 10 Meters (28.060) Meters.

The same station can be worked on different bands for additional QSO points. You get 1 point for every 40-meter contact, and 2 points for every contact on 20, 15 or 10 Meters. This is ARS' way of encouraging operation above 40-meters.

Contacts with "bumblebees" generate a 3X multiplier. So, if you make 20 contacts on 40 Meters and 30 contacts on the higher bands, and you've contacted 25 "bumblebees" in the process, your score is: (20 + 60) X (25 X 3), or 6,000 points.

The exchange for home-based stations is RST, state/province/country, and power output.

The exchange for "bumblebees" is RST, state/province/country, and their ARS-assigned "bumblebee" number.

ARS' web site has an automated contest reporting system, so your score can be sent easily by visiting: www.natworld.com/ars

The competition is organized and administered by avid QRPer, outdoorsman and ARS contest manager Russ Carpenter, AA7QU, of McKenzie River, OR.

Additional information about the Flight of the Bumblebees, ARS, and the organization's monthly web magazine are also found on the ARS web site.

QRP QSLs keep on coming

If there was any doubt that QRPers like to "fly the colors" on their QSL cards, it has been laid to rest with the ***Worldradio*** QRP column's call for card submissions.

Dozens have been submitted, and from time to time we'll get them into the magazine for all to see.

This month we're featuring a QSL from Tom Palmer, N1TP, of Naples, FL. As you can see, Tom leaves no question in the recipient's mind that low power operation is his preference and passion.

His "crossword" approach to presenting his call sign and QRP is eye-catching, for sure.

If you'd like to submit a QSL for presentation in these pages, send it either via the U.S. Postal Service or as an e-mail attachment to the addresses at the end of this column. — *Richard Fisher, KI6SN, can be reached at: 1940 Wetherly Way, Riverside, CA 92506 or via e-mail: KI6SN@aol.com.*

PSK31 record

As a relatively new Amateur Radio mode, PSK31 "records" now are being established — to be broken, no doubt, as well. Here's one of the latest — the first PSK31 QSO between the U.S. (W4WHN) and Cuba (CO2OJ) and on 2 Meters to boot! "I don't know if there have been any other international QSOs on VHF-PSK31, but at least we are sure this one is the first between W4 and CO lands," said Oscar Morales, CO2OJ, who also worked K9KNW. He said he and W4WHN were running QRP, less than 3 watts, and copy was "perfect." Both contacts took place on 144.190 MHz. Morales reports he and others plan to be on 144.190 mornings seeking additional PSK31 contacts. — *VHF Reflector, ARRL Letter*

Carl Luetzelschwab, K9LA

How the MUF varies with the K-index

Back in my March 1998 column, I talked about the three problems unique to those who do their operating from high latitudes (KL7, VY1, VE8, etc.). These three problems are the mid-latitude trough, the auroral zone, and the polar cap.

One thing I mentioned was that in the auroral zone Maximum Usable Frequencies (MUFs) are affected by geomagnetic field activity, usually downward. I also included a figure of the MUF for the Anchorage to Spain path — it clearly showed that the MUF at K=4 decreased roughly 15 percent from its K=Ø value. A good follow-up question to ask is, "Does the MUF always go down when geomagnetic activity goes up?"

The answer to that is "No." It's not a resounding "No," but at least it's not "the MUF always goes down." Let's look into this by digging into the reference cited in that March 1998 column: "Predicting Long-Term Operational Parameters of High-Frequency Sky-Wave Telecommunications Systems" by Barghausen, Finney, Proctor, and Schultz.

What that reference does is summarize the detailed work of another fellow, an R. M. Davis, Jr. His paper is titled "Short-term prediction of F2-layer MUFs from local magnetic activity."

What Davis did was study 12 months of foF2 data (the F2 region critical frequency) and M3000 data (the factor by which foF2 gets multiplied to come up with the MUF for a 3000km hop) from 21 ionosondes, and K indices from 16 magnetic observatories. This was done for three solar activity levels.

All this data resulted in two tables. The tables are the intercept Po when K=Ø and the slope b in the equation P=Po + bK. P is the percentage MUF, which is the ratio of the daily MUF at the local time in question to the monthly median MUF for that hour.

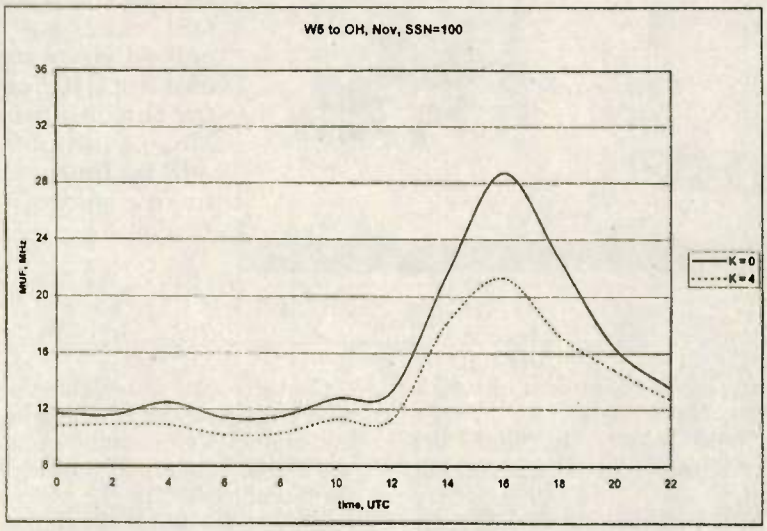


Figure 1 High Latitude Path

The regression constants Po and b are given for seven zones of geomagnetic latitude, for three levels of solar activity (SSN=15, SSN=65, SSN=190), for three seasons (winter, equinox, and summer), and for eight local time periods (0000-0300, 0300-0600, 0600-0900, etc.).

This is a lot of data to try to summarize, but generally at middle and high latitudes the MUF decreases as the K index increases. That's kind of what is expected, and this study by Davis shows by how much. It's also interesting to note that generally at the low latitudes, the MUF increases somewhat as the K index increases.

So what's this all mean? Let's look at a practical example. Figure 1 shows the MUF throughout the day for a path from W5 (Dallas, TX) to OH (Finland) for the month of November at an SSN of 100 for quiet conditions of K=Ø and for disturbed conditions of K=4. This path goes up to about 65 degrees north geographic latitude.

The MUF is always lower at K=4. At K=4, the possibility of 15M propagation from 1400 UTC to 1800 UTC decreases quite a bit, as does the possibility of 10m propagation at around 1600U. There's not much you can do about it, either.

But knowing that the MUF can increase somewhat at low latitudes says maybe it would be advantageous to point your beam so that the path stays more near the low latitudes when the K index is up. Figure 2 now shows the MUF throughout the day for the path from the same W5 location but now to TL (Central Africa Republic in the middle of Africa) for K=0 and K=4. This path goes up to only about 40 degrees north geographic latitude.

Being a low latitude path says the MUFs will be higher. This can be seen by the fact that 10M is expected to be open to TL for 8 hours (compared to only an hour or so to OH), regardless of the K index. In fact, the MUFs are pretty much the same for most of the time. The notable exception is the period 0300U to 0900U, when 20M probably isn't open to TL when K=Ø, but just may be open when K=4. This isn't a lot to hang your hat on, and it's kind of late at night, but if you're up it's better than sitting there doing nothing but fuming about the elevated K index.

So the next time the K index is elevated, try the higher frequencies beaming along a path that stays at low latitudes. The low latitude path offers a higher MUF in general and it won't be affected as much by an elevated K index. And there may even be a surprise opening — no guarantees, of course.

To end this month's column, let's take another look at the progress of Cycle 23. But instead of having a plot as in the previous columns, I'll summarize its progress in words with a comparison to Cycle 22.

We're about two and a half years after solar minimum (which was considered in the scientific community to be October 1996) for Cycle 23. At the time I wrote this, the latest Cycle 23 SSN

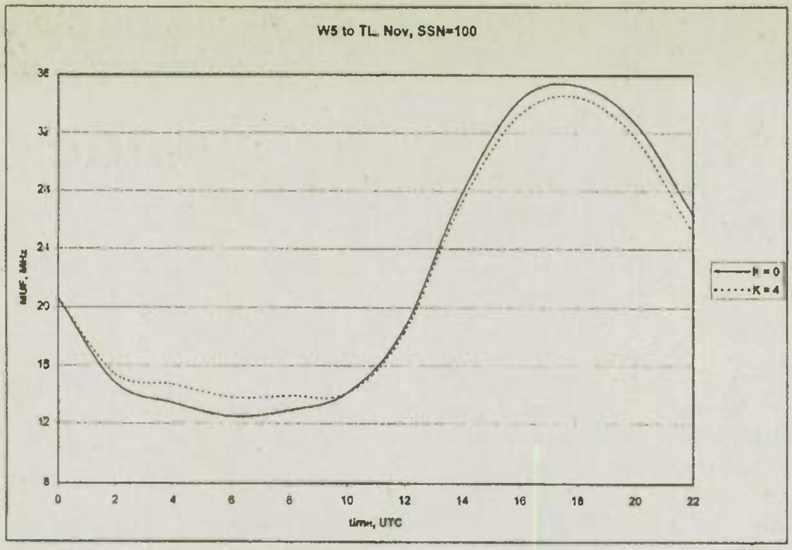


Figure 2 Low Latitude Path

data was for September 1998 — it was 70, and it had increased by about 2 to 3 units per month in the previous months.

How does that compare to Cycle 22? At two and a half years after solar minimum, Cycle 22 was at an SSN of 114 and had increased by about 7 units per month in the previous months. That's quite a difference.

