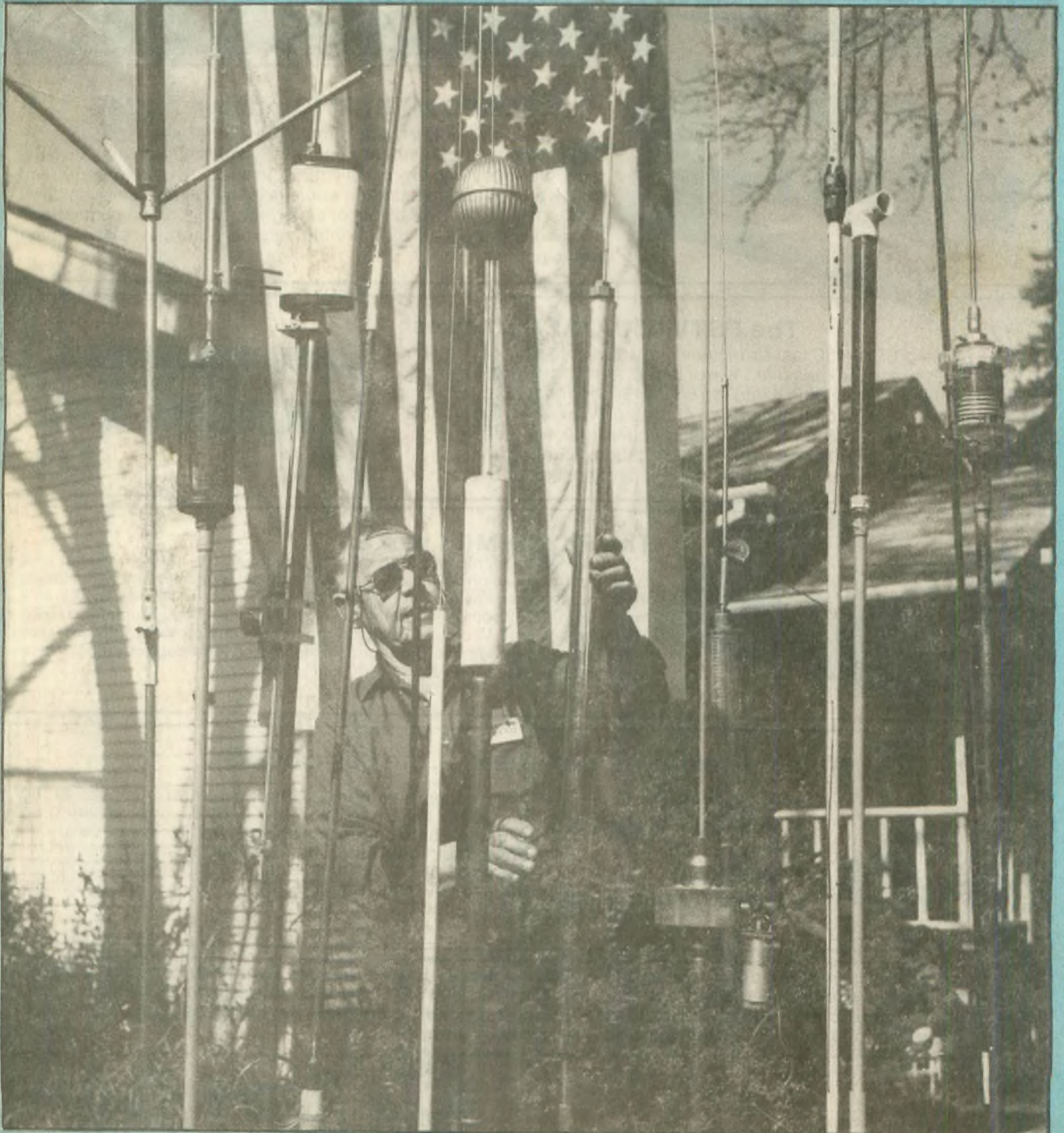


# Worldradio

Year 19, Issue 11

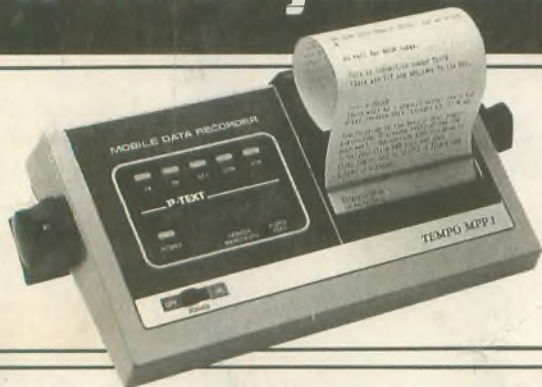
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# We quit

We received this letter here at the Worldradio offices from KW Litho, Ft. Worth, TX. They asked that we share it with you.

As of March 1, 1990, N6KW QSL Cards is no longer in business. It turned out to be too much for just two people to handle.

