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WORLDRADIO

Year 27, Issue 8

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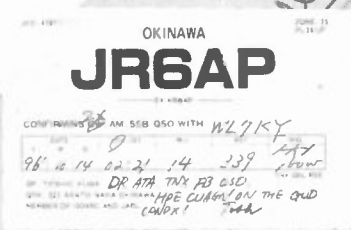

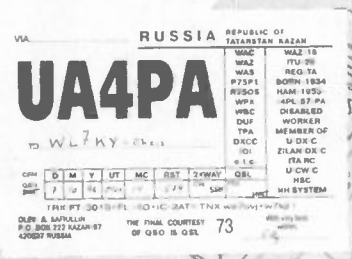

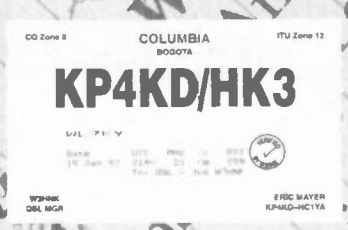

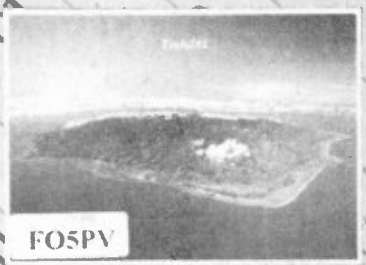

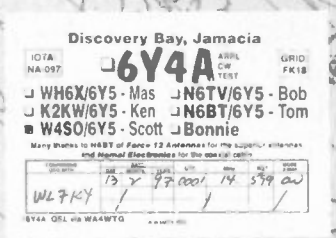

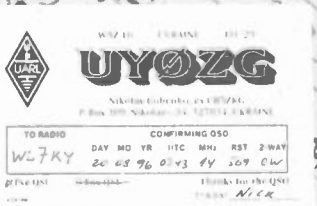

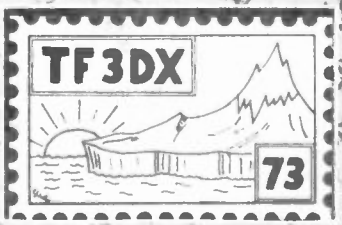

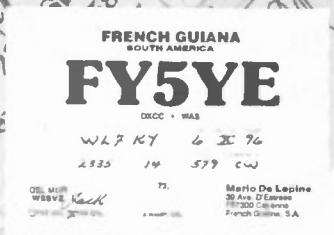

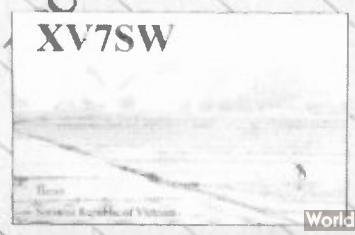

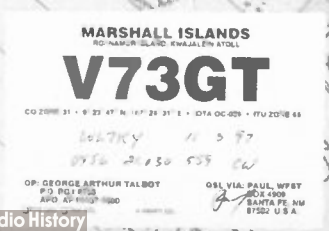

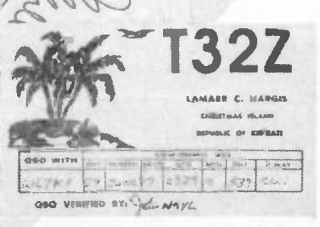

NEWSFRONT

Worldradio

Some information has been supplied to *Worldradio* **Newsfront** courtesy of *Newsline*.

STS-83/84 QSLs

QSLs for space shuttle missions STS-83 (3-8 April 1997) and STS-84 (1-17 July 1997) have been forwarded to the Bergen Amateur Radio Association (New Jersey). BARA generously offered to pay for the QSLs and will be handling QSLing responsibilities for these two missions. Hams aboard were KC5RNI, KC5BTK, and KC5FVF. —*The ARRL Letter*

Nevada hams get a better deal

Glenn Roberts, KU7Z, says since March 1992, hams in Boulder City, Nevada, have been limited to an antenna height of 35 feet. Last spring, with guidance from the ARRL, hams there submitted what Roberts called "a very detailed, well-documented petition" asking for a revision in the antenna code to allow a maximum tower height of 70 feet.

"We worked closely with city officials ever since to get this code revised," he says. On 25 November, the City Council voted unanimously to approve a new code allowing antennas up to 70 feet tall. They also voted to waive the $100 fee for a conditional use permit, in appreciation of the community services hams provide.

"Persistence paid off!" Roberts concluded. — *ARRL Letter*

New Section Managers appointed

Alabama, Kansas, and Northern New York have new Section Managers. In Alabama, the new SM, effective 15 December, is Scott Johnston, N4YYQ, of Vincent. He replaces Tom Moore, KL7Q, who resigned. In Kansas, Orlan Q. Cook, WØOYH, of Shawnee, replaced Mike Brungardt, KØTQ, effective 1 December. Brungardt has moved to Indiana. In Northern New York, Leslie "Les" Schmarder, WA2AEA, succeeded Charles Orem, KD2AJ, 02 December. Orem resigned for personal reasons.

Contact Scott Johnston, N4YYQ, at 1810 Macedonia Loop, Vincent, AL 35178; tel 205/960-6516; e-mail n4yyq@arrl.org. Contact Orlan Cook, WØOYH, at 12110 W. 71st St, Shawnee, KS 66216; tel 913/631-9663; e-mail w0oyh@arrl.org. Contact LesSchmarder, WA2AEA, at RR1 Box 236, Elizabethtown, NY 12932; tel 518/873-2189; e-mail wa2aea@arrl.org. — *The ARRL Letter*

FCC's new Form 610 available

With just days to spare, the new FCC Form 610 became available from the FCC's forms contractor. The FCC has ordered the destruction of all previous versions of the form. As of 01 January the FCC will accept only the new Form 610 for all filings. Forms 610A and 610B also have been amended. The major change in the new Form 610 is a certification that says the applicant has read and will comply with the new RF radiation safety rules that begin phasing in 01 January 1998.

The FCC Forms Distribution Center accepts orders at 800/418-3676. That's not to say the new Form 610 simply has not been available until now. ARRL VEC Manager Bart Jahnke, W9JJ, says the ARRL/VEC sent out 43,000 copies of the revised 610 last week to VE teams across the country. The ARRL had copies printed earlier this fall and has been supplying the new forms to those who have requested them for the past six weeks. In addition, the ARRL now supplies a new handout, Additional Information for Amateurs Completing the New FCC Form 610, that contains a condensed version of how to comply with the new RF safety regulations.

The new Forms 610 also have been available from the FCC's Web site at http://www.fcc.govformpage.html, at ftp://ftp.fcc.gov/pub/Forms, or by fax at 202/418-0177 (request index).

To order a new Form 610 from the ARRL, send an SASE to ARRL/VEC, 225 Main St, Newington, CT 06111. Include one unit of first-class postage for each Form you order.

N8TI vs. Bad Hams

A newly-elected ARRL official appears to be an enemy of potty mouth hams and others who violate the FCC rules. Joe Falcone, N8TI, who beat out incumbent director George Race, WB8BGY, to become the new Director in the Great Lakes Division, says he will make it the primary goal of his freshman term on the ARRL Board to get the bad guys off the air.

Joe Falcone, N8TI, said, "My number one goal is to have the FCC start to proceed against these jerks — I use that as a phrase — who use profanity, intimidation and even ethnic intimidation on the air. I believe that there are only 20 or 30 of these people and I think it is outrageous that you are afraid to let your young child be alone with your radio for fear that they might hear something."

Many of those who are involved in this kind of on-air activity claim that what they do is constitutionally protected. Their vulgar language and intimidation tactics are their way of practicing freedom of speech. Director-Elect Falcone, an attorney, disagrees: "I do not believe that it is a constitutional right to use profanity on the amateur airwaves. It's no more of a constitutional right than is driving at 120 mph down a highway." Falcone appears to be echoing the words of another Amateur Radio attorney, the late Joseph Merdler, N6AHU, who brought the same problems of foul mouth hams and malicious interference to the Amateur Radio public eye in 1979. Before his death in 1995, Merdler was credited with helping to remove over a dozen rules violators from the airwaves. Since his death there has not been any one decisive leader

that the Amateur Radio public could look to in handling this problem. Now the service has Joe Falcone, N8TI, saying he wants the bad guys taken off the air. He is also in the political position to make his words stick. —*Amateur News Weekly, Newsline*

International Space Station crew will include hams

Hams will be among the first crew members to live and work aboard the International Space Station. The first crew will consist of U.S. astronaut William M. Shepherd, as the expedition commander. Shepherd is studying for his ticket. He'll be accompanied by Russian cosmonauts Yuri Gidzenko and Sergei Krikalev, U5MIR.

The second crew will be headed by Russian cosmonaut Yuri Usachev, R3MIR, and will include U.S. astronaut Susan Helms, KC7NHZ. U.S. astronaut Carl Walz, KC5TIE, will be a member of the forth crew to head to ISS.

Initially, crews will inhabit the service module, which will include an Amateur Radio antenna. Ham gear will be delivered aboard STS-96 late next year. NASA says it will not have the International Space Station fully assembled and operational until the year 2003. — *ARRL*

KC5VPF gets extra time aboard Mir

NASA has delayed the next space shuttle flight to Mir, leaving American astronaut David Wolf, KC5VPF, aboard for at least another few days. The shuttle *Endeavour* was to blast off 15 January, but NASA announced Monday that the new launch date will be 20 January. The delay will give the Russian crew time to do additional work on Mir, including three spacewalks and the arrival of another supply ship. NASA also wants to check out problems discovered on the shuttle Columbia which returned to Earth last week after a two-week mission. Also, one of Endeavour's cargo bay doors accidentally was dented last week. The Endeavour will pick up Wolf and drop off his replacement, Andy Thomas, KD5CHF. Thomas will be the last U.S. astronaut to live aboard Mir. — *ARRL Letter*

On the cover

Pictured on the cover this month are the 24 QSL cards submitted by Christopher Hurlbut, WL7KY, winner of ***Worldradio's*** first CATZ Award (see p. 22 for rules). We congratulate Chris for his achievement.

DXCC fees going up

The ARRL DXCC Desk has announced new fees for DXCC, including a $10 fee for an initial DXCC application. This has been free for League members. It will also cost more for walk-in card checking at conventions or at League Headquarters.

All applicable fees are charged on each application. Applicant must supply return postage or an SASE for any cards or information requests. The new fees go into effect 01 January 1998.

Current Fee	Item	New Fee
Free	initial application each year, member	$10
$10	additional application, member	$20
$10	initial application, foreign nonmember	$20
$20	additional application, foreign nonmember	$30
$2	convention/HQ walk-in card check	$5
10¢	per additional QSO*	15¢
$10	certificate fee (includes pin)	no change
$25+shipping	Honor Roll & 5-Band DXCC plaques	$30+shipping**
$40+shipping	#1 Honor Roll plaque	$50+shipping**

*First application prices are for 120 QSOs maximum, and additional application prices are for 100 QSOs maximum. QSOs beyond those limits are charged at this price.

**includes pin

New fees also go into effect the first of the year for VUCC certificates and for WAS, Rag Chewers Club, Old Timers Club, Friendship, and WAC awards. An initial, replacement, or additional VUCC certificate will cost $10. Pins are $5. An initial WAS certificate will cost $5 plus return postage for your QSLs. WAS endorsements will be $3 plus return postage. The 5BWAS certificate will be $10 (includes pin) plus return postage, while the plaque will cost $30 plus shipping. The RCC and OTC awards will be $3 each while the Friendship Award will cost $5 (no charge for these awards from ARRL-affiliated clubs). The WAC & 5BWAC awards will be $3 for U.S. applicants plus return postage for QSLs. — *ARRL Letter*

Congratulations to John Fornof, W9CWP,
winner of a $200 gift certificate (redeemable from MFJ).
His name was selected at random by the computer from the **Worldradio** subscriber list. Check here next month to see if your name has been selected.

Worldradio
February 1998

News & Features

Departments

Next month's columns will include Amateur Satellites, County Hunter, Positively CW, RFI & You, Traffic and Youth Forum.

Worldradio

February 1998 Year 27, Issue 8

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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 armond@delphi.com

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Publisher's Microphone

We now present the names and calls of those who realize that *Worldradio* is the pillar of western civilization. The latest to become *Worldradio* Super Boosters (Lifetime Subscribers) are:

- **Rowland St. Louis, Jr., K2LKH** Geneva, NY
- **Thomas Sawyer, WW3P** Coraopolis, PA
- **L. Scofield, W4SCO** Tucker, GA
- **Baker Springfield, W4HYY** Senatobia, MS
- **Mike Fiedler, KB8YFQ** Royal Oak, MI
- **Robert Forgey, K7LFY** Oklahoma City, OK
- **Richard Pruitt, K5NP** Fort Worth, TX
- **Robert Schuetz, W2BDG** Cave Creek, AZ
- **Dana Bacon, KD6AUO** La Verne, CA

And, they are the pillars who are supporting *Worldradio*.

•

Bill Eckels, W8ZNH, Big Rapids, MI, wrote, "Have to agree with others when they say your publication is the best value for hams on the market today."

Regarding the idea of a once-a-month, Sunday afternoon few hour on-air get together of the quality amateurs who subscribe to *Worldradio*, Larry Eichen, KF2GD, Rockaway Park, NY, said, "Great idea for WR people to get together. My quad is in ur direction!!"

A nice note from John Burdette, N8TX, Ripley, WV, president of the Jackson County, ARC. He was thanking us for the MFJ Antenna Analyzer which their club received from *Worldradio*. It's nice to see people remember the manners their mothers tried to teach them.

•

We've heard about an eighth grader in Lodi, CA, who finally passed the license exam on his seventh try. Maybe he had heard the Winston Churchill speech which contained the lines, "We will never, never, give up."

We've heard of people who flunked the test once and in a fit of pique just dropped the whole idea of being a radio operator.

•

Some amateurs are grousing about the cost of equipment. That may be more of a psychological reaction than a logical one. They see a $1,200 rig and can think back to when they were $600. They forget that at the time that transceivers were $600, their salary was one-third as much as it is today. It's like the old timer who bellows that he remembers when milk was ten cents a gallon. The other side of the equation, that he made a dollar a day, is left out.

Looking in the HRO catalog I see a very fine Yaesu FT-840 for $900. While I would never call $900 an insignificant sum of money, spread over three years it's less than a dollar a day. The FT-23R hand held for 2M is $210. Those who remember the Gonset Communicator, at a much higher cost (in the dollars of 40 years ago) and far less performance, must be amazed.

Another factor that must be cranked in is just how long will that equipment last? You could probably run that FT-840 for the next 10 years before selling it. We're now down to 25 cents a day.

Do you remember when the FT-101 was really the cat's meow? I saw Duane Heise, AA6EE, sell one at a convention to a young person for around $200. That will still put out a good signal today.

I'd guess that for dollar-for-dollar on an hour-for-hour basis, there is no other activity that can be enjoyed for less money. We don't have to change our shoes to do it. We don't have to go anywhere to do it. The weather or time of day or night doesn't matter.

Contrary to what some people think, there is very little in the marketplace that is "overpriced." Don't you expect the people who make radios to have the same quality of medical insurance plan that you do? Are they entitled to a decent salary also? The employees at that radio company deserve the same working conditions you enjoy. Air conditioning in the summer and heat in the winter isn't cheap. And, it's all in the price of the radio.

As is all of the above, in the price of whatever product you are involved in. Which, of course, is not "overpriced" but instead is a great bargain to whoever buys one.

Speaking of rigs, I heard a ham on 20 Meters the other night talking about the Heard Island DXpedition. He said they were the best DXers in the world and he mentioned their choice of manufacturer for every transceiver at every position.

Which company was it? Take a guess. A hint is nearby. N6WR

Ultra Compact Dual Band Handheld **FT-50RD**

One tough little dual bander!

Features

- Frequency Coverage
  Wide Band Receive
  RX: 76-200 MHz, 300-540 MHz, 590-999 MHz*
  TX: 144-148 MHz, 430-450 MHz
- AM Aircraft Receive
- MIL-STD 810 Rating
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- ADMS-1C Windows™ PC Programmable
- Four Battery Savers:
  Automatic Power-Off (APO)
  Receive Battery Saver (RBS)
  Selectable Power Output (SPO)
  Transmit Battery Saver (TBS)
- Time Out Timer (TOT)
- 2.5 and 5 Watt Versions Available
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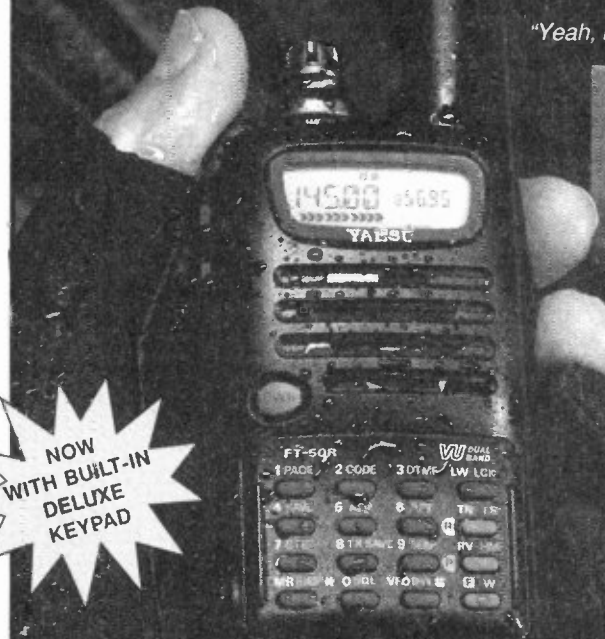
- Full line of accessories

NOW WITH BUILT-IN DELUXE KEYPAD



"You notice how loud this HT's audio is?"

"Yeah, it's Mil Spec tough like a commercial HT."

"Easy to operate, small, great price!"

"Yaesu did it again!"

US MILITARY APPROVED MIL-SPEC 810

The foremost in top-performing, durable, dual band handhelds now includes the FTT-12 DTMF keypad with CTCSS enc/dec, DCS enc/dec, DVRS and paging/coded squelch. Manufactured to rigid commercial grade standards, the FT-50RD is the only amateur dual band HT to achieve a MIL-STD 810 rating. Already a winner: the deluxe keypad makes this stand-out HT even better! Water-resistant construction uses weather-proof gaskets to seal major internal components against the corrosive action of dust and moisture. And, the rugged FT-50RD withstands shock and vibration, so throw it in with your gear!

Exclusive features set the FT-50RD apart, too. Wide Band Receive includes 76-200 MHz (VHF), 300-540 (UHF), and 590-999 MHz*. Dual Watch checks sub-band activity while receiving on another frequency, then when a signal is detected, shifts operation to that frequency. Digital Battery Voltage displays current operating battery voltage. Digital Coded Squelch (DCS) silently monitors busy channels. Auto Range Transpond System™ (ARTS™) uses DCS to allow two radios to track one another. And, the FT-50RD is ADMS-1C Windows™ PC programming compatible, too. To round out the FT-50RD, it has four battery savers, and super loud audio—remarkable in an HT this size.

A reliable companion where ever you go, the FT-50RD is one tough little dual bander with all the features you want!

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FT-10/40R
Ultra Compact Handhelds
VHF or UHF. Similar to FT-50RD including MIL-STD 810, and other exclusive features.

Julie's view of Field Day!

JULIE WADE, KC7FQI

Well, as I am sure you heard, Glenn and friends had a great time on Field Day! He, Willie, KB7STF, Joe, KC7JRS, and a few friends who showed up, like Dr. John Van Such, AA7JA, and Ron Wade, KC7CYI, went out to play in Williams and make a few contacts on Field Day weekend. Now, I'd like to give you Field Day from my perspective.

Six weeks prior

As many as six weeks before the big day, Glenn began talking about going to Williams (and who was invited) for Field Day! He first told me about the location — Willie Berry's vacant property in Williams. Glenn and Willie had to go "survey" the place. Since it is vacant they had to go up and "check things out" in order to plan their radio and antenna setups, campsite, etc. Due to unforeseen circumstances, they were unable to make the trip as soon as they hoped. It was repeatedly delayed. Finally (sigh), the two "boys" made a day trip of it and went out to the property. When they came back, they were even more excited! I didn't think it was possible! Boy, was I wrong!

Glenn told me the locale was "slanted" and bumpy (there was no flat land on it), grassy, had many trees, (snake and spider season is going full bore) and it was perfect! Huh? I didn't get the picture, so Glenn drew me one — literally! He then laid out the "plan" for the antenna and radio hook-ups, the "campsite" with sleep area (including tent), vehicle placement, cooking area and, best of all, they had a port-a-john — how exciting! Once more, attendees were discussed. This list continuously changed up until the Field Day itself! Originally, several hams wanted and intended to go but, unfortunately, plans change, so the name list kept changing. (Begin making ice. It's a good thing because I use a lot of ice myself, so to make extra takes ages.)

Next, Glenn and Willie built the antennas they did not have, and continued to discuss the radios they would take, and continued to discuss the rating they would request for each station — 1A. Not only was I slow on the uptake of all this, but for some reason, it was not clear at first what their rating could and would be. (At least I was not alone in trying to comprehend this big day!) For such a simple day in the boonies with minimal power (Argh! Argh! Hi! Hi! — sounds of the macho "tool man" here), it sure seemed to be a task just getting ready. Oh well (sigh). Okay, antennas and radios and rating all set. On to the second (name) list — Clarke, N7IYV, couldn't go and Willie, KB7STI, had to fly out on Sunday a.m. for school. Darn! And after all that planning.

Next came the food and item lists (make more ice.) That's right, I said lists (I did not lisp here!). Glenn and I wrote out the lists of food (including the planning of a 2-day menu) and supplies. Things like: batteries, eggs, hats, l-o-n-g socks and first aid kit (all those good, important things). Please note — I really did not mind helping out, but I thought to myself, when will this be over? And I did feel better knowing they had what they needed and then some — if you ask they will tell you, they over-planned by a lot! Anyway, by about ten days prior to the big day, lists and menus were completed and gone over and over and over.

Three days prior

By this time Glenn and I were worn out (with all this excitement and planning for the "big day"), but about three days prior to the "big day" my sister and I went shopping! (We bought more ice!) Yea! Countdown had begun! (Thank heaven for my sister — she kept me going when I was done in and she kept the humor in amongst all the planning. She said it was worth it just to see and hear the excitement on Glenn's face and in his voice. And once again, she was right on!)

Tired as I was, I had fun shopping for this trip (it wasn't my trip and if we pulled it off, Glenn would have fun and she and I'd get the house to ourselves for two whole days!).

By this time we were on the third name list — Clarke, N7IYV, had to help his daughter move so he couldn't go, but planned to drop in (if he had the time and energy left — please, please, please! You see, I really was rooting for these guys to go and have a good time!). Nelson, N7WHZ, decided not to go at all (aw, shucks!); Fred, KC7JGG, had to work Saturday morning (I think it's time to cry!), but intended to go up that afternoon; Ron, KC7CYI, planned to go up after work Saturday night; Dr. John, AA7JA, would drop by and Joe Brian, KC7JRS, was invited; and, of course, Glenn and Willie were going, one way or the other!

When it was decided that Joe was able to go for sure (about one week prior), he phoned (a few times — just as excited!). And the three musketeers (as it were, the main characters for the big day!) coordinated their final plans for food, equipment and transportation. Joe brought over his supplies and food share, and he helped Glenn pack the car. It's decided they will follow each other and talk simplex on the radio all the way! They plan a stop in Camp Verde for breakfast, but decide to stop in Cordes Junction instead. (You see, even men change their minds!) (Note* — as they drove by Camp Verde, they noticed a Denny's and a McDonald's, so they had yet another choice to make. I guess they can handle it.)

The day before

Wait, it gets better! On Friday, after Glenn had checked and rechecked his lists, packed the car, filled it up with petrol (as Joe says — he's from Australia), checked the tires and fluids, he takes a well-deserved nap and wakes up to find a huge puddle under the car! Oh, no — danger signs? He turns white and proceeds to check out the puddle. It appears to be an oil leak. Uh-oh, disaster lurks! He probes further — it's only a leaky radiator hose, nothing more! Thank God for small favors and big ones! Totally frustrated, but breathing a big sigh of relief, he calls Willie (due to a transport problem — a car shortage, of all things, at our house — most of the time this place looks like a car lot), goes to auto zone for a new hose, puts it on and, voila — they are once more ready and set to go! Thank you, God. Amen! Yes!?

Glenn gets the non-perishables ready to go, and we are about to go over his lists one last time. (Get this, folks, he was so excited, he packed the car and packed the lists buried down under everything! So I found out my brain still works, even after all this excitement that wore me out. We go over the lists of equipment, food and menus from memory (mine): food, equipment, coffee, even medicine. Now, is that good or what?) After deciding that finally, everything is packed, or if not, oh well, too bad, we fall into bed for a short night's rest (full of nightmares and very little sleep, maybe 40 winks or so) Glenn has to get up, but I don't — I get to sleep in — Hi! Hi!

Finally. . .

Saturday morning at 5:30 a.m. (Yikes!) Glenn gets up, packs the ice chest, takes his medicine and kisses me good-bye! (Very important move, guys!) They are on their way at last! Yes! As it turned out, Willie had a few tense moments when he learned he was scheduled to fly out for school (ugh!) on Sunday a.m., but he worked magic and did not have to fly out until Sunday evening. Yea, Willie! Fred had to work Sunday as well, so he was very unhappy, as was Glenn, and Clark was too beat to go at all, after helping his daughter move. So, it was Glenn, Willie, Joe, Dr. John, Ron and one other lucky fellow ham who dropped by! I believe Glenn said they dozed in shifts and froze their toukases(?), pardon the expression, and their ears off.

My sister and I had two days with no TV (you know about channel surfing, don't you, ladies?). We went to the movies, cleaned house and watched more movies (videos — no channel surfing for us! And no cooking! We had leftovers!). Glenn comes home Sunday a.m. physically and mentally exhausted — way too much preparation anxiety — the word excitement is now left behind. But he says they had a great time, were way overprepared (too much food and not enough time to cook it. Next time, sandwiches, drinks, coffee and cereal are suggested by the guys). He tells me a little about the great contacts, and, tells me even more later on when he wakes up! (Only for about a week — Hi, hi!) Well, the car is no worse for wear (no more leaks), unpacked and put to rest. Glenn sleeps, and sleeps and sleeps. And the other guys, I hear, are just as happy to have gone and are now content to be home, channel-surfing, of course. Did you really need to ask?

**Note: Joe Brian, KC7JRS, has now upgraded, and his new call sign is AB7VY. Also, it is now more than a year later and all the guys have recovered nicely after the excitement of planning and executing their trip for last year's Field Day. However, asked if they would actually do it again, only one man says yes. All the others would want or like to, but, you must understand, "wanting to" and "doing" are two totally different things!*

Special event IDer

A special event station using a 1x1 call sign must announce its regularly assigned call sign at least once an hour. —*The ARRL Letter*

E-mail:
w4zc@macconnect.com

FCC's Universal Licensing

As a first step in implementing its new Universal Licensing System (ULS), the FCC's Wireless Telecommunications Bureau is attempting to "populate" the ULS by getting licensees to register. Ultimately, the ULS will give hams and other licensees on-line access to make license updates and renewals, eliminating the need for hardcopy forms like the venerable Form 610. An FCC Public Notice this week said the ULS is aimed at combining the 11 different licensing systems the Bureau now uses — including Amateur Radio — into a single system.

ULS registration requires supplying a Taxpayer Identification Number (for individuals, this is typically your Social Security Number) and "associated call signs." These could include your individual call sign plus any club station call signs for which you are the trustee.

The Public Notice said that in conjunction with the ULS, the FCC "must collect TIN information to correlate its licensees with any outstanding Federal debt that they might have incurred in other dealings with the Federal Government." All vanity call sign applicants must now supply a TIN as part of Form 159.

On-line registration via the Internet is available. In addition to providing basic name and address information, registration requires you to establish a password that you must use along with your TIN to re-enter the system to make future changes. The ULS also lets you check the status of a pending application. A spokesperson in the FCC's Technical Support Group said the FCC will verify all data supplied at the time of registration to ensure that it is valid before the data are entered into the FCC licensee database.

Using the TIN and the associated call sign(s), the ULS assigns a unique sequential number to each licensee. The WTB says that once it has registration information and has implemented the ULS, it will streamline and simplify the FCC's ability to handle future administrative changes (name and address changes, for example).

Licensees are invited to register electronically at http://www.fcc.gov/wtb/uls. Select ULS Registration. Licensees without access to the Internet may file a TIN registration form, FCC Form 60, from the FCC's fax-on-demand service at 202/418-0177 or by calling the FCC Forms Distribution Center, 800/418-3676. — *FCC, ARRL Letter*

New FCC Chairman, members confirmed

William Kennard is the new chairman of the FCC. Kennard, formerly the FCC's General Counsel, won confirmation 28 October on a 99-1 Senate vote. The vote followed expressions of dissatisfaction from several senators with the way the FCC has been implementing the Telecommunications Act of 1996. Kennard this week named John Nakahata as his chief of staff.

Confirmed on voice votes were FCC nominees Harold Furchtgott-Roth, Michael Powell, and Gloria Tristani. Commissioner Susan Ness is the lone holdover from the Hundt FCC. — *ARRL Letter*

FCC to review regs

The FCC has begun its first com-

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 1 December1997.
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
Ø	ABØGQ	KIØKU	++	KCØCIG
1	AA1SX	KE1IV	N1ZXA	KB1CFW
2	AB2EP	KG2ND	++	KC2CSQ
3	AA3QN	KF3AP	++	KB3BXZ
4	AF4GW	KU4MR	++	KF4UWW
5	AC5OG	KM5NI	++	KD5CUB
6	AD6DX	KQ6TM	++	KF6OTL
7	AB7WV	KK7KU	++	KC7ZTP
8	AB8BP	KI8ER	++	KC8IWZ
9	AA9VD	KG9MA	++	KB9RTD
N. Mariana Is.	NHØB	AHØAY	KHØGT	WHØABI
Guam	++	AH2DF	KH2SR	WH2ANV
Hawaii	KH7V	AH6PE	KH7HH	WH6DEL
Amer. Samoa	AH8P	AH8AH	KH8DL	WH8ABF
Alaska	ALØH	AL7QW	KLØKX	WL7CUO
Virgin Is.	++	KP2CM	NP2JW	WP2AIJ
Puerto Rico	NP3Q	KP3BD	NP3SR	WP4NNM

++All call signs in this group have been issued in this district.

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prehensive biennial review of telecommunications (common carrier) and broadcast regulations as required by the Telecommunications Act of 1996. FCC Chairman William Kennard said the first biennial review "is a key time for the Commission to take a serious top-to-bottom look at its rules." — *FM ARM 1058*

Repeater RF exposure

Many hams and others appear confused when reading the Commission's Second and Third Errata on RF Exposure without the original document in front of them. Many are dependent on news services to explain it to them. The biggest question on the lips of a lot of repeater owners is why a safety survey has to be conducted if a repeater is at a remote site.

A very simple answer is provided by broadcast consultant Bob Gonsett, W6VR, of Communications General Corporation in Fallbrook, California. Bob says that you must do a routine human-exposure-to-RF-signal analysis whenever two or more transmitting antennas are in the same vicinity even if they are not owned and operated by the same party.

The government is very much concerned about the total amount of radio frequency signals at a given location, and just which frequencies are involved. In order to calculate this, you have to know a lot about all the antennas at the site.

W6VR adds that the detailed language on all of this is contained in an impressive new FCC publication known as OET 65 and the just-released Supplement B with still more information for hams. It's a lot of reading, but well worth it to keep your shack and repeater site legal. — *via W6VR, Newsline*

RF Safety Supplement B to OET Bulletin 65

Hams now have basic guidelines and tools to evaluate their stations for compliance with the FCC's RF exposure guidelines that start phasing in 1 January 1998. The FCC's Office of Engineering and Technology issued the long-anticipated Amateur Radio Supplement B to its OET Bulletin 65 18 November. The FCC worked closely with the Amateur Radio community to develop the new supplement. Several ARRL Headquarters staff members and Technical Advisors reviewed preliminary drafts of the supplement. ARRL Lab Supervisor Ed Hare, W1RFI, has been the League's point man for RF safety and exposure issues.

"It has been my pleasure to work with the FCC staff and the amateur community in finalizing Supplement B," Hare said. "All who have been part of this process deserve the thanks of the entire amateur community."

Supplement B, entitled Additional Information for Amateur Radio Stations, contains detailed information specific to ham radio stations. It is designed to be used in conjunction with the FCC's OET Bulletin 65 (Version 97-01), Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. The revised Bulletin 65 was issued earlier this year. Supplement B covers definitions of RF radiation and discusses the FCC exposure guidelines and their applications, methods of predicting human exposure, estimating compliance distances, and controlling exposure to RF fields. The supplement runs approximately 70 pages. Among its noteworthy highlights are numerous easy-to-use tables based on various frequencies, power levels and antenna configurations to help hams determine whether their stations comply with the FCC's published RF exposure guidelines. Most tables show compliance distance — the distance that an antenna needs to be located from areas of exposure to be in compliance. (For a closer look, see "FCC RF Exposure Regulations — the Station Evaluation," by Ed Hare, W1RFI, January *QST*.)

The new RF exposure rules go into effect 1 January 1998 for all new stations and for those filing a Form 610 with the FCC after that date. Existing stations have until 1 September 2000 to comply with the new rules, but existing stations making changes that could affect RF exposure from their station, such as increasing power or relocating antennas, must evaluate that change if done after 1 January 1998.

As first announced, the FCC set a power threshold of 50W to trigger the need to do a station evaluation. In late August, the FCC revised the power level thresholds to trigger a routine Amateur Radio station RF exposure evaluation. Those changes were welcome news for most hams. The newest guidelines raised its original 50W PEP threshold on all bands except 10M-2M, where it remains at 50W PEP. The FCC went along in part with an ARRL request and established a sliding scale for threshold levels dependent upon frequency. The revised thresholds (all PEP) are 500W for 160-40M, 425W on 30M (the maximum legal power is 200W), 225W on 20M, 125W on 17M, 100W on 15M, 75W on 12M and 50W on 10M. The threshold for all VHF bands is 50W. On UHF, the threshold level is 70W on 70 cm, 150W on 33 cm, 200W on 23 cm, and 250W on 13 cm and higher frequencies.

The threshold for amateur repeaters is 500W effective radiated power (ERP) if the repeater antenna is located on a building or is less than 10 meters above ground. Stations operating at or below these respective power levels are categorically excluded from having to conduct a routine RF radiation evaluation. Mobile and portable (hand-held) devices using push-to-talk operation generally are also exempt from evaluation. All stations, regardless of power level, still must comply with the RF exposure limits that become effective New Year's Day.

OET Bulletin 65 and the new Supplement B are available at http://www.fcc.gov/oet/info/documents/bulletins/#65. Copies are available from International Transcription Service Inc, 1231 20th St. NW, Washington, DC 20036; 202/857-3800; fax 202/857-3805. —*ARRL B070*

Elected

Last November's general election saw two hams elected to public office in California. Tim Richardson, WB4HZT, was also elected to office that day. Richardson, of Acworth, Georgia, a suburb of Atlanta, was elected to a four-year term on the Acworth City Council. —*via WB4HZT, Newsline*

Setting the RF gain control

BOB ELDRIDGE, VE7BS

Many many years ago I was struck by a simple statement by Art Collins, introducing the concept of single sideband suppressed carrier operation. He said, "If you can hear band noise, you will hear any signal that is strong enough to overcome it. Running the RF gain higher than that will do nothing but harm."

The lore up to that time (the time of Ancient Modulation phone and BFO injection for CW) was "Run the RF gain at maximum and AGC ON for Phone, switch the AGC OFF and control the audio output with the RF gain control for CW." Many operators still do this in these days of SSB and product detectors, and it is not a good idea.

The control labelled 'RF GAIN' often controls only the IF gain. Many modern receivers have no RF amplifier stage, and those that do often have one with relatively little stage gain. The designer these days likes to protect the first mixer from being overdriven, thus keeping spurious mixer products at bay. When you turn the RF gain control counterclockwise on an older receiver, the bias produced for the RF amplifier stage is 'delayed' (doesn't come into action so quickly), but it has an immediate effect on the gain of the intermediate frequency stages.

Audio-derived AGC

I use a Ten-Tec Corsair 2, which develops AGC voltage from the output of the audio demodulator. The S-meter reading goes to zero when the RF gain is turned well down. If I want to make an S-meter reading, as I would to make a comparison between between two signals or two antennas, I have to turn the gain up temporarily. Not necessarily to maximum, in fact I never have to turn it to maximum, as there is more gain than I need in the IF stages. In practice I turn up the gain until the loudest signal peaks cease to drive the needle higher.

The more signal applied to any demodulator (mixer) the more likely it is that some distortion will be produced, and distortion of any kind damages readability. Even for a short test period, you want best readability, not most noise, don't you?

There is such a variety of filters and processors in modern receivers that you have to experiment with your own to find the best setting for the RF gain. On strong signals it doesn't make much difference, but on weak signals, whether SSB or CW, the best setting is nearly always somewhere just above the position where band noise is first heard, so that is the place to start (and in most cases that is where you will finish).

If you have narrow CW filters or digital signal processors you may need a slightly higher setting for optimum filter action. But filters sometimes also malfunction if the signal input to them is too high.

Too much signal from the antenna (especially if you live close to a high-powered broadcasting station) will overload the first mixer, and this is best dealt with by switching in front end attenuation. But in my case I get best signal to noise ratio on weak signals by running the front end with no attenuation and finding the optimum setting for the RF gain control. I have the AGC ON and FAST, so if a monster signal comes along my ears are not endangered.

Sometimes you may want to estimate the S/N ratio (in practice more correctly termed the S+N/N ratio) of a signal. If you set the RF gain so you can see an S-meter reading on background noise, and have your AGC on FAST, you can see the difference in dB between signal peaks and the no-signal condition. (Don't assume your S-meter is calibrated for 6dB per S-point though — few are).

When in an extended QSO with a reasonably strong station, all you need do is turn the RF gain down until you hear nothing when the other station pauses, then turn the audio control up for comfortable volume.