To reiterate, it's too early to tell, but Cycle 23 just doesn't look like it's going to be as big as Cycle 22. — *Carl Luetzelschwab, K9LA, can be reached at: 1227 Pion Rd., Ft. Wayne, IN 46845; e-mail him at: k9la@gte.net.*

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.*

Family reunion

A night to remember for Red Richards, KD6UP, of Oakhurst, California was 18 November 1985. He says, "It all began in the afternoon when a telephone operator asked if I would accept an overseas call from Rusty. Of course I would; Rusty, WB6FIU, is my nephew. He was calling from Guam.

"Rusty asked if I would like to try for air-to-ground Amateur Radio contacts while he flew to Texas as co-pilot of a U.S. Air Force B-52. What Ham wouldn't?

"We quickly arranged the time and spots on the dial we would try.

"Sure enough, at the scheduled time I heard him fine. After all, what a perfect spot for his antenna, so high in the sky.

"After our first contact, I told him I would phone my brother, Hal, WA9WBY, in Illinois. Hal was eager to join the fun and set a later time on another band, 40 Meters.

"Meanwhile, Rusty's signal was fading but Herman in Australia, VK2EHF, relayed for me while Rusty was over the west Pacific.

"When I switched to the new band, 40 Meters, I heard him very well but he had trouble hearing me so I used Morse code which gets through better. As time went on, he heard me loudly and then Hal in Illinois.

"It was a great contact so Hal reached for his phone and called Rusty's father, formerly WN9JES. While Rusty flew over Hawaii, he talked to his dad.

"The four of us — my two brothers, my nephew and I — continued to chat until we grew too sleepy to continue. Reluctantly, we signed as Rusty was coming over California. The contact had been a rare treat and a great family reunion."

Visit us on the web at: www.wr6wr.com

Old-time Radio

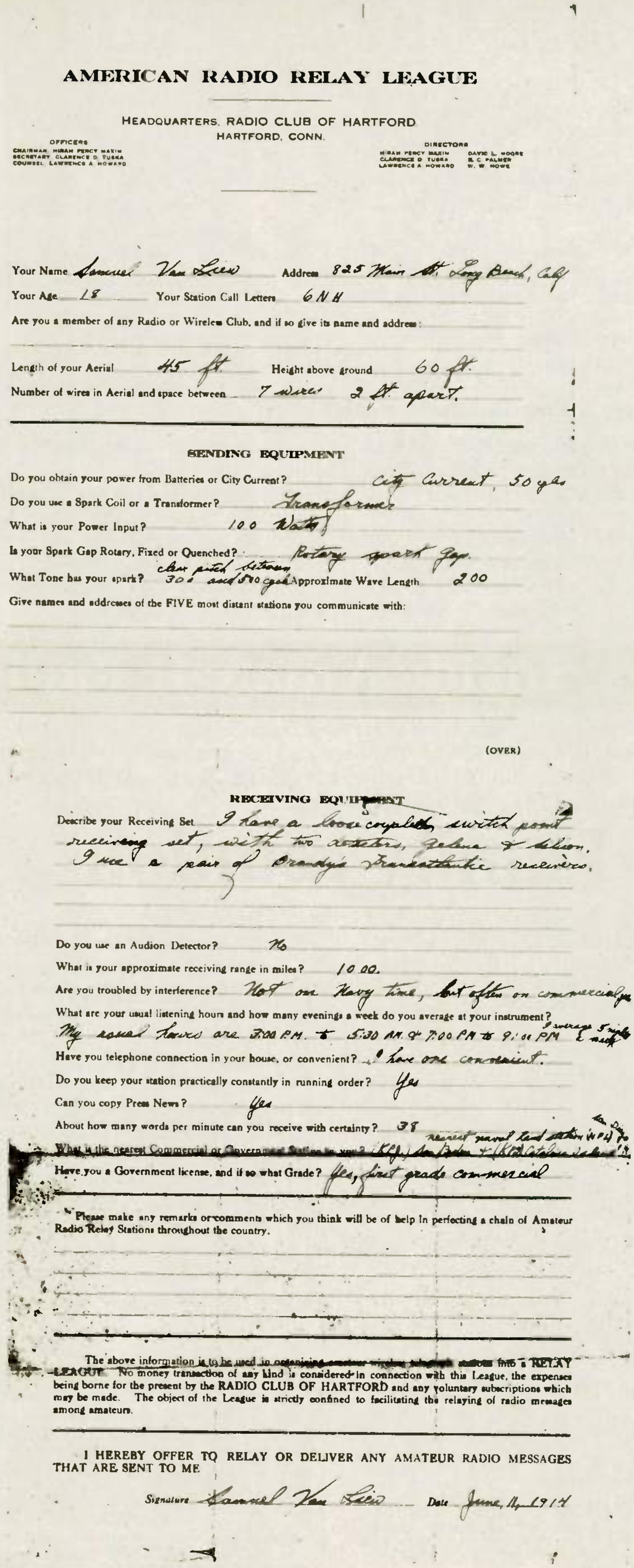
From time to time, the letter carrier, Fed-Ex or the UPS delivery drivers drop off little surprises at the ***Worldradio*** World Headquarters complex. On Monday, 03 May, a BIG surprise package was dropped off.

This package comes from one of our Lifetime subscribers, Don Bremer, KB6LO, of Joplin, MO. Several examples of Amateur Radio history were carefully packed by Don and shipped to us for display in the ***Worldradio*** museum.

Weighing in as the heaviest item, the rarely seen Wouff Hong Don purchased at a flea market several years ago from a vendor who thought it was a "railroad semaphore." It's made of what appears to be brass, and the base has embossed letters that say, "ARRL National Convention, Chicago, ILL, Sep 3, 4, 5, 1938." But a problem has reared its ugly head over its possession. Should we maintain custody of it (hold it for ransom!), or should we send it to ARRL Headquarters for display? Your thoughts on this most perplexing dilemma are appreciated.

Also enclosed in the package was an application from Samuel Van Liew, 6NH of Long Beach, CA, to become a member of the ARRL. Samuel (now an SK) was 18 at the time. It's dated 11 June 1914. This appears to be one of the first forms issued by the ARRL and is a survey and application combined into a single form. The ARRL asked some interesting questions on this form. "Length of your Aerial, Height above ground and Number of wires in Aerial and space between" are some of the most interesting.

There were several other items of interest, and I'll feature them in future installments of "Old Time Radio." — *Rick, WF6O*



AMERICAN RADIO RELAY LEAGUE

HEADQUARTERS, RADIO CLUB OF HARTFORD
HARTFORD, CONN.

OFFICERS
CHAIRMAN HIRAM PERCY MAXIM
SECRETARY CLARENCE D. TUSKA
COUNSEL LAWRENCE A. HOWARD

DIRECTORS
HIRAM PERCY MAXIM — DAVID L. MOORE
CLARENCE D. TUSKA — R. C. PALMER
LAWRENCE A. HOWARD — W. W. HOWE

Your Name Samuel Van Liew Address 825 Main St. Long Beach, Calif.

Your Age 18 Your Station Call Letters 6NH

Are you a member of any Radio or Wireless Club, and if so give its name and address:

Length of your Aerial 45 ft. Height above ground 60 ft.

Number of wires in Aerial and space between 7 wires 2 ft. apart.

SENDING EQUIPMENT

Do you obtain your power from Batteries or City Current? City Current, 50 cys

Do you use a Spark Coil or a Transformer? Transformer

What is your Power Input? 100 Watts

Is your Spark Gap Rotary, Fixed or Quenched? Rotary spark gap.

What Tone has your spark? clear pitch between 300 and 500 cycles Approximate Wave Length 200

Give names and addresses of the FIVE most distant stations you communicate with:

(OVER)

RECEIVING EQUIPMENT

Describe your Receiving Set I have a loose coupled, switch point receiving set, with two detectors, galena & silicon. I use a pair of Brandy's Transatlantic receivers.

Do you use an Audion Detector? No

What is your approximate receiving range in miles? 1000.

Are you troubled by interference? Not on Navy time, but often on commercial

What are your usual listening hours and how many evenings a week do you average at your instrument? My usual hours are 3:00 P.M. to 5:30 P.M. & 7:00 PM to 9:00 PM I average 5 nights

Have you telephone connection in your house, or convenient? I have one convenient.

Do you keep your station practically constantly in running order? Yes

Can you copy Press News? Yes

About how many words per minute can you receive with certainty? 38

What is the nearest Commercial or Government Station to you? (KPJ) San Pedro & (KPA) Catalina Island; nearest naval land station ...

Have you a Government license, and if so what Grade? Yes, first grade commercial

Please make any remarks or comments which you think will be of help in perfecting a chain of Amateur Radio Relay Stations throughout the country.

The above information is to be used in organizing amateur wireless telegraph stations into a RELAY LEAGUE. No money transaction of any kind is considered in connection with this League, the expenses being borne for the present by the RADIO CLUB OF HARTFORD and any voluntary subscriptions which may be made. The object of the League is strictly confined to facilitating the relaying of radio messages among amateurs.

I HEREBY OFFER TO RELAY OR DELIVER ANY AMATEUR RADIO MESSAGES THAT ARE SENT TO ME

Signature Samuel Van Liew Date June 11, 1914

Are our antennas too high?

Once again the *Newington News* strikes out. In the Q&A section run by the Doctor, an unsuspecting reader asks, "What is a small 'broadband antenna'?"

I am pleased that this doctor is not my M.D. My health is good but if his prescriptions for health were similar to those for antennas I would not be writing this column for long.

To begin with, the Doctor does not come out and tell the truth: small and broadband don't go together. The smaller you make it, the bigger the coils you have to add to resonate it and the smaller the bandwidth becomes.

Next the Doctor tells the poor reader that there is always a trade-off between broadbandedness and efficiency. In other words if you want bandwidth you sacrifice efficiency.

Don't you believe it! There are ways to get wider bandwidth and actually improve efficiency. These methods have been well known since the 1920s and 30s and are in use every day. You only have to look as far as your copy of the *ARRL Antenna Book* to find them.