It seemed over this last holiday season, November through January,

for every one order we did we have 50 waiting. We want to thank all of you out there who were so patient with us.

We also want to thank all those people who got their cards, etc., from us over the last 11 years.

Ya know, we only had one check bounce in all that time! That says a lot for the Amateur Radio community.

We learned a lesson though. We

always waited two weeks to make sure each check cleared the bank before we did the order. Oh, we had the few customers we could not satisfy because of one thing or another, but every company has to put up with the crabs.

We had to return several orders these last few weeks. Sorry we couldn't do them for you, but thank you for thinking of us.

Well, take care to all of you out there. Maybe we'll catch you on the air, now that we have the time. □

# Colvins still going



**XT2BX, XT2PS and Iris (XT2KG) operating in Ougadougou, Burkina Faso, AFRICA, during their current trip around the world**

We have just completed our DXpedition as ZL0AKH in New Zealand, with over 6,000 QSOs with radio Amateurs in 137 countries, on 10, 15, 20 and 40M.

We operated at the QTHs of ZL1AMO, ZL1BQD and ZL1BMU,

using their antennas and our equipment. Other Amateurs joined in making our operation successful and very enjoyable.

We received our licenses before we arrived in New Zealand. Not many countries will issue licenses before arrival in the country, but it is a big help to the visiting radio Amateur.

We operated in Australia previously, and found that both countries use identical electric plugs. We wish that all countries did.

We were surprised to learn that New Zealand is only about 1,000 miles from the South Pole, making it one of the most southerly countries from which we have operated. We go next to Tahiti on our present trip around the world. — Lloyd and Iris, W6KG and W6QL, Colvin □

# Crossed signals

The Pueblo West (CO) zoning board appears to have taken it upon themselves to remove all Amateur Radio operation from their community... even though it makes provisions for Citizen's Band and TVRO antennas.

All 12 Amateur Radio operators in the area have recently received citations and been given 10 days to remove all Amateur equipment from their property.

It all started with an incident involving retired engineer Charles R. Landers, W5QZS, of Pueblo West. He was ordered to remove his three Amateur antennas from his property after (please turn to page 10)

## The world at your fingertips Worldradio

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# Worldradio

May 1990  
Vol. 19, No. 11

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**Worldradio** (USPS 947000) is an international conversation. You are 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.

You readers are participants — 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.

**Worldradio** is an independent newspaper not affiliated with any other firm, group or

## PUBLISHER'S MICROPHONE

**Worldradio** is very glad to be a part of your hamfest. When writing in asking for subscription donations, it would be helpful if you'd tell us how many attendees you expect. You can use the previous year's figures as a rough guide.

Some of you may remember my plea that someone manufacture a good-looking call sign lapel pin, big enough to be seen and recognized, but not so obtrusive that we move into the Yagion-a-beanie crowd level.

Finally, Harold Sasnowitz, KB2MB, came through, and you may wish to send for his catalog: H & M Jewelry Co., 26 Edgecomb Rd., Binghamton, NY 13905. He sent me one (it is very nice) and a note, "Thanks for a great idea."

We now recognize those who opted for a good hedge against inflation, as they join the club of **Worldradio** Super-Boosters (Lifetime Subscribers): Dr. William Pack, WA2VFP, Short Hills, NJ; Greg Mulder, WB8LZG, Dimondale, MI; Melinda Wirth, Cedarburg, WI (a gift from Gus Wirth); Thomas Herold, N9BUL, Beloit, WI; Frank Allard, WB7O, Twin Falls, ID; Walter Gaebel, K6DMN, Monrovia, CA; Vern Gamble, Oxnard, CA; Mary Lou DeLashmutt, KA6EZA, Ridgecrest, CA; and Jay Bennett, AA6GK, Soquel, CA.

N8AXA sent in photocopies of QSL cards representing Worked All Continents, all mobile, all QRP, all on 6M! He says he's the first to do such.

All the contacts were made in November 1989. Ah, the glories of the sunspot maximum.

For the crowd still grasping at the straw, if we only had more Amateurs

(which would be accomplished by doing away with the CW test) we'd soon have so many engineers and technicians that we'd tromp Panasonic . . . I offer the following: The leading photographers in the United States, those who shoot the ads for food, clothing and cosmetics, where the colors have to be perfect, are shifting to Fujichrome film.

If anyone could suggest to Eastman Kodak what standards we should drop in this country so that Kodak can make a film so good that no one would use Fuji, even if it were free, I'm sure they'd listen with rapt attention.

Did you see the TV show a few years ago about a teacher in the inner city of Los Angeles who took a tribe of lost youth and turned them into math whizzes? All of a sudden these kids are showing up at college now.

Well, it was all true. However, Jaime Escalante is resigning after 16 years of teaching. He's received letters from parents asking that their children be allowed to drop his calculus classes so they can play sports or take less demanding courses. He's received

anonymous telephoned threats of violence at the school and at home.