RF-derived AGC

In many receivers the control bias for automatic gain control is derived from the signal before it reaches the audio demodulator. The operating technique is the same. If you can hear band noise you will hear any signal that is strong enough to overcome it, so turn the RF gain down to just-audible band noise and save your ears and your brain.

The difference between AUDIO- and RF-derived AGC is in the way the S-meter reads. In the latter type of receiver the RF gain control normally sets the resting bias level for the IF stages and sometimes also the RF stage. If you turn the RF gain down you get a standing reading on the S-meter. If the incoming signal produces more bias than the value you have set with the control,

the needle bounces (or in the case of ancient modulation moves to a higher stable reading).

If you want to set the gain by visual observation, as may be useful during an extended QSO, first set the RF gain to maximum and make a note of the peak S-meter reading. Then turn the control counterclockwise until the meter stays stable at that value (get rid of the dips in the signal). When the other station stops transmitting, or pauses, you will hear no more noise than that which was present when he was transmitting.

There are some subtle complications if you are using a BFO to resolve CW or SSB, so be sure you are listening to band noise (static, manmade QRN, etc) and not to white noise from BFO injection. The internal 'carrier' injected is often of much higher amplitude than is good for reception of weak signals, but that is another subject. You can always momentarily remove the antenna, which removes band noise and leaves internally generated noise there.

Left to right: Meralda Warren, VR6MW, Pitcairn policewoman ; Barbara Hopper; Betty Christian, VR6YL; Tom Christian, VR6TC; Ken Hopper, KD7KH; Gerry Warren, VR6JC, Pitcairn Magistrate

A visit to Pitcairn Island

KEN HOPPER, KD7KH

Being retired, it just doesn't seem right to say we took a vacation. We did indeed, and it may be our last fling. For 50+ years, I have been talking to radio amateurs on Pitcairn Island in the South Pacific Ocean. You may remember *Mutiny on the Bounty*, Fletcher Christian, Capt. Bligh, etc. It has long been a dream that someday we could visit with them. From the photo on this year's card, you will note we made it!

In planning for over a year, the trip began in October by flying from Phoenix to Los Angeles, then LA to Tahiti, French Polynesia. We spent a few days on Tahiti and then boarded the ship *World Discoverer*. This is a small ship, 140 passengers, 285 feet overall, and built with an icebreaker hull. (Much of its operating activities are in the Arctic and Antarctic). We visited many islands in Polynesia, going ashore by Zodiac rubber boats, a la Jacque Cousteau.

On 20 October we set foot on Pitcairn and were enthusiastically greeted by the Pitcairn hams. Meralda Warren, VR6MW, graciously invited us to her home and then took us on a motorbike tour of the island. Meralda is the island's police force. Her appointment was made two weeks before we arrived. It seems London decided Pitcairn needed a constable to size up the "crime" problem (35 inhabitants, a never-used jail, no banks, and surely no getaway route — so much for bureaucracy.)

We also visited Tom Christian, VR6TC, his wife Betty, VR6YL, Irma Christian, VR6ID, Postmaster Dennis Christian, VR6DR, and Meralda's brother Gerry Warren, VR6JC.

From Pitcairn the ship went on to Easter Island where we spent several days exploring the massive stone heads. Our return was a 26-hour, 3-leg air flight Easter Island to Santiago, Chile; Santiago to Mexico City, LA and back to Phoenix. Our trip took nearly the whole month of October. Our good neighbors watched over our house, and it surely looked good on our return. If you look at a globe you will see we were nearly to the tip of South America and Antarctica.

Middle school Amateur Radio program

The Hale Middle School in Woodland Hills, CA is the first public school in California to offer Amateur Radio as part of the regular curriculum. The first semester class is being taught by Bob Lavin, K6BOB who also operates the Foursquare Radio Amateur Youth Club in Oxnard.

In Woodland Hills, Lavin has the full support of the school's administration and the Parent, Teacher, Student Association. The Association donated over $3,000 to support the new class, as well as helping to equip an emergency communications center for the school.

In 1998 the school plans to add more classes and an on-campus radio club as well. Lavin hopes to eventually have five classes going each semester until he can get all the students licensed. — *Newsline, K6BOB*

Ed's window to the world

KEN NEUBECK, WB2AMU

Ham radio has always been touted as a hobby that can be enjoyed by people who are physically challenged in some way. There's a significant number of blind radio amateurs and those who are confined to wheelchairs. For these people, radio represents a window to the rest of the world, one which they normally would not be able to enjoy without the existence of the hobby.

This is a story about a man I met through the hobby who used it as his window to the world. There were a number of Elmers who were responsible in helping him get his license and getting his station set up. However, this story is not set up to be an exhaustive list of call signs and names of all the amateurs who may have provided any sort of help to Ed. I have read a number of Elmer articles and have found that these articles seemed to focus too much on giving credit to those who helped rather than concentrating on the person who received the help. After all, the story should be about the recipient and not be sidetracked in giving out accolades. All hams should give something back to the hobby in whatever way they can and not always expect praise or "ham of the year" awards because of the good deeds they do. The goal is to make this window to the world available to every one who is interested.

Seeking CW practice

I was a member of the Suffolk County Radio Club in early 1972 when I saw an ad in the club's monthly newsletter, *QTC*, from a ham who was looking for others to work him on CW and help him work some DX stations. His name was Ed, with call sign WB2CVZ. He lived about eight miles to the east of me. At the time I held only a Novice license, WN2AMU, and I was trying hard to get both my code speed up and my theory down prior to taking my General class exam. I was midway through the term of my two-year license. Because Novice licenses were nonrenewable in those days, I wanted to upgrade to a General before it expired. I was doing all this in between going to college full time and working part time. So this ad looked like a good chance to help both this ham and me to achieve a higher code speed and work some DX in the process.

When I talked to Ed on the telephone, he informed me that he was physically disabled and required a wheelchair to get around. Ed told me that he had a Conditional class license and that he had a HW16 transceiver, which confined him to CW only. We arranged for a CW QSO on 15 Meters for later that evening and were able to complete the contact despite weak signals caused by the extended distance for groundwave mode. I arranged to visit him to see his station setup during the week on one of my idle afternoons off from work and school. I want to make this clear that this was not a project for the radio club, but rather something I wanted to do as an individual. I am annoyed when people say that you have to do these types of projects through the radio club, when as individuals you're perfectly capable of helping people. People can put something back into the hobby by volunteer work either through a radio club or as an individual and should do it because they want to and not for any resultant publicity they may get out of it.

The first visit

Ed's house was about twenty minutes from my QTH and I was able to find it with his good directions. When I got there, I could see the dipole going from a tree to his house. The house was a modest sized single-story dwelling in the midst of a quiet neighborhood. I did notice a car in the driveway, which I found out later contained modifications for a handicapped driver. I knocked on the door and was greeted at the door by Ed's XYL, Rose, a friendly woman whom I took to be in her late sixties. She was partially disabled herself, as she required the use of crutches and braces to move about. I then met Ed. He was seated in a wheelchair at his station. Ed's physical handicaps were severe, and he had limited use of his fingers on both hands. I could see why code posed an inherently difficult obstacle in the way of sending. Yet despite his many difficulties, Ed never made any excuses why he could not do certain things such as working CW. This is the overall impression I got from talking to him. I could see that he had a tremendous amount of personal pride.

He told me he had a technical background and had worked as a darkroom technician until he retired about five years ago. He had recently been introduced to Amateur Radio through two hams in the neighborhood, Sal, WB2TZE and Frank, K2KXN. They had worked with him in setting up his Novice station with an HW16 and a 40-Meter dipole. Once he had been bitten by the radio bug he worked on getting his code speed up in order to qualify for a Conditional Class license. In those days, prior to the advent of the VEC system, the FCC would send an examiner or an appointed radio amateur to people who were not able to make the trip to the FCC examination site. In Ed's case, the nearest examination point

was in downtown Manhattan, over 50 miles away. He would have had to travel by train or some other mode which would have been very difficult for him, so he met the requirements for a test to be given in his house. However, because of his difficulty with his hands, he was not able to write fast enough to copy the 13 wpm text. He had to memorize the letters and call out the words as he listened to the test tape. The examiner did not force Ed to send a solid minute of code as he was satisfied with his ability to copy the text.

As the HW16 was primarily a Novice rig with CW capabilities only, Ed was limited as to how much DX he could work. At this time, I was relatively new to working DX as I had worked about 20 or 25 countries as a Novice, so this was a new area for both of us to discover. On this particular day, we sat around his HW16 and tuned in the General CW portion of the 15-Meter band. Most of my DX experience was on that band, so I thought this would be a good place to start, as it was early afternoon. I don't remember how long it was but we finally heard a German station calling CQ. Ed ask me to use the key and work this station as he wanted to see how well I could send CW. I called the German station and he came back to Ed's call sign. We exchanged the usual information, RST, name and QTH. The QSO lasted about ten minutes and after it was over, Ed and I discussed the techniques and procedures that I used during the QSO. It was the first DX QSO made from Ed's station and he was excited about it. I believe we made two more DX contacts to Europe that afternoon and I could see that Ed was excited. The DX bug had bitten him!

We broke for tea and cake and I could see that Ed and his XYL Rose were very devoted to each other. They were independent people who did not want to be a burden to others, but they were not afraid to ask for help when they needed it. Rose was excited about Ed's involvement in ham radio and the interesting people he was meeting both on and off the air. They did not have much in the way of family and I could see that having friends was very important to them. When I left that day, after having spent about four hours there, I thought of how ham radio and Ed were good for each other. I also thought of how Ed made no complaints that he had to learn the code, as some hams are wont to do.

Building the kit

I visited Ed about once a month on the average. We had some more DX contacts and pleasant conversations. He was now getting the urge to get on SSB as it would be a heck of a lot easier for him than sending code. It was at this point that he started looking at an SSB rig to buy. At this time the HW101 was out and it was within Ed's budge t range. He finally bought one and yes, he built the entire kit, despite his handicap and he completed the project in one or two month's time. Once he completed the kit he noticed that the receiver was not working and he sought help for this problem.

At one point, I thought it best to introduce Ed to my friend, Mike, who at that time had the call sign WA2IMC (he is now N2MS). Mike was an engineering student who had a very good background in repairing radios. I felt that if anyone could help as well as having a little time, Mike would be the ideal person. Mike went with me one day to Ed's house to meet him and offered his assistance with the ailing HW101. Mike was very impressed with Ed's technical knowledge, even though Ed did not have a radio background. Ed had suspected a faulty capacitor and Mike verified that this was the case when he performed troubleshooting on the HW101 with Ed. The rig was repaired by the end of the week with a replacement capacitor. Mike was really impressed that Ed had put together the HW101 by himself despite his physical limitations.

A new world opens

Now that the HW101 was working, SSB opened a whole new world for Ed. He was no longer confined by his limitations with the code and the SSB required merely the pressing of the push-to-talk switch. He was now meeting new people in the sideband portions of 15, 40 and 75 Meters. He really appreciated this switch to the voice mode and I don't believe he ever operated CW again. I love CW myself and use it for over fifty percent of my QSOs, but I could see in Ed's situation, it was really not something that would be enjoyable for him to use — SSB was the ideal mode for Ed.

With Ed meeting more local hams both on the air and in person, he felt the desire to attend a monthly meeting at the Suffolk County Radio Club during the summer. He asked that I meet him there to help him take his wheelchair out of the car and set it up for him. He said he could travel hundreds of miles using the car with no problems through the use of the steering wheel attachment, but to walk ten feet was a chore. So for this meeting my father, Ray, W2ZUN, and my friends Mike and Joe, WA2HSQ were all there to greet him when he arrived for the meeting. There were a number of hams there who had worked Ed on the air, and they were glad to see him for the first time. There was a lot of attention paid to Ed and he was very pleased to meet everybody. Now he could connect a face with some of the call signs that he either had worked or read about in the newsletter. He was a celebrity of sorts as people had heard about him and now they could see who he really was. Another window was opened for Ed through ham radio.

"What Ham Radio means to me"

An interesting policy that the Suffolk County Radio Club had at this time was to pick three call signs at random each month and they would be asked to contribute anything of interest about ham radio for the club's newsletter. Well Ed's call came up in the July issue of *QTC* and he contributed a write-up for the August issue on how much ham radio had meant to him. The words he wrote said it all about how much impact the ham radio hobby can have.

Ed wrote, "My interest in ham radio began with my retirement from an active scientific life. I wish it had begun earlier. While I do not feel qualified as yet to expound on electronic theories, I do wish to pass on a thought or two of interest to the WN's (beginners).

"CW has been my primary pursuit because I can exchange gab and greetings all over the world. Now SSB just makes it more interesting. The most enjoyable times have been the many afternoons and countless evenings we have spent curing the ills, or thinking up new ones, making new gear or repairing the old. Maybe I have just been lucky to meet the best of the hams who have helped me to put my shack together."

Ed went on to thank the indi-

vidual hams who had helped him. I found it very interesting that he did not mention the obstacles he had to overcome to become a ham due to his physical handicap. The only obstacle Ed felt he had was the fact that he had a late start into the hobby after his retirement. He did not use his handicap as an excuse with regard to getting on the air.

Moving on

I worked Ed a few more times on the air on SSB over the next two or three years. However, my schedule became more hectic as I graduated from college in the spring of 1974 and was now working full time along with going to graduate school at night. My ham radio activity diminished somewhat and I did not attend club meetings any more. I lost touch with a number of people and one of them was Ed. The last time I worked him was during the summer of 1975 via SSB. I had not intended for this loss of contact but too many things were going on that were eating up my time. In addition, I moved a few times over the next ten years before I was settled again.

One day, wondering if Ed were still around, I drove one Saturday to his house. All of the antennas had been taken down and there were children's toys in the yard. I sadly realized that in all likelihood, Ed was no longer with us and must have passed on. This was confirmed by my friend Joe, NI1L, who had seen Ed's call sign in a Silent Key listing.

I thought to myself, how could I have allowed myself to lose touch with Ed? I was angry with myself that I hadn't call him by phone when I did not hear him on the air. The only consolation I had was the fact that Ed truly enjoyed making new friends on Amateur Radio and that it was his window to the world during the latter years of his life. Even though he had a late start in the hobby, he had made the most of it during the five to ten years prior to his passing away. He and ham radio were a perfect match — it kept life interesting for him each day.

I know of a few other stories that parallel Ed's struggle. I'm sure you could name a few similar situations, too. I picked Ed as a representative story of this genre because it is one that I was personally involved with. I have seen a number of hams with disabilities who overcame them to become hams.

The proposition that has been put forth about ham radio being a source of enjoyment for the physically challenged is true and it was certainly proven in the case of Ed. I'd challenge anyone who has a little time and who knows either an older person or physically handicapped person who is looking for a dynamic hobby, to introduce this person to Amateur Radio. These will become the people who will keep the bands occupied during the day and they generally make the best ambassadors that ham radio will ever have. Help these people in whatever way you can to obtain a license and obtain the necessary equipment for them to get started. We all can learn about the true Amateur Radio spirit these people possess.

E-mail Elmers

FRED PEERENBOOM, KE8TQ

The following news release deals with how the influx of new hams is being handled in the Dayton, Ohio, area. Associated with the Miami Valley Hospital, MVFMA is a public service-oriented group which provides emergency communications in the event of a disaster. They decided to expand their service to within the amateur community, also, with the following result:

The Miami Valley FM Association announced the opening of its innovative "E-mail Elmer" program which allows new or prospective hams, or experienced amateurs venturing into a new aspect of the hobby, in Dayton and Southwestern Ohio to send an e-mail request for assistance, which will be answered by one of the online Elmers who have volunteered to support the project.

In Amateur Radio parlance, an "Elmer" is an experienced ham who takes a newcomer under his or her wing and passes on both the technical knowledge and the traditions that are part of Amateur Radio. This mentoring relationship usually began with the Elmer helping the (figurative) youngster prepare for the government examination required to obtain an Amateur Radio license, and frequently developed into a lifelong friendship. Today, many hams prepare for their license exams through classroom programs, and the individual Elmer's touch isn't as common as it once was. The E-mail Elmer program is an attempt to restore this long tradition.

To use the Elmer Server, simply send an e-mail message to "elmer@febo.com", posing the Amateur Radio question you'd like to have answered. You'll be sent a machine-generated confirmation that your request was received, and within a few days you'll get a response from one or more of the volunteer Elmers.

"We feel that the lack of one-to-one Elmering support is a serious problem in ham radio today," said Fred Peerenboom, KE8TQ, President of MVFMA. "We hope this initial e-mail exchange will not only help answer a specific question, but will also be the beginning of an ongoing Elmer relationship in the best tradition of Amateur Radio."

Initial Elmer volunteers are: Paula Di Gennaro, KA8HQJ; Steve Coy, KB8UHY; Lorraine Peerenboom, KC8HWV; Brian De Young, KE4HOR; Fred Peerenboom, KE8TQ; Dave Misek, N8NPX; Steve Lewis, N8TFD; John Ackermann, N8UR; Richard West, N8WYE; Bill Newill, W8LIL; Phil Thomas, W8RMJ; Dana Laurie, WA8M; and Nelson Di Gennaro, WB8VUU. The Elmer Server is hosted at febo.com courtesy of John, N8UR.

For more information, or to volunteer as an E-mail Elmer, contact Fred, KE8TQ, at 937/256-4355 or ke8tq@febo.com

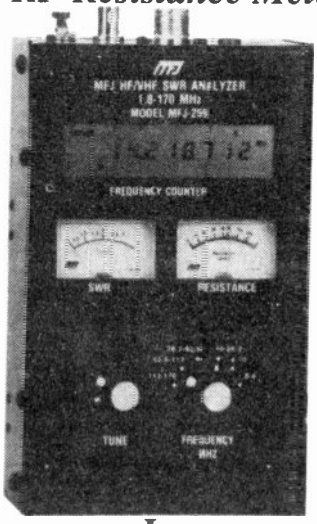
Legislators honor W6KA's public service

The Pasadena Radio Club, W6KA, took advantage of its 1997 Field Day to commemorate its 40th year of affiliation with the ARRL. Proclamations from both the U.S. House of Representatives and the California Legislature honored the group's 40 years of public service.

Founded in 1957, the club has been called upon numerous times over the years to help out in emergencies. Club members relayed health and welfare traffic during the days following the 1994 Northridge earthquake. The club also has supported numerous public service activities and events. *—via ARRL*

MFJ *HF/VHF* SWR Analyzer™ with RF Resistance Meter

Read your antenna SWR from 1.8-170 MHz . . . 10-digit LCD frequency counter . . . RF Resistance Meter™ . . . smooth reduction-drive tuning . . . simple-to-use . . .



MFJ-259 **$239.95** If you work with antennas, MFJ's revolutionary new *SWR Analyzer*™ is the best investment you'll ever make! Now you can diagnose a wide range of antenna problems instantly with one easy-to-use instrument.

What the MFJ-259 Does

The MFJ-259 gives you a complete picture of your antenna's performance anywhere between 1.8 and 170 MHz -- you can even check SWR outside the ham bands without violating FCC rules. Set the bandswitch and tune the dial--just like your transceiver. SWR is displayed instantly!

RF Resistance Meter™

Does 2:1 SWR mean 25 ohms or 100 ohms? *The new MFJ-259 tells you at a glance!*

Now you can measure RF resistance up to 500 ohms at minimum SWR -- instantly -- on MFJ's *exclusive* side-by-side RF Resistance and SWR Meters!

Take the guesswork out of building matching networks and baluns for your antennas.

Watch the effects of spacing on radiation resistance as you adjust your antenna.

Here's What You Can Do . . .

Find your antenna's true resonant frequency from the shack.

Tune the antennas on your tower and watch SWR change instantly as you make each adjustment. You'll know exactly what to do by simply watching the display.

Tune critical HF mobile antennas in seconds -- without subjecting your transceiver to high SWR.

Measure your antenna's 2:1 SWR bandwidth on a single band, or analyze multiband performance over the entire spectrum from1.8 to 170 MHz!

Measure inductance, capacitance, resonant frequency of tuned circuits, transmission line velocity factor/impedance/loss.Test RF chokes, transformers, baluns.

Adjust your tuner for a perfect 1:1 match without creating QRM.

And this is only the beginning! The MFJ-259 is really *four* test instruments in one: an accurate RF signal generator, a high resolution 170 MHz frequency counter, *RF Resistance Meter*™ and an *SWR Analyzer*™.

Free Manual

MFJ comprehensive 18 page instruction manual is packed with useful applications -- all explained in simple language you can understand! For free manual write or call MFJ.

Take It Anywhere

The MFJ-259 is fully portable, powered internally by 8 AA batteries or 110 VAC with MFJ-1312B, $12.95. It's in a rugged all metal cabinet that's a compact 4x2½x6¾ inches. Take it to remote sites, up towers, on DX-peditions -- anywhere your antennas are located.

For rough service, pick up a convenient **MFJ-29B**, $24.95, padded carrying pouch to keep your MFJ-259 close at hand and looking like new.

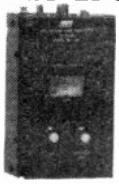
How Good is the MFJ-259?

MFJ SWR Analyzers™ work so good, many antenna manufacturers use them in their lab and on the production line -- saving thousands of dollars in instrumentation costs! Professional installers and technicians use them worldwide.

Get More by Paying Less

With the MFJ-259, you get full 1.8 to 170 MHz coverage, simple operation, instantaneous readings, a high accuracy frequency counter and MFJ's exclusive *RF Resistance Meter*™-- all for a low $239.95.

1.8-170 MHz *SWR Analyzers*™



MFJ-249 **$219.95** **MFJ-249** *HF/VHF SWR Analyzer*™. Same as MFJ-259 but less RF resistance meter. Includes 10-digit LCD frequency counter, *full* 1.8-170 MHz coverage and smooth vernier tuning.

MFJ-209 **$109.95** **MFJ-209** *HF/VHF SWR Analyzer*™ is same as MFJ-259 without LCD frequency counter and RF resistance meter. Has jack for external frequency counter, smooth vernier tuning.

Carrying Pouch with Window

MFJ-29B **$24.95** **Tote** your MFJ-259 /249/209 *SWR Analyzer*™ anywhere with this custom Carrying Pouch. Made with a special foam-filled fabric, it cushions blows, deflects scrapes, and protects knobs, meters and displays from harm.

Clear protective frequency display and window cutouts for knobs let you use it without taking it out of pouch. Fully adjustable webbed fabric carrying strap has snap hooks on both ends. Wear around waist or over shoulder.

Keep your analyzer safe and looking new! **MFJ-29**, $19.95, no window or cutouts.

Dip Meter Adapter

MFJ-66 **$19.95** **Plug** a dip meter coupling coil into your *MFJ SWR Analyzer*™ and turn it into a sensitive and accurate bandswitched dip meter.

With a dip meter you'll save time and take the guesswork out of winding coils, measuring inductance and capacitance, measuring velocity factor and electrical lengths of coax. Determine resonant frequency of tuned circuits and measure Q of coils. Set of two coils cover 1.8-170 MHz depending on your *MFJ SWR Analyzer*™.

440 MHz *SWR Analyzer*™

MFJ-219 **$99.95** **Read** SWR of any antenna 420 to 450 MHz -- just plug coax of your antenna into SO-239 connector, set frequency and read SWR. Uses microwave integrated circuits and microstrip technology. Jack for external frequency counter. 7½x2½x2¼ in.

MFJ-219N, $99.95, sames as MFJ-219 but with "N" connector.

MFJ-219 uses 9 volt battery or 110 VAC with MFJ-1312B, $12.95.

MFJ 2 Meter *FM SignalAnalyzer*™

Measure signal strength over 60dB range - Check and set FM deviation - Measure antenna gain, beamwidih, front-to-back ratio, sidelobes, feedline loss in dB - Analyze audio quality with scope

NEW! MFJ-224 **$159.95**

MFJ's revolutionary handheld 2 Meter *FM SignalAnalyzer*™ lets you measure signal strength with over 60 dB dynamic range; check and set FM deviation of your packet and voice radios; measure antenna gain, beamwidth, front-to-back ratio, sidelobe suppression and actual feedline loss in dB.

Plug in any scope and your MFJ *FM SignalAnalyzer*™ becomes a service monitor! It lets you visually analyze modulation wave forms, measure audio distortion, noise and instantaneous-peak deviation.

You can tune in any signal between 143.5 and 148.5 MHz. It's built-in discriminator-meter function makes accurate tuning simple and easy.

You can plug in headphones to help you tune in and identify signals easily. There's also a battery check function. Uses 9 volt battery. Measures 4x2½x6¾ inches.

Here are some countless jobs your MFJ *FM SignalAnalyzer*™ can perform . . . evaluate antenna performance, detect feedline faults, plot field strength patterns, position your antennas, measure preamp gain, track down hidden transmitters, check and set deviation, analyze audio quality, scan the band, tune transmitters and filters, and much more!

The MFJ-224 2 Meter *FM SignalAnalyzer*™ may be the most useful 2 Meter handheld test instrument you may ever own.

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MFJ 300 Watt *Roller Inductor* Tuner

World's only 300 watt AirCore™ Roller Inductor Antenna Tuner gives you absolute minimum SWR . . . Covers 6 Meters thru 160 Meters . . . lighted Cross-Needle meter . . . tunes any antenna . . . 8 position antenna switch . . . dummy load . . . balun . . . 1 year No Matter What™ warranty

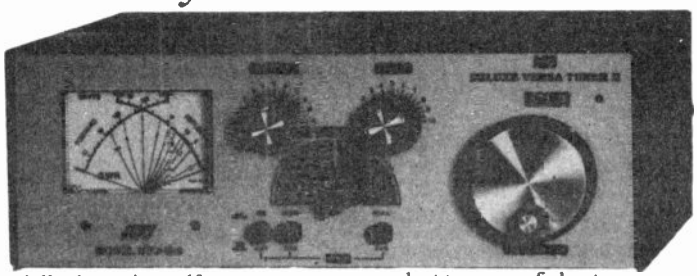
NEW!

Covers 6 Meters thru 160 Meters!

MFJ-969

$189.95

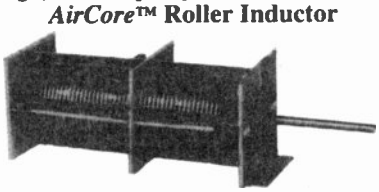
Call your dealer for your best price!



NEW MFJ-969 gives you MFJ's superb AirCore™ Roller Inductor and full 6 Meter thru 160 Meter coverage!

You get everything you've ever wanted including . . . 300 Watts PEP SSB full featured antenna tuner, widest matching range, lighted Cross-Needle SWR/ Wattmeter reads true peak forward power, QRM-Free PreTune™, 8 position antenna switch, built-in 50-Ohm dummy load and heavy duty 4:1 balun -- all in a tough, scratch-proof cabinet.

AirCore™ Roller Inductor



MFJ-969's *AirCore*™ Roller Inductor, three-digit turns counter and spinner knob gives you exact inductance control for *absolute minimum* SWR.

MFJ's exclusive *AirCore*™ Roller Inductor has an air core *that can't burn up!* You get ultra high-Q, the lowest loss, highest efficiency and highest power handling of any roller inductor in ham radio.

MFJ's exclusive *Self-Resonance Killer*™ keeps potentially damaging self-resonances away from your operating frequency.

Large self-cleaning wiping contact gives you excellent low-resistance connection without contact arcing or burning.

Solid ¼ inch brass shaft has self-align bearings for smooth non-binding operation.

Covers 6 Meters thru 160 Meters

The MFJ-969 covers *all* frequencies from 6 Meters through 160 Meters, *including the "magic band"* -- the widest matching range of any full featured antenna tuner.

Match any Antenna

You can match dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave receiving antennas -- nearly *any* antenna. You can use coax cable or balanced feedlines. Has heavy duty 4:1 balun.

Lighted Cross-Needle Meter

MFJ's lighted Cross-Needle Meter shows you SWR, forward and reflected power *simultaneously*. It reads *true peak* forward power and average power on 300 watt or 30 watt ranges.

Meter light has ON/OFF switch and requires 12 VDC or 110 VAC with optional MFJ-1312B, $12.95.

8 Position Antenna Switch

MFJ's 8 position antenna switch lets you select two coax fed antennas, random wire/ balanced line or built-in dummy load for use through your MFJ-969 or direct to your rig.

QRM-Free PreTune™

MFJ's *QRM-Free PreTune*™ lets you pre-tune your MFJ-969 off-the-air into a built-in dummy load without causing QRM.

Pre-tuning into a dummy load makes tuning your actual antenna faster and easier.

Full Size Dummy Load

The MFJ-969 has a *full size* non-inductive 50 Ohm dummy load.

You'll find it handy for tuning, testing and repairing your rig, setting power level, adjusting your mic gain and more.

Superior Cabinet

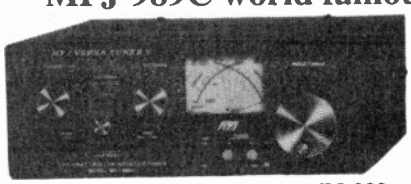
Each MFJ-969 cabinet has a new tough scratch-proof *vinyl* cladding. You won't find a tougher, longer lasting finish anywhere. Measures 3½x10½x9½ inches.

No Matter What™ Warranty

Every MFJ-969 is backed by MFJ's famous one year *No Matter What*™ unconditional warranty. That means we will repair or replace your MFJ-969 (at our option) no matter what for a full year.

Call your dealer for your best price!

MFJ-989C world famous *3 KW* Antenna Tuner



MFJ-989C **$349.95**

More hams use MFJ-989s than any other 3 KW antenna tuner in the world!

The rugged MFJ-989C handles 3 KW PEP SSB and covers 1.8 to 30 MHz including all MARS and WARC bands.

Match dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave -- nearly any antenna. Use coax or balanced lines.

MFJ's new *AirCore*™ Roller Inductor, three-digit turns counter and spinner knob gives you exact inductance control for absolute minimum SWR. *It has an air core that can't burn up!* An exclusive *Self-Resonance Killer*™ removes damaging self resonances.

Two *massive* 250 pf transmitting variable capacitors with extra wide (0.27 inch) spaced stator plates can handle 6000 volts and amps of RF current for arc-free operation.

Lighted Cross-Needle meter lets you read SWR, forward, reflected power *simultaneously*. Read peak and average power in two ranges.

The MFJ-989C's six position antenna switch is made of two individual ceramic wafers wired in parallel. Wide spaced, heavy duty contacts handle extreme current and voltages. *We've never burned one up!*

MFJ's heavy duty current balun has two giant 2½ inch toroid cores with Teflon® wire connected to ceramic feedthru insulators. You can use balanced lines without core saturation or voltage breakdown.

A *full-size* 300 watt non-inductive 50 ohm dummy load is built-in.

Has convenient flip-stand. 10¾x4½x15 inches. Backed by MFJ's famous one year *No Matter What*™ unconditional warranty.

MFJ versatile *1.5 KW* Tuner

MFJ-962D **$249.95**

Use your barefoot rig now and have capacity to add a 1.5 KW PEP SSB amplifier later! Lighted Cross-Needle SWR/ Wattmeter. 6 position antenna switch, *Teflon*® wound balun, ceramic feedthru insulators for balanced lines. 1.8-30 MHz. 10¾x4½x14⅞ in.

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MFJ . . . the world's most trusted name in antenna tuners

Hams help in wake of Guam typhoon

Amateur Radio operators helped relay damage assessments and continued to keep open lines of communication between Guam and the Pacific islands of Saipan, Tinian, and Rota in the Northern Marianas in the wake of Typhoon Paka. The 12 December storm caused heavy damage on Guam, but telephone service remained intact, according to Jim Kehler, KH2D, president of the Mariana Islands DX Association. Kehler said the islanders took the situation in stride for the most part. "Typhoons in this part of the Pacific are something that everyone knows about and has a respect for, since we have all seen the results previously."

While damage estimates are in the $200 million range, no one was killed or seriously injured when the storm passed over Guam, "Everybody is just happy to be alive, and nobody is sitting on the curb crying because the house got flooded and the car got crushed," Kehler related. "That's Guam." Kehler says there's a great sense of community on the island, with everyone pitching in to help others get their lives and homes back together in the disaster's wake.

Kehler reports the storm wiped out commercial power and water as well as most of the trees on the island. He estimated that it could be "two or three months" before commercial power is fully restored on Guam.

Kehler said 7.085 MHz is being used for inter-island communication. He said that during the storm's approach, hams on Guam also used 7.085 while tracking its path. During the storm, Kehler's and five other MIDXA stations were operational on 40M. The others included WHØAAV on Saipan, KHØCE on Tinian, and N4UQM/KH2, KH2JU, and K9AW/KH2 on Guam. Kehler said his Amateur Radio station was not damaged in the storm, but he reports conditions have not been favorable for reliable communication with the mainland with his modest setup. Several other hams on Guam were not as fortunate and suffered heavy wind and water damage from Typhoon Paka, he said.

Kehler said Paka marked the first storm where he was "really scared." The typhoon is said to have packed record-shattering winds in excess of 200 mph.

The only VHF repeater on Guam survived the storm, but Kehler says it's not being used for emergency communication at this point. Commercial radio stations were put off the air, however.

Kehler said the MIDXA was formed in November after Typhoon Keith struck the Northern Marianas. "One of the reasons was that Rota lost all commercial communications in that storm, and the ham community here was totally unprepared to help," he explained. MIDXA members continue to monitor 7.085, "at least those with a radio, antenna, and a house left," Kehler said, but with commercial power and water out of commission, "Guam is a mess."

In the storm's wake, Red Cross National Headquarters had activated Virginia ARES to coordinate damage assessment recovery information from Amateur Radio sources in the Pacific. Red Cross National Headquarters in Fairfax County, Virginia, relies heavily on ARES support during disaster responses when normal lines of communication are not available. Information summaries and updates were posted on the Virginia ARES Web site, http://www.aresva.org. The Red Cross now has a contingent on Guam and has terminated the Virginia ARES activation "with thanks to everyone who participated in this response." — *ARRL Letter*

The Diehard DXer!

CLINTON HERBERT, AB7RG

5:00 a.m. — Fellow DXers arrive. Crawl out of nice warm bed.
5:30 a.m. — Toss all gear into truck.
5:45 a.m. — Get gear out of neighbor's truck, and put it in yours.
6:00 a.m. — Get speeding ticket while hurrying to get to the mountains.
7:15 a.m. — Get to "the site," near top of mountain.
7:16 a.m. — Start unloading gear.
7:20 a.m. — Get poked in eye with 20M vertical by fellow DXer.
7:50 a.m. — Arrive at hospital to get eye patched up.
8:30 a.m. — Get another speeding ticket while heading up to mountains.
8:45 a.m. — Arrive back at site. Unload antennas yourself this time.
9:45 a.m. — Hike up to mountaintop. Pass out from exhaustion.
9:50 a.m. — Wake up to smelling salt, and laughter from fellow DXers.
10:00 a.m. — Put up antennas, and set up rigs.
10:15 a.m. — Fire up rig, call CQ for half an hour; no replies.
10:46 a.m. — Hook up coax to rig...
10:48 a.m. — Realize that finals are wasted in main rig.
10:50 a.m. — Hook up back—up rig, this time with coax.
11:00 a.m. — Yell CQ, rare VP8 comes back; antenna falls down...
11:15 a.m. — Wake up to smelling salt, fellow DXers shaking heads.
11:30 a.m. — Guy antennas.
12:05 p.m. — See long list of QSOs made by fellow DXers.
12:06 p.m. — Notice rare VP8 in logbook.
12:07 p.m. — Beat fellow DXer over head with logbook.
12:09 p.m. — Restrained by rest of DXpedition team...
12:30 p.m. — Back to rig for another attempt.
12:35 p.m. — Nearby lightning strike kills receiver. Notice wet pants...
12:36 p.m. — Look for shelter.
12:38 p.m. — Find cave!
12:41 p.m. — Watch antenna get struck by lightning while hiding in cave.
12:42 p.m. — Wish it was fellow DXer's antenna, or him that was struck...
12:45 p.m. — Realize you're not alone in cave...
12:46 p.m. — Pick up really big rock...
12:47 p.m. — Mauled by large angry bear.
12:50 p.m. — Get pulled out of cave by fellow DXers.
1:05 p.m. — Finally get talked into receiving medical treatment.
1:30 p.m. — Arrive back at hospital.
1:55 p.m. — Receive series of painful rabies shots, and multiple stitches.
2:30 p.m. — Get out of hospital and return home.
2:35 p.m. — "Explain" stitches and eyepatch to wife.
3:00 p.m. — Realize gear is still up on mountain, with bear.
3:01 p.m. — Wish fellow DXers were still up on mountain, with bear...
3:03 p.m. — Consider taking up drinking.
7:00 p.m. — Get phone call from DXer buddies.
7:05 p.m. — Agree to go on DXpedition again tomorrow...

Jack Parker gets his W8ISH

HERSHEL SAYLOR, WD9GMM

Jack Parker has been on the air as NT9J since earning his Extra Class ticket in November of 1987, about six months before the FCC began issuing "W" calls such as WW9A. Jack said, "I always wanted a "W" call... I guess it goes back to all my years in radio and TV."

Jack had always worked for broadcast stations East of the Mississippi River. Due to FCC policy these stations all had call signs starting with "W." He felt that hams should also follow this convention.

His first call, as a Tech, was N9EXK, which he held for almost two years. He didn't see anything outstanding with that group of letters. When he upgraded he sent a note saying that a call with a "J" or "P" would be nice. He was rewarded with NT9J.

Jon Haskell, W8JON (formerly KB9CML), Jack's traveling partner to Belize earlier this year, while researching a vanity call for himself, discovered that W8ISH and W9ISH were available — letters of significance for Jack, as he has been an important part of Indianapolis' Channel 8 WISH TV crew for almost 18 years. When Jack's friends heard these calls were available, they encouraged him to apply for a vanity call. His ham friends at work said, "If any ham at WISH TV should have W8ISH, it's you." The only ham who had been with Channel 8 longer than Jack had retired three years earlier and was deceased.

Jack now had a dilemma. Should he part with NT9J? After all, over the last ten years he had developed a certain reputation and the call had become instantly recognizable to a large number of hams. He had served in the Mid-State Amateur Radio Club (MARC) as president, activities director, and newsletter publisher. He had done various news reports for both *Amateur News Weekly* and *Newsline*. During his adventure in sailing the Atlantic five years ago for the America 500, the Maritime Mobile stations got to know the call very well, and his most recent news-making event was his trip with Jon to Belize to deliver medical supplies.