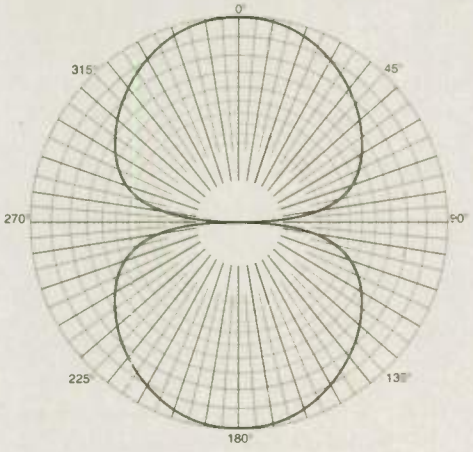
The easiest is to use bigger wire or tubing. For example, look at a dipole for the 80-meter band. The band is 500 kHz wide. If you make your dipole out of heavy wire you'll get a bandwidth (for 2:1 SWR) of about 150 kHz. But if you make it of 2-1/2" tubing it will cover the whole band.

Don't want to use tubing? Use two or more wires spaced a foot or so apart. Use four wires to make a "Cage Antenna" and get full band bandwidth.

Should I mention the "Bow Tie"? How about the "Fan"? These are antennas used every day for broadband TV reception. They work fine for transmitting too!

How about efficiency? A "Cage" of four parallel wires or a "Bow Tie" of two in parallel will have less ohmic resistance than a single wire dipole and thus have less loss, not more. Actually the efficiency of a dipole is very high so the signal strength improvement of a "Cage" or "Bow Tie" is insignificant. But it is there and Kurt wants you to get it straight.

In all fairness to the Doctor I must say that the *ARRL Antenna Book* has a chapter on broadband antennas and that almost all of them have lower efficiencies than a dipole. That's because of losses in the coaxial cable stubs used



to increase the bandwidth.

Back in the early days of radio, before Kurt became a world expert in antenna matters, stubs were made of open-wire transmission line. Losses were almost nonexistent and stub-broad banded antennas would have been efficient. You could do it today if you wanted to.

In closing, the Doc's advice is to build a narrowband antenna with loading coils to resonate.

Kurt says, forget the complicated antennas. Put up a piece of wire wherever you can and buy or build an antenna tuner. Now you can get on any part of any HF band. No problem. Easy.

Impedance revisited

In a recent column I ran a little contest whose purpose was to illustrate that antennas with widely different impedances can cause the same SWR on a transmission line. There were so many prize winners (of a Kurt White Hat) that the stockroom almost ran out.

But one reader questioned my use of the term impedance. For example: One of the contest antennas had R = 10.58 ohms and X = 29.30 ohms. I said its impedance was Z = 31.15 ohms. The reader says Z is NOT 31.15 ohms. Well, Kurt said it was 31.15 ohms and it IS 31.15 ohms.

How can I be so sure? Easy. Using the equation for impedance found in the AC theory section of the Handbook: $Z = R^2 + X^2$. You can check me with your little hand calculator. Square 10.58 and add it to the square of 29.30. Take the square root of the sum and you'll get 31.5 ohms.

My favorite way to look at this formula is as a right triangle. See the figure. R is the horizontal line drawn 10.58 units long. X is always a vertical line. Up for positive reactance; down for negative reactance. In this case up 29.30. The hypotenuse (the long side) is the impedance. (I'm bringing this up for a reason; bear with me.) The sum of the squares of the R and X sides equals the square of the hypotenuse. Take the square root of that and you have Z.

Think you might forget that? Then remember this story: There were three Indian women. One slept on a buffalo

hide. She had one son. Another slept on an antelope hide. She had two sons. The third slept on a hippopotamus hide. She had three sons. This illustrates that the squaw of the hippopotamus is equal to the sons of the squaws of the other two hides.

Getting back to business, there is one more important thing that the triangle shows. That is the phase angle of the impedance. The angle marked with the two arrows is the impedance's phase angle of 70 degrees. So the absolutely complete and correct way to describe the impedance of the antenna is: 31.15 700 as the reader points out. If you leave out the angle you should write 131.151 ohms. The vertical lines show that you left out the angle.

Kurt's way is the American way: Keep it simple as long as everyone knows what you're talking about. But, of course, the reader is correct.

I believe that, if I said, "Our flag is red, white and blue," this writer would say I was wrong. He'd say, "The flag has a field of 13 horizontal stripes, 7 red alternating with 6 white and in the upper corner near the staff, a rectangular blue field, or canton, with 50 white five-pointed stars." He'd be right. But so is Kurt.

Quad revisited

I have also been criticized for my disdain of a company advertising a 4-element quad with 12-dBd gain. I expressed my displeasure because the gain of an optimum 4-element quad design in free space when compared to a dipole in free space does not have 12 dB gain.

"Ah," my critic says, "but no one operates their beam in free space." If you add in the ground reflection gain you can get 12 dBd or more gain.

Piffle! Here we are again comparing apples and oranges. No one operates his dipole in free space either. So if we are to make a meaningful comparison let's have both the dipole and the quad in the same location. Now the dipole also gets ground reflection gain. This gives a realistic comparison and the gain of the quad over the dipole will be less than 12 dB.

Most quoted gain figures these days are from computer simulations, not real world measurements. Computer programs are great for designing antennas but, once the antenna is built, there is just one way to verify performance. That is with a field strength meter comparison of the antenna vs. a dipole.

When you write complaint letters to Kurt please include your field strength measurements.

The crossed field antenna

A new antenna has come on the scene, an import from England. The descriptions of it states that:

1. "Conventional" antennas are inefficient and
2. The crossed field type is much better.

The promoters give an example of a 21 ft. tall crossed field antenna in Egypt that replaced a 211 ft. broadcast tower and produced a radiated field 6 dB stronger. A 30,000 watt transmitter replaced the 100,000 watt transmitter and gave the same coverage. This seems to say that 70,000 watts formerly was wasted.

Old Kurt believes in the principle of conservation of energy. Energy does not just disappear. So what happened to the missing 70,000 watts? If it didn't show up in any other way it must have been converted into heat. 70,000 watts makes a lot of heat. The transmitter site must have been a real sweatshop.

The next time you pass your local 50 kW broadcast station's antenna site check the temperature and let Kurt know how much hotter it is there than in the surrounding countryside.

An article on the crossed field antenna explains that the wave from a dipole suffers a "transient" loss as the wave becomes "organized." And that only a relatively small part of the power applied to the antenna becomes part of the radiated wave. This is news to Kurt and to the authors of the *ARRL Antenna Book* who are convinced that a dipole of #14 copper wire placed high in the air is almost 100% efficient.

The U.S. patent disclosure for the crossed field antenna states that any antenna, to be efficient, must have perpendicular magnetic and electric fields with the proper phase relationships and, "Presently known antennas are probably achieving the requirements in an uncontrolled or accidental manner." Kurt believes that those beams from Hy-Gain and Cushcraft are the product of careful engineering design, not just lucky accidents.

We are also told that, because these antennas are so big and erected so high above ground, a "comparatively weak" signal is developed.

Pity those Big Gun DXers who have gone to all the trouble and expense of erecting massive towers to get their antennas high in the air only to find them in a "large surrounding and lightly stressed volume." It must be their Alpha amplifiers that allow them to get out so well.

Is the crossed field antenna a major breakthrough that will revolutionize Amateur Radio? Kurt recommends that you keep your Force 12 until further field tests are reported.

Get 'em now!

One of ***Worldradio***'s most popular products is now in very short supply. Our world-famous white Kurt Cap, in a limited and numbered series of 400 caps and very few are left. So get yours now! They're only $8 (plus $2 s&h). If you're in California, add 7.75% for the governor. Write, call or email today!

Planning for propagation

Some of the best contesters do plenty of planning before they make a serious contest entry. In DX contests, propagation is perhaps the most important thing for which they plan. A good plan properly executed can make an important contribution to a winning effort and a fun experience. A good plan reminds you when you might have good propagation to different parts of the world, and that directs you to which band you should use, and in which direction you should point your antennas.

One of the most interesting aspects of operating on the HF bands is the variability of propagation. As if it had been waiting silently for millions of years for us Hams to arrive, the ionosphere, an entirely natural phenomenon, provides us with the means to communicate around the world, easily, cheaply and independently. As we all know, the ionosphere is not a perfect communications medium, but a highly variable one. The weather on the sun has a huge influence on HF propagation, but the weather here on earth has almost none.

For amateurs active on the HF bands, there is a wealth of information available to help you predict propagation. The best teacher is experience, of course. Just getting the air during contests and at other times will give you a good general sense of how the bands will behave at different times of day. How do you go the next step, from a general idea of how the ionosphere behaves, to develop a plan the directs your band changes, and tell you where to point your antennas?

One excellent source of propagation information may already be sitting in your shack. Your log from last year's contest will demonstrate what openings you did find. Comparing your log to that of another competitor will demonstrate what openings you missed. In drafting your plan, chart what you did last in the same contest one year before, and look especially for times when you think you could have done much better.

Another useful source of information are the propagation predictions that appear in some amateur magazines, and many software packages that will do the job. The in-print sources suffer one critical failing: they are imprecise. This is not a failing of the authors, but a tyranny of magazine publishing — press deadlines require that these articles be written weeks, sometimes months, before you see them in print. In your scribe's humble opinion, the best example of propagation predictions in print are the Propagation column in *CQ* magazine, prepared by George Jacobs, W3ASK. George has been studying HF propagation for many years, and in anticipation of the CQ WW DX and CQ WPX contests, he produces excellent charts detailing his predictions for propagation from different regions of the United States to major regions of the world. George also describes the quality of propagation on a four-point scale to give you not just an idea of when a band may be open, but also how loud the signals might be.

Many other columns suggest optimum working frequencies for certain paths at certain times of day, but they fail to provide an estimate of the quality of these paths. This is a major failing.

Another approach many use is to use the propagation-prediction software that is widely available. This can be a more accurate way to go, in that you can advise the software of current values for solar flux (available from WWV and WWVH) or sunspot numbers and instruct it to make predictions based on those values.