You can be sure that no such thing is happening in you-know-which country. (It's probably a good thing that Escalante didn't propose teaching CW, that would have been the end of him.)

We ran a survey a few months ago. "More antenna articles," we heard. OK, all you antenna experimenters, share your findings.

Also, clubs are very interested in hearing about the activities of other clubs and anything that improves attendance.

Can't pass this one up. David Killian, KB5IWU, Denton, TX, said, "This hobby is the most fun I have ever had. I put it right up there with the plane ride home after boot camp."

Dr. G. O'Toole, KB6ISL, South Gate, CA wrote, "I don't know how to tell you of all the gratitude that has been expressed to me, not only by the people on Pitcairn but also by some 500 to 550 Amateurs who read the Pitcairn story in the January and February issues."

Ed Lappi, WD4LOO, Carrboro, NC, called **Worldradio** "a fine journal with news of public service carried on by the Amateurs in this country."

Jack Cleary, WN2Q, Syracuse, NY, who was last month's *Station Appearance* winner, sent in a fascinating letter detailing his QRP exploits. Earlier today I was reading the bulletin of the Michigan QRP Club. There's a bunch who are really getting kicks from AR.

Patrick Whittle, AK6T, Danville, CA, wrote a brilliant letter to his local newspaper regarding RFI. We'll reproduce the letter in next month's issue so all can have a guideline to do the same in their city, if need be.

—Armond, N6WR

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# W6AAQ . . . master of mobile

What do you do on a bright Spring-like day? Well, if you're an Amateur with lots and lots of friends, you invite them to an open house with a radio theme.

That's what Don Johnson, W6AAQ, did on Feb. 25, and from all over his friends came.

It was the day of the Almond Festival in Esparto, CA, so the spread put out for the visitors included coffee, sandwiches, dip and almonds.

And in the garage . . . how long has it been since you've seen a Harvey-Wells Bandmaster? Nostalgia overtakes you when your eyes land on a Gonset HF converter (in the old days [AM] the unit converted the Amateur frequencies and used the broadcast band on the BC radio).

Don remembers using all that gear and even further back than that, as he was first licensed as W9VVN, in 1935 while in high school in Minnesota.

Today, he may be best known as the author of the book *40 Years of HF Mobileering*. Well over 6,000 copies of the 100+ page book have been sold, which in Amateur circles puts it in the "best seller" category.

A steady stream of visitors came to Don and Letha's QTH this Sunday afternoon. She's W6HMD, since 1948. Son Gary, KG6UN, is an engineer at the Lawrence Livermore Laboratories.

One attraction at the Johnson's was a vast collection of mobile antennas. With a field strength meter and quick release connectors, the antennas could be quickly compared. Illuminating.

speeds rather than go through all the plateaus.

When WW II came along, Don's radio experience resulted in his being a radioman on a PBY Catalina in the SW Pacific. His squadron of the famed Black Cats sank more enemy tonnage than any other squadron.

Today Don, with computer and laser printer puts out a 12-page bulletin every four months for the 200-member association of the squadron.

Most of his working career was spent as Production Manager of the ITT-



The term "antenna farm" really means something here. Don Johnson, W6AAQ (pointing), "and then I put up . . ."

One of the guests at the get-together was Tom Spiva, N6XKH. Now in his mid-50s, he showed determination and grit in his efforts to join the ranks. He started in October, driving 50 miles each way to the licensing classes held by Lyle Aufranc, AA6DJ, in Sacramento.

On Feb. 24 Tom passed his Extra! This was with no prior knowledge of electronics or CW, of which he says it would have been easier to start at high

Jennings power switch division, working with the legendary Jo Jennings, of vacuum variable fame.

Don was also friends with John Reinartz, K6BJ. One of Don's prized possessions is the very key with which (in 1923) Reinartz made the first two-way trans-Atlantic contact. It was given to him by Reinartz' widow. The great and many contributions of John Reinartz are spelled out in Don's book.

Mobile operation on 75, 40 and 20 was first allowed by the FCC on July 15, 1948. On the first legal minute Don



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For the Commodore 64

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Letha Johnson, W6HMD (r), relaxing with one of her guests.



was on 3.995. His book (only \$10 in the United States, extra for postage elsewhere, Box 595, Esparto, CA 95627) recounts the history of HF mobile and goes on to explain about noise filtering, antennas (naturally) and a lot of hints

and tips covering the gamut.

All in all it was a fun day. There was some of yesteryear, today and what will be tried tomorrow. It was Amateur Radio at its finest . . . old friends and new friends. □

# Conference an attempt at resolution

A bipartisan, non-aligned two day Amateur Radio conference will be held immediately following the Dayton Hamvention on Sunday, April 29, at the Airport Inn Dayton, OH. The purpose of this conference is to address the current problems facing Amateur Radio, as requested by Robert H. McNamara, Chief, Special Services Division of the FCC.