OK, he decided, so he could give up NT9J. Now should he apply for W9ISH, the "9" reflecting his geographical location, or should he go for W8ISH, the "8" being the channel number of WISH TV? Jack said, "I debated long and hard."

Jack feels that Amateur Radio has changed lately. There are new rules. Years ago, who would have thought you could, some day, buy a vanity call sign? Or live in one geographical call sign area and yet receive a call for a different area! It's getting tough for hams to be able to tell what area or license class a fellow ham is from, with all these changes.

Jack is somewhat experienced in the area of changing call signs. Over the years he has had to learn new calls more often than most of us. During the mid-'60s he was the Top 40 DJ for WIZE radio. He was know as one of the "WIZE" guys. He has also worked for WLW-D and WTTV television. Other stations he has worked for are WMWM and WNAP radio.

What are Jack's last thoughts about this call sign business? "I think my new call sign will be a good change. What's in a name or call? I believe it's whatever you make it. So, now it's time for a new era. I finally got my "W" call, now it's time to make my mark on Amateur Radio."

If you'd like copies of *Worldradio* to pass out at a local hamfest, contact our editorial office 4-6 weeks prior to the hamfest. • (916) 457-3655

Catch it - Catch it — dead end or Godsend?

JERRY WHEELER, W6TJP

In the August 1997 issue of ***Worldradio*** an article by Dave Kelley, AI7R, astonished us with his unhedged condemnation of the Code Quick method. Although well meant, his comments "NEVER use crutches" and "THIS IS A VERY BAD way to learn the code," demonstrated, we believe, a misleading and serious misunderstanding of the code learning process. We were left to wonder just what scientific research provided justification for Mr. Kelley's dazzling assertions? The editors of this magazine are to be congratulated for their willingness, in this debate, to air both sides. This article will demonstrate why "Catch it-Catch it" and other such "crutches" enable fledgling amateurs to become truly code proficient in a fraction of time compared to traditional or even "Farnsworth" approaches.

0-5 wpm in only a year!

When, in 1950, Mr. Tom Thorpe taught the author Morse Code at West Phoenix High School, he played the code on a military surplus machine. A long tape with holes whirled around, producing the code while the RPM of the spool set a 5 wpm speed. Painfully and fruitlessly in front of that ancient device, our class assembled for countless hours. In this method the student was told to associate the sound of the character being sent in Morse with the elusive letter. While this method could be praised for keeping a group of high schoolers off the streets, the endless parade of dahs and dits produced few amateurs! In retrospect, I remember that although I never seemed to make much progress, I was among the best and after a year, I successfully passed my Novice tests. But code never came easily and as Mr. Kelley says, it wasn't much fun.

Payday today and other "catchy phrases"

Then one day, Mr. Thorpe walked through the classroom while the "Q" was sounding and playfully exclaimed, "Hey guys, listen to the Q. it says, 'payday today!' You'll never forget your payday will you?" From that instant I never again struggled with the letter Q, it was always there instantly. However, all the other characters continued to conceal their identities from me. Practice as I would, it took another ten years before I gained enough proficiency to squeak through the 13 wpm test. Working CW was always a white knuckle experience. Tense and rigid, my body seemed intent on flexing every sinew and popping every ligament. Even this maximum exertion rarely provided a satisfactory QSO, so I mainly stuck to phone.

And then there was one!

In the late 1970 at Huntington School in San Marino, CA, 57 enthusiastic students agreed to sacrifice six weeks of their summer, all morning long, to the establishment of a school radio club and station. Excitement and anticipation filled the air. The eager troop began stringing dipoles, obtaining gear and pounding the books. While with usual speed the theory fell into place, the code began to take its toll. One by one discouraged and frustrated kids disappeared from the roster until at last only seven starters completed the requirements for Novice. Sadly, when the tickets arrived two months later, one lone fledgling knew enough code to man the radio club station! What made the learning of code so nearly impossible for so many? Negative experiences launched your author's life quest and doctoral level research to solve that puzzle. The following conclusions represent his answer.

Why code stops many cold

Our brains demonstrate the amazing work of a master creator. They are designed to handle thousands of tasks simultaneously, each part functioning independently and co-dependently. In order to receive code, the sound needs to be noticed, determined important and processed for meaning. When we first hear code the mind asks itself, "What manner of audio information is this?" Not recognizing it as language, the sounds are mistakenly routed to the non-language auditory area as though they were environmental noises. The grey matter in this region is extremely efficient for recognizing thuds, clunks, screeches and squeals, but quite inadequate for processing language. The functioning of this section of the brain appears to be sound specific. It is looking for exact matches with stored experiential information. Scanning the environment and searching for potential hostile noises it locates a sound it deems worthy of notice, notifies the visual part of the brain that trouble might be brewing, collects data and quickly determines its importance, hopefully in time to get you out of the way of the approaching truck. Literally hundreds of thousands of messages pass through this portion of the brain every day. Most are ignored as irrelevant.

What's a 3 wpm window?

If we try to copy code in this non-language portion of our minds as environmental noises, symbols must be learned EXACTLY the way they are to be received. As many of us have discovered, the process is arduous and often exasperating. This area of the brain does not appear to possess the ability to learn at one speed or frequency and then decipher at another. Consequently, we learn code at one speed, say 20 wpm but are out to sea when someone sends us code at 5 or 13 wpm. If we learn code by listening to the sound of the characters and then attempt to associate the letter with those sounds, we are locked into a dismal 3 wpm "window." (Hams often refer to these windows as plateaus) If we speed up or slow down, we no longer recognize the characters. Thus, we might get through an exam if our code "window" matches the test oscillator, but we don't become CW proficient unless we set out on the grueling course to learn six or more complete sets of code. As

so many of us know by personal experience, this is just too painful and most who try it give up in disgust. Who wants to spend the rest of his life studying code?

Speech — man's most amazing ability

Now compare that scenario with what happens in the amazing language part of our brain. One aspect of man which makes him unique from all the animal kingdom is his ability to receive and process speech information. Scientists tell us that language functions are strung all over our skulls where thousands of circuits connect and constantly communicate with each other. As a result, this most powerful part of our mental function is able to hear and decipher meaning from a child's high-pitched whine, the thick accent of a Jamaican fisherman, the bass roar of a Marine drill sergeant, or the slow drawl of a Louisiana river boat captain. No one ever needs to teach the difference between fast language and slow language, high pitch or low, our brain just fills in the differences. It can process speech equally well at an agonizingly slow 25 wpm or from a traffic controller's 500 wpm machine-gun-like spiel.

30+ wpm — how does he do it?

The old ham who sits by his radio while code flows at 30 wpm, no doubt receives and processes code in his mental language center. Some can even carry on two conversations at once, one with you, the awestruck ham shack visitor, the other with a CW friend through the transceiver. Somehow for him, the code language became fluent, as easy as English. He feels no struggle, hesitation or tension; how did he do it? It remains a mystery to us how for a small minority of hams the non-language he learned connects to his brain's language center. We don't know how he developed his skill while so many others founder, but we are delighted to report that since 1979, Code Quick has launched tens of thousands of men and women into his world of CW language with the unique sound-alike process. Hundreds of students continue to succeed by following the simple steps found in the Wheeler Applied Research courses and computer programs.

How does CW become language?

To acquire any foreign language, say Spanish, we learn a set of sounds (noises if you will) to represent an idea. Take the sounds, "mi boca" as an example. If we are older than 9 years old we will most likely have to go through the process of saying to ourselves, "Mi boca means my mouth." Every time we hear "mi boca," we think, "my mouth." Those of us who learned a foreign language are familiar with this translation process. If we stick with it, eventually we jump right from the Spanish word to the imaged thought and the English equivalent then drops away. Wallah, we arrive at the point of fluency.

Why do sound-alikes eliminate plateaus?

If we learn code by way of sound-alikes, very much the same process emerges. Using Mr. Kelley's example, "Catch it-catch it" is first learned as a sound-alike to represent the letter "C." In the beginning, the student will hear the code say "catch it-catch it," and will go through some rapid mental gymnastics to remember that those sounds represent "C." Just like the sounds "mi boca" represented "my mouth" in the example above, translation was necessary. With practice, the "catchy phrase" disappears into the subconscious and the brain deals with the sound as it would with any other language bit. Once a sound becomes fluent language, it can soon be deciphered at almost any speed. A minimum of processing time, freedom from speed or frequency dependency, long-term retention, and instant comprehension mark our language abilities. Getting all this power working helps us to become code fluent quickly while avoiding failure. That's why so many Code Quick students come to us after a lifetime of struggle to learn that CW can be both fun and rewarding.

In conclusion, the author would like to recommend that you NEVER study code as dahs and dits, dots and dashes, Farnsworth or traditional; THIS IS A VERY BAD WAY TO LEARN THE CODE.

(Editor's note: People have many different learning styles. One person's success may not be another's cup of tea. We encourage all to find the method that works best for them.)

North Pole net

Sixteen members of the Ak-Sar-Ben Amateur Radio Club were called into action by Santa to activate the North Pole Network 13 December. This marked the fourth consecutive year that net coordinator Pat Joseph, NØHPP, has organized the event that uses ATV and Amateur Radio to allow Santa Claus to visit children in area hospitals.

Working with Santa and the nurses and technical staff of the hospitals, the children could see and hear Santa on their hospital room TVs and talk to him via Amateur Radio. This year, three hospitals had children who wanted to talk to Santa, and 24 kids had a chance to have a visit with Santa to discuss their Christmas lists. The hams used the KØUSA Ak-Sar-Ben ARC, 2M repeater and the WBØCMC ATV repeater, which is sponsored by WOWT Television. Both repeaters are located on the WOWT broadcast tower. — *Pat Joseph, NØHPP*

Awards

Contact All Time Zones

To help commemorate 25 years of ***Worldradio,*** we announced an award known as "Contact All Time Zones" (CATZ).

• Rules

The start date for valid contacts is 01 July 1996 at 0000Z.

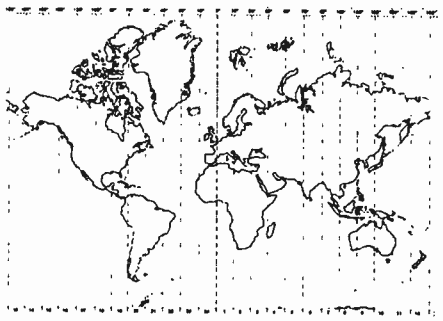
The world is divided into 24 time zones. Each time zone is 15 degrees wide. For the sake of this award, half-hourly zones and out-of-zone artificial time changes will be ignored.

This award is based on the true 15 degrees each, world map 24 time zones.

The applying station must have one (two-way) contact on Amateur Radio allocated frequencies with a station in each of the world's 24 time zones. Contact with one's own nation does not count.

The operator applying for the award must have made all 24 contacts from a location within the same country.

The award may be endorsed as the applicant wishes in regard to band and/or modes.



• Application

The applying radio operator must be in possession of 24 QSL cards, one from each of the time zones.

A list shall be made showing each contact's call sign date, band, mode and the time zone starting with the prime meridian (0°) and moving eastward.

There is a fee of $5 to cover the cost and mailing of the 8 x 10 certificate (mailed unfolded).

It is not necessary to mail your QSL cards to ***Worldradio.*** Send a statement signed by two other licensed radio amateurs (General Class or above) that they have inspected and verified the required QSL cards.

Address applications to CATZ Award, ***Worldradio,*** 2120 28th St., Sacramento, CA 95818.

Recipients of the CATZ award will be announced in the ***Worldradio*** DX column.

FAR scholarship

The Foundation for Amateur Radio, Inc., a non-profit organization with headquarters in Washington, D.C., plans to administer 66 scholarships for the academic year 1998-99 to assist licensed radio amateurs. The Foundation, composed of over 75 local area Amateur Radio Clubs, fully funds nine of these scholarships with the income from grants and its annual hamfest. The remaining 57 are administered by the Foundation without cost to the various donors.

Licensed radio amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college or technical school. The awards range from $500 to $2500 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Clubs, especially those in Delaware, Florida, Maryland, New Jersey, Ohio, Pennsylvania, Texas, Virginia and Wisconsin, are encouraged to announce these opportunities at their meetings, in their club newsletters, during training classes, on their nets and on their web pages.

For an application form send a letter or QSL card, postmarked prior to 30 April 1998 to: FAR Scholarships, 6903 Rhode Island Avenue, College Park, MD 20740.

The Foundation for Amateur Radio, incorporated in the District of Columbia, is an exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1954. It is devoted exclusively to promoting the interests of Amateur Radio and those scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.

DARA scholarships

The Dayton Amateur Radio Association is accepting applications for its annual scholarship program. Applicants must be Amateur Radio operators and graduating high school seniors. Eight scholarships of up to $2000 apiece will be awarded. To request an application, send an SASE to DARA Scholarships, 45 Cinnamon Ct., Springboro, Ohio 45066-1000. The application deadline is 01 June 1998. — *Stan Kuck, NY8F, ARRL Letter*

6M scholarship

The Six Meter Club of Chicago Inc., through the ARRL Foundation, Inc., offers a scholarship on an annual basis. This scholarship is awarded to any eligible college student with an Amateur Radio license who resides in the "9" call district. If there are no applicants from that area, applications are accepted from all call districts (at the discretion of the ARRL Foundation, Inc.). David Butowski, N9KPD, Oak Forest, IL, was the third student to receive this award.

The Six Meter Club hopes the granting of the award will promote this great hobby of ours and that many students will take advantage of this scholarship in future years.

For those interested in applying for the 6M Club scholarship, write: 6M Club Scholarship, c/o ARRL Foundation, 225 Main Street, Newington, CT 06111-1494.

Product Review
The Collins 30L-1 Video Tape

ARMOND NOBLE, N6WR

One virtue of older ("classic") gear is that one can see all of the parts and it can be worked on and repaired without having to bundle it up and send it back to the factory, if one so chooses and has the ability to do so.

Collins radios lend themselves to an amateur being able to look inside and figure out what might be wrong. In that light, Floyd Soo, W8RO, Hi-Res Communications, has produced a series of instructional videos covering eight different pieces of a revered line of equipment.

The one-hour "30L-1 Video" on the four-811A grounded-grid linear amplifier (600W output) features Dennis Brothers, WAØCBK, who was employed at the Collins factory from 1963-76. Of interest on the tape was the mention of the massive amount of overtime work necessary at the factory to be able to keep the military (during the Viet-Nam war) supplied with Collins transceivers and amplifiers.

When WAØCBK left Collins (to help his father farm) he was so highly thought of that he was later allowed to open one of only two "official" non-factory Collins repair facilities.

The video cites the exact length of RG-58 coaxial cable to use between the exciter and this amplifier to protect against instability. In proposed modifications, better power supply diodes are suggested by part number. Another simple change can prevent 2,000 volts from hitting many capacitors and the antenna relay should the 811A short internally, which some, due to the horizontal position, are known to do.

Lubrication of the fan is covered, as is adjustment of the variable capacitors and the tuning and loading of the amplifier. Adjustment of the input circuit 80-, 40-, 20-, 15-, and 10M coils is detailed, as well as the adjustment of the ALC.

There is also instruction on how to change the value of one capacitor in the bias circuit to allow the replacement of the 811As with the more modern and far better 572Bs.

As the tape ends, lettering on the screen prompts those with "questions or problems" to call Dennis Brothers. Other videos in the series are KWM-2, 75A-4, 30S-1, KWS-1, R-390A, 75S-3/32S-3, and Collins Spotter's Guide.

Hi Res Communications is located at 8232 Woodview Dr., Clarkston, MI 48348, 248/391-6660.

SPECIAL EVENTS

CAJUN VALENTINE'S DAY

The Mecury Amateur Radio Association South East (MARASE) is sponsoring a "Cajun Valentine's Day" 14 February 1998 from 1400 UTC - 2200 UTC in Slidell, LA. Frequencies are 14.280 MHz and 21.325 MHz (+/– 20 kHz). Call sign will be KM5LS. To request a certificate contact Michael White, 404 Holmes Drive, Slidell, LA 70460; 504/649-6650.

UP 200 SLED DOG CHAMPIONSHIP

The Hiawatha Amateur Radio Association is holding the "Up 200 Sled Dog Championship" 20-22 February 1998 in Marquette, MI. Station K8LOD will operate on the general portion of the 80/40/20 bands. For certificate send SASE to Rich Schwenke, N8GBA, 21 Smith Lane, Marquette, MI 49855. For more information contact Paul Kaarre, N8XTB, at 906/346-9854.

DU100

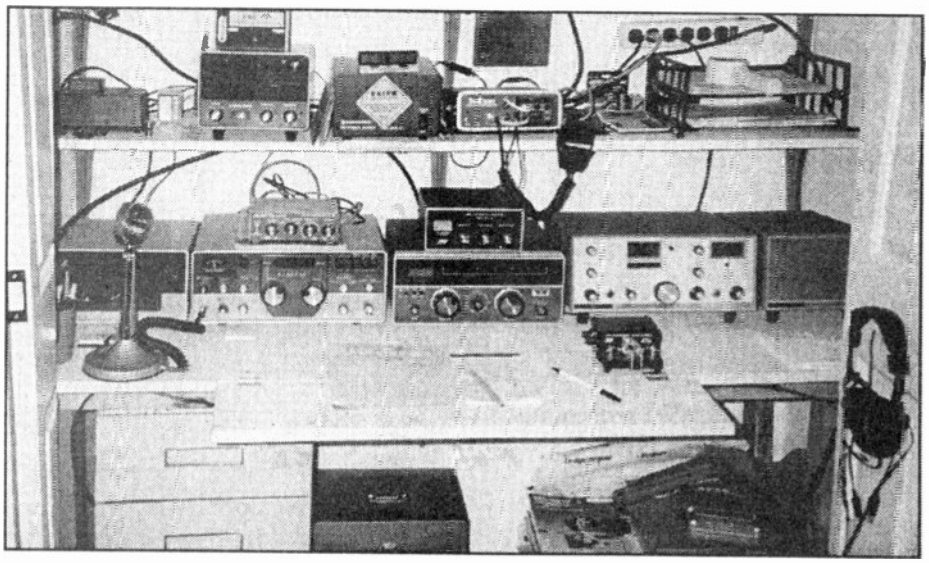
The special prefix DU100 will be used during all of 1998 to celebrate the Philippines' 100th year of independence. — *press release*

Station Appearance

Paul Deason K4HRX

*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.



My station is built into a closet. The antenna lead in coax enters the closet from the attic through the ceiling. I have a fold-up leaf on the bottom shelf so that I will have plenty of room for pads, etc. I can close the closet doors and make the station disappear when not in use. My XYL likes that.

Top shelf left to right: Icom BC 35 drop-in charger, Yaesu Landliner phone patch, Kenwood KPS-21 12V DC power supply, VoCom Power Pocket (25W 2M amplifier for Icom 2-AT). Note handheld shown inserted into the power pack.

Bottom shelf left to right: Cubic PSU-6A power supply, Cubic 102BXA transceiver with Autek QF-1A audio filter on top, Tentec model 229 antenna tuner with MFJ artificial ground on top, National NCX-3 transceiver with power supply for same next to it.

Out front is a D-104 mic and an MFJ keyer. Computer is on desk at left (not shown). Antennas are GAP vertical for low bands and 8-element beam for 2M.

I have been licensed since 1956 and hold an Extra class license.

Amateur "Hi"

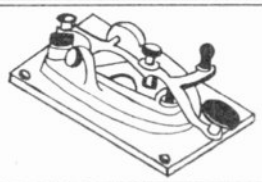
*Ever had a funny or strange experience with Amateur Radio, either on or off the air? If so, type it up (or print neatly) and send it to us for consideration in our monthly AMATEUR "HI" contest. You could win a free year's subscription to **Worldradio**!*

Drugstore Hi!

W.R. PLAGE, W4DQT

The drugstore from which I buy all of my pills employs a pharmacist who was a radio operator in a B-17 bomber during WWII. Each time I use his services, and at my age it's often, we greet each other with an exchange in oral Morse code "dit-dit-dit-dit, dit-dit." Every time we use our Morse code version of "hello," or "hi," the other customers at the pharmacy counter obviously consider us a little wacky. Maybe we are.

Silent Keys



LARRY FERRARI, WA2MKI

Well-known ham and TV personality Larry Ferrari WA2MKI, of Cinnaminson, New Jersey, died 20 November. He was 65 and had been suffering from cancer. For 40 years, Ferrari played the organ on The Larry Ferrari Show on Philadelphia's Channel 6 (WPVI) and was a regular in the station's Thanksgiving Day Parade, where he performed on a float. He also provided music for other Channel 6 programs. In addition, he entertained at various Amateur Radio club banquets over the years. From 1985 until earlier this year, Ferrari was the organist at the Cathedral of the Immaculate Conception in Camden, New Jersey. —*Kay Craigie, WT3P, ARRL Letter*

BRUCE L. KELLEY, W2ICE

Antique Wireless Association cofounder and AWA Museum curator emeritus Bruce Kelley, W2ICE, of Holcomb, New York, died 6 November 1997. He was 82. Kelley, along with George Batterson, W2GB, and Linc Cundall, W2LC, founded the AWA in 1952. The museum stemmed from one Kelley had set up in his barn in the late 1940s. Kelley had recently stepped down as curator of the AWA museum in Bloomfield because of ill health. An April 1991 *QST* article about the AWA Museum called Kelley the "guiding light" of the museum.

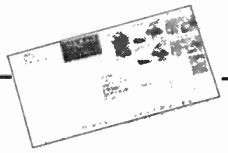
Well known as a radio historian and among vintage radio collectors, Bruce was a frequent contributor to the *AWA Journal*, *The Old Timer's Bulletin* and was co-author of "Hams Span the Atlantic on Shortwave!" which appeared in the December 1996 issue of *QST* and won the *QST* Cover Plaque Award for that month. Kelley assisted in the preparation of Ken Burns' TV documentary "Empire of the Air," some of which was filmed at the AWA Museum. Kelley also produced the video, "The Trans-Atlantic Tests and Station 1BCG," available from the ARRL. He also was club historian for the Rochester Amateur Radio Association. First licensed as W8ACY in 1929, Kelly was an ARRL member from that time on. He was retired from the engineering department of Eastman Kodak.

Ed Gable, K2MP, who recently succeeded Kelley as museum curator, said, "The world has lost a true radio historian and a great radio amateur."

AWA President Bill Fizette, W2DGB, recalls he first met Kelley in the 1970s, after he was introduced to the AWA. "Even at that time, Bruce Kelley was somewhat of a legend among the members. He seemed to be everywhere and do everything, from building a museum of early wireless apparatus, now one of the best in the world, to editing and producing the club bulletin, to officiating at the conferences, to maintaining an extensive outreach program — the list goes on," he wrote. "I thank Bruce Kelley for the inspiration and opportunity he gave to us. He was a leader and a very unique person, and he will be missed." Survivors include his wife, Helen. —*ARRL Letter*

MARY D. BURKE, W3CUL

Champion NTS traffic handler Mae Burke, W3CUL, of Seminole, Florida, died 5 November 1997. She was 86. Mae Burke was a member of the ARRL and of the A1 Operator's Club. She won the fifth Edison Radio Amateur Award for public service for 1956. At that time she was operating daily in six CW nets and handled some 312,000 messages between 1949 and 1957. Her husband, Alfred Burke, W3VR, survives. —*Michael Wacker, N3HR; ARRL Letter*



Off the air

Digital Bus

Dear Mr. Snyder, WØLHS,

Again, I am too late. I have been meaning to write — e-mail you to say how much I enjoy The Digital Bus, the behind-the-scenes of the Gatti-Hallicrafters expedition, the communications highlights and sidelights of the South Pacific campaign (Thank you for your service to our country) and the overview of Ham-dom in the cold Dakota territories.

I am sorry I haven't written earlier. Please accept my thanks for an interesting column, one that I always enjoyed reading. Some things never change. Attitudes of non-communication people in New Guinea in 1943 have been experienced at Diego Garcia, Guantanamo Bay, Cuba and the Persian Gulf in the 1980-90's.

Please accept my sincere salute, from a Journalist First Class, United States Navy (Fleet Reserve) to a communicator par excellance. Your column will be missed by me.

JAMES SACKEY, N9ESM
North Bend, WA

More pipe banging

I particularly liked the article by Bill McCracken, W6IGN *(**Worldradio**, Nov. 97, p. 29)* the writer in regard to the usefulness of CW when all else fails. His comparison to the Navy's requirement to maintain the sextant as a backup to all the modern day position locating equipment they have, hits the nail on the head. The only thing I take issue with is when he talked about sending CW by banging on pipes. I don't see how you can do the dits and dahs. Maybe I read his comments wrong.

cuagn,

JOHN CARMODY, N8FFG
West Milton, OH

Don't touch that iron!

To any and all do-it-yourselfers, beware of the Dual Heat Soldering Iron sold by Radio Shack, model number 64-2187. I purchased my first one from them in September. It shorted out and started smoking the second time I used it. I promptly took it back for a replacement. The new one didn't make it past the first coax solder before it, too, shorted out, and the barrel fell off, throwing solder on me, my computer keyboard and burned my new computer desk.

On investigation I discovered the barrels that come out of the gun are themselves only soldered to the inside coil. DANGER!!! This manufacturing technique is highly hazardous. When I talked to the Radio Shack representative, he said, "The product is being taken off the market." Later, when I called the area representative and local stores, they had not received any such notification. If this is an example of the current quality of workmanship from them, I would suggest caution in using any product purchased from them or certified from "United Labratories (UL)".

HENRY, KB2SRU, & LENAYA DEITCHMAN
Niceville, FL

Radio NSS, Annapolis, MD

Attention, former "shipmates," Radio NSS, Annapolis, MD: Please check out NSS web page: http://members.aol.com/k6dc/nss.html

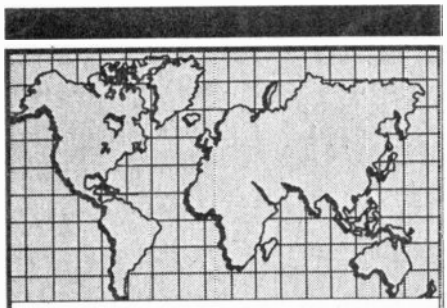
Any comments are welcome. If you were stationed there at any time before or after WWII, Navy, Marine, or civilian and care to post your rememberances and/or a photo for all to see, please send to me at 930 Alston Rd., Santa Barbara, CA 93108-2312 or e-mail K6DC@AOL. COM

MERLE B. PARTEN, K6DC
Santa Barbara, CA

Likes the curmudgeon

While I really enjoy all of ***Worldradio,*** I would appreciate it if you would pass on my message of multi-thanks to the curmudgeon, the famous (or infamous, depending on one's point of view) Kurt N. Sterba. His is the column that I grope for as soon as each new issue arrives. I have picked up many good and useful antenna suggestions from him over the years and his realistic approach to antennas and antenna gain is great. Please tell him to take care of his health and we hope to read his pearls of wisdom for many years to come. The true identity of Mr. Curtain is subject to much conjecture around here, with many well-known and not-so-well-known names being suggested, but we understand in this day of the "hired gun" why he chooses to remain anonymous. Give 'em hell, Kurt...and let's see more of the non-typical antenna designs. I've tried many and you know what??? They work!

BILL SCHWARTING, WR2L
Scotia, NY



DX WORLD

John F.W. Minke III, N6JM
P.O. Box 310 Carmichael, CA 95609-0310
• E-mail: n6jm@pacbell.net•

W-100-N

There were no applications for ***Worldradio's*** Worked 100 Nations or Contact All Time Zones awards this month.

Maldive Islands (8Q)

The Central Arizona DX Association has mounted an all-out effort in their DXpedition to the Republic of the Maldives. Their plans call for operation around the clock 19-28 January.

Members of this team include: Nilda Resto, NP3BY; Oscar Resto, KP4RF; Sally Martinez, KM5EP; Rich Chatelin, K7ZV, and Dan Brown, NA7DB. This group will handle SSB chores. On CW will be Bruce Sawyer, N6NT; Darryl Hazelgren, AF7O; Warren Hill, K7WX; Steve Thompson, N7TX, and Stephen Towne, NN7X.

Predicted propagation to North America on the higher bands will be during the 1500-2100 UTC time frame. There will be focus on the lower bands with special attention being given to openings for North America.

East Malaysia (9M6)

The grand opening of the Hillview Gardens Ham Radio Resort in Sabah, East Malaysia was celebrated by the use of the special event call of 9M6HIL. Bob Schenck, N2OO/9M6OO, was present during the celebration.

Spratly Islands (9M6)

Bob Schenck also operated from the Layang Layang Island in the Spratly Islands.

Bob, as 9M6OO, said it took him only 18 years and adds, "I was on the 1S1DX team back in 1979 but after gunfire thwarted landing at Amboyna Cay, the team returned to Brunei." Three of the original six team members made a second run to find another island, while Bob remained in Brunei to provide communications with the boat. The group did find another island, a small sand cay at Barque Canada Reef and were able to make some 14,000 contacts.

Nepal (9N)

The *Ohio / Penn DX Bulletin* notes that Charles, K4VUD, is planning to go back to Nepal in February and March of 1998. He says if anyone cares to donate any radio equipment to 9N1AA or 9N1HA (the only two native Nepal Amateur Radio operators), to contact him at 407/349-2211. He will carry it in his baggage when he goes. Satish, 9N1AA, is interested in getting on RTTY and satellite, but has no TNC and no 2M SSB equipment. He cannot receive a beam because of import restrictions.

Moldova (ER)

425 DX News reports that Slawa, ER1LW, is very active on the WARC bands during the weekends. Look for him on 10.104, 18.072 and 24.895 MHz for CW contacts, and 18.130 and 24.945 MHz for SSB contacts. He also operates RTTY. Slawa's e-mail address is er1lw@cinf.usm.md

Vatican (HV)

Peter Casier, 5X1T/ON6TT, recently operated from HV4NAC in Vatican City. He reports the station is located in the center of Rome in the North American College, on the Vatican City extra territorial grounds. Most of the equipment is actually donated by IKØFVC, who is acting as station manager, and also handles QSL requests.

Kure Island (KH7K)

If you missed the last K7K DXpedition to Kure Island, you will have another chance at it. According to *Island / DX News* there probably will be another in 1998.

Greenland (OX)

The *Ohio / Penn DX Bulletin* notes that Kim, OX3FV, is active on 160M and the WARC bands, operating CW. Look for him on 17M around 1830 UTC; 20M around 1230 and 2215 UTC; 30M around 1200 UTC; 80M between 0415 and 0500 UTC; and 160M between 0345-0430 UTC.

St. Kitts & Nevis (V4)

Bernie McClenny, W3UR, editor of *The Daily DX,* suggests that deserving DXers work this one on all bands and modes just in case St. Kitts and Nevis islands become independent of each other. If that happens this one will be added to the deleted countries list with two new ones added.

As a matter of interest, Bernie says the Callbook lists V44KAU, V44KJ and V44NK as residing on Nevis Island. He says that also on the island is V47NS and V44NEF.

For the IOTA island hunters this probably will also be affected as the two islands presently count as a single island group (NA- 104). One of the two will retain the existing IOTA reference number and a new number will be issued for the other.

South Shetland Islands (VP8)

The new operator at the Polish Antarctic Station, HFØPOL, located on King George Island in the South Shetland Islands (AN-010) is Stan, SP3BGD. According to the *Ohio / Penn DX Bulletin,* Stan should be active through the end of 1998, mainly on RTTY and CW with very little SSB. Contacts with Stan can be confirmed via his son, SP3SUN,

either via the bureau or direct.

North Cook Islands (ZK1)

The Dateline DX Association completed their Dxpedition to Penrhyn Atoll (OC-082) in the northern Cook Islands 27 September. Signing with ZK1XXP, the total on-the-air time was five-and-a-half days. With two stations operating they produced 15,299 contacts. Twenty Meters led with 4,219 contacts. Of the total amount of contacts, 8,101 were made via CW. The bulk of the contacts were with North America.

A slide presentation will be available for club and association viewing. Please contact Tom Harrell, K8XP/K4TSJ, for details at e-mail k4tsj@juno.com or k8xp@negia.net. A professional video is being produced and will be available for sale at a future date.

Chatham Island (ZL7)

Lee Jennings, ZL2AL, reports that the ZL7AA/ZM7A DXxpedition to Chatham Island was a successful one. In spite of the poor propagation the team managed to collect approximately 12,000 contacts during the few days they were there. They have already begun to answer QSL requests for this one.

According to *The Daily DX,* a German team plans to activate Chatham Island 23 February-9 March 1998 from the Chatham Lodge. The team, composed of six DXers, Joe, DL8WPX, Mar, DL3DXX, Jan, DL7UFN, Falk, DK7YY, Manfred, DK1BT, and Tom, DL2OAP, plans to have three complete stations with two on the air at the same time. They will be on all bands, CW, SSB and RTTY, with the main emphasis on CW and the low bands.

Campbell Island (ZL9)

Lee Jennings, ZL2AL, of the most recent Chatham Island DXpedition, reports that they will activate ZL9CI in January, which should be coming up soon!

IOTA

Yuki, JI6KVR, will visit Tokara Archipelago (AS-049) 20-23 February 1998 signing with JI6KVR/6.

Here is another selection of the IOTA activity during the month of November. Some of these calls are regular visitors to the bands. Frequencies are in the usual MegaHertz and times are UTC.

AF-018	IH9/IT9FXY	21.260-21.265	1345-1630
AN-006	EM1HO	21.012	1300
AN-010	R1ANF	18.071	1530
AS-005	RAØBK	14.165	1100-1215
AS-012	JI6KVR/P	21.263.	0815-0845
AS-017	JR6EA	18.139	0815
AS-018	UAØFDX	7.005- 7.007	1245-1530
AS-021	A61AH	14.260	0930-1415
AS-022	RKØQXY	14.003-14.021	0900, 2345
AS-032	JO6PRM	7.039	1000
AS-045	HL5FUA	21.256-21.260	2200-0000
AS-053	HSØ/IK4MRH	21.255-21.270	1015-1300
AS-072	9M2/G3OZF	14.260	1400-1430
AS-088	A71CX/P	14.260	1400-1700
AS-124	A61AH/P	14.260	1115-1245
AS-131 (also BD7YA/7??)	BD7JA/7	14.260	0945-1415
AS-132	XV8FP	14.263	1230-1430
EU-008	GM3UTQ/P	14.260	1300-1515
EU-010	GMØKCY	3.772	1145-1600
EU-012	GMØEKM	14.260	1630
EU-014	TK5AE	14.198	1430
EU-016	9A2GF	14.260	0745
EU-020	SM1BIQ	14.260	1415-1430
EU-029	OZ2CW	7.031	1400
EU-036	LA8LA	14.260	0715
EU-037	SM7DLZ	7.006- 7.014	0545-0715
EU-038	PI4LEA	14.259-14.260	0930-1645
EU-046	LA5TFA	14.082-14.083	1100-1630
EU-047	DJ9IN	14.260	0930-1030
EU-049	SV8CYV	21.262	1330
EU-052	SV1CIF/8	14.259-14.260	0445-0500
EU-055	LA7QIA	18.072	1545
EU-056	LA4GHA	14.260	1200
EU-067	SV8EUA	14.265	1515
EU-075	SV1TP/P	7.011	2045
EU-082	U1ZA/A	7.001	0630
EU-096	OH1LU/P	14.260	1130-1200
EU-098	DL2BUE/P	3.700	0900
EU-123	GM3XWE	3.772	1430
EU-124	GWØHCN/P	14.260	1300-1545
EU-130	IV3BLQ	14.260	1430
EU-131	IK3VIA	14.265	1000
EU-133	R1ASP	14.255-14.261	0715-1500
EU-136	9A1ØØKRK	7.064- 7.090	0845-1200
EU-146	PA3FDO/P	14.260	0830-1330
NA-001	C6AMP	21.308	1315
NA-010	CJ1XA	14.260	1615
NA-027	VO1COP	14.260	1600
NA-029	VY2RO	21.235	1715
NA-031	KA3UNQ/P	14.250-14.260	1430-1445
NA-033	HKØTCN	21.310	1800
NA-036	VE7IM	14.198	1745
NA-041	KL7MS	14.260	1700
NA-051	VE7QCR	14.260	1700-1900
NA-052	N2OFY/4	21.260	1445
NA-054	N5XG/C6A	14.038-14.039	1430-1630
NA-055	AK1L	21.257-21.263	1415-1600
NA-057	N7QXQ/HR6	28.435	2015
NA-063	CYØDX	14.011-14.014	1630-2245
NA-065	KK7JP	14.260	1715-1915
NA-072	3E1DX	21.218	1300
NA-075	VE7GMW	14.258	1915
NA-080	C6AHN	21.264	1400
NA-096	HH2PK	21.092	1315
NA-105	FS5PL	21.292	1430
NA-106	KP2J	21.009	1130
NA-110	WB4WTY	14.259	1445
NA-114	FG/F5SIH/P	14.260	1100-1530
NA-140	WA2GGT	14.260	1500-1530
NA-183	XE3LMV/XF3	14.260	1300-1330
OC-004	VK9LX	14.197-14.199	0845-1000
OC-006	VK7CW	14.020	0615
OC-011	V63KU	14.245-14.249	0800-0830
OC-021	YCØSBV	28.445	1000
OC-031	C21NJ	14.247	0800
OC-042	4F4IX	14.260-14.265	1515-1530
OC-045	KH8/N5OLS	18.128	1945
OC-054	FW5XX	14.260	0500
OC-086	WHØAAV	21.294-21.295	1000
OC-088	9M6BC	21.027	2331
OC-119	DU8ARK	21.330	1300
OC-130	4I9RG	21.250-21.277	1000-1100
OC-137	VK4CY	14.195-14.218	0700-0815
OC-141	VK8KTC	21.260-21.275	1100-1300
OC-148	YC9MKF	28.495-28.550	1015-1145
OC-173	VK8SEA/P	21.257-21.267	0900-1115
SA-002	VP8CWI	14.245	1100
SA-008	LU1XSI	7.013	0315
SA-033	PY6JJ	14.260	0830
SA-049	L2ØXSI	14.260	0400-0415
SA-064	CE7AOY	28.476	1515

The Japanese Dxpedition to Con Dao Islands (AS-130) in Vietnam in October produced some 5,581 contacts for the deserving IOTA island hunters. No doubt this was a new DXCC country for many. Four call signs were used during the 16-19 October 1997 operation and were used as follows: 3W5FS on RTTY and the three WARC bands; 3W5MNB on CW and 160M; 3W5KDN on 40 and 80 meters SSB; and 3W5KVR on 15 and 20M SSB.