Once you have drafted a plan, you might do well to test it by using the beacons of the International Amateur Radio Union (IARU) and Northern California DX Foundation. These beacons can be found on 14100, 21150 and 28200 kHz. Each beacon occupies the frequency for a short period, signing its call sign and transmitting dashes at 100w, 10w, 1w and 100mw output into identical vertical antennas. These will give you an excellent indication of how good propagation is.

During a contest, I like to listen to WWV or WWVH on 5, 10 or 15 MHz. This station broadcasts a short bulletin of solar flux and geomagnetic information at 18 minutes (WWV) and 45 minutes (WWVH) past the hour. This information is updated every three hours, with the solar flux updated daily after 2100Z. Increases in the values of the A and K-indices usually indicate the onset of disturbed conditions, while increases in values of solar flux can indicate improved conditions. How you use this information is up to you, but it can acts as a check on your well-drafted plan.

Planning is important to doing well, as it helps guide you towards a better score. You can't be on all bands at the same time, but if you plan carefully, you can allocate your time where it will give you the best opportunity to make a great score.

Contest of the month — Canada Day Contest

0000 UTC Thursday 1 July to 2359 UTC 1 July

(PST: 5 p.m. Wednesday 30 June to 5 p.m. Thursday 01 July)

EST: 8 p.m. Wednesday 30 June to 8 p.m. Thursday 01 July)

Here in Canada, we celebrate our country's birthday on 01 July each year. Canada Day celebrates the day in 1867 when, by an act of the British Parliament, three British colonies were reorganized as a federation of four provinces — Nova Scotia, New Brunswick, Quebec and Ontario. Over the next 82 years, other British territories in the northern part of North America joined the Dominion to create a country that now stretches from sea to sea to sea — bordering the Atlantic, Pacific and Arctic Oceans. The most recent change to the map of Canada occurred on 01 April 1999, when the Northwest Territories (NWT) was divided and recast as two territories — the NWT and Nunavut. From four small, sparsely-populated provinces in 1867, Canada now has ten provinces and three territories, covering a landmass second only to Russia, and a population of thirty million, of whom some 45,000 are radio amateurs.

Since 1978, the radio amateurs of Canada (RAC) and its precursor, the now-defunct Canadian Amateur Radio Federation, has sponsored a contest that runs the whole twenty-four hours of Canada Day in GMT time. While originally conceived as a domestic event, the rules are written in such a way that anyone can work anyone. The scoring structure clearly places the focus on working Canadians, but everyone is welcome. U.S. amateurs participate in large numbers and enjoy the friendly, low-pressure atmosphere of this contest.

One inconvenience for many of you is that this contest always takes place on the first day of July. It's a national holiday here, but for the rest of the world, 01 July is a working day five years out of seven.

The Canada Day Contest takes place on 160 through 2M, using CW, SSB and on VHF, FM. One may work the same station once on each mode on each band, and one collects multipliers by band and mode as well.

This twenty-four hour contest is a great deal of fun. The pace can be quite quick at times, but by no means overwhelming. If you are keen to stop and have a brief chat, many participants will be happy to do so. You can expect to hear all parts of Canada on the air, and you may find many contacts you need for some Canadian operating awards, such as RAC's "CanadAward." Even the most serious entrants will take a few hours off in the wee small hours, as the casual operators tend to disappear between 0700z and 1200z. You don't have to sacrifice all sleep to do well.

For U.S. stations, working Canadians is a snap. During disturbed conditions, it is often easier for U.S. amateurs to work Canadians than it is for Canadians to work each other. Some U.S., amateurs, such as Bruce, N6NT, and Ken, N6RO, have turned this to their advantage and made winning scores!

The RAC contest is rich in entry categories and in awards. There are three single-operator all-band categories: High power (over 100W output); Low power (100W or less output); and QRP (5 watts or less output.) As well, those who prefer to work only one band can enter the Single-op Single-band category. There is a multi-op category that allows entrants to operate on more than one band at the same time. One well-equipped team (VE6JY) often runs two stations on 20M at the same time — one on SSB and one on CW!

Certificates are awarded to the top-scoring entrant in each category in each province, territory, U.S. call area and DXCC country in each entry category. As well, there is a plaque awarded to the top-scoring single-op entry from outside Canada. There are separate certificates award on each band for single-band entrants. Roughly 40-50% of all entrants in RAC contests win certificates — and it's much higher among entrants from outside Canada. If you're looking for wallpaper, entering the RAC contest is one way to earn some.

Each contact you make with a station in Canada is worth ten points. Official stations of RAC count 20 points. These can be distinguished by the "RAC" at the end of their call signs and include: VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY1RAC, VY2RAC and VYØRAC. Contacts with stations anywhere outside of Canada are worth 2 points. VEØ stations, on board Canadian-registered vessels, count as Canadian stations no matter where in the world they may be and are worth 10 points per contact. Of course VEØs don't count for multipliers, as they are not in any province or territory — they're on the high seas.

The multipliers are Canada's ten provinces and three territories. They also count once on each band and mode. The following is a list of the thirteen:

Province or Territory	Prefix	Postal Abbreviation
Newfoundland & Labrador	VO1 and VO2	NF
Nova Scotia	VE1, CY9* and CYØ*	NS
Prince Edward Island	VY2 (some VE1s)	PE
New Brunswick	VE9 (some VE1s)	NB
Quebec	VE2, VA2	QC (PQ & QU)
Ontario	VE3, VA3	ON
Manitoba	VE4	MB
Saskatchewan	VE5	SK
Alberta	VE6	AB
British Columbia	VE7	BC
Nunavut	VYØ	NU
Northwest Territories	VE8	NT
Yukon	VY1	YT

* Although St Paul Island (CY9) and

Contest Calendar

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
RAC Canada Day	0000Z 1 Jul 2359Z 1 Jul	160-2M CW & 'phone	10pt/VE 20pt/RAC stns. 2pt/DX	Can. Provinces and Territories (12) worked on each mode on each band.	RST Prov DX and VEØ send Ser#	Single Op: All bands, Low Power, Single band Multi-op	31 July 720 Belfast Rd Suite 217 Ottawa ON K1G 0Z5
Venezuela SSB	0000Z 3 Jul 2359Z 4 Jul	160-10M SSB	5pt/DX 3pt/NA 1pt/Own country	YV call areas + DXCC worked on each band	RS Ser#	Single Op: All bands, Single band Multi-op: Single or Multi-tx	30 Sep Box 2285 Caracas 1010-A
Fourth of July QRP Sprint (Michigan QRP Club)	2300Z 4 Jul 0300Z 5 Jul	160-6M CW and SSB	5pt/MI QRP Club Mbr 4pt/DX 2pt/VE or W non-member	U.S. States, Canadian Provinces and Territories, DXCC worked on each band If either your TX or RX were home-made, multiplly your score by 1.25. If bothe were home-brew, bmultiply by 1.5	RST QTH and MI QRP Club #	A- 0-250mW output B- 250mW-1W output C- 1W to 5W output D- 5W or more output	30 days N8CQA
IARU HF Championship	1200Z 10 Jul 1200Z 11 Jul	160-10M CW & SSB	1pt/ur Zone 3pt/oth NA Zones 5pt/DX	ITU Zones (75) worked on each band + HQ stations	RST ITU Zone	Single Op: All bands, both or one mode, Single band, Low power, QRP	1mo. ARRL
CQ WW VHF	1800Z 10 Jul 2100Z 11 Jul	50MHz to microwaves	1pt/50, 144MHz 2pt/220, 432MHz 4pt/902, 1296MHz 6pt/2304MHz +1pt/CW QSO	Grid squares worked on each band	Grid square	Single Op: fixed, portable, QRP (max. 25w) Rover Multi-op fixed more than 5 transmitters Multi-op fixed four or fewer transmitters Multi-op portable more than 5 trans Multi-op portable four or fewer trans	31 Aug Box 73 Oklahoma City OK 73101 USA
South-East Asia Net CW	0000Z 17 Jul 2359Z 18 Jul	160-10M CW	1pt/QSO Work SEANET countries only	3 mult pts for SEANET countries: A4 A5 A6 A7 A9 AP BV BY DU EP HL HS JA JD1 JY KH2 P2 S7 VK VQ9 VS6 VU V8 XU XV XW XX9 YB ZK ZL ZM ZL6 ZL9 3B6/7 3B8 3B9 4S 4X 8Q7 9K 9M2 9M6/8 9N 9V		Single Op: All bands, Single band Multi-op, single tx	31 Oct 9M2FK Box 13 10700 Penang MALAYSIA
Colombian Independence Day	0000Z 18 Jul 2359Z 18 Jul	80-10M CW and SSB	5pt/HK 3pt/DX 1pt/NA 0pt/VE	HK Call areas + DXCC countries worked on each band	RST Ser#	Single Op: All bands, Single band Multi-op: Single or Multi-tx	31 Aug Box 584 Santafé de Bogota
South Pacific 160M	0700Z 17 Jul 2330Z 17 Jul	160M CW & SSB	5pt/QSO Work P2, VK , ZL and Pacific Islands only	P2, VK and ZL call areas, DXCC countries in the Pacific Ocean	RST Ser#	SIngle op SWL	6 weeks VK3DID or e-mail to VK3DID@eudor amail.com
Venezuela CW	0000Z 24 Jul 2359Z 25 Jul	160-10M CW	5pt/DX 3pt/NA 1pt/Own country	YV call areas + DXCC worked on each band	RST Ser#	Single Op: All bands, Single band Multi-op: Single or Multi-tx	31 Oct Box 2285 Caracas 1010-A
Islands on the Air (IOTA) (RSGB)	1200Z 25 Jul 1200Z 26 Jul	80-10M	15pt/IOTA 5pt/DX 2pt/QSO with your own country or IOTA reference	IOTA references worked on each mode (CW and SSB) on each band	RST Ser# +IOTA ref. if you are on an ICTA island	There are separate sections for stations on IOTA-recognized islands and those elsewhere. In each of these sections, there are the following categories: - 24-hr Single Op: Mixed mode, CW, SSB - 12-hr Single Op: Mixed mode, CW, SSB - Multi-op single tx - SWL	26 Aug G3UFY
YO DX (Romania)	0000Z 1 Aug 2000Z 1 Aug	80-10M CW & SSB	8pt/YO 4pt/DX 2pt/NA	YO Counties, ITU Zones on each band	RST ITU Zone	Single op: all bands, single band Multi-op, single tx	1mo Box 05-50 R-76100 Bucharest
NA QSO Party CW (NCJ)	1800Z 7 Aug 0600Z 8 Aug	160-10M CW	1pt/QSO	Canadian Call areas, U.S. States, other NA countries	Name QTH	Single Op Multi-op, two tx All entrants must run 150W or less	1mo K8CC
ARRL UHF	1800Z 7 Aug 1800Z 8 Aug	220MHz to microwaves	3pt/220, 432MHz 6pt/902, 1296MHz 12pt/2304MHz +	Grid squares worked on each band	Grid square	Single op Rover Multi-operator	1mo ARRL or e-mail to contest@ arrl.org
European DX CW (Germany)	0000Z 14 Aug 2359Z 15 Aug	80-10M CW	1pt/Eur 1pt/QTC QTC: reports of previous QSOs Time:Call:Ser#	WAE Countries worked on each band. x2 on 10/15/20 x3 on 40m x4 on 80m	RST Ser#	Single Op: All bands, Single band Multi-op: Single or multi-tx All entrants may use PacketCluster	15 Sep Box 1126 D- 74370 Sersheim Germany
Maryland-DC QSO Party	1600Z 14 Aug 2359Z 15 Aug 0400-1600 off time for all participants	80M-UHF CW, SSB, FM, ATV and RTTY	10pt/Club stns 5pt/Mobiles 4pt/Novice or TEch. 3pt/CW, RTTY, ATV 1pt/all others Stations outside MD, DC work MD, DC only. MD. DC stations work everyone	For Stations outside MD. DC. Total of Maryland counties, city of Baltimore and DC regardless of band For MD, DC stations: Above plus 49 other US states, Canadian provinces, territories and Labrador, DXCC countries regardless of band.	QTH Entry Categtory	"standard" (Single Operator All Bands) QRP Mobile YL Club Novice/Technician class	1 Sept Box 52 Hagerstown MD 21741 USA Include SASE with your log