Invited to the conference are representatives and members of the Federal Communications Commission, ARRL Headquarters Employees Operators

Club, Better Amateur Radio Information Network, Halo Net, Intercon Net, International Amateur Radio Network, International Mission Radio Association Inc., Maritime Mobile Net, Seafarer's Net and the Waterway Net. All other interested Amateurs are encouraged to attend.

A valid Amateur Radio operator license will be required for admittance. All Amateurs present will be permitted to submit resolutions and vote.

The conference will begin at 3 p.m. Sunday and continue at 8 a.m. Monday. The submission of resolutions by mail prior to the conference is encouraged.

Suggested topics for resolutions include telephone patching, transmission of information bulletins and code practice, net operations, intentional interference and any other topics of general Amateur interest.

Resolutions and inquiries should be addressed to Bill Brunton, KA0SEP. □



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HPD-3*	160-80-40M hi-performance dipole 113' long	\$75ppd
SSD-8*	160-80-40-20-15-10M space-saver dipole 71' long	\$125ppd
SSD-5*	80-40-20-15-10M space-saver dipole-specify L, 42'-105, 52'-108ppd	
SSD-4*	80-40-20-15M space-saver dipole-specify L, 46'-93' . . . . . 60'-99ppd	

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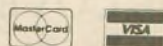
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Send for FREE catalog describing the R-X Noise Bridge and our complete line of SWR Meters, Preampifiers, Toroids, Baluns, VLF Converters, and Loop Antennas.

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An RFI nuisance case against an Amateur was dismissed by the Superior Court of the state of Washington, stating that only the FCC has exclusive jurisdiction over such cases.

Inspection by the FCC found the Amateur's equipment to be operating in accordance with FCC rules, but his neighbors took him to small claims court anyway. The court ruled in favor of the Amateur when it was determined that his neighbor's touch lamps were the actual cause of the RFI and that they had not taken steps to solve their own RFI problems, as had been requested by the FCC.

In another incident a Tucson, AZ, Amateur has been reported by the local radio club's TVI committee, as well as engineers from the FCC, as operating his station within FCC standards. Since the primary complainant refused to admit the FCC's engineers, the agency considered the case closed.

However, the neighbor went ahead and filed suit in state superior court claiming that "radio transmissions disrupt radio and television reception..." The judge, finding that the FCC

has exclusive jurisdiction in the matter, dismissed the case.

In January, the Amateur was informed that the case was being re-filed! Those close to the case feel that interference is not the question, but aesthetics, after all, not everyone is able to see the beauty of a properly installed 50 ft. tower.

On Jan. 2 the FCC voted to expand the 6M repeater subband from 52-54 MHz to 51-54 MHz (PR Docket 88-527). The expansion will permit operation of additional repeaters to meet increased demand.

The Commission said it was confident that voluntary band plans will assure that weak signal communications in the DX window and other Amateur service uses will be adequately protected.

#### Third party agreement countries list

Antigua and Barbuda, Argentina, Australia, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Federal Islamic Republic of Comoros, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvadore, The Gambia, Ghana, Grenada, Guatemala, Guyana, Haiti, Honduras, Israel, Jamaica, Jordan, Liberia, Mexico, Federated States of Micronesia, Nicaragua, Panama, Paraguay, Peru, St. Christopher and Nevis, St. Lucia, St. Vincent and the Grenadines, Sierra Leone, Swaziland, Trinidad and Tobago, United Kingdom (special event stations with call sign prefix GB followed by a number other than 3), Uruguay and Venezuela. United Na-

tions stations 4U1ITU in Geneva, Switzerland, and 4U1VIC in Vienna, Austria, have also made arrangements with the United States to permit third party communications.

No Amateur station regulated by the FCC shall transmit messages for a third party to any stations within the jurisdiction of any foreign government not listed above. This prohibition does not apply to a message for any third party who is eligible to be the control operator of the station.

The FCC has closed down pirate station "WNYS" in West Taghkanic, NY, operated by (the licensee of) KA2YLZ. He received a \$1,000 fine.

The station was causing interference to (reception of) WINS on 1010 kHz in New York City. After the New York State Broadcasters Association complained, the FCC staff used mobile DF equipment to locate the unlicensed station at (the operator's) residence.

#### END-OF-MONTH LICENSE TOTALS

November 1989		December 1989
50,070	Extra	50,324
101,904	Advanced	102,141
116,944	General	117,153
114,507	Technician	115,427
85,022	Novice	85,747
468,447	Totals	470,792

Days are short in winter and long in summer because cold contracts and heat expands — very simple. —Arrowhead RAC, Duluth, MN

## Amateur Radio call signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of March 1, 1990.

For more information about the call sign assignment in the Amateur Radio Service, see Section 97.51 of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17326.