The Chinese DXpedition to Gui-Shan Dao (AS-131) by Yang, BD7JA, and his crew managed to make 1,600 contacts during their short stay of two days on the island. This was a new IOTA island and I saw no listings for contacts made with North America.

Another new IOTA island in November was the French DXpedition to an Cac Ba Island (AS-132) off the Vietnam coast. They were authorized only three frequencies: 7.063, 14.263 and 21.263 MHz and signed with XV8FP. The team included five operators, whose calls were F5LGQ, F6AOI, F6AUS, F6BFH, and F9IE.

Alberto, LU1DZ, and his DXpedition team to Staten Island (SA-049) operated two complete stations on the island signing with L2ØXSI. They were also very active in the CQ World Wide DX Contest. This should clear the demand for this one.

JH4FHV is a resident on Innoshima, and counts for Honshu coastal islands (AS-117).

The *Ohio/Penn DX Bulletin* reports that the Rimatar Island (OC-050) DXpedition by Albert, FO5JR, has been postponed to possibly next July, due to projected ominous weather conditions.

A mention of KE4I as a check point was made in the December

DX Prediction — February 1998

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. 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.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(11)*	12	***16**	*(9)*	***14**
12	*(11)*	11	***15**	*(9)*	14
14	*(16)*	11	***14**	*(13)*	27
16	*(22)*	12	***20**	17	30
18	25	*(11)*	17	*(13)*	32
20	25	18	*(20)*	*(10)*	***33**
22	22	24	26	*(10)*	***32**
24	*(19)*	***26**	30	*(9)*	***29**
2	***17**	22	29	9	***22**
4	***13**	15	23	9	***19**
6	*(12)*	13	20	10	***17**
8	*(11)*	***12**	17	*(10)*	***15**

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(14)*	9	*(15)*	***9**	***15**
10	*(13)*	9	14	*(9)*	***14**
12	*(21)*	9	14	*(13)*	21
14	29	***12**	***21**	19	***27**
16	32	*(12)*	20	18	***30**
18	***32**	*(11)*	*(18)*	16	***32**
20	26	*(17)*	*(20)*	*(11)*	***33**
22	22	20	26	*(10)*	***32**
24	***19**	*(17)*	30	10	***26**
2	***17**	*(12)*	24	9	***22**
4	***15**	*(11)*	19	9	***19**
6	*(14)*	*(10)*	17	9	***17**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(14)*	*(9)*	*(15)*	***9**	***16**
9	*(13)*	9	***14**	*(9)*	***15**
11	26	9	14	14	20
13	31	10	***26**	19	***25**
15	33	*(9)*	22	***19**	***29**
17	***33**	*(9)*	*(19)*	18	***31**
19	***29**	*(9)*	*(17)*	*(13)*	***32**
21	24	*(17)*	*(24)*	*(11)*	***32**
23	***18**	*(17)*	28	10	***27**
1	***16**	*(12)*	20	9	***23**
3	***15**	*(11)*	*(17)*	9	***19**
5	***14**	*(10)*	*(16)*	9	***17**

issue. Dave, WA3L, alerts us that this checkpoint has changed his call and is now W4DKS.

Clubs

The Lone Star DX Association has selected their new directors for 1998. Their new chief director is Bob Alexander, W5AH, with Bud Walton, K5HW, as Membership Director. Herb Blair, K5IDX, is the Information Director and Bill Priakos, W5SJ, is Program Director.

The Lone Star DX Association (LSDXA) was founded in 1987 by a small group of DXers from the Fort Worth area and has grown to a group with over 150 members throughout the State of Texas.

Several other DX-oriented clubs also announced their new officers during the month of November, including the Potomac Valley Radio Club, National Capitol DX Association, Central Arizona DX Association, North Jersey DX Association and the Oklahoma DX Association.

1998 NOIDXC

The Board of Directors of the New Orleans International DX Convention have announced that the dates of the 7th Annual NOIDXC will be 14-15 August at the Royal Sonesta Hotel on Bourbon Street in the New Orleans French Quarter. If you have never attended this event, now is the time to make plans. You will have a good time! These New Orleans DXers will make you feel at home. For hospitality no DX convention committee can match them!

Antique QSL Department

Remember the VP3CW QSL card in the December issue? Yes, Tiny is now Cecil Wiltshire, NM3L, who writes, "You may be interested in closing the gap of almost 4 decades between 1949 when I held the call letters VP3CW and 1997 my present call sign NM3L.

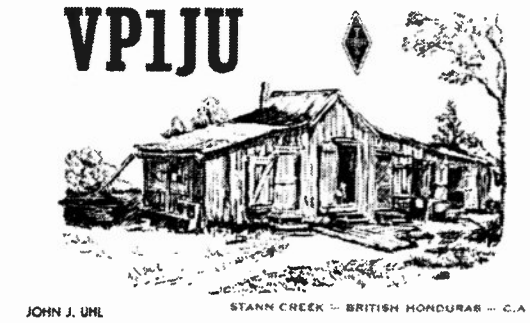
"The handle Tiny was inflicted upon me when I was apprenticed to the telecommunications organization in British Guyana and was the tiniest member in the group, and had to stand on a box to reach the wall mounted Western Electric telephone in our workplace.

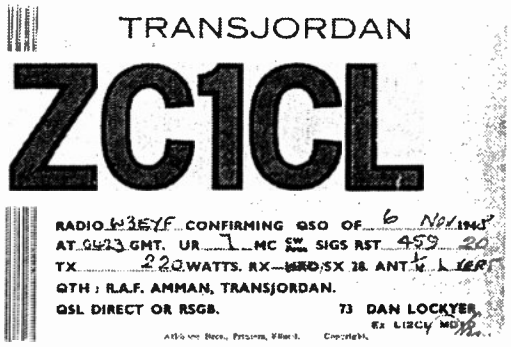
"Having completed my apprenticeship I was awarded a scholarship for study in England where I graduated with degrees in Electrical and Electronics Engineering. During this period I managed to lose the name Tiny and rightly so, as I had grown to a height of 5' 11-1/2" in socks.

"I joined the International Telecommunications Union (ITU) in 1965 and served as training expert and project coordinator in several countries. When I retired I took up permanent residence in the United States and was assigned the call NM3L."

During field assignments with the ITU, Cecil had held temporary and reciprocal calls with such prefixes as A2, 3D6, ZS4, and others. Cecil also held the calls ZD3D abd 7P8AY.

Don Simpson, W3EYF, provides us with a card from Transjordan dating from November 1948. The operator of ZC1CL was Dan Lockyer,





who Don says is presently in England. This same card was shown in the November 1980 issue but was provided by W5CPI.

The other cards come from the collection of Leo Haijsman, W4KA. The call 8Z4A was the call used by a DXpedition to the Saudi Arabia/Iraq Neutral Zone in November 1979 to celebrate the 44th birthday of JY1 on 14 November 1979. There were several operators on the DXpedition, eight from the Royal Jordanian Radio Amateur Society, plus four visiting operators. Two years later this one would be added to the deleted countries list for DXCC purposes.

The third card is for a contact on 16 April 1966 with VP1JU at Stann Creek in British Honduras. The operator is shown as John J. Uhl, who is now active as W5ZE in Louisiana. I contacted John and he sent the following:

"Yes, that is my call sign that I got from a High School friend, Len Bowman, VP1LB, back in the 60s. I met him on the bands by accident and when he asked me to come down to visit I requested a ham license. A few weeks later it came in the mail. Shortly, I was on a plane going to British Honduras.

"Len and I traveled around the country and I was able to operate from lots of other amateur's homes. His father, brothers and his wife all had amateur licenses. He now resides north of New Orleans in Hammond, no longer active."

John thinks he still may have some old VP1JU QSL cards and the logs to confirm a contact for anyone who worked him as VP1JU. Finding the cards and logs may be a challenge. British Honduras is now known as Belize.

QSL Information

Ryszard Tymkiewicz, SP5EWY, says that Tom, SP5AUC, who was active as YI9CW, is still very busy. He promises that all QSL requests for YI9CW will be answered soon. If you are desperate you may send a request via Adam Perz, SP5JTF.

Most of the time QSL requests for contacts with 3V8BB are sent via YT1AD. However, this depends upon the operator at the station at the time. Following is a list of operations that might be of help in determining the correct QSL route:

1995	
29 Apr-05 May	YT1AD
-28 May	JF2EZA
?? Jul	JF2EZA
24-29 Jul	YT1AD
08-13 Aug	GØUCT
14-31 Oct	YT1AD
22-29 Nov	DL2OBF
1996	
14-24 Apr	AA6BB
23-30 May	YT1AD
05-18 Jul	DK3DM
11-17 Sep	DK9IP
21 Sep-01 Oct	OK1CZ
09-13 Oct	W6/GØAZT
CQ World Wide (SSB)	YT1AD
CQ World Wide (CW)	DL2HBX
1997	
26-31 Mar	YT1AD
April	DJØIF
28-05 May	I5JHW
12-13 Jul	YT1AD
11-23 Sep	DF2UU

Joe Pontek, K8JP, who handles QSL requests for V31JP, VP5JP, and other calls, informs me of his new address: 26441 Devaney Rd., Arcadia, IN 46030. If you keep a file on QSL managers be sure to make the correction.

There has been discussion regarding the use of green stamps (American dollar bills), IRCs (International Reply Coupons) and mint stamps for postage on return QSL cards when requesting a direct QSL card from a country other than your own.

A country not to send green stamps to is Vietnam, according to Yoh, 7L1MFS, who recently operated as 3W5FS from the Con Dao Islands in Vietnam. Yoh says that American currency in Vietnam is against the law.

Don Simpson, W3EYF, says that in the long run he has found that an SASE with stamps of the country makes it simple and easy for the DX station to reply. All he must do is put his reply QSL card in the SASE and drop it in the mail box.

He also makes the practice of

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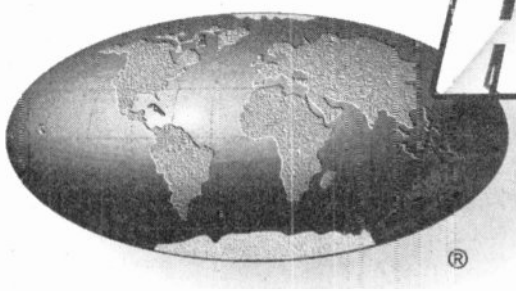

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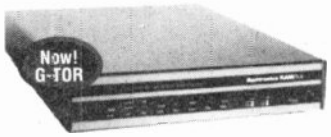

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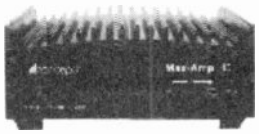

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never using U.S. airmail stamps on his outgoing overseas mail. Over the years he has found that many of these DX amateurs are also stamp collectors. He uses commemorative issues with various general postage issues to benefit stamp collectors.

Don says, "I get a good return on foreign QSLs but sometimes I get more than I expected. Apparently, many U.S. hams think U.S. postage can be used anywhere in the world. Frequently, foreign hams use my SASE to send me QSL cards for other U.S. hams who include the SASE but with a 32-cent U.S. stamp!"

I might add to this, Don, that the originating person in the U.S. may have sent the DX station the customary SASE plus a green stamp. The DX station had a supply of U.S. 32-cent stamps, and he placed the postage on the envelope. By sending them via you he gained some revenue. Generally, I would say this is not the case. Most likely, it was as you said it was.

Goetz Linss, DJ3IW, says that he uses thick, dirty looking envelopes made of recycled paper for sending direct QSL requests. This isn't such a bad idea and could be a good ploy to fool dishonest postal employees.

Bill, W3KO, suggests adding such notes to QSL Routes as "This manager is reported as not honoring an SASE or QSLing." I'm not sure if this is a good idea. The delay could be for various reasons such as no logs received from the station that the manager handles, or perhaps the QSL cards have not been printed. I would suggest a follow-up and if no response (if one of the above he could use the extra SASE to respond) then start asking around. What do QSL managers have to say on this?

Frank Hurlbut, KL7FH, operated as KL1SLE from various IOTA islands this past summer and says: "When I traveled to Shemya Island (NA-037) I worked 800+ stations and we decided to not send out the 'plain Jane' QSL card for this trip. Instead we had a special picture card made. We had to wait for film processing and then we chose two pictures and designed the cards. Then we had to find a vendor to do the printing. We thought that we could get a local printer to do the job for a decent price." Frank said this was not the case and had to look elsewhere for assistance in the printing. So, here you have another reason for a delay in getting QSL returns. Personally, I don't mind the wait. Look at some of those famous Dxpedition QSL cards — they sure are worth the wait.

Thanks go to the following contributors for this month's column: 5X1T, DJ3IW, EA5EYJ, F6AJA, G0AZT, JA1ELY, SP5EWY, VA3EU, ZL2AL, W1BIH, N2OO, W3EYF, W3KO, WA3L, NM3L, W3NB, K3ZO, W4KA, K4PHE, W5FKX, K5IDX, W5ZE, N6RT, W7CF, KL7FH, W7WK, K7WX, K8JP, K8XP, WØTM, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7YS), Juliet Alpha Cluster (JE1OMO), WebCluster (OH2BUA), *425 DX News* (I1JQJ,), *DX News Letter* (DJ5AV), *The OPDX Bulletin* (KB8NW), *Internet DX Mailing List* (VE7TCP), *The Low Band Monitor* (KØCS), *Island/DX News* (W5IJU), *The Daily DX* (W3UR), *QRZ DX* (N4AA), and *DX News Sheet* (G4BUE).

I just finished with the CQ World Wide DX Contest (CW) and am frustrated as usual. I would be there calling away in the pile-up and not get through. To make matters worse after the pile-up thins out they still don't hear me. Then I call another station and he comes right back after a single call. And this was another pile-up. Armond says I should invest in an amplifier. Heck, I'm too old to change now. I hope 1998 is a good DX year for you. 73 de John, N6JM.

QSL managers

These QSL routes are correct to the best of my knowledge. Corrections would be appreciated. Some routes show two routes, which often includes the manager's former call. For QSL routes not shown, they should most likely be sent via the bureau or direct to the station worked. Many of these calls listed below were active in the October CQ World Wide DX Contest. —N6JM

3B8/F6HMJ	—F6HMJ
3CØBC	—K4PHE
3C1BC	—K4PHE
3C1YL	—K4PHE
3D2AL	—7M3VAL
3D2HW	—I5JHW
3D2ME	—JG2EBN
3D2RW	—ZL1AMO
3D2XU	—PA3AXU
3DAØCA	—W4DR
3DA5A	—JH7FQK
3E1DX	—KU9C[4]
3E1DX	—NØJT/FØUI
3V8BB	—YT1AD[3]
4F3CV	—HB9CXZ
4F4IX	—DU4IX
4F6/KE6UP	—KE6UP
4I9RG	—DU9RG
4K9W	—DL6KVA
4LØCR	—IK7JTF
4L4MM	—ON4CFI
4M5E	—YV5NWG
4NØS	—YU7JDE
4N1N	—YU1AST
4N7B	—YU7BJ
4O6A	—YU1FW
4S7BRG	—HB9BRM
4S7DA	—W3HNK
4X/OK1DTP	—OK1DTP
5A2A	—DL3KDV
5A7A	—DL3KDV
5B1/EU1AA	—EU1AA
5B4/T97M	—K2PF
4B4/UN7FK	—UN7FK
5B4ADA	—9A2AJ
5B4AGC	—G3LNS
5C8M	—CN8MC
5H3ES	—DF9SU
5J2X	—HK3DDD
5K1X	—HK1HHX
5NØT	—F2YT
5NØYL	—F2YT
5N3CPR	—SP5CPR
5R8EE	—FR5EL
5R8EY	—DJ1RL
5R8FK	—NY3N
5R8FX	—DJ9DX
5T5BC	—K4PHE
5T5MH	—K4PHE
5T5U	—JA1UT
5V7A	—GM4FDM
5V7BC	—F5KPG
5V7BG	—N7BG
5V7GL	—EA5WX
5V7ZM	—G3ZEM
5X1M	—ON5NT
5X1S	—DF2RG
5X1T	—ON5NT
5X1Z	—SM7PKK[2]
5X4F	—K3SW
5Z4RL	—N2AU
6D2X	—K5TSQ
6KØ IS	—HL1IWD
6V1C	—6W1QV
6Y4A	—WA4WTG
6Y5DA	—VE4JK
6Y6A	—JE3MAS
7Q7EH	—AA9HD
7Q7JL	—GØIAS
7X2RO	—OM3CGN
7Z1IS	—SMØOFG
7Z5OO	—W1AF
8P6DA	—KU9C
8P9CV	—KU9C
8P9DX	—VA3DX/VE3ICR
8P9Z	—K4BAI
8Q7AA	—N7TX
8Q7AJ	—KD6WW
8Q7DV	—UA9CI
8Q7LB	—UA9CI
8R1K	—OHØXX[2]
9AØC	—9A3TF
9A11ELS	—9A2AA
9A2ØD	—9A1CRD
9A46ØKC	—9A3KQ
9A5ØD	—9A1BHI
9A5D	—9A1BHI
9ER1TB	—K4PHE
9G1BJ	—G4XTA
9G1MR	—IK3HHX
9G1YR	—G4XTA
9G5SW	—G3VMW
9G5VJ	—G4ZVJ
9G5WD	—G4RWD
9HØA	—LA2TO
9H1ZE	—IZ3AHY
9H3YC	—DF4RD
9H3YV	—EA1DVY
9J2AA	—IK2RZQ
9J2BO	—W6ORD
9J2CE	—IN3VZE
9K2GS	—WB6JMS
9K2HN/P	—9K2HN
9K9K	—KU9C
9MØC	—G3SWH
9M2/G3OZF	—G3OZF
9M2KQ	—JA1XQC
9M2TO	—JAØDMV
9M6ACC	—N2OO
9M6BG	—VS6BG
9M6NA	—JE1JKL
9M8BC	—HL5AP
9M8HIM	—HL5AP
9M8R	—W7EJ
9M8YY	—JH3GAH
9Q2T	—ON5NT
9Q5HX	—IK2MRZ
9Q5TE	—SMØBFJ
9Q5TT	—ON5NT
9U5CW	—EA1FFC[2]
9U5T	—F2VX
9V1ZB	—JL3WSL
9XØA	—DL5WM
9Y4H	—K6NA
9Y4SF	—WA4JTK
9Y4VU	—W3EVW
AØ2HA	—KA5ZMK
A22EW	—KB2MS/B2UCO
A43/K3LP	—W3UR/WR3E
A43/KE3Q	—W3UR/WR3E
A61AH	—KA5TQF
A61AJ	—W3UR/WR3E
A61AO	—N1DG
A71CX/P	—KA5TQF
A72O	—KA5TQF
A92GD	—K1SE
AH2R	—JI3ERV
AH8A	—AC7DX
AH8LG	—KS6DV

AP2N —AP2MMN
ATØPAI —VU2PAI
AY1I —IØWDX
AY7D —LU7DW
AZ9W —LU5UL
BA2TB —HH2HM[2]
BPØA —BV2AA
BV4FH —KA6SPQ
BY1QH —K9FD
C31LJ —VE3GEJ
C4A —9A2AJ
C5/JA1OEM —JA1OEM
C6A/K8DD —K8DD
C6AHN —EA3ELM
C6AJT —W4CJK
C91JM —W7MAE
CEØ ZAM —CE3ESS
CE8T —CE8EIO
CI9DH —VE9DH
CL8VP —CO8RCG
CM8TW —W3HNK
CN18DKH —CN8SS
CN22AMV —CN8MK
CO2JD —HI3JH
CO3CL —W3HNK
CO8TW —W3HNK
CQ8EIF —CT1EIF
CS5EWA —CT1EWA
CS6S —CT1ERK
CS7BWW —CT1BWW
CT3BX —HB9CRV
CT3FF —WF5E
CU7DT —CU7AA
CV1F —CX6FP
CV1T —CX8CP
CW1D —CX1AK
CW5R —CX2ABC
CW5W —CX7BY
CX5X —W3HNK
CX8DX —F1NGP
CX9AU —KA5TUF
CYØDX —VA3EU[2]
D2AI —CT1EGH
D2BB —EA4BB
D2EV —DL3KBQ
D3SAA —CT1BZJ
D68SE —F6FNU
DAØSI —DK1WI
DL7DF/HR3—DL7DF
DU6/KE6UP—KE6UP
DU8ARK —I2YDX
DX1CW —4F1FZ
DX1HB —JA1KJK
E21AOY/8 —7L1MFS
E21CJN —W3PP/ K3WUW
E22AAA —HS1CHB
EA6IB —EA3KU
EA8AH —OH1RY
EA8BH —OH2BH
EA8EA —OH2MM
ED1BD —EA1BD
ED1II —EA1FDC
ED3TR —EA3RCS
ED5CRM —EA5CDE
ED7VG —EA7EDY
EK6GC —W3HNK
EL2JR —KB3U
EMØ F —OE5EIN
EM1HO —I2PJA
EM81 —UT8IM
EP2MKP —UA6HCW[2]
ER5AA —I8YGZ
ER5DX —I8YGZ
ES5Q —ES5RY
ET3BC —K4PHE
EU6MM —IK2QPR
EW1NY —N8LCU
EW3LB —W3HNK
EW6WR —GW3CDP
EW6WW —IK2QPR
EX2M —HH2HM[2]
EX2U —IK2QPR
EX7MA —IK2QPR
EX8DX —IK2QPR
EX8MF —IK2QPR
EX8MLE —IK2QPR
EX8QB —IK2QPR
EX9A —DF8WS
EY8AM —DF3OL
FG5BG —KI6FE
FG5FC —F6DZU
FH/DJ1RL —DJ1RL
FK8FB —F6FNU
FK8FU —NA5U
FK8GM —WB2RAJ
FK8HC —VK4FW
FM/K2PF —K2PF
FM5CD —F5VU
FM5DN —KU9C
FOØBRD —N6RT/NF6H
FOØGUI —F5UIV
FOØKEO —KA7CQQ
FOØMIT —W6RW/N6NU
FOØPLA —W8AEF
FOØSPE —KG6AR
FO5VO —N6VO
FO8DX —KG6AR
FP/KG8CO —K8AMQ
FP/W8MV —W8MV
FP5BZ —F1JTP
FP5EJ —K2RW
FR/IK2RXV—IK2RXV
FS5PL —NØJT/KFØUI
FT5ZC —F5RQQ
FW5XX —ON4QM
FY5YE —W5SVZ
G6Q —GØSAH
G7Q —GØSAH
GB5ML —GM3PXK
GC4STH/P —G4DIY
GD4UOL —G4UOL
GIØUJG —GW4VEQ
GW7K —GWØANA
HBØ/
HB9AON —DJ2YE
HC5C —W5AJ
HC8N —AA5BT
HD1J —HC1JE/ HC1JOL
HD2RG —HC2RG
HFØPOL —SP3SUN
HF1GD —SP2BIK
HG1S —HA1KSA
HH2LQ —NN6C/ KM6ON
HH2PK —9A2AJ
HI4M —AD4Z
HLØBHQ —HL5AP
HLØC/4 —HLØ C
HL5KY —W3HNK
HP1XBI —F6AJA
HP2CWB —W2JN
HP3XUG —KG6UH
HSØ/
DL2FDK —DL2FDK
HSØAC —LA7JO
HSØZAA —KM1R
HS8AS —E21AOY
HV4NAC —IKØFVC
HZ1AB —K8PYD
HZ1HZ —N7RO
IC8JAH —IC8SDL
IG9EQO —IT9EQO
IG9STG —IT9STG
IH9/OL5Y —OK1FUA
II9ZZ —IT9PKO
IL3Z —IK3SSJ
IO2L —I2OKW
IO4I —IK4QIB
IO4LCK —I4LCK
IQ1A —I1JQJ
IQ2C —IZ2ABW
IQ2X —IK2GZU
IQ4A —IK4QJH
IR1A —IK1GPG
IR2W —I2EOW
IR3MD —IN3BHR
IR3PN —IV3JVJ
IR4T —IK4IEE
IU4U —I4AUM
IZ8Z —IK8HCG
J28DB —F4AAQ
J28MD —DL2RDP
J37LK —K5IPQ
J3A —WA8LOW
J41W —SV1CIB
J42TCE —SV2CWW
J49IL —DJ5IL
J52IM —KB9XN
J6LAH —K4PHE
J8/DF2SS —DL2MDZ
JA6FAK/1 —7L1MFS
JI6KVR/6 —EA5KB
JL1KFR/JD1—JL1KFR
JRØBQD/
JD1 —JRØBQD
JW2' —LA2'
JW5E —LA5NM
JW5NM —LA5NM
JW7QIA —LA7QIA
JY9QJ —DL5MBY
KC4AAA —NC6J
KE7X/6Y5 —KE7X
KG4QD —K4QD
KHØ/
JAØIXW —JAØIXW
KHØ/
JA1JQY —JA1JQY
KHØ/
JEØ WTU —JEØWTU
KHØ/
JFØW1R —JFØW1R
KHØ/
JHØAKT —JHØAKT
KHØ/
JHØYKS —JHØYKS
KHØ/
JIØEYA —JIØEYA
KHØA —JF1MIA
KHØAC —K7ZA
KH2D —K8NA
KH2K —JA1RWU
KH3/W4FJE—W4FJE/ W3GMG
KH8/N5OLS—N5JA/ AA5BL
KL1SLE —WL7KY
KP2/K4MA —K4MA
KP3Z —WC4E
L2ØH —LU4HAW
L2ØXSI —LU6EF
L4ØH —LU4HH
L5ØV —LU5VC
L7Ø FM —LU4FM
LQØ N —LU2NI
LQ7N —LU2NI
LR2DW —LU2DW
LS9F —LU5FCI
LT1F —LU1FKR
LT5V —LU8VCC
LUØ FM —LU4FM
LU1ZC —LU6EF
LY5W —LY1DR
LY7A —LY2ZO
LY8X —LY1BZB
LZØ L —LZ1KCP
LZ7Ø BFR —LZ1BJ
LZ7N —LZ1KAZ
LZ9A —LZ2KTS
M7P —G3GAF
N4RP/C6A —W3FG
N5XG/C6A —N5XG/ K5BDX
N7QXQ/HR6—W7TSQ
NH2/NH6D—N6FF
NH2C —JI3ERV
NH7A —N2AU
NP3D —W3HNK
NP4A —W3HNK
OD5NJ —EA5BYP
OE2S —OE2GEN
OE5T —OE5XVL
OFØ RJ —OHØ RJ
OF1AF —OH1XT
OHØ TA —OH2TA
OK5W —OK1AEZ
OK7DX —OK2PWO
OM2I —OM3TA
OM3A —OM3KAG
OM7M —OM7PA
OT7P —ON6AH
OT7T —ON4UN
P29AS —K6VNX
P3A —W3HNK
P4Ø E —W3HNK
P4Ø R —NK4U
P4Ø W —N2MM
P43A —P43ARC
P43E —P43ARC
P43HOT —P43ARC
PI4COM —PA3CAL
PI4LEA —PDØ PKY
PJ2M1 —W2CQ/ K2PEQ
PJ8/KG8XV—JH1ROJ
PJ9/W9QQ —W9QQ
PJ9/
ON4CFD —ON4CFD
PJ9B —K2SB
PJ9JT —W1AX
PQ5W —PP5WG
PR2W —PT2AW
PR5L —PP5LL
PT4M —PY4MBJ
PW2N —PY2NY
PX2U —PT2QX
PZ5JR —K3BYV
R1ANF —DL5EBE
R1ANZ —UW1ZC
R1ASP —RA1AD
R1FJZ —U3AJ[2]
R97V —RU3VN
RAØ FF —KL7H
RK2FWA —DK4VW
RN3R —RW3RQ
RZ9AZA —UA9AB
S5Ø O —S59VM
S57O —S51OJ
S92AT —NJ2D
S97A —CT1EAT
SM7CRW —W3HNK
SNØ SUL —SP5ZCC
SN1I —SP1PEA
SN2B —SP5FAX
SPØ PEA —SP1NQF
SVØ LK —DJ4TR
SV1CIF/8 —SV1CIB
T32BE —WC5P
T32CC —KD4YED
T48RCT —SKØ UX
T49C —SKØ UX
T77V —ISØ QDV
T91ENS —DJØ JV
T94QE —DL4KAX
T95A —K2PF
T95LGN —HH2HM[2]
T97M —K2PF
T98PSR —F5WN
T99W —DL1QQ
TA1FA —TA1AL
TA2IJ —DJ9ZB
TG9NX —N4FKZ
TI1C —W3HNK
TI5N —TI5KD
TJ1HP —F6FNU
TL8MS —DL6NW
TL8PL —F5LNA
TM1K —F6KHK
TM2T —F6KDF
TM2V —F6KRC
TM2Y —F6BEE
TM5CW —F5EJC
TM5DX —F5EJC
TM7BNV —F6KTG
TM8A —F5SSG
TR8/ON5GA—ON5GA
TR8XX —F2XX
TT37Y —F6FNU
TT6E —F6FNU
TT8AC —K4PHE
TT8AM —IK7JTF
TT8BC —K4PHE
TT8BE —F6FNU
TT8JFC —WA4ZJB
TT8JWM —N4RXL
TT8KM —F6FNU
TU3F —F6AXP
TU5CE —IK3HAT
TZ6FIC —F6KEQ
TZ6HP —JA1OEM
TZ6JA —JA3EMU
UAØ FDX —HH2HM[2]
UAØ FZ —W3HNK
UA2FB —DJ9ZB
UE6FST —RZ6HWA
UK4KY —W2TK
UK8IZ —IK2QPR
UN2O —IK2QPR
UN7PJO —IK2QPR
UN9GL —UL7LG
UN9PQ —IK2QPR
USØ HZ —W3HNK
US1I —N5FG
UTØ D —UT7DX
UU4JWA —UU2JQ
V26B —WT3Q/ K3TEJ
V26ED —WA3WSJ
V26KW —K3TEJ
V29TT —N2AU
V31MX —KØ BCN
V44KAI —K2SB
V47CA —VE3BW
V47KP —K2SB
V47NS —W9NY
V51E —K8EFS
V63BR —AA4US
V63DA —JE5WJM
V63KU —JA6NL
V73AR —JA3OIN
V73C —AC1G
V73NH —JA3OIN
V73NN —N3OA/ W3HVN
V73TX —JA3OIN
V73YAQ —JA3OIN
V85AP —HL5AP
V8EA —JH7FQK
VD3DX —VA3DX
VE2QRZ —WB2K
VG3W —VA3SWS
VIØ ANARE —VK4AAR
VKØ ANARE—VK1AUS
VK6BAT —N6ZZ
VK9LX —VK2ICV
VK9LX —W6/GØAZT[5]
VK9LZ —W6/GØ AZT[5]
VK9NM —W6/GØ AZT[5]
VK9NX —ZS6CAX
VP2EC —N2AU
VP2EEB —AA3B
VP2EST —KT8Y
VP5DX —K4UTE
VP5T —N2VW
VP8CTR —DL5EBE
VP8CWI —RA9DX
VP9ID —K1EFI
VQ9KH —WJ5R
VQ9ZZ —NS1L
VR97BG —VR2BG
VU2JBK —VU2DVC
VU2JBS —VK9NS
VU2TS —I1YRL
VX1YX —VE1YX
VX6JY —VE6JY
VX8XN —VE3XN
W2A —W2XX
W2B —K2WE/ W2HHE
WB4ZNH/ 3D6 —K4PHE
WB4ZNH/ 5X —K4PHE
WB4ZNH/ A2 —K4PHE
WL7E —KL7GNP
WP2AIJ —W9CGI
WP2Z —KU9C
WP3A —NP4QH
WR6WR —N6WR[1]
X5SO —YU1KN
XF3/EA3BT—EA3BT
XF3/XE1K —XE3LMV
XF3/XE3AD —XE3LMV
XF3/ XE3HLR —XE3LMV
XF3/ XE3LBT —XE3LMV
XF3/ XE3LMV —XE3LMV
XF3/ XE3LYC —XE3LMV
XM7A —VE7SV
XT2DP —WB2YQH
XU3'T —JL3'T
XU5SE —F6FNU
XV8FP —F6BFH
YA/PA3BTQ —PA3BTQ
YB1AQS —DK7YY
YB9AS —YB9BON
YJØ NX —ZS6CAX
YJ8RN —N9DRU
YM2IYK —TA2IR
YM3SV —TA3YJ
YN6WW —JA6VU
YN9/TI4SU —TI4SU
YP2C —YO2LIF
YS1RRD —W3HNK
YT4D —YU4FDE
YU4A —YU4WU
YU4EBL —YU4WU
YW1A —YV1AVO
YX1D —YV1AVO
YZ4IZ —YU4WU
Z21BA —N5FTR
Z32AM —Z31DX
Z35Ø GBC —NN6C/ KM6ON
Z38G —OH3GZ
Z39Z —Z37FAD
ZA1MH —Z32KV
ZB2/
DL3OCH —DL3OCH
ZD7HI —N2AU
ZD8JF —GWØ ANA
ZD8T —AC4IV
ZD8V —KF4OOX
ZD8Z —VE3HO
ZD9IL —ZS5BBO
ZF1A —K9LA
ZF2AH —WA6VNR
ZF2GS —DL1DA
ZF2LA —K9LA
ZF2MK —K9MK
ZF2NE —W5ASP
ZF2RF —K4UVT
ZF2VR —WB8WCU
ZK1DI —DK1RV
ZK1HW —I5JHW
ZK1XXP —WA4YBV
ZK3MF —ZL2MF
ZL1AA —ZL1ANJ
ZL5PX —ZL3PX
ZL7AA —ZL2AL
ZM2K —ZL2IR
ZM7A —ZL2AL
ZPØ M —ZP5XF
ZPØ R —ZP5AZL
ZPØ Z —W3HNK
ZP27T —ZP5WYV
ZP5/ N3BNA —N3BNA
ZP5AZL —W3HNK
ZP5V —ZP5WYV
ZP5XF —N2AU
ZS6Y —KK3S
ZS9F —KK3S
ZV8C —PY5AMS
ZW2WAL —PU2LCD
ZW2Z —PY2ZI
ZW5B —PY5EG
ZXØ F —PY5EG
ZX5J —PP5JR
ZY2HT —PY2KC
ZY2RJ —PY2RKM
ZZ2B —PY2GY
ZZ2Z —AC7DX

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EA1FFC —Jesus Huerta, P.O. Box 727, 33400 Aviles, SPAIN
ET3AA —Ethiopian A.R.S., P.O. Box 60258, Addis Ababa, ETHIOPIA
HH2HM —Michael, P.O. Box 104, F-22650 Ploubalay, FRANCE
OH0XX —Olli Rissanen, Ste 599, 1313 S. Military Trail, Deerfield Beach, FL 33442
SM7PKK —Mats Pearsson, Zenithgatan 24 #5, SE-212 14 Malmoe, SWEDEN
SV0LM —Charles Lewis, Greek Relay Station (KAV), P.O. Box 1001, GR 67 100 Xanthi, GREECE
SV0LN —Leslie Lewis, Greek Relay Station (KAV), P.O. Box 1001, GR 67 100 Xanthi, GREECE
U3AJ —Boris A. Ermilov, P.O. Box 650, 113093 Moscow, RUSSIA
UA6HCW —Igor Kovalov, P.O. Box 59, Piatigorsk 357500,RUSSIA
VA3EU —George Balint, 59 Snowcrest Ave., North York, ON M2K 2K9, CANADA

NOTES:
(1) Surprise! That's Armond!
(2) Please refer to the above address for this manager.
(3) Normally the QSL route for 3V8BB goes via YT1AD. But that depends upon the operator. Refer to QSL information for these variations.
(4) This route for 3E1DX applies for operations during November 1997 only. All others go through the normal QSL route.
(5) This route applies for the period of 20-30 September 1995 only.

Chechnya nyet nyow

If you worked 1X5AA in Chechnya don't try to claim DXCC credit for it. The unofficial 1X5 prefix doesn't have international recognition and isn't valid for DXCC accreditation at this time. — *ARRL, Newsline*

FM, Repeaters Repeaters Repeaters & VHF

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Have I lost my mind????

Recently, another ham asked me if I had lost my mind when I posted to the *Repeater Owners Reflector* some thoughts I have concerning the future of coordination of repeaters. I stated flat out that I expect to see failures of coordination groups spread across the nation unless the Amateur Radio community comes to the realization that coordination of all interests takes place, that coordination will fail and anarchy will replace reason.

No, I have not lost my mind. Rather I see the "handwriting on the wall" that others refuse to acknowledge. Simply, those involved in coordination the past 20 to 30 years — depending on geographic location — are getting older and tired. Some have walked away.

Others have become "SK." These were the technocrats who understood the needs of repeater owner/operators from the point of view at a repeater site.

Many, if not most, of their replacements — where there is enough interest in the region's ham community to continue coordination — are, for lack of a better term, "political animals." Many have never been to a repeater site. Others come from non-technical backgrounds, have no understanding of relay system design, site planning or how to properly implement the technology.

Take for example the NY-NNJ-CT area that we have talked about a lot the past few months — that's where frequency coordination is a total failure.

To quote from the December 1997 issue of *CQ-VHF Magazine:* "...A last ditch effort to revitalize the Tri-State Amateur Repeater Council, which had become dysfunctional in recent years, instead turned the organization into a new group, the "Triple States Amateur Repeater Council." But there's considerable doubt as to whether the new group will be accepted by the 300+ repeater owners in southeastern New York, northern New Jersey and Connecticut. For now at least, repeater coordination remains in limbo for the nation's second largest concentration of repeaters and users."

Since that was published a small group of hams on New York's Long Island has indicated their readiness to go into court and enjoin any entity from attempting to set up as a coordinator or coordination entity. Others across the region; primarily established repeater owner-operators; are candid in their willingness to "wage war" to keep any new repeater off "their" channel. What they are really saying is that they prefer chaos and anarchy over cooperation. And this is taking place in an area of the nation that is an "indicator" in the overall health of coordination process.