Addresses: CQ — 76 N. Broadway, Hicksville, NY 11801 USA; ARRL — 225 Main St. Newington, CT 06111 USA; Call sign — Call Book address; Bands: The 30, 17 and 12M bands are never used in any contest. Official forms and complete rules may be available from me. Please send SASE for details

Sable Island (CYØ) are separate entities on the DXCC list, they are still part of Canada, and are included in the province of Nova Scotia.

On each band, therefore, there are twenty-six multipliers — thirteen on CW and thirteen on phone. Given that there are eight bands involved in this contest, there are potentially 208 multipliers to be worked. The highest multiplier total ever amassed was 134 — and that took a lot of hard work. If you want to make a good score, you absolutely must seek out those multipliers on the other mode, and you must look for them on other bands, too.

Now, as you can work the same station once on each band and mode and as you collect multiplier points each time you work a new province or territory on a new band or mode, the rules contain a huge incentive to do a lot of mode- and band-changing. Most of the Canadians you work will understand this, and you should feel free to ask the stations you work for contacts on other bands and modes.

As well, the contest rules oblige entrants to follow RAC's HF band plans — we have no regulated phone or CW sub-bands in Canada — and keep CW out of the 'phone bands and vice-versa. That means you can't make both CW and SSB contacts on the same frequency. Our dividing lines between the CW and SSB parts of the HF bands are drawn at 1840, 3725, 7040, 14100, 21150 and 28300 kHz. If you work someone on 14155 kHz SSB and you need them on 20M CW, choose a frequency below 14100 kHz. CW activity congregates around 25 kHz up from the bottom end of each band. Suggested frequencies for SSB are 1850, 3775, 7075, 7225, 14175, 21250 and 28500 kHz. Please note that many Canadians will "hide out" just outside the U.S. phone band. This can make working SSB in this contest a little frustrating for U.S. amateurs, but most of us stick close to the suggested frequencies, which are inside the U.S. phone bands.

The Canada Day Contest is one of the two contests sponsored by RAC. The other is the Canada Winter Contest, which takes place with identical rules in December. The two contests are completely separate events, with separate records.

If you intend to log using a computer, TR-Log by N6TR handles the RAC contest very well, and the most recent versions of CT by K1EA and NA by K8CC also will make participating a breeze. Logs may be e-mailed to Contest Manager God Kosmenko, VE6SV, on gkosmenko@arrowspeed.com.

If you log the old-fashioned way, or if you would prefer to mail your entry, the address is RAC Canada Day Contest, 720 Belfast Rd #217, Ottawa ON K1G 0Z5 CANADA.

Other contests in July

The United States, Venezuela and Colombia are three other countries whose national anniversaries are marked with Amateur Radio contests. The Michigan QRP Club hosts its annual "4th of July Sprint," and the Venezuelan and Colombian national societies mark their countries' birthday parties on the first, third and fourth weekends of the month.

Casting a wider net, the International Amateur Radio Union (IARU) has its annual HF Championship on the second weekend of the month, and the Radio Society of Great Britain (RSGB) sponsors its very popular "Islands on the Air" (IOTA) contest on the fourth weekend of July. IOTA has become a very popular award in the last several years, and if you are an island chaser, the IOTA contest is a can't-miss event, with many contest expeditions on the air.

For VHF fans, *CQ* magazine's CQ World-Wide VHF contest runs the second weekend, and for the truly hardy, the South Pacific 160M contest will test your ability to separate static from signals.

Dave Goodwin VE2ZP/VE9CB, 15 Oval, Aylmer QC J9H 1T9 CANADA 819/684-1432; E-mail: ve2zp@rac.ca; Packet: VE2ZP@VE3XRV.#EON.ON.CAN.NOAM.

FCC takes action

David Castle, WA9KJI, has received several warnings from the FCC about operations resulting in 'malicious interference' to several stations in the Amateur Radio service. As a result of continued violations, Mr. Castle has had his license modified to prohibit operation below 30 MHz for a period of 2 years.

As a result of failing to appear for retesting as ordered by the FCC, Rusty Leewright, KE6OUF, Joseph Santini, N2RGZ, and Joseph Walker, W8JCW have had their Amateur Radio licenses canceled.

Earlier this year, we reported on the problems on the K7IJ repeater system,. Several amateurs in the Northern California received warning letters from the FCC in that case. The FCC has now taken action against three of the amateurs accused of interfering with the K7IJ repeater, as well as the W6SEK repeater, also located in Northern California.

Timothy Sheen, N6MZA, was monitored on the W6SEK repeater on 24 May causing interference on the repeater. The following day, Mr. Sheen called Riley Hollingsworth and apologized for the interference. On 26 May, his license was modified to prohibit transmitting on frequencies above 30 MHz for a period of 90 days. William Gifford, KF6URY, was also monitored causing interference on the same repeater, and has had his license modified. Mr. Jim Walker, formerly, KF6VAA, was also on the same repeater. His license was revoked in February. He received another warning letter from the FCC. — *WF6O*

Hamfests

ILLINOIS

Fox River Radio League Hamfest, 18 July, 8 a.m., at Waubonsee Community College. (Rte 47 at Harter Rd, Sugar Grove, IL.) Adm. $4 adv. $5 at door. Table: $12 Setup: Sat 7 p.m. Sun 6 a.m. - 8a.m. Commercial dealers, computer vendors, huge outdoor flea market, VE exams. Talk-in: 147.210(+)(PL 103.5/107.2). For info: James Von Olnhausen, N9UZC, %FRRL, P.O. Box 673, Batavia, IL 60510. Phone: 630/879-3042. Email: n9uzc@amsat.org. Web: www.frrl.org/hamfest.html.

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Kankakee ARS Hamfest 11 July at Will County Fairgrounds, Peotone, IL. Setup 6 - 8 p.m. Sat. and 6 a.m. Sun. Flea market open 6 a.m. Main Hall 8 a.m. Free parking, giant flea market, refreshments, prizes. Overnight parking available. Talk-in 146.94. Advance double-setup tickets $4, $5 at gate. Inside Tables $7. Make checks payable to KARS and send with SASE to: Billie Kerouac, KF9IF, 6311 E. Flora St., Kankakee, IL 60901; 815/939-7548; email: dkbk@megsinet.net; web: www.w9az.com.

KENTUCKY

Monroe County ARC Hamfest 03 July, at National Guard Armory (Tompkinsville, Kentucky) Adm. $5 Tables: $7. Setup 6:30. Doors open 8:00. Talk-in 146.775. For info: Davis Welch, K4PL, 111 Pocahontas Trail, Glasgow, KY 42141. Email: dwelch@glasgow-ky.com. or Call J. Bunch 502/678-5784. Web: http://monroearc.hypermart.net.

MARYLAND

Baltimore Radio Amateur Television Society Hamfest/Computer Fest, 25 July, 6 a.m. at Timonium Fairgrounds. Admission: $5 (under 12 FREE) Tailgating: $10 Tables: Call. VE exams 9 a.m. pre-register by calling John Creel, WB3GXW after 6 p.m. 301/572-5124. Talk-in: 147.03(+), 224.96, and 448.325. For info: http://www.smart.net/~brats. Email: brats@smart.net. Call or Fax: 410/461-0086, or mail: BRATS Hamfest, P.O. Box 5915, Baltimore, MD 21282-5915.