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	WZ0Y	KF0IM	N0LPK	KB0GAM
1	WD1N	KC1TX	N1HJS	KA1VFZ
2	WW2Q	KE2SE	N2KJU	KB2JOW
3	NY3R	KD3RF	N3HWQ	KA3VVM
4	AB4TW	KN4EZ	N4YHA	KC4OVY
5	AA5QS	KI5DF	N5QBM	KB5LUV
6	AA6UH	KK6HJ	N6YBR	KC6JCV
7	AA7DO	KF7AX	N7OIZ	KB7JVU
8	WZ8W	KF8ES	N8LXN	KB8JFB
9	WO9Z	KE9VF	N9JIN	KB9EDT
North Mariana Is.	AH0H	AH0AF	KH0AM	WH0AAL
Guam	KH2M	AH2CF	KH2EI	WH2AMK
Johnston Is.	AH3C	AH3AD	KH3AB	WH3AAD
Midway Is.		AH4AA	KH4AD	WH4AAH
Hawaii		AH6KH	NH6WB	WH6CGU
Kure Is.			KH7AA	
American Samoa	AH8D	AH8AD	KH8AI	WH8AAZ
Wake Wilkes Peale	AH9A	AH9AD	KH9AE	WH9AAH
Alaska		AL7LX	NL7TN	WL7BXE
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# ANTENNA dispute

(continued from page 3)

neighbor John Wyman complained of telephone interference.

The antennas are on two television masts attached to Landers' house. . . and a Butternut ground-mounted vertical is in the center of his back yard.

Furthermore, his remaining Amateur equipment may not even be stored at his residence. Landers, who has lived all over the world (his mongrel dog is from East Africa), recently returned to his native Colorado to retire. . . and live

out his days enjoying Amateur Radio.

The Pueblo West Committee of Architecture (COA), which serves as the zoning board for the area, has ruled Landers "... a public nuisance" and labeled his antennas as being "... not aesthetically pleasing." The tallest antenna is only 25 ft. high.

Wyman, who denies it was he who made the complaint, sits on the five member board.

Landers said his trouble began when three of Wyman's dogs attacked his dog. After a second attack, Landers called the animal shelter. . . dogs cannot run loose in Pueblo County.

Soon afterward the interference complaints began. Interestingly, no other neighbor has experienced any TVI or telephone interference. . . and many live closer than Wyman, who is 150 yards away.

Although Wyman is denying his involvement, he won't reveal the identities of those who did complain to the Committee. A news reporter from the *Pueblo Chieftain*, a local paper, canvassed the area and conducted an interference survey. He verified that no other neighbors were having a TVI or telephone problem.

Landers points out that if his radio



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IC-R7000 25-1300 + MHz Rcvr	1199 00	Call \$
IC-R71A 100 kHz - 30 MHz Rcvr	999 00	Call \$
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IC-275A/H 50/100w All Mode Base	1299/1399	Call \$
IC-28A/H 25/45w, FM Mobiles	469/499	Call \$
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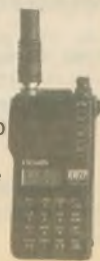
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antennas do not meet aesthetic standards. . .neither should Wyman's backyard satellite dish. An offer made to Wyman by the local Pueblo Amateur Radio Club's TVI committee to assist with the alleged telephone interference was declined. Reportedly, Wyman's wife said the interference did not exist.

Recently Landers was delivered a formal complaint from the COA stating that he had placed Amateur Radio antennae on his property without approval from that body. *Section A:1* is being applied. It prohibits buildings, fences, patios or other structures [to] be erected, altered, added to, placed or permitted. . ." without COA approval. *Section D:9* prohibits "...noxious or offensive activities. . .which may become an annoyance or nuisance to the neighborhood." *Section D:13* requires that "storage of. . .materials. . .or other items that shall in appearance detract from the aesthetic values of the property. . .be concealed from view."

General guidelines applying to Citizen's Band antenna variances do exist, but they refer only to roof or end-of-the-house mounting, with a base not to exceed two inches in diameter. Another neighbor, Robert L. Shrum (an architect and not an Amateur), said the guidelines were just that — they were not regulations and were therefore unenforceable. Shrum maintains that the Pueblo West Declaration of Reservations do not cover radio and TV antennas which are *specifically excluded*.

Shrum has sided with Landers and is assisting him in his fight. He called the Architectural Committee "...the wildest and most irresponsible group I have ever heard of." Furthermore, Landers' antennas are shortwave Amateur Radio and not CB.

Landers' request for variance was

denied, even though the Pueblo West Metropolitan District, of which his housing tract is a part, examined and approved the antenna installation and placement.

The COA Variance Report reads, "Charles Landers — multiple radio antennas denied on aesthetic basis and because of interference with electronic devices and telephones in the neighborhood." Landers contends, "...aesthetics are a judgment call" and no one has come up with any concrete evidence of interference. . .or allowed it to be resolved. He is frustrated to say the least.

All area newspapers are closely following the story, including the *Pueblo West Horizon*, the *Pueblo West Eagle* and the *Pueblo Chieftain*. The *Horizon* reported many "...more blatant violations of covenants" and "openly junky areas" that have gone unenforced.