What are "indicators? Read on.

Bellwether of the future

When it comes to FM, repeaters, repeater politics and coordination, certain areas of the USA have traditionally been "indicators" of what is to come: the NYC-NNJ-CT area; Chicago and other environs of Illinois; north Texas and southern and northern California. If you stop for a moment and look back at FM/Repeater "history" over the past three decades, everything political, and almost everything of a major technical nature that has happened — at least anything of real consequence (except 20 KHz spacing on 2M) has emerged from one or more of these areas.

Contrary to what Wayne Green, W2NSD, has claimed in his editorials, (that he had a repeater in the late '30s) the first practical repeaters were developed in Southern California by the late Arthur M. Gentry, W6MEP. The first truly meaningful bandplanning was a product of the Texas VHF-FM Society. The first recorded repeater jamming and subsequent prosecution of a jammer was out of the NYC area in 1969 (when we still had an FCC that cared). Total "spectrum management" emerged from SoCal in 1979 when SCRA split into 220-SMA and TASMA. The success of "umbrella" coordination groups came when Illinois joined MACC and urged other states to follow. The examples go on and on and on.

In three decades, these indicator regions have never been wrong. Now, one of them — the NYC-NNJ-CT area is showing us that coordination can be a total failure because the people there do not want it any more. Unless that situation is corrected — and I kind of doubt that will be possible without direct outside intervention — it can and will spread like a political cancer.

If you are an individual involved in repeater coordination, or simply a repeater owner/operator who wants to keep his system as interference free as possible, it's time to ask yourself some important questions:

"Who will follow me when I tire and step away from involvement in coordination?"

"Will it be a person who understands the technical realities of the process or simply an Amateur Radio politico looking for power and ego gratification?"

"Will there be anyone at all?"

If the TSARC failure syndrome spreads then either the ARRL or some other national Amateur Radio society will be forced to move in and unilaterally take over — wanted or not. Once that happens, there is no doubt that strictly enforced unified bandplans will follow. It will be a natural course of events.

Future without a future?

As noted, there is whimpering about TSARC trying to get back into

operation, but I'm not holding my breath. Rather I'm watching to see which area will be next. My guess is Indiana, where two rival coordinators are going at one another's political throats. It will reach a climax when the state's repeater owner/operators become so apathetic they tell both groups to go away.

You can (or not) believe any of the foregoing, but let me simply say that I've been around and have written about FM, repeaters and coordination bodies for three decades. I have gotten to know the political signs of the time. What I see right now is growing apathy on the part of the nation's ham radio community. It's a community that views FM and repeaters as a form "ham radio public utility communications" that come "built into a radio" rather than a service of one amateur to another. Most of all it is a community that is willing to accept the lowest common denominator, even if that means fighting for it.

When will this all be a *fait accompli?* I hope NEVER but realistically the trends I see, say 2005, if not sooner. It all depends on how fast apathy spreads, or if the Amateur Radio community can revitalize our interest in "cooperation" and not accept "anarchy" as the norm. In this case, cooperation is spelled "c-o-o-r-d-i-n-a-t-i-o-n."

2005 is not that far away. Let's put this story in our files and see how much of it we can keep from ever coming to pass. In the meantime, I think you will agree that I am far from losing my mind.

FCC repeater RF safety evaluation threshold

The FCC has released an erratum to its RF safety rules that sets 500 W ERP (effective radiated power) as the limit for most amateur repeaters before a routine RF safety evaluation would be required. This applies to repeater systems on all bands.

A routine RF safety evaluation would be required for all repeater systems with more than 500 W ERP and having either (1) a building-mounted antenna or (2) a non-building-mounted antenna with a height of less than 10 meters (approximately 33 feet) above ground level to the lowest point of the antenna.

For details, see "Second Erratum" (22 Oct. 1997) at http://www.fcc.gov/oet/dockets/et93-62/ *ARRL Letter*

New 222 MHz beacon

NS4W and KD4IBW have teamed up to put a new 222 MHz beacon on the air in the East Tennessee area. They are planning on a frequency of +- 222.052. Power output will be 25 watts or less, and the antenna is a miniloop.

The two experimenters are in the process of modifying a transmitter strip & building a keyer/id'er for the unit. They say they have one site now available at N 35 51 99, W 84 42 87 at 2500'. Other higher sites are being looked at and the beacon may be on the air by the time this reaches print.

Signal reports go to NS4W or KD4IBW at their respective call book addressees.

Seattle VHF AM grows

6 Meter and 2 Meter AM is making a comeback up in Seattle, Washington, according to Pat, K7YIR. He recently posted to the VHF Reflector the following list of monitoring times and frequencies that have taken root in his area:

Sunday	2000 pst	50.4 MHz
Tuesday	2000 pst	144.4 MHz
Wednesday	2000 pst	50.4 MHz
Thursday	2000 pst	144.4 MHz

Pat adds that he usually calls and listens and does operate for a 30-minute window at least.

UK VHF, repeater and packet changes

As a result of a request from the Radio Society of Great Britain, the United Kingdom's Radiocommunications Agency has agreed to a new type of repeater designed to fill in coverage gaps between areas presently served. These fill-in repeaters can be on either the 144 or 430MHz bands and will be low power units with carefully tailored service areas.

A fill-in repeater that recently went operational is GB3KY, a 2M unit at Kings Lynn, running 10W and a highly-directional antenna. It is on 145.750 MHz and reports should go to its trustee, G1HYU.

A Radiocommunications Agency Gazette Notice (the equivalent of a Report and Order from our FCC) has been published announcing a number of changes to all UK Amateur Licenses. Effective in April 1997, the main change is the withdrawal of 10.150 to 10.300 GHz from the Amateur Service.

Identification requirements when operating on a repeater were simplified for net operation. As of April 1997, callsigns must be given at the start and end of communication with each station on a repeater, as in normal operation.

The definition of a packet radio mailbox was also clarified and there were a number of other minor administrative changes. — *Via GB2RS*

The guest section

I found the following as a general interest posting to the *W6YX VHF Reflector*. We have discussed this very interesting remailer in the past as well as bringing you a sample of the materials to be found there.

What follows is yet another example of the thought-provoking articles and ideas that the VHF community posts to W6YX. This one deals in what many believe to be a rather esoteric area of ham radio — meteor scatter communications. Most hams feel it's an almost impossible task to bounce a signal off an ionized meteor trail, but Steve Harrison, KØØU/1, makes it sound like ham radio child's play:

Meteors: There ain't enough

Many stations managed to work a 1997 DXpedition to Market Reef (OJØ) on 144 MHz despite lack of tropo, E-skip, or any other regular mode of propagation. They used random meteor scatter with no schedules!

How did the Europeans do that? Simple: the OJØ station sat on one frequency CQing for one-minute transmit periods with high-speed CW (I believe at 1500 lpm, equivalent to 300 wpm). During receive periods (also one-minute), they would tune up the band for callers, who were spread out every few kHz. As rocks burned through the atmosphere creating trails that reflected the callers, the OJØ guys would pick

them out one by one and send a report during the next transmitting sequence. Obviously, the technique works very nicely, and literally DOZENS of people worked both a new country and grid on 144 MHz! And all without benefit of any extraordinary or even decent propagation!

Of course, one of the tricks that make the technique so successful is the discipline of all the callers in spreading out across the band so they don't QRM each other during pings. I'm not certain exactly how this was done; but in any case, none of us North Americans are yet ready to try this.

Are you convinced yet of the viability of high-speed CW meteor scatter? Want to try something new that has, as likely as not, never been done in any organized fashion in North America before? No? Then consider the following:

How would you W6s like to work somebody gazing out over the Atlantic on 144 MHz without using moonbounce? How about us east-coasters: anybody interested in adding a bunch of DN/DM/CM/CN grids to your 144 MHz totals? It can easily happen...and chances are, if the coming meteor storms are as hot as everybody thinks they can be, you will make MORE THAN ONE of those epic coast-to-coast QSOs!

Of course, you will have to catch, at minimum, two, or even THREE, simultaneous meteor burns. Not once, not twice, but at least THREE times (in order to get a valid full exchange across).

Consider: even at rates of up to a thousand rocks per hour, how many of them do you think are going to not only hit the atmosphere simultaneously, but also hit in just the right places to reflect your signal clear across the continent? And how many of those will produce BURSTS during which you will be able to blurt out full calls, reports and final "Rogers"? The answer is, of course, probably only a couple...and of course, those couple of times ALWAYS seem to happen during SOMEONE ELSE'S schedule, never our own!

Go ahead...let's hear you say calls and reports in an understandable voice at 300 words per minute! Now, try 500 wpm. Now try doing that for 15 seconds, every 15 seconds, for a couple of hours! Do you still think you're going be able to make that epic coast-to-coaster using voice?

AHHA...you're going to use a digital voice keyer, huh? OK, that will eliminate the fatigue factor...but it still doesn't buy you the higher speed AND higher signal-to-noise ratio that could, just maybe, allow you to make at least one and possibly MORE than one coast-to-coaster.

SO: now a few of you are convinced? You think you just might want to look into this new-fangled "thangamajig" and see what it's all about, right? No sweat.

The first place to start is to get yourself familiar with the programs available that are already being used successfully, and decide which of them you want to really use. In doing so, you will want to try the programs out dynamically on the air, which means you will want to make some schedules with others at the appropriate distances so you will have somebody to listen for, and to transmit to!

"BUT I DON'T LIKE CW, AND BESIDES, I CAN'T COPY OVER 10 WPM ANY MORE!" you say. Yes, both of those objections can be a problem...but only a minor one! Do you want something new, different, and profitable to do? Do you think you can stifle your dislike enough to use CW, at a speed comfortable to you, to work new grids? Then give this a try! The programs that will record the pings you hear on your radio allow you to set the playback speed to whatever your capability is (of course, if you don't know CW at all, or only have a passing knowledge of what dits and dahs compose a few letters, then the only thing that will help you is to LEARN it!).

Download one or both of the two programs mentioned by W8WN in his posting of 29 May 1997 to the METEOR-SCATTER group on QSL.NET:

"Two DOS-based programs have recently been written that do all of the work of the modified tape recorder. One is SBMS ("Sound Blaster Meteor Scatter"), written by DL3JIN. It can be found at http://www.ilk.de/sites/gap/msound.htm. A second one is MS_DSP ("Meteor Scatter-Digital Signal Processing") by 9A4GL. It can be found at http://fly.cc.fer.hr/~9a4gl/msdsp.html. Both programs use the Sound Blaster compatible audio board to do the work. While the programs are quite different in many ways, they do the same thing for you, and they do it very well!"

How about it, folks: anybody want to get going with this? — *Steve Harrison, KOØU / 1, W6VHF Reflector*

Florida trek

As is usual, I will be in Florida for part of February. This year I arrive in Ft. Lauderdale on the 6th and will be celebrating my 56th birthday by attending the Miami Tropical Hamboree on the 7th.

The following Saturday, 14 February, I'll be prowling the display floor at the Orlando Hamcation before running off to ride a pair of MD-80s back to Burbank, CA. If you are planning to attend either of these shows, I hope to meet you.

An anniversary

This month marks the end of the fourth year of this column and the beginning of the fifth. And the experts said: "...it will never last." So much for the "experts." de WA6ITF

Turn a friend on to ham radio!

Computers & Basic Stuff

C.H. Stewart, KD5DL
P.O. Box 181
Duncan, OK 73534

BASIC Tuning

What is becoming one of the fastest growing segments of Amateur Radio is building and operating low-power QRP radio equipment, and it's no wonder. A modern manufactured rig can cost upwards of $1,000 or more, and its circuit complexity can overwhelm all but the most proficient (and patient) technicians in the hobby.

Even when one can afford a modern transceiver, there's a lot of reluctance to use it anywhere other than at home or in a very secure vehicle. In fact, home is probably where the manufacturer intended it to be used, because that's where the owner's manual will undoubtedly be when something doesn't seem to work exactly the way it should.

A QRP rig, on the other hand, doesn't have to cost its weight in gold, although if it did it would still be very affordable. Nor does it have to take a technical genius to work on one when something goes wrong. In fact, a growing number of amateurs are building their own, and you can bet that if something ever does go wrong they will usually try to fix it themselves.

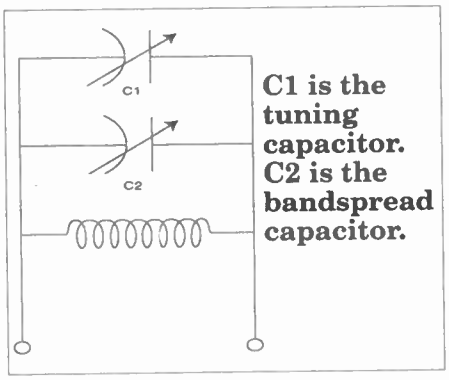
And a QRP rig can be extremely portable. A lot of QRPers are hikers and campers, and they get a kick out of operating their flea-powered radios from some of the remotest locations around. Businessmen, too, can pack a QRP station in a corner of their suitcases and enjoy their radio hobby wherever they are.

Best of all, QRP has got to be the least expensive way to get into and enjoy our great hobby. One of the hottest-selling QRP rigs of recent times was the NorCal 38 Special. The basic kit only costs $25.

If you want to know more, just stay with Richard Fisher's QRP column in this magazine. Every month he adds something new to the subject — from equipment and kit reviews to club activities and operating hints. Trust me, he really stays on top of the QRP scene.

There are literally hundreds of ways to get started in QRP, and do it inexpensively. Back issues of *QST*, *CQ* and *73* are all good starting places to read about low power operation and find projects to build.

If you're new to circuit theory and design, then perusing a few articles may stimulate you to try several ideas on your own. That's what I did before writing "A BASIC Oscillator" in the April 1993, issue.



C1 is the tuning capacitor. C2 is the bandspread capacitor.

```
10 CLS: PRINT "TUNEMAX.BAS, BY KD5DL, 2/98": PRINT
20 INPUT "FREQUENCY RANGE, MHz (min, max)" ; A,B
30 INPUT "CAPACITOR RANGE, pF (min, max)" ; C,D
40 E=10^6/(4*3.1416^2)
50 F=(E/(D-C))*1/A^2-1/B^2)
60 PRINT "TRY " ;F/F*B^2)-C; "pF IN PARALLEL WITH
       THE TUNING CAPACITOR AND"
70 PRINT "USE A " ;F; " uH INDUCTOR.": PRINT: GOTO 20
```

The program that accompanied that article was a 21-line BASIC listing that one could use to select components for a one-transistor Colpitts variable frequency oscillator (VFO) for any HF application.

What was handy about that program was that it selected "real" industry values for the oscillator's capacitors. For all the capacitors, that is, except the tuning capacitor. The article suggested using a trimmer capacitor in parallel with the tuning unit to set the band spread.

A few years later I saw a different way to approach the problem. Jim Pepper, W6QIF, presented his method in the September 1995, issue of *QRP* magazine, the quarterly journal of the Northern California QRP Club (Subscribe by sending $18 to Jim Cates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821).

Pepper's approach was to use simple math to solve for capacitor and inductor values to match variable-capacitance diodes (varicaps) to the tuning range of different kinds of oscillators.

More recently, and I apologize for not remembering where I saw it or who wrote about it, someone simplified Jim's formulas even further. This month's BASIC listing is an adaption of the new formulas.

Lines 20 and 30 allow you to enter the range you want the oscillator to tune through and the minimum and maximum values of a selected tuning capacitor. The formulas in lines 40, 50 and 60 do the math, and lines 60 and 70 provide values for the parallel capacitor and the oscillator's inductor.

The program works best (as does the oscillator) in the HF portions of the band, and it would probably be best to use small values of capacitance and range at the higher frequencies.

For example, if we were to design the oscillator to operate in the 30-meter band between 10.1 and 10.125 MHz, and we wanted to use a 5 to 15 pF variable, we should see values showing 2012.516 pF for the parallel capacitor (two 1000-pF units would probably do fine) and .122471 uH for the inductor.

If we had only a 5-10 pF tuning capacitor, we'd find we need the parallel capacitance to be 1003.785 pF (use 1000 pF) and the inductor would increase to .244942 uH.

All in all, it's a simple way to tailor an oscillator to meet whatever tuning ranges we have in mind. Once you ascertain that the oscillator is working in the desired range all you need to do is add an output filter and an antenna, and...and I think you'll be hooked on QRP!

Stay in band, and keep radio active!

Kay Eyman, WAØWOF
29048 SE 1200 Road • Garnett, KS 66032
e-mail: waøwof@kanza.net

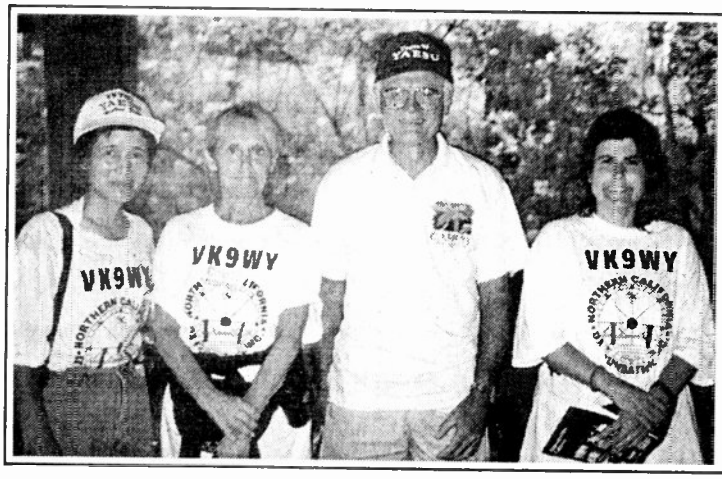
YL Contests

10-11 Jan — Meet the Novices & Techs
12 & 14 Feb — BYLARA Contest
14-16 Feb — YL-OM Contest (SSB)
21-22 Feb — Guides on the Air (GOTA)
21-23 Feb — YL-OM Contest (CW)
8 Mar — International Women's Day
17-18 Mar — CLARA Day

Contest Info

The 1998 YL contest season officially opens with six contests, sponsored by four international groups. YLRL sponsors **Meet the Novices and Technicians** each January and the popular **YL-OM Contest** each February. BYLARA sponsors an annual HF and VHF contest each February. CLARA sponsors **CLARA Day**, also known as the **CLARA and Family HF Contest**, and co-sponsors **Guides on the Air**, with the Girl Guides of Canada. This event is also known as **Thinking Day** and has participants around the world. The Finnish YLs sponsor the International **Women's Day Contest** on March 8 every year.

Each contest offers a wonderful opportunity to meet new YLs, greet old friends, and make progress toward earning the many beautiful YL certificates that are available. With the exception of Meet the Novices and Technicians, all contests are open to both OMs and YLs. Full details for the YLRL contests are available on the web page at http://home.sprynet.com/sprynet/thedunns/ylcontst.htm and for the BYLARA contest at http://www.lurpac.lancs.ac.uk/bylara/. Details for Guides on the Air can be found at http://www.guidezone.skl.com/haindex.htm. You can also contact me via e-mail or drop me a note if you need complete rules and addresses for the contest managers for any of these activities. Be sure to get on and give out a few contacts even if you don't have time to work the entire contest.



Left to right: Noriko Tokura, 7K3EOP; Elvira Simoncini, IV3FSG; Doug Renwick, VE5RA, and Ann Santos, WA1S, of the Willis Island DXpedition group.

YL Updates

Martha Barron, KA6TYO, has a short questionnaire with 13 questions that she would like to have answered to help her in planning for the 1999 YLRL Convention in Long Beach. You can contact her via e-mail at marthabar@aol.com, by fax at 562/869-2325, or by mail, if you'd like to help with the survey.

The Sunflower YLs in the Wichita, Kansas, area are really having a good time. I attended their meeting at the Kansas State ARRL Convention held in early October in Wichita, and it was easy to spot them because each one was wearing a vest covered with sunflowers. Each December they help with communications for the Christmas parade, and they have a special Christmas party. In January, they scheduled a chili feed, complete with bonfire and marshmallows, and in February, they'll have a potluck dinner on Valentine's Day in Haysville, Kansas. They meet for breakfast on the third Saturday of each month at the Masonic Home in Wichita, and have a YL net on Tuesday nights, at 9:00 p.m. local, on the 146.82 repeater. All YLs are cordially invited to check in.

Vicky Tuttle, WA1QCQ, and her husband Bob, K1UTI, in Barrington, New Hampshire, are both slow scan TV enthusiasts and would like to find more YLs on SSTV.

The Quarter Century Wireless Women held their annual meeting during the 50th Anniversary Convention of the QCWA in Kansas City, on 10-12 October. President Helen Drake, K5ECP, presided over the meeting and Secretary/Treasurer Betty Strattan, W2PVS, read the minutes from the last meeting. New officers were elected. Blanche Randles, W4GXZ, is the new President, and Dot Beam, K4PPS, will serve as Vice-President. Lorraine Witkowski, WA1EDR/4, will serve as Secretary/Treasurer, and the new Board Members are Catherine Dunlap, W4OMH, and Paul Gerbracht, W3QPP.

Congratulations to Esther Givens,

W6BDE, who was honored at the QCWA banquet during the convention when she was awarded the John DiBlasi Award for her many contributions through the years to both QCWA and QCWW. Esther currently writes the Sylver Belles column for the *QCWA Journal*. (Photo)

DX YLs

YLs with new call signs are Eleanor Bennett, GIØOHG, who has just moved to County Antrim, in Northern Ireland, and Diane Harris, GW7VBE, who has just moved to Mid-Glamorgan, South Wales.

Thanks to Helen Archibald, VE2YAK, who forwarded this write-up from Pat Giesbrecht, VE4PLG, about the Canadian YLs who helped during the "flood of the century" in Manitoba this spring. It was the first real test for most of them in dealing with emergency communications and they did a wonderful job. Ruth Mills, VE4XYL, was in charge of staffing and operating the station at the Emergency Management Organization (EMO), and she also operated the station at the city Emergency Operation Center (EOC). Mariska Maguire, VE4MMG, and Pat Giesbrecht, VE4PLG, worked at both of those stations and also provided communications at the sand bag sites. Paula Enns, VE4MHZ, had one of the hardest jobs as she was actually located behind the dikes in the town of Morris.

The YLs' duties included keeping communications open with the ring dike sites in southern Manitoba, as well as the dikes in and around Winnipeg. They are all members of ARES, and this was the biggest exercise they had been involved with.

Pat also wrote that five YLs helped with communications for the Senior Games held in Gimli, Manitoba. They were Gladys Wilsone, VE4GLA, from Winnipeg; Ruth Mills, VE4XYL, from Winnipeg; Wendy Perrier, VE4WND, from Teulon; Jean Arsenault, VE4BEL, from Petersfield, and Coleen Grossmeyer, VE4COL, from Gimli. They not only did a good job, but had fun to boot.

Noriko Tokura, 7K3EOP; Elvira Simoncini, IV3FSG, and Ann Santos, WA1S, who took part in the Willis Island DXpedition in September, encourage other YL operators to participate in future DXpeditions. They operated as VK9WY and were part of a 10-member group from six countries, which was organized by the Oceania DX Group.

The group left the port of Cairns in the middle of the night on 9 September aboard a 63-foot boat for the trip of 250 miles to Willis Island, accompanied by over two tons of equipment and supplies. They experienced bad weather and very rough water during the 30-hour trip and had to stay on the outside deck because everyone was seasick.

They were happy to reach the middle island, which is uninhabited and had not been activated before.

Esther Givens, W8BDE, receiving the John DiClasi Award at the QCWA 50th Anniversary Convention.

Only sand and birds were there to greet them when they arrived on 11 September. The generators were soon up and running and were kept going for 24 hours a day as they made 42,000 QSOs during the 11-day stay. All the operators were friendly and cooperative during this international venture, and the YLs were very happy and proud to be members of the team.

Unni Gran, LA6RHA, has written a very interesting account of her operation from Jan Mayen Island last summer, which can be found on the web at http://www.hamradio-online.com/. In addition to operating from Jan Mayen, Svalbard, and Vietnam in the past 12 months, Unni was making plans at press time to operate from Africa.

She had made arrangements to fly to Nairobi, in Kenya, with a Swedish friend on 20 December. There they would meet an OM Unni had contacted on the air when she was on Jan Mayen and visit Karen Blixen's farm featured in the movie "Out of Africa." From there Unni and her friend will travel to Arusha, in Tanzania, where they plan to climb Uhuru Peak, at an altitude of almost 18,000, on Mt. Kilimanjaro. After that, they will go on safari in the Serengeti.

Unni's birthday is 4 January, and she plans to celebrate it in Zanzibar, where she will stay until the 13th. She has applied for licenses and hopes to be on the air from Kilimanjaro, the Serengeti, and Zanzibar. All QSLs go to Unni's home address.

2M meteor skeds

W6CAP says via the *VHF Reflector* that he would like to make some 2 Meter meteor skeds. He is located in Grid DM 14 and is running a full kilowatt. Contact him by e-mail at w6cap@primenet.com. — *Internet*

The Club Huddle

Mike Flaherty
WA6UBW

P.O. Box 189490
Sacramento, CA 95818-9490

The publisher promised us lots of input material when we started this column. True to his word, we've received and read literally hundreds of your excellent and informative newsletters. What stood out among all those pages?

A very large number of well-organized and well-run clubs exist in Amateur Radio. Among other things, these groups provide hams with an added element of fun and enjoyment, conduct a massive number of public service events, meet community emergency communications needs during disasters, and encourage the growth of Amateur Radio through licensing and upgrade classes.

The not-so-good news is that a small number of clubs face problems which keep them from being listed among the more successful; problems which possibly threaten their existence. What stands out as the difference between the extremes?

Successful clubs, regardless of size and purpose, have two significant characteristics in common. First is a membership proud to be amateurs and proud of their club. Second is quality leadership. In fact, the quality of leaders matters more than the number of officers and chairpersons.

Bruce Warrington, N9EHA, president of the **Shaumburg Amateur Radio Club** (IL), suggests that if members try putting some effort into SARC, they'll see it returned by it being a club others want to join and help out with.

In his *The Radio Hill Gazette* column "From The President," Bruce further says that sometimes you have to put in some real work, even at your hobbies, if you want them to be truly interesting. He requests members help out with club activities when asked, even if there is no promise of free donuts. He stresses volunteering even if there's work involved.

Bruce also mentioned which activities the most club members show up for. He concluded that the top four-attended functions involved free food! *(Ed note: Aren't coffee and donuts the ham's favorite fuel?)*

Ernie Thomas, N3PXF, is president of the **Wichita Amateur Radio Club** (KS). In the *Grounded Grid* Ernie sums up club success as follows: "Remember, our club will have nothing to offer except as each member contributes."

So many factors exist when identifying traits of good leaders and managers that colleges teach courses on the subject. No one set of personal characteristics describes all good leaders, or for that matter, all poor leaders. What's important to a ham club?

Leaders must always remember their authority comes from the membership which elected them to office. Accordingly, they take direction from the collective desires of the members. They need to function within the organization's articles of incorporation and/or bylaws. They are successful when the members say so.

Santa Cruz Amateur Radio Club (CA) president Cap Pennell, KE6AFE, defines the club's success in *Shortskip*: "The results are in. The hams who care about this club have made themselves known. They are SCCARC members for the entire year of 1997! As your president this year, I would like to say 'Thank You!'

"Thanks for demonstrating that what we are trying to do is worth something to you. Our thanks are deserved by you whether you come to the monthly meetings, check in on the weekly nets, participate in club activities, serve on the board, or simply read *Shortskip* to keep up with the news.

"You have already spoken with your membership dues payment. You do care about this club. You do want it to succeed and flourish. You're one of us. This is your club, your community of hams.

"We have made a commitment to support each other. We've shown that we care about each other. There's something about us that makes us all want to be a part of our group, a group that is unique and different from everybody else we associate with in our daily lives. We are the members of the SCCARC. We want to help."

To gauge success, a club's leaders and members must have a common

purpose for the club. New subsets of Amateur Radio have blossomed. There was a time when ATV, packet, and even repeaters did not exist. Over time, clubs have either changed to encompass one or many of the new activities, or chosen to remain dedicated to a single activity like DX.

President Ron Whitsel, WA3AXV, of the **Mt. Airy V.H.F. Radio Club** (PA) offers a good philosophy in *Cheese Bits*: Many things have changed in the club, yet many things remain the same. It's that balance between tradition and change that makes this organization so strong. Dwell too long on either extreme and a radio club, just like a nation, will be soon gone.

Apparently one Florida club's purpose is eyeball QSOing. Its members are retirees who prefer getting together randomly and casually during the day rather than having formal meetings. One member quipped, "For the shape we're in, we are in pretty good shape!"

Bill Smith, AB6MT, is president of the **Marin Amateur Radio Club** (CA). He led off the "President's Message" column in *QSA-5* with, "One of the greatest things in writing the President's Message is the chance to publicly thank people who have contributed to the club."

Dale Carnegie stressed in his teachings that everyone likes to hear his own name. Bill goes further by also saying thanks! Carnegie also wished his friends and acquaintances a happy birthday, yet another way to win friends and influence people.

While many newsletters feature birthdays and anniversary dates, an even more important date to report is upcoming license expiration dates. Who pays attention to an expiration date once the ticket's hung on the shack wall? An alternative reminder is what the **Indian River Amateur Radio Club** (FL) now does with its roster.

The *Spurious Emissions Newsletter* reported the Membership Manager has been informed that several club members have recently missed the renewal dates for their Amateur Radio license. At least one has actually lost his license for failure to renew. To help prevent such an oversight in the future, we are including the year of license expiration in column LX (license expiration) in your club roster.

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.*

The Dick Van Dyke Show

LENORE JENSEN, W6NAZ

Byron Paul, WA6RBG, claims that the Emmy Award-winning show got on the air because of Amateur Radio.

"When I was just out of the army in 1945, I was walking in New York City and passed CBS. I wanted a job, so I asked the doorman to which floor I should go. I must have misunderstood, as I got off the elevator at the wrong floor.

"There, I almost bumped into a gentleman who asked what I wanted.

"I told him, 'A job.' He talked to me and I mentioned I was an Amateur Radio operator. It turned out he was the renowned Dr. Peter Goldmark, head of CBS Labs. He said, 'Ah, I like you hams. I have several here. You report for work tomorrow morning.'

"Well, eventually I became a cameraman, then a director and finally a producer. One day we needed a certain talent for a new program and I happened to think of a tall, talented fellow I'd been with in the Army. We sent for him.

"Of course, Dick was excellent and an immediate hit. We became partners and the Dick Van Dyke series was born.

"Dick later returned the favor to ham radio by recording a flock of radio and TV announcements inviting people to join Amateur Radio, via the American Radio Relay League."

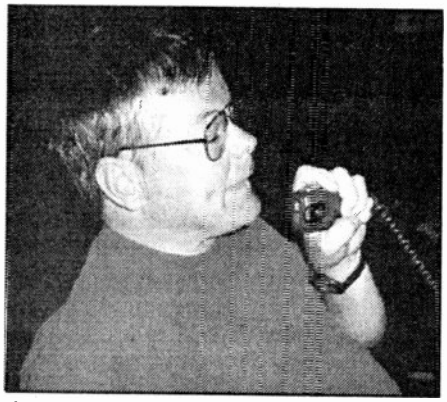
Radio Dreams: Having the determination to get an Amateur Radio license

R. H. JORGENSON, KBØQPY

Growing up in Chippewa Falls, Wisconsin, Gary Virchow would listen to Amateur Radio operators on his shortwave radio, and wish he were able to talk to them. With the assistance of the Courage HANDI-HAM System he was able to make his dreams come true.

Gary developed an interest in Amateur Radio by dialing around the bands on his shortwave radio and hearing Amateur Radio operators. He would listen to amateurs from all over the United States, and he wished he were able to talk to them. The more he listened, the more he wanted to be an Amateur Radio operator so that he could participate. Gary wanted to make new friends from different parts of the United States. He was also interested in antennas and feedlines, and he even tried building antennas out of telephone wires.

Gary was born with Cerebral Palsy in Webster, Wisconsin, 29 May 1947, and has one sister and two brothers. He attended the Northern Wisconsin Colony Training School in Chippewa Falls, Wisconsin. He did not have the opportunity to go to high school. At the "Colony," where at age 10 he was one of the Supervisors in a woodworking shop, Gary learned practical skills, but not traditional subjects. People like Gary did not have the right to an equal education before 1965, so he did not have the training he needed in order to get his Amateur Radio license. Gary had trouble comprehending what he read, which made it difficult for him to study the license manuals.



Gary Virchow, KCØBNB

In 1979, he went to the University of Wisconsin in Madison for Rehabilitation training. During his stay, he took about 200 feet of telephone wire and made an antenna. Gary realized he had an interest in Amateur Radio and wanted to get his operating license. He had the desire to talk to people all over the world and meet new friends. He also realized he was interested in and had the ability to learn about electronic equipment. When he moved to Courage Center in 1980, Gary found there was the opportunity for him to get his Amateur Radio license, so he talked to Bruce Humphrys, KØHR, the Director of HANDI-HAMS, and told Bruce of his interest in Amateur Radio. He worked with Sister Alverna, WAØSGJ, but discovered that Morse code was difficult for him. At this point, Gary gave up because he lost interest in the hobby.

A few years ago, Gary talked to a friend who was working on his radio license, so he decided to give Amateur Radio another try. He wasn't serious about studying, however, and spent most of his time visiting friends. He needed to develop good study habits. He enjoys being outdoors as well as hanging out at the malls and not taking the time to study. He was only taking the practice exams on his computer, hoping to pass the exam. A friend kept telling him that he had to develop better study habits if he wanted to get his Amateur Radio license. Virchow finally decided to listen to his friends and started to study more and passed his Tech.

In an interview he stated, "The hardest part about getting my license was wanting to spend time outside and not finding time to study. I was able to teach myself to study because I had the desire to get my Amateur Radio license."

After passing the tech exam, he felt relieved and felt he had finally accomplished a goal. This proved that he could do anything if he put his mind to it! Now Gary enjoys being on the air and talking to people all around the world. KCØBNB is on a local net on Monday night. He has made new friends on the air such as Roy Berry, KBØUWH, and Bobby Edward, N5BE. These are just a few amateurs he talks to on the air. Gary also has talked to hams in Michigan on 2M and plans to make new friends.

Need more information about HANDI-HAM Radio Workshops or study materials? Contact: The Courage HANDI-HAM System, 3915 Golden Valley Rd., Golden Valley, MN 55422; 612/520-0511; handiham @mtn.org

CA HANDI-HAM camp

The next session of HANDI-HAM Radio Workshop (camp) will be held at Camp Joan Mier, Malibu, CA, 24 Feb.-01 Mar. 1998. This camp will provide ham radio instruction at all levels for persons with severe physical (not learning) disabilities and/or sensory impairments. The 1998 camp is free for California residents seeking a first ham ticket or an upgrade. All normal care, food, lodging, and Amateur Radio instruction for the session will be provided at no cost to the campers. For more information, contact Jane Rova, Secretary, Courage HANDI-HAM System, 3915 Golden Valley Rd., Golden Valley, MN 55422; 612/520-0512; e-mail hand iham@mtn.org — *ARRL Letter*

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 Bldg., 21st Ave. & W. Cheryl, Phoenix. Info: (602) 849-0851. 9/98

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. 5/98

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., YMCA Lighthouse Cntr., 2900 N. Columbus (So. of Ft. Lowell). 2/98

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. Meets 2nd Sat./monthly, 7:15 p.m., Dept. of Emergency Mgmt., 130 W. Congress. Net Thurs. 7:30 p.m. 146.82(-), 146.88(-), 147.06(+), 448.550(-) & 145.15 Packet. 3/98

CALIFORNIA

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 4/98

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. 7/98

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 1st 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. 5/98

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 0630, Baker's Square Restaurant in Richmond, CA. Info: Ed Caine, KA6OFR, (707) 996-0962. 1/99

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m. 5/98

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. 11/98

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/98

Fullerton Radio Club, Inc., W6ULI. P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Ctr., 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975(-). Info: Bob Hastings, K6PHE (714) 990-9203. 7/98

Garlic Valley Amateur Radio Club (GVARC). Meets last Sat./monthly, 8:30 a.m., Gavilan Restaurant near Monterey exit, hwy 101, Gilroy, CA. Info: Hal, AC6LK, (408) 779-7787. Net Tues., 7:30 p.m. Club rptr. K6THR, 147.825(-). 9/98

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Rm. 101, Chico. 10/98

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. (510) 846-6513. 1/99

Marin Amateur Radio Club (MARC). W6SG. Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./7:30 p.m., Kaiser Hosp., Bldg. 2, Terra Linda, CA. (except July & Dec.; contact Membership Chair., Pete Wolford, N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael. 9/98

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, (714) 551-2010 or (714) 551-1036. 2/98

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 Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 7/98

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., Wed., Thur., 145.190(-) PL 162.2 and 224.400(-). Contact: Bob, AC6HF, (916) 966-3654. http://www.ns.net/~NHRC 3/98

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. 146.550. Contact Bob Buss, KD6BWH, (714) 534-2995. 2/98

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Church, Telegraph Rd. & Teloma Dr., Ventura, CA. Info: Bill Klope, KB6LJN, (805) 642-4955. 4/98

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 info contact Lyle, AA6DJ, (916) 483-3293. 9/98

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, 1000 Howe Ave. For info contact Paul Wolf, W6RLP (916) 331-1830. 12/98

Santa Clara County Amateur Radio Assoc., (SCCARA) W6UW & W6UU. P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets 2nd Mon./monthly, 7:30 p.m., United Way, 1922 The Alameda, San Jose. Net all other Mon., 7:30 p.m. W6UU/R 146.385(+), 442.425(+) PL 107.2. 5/98

Shasta Cascade Amateur Radio Society, (SCARS). 2124 Airstrip Rd., Redding, CA 96003. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 10/98

Sierra Foothills ARC. 1222 San Simeon Dr., Roseville, CA 95661-5365. 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, 7 p.m., Fri. 28.415. 3/98

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. 7/98

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 7:30 p.m., 50.150. FM Rpt. Net Thurs., 7:30 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 4/98

This month ... Clyde Amateur Radio Society, from Bellevue, OH, has won 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.