MASSACHUSETTS

MIT Radio Society/MIT Electronics Research Society Flea Market 18 July 9 a.m. - 2 p.m. Albany and Main St, Cambridge MA. Adm. $4. Tailgating: $10 at door, $9 advanced. Set-up: 7 a.m. Free parking. Talk-in 146.52 and 449.725. For info: 617/253-3776. For advanced reservations mail W1GSL, P.O. Box 397082 MIT BR., Cambridge MA 02139-7082.

MICHIGAN

Straits Area ARC's Swap & Shop 10 July, 8 a.m. - 1 p.m. at Emmet Co Fairgrounds (Petoskey, Michigan). Adm. $3. Table: $5. Prizes, Commercial Displays, Refreshments, VE exams. Talk-in: 146.68. For info: Tom, W8IZS, 616/539-8459 or Dirk, KG8JK 616/348-5043, kg8jk@qsl.net.

MISSOURI

PHD ARA Hamfest/ARRL Midwest Div. Convention will be on 10, July, at Kansas City Market Center (Exit 7, I-435, Kansas City). Adm. $5. Table: $40, $25, $15. For info: Bob Roske, WAØCLR, P.O. Box 28954, Kansas City. MO 64188-8954. Phone:816/436-0069. Email: wa0clr@worldnet.att.net. Website: http://members.tripod.com/~PHDARA/.

NEW YORK

Genesee Radio Amateurs, Inc.'s 1999 Batavia Hamfest 10 July, 6 a.m. - 3 p.m., at Genesee Fairgrounds. Adm: $4 adv., $5 at door (under 12 FREE). Flea Market space: $2. Refreshments available. For info: Harold Hay, 716/343-2844. Email: wa2abq@aol.com.

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Mid Island ARC Summer Fest '99 11 July at Knights of Columbus Hall, Patchouge, NY. Adm $6 (No adm for VE testing only). Tables $15 (adv) $20 at door. Talk-In: 447.025 (pl 91.5). Free tune-up clinic (Check out your rig), parking, food door prizes. Long Isl Xprsway: to Exit 63 South, Ocean Ave (Rte 83) to Main St. Right on Main, and take first left. Sunrise Hwy: to exit 53A South, Ocean Ave (Rte 83) South to Main, right on Main, take first left. For info: Mike, N2OX 17 Whiskey Rd. Coram, NY 11727, 516/736-9126, or web: www.qsl.net/mid-island/arc/

NEVADA

Sierra Nevada Amateur Radio Society (SNARS) Hamfest 31 July at International Game Technology, 9295 Prototype Dr., Reno, NV. Adm. $1 (under 16 FREE) Space: $10. Setup 6 a.m., open 8 a.m. — 4 p.m. VE testing at 9 a.m (pre-reg requested/Walk-

Hamfests

ins OK). Door prizes all day, Grand Prize Raffle at 2:30 p.m. Test registration call Steve, W7VI, at 775/972-3672. Spaces or info: Bill, K7NHP, or Caroll, KC7TCK, at 775/246-3756, email: kc7tck@arrl.net Ray, KB7GNA, 775/826-0362, email: raf.xray@worldnet.att.net or Neil, WA7KCD, 775/972-8373 email: wa7kcd@juno.com.

NORTH CAROLINA

Cary ARC Mid-Summer Swapfest 17 July, 8 a.m. at Cary Community Center (404 Academy St., Chapel Hill Rd. & Academy St.) Adm. $4 ($5 at door). Tables $10. Talk-in: 147.15. VE testing 10 a.m. Vendors, Flea Market. For info/tickets: Cary ARC, P.O. Box 53, Cary, NC 27512.

NORTH DAKOTA

International Peace Garden Hamfest, on U.S.-Canadian border between Dunseith, ND and Boissevain, MB. Camping, flea market, Burghardt Amateur Center (dealer), VE testing, T-hunts, mobile judging, kids games, ladies bingo, Saturday night dance/social, Sunday breakfast. Fun for everyone! TI: 146.85 (–) or 146.52. For info: Dave Snydal, VE4XN, 204/728-2463; dsnydal@mb.sympatico.ca, or Duane Hagen, KEØVF, 701/794-3309; dhagen@westriv.com.

OHIO

OH-KY-IN ARS Hamfest 24 July at Diamond Oaks Career Developement Campus, 6375 Harrison Ave. (East of I-275 and I-74). Special seminars to develop technical understanding in Amateur Radio, transmitter hunt, indoor vendors, outdoor flea market - 2 spaces free with adm. (additional $3/ea. VE session, refreshments. Talk-in: 146.67. Adm. $4/adv, $5/door, 12 and under free; indoor tables (with power!) $8. Dana Laurie, WA8M, 280 Hillcrest Dr., Cincinnati, OH 45215-2610; 513/761-7388; wa8m@arrl.net.

OKLAHOMA

Central Oklahoma Radio Amateurs, Inc.'s "Ham Holiday '99" on 23-24 July, 5 - 8 p.m. Fri. and 8 a.m. - 5 p.m. Sat. at Oklahoma State Fair Park. Adm. $7 adv. $9 at door. Table: $10 adv. $15 at door (if available). W/ power $5 more. Technical and non technical programs, Fox hunt, WAS card check, VE testing, flea market. Talk-in: 146.82. For info check our website at www.geocities.com/heartland/7332. Or mail: Ham Holiday '99. P.O. Box 95942, Oklahoma City, OK 73143. Email: n1lpn@swbell.net.

OREGON

Coos County Radio Club Hamfest 31 July 9a.m. - 3 p.m. at The Barn (community center) located on the northwest edge of the city park. Adm. $4 ($5 at door). Tables $10/ea. Talk-in: 146.610 MHz. For info: Coos County Radio Club, c/o Brian Howard, 1107 Roseburg Highway, Myrtle Point, OR 97458.

PENNSYLVANIA

Harrisburg Radio Amateurs Club Hamfest/Computer Show, 04 July at Emerick Cibort Park, Bressler (near Steelton/Harrisburg, PA) Adm. $5 (YL, XYL, under 12 Free). Open for vendors 6 a.m., public at 8 a.m. Tables w/power $15 ea. for 3, $12 for additional tables by 15 June. Late Tables $18 ea. Tailgating $5 per space. Talk-in 146.16/76 and 146.52. For info: 717/939-4825. Reservations: Richard Bordner, W3NJB, 2501 S. 2nd St. Steelton, PA 17113. Email: n3njb@aol.com (SASE for map)

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Mid-Atlantic ARC Hamfest/Computer Fair 11 July at Kimberton Fire Co. Fairgrounds in Kimberton, PA. Adm. $5 (spouse/children free). Tables $10/ea. Tailgate spaces $5. Talk-in: 146.835 (–) and 443.80 (+). For info: Bill Owen, W3KRB, 679 Malin Road, Newtown Square, PA 19073, 610/325-3995 or MARC, P.O. Box 352, Villanova, PA 19085; hamfest-info@marc-radio.org; www.marc-radio.org/hamfest.html.

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Murgas ARC Hamfest/Computer Show 3 July, at Luzerne County Fairgrounds(I-81 to Exit 47b North on Rt 309 to Rt 415 to Rt 118). Adm. $5 Tables: 8 ft w/power $14. Outside space: 1st one FREE 2nd $5. Talk-in 146.61(–) and 146.52. For info: Stan Perry, KE3TC, 51 West Grand Street, Nanticoke, PA 18634-3101. Phone 570/735-2385 or 570/477-5226. Email: slperry@epix.net. or Bob Michael, N3FA, 15 Valley View Drive, Pringle, PA 18704. Phone: 570/288-3532. Email: wb3faa@aol.com.

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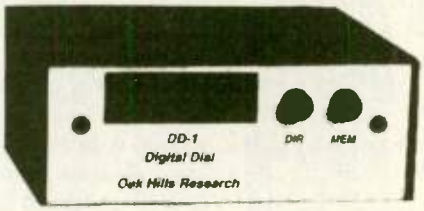
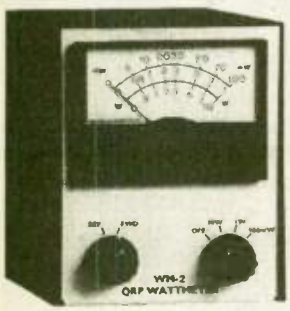
Information in "New Products" is supplied by the manufacturers to acquaint ***Worldradio*** *readers with new products.*

Milestone Technologies acquires Oak Hills Research

Milestone Technologies has acquired kit manufacturer Oak Hills Research, a company once owned by QRP pioneer Doug DeMaw. Milestone president Marshall Emm, N1FN, said the acquisition was made to enable Milestone Technologies to reach its goal of providing "everything for the Morse enthusiast."

Milestone has also introduced four new kits for Amateur Radio operators. The OHR 100A Single Band transceiver kit for 20, 30 or 40 Meters is a single signal superhet receiver, with an ultra stable pre-mix VFO with high side LO. injection, and 70 kHz coverage. RIT +/- 1 kHz, 4 pole crystal IF filter, adjustable 1200-499Hz on front panel. Room filling audio available at the speaker jack. 5W output, variable from 0-5 watts. Silky smooth QSK. Operates on 12-13.6 VDC, 80 mA RX and 850 mA TX at 13.65 VDC. Completed kit measures 2 1/2" X 6" X 6" and weighs 24 oz.



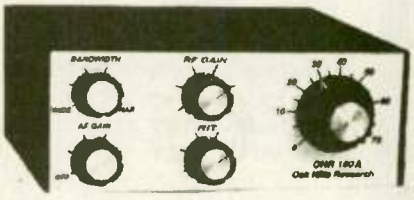


The OHR 100A retails for $119.95.