Flag poles, commercial communica-

tions antennas and lighting standards also require variances, but somehow have escaped COA scrutiny. Landers feels he is being unfairly singled out and has sent three letters to the COA pointing out 78 other Tract 331, Pueblo West violations.

A public hearing was held and a motion was made by the COA lawyer to institute legal proceedings against Landers if his antennas are not dismantled and all Amateur Radio equipment removed from his property. Landers says they are staying. . .although he cannot afford attorney fees and court costs.

Landers handled many Health and Welfare messages for people in the area during the California earthquake and Hurricane Hugo, a fact pointed out by both the *Chieftain* and *Horizon*. It appears that everyone — except the zoning board — supports Landers and the fine work he and other Pueblo Amateurs are doing. — *W5YI Report*. □

## Killer tornado strikes Alabama

DAVID BLACK, KB4KCH

In a year that has seen a hurricane hit South Carolina and an earthquake rock California, residents of Huntsville, AL, may have thought they had little to worry about.

But the afternoon of Nov. 15, when a deadly tornado slammed into the city, reminded them otherwise.

Striking the southeastern side of

"the rocket city," the storm took a devastating toll. Seventeen people were dead at the scene — two more would die later in hospitals. Hundreds of people were injured.

Huntsville's Jones Valley community looked like a war zone. Hundreds of homes were either leveled or heavily damaged. Mattresses that were once in the bedrooms of comfortable homes



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were stuck 30 ft. above the ground in twisted tree limbs. Rescue workers spent the next several hours digging through mangled homes and buildings, looking for victims — some would be found alive, others would not.

Weather experts later called the tornado the worst to strike Alabama in nearly 15 years.

Amateur Radio played a major part in this history-making disaster. With a tornado watch already in effect, members of the Huntsville Amateur Radio Club knew they might be in for a busy day.

"Our effort really started about an hour and a half before the storm actually hit," recalls Bryan Turner, AB4AP, president of HARC. "We had hams at the National Weather Service and at the Emergency Operations Center to activate the RACES (Radio Amateur Civil Emergency Service) station."

Amateurs followed the storm while tornado warnings were in effect for two nearby counties. But Turner notes that the warning for Huntsville wasn't issued until after the storm had begun its deadly track that included wiping out an elementary school and a shopping center.

"It was chaos for the next hour or so (after the tornado hit)," Turner says. "But things were still fairly well organized on the ham bands. We didn't

have the problems that we usually have during weather nets with unnecessary check-ins. We were listening to a scanner on the public service bands and I believe the hams were more organized than a lot of the 'professionals'."

Turner estimates that about a dozen Amateurs responded to the disaster scene to assist in recovery operations and communications. About 50 Amateurs participated in overall disaster-related communications, he said.

The lack of Amateurs enrolled in a RACES program turned out to be a major hindrance in being able to provide emergency communications, Turner said, because officials at the scene were looking for people wearing RACES or Civil Defense cards.

"The lack of that card hampered us getting hams actually on the disaster site," he said.

Requests for health and welfare checks began pouring in a few hours after the twister hit.

"It was hard to find out who was in good shape because the (phone) lines were out," Turner said.

"The best we could do the first evening was get a street address and if we could have someone in the area that was on that street, they could tell us if that street was damaged or not. Sometimes, that was enough. Sometimes,

we had to wait until someone actually got on that street and could check by number."

Amateurs were swamped with more health and welfare messages the following day. Amateurs in other cities wound up helping their Huntsville counterparts. Red Cross officials at the disaster site needed to talk with their office in Birmingham, 90 miles away. But telephone service was knocked out over a large area. An emergency net was set up on 3965 kHz and Amateurs in both cities assisted in helping the agency with its communications needs.

Turner says Amateurs learned two lessons almost immediately.

"We need a telephone installed in our club shack. And we need to order the standardized message forms from the League (ARRL). If you're handling one or two health and welfare messages, you can just grab a sheet of scratch paper. But when you start handling dozens or hundreds, you really start running into problems!

"I was really surprised at how smoothly things went. There were a lot of people available. For the most part, everyone was able to work under a directed net."

A few Amateurs were not aware of the rules that require them to obtain permission from the net control station before transmitting, Turner said. And some Amateurs were not familiar with proper traffic handling procedures.

Turner says he wouldn't give his fellow Amateurs a score of 100 for their performance during the disaster — "that would mean there's not room for improvement. But I would have to say it would be at least in the mid to high 90s. I was pleasantly surprised. The people were prepared. They jumped in with both feet. Some Amateurs took off from work to help.

"Overall, I think the north Alabama hams really have something to be proud of!", he said.