Southern Humbolt ARC, (SHARC). Meets 4th Tues./monthly, 7 p.m., Best Western Humboldt House Inn, Garberville, CA. Talk-in on 146.79(-). 5/98

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. 1/99

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 3rd Tues./monthly, 7:30 p.m., Stanislaus Co. Admin Bldg. 145.39(-) PL 136.5, 224.14, 440.225 PL 136.5. 3/98

Tri-County Amateur Radio Assoc. P.O. Box 142, Pomona, CA 91769. Meets: 2nd Mon./monthly, 7:30 p.m., Covenant United Methodist Church, corner of Towne Ave. & San Bernardino Rd. in Pomona, CA. 1/99

Trinity Country ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School Adm. Bldg. in Weaverville, 7:30 p.m., Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 10/98

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.—5 p.m. 7/98

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St. in Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Mary Turner, (707) 451-2134. 5/98

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 10/98

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 3rd Thurs./monthly, 7:30 p.m., Red Cross Bldg., 1450 11th St., Santa Monica, CA. Net every Tues., 8 p.m., 146.67(-). Voice mail: (310) 917-1100. 6/98

Willits Amateur Radio Society, (WARS). 1712A South Main St., Ste. 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. (northwest of Willits). Talk-in: 145.13(-), PL 103.5. 9/98

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. 10/98

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. 11/98

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., 3852 Prime Place, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 10/98

Indian River ARC, Inc., (IRARC). 597 Capri Rd., Cocoa Beach, FL 32931-3011. Meets 1st Thurs./monthly, 7:30 p.m., Community Church of the Nazarene, 400 Crockett Blvd., Merritt Island, FL. 3/98

Port St. Lucie ARA. Meets 1st Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Roy Cox, KT4PA, (561) 340-4319. Call in 146.955(-). 11/98

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. 6/98

GEORGIA

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, N4OTC, 706/673-2291. 3/98

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. Meets 2nd Tue./monthly, 7 p.m., Army Reserve Center, 470 W. Lanikaula St., Hilo. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Pizza Hut, Puainako Twn. Ctr. 7/98

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elem. Sch., 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) 833-6944, WH6CZB. 11/98

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Pk., Kaneohe, HI. 4/98

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. 7/98

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Holy Trinity Church, SE corner of Cass & Richmond, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP repeaters 145.25(-) 107.2PL, 442.55(+) PL 114.8, 224.68(-). 2/98

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. 7/98

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 8 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. 1/99

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612-3508. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 6/98

Schaumburg ARC. P.O. Box 68251, Schaumburg, Illinois. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (630) 612-9446. http;//members.aol.com/sarcradio 10/98

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(+). 1/99

LOUISIANA

Baton Rouge ARC. Meets last Tue./monthly, 7 p.m., Catholic HS cafeteria, 855 Hearthstone Dr., Baton Rouge, LA. Info: Norma Ramey, WD5GFD, (504) 654-6087. Club rptr. 146.79(-). 10/98

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 11/98

MASSACHUSETTS

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 3rd Fri./monthly, 8:00 p.m., at Lynnfield-Wakefield Methodist Church, Vernon St., Wakefield. Info: Jim Chamberlain, N1AKG, (617) 944-5098. 3/98

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: Brian Sarkisian, KG8CO, (517) 265-1537. 4/98

Edison Radio Amateurs Assoc. Meets 2nd Fri./monthly (Sept.-June), 7 p.m., Edison Western Wayne Div. HQ, 8001 Haggerty, Belleville, MI (So. of Ecorse Rd.). Net each Thurs., 8 p.m. on 145.33(-) and 442.80(+) rptrs. 4/98

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 634-6077. 3/98

MINNESOTA

Viking Amateur Radio Society (VARS). Meets last Tues./monthly, 7:30 p.m., basement EOC, Waseca, MN. Call-in 146.94(-). 10/98

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202. 11/98

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. 8/98

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 8:30 a.m., Bonanza Casino/Restaurant, 4720 N. Virginia, Reno. Info: (702) 356-8200. Call on 147.30(+) MHz. 5/98

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Carson Valley Museum & Cultural Cntr., 1477 Hwy 395 North, Gardnerville, NV. Contact: George Uebele, WW7E, (702) 265-4278, 147.330 MHz. 11/98

NEW HAMPSHIRE

Great Bay Radio Association, WB1CAG. P.O. Box 911, Dover, NH 03820. (603) 749-2970/332-9107. Meets 2nd Mon./monthly, 7 p.m., Rochester Community Ctr. Talk-in: 147.57. 1/99

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. 7/98

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. 6/98

The Garden State Amateur Radio Assoc., (GSARA). P.O. Box 34, Fair Haven, NJ 07704. Meets twice monthly/1st & 3rd Wed., 8 p.m., Bicentennial Hall, Cedar Ave. (off River Rd.) Fair Haven, NJ. Contact: Bob Buus, W2OD, (732) 946-8615. 12/98

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. 8/98

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. W2PVL. 11/98

Genesee Radio Amateurs, (GRAM). N.Y.S. Civil Defense Ctr., State St., Batavia, NY 14020. Meets 3rd Fri./monthly, 7:30 p.m. 147.285(+) W2RCX. 1/99

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Arnie, WB2YXB, (718) 343-0172. 2/98

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9 a.m. Thurs. 3853 kHz. 3/98

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us — "Classroom Net," 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 10/98

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Morten Eriksen, KA2UIU, (516) 929-6911. 4/98

Westchester Amateur Radio Assoc., (WARA). Meets 1st Wed./monthly, 7:30 p.m., Am. Red Cross Bldg., 106 N. Bway, White Plains, NY. Club nets: (10 Meters) 28.420 MHz Tues., 8 p.m. (2 Meters) 145.495(-) rptr., Thurs., 8 p.m. Info: Dan Grabel, N2FLR, (914) 723-8625. 4/98

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 11/98

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(+). 10/98

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Phone: (704) 888-4815. 5/98

SOUTH CAROLINA

Sumter Amateur Radio Assoc., Inc. (SARA) P.O. Box 193, Sumter, SC 29151-0193. Meets 3rd Mon./monthly, 7 p.m. Central Carolina Tech. College, Rm. 102, 506 N. Guignard Dr. Contact: Dee, NØZTV,(803)499-6315.E-mail: deebrown@sumter.net. Talk-in 147.015. 9/98

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Justice Ctr., Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 10/98

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 3/98

Greater Cincinnati Amateur Radio Assn., (GCARA), W8DZ. ARRL SCC, meets 4th Wed./monthly, 7:45 p.m., Brusman's Hall, 4813 Vine St., St. Bernard. Nets: Mon. 145.27-, Thurs. 1.936 MHz, 9 p.m. Info: http://w3.one.net~rkuns/gcara.html, K8JE (513) 825-2868, W8XS (513) 474-0287. 12/98

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(-). 2/98

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: B. Beckman, N8LXY, Pres., 146.73(-), 444.900(+) MHz. 7/98

OREGON

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./monthly, & every Wed./weekly, 9 a.m. for brkfst. at Mo's Rest. Net Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 1/99

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 147.06(+) MHz. Info: (541) 389-7194. 7/98

Keno Amateur Radio Club. P.O. Box 653, Keno, OR 97627. Meets 3rd Thurs./monthly, 7 p.m., Keno Fire Stn. Rptr. 147.32(+) W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736. 11/98

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 310, Roseburg, OR. Info: W5PII/R 146.90(-) or (541) 673-1310. 6/98

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. 11/98

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. 145.01. 3/98

Mid-Atlantic ARC. Box 352, Villanova, PA 19085. Meets 3rd Thurs./monthly, 8:00 p.m., Radnor Mem. Libraray, Wayne, PA. Call Bob Haase, W3SA, (610) 293-1919. 147.06(+) WB3JOE PBBS 145.09. 4/98

Warminster Amateur Radio Club, K3DN. P.O. Box 113, Warminster, PA 18974. Meets 1st Thurs./monthly, 7:30 p.m., Benjamin Wilson Sr. Cntr., Warminster, PA. Net on 147.09(+), Wed. 8:30 p.m. and 28.450 Sun. 9 p.m. 5/98

VIRGINIA

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 2/98

Virginia Beach ARC. Meets 1st Thurs./monthly (except July), 7:30 p.m., St. Andrews United Methodist Church, Tucson & Princess Anne Rds., Virginia Beach, VA 23462. 2/98

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(-) rptr. Doors open at 9:30 a.m. 5/98

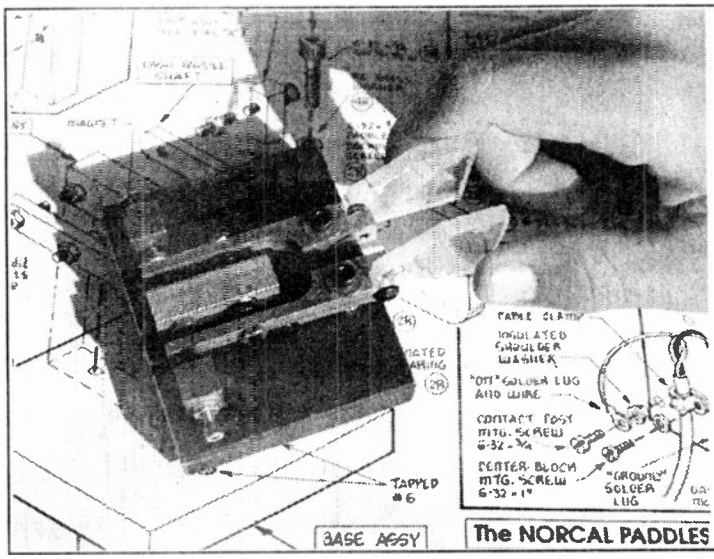
WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. For info: D. Tennant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 7/98

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7 p.m.,The American Red Cross, 111 Veteran's Memorial Blvd., Huntington, WV. 5/98

Richard Fisher, KI6SN

1940 Wetherly St., Riverside, CA 92506
e-mail: KI6SN@aol.com



The NorCal Paddle kit atop the instruction manual's blow-up illustration.

Up a QRP creek (with some paddles)

In the touchy-feely art of sending Morse, QRPers are perhaps more vulnerable than most to the shortcomings of keyer paddle design.

After all, the vast majority of low power operators are brass pounders, and for some of them, sending dits and dahs has not come easily. Good CW can make or break a contact when low-level signals are involved. Wrestling with a poorly designed CW-sending instrument doesn't help one bit.

So when good things appear on the keyer paddle front, it's something for QRPers to chirp about, figuratively speaking.

Here are three relatively new entrees to the keyer paddle scene, each of which does its duty to make things easier on the fledgling QRP CW op.

NORCAL Paddle Kit

When you talk about a project at risk of being high on concept and low on execution, this is it. Doug Hendricks, KI6DS, and the NorCal QRP Club was betting people with little or no metalworking experience would be able to turn a bag of metal pieces, nuts, bolts and screws into an iambic keyer paddle, finely adjusted to precision. It would rival commercially made models.

Hendricks' gamble paid off quickly hundreds of times over as NorCal Paddle kits today are producing beautiful CW across the airwaves around the world.

The kit's assembly is indeed well within the capabilities of even the novice builder. My metalworking and assembly experience was practically nil, yet the paddle went together quite easily in an evening.

First made by Wayne Smith, K8FF, of Aurora, OH, the paddle design was selected winner of the NorCal Building Contest at the 1997 Dayton Hamvention. It was reproduced and kitted for sale by NorCal just in time for October's West Coast QRP Symposium at Pacificon '97 in Concord, CA.

For $30, plus shipping, the builder gets everything needed: heavy steel base, brass shafts, mounts, posts, cylindrical magnet, set screws, mounting hardware, bushings, clear plastic paddles, rubber feet and solder lugs for attaching your keyline.

Assembled, its keying action is every bit as good, if not better than the well-heeled Bencher paddle here at KI6SN.

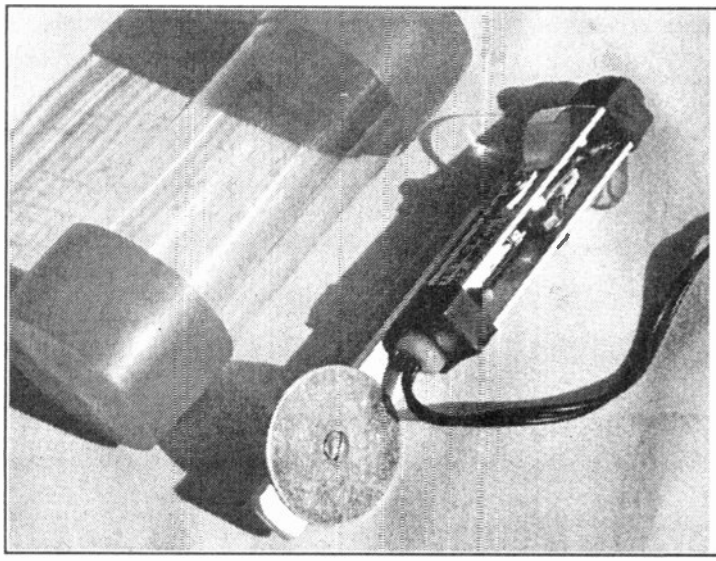
There are no springs or weights in the NorCal kit. Keying tension is produced by a center-mounted magnet that pulls at screw heads protruding from the dit and dah armatures. Tension is adjusted by changing the distance each screw head is from the centered magnet. The feel of the paddle can also be seasoned to taste by adjusting set screws at the dit and dah contact points.

Basic assembly is one thing, but making this instrument nice to look at is another matter altogether. After all, the unassembled parts are raw metal pieces — drilled and ready for assembly, but rough around the edges.

The photograph of the NorCal Paddle accompanying this column shows you one of those ugly ducklings — the kit built here at KI6SN. A peek at NorCal's website (www.fix.net/norcal.html), however, will give you an idea of what beauties these ducklings can become, thanks to equal helpings of pride and spit 'n polish.

The NorCal construction manual offers a lot of ideas on properly finishing the metals used in the paddle. There's also instruction on buffing the plastic handles. And for those who'd like a ready-made powder-finished based, San Luis Machine Co., has them for $15 (plus shipping) with your untouched base as a trade-in. Or you can order a finished base without trade-in for $20, plus shipping. They're available in red, blue, black, white and gray. Ordering instructions appear in the paddle manual.

The metal parts for the paddle kits were beautifully crafted by Doug Hauff, KE6RIE, NorCal member and machinist. Prototyping, debugging, kitting and distribution was handled by a project team including Jim Cates, WA6GER; Chuck Adams, K5FO; Jerry Parker, WA6OWR; and



The NE8KE fold-out TE-NE-KE with plastic carrying case.

Hendricks.

Paul Harden, NA5N, did a fabulous blow-out drawing of the paddle and each of its parts. The illustration is a vital addendum to the kit manual's thorough step-by-step instructions.

The NorCal Paddle Kit is $30, (plus $5 shipping in the United States; $10 to Europe and Canada; $15 to the Pacific Rim). For more information or to order, write: Jim Cates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821. E-mail: WAGER@juno.com. Make checks payable to Jim Cates.

The NorCal Paddle is at once a marvelous kit, CW-sending instrument, and teaching tool for anyone who'd like to try their hands at simple metalworking. And who would not take pride in telling the operator at the other end: "The keyer paddle here is homebrew"?

More on the 'TE-NE-KE'

When it comes to the "small wonders" department, Boyd Mason's, NE8KE, series of "TE-NE-KEs" (Teeny Keys) warrants a double take.

A review by Norm Brooks, K6FO, ("Product Review, ***Worldradio,*** December 1997, p. 20) beautifully covers the intricate workings of this tiny iambic paddle, which as described was attached to a heavy metal base.

Mason has since come out with a variation that is bound to catch the attention of QRPers who like to backpack with their radio gear. It's a folding version — much like a pocketknife — which when collapsed is just 3.5 inches long and weighs about 2 ounces.

When it's time to operate, a swiveling armature can be loosened from beneath a small set-screw on the bottom of the paddle and folded out 180°. A 1.25-inch diameter disc on the end of the arm can be held in the operator's left hand to steady the instrument as he sends with his right — or vice versa. At full extension the "pocket paddle" is about 5.25 inches long.

The key comes complete with a permanently affixed key line with plug.

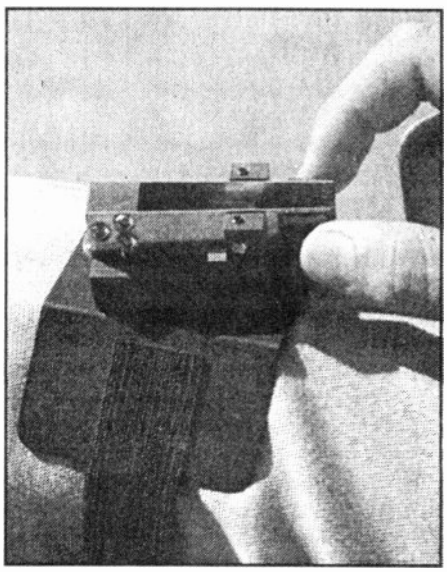
A plastic carrying case — about the size of the cardboard center of a toilet paper roll — accompanies the key. With its lightweight plastic carrying case, it tips the scale at 2.5 ounces — perfect for the weight-conscious backpacker.

The fold-out version of the TE-NE-KE is $35, plus $4 shipping.

For more information, write: Boyd Mason, NE8KE, 8297 Cleveland West, Cooperville, MI 49404; 616/837-7182.

Paddlette knee-mount paddle

During last July's "Flight of the Bumblebees" sponsored by the Adventure Radio Society, I was fortunate to have the Paddlette knee-mounted paddle as part of my trail-friendly radio set-up.



The Paddlette iambic keyer paddle magnetically affixed to its knee mount.

It turned out to be a perfect addition to the lightweight and rugged radios and antennas I carried in a backpack on a bicycling 14-mile roundtrip outing for the society's competition. Details of the Paddlette were first carried in ***Worldradio*** in August 1997 (New Products, p. 66). There's nothing like a rugged field test, though, to test a key paddle's mettle — or metal, as the case may be.

The iambic paddle has only two moving parts, comes complete with keyline and is held in place at the operating position with a small magnet. By itself, the paddle weighs about 2 ounces. Add the knee mount and it's 3.5 ounces.

According to the manual, "fine

pitch, spring-loaded gap adjustment screws with 56 threads per inch make precise setting of the gap simple." A small allen wrench is included for adjustments, and it's amazing just how finely you can "tune" the Paddlette.

The rugged knee mount is made of lightweight 22-gauge aluminum, and while the operator is seated fits nicely across the bridge of the knee. A 24-inch-long strap is used as a belt around the leg to hold the knee mount in place. It's made of stretchable 1-inch woven elasticized polyester.

When the paddle arrives from Paddlette, it's up to the operator to affix one of the provided magnetic strips to the surface of the knee mount. This way the operator can "customize" the angle at which the paddle is always set. The magnets have an adhesive surface on one side. The magnet on the knee mount is used to mate with a magnet on the base of the keyer paddle. The magnetic force firmly holds the keyer paddle to the knee mount, but also allows for easy removal and reattachment.

I pounded brass for four solid hours during the "Flight of the Bumblebees" using the Paddlette paddle and knee mount. The instrument performed beautifully and the knee mount took the hassle out of operating an iambic keyer in a field environment. I even left the key paddle strapped to my leg when walking around the campsite during brief breaks from the competition.

The Paddlette iambic paddle is $38.50. With knee mount it's $44.95. The package includes an extra mounting magnet and small adjustment wrench.

Paddlette Co.'s Bob Hammond, KI7VY, says an even smaller "backpacker" version is in the works and will be priced in the $45 to $50 range.

For more information, write: Paddlette Co., P.O. Box 6036, Edmonds, WA 98026; 425/743-1429.

QRP FYBO, again!

For the second year, the Arizona ScQRPion QRP Club is sponsoring its "Freeze Your B___ Off" Winter QRP Field Day. The 12-hour contest runs from 1600Z, 7 February to 0400Z, 8 February.

The club encourages competitors to operate QRP from field locations and awards high multipliers for low temperatures. Home-based operation is fine, too.

According to contest manager Joe Gervais, AB7TT, the contest is on HF frequencies only with a maximum 5W output on CW; 10W SSB. Operators are urged to listen around the standard QRP calling frequencies — no WARC.

The object of FYBO, writes Gervais, is for "everyone to have fun. But please be safe, too. I'll be snow camping this year (along with others), so please plan on sending a little RF this way to warm us up."

Categories: Single Operator (Home/Field), Multi Operator (Home/Field), Novice/Tech+. Work stations once per band/mode. Score 1 point per QSO. The exchange is RS(T), State/Province/Country, first name, power output, and temperature (Fahrenheit) at the operator's position. Example: 579 AZ Joe 2W 40F. Indoor stations must report indoor temperature.

Multipliers: SPCs (each counts only once overall); Field Location: x4 (Field per ARRL Field Day definition); Alternative Power: x2; QRPp (less than 1W): x2; and lowest operating temperature at the operator's position: 65+ F = x1; 50-64 F = x 2; 40-49 F = x 3; 30-39 F = x 4; 20-29 F = x 5; Below 20 F = x 6.

Final Score: QSOs x SPCs x Temperature Multiplier (x Field) (x Alt Pwr) (x QRPp).

Remember: Safety first! Respect the weather and your own limitations.

Mail logs by 7 March to: Joe Gervais (AB7TT), P.O. Box 1822, Goodyear, AZ 85338. Include location, category, op(s), and power output. For more information, e-mail: vole@primenet.com or visit <www.dancris.com/~KI7MN>.

New G-QRP Club representative

The Rev. George Dobbs, G3RJV, has announced that a new U.S. representative has been selected to handle renewals to the G-QRP Club.

Renewals ($14 U.S. for 1998) should be sent to: Bill Kelsey, N8ET, 3521 Spring Lake Dr., Findlay, OH 45840; 419/423-4604. Queries via e-mail: <kanga@bright.net>. "The club extends its thanks to (former U.S. representative) Mike Kilgore, KG5F, for all his work for the club over the last few years," Dobbs said.

The Rev. Dobbs can be contacted via e-mail at: g3rjv@gqrp.demon.co.uk.

Vanity Gate 4

The FCC plans to run the first-day Gate 4 applications on or about 07 January, but adds that this is only a guess and is far from a firm start-up date. — *FCC*

Quarter Century Wireless Association, Inc.

John G. Troster, W6ISQ

CROFT TAYLOR, VE3CT

Our regular columnist Jack Troster has encountered a few very busy months, and has asked some of QCWA's Board members to fill in for him. I am sure, however, that none of us will be a match for the smooth flow of copy continually coming from Jack's pen. As you read the following, I hope you will forgive some of the Canadian spelling within!

QCWA around the world

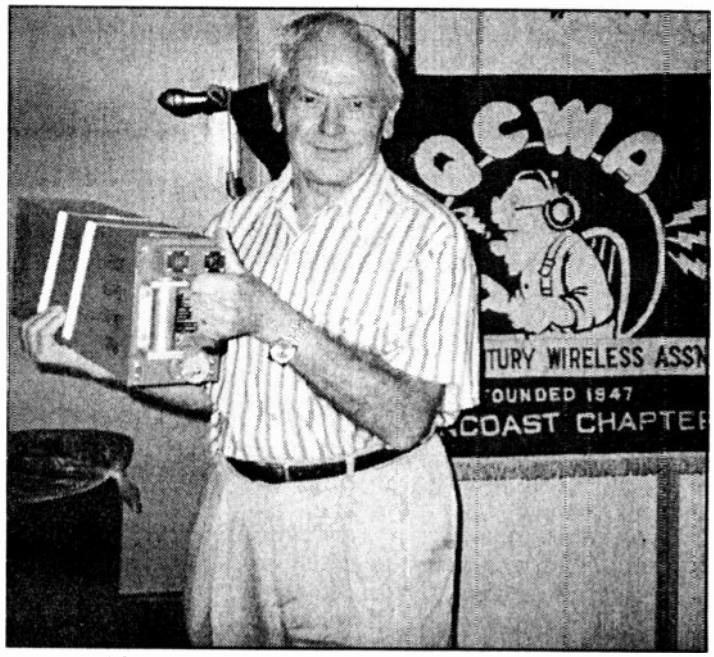
As a long-standing life member of QCWA, I have found it very rewarding, when traveling, to discover other Association members close by. Whether one travels anywhere in North America, or in one of 27 countries where QCWA has representation, he can be assured of being welcomed by individual members, and at meetings of any of our chapters.

It is particularly gratifying for snowbirds such as I who spend part of the wintertime in the South. Here in Florida, I have aligned myself with five QCWA chapters — all within an hour's drive of Sarasota. The friendship and good food at monthly luncheons at four of these chapters, besides helping to retain one's weight, facilitates very interesting weekly get-togethers.

In addition, many very interesting presentations are offered at some of these luncheons, such as the recent presentation to Chapter 53 in Sarasota, FL, by WB2ZZB, Hans Napfel, who, as Director of Engineering at the Fairchild Camera Corporation, was involved with the development and crash testing of cockpit voice recorders. It was a revelation to learn how these tests were carried out — simulating an impact of 3400 grams for 5 msec, simulating a 2100° heat level for 30 minutes, and surviving a 560 km/h crash in a distance of 45 cms. As part of his presentation, Hans brought along a "Black Box" which had actually been retrieved from a commercial airline crash.

1998 QCWA QSO parties

Most QCWA members know me as Chairman of International Relations. Recently, however, President Jack Kelleher asked me to also undertake the Chairmanship of the Activities Committee. This in itself is a busy area — comprising Operating Activities, Awards, Network Management, and the Audio Cassette Programme for our hard-of-sight members. As most of you know, we are very fortunate to have a dedicated and efficient amateur in the name of Blanche Randles, W4GXZ, administering the cassette programme, and with much success.



Jim Walsh, QCWA General Manager

As Activities Chairman, I have focused my attention this year on one of the long-standing activities within QCWA — that of the Annual QSO Parties. Each year, we have been getting exponentially increasing levels of mail with comments as to how to improve this activity. To that end, I thought it prudent to undertake a little research during the 1997 parties in the form of an "on the air" questionnaire. The results were interesting and in some cases surprizing.

In the first place, 99% of those members responding thought that 48 hours was simply too long a period of time for the number of participants involved. It has been increasingly obvious that a lot of "dead" air exists towards the end of

these parties in that no new calls are being heard. Calling CQ in vain is not only frustrating, but is also a waste of spectrum usage. One of the more successful annual QSO parties is that of the Telephone Pioneers. They have had about three times the potential participants and yet allocated only 1/3 as much time as QCWA to their annual event. (32 hours vs our two weekends of 48 hours each). This time vs number of participants seems to be almost optimum as very little "dead air" is encountered in their parties. Using this as a guide for us would mean that our optimum time would be about 10 hours rather than the 96 we have previously had.

Associated with the time frame question, was another interrogation — that of whether we should continue to have two weekends or reduce it to one weekend. There was a slight leaning here toward one weekend, 59% vs 41%. However, we could not ignore the 41% of our participants who wanted two parties, so we asked another question, and that was if we continue with two weekends, would they like to continue with consecutive months, or would they rather see the parties spaced about six months apart?" There was resounding 93% in favour of the six month spacing!

In another area of interest, we were unsure of the membership's overall view of the mixed modes of CW and Phone, as exercised for the last year, rather than having a CW weekend, and a Phone weekend. In view of the few letters received that were not in favour of mixed modes, it was once again a surprize to us that 91% of the respondents were in favour of the mixed mode. It seems that many of our old timers found it relaxing to give their voice a rest once in a while and to switch over to CW. I personally agree. In analyzing some of the letters from our members, most of those in favour of single modes did concede that mixed modes would be appropriate if the parties were spaced six months apart.

Another unanticipated survey result was the strong interest in welcoming non-QCWA members to participate in our parties, as we did in the Golden Anniversary party last year. No one can deny that we as an Association welcome the "outside" publicity, and by inviting future QCWA members to our activity, we keep our name in their minds as an organization they can eventually become a part of. Also, in view of the "Novice Roundup" no longer being an entity, we are encouraging Novices, our long term future membership resource, to participate in our activity, and in turn, we are offering certificates to the five most successful Novice participants.

Only by implementing changes in rules for activities can we determine how successful they will be. For instance, one new rule introduced for our 1997 was that of allowing participants to choose a 24-hour operating time segment within a 40-hour period. This turned out to be a disaster — both for the participants and the markers. For example, there were several opinions as to whether to divide the hours into tenths — minutes — full hours, etc. Well, we learned our lesson well here, and that is an option which will not be an option in 1998!

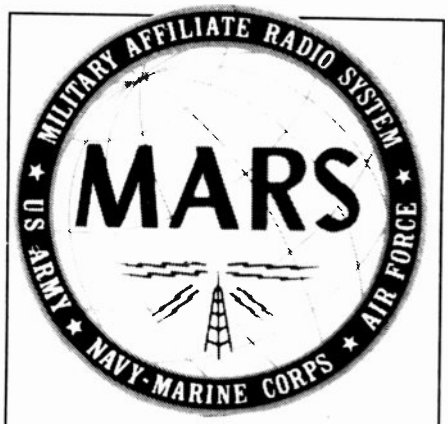
One of the popular new rules introduced last year was the activation of our QCWA Memorial Station, W2MM, and to reward those contacting the station with bonus multiplier points. We plan to continue this in 1998, but plan to have the station activated during the full 24-hour periods. The station will be activated by the host chapter of the annual convention, and will therefore be a combined Special Events/ QSO Party station to remind amateurs of the autumn convention.

To that end, and in accordance with our members' wishes, we have revised the 1998 QSO Party rules to include a shorter period of time, to space the parties six months apart, and to include a mixed mode of CW and phone. You can peruse all of these revisions in the winter *QCWA Journal*, together with suggested operating frequencies and multipliers. We have taken a page out of the Telephone Pioneers' annual party, and are increasing the number of eligible bands (and multipliers) from 13 to 15, but are continuing to render the WARC bands (10, 18 and 24 MHz bands) ineligible. The parties will take place on 14 Mar 98 starting at 1900 UTC and on 19 Sep 98 starting at 1800 UTC each for a 24-hour period. They will be open to non-QCWA members as in 1997. For those readers who would like to participate, but are not yet QCWA members, please send an SASE to our General Manager Jim Walsh and ask for the following:

1. The QCWA 1998 QSO Party Rules
2. The 1998 QSO Party Log Form
3. The Multiplier and Check Lists

Jim's address is as follows: Mr. Jim Walsh, W7LVN, QCWA General Manager, 159 East 16th Ave., Eugene, OR 97401-4017 U.S.A.

Looking forward to a contact with you in March and September, 73, Croft, VE3CT



Lorraine S. Matthew, N4ZCF
MARS Call AAA9PR
E-mail: LoriMatt@aol.com

Army MARS helping hands

As a reflection of the Army MARS Code, discussed in last month's column, Army MARS has in place a new program suggested by Cindy, AAA9AX, and Jim Rogers, AAA9AC. The new program is Army MARS Helping Hands and is being coordinated by the Rogers family, who are uniquely qualified to carry out its concepts.

Background

The program's name, Helping Hands, was coined by Chief Army MARS Robert Sutton after initial proposals were presented by Jim and Cindy who offered to help disabled MARS members. Both have helped others (as fellow MARS members do), as they have been helped themselves. The idea to offer this program arose from the work that Jim and Cindy do with the disabled. Both are part-time System Operators (SySops) for Partnerships in Assistive Technology, a nonprofit organization in NC. They provide: instruction on and resources for: how to use the computer, software, hardware, the Internet, e-mail and adaptive technology. They are charged with running a forum for the disabled in which ideas and adaptive technology are presented and exchanged. They also write educational and consumer articles on the computer, Internet, software and hardware usage and repair. As all MARS and Amateur Radio Operators do, they help fellow HAMS and MARS members set up their stations, TNCs for packet radios, computers, antennas.

Prior to a car accident, Cindy was a social worker for the blind with extensive experience in not only teaching the client, but in showing the family and other professionals how to help the disabled person with independence skills. She worked with the blind, deaf, deaf-blind, those paralyzed and all other disabilities. It occurred to both Cindy and Jim that this could be a viable program in MARS, whether implemented formally or informally. In their chief's staff positions, this kind of help seemed, to them, to be a part of their work for the members. Jim and Cindy are themselves disabled.

Definition

Helping Hands is a program to help any disabled member in MARS to be as independent, active and fully functional as possible.

Purpose

Helping Hands will enable any member to function independently or with minimal assistance to be as fully an active member for the MARS program as possible. Assistance can be given from Jim, Cindy, from a regular Army MARS member, or from the Army MARS Auxiliary. This program is designed to be a coordinated effort utilizing the skills of not only Jim and Cindy but all Army MARS members with the desire and ability to help their fellow members.

Goals are for the disabled MARS member to be able to:

1. Know and keep current with all MARS rules and regulations.
2. Receive and be able to read all CAM, Area Director and SMD bulletins, EEI messages, MARSgrams and all other manuals and directives to be able to act on them.
3. Operate his/her voice and digital communications stations
4. Learn to use text-to-speech software for the blind, voice recognition software for the quadriplegic and paraplegic and/or use any other adaptive technology.
5. Use the computer, the Internet and e-mail independently
6. Assist others with similar disabilities to also be active members.
7. Each state will be asked to have a point of contact for the Helping Hands program.

Helping Hands shows the members that no matter what their disability, Army MARS wants everyone to be able to take part. Each member is important, needed, and can be able to assist with emergencies, message handling and all other facets of the Army MARS program. Helping Hands is the way to thank all disabled members for wanting to support the Department of Defense, Department of the Army, the military and their families and all fellow members despite sometimes desperate health situations.

Identification and reporting of need

Any member needing assistance through Helping Hands, at this writing, has been invited by Chief Army MARS to contact directly Jim, AAA9AC, and/or Cindy, AAA9AX, by MARSgram, e-mail, letter or phone. SMDs are invited to refer members for assistance. Upon receipt of a request for assistance, immediate action is taken with follow-up.

Helping Hands training

Jim and Cindy are willing to train anyone who wishes to help a member. The Helping Hands can be done through regular members or the Auxiliary, whatever is practical or necessary. Training can be done by MARSgram, phone, e-mail, packet, letter, and may range from teaching members the proper method of reading to a blind member to helping members describe to a blind person how to set up a packet station.

A few examples of kinds of assistance that Helping Hands provides:

1. A totally blind member in another state requested Jim to help him get on the Internet and use e-mail. Jim worked with him by radio and phone to tell and teach him about a text-only web browser, an e-mail program designed for the blind that works with speech software. He sent him the (shareware) program, taught him how to set it up, and taught him how to configure his software to work with it.
2. Jim repaired and taught the use of donated computers for one disabled member to use as, what became, a packet station.
3. Jim and Cindy are working to get assistance for a member in a remote area to get his TNC set up so he can participate in RTTY and other digital nets in his state. The SMD will follow up for local assistance.
4. Cindy and Carolyn Cavanaugh, AAR3GG/VA, are working on the taping of all manuals for the blind

and paralyzed members. Carolyn has distributed several to those who cannot now read manuals due to blindness and have no family member to read to them.

5. Cindy with her SMD was able to get a large statewide hamfest to be wheelchair accessible. This meant that for the first time that all members could attend the state joint MARS meeting.

Prior to this, it was held upstairs with no elevator access. Cindy can counsel state representative on how to do this and what is needed to make hamfests accessible.

Limits of the program

It must be noted that Helping Hands training and assistance is limited to MARS station capabilities only. All assisted must give their permission if needed to be referred to another member for help. Privacy will be ensured in keeping with DOD/DA MARS regulations.

For further information, please contact: Jim Rogers, Jim, Automation Coordinator, jimlr@mindspring.com or Cindy Rogers, Cindy, Auxiliary Coordinator, crogers @mindspring.com; r4ls@juno.com; 910/630-1134; Fax 910/630-0396; 545 Waterbury Dr., Fayetteville, NC 28311-1563.

My thanks and gratitude go out to Cindy and Jim Rogers and Chief Sutton for their assistance in writing this column. This is a program which will surely allow disabled MARS members to participate more fully and which may encourage disabled amateurs to become Army MARS members. I have known several severely disabled members who have operated message control centers and other operations that I, as a non-disabled member, could not even visualize, much less do. Congratulations to the Rogers for this proposal and to Chief Sutton for his support of it.

Surely this is the spirit which will keep Army MARS... Proud, Professional, and Ready.

Book Review

JERRY BOYD, K6BZ

"Guide to emergency survival communications"

This 182-page book written by Dave Ingram, K4TWJ, covers a number of important issues in its twelve chapters. This well published author is no stranger to the broad range of emergency communications subjects he addresses.

Individual chapters are devoted to: the need for survival communications; traditional sources of emergency information; shortwave and specialized broadcasts; Amateur Radio; scanners; citizen band radio; the personal communications service (PCS); GPS equipment; "free-play" radios; weather information; emergency and alternate power supplies; satellites.

The book is up to date and even includes descriptions and reviews of amateur radio products only recently released to the market. Dave's background in electronics and communications, as well as his experience as an instructor, are evident in the book. It is priced at $20 + $4 shipping/handling, and is available from Universal Electronics Inc. 4555 Groves Rd. Suite 12, Columbus, OH 43232.

Search And Rescue Communications

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Salt Lake City, UT 84147
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Last week a friend brought over his dead radio. A thief broke into his car and took the radio's control head and the replacement would not work. Schematic in hand, we traced the lines and discovered a surface mount fuse that handled power to the control head. It was not easily replaced.

This event triggered an idea, a learning point if you will, concerning how groups operate. If you look at a radio, there are "major" components such as the main unit, a microphone, a power supply, and an antenna. Generally these are easily repairable — as a whole component. If the microphone fails, we replace the microphone. If you need a new antenna, you simply connect one.

However, there are many critical parts inside each component (such as the control head fuse) that are not easy to replace, but which are just as critical to the radio's operation. The key here is "not easily replaceable."

Let's take the analogy to a group. There are members of a group who are high-profile and often elected or appointed such as commander, director, net control, etc. While these people are critical to the group, they are replaced on a regular basis. What about the members deep within the organization, often having specific critical skills, who are just as critical to the organization but not as easily replaced?