The OHR 500 5-band CW transceiver kit features 150 kHz of the 80, 40, 30, 20 and 15-meter bands in a single signal superhet receiver with diode ring mixer, ultra stable pre-mix VFO with high side LO. injection. RIT, 4-pole crystal IF filter, 4 pole audio filter. TX power control on front panel. Receiver has selectable AGC and RF gain control. Chassis is pre-punched for the optional keyer kit. 4-5 watts out on all bands except 15. Output on 15 is 3-3.5 watts. Also has a silky smooth QSK. The OHR 500 operates on 12-13.6VDC, 270mA RX and 1A TX at 13.6V. Completed kit measures 4" X 8 1/4" X 8 1/4" and weighs 3.8 pounds. The OHR 500 retails for $349.95 and the optional keyer kit is $39.95.

The OHR Digital Dial/Frequency counter kit is the perfect companion to the OHR 100 and OHR 500. It's a six-digit counter designed to be used as a digital dial with all of the OHR transceiver kits, and can be used as a 100 Hz to 50 MHz frequency counter with a programmable offset display. Requires 9-13.6VDC, with 100mA drain with display active and 40mA with display blanked. Completed kit measures 1 3/4" X 4 1/2" X 4" and weighs 11 ounces. It retails for $74.95.

Another new offering from Milestone is the OHR QRP Wattmeter kit. Designed specifically for the QRP operator, the WM-2 operates from 300 kHz to 54 MHz. It measures forward and reflected power at QRP levels down to 5mW. Three full scale power ranges — 10W, 1W or 100mW with an accuracy of 5% of full scale. Rear panel switch allows you to select the internal 9V battery or external power jack. High quality American made 3" meter movement with a large easy-to-read scale. The meter circuit current drain is typically 1mA, making it great for portable use. It has coax connectors. The WM-2 is easy to build and align. The alignment consist of setting three voltages with your digital voltmeter. A source of RF is not required for alignment. Completed wattmeter measures 4 1/2"x 3 1/2" X 4" and weighs 16 oz. It retails for $84.95.



To order call: 800/238-8205. Additional information and secure on-line ordering of all Morse Express/Oak Hills Research products is on their webpage at: www.morsex.com or by writing to: Morse Express, 2460 S. Moline Way, Aurora, CO 80014.

New HT from Alinco

Alinco USA has introduced two new hand-held radios as additions to their line of Amateur Radio products.

The new DJ-V5T is a compact dual band HT for the 2M 70cm bands. It features alphanu-

New Products

meric display, up to 5 Watts power output and 200 memories. It also features an expanded received capability offering coverage from 76-999.995 MHz (cellular blocked), narrow and wide FM receive modes and CTCSS encode and decode.

Additonal features include four scan modes, five programmable scan banks, automatic internal temperature protection, cable cloning, SMA antenna connector, 13.8 VDC direct input, four different European tone bursts, autodial memories, input voltage display with over-voltage warning, MARS/CAP capability and more. Manufacturers suggest retail price is $315.00 for the DJ-V5T with a 2 watt battery, or $345.00 for the 5 watt model with a bigger battery.

The new DJ-195T, a new 2-meter HT, has been added to the Alinco product line and has some unique features. Receiver coverage from 130-174 MHz, 40 memories, CTCSS encode and decode, Digital Code Squelch (DCS), autodialerNew HT's from Alinco

The new DJ-195T, a new 2-meter HT, has been added to the Alinco product line and has some unique features. Receiver coverage from 130-174 MHz, 40 memories, CTCSS encode and decode, Digital Code Squelch (DCS), autodialer memories and 5 watt output power are impressive features. Unique features not found in other HT's are a theft alarm that, when activated, sounds when the unit is removed from an external power source, such as in a mobile environment. Also included is an experimental "mosquito repel" feature that may keep the annoying insects away from the vicinity of the radio through the emission of an electronic tone. Could this be the first Amateur Radio capable of debugging a Field Day operating position?

Additional DJ-195T features include standard 5 watt battery, 18.8 VDC direct input, cable cloning, BNC antenna connector, European tone bursts, MARS/CAP capability and more.

Suggested retail price for the DJ-195T is $289.95.

Toolpak BucketPak

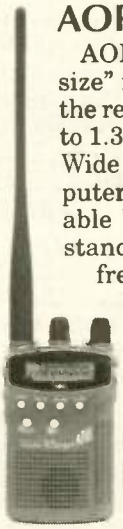
The biggest problem with all the bucket organizers on the market today is they are difficult to carry when full. The revolutionary new BucketPak solves the problem by adding a ShoulderStrap that makes carrying a breeze.

BucketPak's constructed from super-tough Dupont Cordura to give years of trouble free service. 38 individual pockets, 24 outside, 14 inside, organize a wide variety of your most important tools. A Velcro flap-covered pocket holds valuable items in place.

Our mid-bucket nylon strap cinches the BucketPak in place. Two "D" rings hold Paktek's ShoulderStrap or any other items you want to clip in place. Made in America to last, BucketPak is available from ToolPak dealers nationwide or from Paktek, Inc.

BucketPak retails for $24.97. ShoulderStrap retails for $7.97. To order a BucketPak, call 800/258-8458. For further information you can contact ToolPak by writing to: ToolPak, 7307 82nd St., CT. SW., Tacoma, WA 98498, phone: 253/584-4914 or fax 253/589-1091. ToolPak has an excellent website at: www.toolpak.com

AOR AR16B "Pocket" Receiver



AOR has announced the release of a new "pocket size" receiver, the AR16B Wide Ranger. Features of the receiver include frequency coverage from 500 kHz to 1.3 GHz, 500 memory channels (cellular blocked), Wide FM, Narrow FM and AM operating modes, computer programming capability, S meter, rechargeable NiMh batteries and the ability to operate on standard AA alkaline cells. In addition, there are 21 frequency band settings, 25 search banks, 12 selectable frequency tuning steps and the ability to scan up to 20 channels per second.

The AR16B is not much larger than a pager, measuring 2.4 inches wide, 4.2 inches high and only 1.2 inches deep. It weighs just 5.4 ounces, including the antenna and batteries. Suggested retail price is $299.95. The AOR AR16B Wide Ranger is available through AOR dealers.

New Catalog

Universal Radio announces its new 1999 Communications Catalog. Catalog #99-02 is 120 pages covering equipment for the amateur, shortwave and scanner enthusiast. An impressive selection of antennas, headphones, books and accessories is also featured.

Several new items are premiering in this catalog:

Sony ICF-SW07 Portable Receiver
Icom IC-R75 Communications Receiver
Icom PCR-100 Wideband Computer Receiver
AOR AR7000B Wideband Communications Receiver
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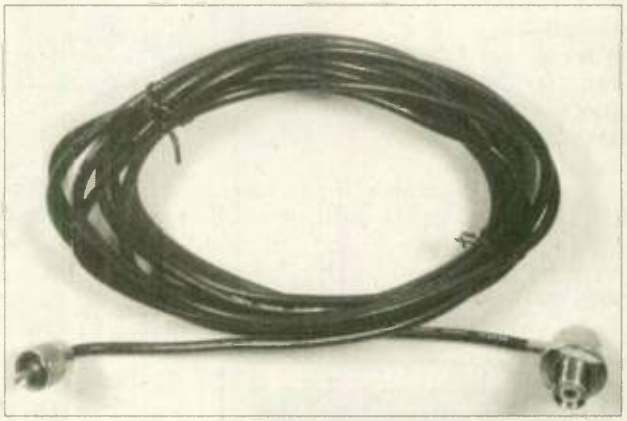
Contact Universal Radio by writing to 6830 Americana Pkwy. Reynoldsburg, OH 43068-4113. Call 800/431-3939 for orders or prices, 614/866-4267 for information or fax 614/866-2339. Universal Radio's website is: www. universal-radio.com, email: dx@universal-radio.com

New MFJ products

Two new 24-hour clocks have been added to the MFJ line of products. The MFJ-125 is an attractive 12-inch diameter face quartz clock that shows 24- and 12-hour time, day-of-the-week and day-of-the-month simultaneously at a glance. You get a large, highly visible 24-hour clock with smaller day, date and 12-hour time cylinders inset in the larger clock. It's black with an attractive gold trim and white face with huge 24-hour digits. The MFJ-125 retails for $29.95.

The MFJ-115 is a GMT clock you can set for GMT time and easily see what time it is in Moscow, Cairo, London, Chicago, etc. Each city has a + or – number from GMT.

You just add or subtract to know what time it is in the individual cities. You get quartz accuracy plus excellent visibility across your Ham shack, office or computer room. It's got a 12-inch diameter face with a blue and brown map with bright red hands. The clock is powered by a single AA size battery. The MFJ-115 retails for $24.95.



Mobile antenna cable

MFJ now offers hard mount coaxial line with connectors for installing permanent mobile VHF/UHF antenna systems. The cables have either SO-239 or NMO connectors for connecting the MFJ *RuffRider* series of antennas

or the antenna of your choice. The NMO cable is MFJ-341M; the SO-239 cable is MFJ-341S. The cables retail for $19.95 each.

Tunable measurement filter

The MFJ-731 is a new RF measurement filter allowing accurate SWR and impedance measurements between 1.8-30 MHz in the presence of strong RF fields. It has virtually no effect on measurements and works with all SWR analyzers. If you have a strong RF environment or a strong broadcast station nearby, you may have had trouble using an antenna SWR analyzer. If you have found working with your SWR analyzer is difficult at the top of towers, you need this filter. Its compact, all-metal box fits on top of your SWR analyzer's coax connector. It will eliminate strong RF fields interfering with readings on your instrument. The available accessory package, MFJ-99 works with the MFJ-259/B/249/B/209, and includes genuine MFJ-29C tote case, MFJ-66 dip meter adapter and the MFJ-1315 110 VAC adapter. The MFJ-731 Tunable Measurement Filter retails for $89.95. The MFJ-99 accessory package retails for $54.85.

All of the new MFJ products feature the famous *No Matter What* one year limited warranty. MFJ will repair or replace (at our option) your MFJ products for one full year.

For your nearest dealer or to order, call 800/647-1800, for information 601/323/5869, fax: 601/323-6551 or on the web: www. mfj enterprises.com.

Whoops!