*A disaster like the Huntsville tornado could happen in YOUR area. How well prepared are you and fellow Amateurs to handle a sudden catastrophe? Turner offers the following tips:*

**Affiliate with an emergency agency**  
 "Get involved with an organization (please turn to page 14)

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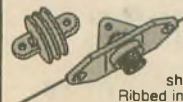
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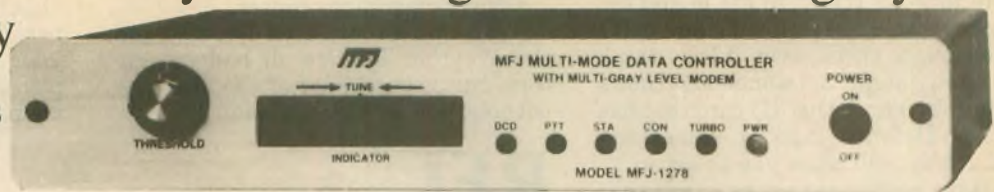
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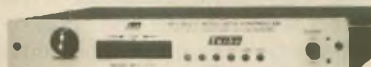
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**CQ Magazine:** "I found the '1278 did an excellent job (copying CW), even with bad operators. I've checked lot of CW 'copiers' in

my time, and certainly this unit was as good or better than most."

"I switched the terminal mode to HF packet . . . I was very impressed, because with the tuning indicator I immediately received (good) packet copy . . . I (tried) a connect with an east coast station. Before I knew it I had a QSO going and even handled break-in stations anxious to log New Mexico." May, 1989.

**73 Magazine:** "If you think I enjoyed using (the MFJ-1278) you are right. It was easy and fun to use . . . Overall, I found the MFJ-1278 to be . . . a good multi-mode controller at a reasonable price. You won't be disappointed." April, 1989.

**Worldradio Magazine:** "Bottom line: Excellent value for the money. Solid performer. Easy to use. Easiest of the top three to get on line . . ." September, 1989.

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# ALABAMA tornado

(continued from page 12)

like RACES," Turner says. "Get identification cards. When you're trying to go to a disaster scene, there are so many tourists trying to get in and the police are so overwhelmed, they don't have time to check, even if they think that you might be somebody that's helpful. You need that ID card that has a Civil Defense logo or something similar that will allow you to get in."

• **Have equipment set up in advance**

"We have permanent installations at the National Weather Service, the Civil Defense office and at the Red Cross," Turner says. "You don't run into the problem of having to drag equipment in from the car and hook it up or work off of handi-talkies when something happens. The equipment is in place so that, if something very unexpected happens, you can go in and flip it on and you're on the air."

"If severe weather comes along, you could go in and get the net going before you actually need it because the equipment is there."

• **Include packet in emergency plan**

"We have a good packet network, but we just didn't have the stations on packet," Turner said. "Packet would be ideal, since you could send messages

to outlying stations to handle health and welfare inquiries by telephone. People should be prepared for packet radio. This would have been really helpful during the tornado, but it wasn't exploited."

• **Have emergency power**

"The Red Cross, Civil Defense and the Weather Service all had generators. But a good part of the area was without power," Turner said.

Only two of Huntsville's five television stations were on the air following the storm, and few homes in the affected areas had emergency power.

**Hold training nets**

Huntsville Amateurs are thinking about holding a special 2M training net, Turner said. If no such net exists in your area, Turner's suggestion is simple: Start one. Include information on net procedures and traffic handling. □

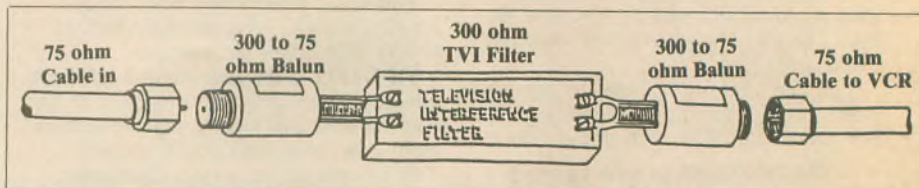
## RFI

### NORM BROOKS, K6FO

"I'm not here to tell you that you can cure every RFI (Radio Frequency Interference) problem, unless you have complete cooperation. If you do, however, you can achieve excellent results.

### RFI "Modes"

For starters Phineas asked how many in the audience understood the difference between Common Mode and Differential Mode RFI? I had to con-



At the Collins Radio Company we were able to operate a 1kW SSB transmitter on the same antenna with a one microvolt receiver and operate both at the same time, only 10 percent apart in frequency. This was accomplished 34 years ago — so there isn't a great deal new in controlling RFI."

This was Phineas J. Icenbice, Jr., W6BF, in his forum on RFI at the Southwestern ARRL Division convention in Los Angeles on Aug. 26, 1989. Phineas is well qualified to discuss this subject, as he has been doing this type of work for many years as an engineering manager at Collins Radio Company.

fess that I had not heard these terms before.

It turns out that in the Differential Mode, there is RFI potential *between* two leads of a circuit. This RFI can be "shorted out" by a bypass capacitor across the circuit. Use a capacitor with a voltage rating high enough for the circuit and .01 or .068 microfarads.