You may have a couple of highly competent on-scene coordinators. These people have been to enough events or on enough search missions that they are critically good at what they do. They're not elected, they're not appointed, and they are not recruited off the street. They're critical because of their experience doing what your group does. And they're not easily replaced.

My view is that every group has members who develop over time skills or knowledge important to your group's success. They know the area history, they know the area politics, they know the area resources, and they know how to get done what it is that makes your group good. Without these few, your group founders until these people are replaced, and they're not usually replaced easily.

What's important to any group is that these key people are not lost because of internal issues and frustrations. These are the people you want to keep. You can always elect or appoint a new commander. While important, it's the inner workings that spell success or failure.

RACES

Several readers have written to ask if I'm biased against RACES because I've not mentioned it. No! RACES — Radio Amateur Civil Emergency Service — is a great program and very active in Utah as well as in many other parts of the country.

RACES provides for Amateur Radio operators to provide emergency communications during local, regional, or national emergencies. In essence, a disaster can be declared and certain Amateur Radio frequencies restricted to RACES operation. This process is directed by the emergency management agency having jurisdiction over the area affected.

According to the FCC, all RACES communications must be specifically authorized by the civil defense organization for the area served. For example, if there were a large-scale hazardous material incident in Utah, the Utah Comprehensive Emergency Management folk could activate RACES support of emergency communications for the incident. Certain frequencies could be designated for RACES use and only RACES operators would be allowed to operate on those frequencies.

If the event were larger than the State of Utah, most likely the Federal Emergency Management Agency's Region VIII in Denver would activate appropriate RACES plans for involved states.

While the most common RACES structure is state-wide, any level of government can involve RACES. There are several cities I know of with RACES groups as well as several county level structures and each political entity can have a RACES plan as part of their comprehensive disaster response.

In Utah the state structure is under the coordination of Comprehensive Emergency Management. Brent Thomas, AC7H, coordinates RACES registration and training. The registration involves a form listing information about the person and available resources. Brent then assigns the applicant a RACES number and authorizes the Amateur Radio operator to participate in RACES operations.

Every month Brent coordinates a statewide RACES training net for an hour. We alternate between an HF-SSB net and a VHF-FM net. The VHF nets involve linking various repeater systems. This latter event is quite an undertaking, as various operators perform in-band linking to carry the net statewide. It has worked well for the last several years and gives us the expertise to link large geographical areas using systems not normally linked.

If you're interested in RACES, I would encourage you to contact your State emergency office first. If you cannot find information, you might then contact the FEMA's regional office, or if all else fails, write the Federal Emergency Management Agency, Emergency Communications Division, Washington, DC 20554.

Action plan

An important part of the Incident

Command System (ICS) is an action plan. As the event unfolds, the incident commander, the operations chief and the planning chief develop and prepare an action plan. Typically this plan covers an operational period of time such as a shift, a portion of a day, a day, or even a week. The action plan sets the operation in motion and defines how resources are allocated to deal with the emergency at hand.

An action plan includes a communications plan and lists what resources are available and where and how they would be deployed. A plan might contain a diagram of the emergency area and the plan would define what is expected to be accomplished during the time period.

It is possible to prepare action plans in advance for many responses. Your group may be on call to assist the local sheriff do direction finding for emergency locator transmitters (ELTs). Your action plan might include a listing of available Amateur Radio operators with their own DF equipment and a supplementary list of other agencies in the area with available DF gear.

Your action plan might designate a certain repeater as your tactical frequency with a resource net to be called on another frequency. You might also designate a local area simplex frequency for DF teams to use to compare readings. The sheriff may allow you to use type-accepted equipment on public safety frequencies during these events, and you would need to know who has these radios and what frequencies are to be used.

An action plan may call for a member of your group to act as a coordinator and be the chief contact with the sheriff's office. You might choose to have an on-scene coordinator and have the resource or tactical net control act as contact point for the sheriff. Your "boiler plate" plan should address what might happen in the case of accidental ELTs in aircraft on airports, and what might be expected if the signal is coming from an actual plane crash.

You can prepare preliminary action plans for every agency you support. The Red Cross may use ARES when there is a disaster to help handle health and welfare traffic. Your plan might address local emergencies as well as local support of disasters in other areas where the Red Cross might serve as the public contact point for such traffic.

Locally our ARES group is on-call for one city in case of communications failure for their police and fire department. Our plan would call for an on-scene coordinator at the dispatch center and an operator in every fire station. The action plan would list every fire station and give an address. A coordinator could then use the plan to enter the Amateur Radio call sign as an operator is sent to each station.

I would suggest your "in advance" planning be done for a typical initial shift. Most of the time this would be a six-hour time period. This is simply to get you running when your feet hit the ground. Obviously you could spend a lot of time and generate a lot of paper for every possible scenario, but the "advance" plan is just to get you started. As soon as the incident develops, you will be changing your action plan to fit into the overall incident commander's plan.

The idea here is to motivate your thinking to prepare for most likely support scenarios based on what the agency expects of you. If you know in advance you're going to have a tactical and a resource net, you know you'll need two repeaters and two net control stations. You may not know who will be plugged into these roles, but you're saving time by knowing, in general, what a typical response would include.

Don't create too many advance plans. I would recommend one for each typical type of response or for each agency with unique needs. The plans allow you to train and equip in advance and ensure you have resources (people and equipment) generally available.

Net Protocol

We are always talking about "nets," but never take time to explain what they are. Net is short for "network" or an organized connection of similar units. We might have a bunch of computers on a network and connected to a file server. Our highways comprise part of a transportation network.

In Amateur Radio circles, a group of stations on a common frequency comprise a network. In the morning there are several roundtable discussions as people drive to work. These are informal networks — an informal net being one where no one station directs the interaction.

Weekly we have a "formal" net where one station acts as a net control station (NCS) and conducts a formal procedure such as a roll call and the listing of traffic (or messages). In the formal setting, stations must follow the directions given by the NCS and only transmit as directed. The NCS may call for stations three at a time, or in alphabetical order of call sign. The key to a formal net is to LISTEN to the net control station, and FOLLOW directions. Formal nets often have a prepared script and a set of standard procedures that the NCS follows.

Another type of net is an emergency net, often conducted in a formal manner. These nets include command, tactical, operational, resource, or logistic functions. A tactical net is often comprised of stations on assignment, or involved in the active operation. Stations awaiting assignment are often part of the "resource" net — or the communication resources for the operation. Fire departments often have a "rehab" net where units check in when they are taking a break from a protracted fire operation. The rehab units are not resources awaiting assignment, but resources being rested, fed, or "rehabbed" before their next assignment.

Some nets are linked to other nets. In an event covering many counties or cities, each political entity may have a tactical net and then feed data into the incident command net. This structure always depends on the event, the size of the event, and the complexity of support operations.

It is absolutely critical that stations listen before transmitting! If you hear a "SKYWARN" net in progress, this is a weather net in support of the National Weather Service. Unless you are part of this effort, you should NOT check into the net or even get on the frequency to ask what is happening.

The key is to LISTEN. A net is organized for a purpose usually in support of a public service event. If it's a club net or a weekly swap net, you'll quickly determine the net protocol by listening. A good NCS will give instructions and on-the-air briefings so all those listening will know what is happening.

Until next month, best wishes from Salt Lake City!

Agreement

I, _____ ,
(Please print name)

Owner and Operator of
Amateur Radio Station

_____ ,
(Block letters, please)

Eagerly and with Gratitude send the measly and paltry sum of $15 to ***Worldradio***.

In exchange for which I shall receive the next 12 monthly issues of (packed with the latest news, interesting articles and profound columns) ***Worldradio***. Sent to:

_____
My Street Address

_____
City, State, ZIP

I understand that I am also quite cordially invited to send in something I have written.

(And now the formalities.)

AMEX, VISA, MC

_____

_____
(Expiration date and Signature)

Or, if you prefer: check, money order, gold bullion, silver ingots, postage stamps from the 1860s, or Authentic Roman Coins dated BC.

Mail to:
Subscriber Services
Worldradio
2120 28th Street
Sacramento, CA 95818

Thank You

(Fine Print)

For our overseas friends: We must ask for an additional $10 per year to pay for the additional postage that is charged to us by the Post Office. Also, please use your credit card or check on a U.S. bank or international money order. The bank's processing assessment charged on overseas checks devours that minuscule fee we charge for a subscription.

-10-10- INTERNATIONAL *News*

Chuck Imsande, W6YLJ
10-10 19636

New QSO Party rules

After much discussion and coordination with a number of 10-10 members, the QSO Party Committee under the direction of the QSO Party Manager, Don Ward, WØRTV, #13962, has established a new set of QSO Party rules. These new rules become effective 1 January 1998, and will apply to all 10-10 QSO Parties beginning with the phone party in February. The basic changes to the previous rules are as follows:

- Prefix multipliers will no longer be used.
- DX contacts (contacts outside your own country) with a 10-10 number will count 3 points. DX contacts without a 10-10 number will count 1 point.
- Contacts within your own country will count 2 points with a 10-10 number and 1 point without a 10-10 number — no change from previous rules.

The details of the new rules are being published in the January 1998 issue of the *10-10 International News*. Be sure to check your January issue of the News for the complete listing of the new rules. Don't be disqualified from one of the QSO Parties for not following the new rules. A copy of the new updated 10-10 QSO Party Brochure for 1998 is also available for a #10 (business size) SASE from Mike Elliott, KF7ZO, 10-10 Information Manager, 9832 W. Gurdon Ct., Boise, ID 83704-4080.

QSO 1998 Party dates

The QSO Party Manager, Don Ward, has announced the QSO Party dates for the year 1998. Mark your calendar and reserve the following dates:

Phone	7-8 February
CW	2-3 May
Phone	1-2 August
Sprint	10 October
CW	31 Oct.-1 Nov.

All parties begin at 0000 Z on the date noted and end at 2400 Z on the noted day. The 10-10 Sprint party is a 24-hour event and the parties are 48-hour events. Remember, your 10-10 dues must be current for you to submit your log for any 10-10 QSO Party; however you may participate, give your number, even if your dues are not current. Non 10-10 members are always welcome to join in the fun of a 10-10 QSO Party. It is a great way to work your 10 contacts required to become a 10-10 member.

10M DX is happening

Mike Davidson, N5MT, #24949, *10-10 International News* DX Editor, reports that he worked a total of 85 countries with 275 contacts and 29 of 40 zones in the recent CQ WW Phone and CW DX Contests. These were all on 10-meters! This sure indicates that the new sun spot cycle is well on the way to full recovery. Contacts into Europe, Africa, Asia and Oceania had weak to minimum strength signals. Central and South America signals were excellent, some well over S9, Mike reported.

Mike also reported that the solar flux is expected to range from 100-125 during the first quarter of 1998 and should steadily increase. With these numbers you can expect to work DX on a more regular basis.

The official 10-10 DX country count is now at 288 countries. 10-10 is truly an international organization. Carol Hugentober, K8DHK, #29588, 10-10 DX Manager, reports the following recent new DX10-10 members include DF4PL, #68932; DJ2VZ, #68933; DL2KK, #68934; DJ6SE, #68935; DJ5JO, #68936; DK4QO, #69087; VA3LGD, #68937; and PL3LSP, #68938. We welcome these new DX members to 10-10.

Meet Christine, 5Z4LL, #50437

Christine Sachse, 5Z4LL, #50437, is the only YL in Kenya since 1988 and lives 20 kilometers north of Nairobi, the capital. She is a schoolteacher, mother of two children, eight and ten years old. Kenya is composed of 40 different tribes and Christine enjoys her holidays traveling through Africa and other coun-

tries.

Christine is often on 10 Meters with her TS-450 and 5-element beam antenna. If you are lucky enough to work Christine, QSL direct to P.O. Box 14425, Nairobi, Kenya, and include return postage.

10-10 Chapter News

The Springbok Chapter has reached a milestone in its short history by reaching over 1800 members in just less than 6 years. Members are in all 50 states and over 25 countries. There are also 48 OM/YL teams in the chapter.

The weekly Route 66 Chapter net is held on Saturday at 1730Z on 28.370. One recent Saturday had 27 check-ins from 12 states. Look for this active group on Saturdays at 1730Z. Net controls Steve, KJ7KW, and Dick, K7RRR, invite all to join in the Arizona Desert 10-10 Net on Sunday nights on 28.445 at 0230Z.

Scholarship News

The Board of Directors, at the last board meeting, voted to increase the 10-10 Scholarship Fund from three $1000 scholarships each year to four $1000 scholarships each year beginning in 1998. The 10-10 scholarship program fund is supported by donations from the membership. Each year, donations are requested of the membership and each donation qualifies the member to become a Scholarship Fund Volunteer. A certificate of appreciation is sent for each contribution, and each year the certificate is revised to indicate the current year. If you would like to become a Scholarship Fund Volunteer and support this worthy 10-10 program, send your donation to Morrie Goldman, W6EHM, #4189, 10-10 Scholarship Manager, 21518 Marjorie Ave., Torrance, CA 90503-6814. Please make your check payable to the 10-10 Scholarship Fund. No amount is too small for this worthy cause.

Need Info about 10-10?

If you would like information about 10-10, and how you can become a member and receive your very own unique 10-10 number, send $2.00 and an address label for the return of your information package to: Mike Elliott, KF7ZQ, #54625, 10-10 Information Manager, 9832 Gurdon Ct., Boise, ID 83704-4080. No SASE please as the information package requires a 9x12 envelope. You will receive a copy of the 8-page "Prospective New Member Brochure" which contains everything you want to know about the 10-10 organization, a listing of all 10-10 Chapters, their day, time, and frequency of net operation and an application form. Also enclosed will be a copy of the latest issue of the *10-10 International News*, the 32-page 10-10 quarterly magazine.

If you have lost, or forgotten, your 10-10 number, send the same as above to Mike and you will get the information package along with your original 10-10 number.

If your membership in 10-10 has expired and you would like to renew your dues, send your dues ($10.00/year) to: 10-10 International Net, Inc., 643 N. 98th Street #142, Omaha, NE 68114-2332. You will become an "ACTIVE" member again and receive all of the benefits of 10-10 including the quarterly *10-10 International News*. Remember 10-10 numbers are issued for life and your originally issued number is always yours.

Texas antenna victory

Hams in Greenville, Texas, have succeeded in getting Amateur Radio antennas and towers exempted from a local telecommunications facility ordinance. The Sabine Valley Amateur Radio Association worked hard to win the exemption for Amateur Radio by getting the City Council to reject a Planning and Zoning Board ruling that would have kept ham antennas in the ordinance. The exemption is expected to serve as a model for a larger section-wide ruling. —*ARRL, Newsline*

propagation

Carl Luetzelschwab, K9LA
1227 Pion Rd. • Ft. Wayne, IN 46845
e-mail: k9la@gte.net

Letters I'll probably never receive.....

•

AB writes: My propagation prediction program doesn't predict 6M openings. Does that mean it's no good?

Nope. Remember the discussion of the propagation model in the October column? The model is based on measured data (critical frequencies from years of worldwide soundings) correlated to an indirect measurement (sunspots or solar flux) of the ionizing energy (extreme ultraviolet, etc). The best correlation has been found to be between monthly median critical frequencies and smoothed sunspot number (12-month running average) or smoothed solar flux. If you dig into the statistics, 6M openings would be predicted to occur with a very low probability — much lower than what really happens. Thus the model of the ionosphere is the limiting factor, not the prediction program. When we have a more accurate model of the ionosphere, prediction accuracy at 6M (and at 10M, which is presently considered to be at the ragged edge of prediction accuracy) will improve.

•

CD writes: I recently moved from the city to a rural area. I now can put up some decent low band antennas. Along the way, I've learned a lot about HF propagation — can I simply apply my higher HF knowledge to 80M and 160M?

Interesting question. There are some simplifying assumptions that allow us to do in-depth analysis of HF propagation above 4MHz or so. These assumptions start falling apart as our operating frequency approaches the 80M band, and aren't very good at all on the 160M band.

For example, one of the very basic assumptions for the higher HF range (~4-30 MHz) is that the index of refraction (which determines how much the wave is bent as it travels along its path) is independent of the direction of the RF. That means we can analyze propagation using simple ray tracing techniques by just knowing how the electron density varies with height along a path. In fact, such a ray tracing program appears on page 139 in the ARRL Antenna Compendium, Volume 5.

But as the operating frequency approaches 80M, the index of refraction begins to depend more and more on the direction of the RF. How can that be? It's because the earth's magnetic field comes into play more and more as we go lower in frequency, and it affects the index of refraction. Thus the direction of RF is constantly changing relative to the magnetic field (strength and orientation), which means the index of refraction is changing relative to the RF direction.

The full-blown study of electromagnetic propagation in the presence of a magnetic field is called magneto-ionic theory, and it addresses polarization and absorption issues as well. This gets very mathematical very quickly. This also explains why most prediction programs do not include 1.8 MHz — it's just too complicated down there. Using magneto-ionic theory, the equations of motion for these lower frequencies do include the effects of the magnetic field's strength and orientation. Although they are complicated, they do accurately account for what's really happening.

To summarize all this, there's more going on at 80M and 160M than you may realize. Some interesting things happen down in the medium frequency range that don't happen at higher frequencies. For example, see GH's letter below. Propagation down at 80M and 160M does follow theory — it's just more rigorous theory that generally is not understood very well.

EF writes: I read that absorption is inversely proportional to the frequency squared. Does this mean that absorption decreases by 6dB every time you double the frequency?

Not quite. The equation you refer to is absorption = A/(Fop + Fh)^2, where A is the absorption index in dB (which depends on sunspot number, season, elevation angle of the wave, etc), Fop is the operating frequency in MHz, and Fh is the gyrofrequency in MHz (the frequency at which an electron spirals down around magnetic field lines, and is ~1.0 MHz).

The important item to note is that this equation, because of how it is derived, is already expressed in terms of dB (that's why A is in dB). Using typical values of A (300 dB, for example) shows that going from 4 MHz to 8 MHz results in an 8.3 dB decrease in absorption. Going from 14 MHz to 28 MHz results in a 1.0 dB decrease in absorption.

If you work through the math in the example above, you'll find that you could say that when the frequency is doubled, absorption decreases by a factor of about 4 — that's true. Just don't "10log" it to convert it to dB, because it's already in dB.

•

GH writes: I've seen some discussion in relation to multiple hops versus ducting down on the lower frequencies. I'm a firm believer in multiple hops, and will never acknowledge ducting unless someone can

prove it to me.

Interesting topic. First let's define the two scenarios. Multiple hops means the successive bouncing of electromagnetic energy between the ionosphere (refraction) and earth/ground (reflection). Ducting means the energy is trapped between two regions (usually the E and F region) and goes for some distance (not necessarily the whole way) without an intermediate ground reflection.

One could say that ducting is an exotic mode, and that's why it's hard to believe it happens with any regularity. But many interesting (and consistent) things happen up there in the ionosphere when the magnetic field is taken into account. For example, the earth's magnetic field is directly responsible for transequatorial propagation, which is a very consistent and well-documented mode of propagation. Clumps of electrons on either side of the geomagnetic equator (due to the effects of the magnetic field) refract signals just right to make a long single hop. A detailed article on transequatorial propagation, including electron density profiles and ray traces, appears on page 135 of the ARRL Antenna Compendium, Volume 4.

But back to ducting. How does one analyze the ionosphere to see if ducting exists? And if it exists, what are its characteristics? It surely can't be done using the simple ray tracing program referenced in CD's letter above. What's needed is a ray tracing program that correctly takes the earth's magnetic field into account — in other words, it needs to properly address magneto-ionic theory.

Fortunately, such a program exists. It's in PROPLAB-PRO Version 2.0, a propagation prediction and analysis software program offered by the Solar Terrestrial Dispatch out of Canada. With it, one can accurately ray trace paths knowing that magneto-ionic theory using the Appleton-Hartree formula is properly addressed. Doing this shows ducting to naturally occur at the lower frequencies due to the effects of the earth's magnetic field. It's interesting to note that the ducts can be non-reciprocal (resulting in signal strengths greater in one direction than the other as is reported in the literature discussing propagation at these lower frequencies), and the ducts can also account for the often-reported dawn enhancement. For more details on ducting on 160M, keep an eye out for NM7M's article in a future issue of *Communications Quarterly*.

I agree it's hard to actually prove ducting exists, but I'll venture to say that if one has a good understanding of how the earth's magnetic field affects medium frequency propagation, then one would tend to believe in ducting at these lower frequencies.

•

IJ writes: I saw a ray trace in an antenna publication (not the ray trace article referenced in CD's letter above — it's another one) that showed a signal returning to earth after being refracted above the F region peak. That's not right, is it?

You got it. If the signal is *above* the F region peak and since the signal is refracted *away* from increasing ionization, then it would go off into space. There's probably an error in the author's ray tracing program.

•

KL writes: Since I can't do anything about coronal holes, the solar wind, and all that other exotic stuff, why should I learn anything more than just the basics?

It's true that we can't do anything about these exotic factors — for that matter, we can't even do anything about the simple stuff. But we sure can learn to take advantage of what we're given. And I think the more we know, the better off we are. In my opinion, in addition to learning the practical stuff, one shouldn't shy away from the more exotic stuff. I would not discourage anyone from learning all they can, whether it appears to be practical or not.

April 1st earthquake drill

California may hold a full-blown earthquake preparedness drill next April 1st. Will anyone believe the alerts when they are broadcast?

The California Office of Emergency Services has begun a series of planning meetings for next year's Earthquake Preparedness Campaign. The OES asked broadcasters to publicize the annual "Duck, Cover and Hold" drill scheduled for Wednesday, 01 April 1998. The broadcast community has agreed, but some wonder if the selection of April 1st is a good idea. Several question whether the public would even believe a real earthquake alert on that day unless they actually felt an earthquake.

Amateur Radio emergency preparedness groups routinely take part in this practice event. —*via various sources*

AERIALS

LIL PADDLE
& KURT N. STERBA

Lil begins

I have mine. Do you have yours? Remember how, in the cinema stories about cowboys, the desperados wore the black hats and the good guys wore white hats?

Here is a "white hat" for Kurt's "good guys." Only $8 for the cap itself and $2 shipping (most of which, I've been told, goes to the Post Office) and handling (a sturdy box, so your chapeau will arrive in pristine condition, is not inexpensive). Radio operators residing in California will add 62¢ tax. That's a small sum indeed to pay for the privilege of living in the state with multi-laned freeways and a salt water path to an Asian land whose polite amateurs will fill your bureau envelope with brightly colored QSL cards.

And don't forget, at Dayton, 11:30 a.m. on Saturday, you and your fellow capees will stand shoulder-to-shoulder, like the men's chorus, in front of the display of the Granite Antenna Co. and chant, "Ohm, Ohm, Ohm." Or you could sing "Laura," as in "Laura your dB claims."

Possibly after that performance the group could perform a conga line dance down the aisles to another booth or two. On second thought, however, I do think that propriety would limit such efforts to the first named company. I am not as vicious as my beloved and betrothed.

Kurt is very touched by the report of a great number of cap sales so far. He sees it as a sign of the bond between the readers and himself. The evidenced rapport has come to have such meaning to him that he has requested that when he shuffles off this mortal coil he be buried wearing the cap.

There appears to be a scribe on the radio scene who seems to be a veritable cornucopia of misinformation. We'll call him "Marty Feldman." The latest episode was brought to our attention by a distinguished member of the Bar in the state of Georgia, who wrote:

"I am not a famous author of instructional materials for the prospective ham operator. Please inspect the enclosed item from someone who is, which was published recently. Ouch. Hasn't he familiarized himself with the effects of loss?

"Please compare the item from our friend with the statement in the same issue by a different columnist as to the efficiency of the quarter-wave. They should talk among themselves.

"Having read many articles by 'Marty Feldman,' it's a sure bet that if you sent him a blown fuse he'd give it a favorable review.

"Thank you for standing up for the laws of physics. Almost no one else does."

The article the jurist referred to was in *Populist Communications*. In it the writer exclaimed that when changing from a 96-inch whip (used for both 10 and 11 Meters) to a three-foot loaded whip (and I quote) "performance on both bands was slightly better on transmit" and "gave me a better SWR match when preset to straddle the 10 and 11-meter bands than the big whip."

If that is such a truly desirable trait of antennas we wonder what sort of exuberance he would display after utilizing a 50-Ohm resistor in place of his normal antenna. No doubt further squeals of delight would find their way into print.

So as we would not miss the point, he drove it home by saying "both my CB and ham set tuned quite nicely into the Wilson 5000 base-loaded antenna with the VSWR not terribly high on either 10 or 11 Meters."

Those who are accustomed to but a modicum of precision would appreciate numerical values over "not terribly high."

We chuckled into the evening over this tidbit. He related that he talked to a station in Australia for 45 minutes and then went out and placed his hand upon the coil, "it was only moderately hot."

"Moderately hot" HOT? Even slightly warm would have been too much. For you see, all that HOT was staying right there and not going across the sea. Energy can not be in two places at once.

In the same issue, another columnist wrote: "Mounted in the same place, a nine-foot whip antenna is the best CB antenna you can have on your car or truck. Anything less (shorter) will not get out as far, regardless of the manufacturer's claim." Good for you Don Patrick!

But enough of this CB talk, I will now have to go and wash out my typewriter with soap.

Kurt butts in

A Kurt pal picked up a brochure from a new antenna company and then sent it to me, which is a most natural and highly sensible thing to do.

At first glance I saw that they rated a Two Meter, five-element Yagi at 8.4dBd and I was about to praise them for being not like some others whose figures seem to come out of the marketing department instead of the engineering department.

Then I looked a bit closer. The boom is 24 inches long. Hmmm, that's two feet. A little mental arithmetic. A full-wave for Two Meters is about six feet. Two feet is one-third of that, so the boom is about one-third wavelength. That's pretty short for five elements. Three elements would be more like it. To help relate this, have you ever seen a five-element Yagi for 20M on a 20-foot boom? No, that's the length for a three-element.

Then the brochure detailed a 440 MHz antenna with seven elements on a boom of 21.5 inches with a gain of 13.4dBd. That means this antenna would have 13.4dB over a dipole previously located just where the Yagi is now.

Let's examine this. That 21.5 inches at 440 MHz is boom length of 0.80 WL.

I'll check that out with a book that takes all of this very, very seriously. In order to get 13.4dB gain this book says I need a 17-element Yagi with a boom that is 3.2 WL long. As far as an antenna with a 0.8 WL boom, that checks in with 9.2dB gain.

This raises some interesting questions. What are the answers?

The first question is: Has this manufacturer actually and truly

measured this antenna according to the accepted industry procedures?

(2.) Has this manufacturer ever read any serious antenna books?

(3.) How about "The ARRL Antenna Book"?

If the antennas were actually measured and found to be at such great variance with the figures in the readily available technical literature, did the manufacturer wonder what was askew or instead dance the jig and say, "I must be a genius, I've beat everybody!"

Let's look at some other antennas. For example, it takes K1FO (and you don't need me to tell you that he is no slouch in the antenna department) 13 elements on a boom 6.1 wavelengths to come up with 15.7dBd. Another antenna takes 13 elements on a boom that is 4.6 WL to come up with 13.7dBd which is just 0.3 dB more than this (under discussion) 0.8 WL boom with seven elements. Let's look at how to get 14dBd (just 0.6 dB stronger than the antenna under question) that would take 10 elements on a boom 3.5 WL long.

One must ask this question: Is the antenna company aiming their product at only the most gullible among the amateurs? Do they not care if they alienate those who have cracked open a book or two? I would be most pleased to offer the antenna company the opportunity to give their side of the story in this column.

Possibly, for those who got their licenses at the weekend licensing classes, a basic Yagi primer seems to be in order.

A three-element Yagi on a 0.3 WL boom will have a dBd gain of about 6. This, the equivalent of a four times power gain, comes about because power is taken from the directions normally radiated by a dipole and funneled into one direction.

Moving up the ladder of gain figures requires a longer and longer boom. While we all like nice neat round numbers and it is casually bandied about that doubling the boom length increases the gain by 3dB, that is not quite true.

The actual theoretical figure is 2.8dB but the figure in reality is most likely closer to 2.5dB. So, it would take a boom 0.6 WL long (and five elements) to realize about 8.5dB or so above a dipole. I said "or so" because the number can be slightly different depending on how you have juggled the element lengths and element spacing to reach certain numbers regarding the front-to-back ratio and the SWR bandwidth.

Now, in order to get this antenna up to around 10dB would require a doubling again of the entire previous boom length up to now a 1.2 WL boom. For example, there is a National Bureau of Standards (which, if you listen to WWV, you know is now the National Institute of Standards and Technology) reference antenna that has six elements on a 1.2 WL boom for 50 MHz for which they claim 10.3dBd.

According to page 18-20 of the latest *ARRL Antenna Book* we see that it takes 15 elements on a boom 3.4 WL long to get 13.57dBd (on 432 MHz), which is but the tiniest sliver (0.17dB) above the 13.4dBd antenna we found in the brochure. Maybe the manufacturer coats their antenna with the magic ingredient 44BX?

On the prior page of the ARRL book is a chart that shows maximum gain per boom length. The forward gain is given in dBi. Subtract 2.14 from that figure to get to the dBd figure. Armed with that chart you can question some of the figures given by some of the manufacturers.

I would say, you have probably never seen that explanation anywhere else. But one of the more senior readers of this column wrote in about me saying that and said the readers are brighter than I give them credit for. Well, this column has never pretended to be for those with post-graduate engineering degrees or even those working as high-level technicians. I've always viewed these monthly meetings as intended for those who are still trying to dig themselves out from the misinformation presented elsewhere.

You can find some interesting things going through *The ARRL Antenna Book*. For a moment let's first look at an antenna manufacturer who totally castigates the trap tri-bander in his book. A rotatable dipole, I think he called it.

Well, on page 11-28, Dean Straw, N6BV/1 (the book's editor), totally demolishes all that by proving, with Ohm's Law, that the trap losses in the Hy-Gain TH6DXX are about 0.5dB. How? Gee, buy the book. And, no one can hear a 1/2 dB difference!

Lil reclaims the floor

And now (for the 75M mobile group) we quote from the respected and revered great Dutch antenna scientist Dr. Van "Mouse" De Row. In Europe he was known as a great QRPer because he adopted his architect cousin's philosophy of "Less is More." From his post-doctoral lectures: "Without the slightest fear whatsoever of contradiction, I would say that the greatest severe and prevalent misinterpretation (call it sheer fallacy if you will), in regard to SWR, rampant throughout hamdom, is that incorrect, mistaken, untrue, wrong and false assumption that there does exist some exact, actual, real, constant, consistent, undeviating and uniform lockstep reciprocity connecting a lowering of the bounced-back energy and a subsequent rise of radiated RF.

"Expressed but yet another way, there is a multitude suffering under the delusion that each reduced Watt of reflected power results in now an extra Watt of expanded RF heading skyward.

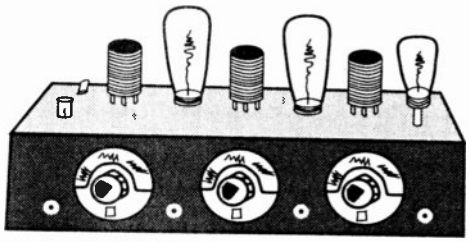
"Tragically, the abundance of hams who clutch at such a groundless, illogical, fallacious and mistaken hypothesis is absolutely astonishing!"

(The fearless duo will return next month with another exposé and the theory behind it. Only those who wear the "Kurt White Hat" will be allowed to read it.)

Deceased vanity club apps

Club station trustees requesting the call sign of a deceased member as the club's station vanity call sign, should be sure to check 'Box 7D' on FCC Form 610-V. Make certain you have a letter of consent from a close relative of the silent key, then fill in the deceased's call sign and the relationship of the close relative who wrote the letter of consent. —*ARRL*

OLD-TIME RADIO



Developing the radio bug

JIM EAKIN, W6SBY

The second and third grade grammar school interval was the beginning of Jim's political awareness. These were euphoric times. The family had a broadcast radio receiver in a mahogany wood case with a separate large pedestal-mounted magnetic speaker. Dry batteries on the floor underneath enabled that elecronic marvel to spill out news and very flat sounding music. Charles Lindberg had flown the Atlantic nonstop in his "Spirit of Saint Louis." The headlines read "We Are Here" (my plane and I), May 1927.

When the financial stock market crashed in 1929 things took on a grim aspect at home. Jim could not figure out what it was all about. He was seven years old. The wood-cased table radio with the many knobs brought the bad news. They moved to Long Beach shortly after, having had to sell a house in Pasadena.

A young neighbor friend had a crystal set radio with large aluminum "Cannonball" headphones (cans) which Jim greatly admired. It had an adjustable cat whisker (to locate the most sensitive contact point on the galena crystal) and a vertical coil about 3 inches in diameter, the height of which could be adjusted by means of a clamp on a round wood dowel in the center. Changing the height of this coil, turn spacing, and therefore the inductance, was used to select the desired broadcast station. KFOX, KFI and others were very strong. This coil was wound from wire covered with green silk and looked like a big coil spring. Binding posts were fitted for antenna and ground wires and for the headphones. No volume control was necessary, the rectified RF energy driving the headphones. It was a strictly passive device. The selectivity was reasonably good. It was all mounted in a black-stained oak box with a fancy lid. The father of the owner noted Jim's intense interest in the little marvel, and knowing the family was anything but affluent asked his son to give it all to Jim. There was joy that night.

Moving on to Long Beach Poly High School opened up a new world to the budding radio enthusiast. The real kicker was Radio Science, perhaps the first time ever taught in high school. Cy Farrand had written his own text book, a one inch thick mimeographed document — Ohm's Law, Electricity and Magnetism. There was code practice and radio construction projects in the second year. There was a radio club with visits to the old Polsen Arc shore station at Hines-Clearwater, KOK, to KFOX and to the 50 kW clear channel station, KFI, in Buena Park. The high-level plate modulation transformer at KFI was as big as a bedroom. The Poly High ham club went to visit W6AM, Don Wallace, and wife W6MA in Los Cerritos. One could draw an RF arc off the unused tank coils on a shelf near the transmitter when Don pressed the key. His sons, Bill and Don Jr., were students at Poly.

Cy Farrand knew how to get a boy's attention and he got Jim's for life. In order to finance his radio habit, Jim began to carry newspapers. More crystal sets had been constructed but now he was building vacuum tube receivers. He took the Amateur Radio license test at 16 but was so nervous he couldn't hold on to the pencil while trying to copy 13 wpm. After messing around with Ford spark coils and getting into the neighbor's BC receivers he took up bootlegging on the old 5M band, 56-60 MHz, using W6HQN which the Call Book showed to be unassigned. At the same time he studied code in earnest. The 5M receiver was a type 56 superregenerative dector — hisssss — and 2-45 type tubes with the bases removed in a push pull self-excited modulated oscillator, maybe one watt output. It worked on voice talking around town to Radio Science classmates. Cy Farrand cautioned his students, including a couple of girls, against bootlegging. $2,000 fine and/or 10 years in jail (or was it the other way around?), FCC Rules and the Radio Act of 1934.

At 17 Jim passed the code and written test, was issued W6SBY, Class B, and moved up into the elite ranks of legal radio amateurs and the world of long distance HF communications. He also constructed a 10 tube superhetrodyne with mechanical bandspread and plug-in coils for changing bands. It was finally aligned using a code practice buzzer as a signal source. Oh boy, VKs and Zed Ls from Oceania.

Anxious to "get on the air" (legal-like) he yogied up a crystal oscillator CW rig, type 76 tube with about one watt output and worked W6PQF in San Francisco at 11:15 p.m., 22 January, 1940 on 40M, 5-8-9 both ways. He was off and running now. There followed the construction of the big CW rig, 100 watts, with the push-pull 809s and the 1000-volt power supply and Triplett panel meters; peak the grid current and dip the plate current. It took a while to figure out the proper grid bias and get the amplifier properly neutralized.

A radio repair shop in Long Beach on 4th or 5th Street near Locust Avenue displayed a working television in the front window. It received a picture, green and white, on perhaps a 6-inch screen, with the signal from W6XAO, an experimental TV broadcast station in Hollywood. Memory places this transmission from Don Lee facilities in about 1938 or '39. The round picture tube scanning raster was driven by electro-static deflection. This little demonstration was to signal a new era in mass media communications following World War II, which was soon to follow.

Contests

Dave Goodwin
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Entry categories

Just about every contest allows entrants to select from among a number of entry categories. Each category allows entrants certain opportunities, and imposes certain limitations. You should choose a category that corresponds to the resources of your station and the interest you have in the contest. You don't have to preregister in any category for any contest, and you are free to change your category in midstream, or even after the contest, provided you claim credit only for those contacts you made that were consistent with the limitations of your ultimate category.

While each contest has its own unique features and rules, the following are among the most common entry categories:

The first big categorization divides single- from multi-operator stations.

Single operators, as you might infer, are those who operate alone. That means no one else can help you operate, log your contacts, turn your antenna, or find new stations to work. This doesn't inhibit your spouse, children, parents or a buddy from bringing you a cup of tea or a meal during the contest, but it does prevent them from sitting in for you while you make a trip to the smallest room or catch a few winks, or from listening in and helping you copy the stations you work.

Within the Single-operator category, most contests have special subcategories dividing single-band from multi-band entrants. Multi- or all-band entrants may use all the bands available in the contest to accumulate contacts and multipliers toward their scores. Single-band entrants are free to use any bands they wish, but may only count the contacts they make on one band toward their scores. Most very serious single-band entrants make very few or no contacts on any other bands during a contest.

Even among the single-operator all-band entrants, there are several subcategories in many contests. These include special categories for those running QRP (5W output or less), or "Low Power" (100W output or less).

Many of the most competitive single-op all-band entrants have a second complete station, and while "running" (calling CQ and working people as fast as possible) on one band, they will use the second station to find new multipliers on another. This requires a lot of skill, mental agility, and careful attention to the ergonomics of your station. I am not aware of any contest that restricts or reclassifies this kind of operation, although there are some people calling for a "single-operator multi-transmitter" category in the major contests. I think it would be a bad idea to create a separate category for this group, as it serves to punish those who have developed their skills and have a will to innovate.

Most contests have one or more multi-operator categories. These allow several people to team up at one location with everyone's efforts contributing to the score. Working a contest with a few friends can be a great deal of fun, and a great way to get started in contesting.