In our May issue, we listed a new Lightning Surge protector and inadvertently left off the company information. The LP-1 Lightning Surge Protector is a product of Dynamic Electronics, Inc., P.O. Box 896, Hartselle, AL 35640. Phone: 256/773-2758, fax: 256/773-7295. Email: dei@whnt19.com, web page: www.hsv.tis.net/~dei

UK adopts slow-code licensing

The United Kingdom has announced a new licensing structure built around amateurs having access to the high frequency DX bands by passing only a 5 word per minute Morse code test. According to a 21 May release from the RSGB, the UK's Radiocommunications Agency says the new Class A/B Amateur Radio license sets the Ham radio scene for the new millennium.

Under the soon to be revised UK licensing system, the new Class A/B new class of license will provide access to all amateur bands, on passing the UK Radio Amateurs Examination and a 5 wpm Morse test. Operators will be permitted up to 100 watts Peak Envelope Power output on the amateur bands below 30 MHz and up to 400 watts P-E-P output in amateur allocations above 30 MHz. The new license will also usher in the M-5 prefix block when this restructuring takes effect later this year.

The UK is also enhancing the operating privileges of its entry level licenses as well. Their Novice A and Novice B licenses will be improved this summer through the addition of higher output power and operation on the 144MHz band and an SSB allocation on the 75-meter band as well.

Restructuring in the UK does not end there. The Radiocommunications agency says it expects to see mandatory Morse testing disappear following a World Radio Conference to be held in 2002 or 2003. The agency says it will agree to the removal of mandatory testing for access to all Amateur Radio frequencies below 30 MHz. Following that decision, the agency says the existing UK license structure will be replaced with an incentive-based system. — *RSGB, Newsline*

New 2-meter DX record

A new North American 2-meter DX record for high speed CW meteor scatter communications has been set. It occurred the morning of 09 May when NØKQY in western Kansas made contact with Russ Pillsbury, K2TXB in Southern New Jersey. The new record, 1430 miles, eclipses by 29 miles the previous record set by K2TXB and K5IUA back in November of 1998. This latest record setting contact was made on 144.090 MHz. Transmission speed equates to about 6000 letters or 1200 wpm using computer aided C-W technology. — *VHF Reflector, Newsline*

VE Exams

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
p/r=pre-register only—no w/i
w/i=walk-in only
w/i pref.=w/i preferred to p/r

State	City	Contact	Notes
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7/06/99	Mobile	David, WA4VAC 205/649-5229	p/r pref
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7/10/99	Tucson	Joe, K7OPX 520/886-7217	w/i only
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7/17/99	Gassville	Phil, AB5ZU 870/425-7406	p/r pref.
California			
7/10/99	Carisbad	Rusty, AA6OM 760/747-5872	p/r pref.
7/22/99	Colton	Harold 909/825-7136 days or 909/685-6073 eves	p/r pref.
7/03/99	Culver City	Clive, AA6TZ 310/827-2538	w/i pref.
7/10/99	Cypress	Harrison, AC6TI 714/952-6114	w/i
7/01/99	Fremont	Dennis, K6DF 510/791-0914	w/i only
7/10/99	Harbor City	Elvin, N6DYZ 310/325-2965	p/r pref.
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7/31/99	La Verne	Carl, WJ6N 909/356-1919	p/r
7/17/99	Long Beach	Don, 562/420-9480	p/rpref.
7/18/99	Pablo Verdes	Paul KITKL 310/644-2271	w/i
7/17/99	Redwood City		Al, WB6IMX 408/255-9000 w/i only
7/14/99	Santa Ana	Red Cross 714/835-5381 x140	w/i
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tba	All Colorado	Exam recording 303/360-7293	
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7/24/99	Longmont	Eaarle, NØISB 303/776-9158	p/r pref.
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7/10/99	Newington	Dan, K3UFG 860/289-3379	w/i pref.
Florida			
7/08/99	Ft. Myers	Leonard, KC4GOA 941/694-2505	w/i
7/20/99	Middletown	Paul Lux, K1PL 860/635-1742	p/r pref.
7/10/99	W. Palm Beach	Steve, W2QX 561/585-8504	w/i
Idaho			
7/10/99	Boise	Lem, W7JMH 208/343-9153	w/i pref.
7/28/99	Grangeville	Larry AB7GY 208/983-2163	w/i pref.
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Anytime!	Burr Ridge	Deni, W9DS 630/986-0061	p/r
7/21/99	Chicago	Mike, KG9C 773/781-7171	w/i ok
7/10/99	Oak Forest	David, NF9N 708/448-0580	p/r pref.
7/17/99	Rockford	Rusty, WB9QYV 815/968-0080	w/i pref
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7/24/99	Frankfort	Donald, K9DFK 765/249-2020	w/i pref.
7/10/99	Indianapolis	Ray, K1HG 317/788-7448 or Mark, W9MAM 317/788-7448	w/i pref
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7/17/99	Melrose	Scott, WB1F 617/665-7654	w/i ok
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7/10/99	Houghton	George, W8FWG, 906/337-2542	p/r pref.
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7/19/99	Telford	Joe, W3PNL 215/723-6697	p/r pref
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Rhode Island			
7/08/99	Providence	Judy, KC1RI 401/231-9156	w/i pref.
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7/17/99	Charleston	Ed, KE2D 843/871-4368	w/i pref.
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It's a double-sided sword

The FCC's chief rules enforcer Riley Hollingsworth, K4ZDH, has asked a slow scan television operator to spread the word that SSTV should be careful not to interfere with organized voice net operations. The letter to Larry Teel, KJ7QP, notes that he was heard transmitting SSTV on 14.236 MHz and interfering with the Indexa Net.

Instead of reprimanding Teel, the FCC's Hollingsworth asked the Texas ham to please assist him by reminding other Slow Scan operators of the gentlemen's agreement bandplan for SSTV. This is generally from 14.228 to 14.232 MHz.

Hollingsworth says the FCC wants to avoid any formal enforcement action against SSTV operators. He wants them to stay inside the agreed to bandplan and thereby minimize interference to other modes.

But there is a caveat for the nets and operators of other modes at the end of the letter from Hollingsworth to Teel. Hollingsworth says that if the Indexa group appears to be causing deliberate interference to slow scan television operations within the gentlemen's agreed to subband, to let him know. He promises to do a follow-up on all such complaints. — *FCC, Newsline*

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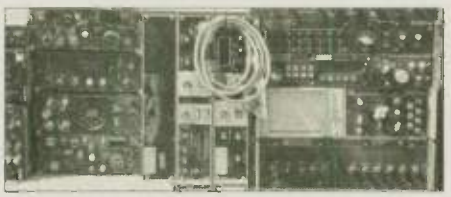

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Club call signs and the FCC

Many amateurs have expressed frustration and have been puzzled by the club call system reintroduced by the FCC in 1995. During the past six months, I have also been perplexed and frustrated by a system that seems to be out of control.

Last November, I tried to obtain a certain 2x1 call for my own personal call. I was not successful in getting the call, which was assigned to a club. On the same day, another club vanity call was granted and assigned to the same individual. Being the curious kind, I checked the street address of the trustee listed and discovered he was the trustee for 12 clubs, with the majority being either 1x2 or 2x1 vanity call signs.

Someone holding 12 club calls piqued my interest, so I naturally started asking questions of amateurs in our local area. Many were familiar with the individual, as well as several others holding numerous calls. One amateur pointed out to me has 18 club calls, and is a very famous contester. Another, living in the Los Angeles area, has more than 40 calls.

As part of my natural curosity, I started checking the club calls listed in the QRZ online database 'new hams' section of their daily update. One particular individual kept coming up as the trustee of numerous clubs established since December 1998. This amateur had established clubs in Washington, DC., New York City, Hawaii, Alaska, Guam and Saipan and American Samoa. I kept asking myself over and over again, "How can this guy afford to go to all of those meetings?"

Just to test the club call system, I filled out and sent 100 FCC form 610B's to establish 100 new clubs. I sent all of the applications in ONE envelope. After three weeks, I started checking the daily updates, looking for any of the bogus names I had picked out. After seven weeks had gone by without a single new club being listed, it was obvious I had gotten someone's attention.

On 07 May, I was talking to Riley Hollingsworth about an enforcement action in Northern California. When we finished our business, Mr. Hollingsworth asked me to explain the stack of 100 forms on his desk. I told him about the problems I suspected were taking root in the club call sign system. In particular, I pointed out Motoaki Uotome, W9BO, and his obtaining club calls and vanity calls at an alarming rate.

On 11 May, I received an email from Mr. Hollingsworth, stating that I had been correct about Mr. Uotome, and that he had just set aside 24 club calls recently granted to Mr. Uotome. In his letter to Mr. Uotome, Mr. Hollingsworth asks him to produce some paperwork about his clubs. Mr. Hollingsworth said, "Where you are claiming that they are used by clubs provide a list of the names, addresses and telephone numbers of the members, meeting times and dates within the past year, proposed meeting times and locations for the coming year, and copies of minutes, if any, taken at meetings within the last three months." Mr. Hollingsworth further states that failure to provide the information requested within 30 days will result in cancellation of all of the licenses.

Club call signs held by Mr. Uotome under investigation by the FCC are: KB3DRY, KB3DRZ, KB3DSA, KB3DSM, KC2EXC, KC2EYU, KC2EZB, KC2EZH, WHØABM, WH2AOA, WH6DFK, WH6DFR, WH6DFV, WH6DFZ, K3MH, K7AH, KHØAW, KH2AW, KH2ZZ, KH8JA, KL7AR, KR6CW, W1BA, W3AN, W2AN, WH8A, WH7J, WH7AA, AJ1AA, KB3DLY, KH7WW, KH8J, NH7AA and W1BT.

Mr. Hollingsworth is now aware of several other individuals holding numerous club calls, and will be investigating these cases soon. I believe this is just the start of an effort to straighten out the mess the club and vanity call sign systems have become. — *Rick McCusker, WF6O*

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