The two most common kinds of multi-op categories are multi-operator single transmitter (multi-single) and multi-operator multi-transmitter (multi-multi). I know of no contests that have special categories for multi-ops who use lower power levels.

Multi-singles are often just that — several operators taking turns on just one transceiver, but some contests (such as the CQ World Wide DX contests) allow multi-singles to operate a second or third station to collect new multipliers. There are usually very detailed rules describing the permissible uses of a "multiplier station," so check these out before you try.

The multi-multi category usually limits its entrants to transmitting only one signal at a time on any one band — in other words one station per band. If there are six bands allowed in a contest, the most competitive multi-multis will have six stations going simultaneously, and some have an additional station on each band looking for new multipliers, wired so that only one of the two transmitters can be used at any instant. This requires a lot of operators, a lot of gear, a lot of antennas and a lot of time to sort out problems of interference between stations. It also involves a lot of fun.

Some years ago, the ARRL's DX Contest added a new wrinkle in the multi-op game: a multi-operator TWO-transmitter category. This is a unique category and offers a great opportunity for some additional fun in this contest. To my knowledge, no other contest has copied ARRL's innovation.

PacketCluster, a packet-radio-based system for sharing DX information, has revolutionized HF DXing, and had a great impact on contesting. Some contests have created a special "assisted" category for single-operators who use PacketCluster to find new multipliers, while others allow all entrants to use this help. If the rules of a contest are silent on packet or other kinds of in-contest assistance, you should assume that they are not permitted to single operators, and if you collect data from the "cluster," reclassify yourself as a multi-op. Multi-op entrants of all categories may freely use this kind of assistance.

Even if you enter a contest as a very casual entrant, if you choose your entry category correctly, you may end up a winner, as most organizers award certificates to the top-scoring entrant in each category in each US call area, or even each state.

Contest of the Month — ARRL DX CW Contest

0000 UTC Saturday 14 February to 2359 UTC Sunday 15 February 1998.

(PST: 4 p.m. Friday 13 February to 4 p.m. Sunday) (EST: 7 p.m. Friday 13 February to 7 p.m. Sunday)

The SSB contest takes place at the same times on 7-8 March 1998 with identical rules.

This is one of the biggest events in contesting, surpassed only by the World-Wide DX Contests and the WPX Contests sponsored by *CQ* Magazine. In this contest, the CW sections of 160 through 10M (but not the WARC bands) fill with all sorts of DX. DX stations may work only Amateurs in Canada and the continental USA for credit, so not only will the DX be anxious to work you, but you will only be competing with other North Americans to work. DXCC in a weekend is quite commonplace in the ARRL DX Contest. This is a great opportunity for you to increase your DXCC total, or to find those missing zones for WAZ.

In each contact, amateurs in the continental USA send DX stations their RST and state. DX stations (including those in Alaska and Hawaii) will send RST and power in watts. DX stations

Contest	Date/Time	Bands	QSO points	Multipliers	Exchange	Entry Catagories	Entries
Vermont QSO Party	0000Z 7 Feb 2359Z 8 Feb	160-10M CW & SSB	1pt/QSO Work VT, NH, ME stations only	Vermont counties, Vermont club stations. For VT stations: VT, ME NH counties, U.S. states, VE provinces, DXCC Bonus QSO points: QSOs w/W10FW 2,000; W10FW/M 5,000	RST State VT, ME, NH stns send county	Single op high power Single op QRP Club + Rover for VT stations	1 Mar KE1BV
PACC (Netherlands)	1200Z 7 Feb 1200Z 8 Feb	160-10M CW & SSB	1pt/QSO Work Neth. only	Neth. provinces (12) on each band	RST Ser#	Single Op: Mixed Mode, CW only, SSB only, QRP Multi-op: Single or Multi-tx	31 Mar PA3BFM
Spanish RTTY	1600Z 7 Feb 1600Z 8 Feb	80-10M RTTY	1pt/NA 2pt/DX x3 on 80, 40M	Spanish provinces (52), DXCC countries on each band EAs will send 2-letter province abbreviation	RST CQ Zone	Single Op: All bands, Single band Multi-op, Single transmitter	9 Apr EA1MV
North American Sprint SSB (NCJ)	0000Z 8 Feb 0400Z 8 Feb	80-20M SSB	1pt/QSO	Canadian provs/terrs U.S. States NorAm DXCC Countries	Ser# Name Prov	Single op all bands only Entrants may combine their scores to form a "team"	1 mo. K7GM
North American Sprint CW (NCJ)	0000Z 15 Feb 0400Z 15 Feb	80-20M CW	1pt/QSO	Canadian provs/terrs U.S. States	Ser# Name Prov	Single op all bands only Entrants may combine their scores to form a "team"	1 mo. N6TR
ARRL DX CW	0000Z 21 Feb 2359Z 22 Feb	160-10M CW	3pt/QSO Work stations outside Canada, USA only	DXCC on each band	RST Prov	Single Op: All bands, Single Band Assisted, Low power, QRP Multi-op: one, two or multi-tx	1 mo. ARRL
CQ 160M SSB	2200Z 27 Feb 1600Z 1 Mar	160M SSB	2pt/VE 5pt/NA 10pt/DX 5pt/Mar. Mob	Canadian call areas, U.S. states, other DXCC countries	RS Prov	Single Op Multi-op	1 mo. K4JRB or *CQ* mag.
REF SSB	0600Z 28 Feb 1800Z 1 Mar	80-10M SSB	15pt/France + terrs 5pt/F. terrs in NA	Departments of France (96), F8REF/00 on each band	RS Ser#	Single op: All bands, single band Multi-op SWL	15 Apr BP 2129 37021 Tours Cedex
UBA CW (Belgium)	1300Z 28 Feb 1300Z 1 Mar	80-10M CW	10pt/ON 3pt/Eur. Union 1pt/other	ON provs (8) + ON prefixes + DXCC countries in European Union	RST Ser#	Single Op: All bands, Single band Multi-op, single tx SWL	30 days ON7LX
RSGB 7MHz	1500Z 28 Feb 0900Z 1 Mar	7000-7030 kHz CW only	15pt/QSO Work UK stations only	UK counties UK stations will send a three-letter county code	RST Ser#	Single op only	17 April G3UFY

Addresses: *CQ* — 76 N Broadway, Hicksville NY, 11801 USA ARRL — 225 Main St., Newington, CT 06111. Callsign — Callbook 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.

running 1,000W (or more) usually send "KW" as their power.

A typical QSO might sound like this:

Station 1: "CQ TEST G3MXJ G3MXJ TEST" (Very short and to the point)

Station 2: "W9QA" (This station replies just by sending his or her call sign once.)

Station 1: "W9QA 5NN 400" (G3MXJ acknowledges the station to which he's responding, and sends a signal report and his power.)

Station 2: "R 5NN IL" (W9QA confirms he received the information correctly, and sends a signal report and his or her state.)

Station 1: "TU G3MXJ" (G3MXJ thanks W9QA for the contact, and is standing by for other stations to call him. If he gets no response, he'll call CQ again.)

Each QSO you make is worth three points. To calculate your final score, first add up all the points from all the contacts you made. This gives you your "QSO points." Then total the DXCC countries you worked on each band. Sum your country count from all bands and multiply that figure by your "QSO points."

Your log

If you use paper log sheets, you can get official forms for a large self-addressed stamped envelope or $1 from ARRL, 225 Main Street, Newington, CT 06111. They also have a web site (www.arrl.org/contests) from which you can send them to your own printer.

As always, there is plenty of good logging software that makes submitting your entry a snap. CT by K1EA, NA by K8CC and TRLog by N6TR all handle this contest exceptionally well. If you do use a computer to log, you can send in your entry by e-mail. Contact ARRL's contest department on contest@arrl.org for more details.

The deadline for entries is one month after the contest. Send your entry to ARRL DX CW Contest, 225 Main St., Newington, CT 06111.

Other February contests

CQ Magazine's 160M SSB contest takes to the air on the last weekend of the month. The rules for the SSB contest are identical to the CW contest, which was featured as "contest of the month" in the last issue. See that article for detailed suggestions about how you can participate.

Also in February, there are two interesting four-hour "Sprint" contests sponsored by the ARRL's *National Contest Journal*. The Sprints have a unique "QSY rule," which obliges each operator to continuously "search and pounce" for every QSO. Here's how it works: If you call CQ or QRZ? to solicit a QSO, after you work one station, you must either move up or down at least 1kHz before you call someone else, or move up or down at least 5kHz before calling CQ again. In practice, participants can make two successive QSOs before

changing frequency. Imagine you hear another station complete a contact. You call that station and work him or her. The frequency is then yours. Call CQ or QRZ?, and work another station. Once you complete the contact, the frequency is now "owned" by the person you just worked, but only for one QSO. You have to move at least 1kHz before you call someone else, or 5kHz before calling CQ. It's a real challenge at the beginning, but you will quickly fall into the rhythm of this fun little contest.

February also sees contests where the action centers on Vermont, the UK, the Netherlands, Spain, France and Belgium. That Spanish contest is for radioteletype (RTTY) operators.

73, and good luck in the contests.
Dave VE2ZP/VE9CB.

FISTS CW Club contest

Novice Round-Up sponsored by FISTS CW Club will be held starting Friday, 13 February at 1700 UTC to Monday, 16 February 2400 UTC. Novice/tech stations get points for working anyone. Above Tech gets points only for working Novice/Tech stations. No repeater contacts. Score 2 points for CW and 1 point for phone. Exchange: Call Sign, Name, RST, License Class, QTH. Total of 50 multipliers, one for each state worked. Score = (number of CW QSOs times 2, plus the number of phone QSOs) times number of multipliers worked. Certificates to the winners and the top scoring Novice and Non-Novice will get a one year free membership in FISTS CW Club. Send Logs and summary sheets and check sheets to: NOVICE ROUND-UP, c/o Dennis Franklin, K6DF, 4658 Capitan Dr., Fremont, CA 94536-5448, postmarked no later than 16 March 1998.

Florida hams respond to surprise tornado

Just after midnight02 November, the beachfront community of New Smyrna Beach, Florida, was struck without warning by a tornado. The storm, rated by the National Weather Service as an F2 twister, carried winds in excess of 150 mph. Damage surveys estimated more than 350 structures were damaged or destroyed, and 32 people were injured — a half dozen or so badly enough to require hospitalization. Remarkably, no one was killed, but some 200 residents were forced to seek refuge in shelters, hotels or with family and friends.

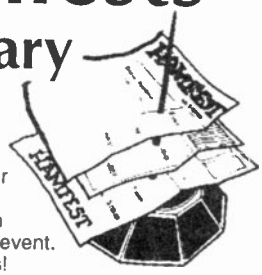
The surprise storm was a bit of a wake-up call for The Central Florida ARES and RACES teams, which had been lulled into complacency by a rather inactive hurricane season.

Volusia County ARES EC Bill Crandall, KM4AE, and his wife, Mary Ann, KD4MSD, activated the Volusia County Amateur Radio Emergency Communications Service (VARECS) and had the emergency operations center operational by 6:45 a.m. 02 November. An emergency net soon was humming on the 147.24 MHz repeater. Within a couple of hours, Amateur Radio priority traffic began flowing between the Daytona Beach Red Cross and the New Smyrna Beach ARC field disaster site service center. Telephone communication also was established with the New Smyrna Beach Sheriff's Office to verify and update damage reports. In addition, damage reports were funneled through Air Force MARS channels to FEMA.

By noon, a working communication plan was established between Red Cross Communications Director Paul Branch, K3NON, and KM4AE. All East Central District County ARES teams responded to a call for outside support. In all, KM4AE reports, 54 hams, including two ARRL PIOs, volunteered their services to help in the tornado damage assessment and recovery effort.

"Our working relationship with the Red Cross communications director was excellent," Crandall said. Hams actively provided communication service for more than 156 hours between 02-08 November — *Bill Crandall, KM4AE; Michael Welch, KF4HFC; Norman Lauterette, WA4HYJ, ARRL Letter*

Hamfests
February



Do you have a hamfest coming up? Send your information to our 28th St. office at least 2 months in advance of your event. We'll send prizes!

•ARIZONA•

The **West Valley Amateur Radio Club** will have its Amateur Radio equipment auction, at St. Clement of Rome Catholic Church Social Hall, 15800 Del Webb Blvd., Sun City (1/2 mile S of Bell Rd.), 2 Feb. starting at 7:00 p.m. Free admission, club keeps 10% on equipment sales. TI: 147.30 (+). Contact George, N7JSA 602/ 933-0854; e-mail: watgl@juno.com

•CALIFORNIA•

The **Livermore Amateur Radio Klub** swapmeet will be 1 Feb., 7 a.m.-noon at Las Positas College, 3033 Collier Canyon Rd., Livermore, CA (Airway Blvd. exit to north of 580 highway), featuring new, used, surplus ham, computer gear, misc. electronics & testing equipment, with refreshments available. Admission/ parking, free. Vendors—$10.00/space (space equals two parking places). Talk-in: 145.350(–) PL 100 (receive and send), 147.045(+) PL 94.8, 147.120(+) PL 100. Contact Noel Anklam, eve 510/447-3857, days 510/ 783-2803.

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The **Naval Postgraduate School Amateur Radio Club** Winterfest will be 21 Feb., 8 a.m. - 2 p.m. at the Monterey Peninsula College Armory, Highway l/Fremont Street. Radio and computer demonstrations, indoor/outdoor swap meet, refreshments available, Admission/parking, free. Vendors-indoors 8X6 $20, outdoors two parking places $10. Talk-in 146.97(–)PL 94.8. Contact Bev McKinney, 408/663-6117, wf98@mcktech.com, www.mcktech.com/wf9B.htm

•COLORADO•

The **Aurora Repeater Association** will hold its annual Swapfest Sunday, 15 Feb. 8 a.m-2 p.m. at the Adams County Fairgrounds, located at 9755 Henderson Rd., Brighton. Featuring refreshments and VE testing available. Talk-in 147.15(+). For additional information contact Wayne Heinen, NØPOH, 303/699-6335, e-mail nrclog@aol.com or USPS P.O. Box 473411, Aurora, CO 80047-3411.

•ILLINOIS•

The 27th annual **Davenport** (Iowa) **Amateur Radio Club** Hamfest/Computer Show is set for Sunday, 15 Feb. at the QCCA Expo Center, 2621 4th Ave., Rock Island, IL. A 60,000 square-foot exhibition floor with wide aisles, ample free parking and one-level handicapped accessibility, allows ample space for large indoor flea market, commercial exhibits, food, and door prizes. Talk-in on the WØBXR 146.28/.88 and 146.04/.64 repeaters. Tickets, $5 advance, $6 at the door (under 14 free). For more information on tickets or table reservations, send SASE to: Kent Williams, K9UQI, 4245 10th St., East Moline, IL 61244-4154. or call voice: 309/796-0718 (4-9 p.m. only please.), Fax: 309/796-0629 (24-hour). e-mail: k9uqi@arcsupport.com

•INDIANA•

The **Laporte Amateur Radio Club** will sponsor the cabin fever hamfest 28 Feb., 7 a.m.-1 p.m. At the Laporte Civic Center. Admission $5.00, tables $5.00 each. Talk-in K9JSI 146.610 (131~8pl) 146.520 simplex. For details contact John, N9ROH, LPARC, P.O. Box 30, Laporte, IN. 46352; 219/326-7182 evenings.

•IOWA•

See Illinois.

•MASSACHUSSETTS•

Algonquin Amateur Radio Club Flea Market will be held Saturday, 14 Feb. at Marlborough Middle School Rte. 85, Marlborough. 6-ft. tables 10-ft. spaces, $12 before 2/8/98 or $15 after that date. General admission $3. Time: dealers 8 a.m. and general admission 10 a.m.-2 p.m. Contact Ann Weldon, KA1PON before 9 p.m. at 508/481-4988 or AARC, Box 258 Marlborough, MA 01752.

•MICHIGAN•

Cherryland Amateur Radio Club's 24th Annual Swap-n-Shop will be held 14 Feb at Immaculate Conception Middle School. 8 a.m.-noon. VE tests following Swap at 1 and 4 p.m. Pre- register or register at Swap only. Talk-In: 146.86. Additional Information: Joe, W8TVT 616/947-8555 or Chuck, W8SGR at 616/946-5312.

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The **Livonia Amateur Radio Club** will hold its Swap 'n Shop, Sunday, 22 Feb., 8 a.m.-3 p.m., at Dearborn Civic Center, Dearborn. Talk-in on LARC Repeater 144.75/ 5.35 and 146.52 simplex. Reserved tables $16 plus $5 adm. For info, send 4x9 SASE c/o Neil Coffin WA8GWL, Livonia ARC, P.O. Box 51532, Livonia, MI 48151-5532; Club phone 313/ 261-5486; Web page: www.larc.mi.org

•MINNESOTA•

The 17th Annual Midwinter Madness will be held Saturday, 14 Feb. 1998 at the National Sports Center in Blaine, Exit #32 off 35W., 7:30 a.m.-3:00 p.m. Admission, $7.00. Super buys on computers, software, hardware, components, peripherals, Amateur Radio equipment. Over 40 commercial vendors; over 300 flea market tables selling used equipment, over 4,000 people anticipated. Write RARC, P.O. Box 22613, Robbinsdale, MN 55422, or call 612/ 537-1722.

NEW YORK

The **Long Island Mobile Amateur Radio Club** is sponsoring the Long Island Indoor Hamfair 22 Feb. at the Freeport Armory, Freeport. Open 9 a.m.-2 p.m. Talk-in on W2VL 146.85 repeater. General admission: $6, children free! All spaces $25 (Includes one six-foot table and admits one person). Special close parking and/or drop-off area for vendors. Opens 7 a.m (vendors only). Advance registration only! Send your check to LIMARC, P.O. Box 392, Levittown, N.Y. 11756-0392. Limited space, some with electric hookup. Free parking, food, refreshments, door prizes. For reservation form contact Rich, N2WJL, n2wjl@ juno.com or write: Long Island Mobile Amateur Radio Club, P.O. Box 392, Levittown, NY

11756. 24-hour infoline 516/520-9311. Web Page: http://members.aol.com/RaySkJLIMARC1.HTML

•OHIO•

The **Inter-City Amateur Radio Club** will hold its Mansfield Mid-Winter Hamfest/Computer Show Sunday, 8 Feb. at the Richland County Fairgrounds, Mansfield. Plenty of prizes and a 400-table flea market in three large, modern, heated buildings. Doors open to the public at 7:00 a.m. Tickets $4 in advance $5 at the door. Tables $9 in advance, $12 at the door, (if available). Talk-in, call W8WE on 146.34/94. Advance ticket/table orders must be received and paid by 15 January. For additional information or advance tickets/tables, send SASE to: Pat Ackerman, N8YOB, 63 N. Illinois Ave., Mansfield, OH 44905, 419/589-7133 (after 6 p.m. EST).

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The **Great Lakes Division** Communications and Computer Convention 1998 will be Saturday and Sunday, 21-22 Feb. 8:30 a.m.-5:30 p.m. at the Cincinatti Gardens Exhibition Center, 2250 Seymour Avenue (St. Rt. 561) at Langdon Farm Road in Cincinatti, OH. All indoors, drive-in unloading. Set-up is Friday afternoon, 20 Feb. Free parking for vendors and attendees. Computer forums, internet, ARRL officials, ham forums, ladies lounge, major prizes, FCC exams, major dealers, manufacturer's reps., flea market. Advance tickets $6.00, $8.00 at the door. For more information contact Bob Garfield, WD8EFO, 513/791-6300, Fax: 513/241-4170, e-mail: bobgarfield@juno.com. Call the hotline at 513/661-0201 or fax at 513/531-3834.

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Cuyahoga Falls Amateur Radio Club's Hamfest and Computer and Electronic Show will be Sunday, 22 Feb., 8 a.m. to 2 p.m. at Emido's Party Center, 48 E. Bath Rd. at State Rd., Cuyahoga Falls. Talk-in 147.270(+). Admission $4 advance, $5 at the door. Tables $8. Fore more info call Dan Adkinson, KC8CFJ, 330/923-9045 or write: Box 2222, Stow, OH 44224.

•OREGON•

The **Salem Repeater Association** and the **Oregon Coast Emergency Repeater Association, Inc.** will hold the Salem Hamfair Saturday, 21 Feb., at the Polk County Fairgrounds in Rickreall, 9 a.m.-3:30 p.m. Swap table set-up 6-8 p.m. Friday night, 20 Feb., and on Saturday morning, 21 Feb. at 7 p.m. Self-contained RV spaces available. Talk-in on the 146.86 repeater. Features include: Swap tables, commercial dealers, meetings and seminars. For more information contact Evan Burroughs, N7IFJ, 503/585-5924. To download a copy of the flyer and pre-registration form: http://www.teleport.com/~n7ifj/sraflyer.htm

•PENNSYLVANIA•

The **Chestnut Ridge Amateur Radio Club**'s Hamfest/Computer show will be 8 Feb., 8 a.m.-3 p.m. at the American Legion, 1811 Ligonier St., Latrobe (Rte. 30 to Rte. 982 North, follow signs). Admission $2, tables $10. Talk-in 145.15 (–600) K3JDU repeater. Send payments to: CRARC, Box 175, Loyalhanna, PA 15661-0175. For info and reservations contact: Chris Weiss, K3JDU, 412/537-6068, Carol, N3UVA and Bill Demosky, K3AFS, 412/539-1552 or Andy Michalovicz, KE3YU, 412/539-0468.

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The Harrisburg Radio Amateur's Radio Club will hold its Winter Hamfest 14 Feb. 8 a.m.-12 p.m. at the Oberlan Fire Hall, Oberlan. Prizes, food, VE testing. Admission $2, tables $8. Talk-in 146.76. For information, HRAC AnswerLine 717/232-6087.

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The **South Hills Amateur Radio Club**'s SHARCfest Hamfest and Computer Show, Sunday, 22 Feb. 8 a.m.- 3 p.m. at the Castle Shannon VFD Memorial Hall on Rte. 88 (Library Rd.). All display areas are located inside CSVFD's spacious facility, and everything is located on one handicapped-accessible level. Acres of FREE parking. Admission is $4, harmonics 10 & under admitted free with adult. Tables are $15 with electricity (limited number), $10 without. Vendors (only) setup at 6:00 a.m. Talk-in: 146.955(–) Contact: Steve Lane, N3RNY, 412/341-1043. E-mail: sharcfest@juno.com Check out our club's web site at http://www.inky.com/~sanfordb/index. htm

•SOUTH CAROLINA•

The Charleston Amateur Radio Society will hold the Charleston Hamfest and Computer Show Saturday, 7 Feb., 8:30 a.m.-4 p.m. at Stall High School in North Charleston. (Near I-26 and Ashley Phosphate Road.) Talk-in on 146.79 repeater WA4USN. Prizes, food, activities, VE exams. For info. contact: Jenny Myers, WA4NGV, 2630 Dellwood Ave., Charleston, SC 29405-6814, 803/747-2324; e-mail: brycemyers@aol.com

•VERMONT•

The **Radio Amateurs of Northern Vermont** will hold the Northern Vermont Winter Hamfest on 28 Feb. from 8 a.m.-3 p.m. at Milton High School, Rte. 7, Milton, 5 miles north of I-87 exit 17. Features include flea market, auction, dealers, book sales, forums, exhibits, and refreshments. VE exams will be given at 9 a.m. and 2 p.m., commercial exams at 2 p.m. Admission is $3, free for under 18. Tables are free, while they last. Call for large setups. Talk-in on 145.15 repeater. Contact W1SJ at 802/879-6589, e-mail: wb2jsj@vbi.champlain.edu; http://www.ranv.together.com.

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

ARRL debuts 160M DXing book

The ARRL has introduced *DXing on the Edge — The Thrill of 160 Meters,* by Jeff Briggs, K1ZM. *DXing on the Edge* gives an insider's view at what it takes to make it on 160 Meters. The book includes lots of interesting Topband history plus an audio CD of some exotic and exciting QSOs made from prominent DX stations. Much of 160-meter history revolves around the late Stew Perry, W1BB. His QSL card remains prize wallpaper for amateurs around the world.

Author Jeff Briggs, K1ZM, is a well-known DXer and contest operator. He has 270 countries confirmed on 160 Meters, making him one of the leaders in the DX chase and an expert on this most challenging of amateur bands.

DXing on the Edge is $29.95 (plus shipping). Order Item No. 6354. Call toll-free 888/277-5289 or see http://www.arrl.org/catalog/6354/

MFJ Jumbo LCD

MFJ proudly announces the MFJ-118 JUMBO LCD 24/12 hour ham station clock for only $29.95!

MFJ's JUMBO LCD 24/12 hour clock has jumbo 1.25 inch high-contrast digits that you can see anywhere in your ham shack! It displays time in 24-hour UTC or 12-hour format — your choice. It also displays year, month, date, and day of week. Choose from English, Spanish, German or French for large 3/4 inch day-of-week display.

MFJ-118 has 100-year full calendar and is quartz-controlled for excellent accuracy. The MFJ-118 is synchronizable to WWV.

Its sleek black designer case is made of tough scratch-resistant plastic that'll take plenty of abuse. It measures a compact 5 3/4 x 2 1/2 x 1/2 inches.

Convenient flip stand lets you place it anywhere on your operating position. Built-in mounting holes make it easy to hang on any wall.

For extra-long battery life, the MFJ-118 uses an easy-to-replace AAA battery (not included) that's readily available everywhere.

You'll never have trouble seeing 24-hour UTC time again with these jumbo high-contrast digits. It makes a wonderful gift for your favorite ham buddy.

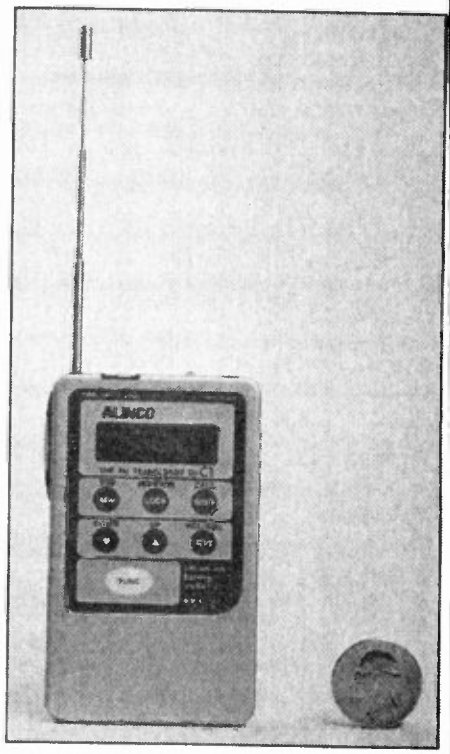
MFJ-118 comes with MFJ's famous "No Matter What" one-year limited warranty. MFJ will repair or replace (at their option) your MFJ-118 no matter what, for one complete year.

For your nearest dealer or to order, call toll-free 800/647-1800, fax 601/323-6551 or write to MFJ Enterprises, Inc., 300 Industrial Park Rd., Starkville, MS 39759. Visit us on the Web! http://www.mfjenterprises .com.

Alinco introduces DJ-C1T and DJ-C4T Revolutionary "Credit Card" Transceivers

Alinco has announced the introduction of the DJ-C1T and DJ-C4T, new concept "micro" transceivers designed to operate on the popular Two Meter (144-148 MHz) and 70 cm (420-450 MHz) bands. The new HTs, only slightly larger than a credit card, run on a large capacity (500 mAh) lithium-ion battery that can go up to 100 hour between charges and recharge in ap proximately two hours.

Both radios feature 21 non-volatil memories. CTCSS encoder, and a offset capability up to plus or minu 99.995 MHz (within operating range) The DJ-C1T can transmit through al of the U.S. 2M DJ-C4T operates on the entire 70 cm band (420-450 MHz) Both radios have an output of 30 milliwatts, more than adequate t "hit" repeaters or carry on simplex communications over a considerable distance. Both radios come with CTCSS tone encoder, European tone burst generator, battery save mode and scan function. There is a telescoping antenna and a flexible "clip on" wire antenna for receiving when the



telescoping antenna is retracted, as it might be when stored in a shirt pocket.

The DJ-C1T has extended receive capabilities ranging from 118-174 MHz including AM aircraft band reception. Both radios also come with a soft case, earphone, and a two-hour charge, in addition to the flexible wire antenna.

Accessories include a variety of speaker mic and earphone mic units, a mobile charging cable and a cable to allow the use of Alinco and compatible speaker mics.

The "credit card" radio concept is a breakthrough for Alinco, allowing radios to be used by licensed operators in a variety of applications. The small size and light weight are ideal for use

in connection with business attire, pocket or purse transportation and storage, cycling and other athletic uses and it will allow emergency communications volunteers to carry reliable communications devices in almost any situation.

The DJ-C1T and DJ-C4T have been type approved by the Federal Communications Commission. Both radios are now available through authorized Alinco dealers. For more information, photos and specifications, contact http://www.alinco.com

Stress-reducing rotator absorber joints announced by Yaesu

Two new tower-mounted absorber joints for rotators are now available from Yaesu U.S.A., the foremost manufacturer of Amateur Radio equipment throughout the world.

The GA-2500 and GA-3000 Tower Mount Absorber Joints are designed to both reduce stress to rotator gears, and lessen the chance of binding. Made from high-density polypropylene, the absorber joints increase rotator performance by cushioning and absorbing shock produced by rotation start and stop, and sudden wind gusts, plus the unique pivoting design of the GA-2500 and GA-3000 Tower Mount Absorber Joints permit the rotator base to compensate for up to 2 degrees of offset from vertical.

The GA-2500 and GA-3000 Tower Mount Absorber Joints easily install inside the tower between the rotator and tower mounting plate, and come equipped with all mounting hardware.

Use the GA-2500 Tower Mount Absorber Joint for light to medium duty G-400, G-450, G-800S, and G-800DX Rotators, and the GA-3000 Tower Mount Absorber Joint for heavy duty installations with the G-1000SDX and G-2800DX Rotators.

Both models are available at authorized Yaesu dealers.

AA3CH honored

The Greater Delaware Valley Chapter of the National Multiple Sclerosis Society has honored volunteer Russ Stafford, AA3CH, of Linwood, New Jersey, as a member of its Leadership Class of 1997.

Stafford was recognized for donating his time and energies to the organization through his Amateur Radio activities over the past 15 years. — *via ARRL*

?·? Quiz ?·?

This concludes the monthly Quiz. Actually, this was the Advanced Class question pool. If you haven't reached the Advanced level yet, now's the time to take the test. You'll gain much more spectrum space in the HF region.

The answers to last month's quiz questions are: 318. C; 319. D; 320. C; 321. D; 322. A; 323. B; 324. C; 325. D; 326. A; 327. B; 328. D; 329. D

VE exam schedules

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

State	City	Contact	Notes
Arizona			
3/14/98	Tucson	Joe, K7OPX 520/886-7217	w/i
Arkansas			
3/21/98	Gassville	Phil, AB5ZU 870/425-7406	p/r pref.
California			
3/11/98	Anderson	Al, N6BJ 530/357-4834	p/r pref.
3/28/98	Culver City	Scott, K6PYP 310/459-0337 or Dave, N3BKV 818/559-2572	w/i
3/07/98	Culver City	Clive, AA6TZ 310/827-2538	w/i pref.
3/28/98	Escondido	Harry, WA6YOO 760/743-4212	p/r
3/03/98	Fremont	Dennis, K6DF 510/791-0914	w/i only
3/14/98	Harbor City	Elvin, N6DYZ 310/325-2965	p/r
3/28/98	Lake Isabella	Ham Hotline 760/379-2947	p/r pref.
3/30/98	Montclair	Steve, 909/597-2249	w/i pref.
3/01/98	Oakland	Vern, AA6YE 510/233-4504	p/r pref.
3/21/98	Pablo Verdes	Paul, KITKL 310/644-2271	w/i
3/21/98	Redwood City	Joe, KB6OWG 408/255-9000	w/i only
3/08/98	Sacramento	Dick, N6DK 916/383-2113	p/r
3/21/98	Stockton	Mark, W6DKI 209/465-7496	w/i
3/14/98	Sunnyvale	John, KG6XF or Gordon, W6NW 408/255-9000	w/i only
3/28/98	Upland	Warburg, WA6HNC 909/949-0059	p/r
Florida			
3/21/98	Melbourne	Bill, WB9IVR 407/724-6183	p/r pref.
Idaho			
3/14/98	Boise	Lem, W7JMH 208/343-9153	w/i pref.
Illinois			
3/14/98	Oak Forest	David, NF9N 708/448-0580	p/r pref.
Maryland			
3/19/98	Manchester	Ed, 410/239-8488	p/r pref.
Massachusetts			
3/21/98	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Nevada			
3/21/98	Minden	George, WW7E 702/265-4278	w/i pref.
New Jersey			
3/19/98	Bellmawr	Diane, N2LCQ 609/227-6281	w/i
3/14/98	Cranford	24-Hour Hotline 973/377-4790	w/i pref.
3/21/98	Pennington	Don, AA2F 609/737-1723	p/r pref.
New York			
3/01/98	Yonkers	Emily, AC2V 914/237-5589	w/i ok
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•MARK V ELECTRONICS,8019 E. Slauson Ave., Montebello CA 90640; 800/425-FIVE; Fax 213/888-6868; **Power supplies, frequency counters, catalog.**

•MILESTONE TECHNOLOGIES 3140 S. Peoria St., Unit K156, Aurora CO 80014-3155; Tel/Fax 303/752-3382; **M log software, OHR dealer, catalog.**

•MILLIWATT BOOKS, Ade Weiss 526 N. Dakota St., Vermillion, SD 57069; 605/ 624- 8415; **History of QRP in the U.S.**

•MOUSER ELECTRONICS, 958 N. Main Street, Mansfield ,TX 76063-4827; 800/346-6873; Fax 817/483-4422; **Electronics distributor, catalog.**

•MXM INDUSTRIES, Rt. 1, Box 156-C, Smithville , TX 78957; 512/237-3906; **QRP receiver, transmitter transceiver, catalog.**

•NEWARK ELECTRONICS, 4801 N. Ravenswood Ave., (Catalog Dept.) Chicago, IL 60640-4496;312/784-5100;**Parts distributor catalog.**

•NORCAL QRP KITS: Jim Kates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821.

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•P.J.M. SERVICES (QRP Division), 214 Ormonds Close, Bradley Stock N., Bristol England BS12 DZ; ++0454-615793; **Parts, boards, enclosures, list (S.A.S.E.)UK**

•PALOMAR ENGINEERS, P.O. Box 455, Escondido, CA 92033; 619/747-3343; Fax 619/747-3346; **Keyers, noise bridge, keys, paddles.**

•QRP COMPONENT COMPANY, P.O. Box 88, Haslemer Surrey England GU27 2RF;++0428-641771; **Mfgr. of Jones Key.**

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•RADIOWARE, P.O. Box 1478, Westford MA 01886; 800/950-WARE;Tech 508/251-9385; Fax 508/90FAX-US; **Antennas & antenna components, catalog.**

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•RAMSEY ELECTRONICS, 793 Canning Parkway, Victor, NY 14564; 716/924-4560; Fax 716/924-4555; **Transceiver/receiver kits, accessories.**

•S&S ENGINEERING, 14102 Brown Road, Smithburg, MD 21783; 301/416-0661; Fax 301/416-0963; **QRP transceivers, HF test equipment, catalog (S.A.S.E. 2 stamps).**

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— Continued next month —

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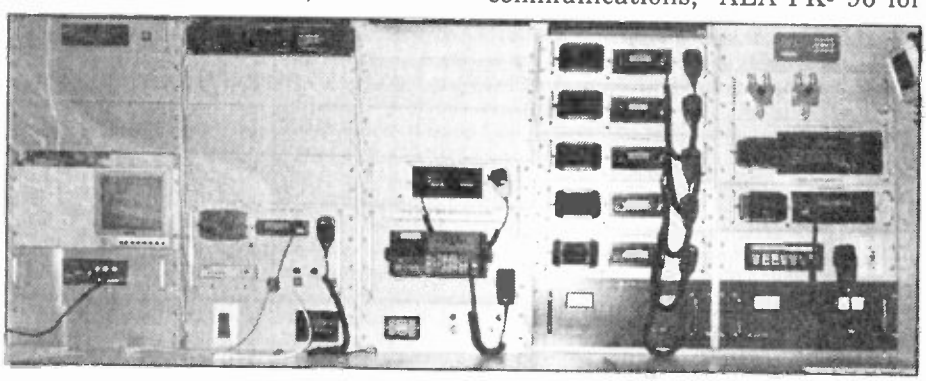
The Harrisburg REACT Team

STEVEN GOBAT, KA3PDQ

In recent issues the magazine has asked for photographs. Well here are mine! This vehicle belongs to the HARRISBURG AREA REACT TEAM in Harrisburg, PA. The majority of members are amateurs, thus influencing the layout of the vehicle's equipment. The vehicle is called Unit #8 after a lifelong member, and was assembled in this configuration by members Tony Zupanovic, N3JDT and Steven Gobat, KA3PDQ, over a two-year period. This vehicle is used for the team's many public service activities and stands ready to assist the community in case of disaster. Equipment included in this effort includes 2 Astron RM-60M Power supplies, Kenwood TM 241A 2M, TM-331A 220MHz, TM 441A 70cm, TM 541A 1.2GHz, Alinco DRMO6 6M FM, Uniden Bearcat BC 890 XLT Scanner, Ultimeter II Weather Station, Motorola MAX-TRAC UHF, SGC Radio Telephone Transceiver with SGC Auto Tuner for HF, Alinco DR-610 Dual-band Transceiver for digital communications, AEA PK- 96 for packet and APRS, Magellan Sensor for GPS, Regency U 15RA Repeater for the General Mobile Radio Service, P.C. Electronics TC-70-10 Transceiver for ATV, Panasonic WV-CM 1000 Color Video Monitor, Panasonic CCD Camera, Kenwood KRC-S200 AM/FM cassette, and the team also has an ATV 1.5W transmitter with video IDer and B&W camera with battery pack to send ATV back to the unit. Also included are meters to monitor battery status and AC voltages and amperes. While operational at this time Unit #8 is not complete and plans are continually being developed as technology and funds become available.

Unit #8 outside, and below inside.



Steven Gobat, KA3PDQ, is President of the Harrisburg Area REACT Team, Inc.

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