In the Common Mode, the RFI potential is *the same* on each of two conductors. A capacitor across such a circuit would do nothing. The most effective method of reducing the Common Mode RFI is to put both circuits through a ferrite device, such as a toroid.

"Knowing the difference between these two RFI modes is the key to success in RFI reduction," Phineas said.

The usual situation in TVI is for the TV antenna lead to act as half a dipole in the common mode and the power line to also act as the other half of the same dipole in the common mode. The solution is to put the lead in through a ferrite, the power lead through a ferrite, or both.

### Ferrites

Ferrites come in a variety of sizes and shapes. There are cores that look

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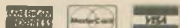
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like small doughnuts through which wires can be looped up to ten times. Six loops is probably best.

For flat ribbon cables, such as those found on computers, there are special flat ferrites that will clamp on the flat cable.

There are ferrite beads, too. Single wires can be threaded through them. Just by being there, they effectively place a RF choke in series with the wire. Ferrite rods are excellent for use on the power cords, because the rod cannot saturate.

An inexpensive source of ferrite material is the core of a horizontal flyback transformer from a junked TV set. The core of a built-in antenna from an old broadcast receiver also yields a ferrite rod.

There are different kinds of ferrite material in various ferrite products. The new ones you get from Palomar or Amidon are marked with paint color as to their frequency of operation. If you have unmarked ferrite material, try it anyway, as it may work OK.



Phineas J. Icenbice, Jr., W6BF, gave the scoop on RFI at the ARRL Southwestern Division Convention.

#### Telephones

Telephone interference is best reduced by adding .01 mfd. capacitors from the red wire to ground, and the green wire to ground, within the telephone itself. If RFI persists, use ferrite beads on the wires, too.

#### Burglar alarms, etc.

Burglar alarms, water sprinkler controllers, touch lamps, rotor controllers, stereo equipment, etc., are all approached the same way. Use bypass capacitors from each lead to ground and run all long leads outside the cabinet through ferrite cores or rods.

VCR TVI is very difficult to resolve. The price of a VCR is not related to its ability to reject RFI. Some of the cheaper ones are less prone to RFI than more expensive ones.

Fig. 1 shows a circuit that takes care of both Common Mode and Differential Mode RFI. It is especially effective on VCRs. Some VCR TVI is helped by

adding shielding to the plastic case. This is done by adding adhesive backed metallic tape on the inside of the case. Be sure the tape strips are connected to ground.

#### Harmonics

The harmonics from a 1kW transmitter must be reduced over 150dB to be unnoticed on a channel 3 or 4 TV receiver. This is a level of only 1 1/3 picowatts!

Does an antenna tuner help reduce harmonics? Yes, if it's not a high pass filter. The transmatch, which is very popular, is a "T" network, but it's a high-pass filter. Use a good low-pass

filter made for your power level. It is easy to flash over the capacitors in a low-pass filter if you run more than its rated power.

When adding a low-pass filter doesn't seem to help, perhaps it is being totally bypassed by a poor ground. Grounding is very important. It should be short and direct.

Long ground wires can be "tuned" by using a heavy coaxial cable (e.g. RG-8), connecting both shield and center conductor together at the ground end, connecting to the shield only at the equipment end and tuning with a small variable capacitor between the center conductor and shield

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at the equipment end.

### Non-linear devices

It is now pretty well known that non-linear devices have the ability to generate RFI when excited by a strong RF field. Devices using diodes are usually the culprits. Generally, they are PIN diodes.

Rusty chain and rusty joints in guy wires can also wreak havoc. They can be sniffed out by making a sniffer first described by Jack Holmes, W6BUY. He connected his transceiver to a 50 ohm dummy load resistor at the end of a pole. The pole can be a broomstick or the like, long enough to poke into the suspect places. Alongside the resistor, he mounted a one turn loop antenna,

connected by coaxial cable to a TV set. Fire up the transceiver to 5W or so, tune the TV set to the problem channel. Poke around guy wires, fences, appliances, walls, pipes in the basement and attic, etc. When you approach the non-linear device that is generating TVI, you'll see it on the TV receiver! Jack found his "TVI generator" to be metallic mesh under the plaster in his home, making a poor overlap joint in the wall!

### The ARRL Interference Book

Phineas was especially enthusiastic about the *ARRL Interference Book*, "the Green Book." Get a copy. It has all the answers.

Happy RFI Hunting! □

# ACLR visits seniors



Members of the Amateur Cross Link Repeater, which is part of the KD9FA family of Chicago based repeaters, got together Dec. 10 to bring some cheer to the senior citizens at the Bridgeview Convalescent home near Chicago.

Included among the activities at the event, which is sponsored by the ACLR, were Bingo games, a raffle, Christmas carols and a "goodie" giveaway by Santa. The seniors were allowed to talk on the club's 2M and 220 repeater to other seniors and Amateurs who could not attend. Several pieces of traffic were handled by the Amateurs for the seniors to relatives and friends.

The ACLR members pictured are (bottom row) Paul Rontos, N9HFE; Loretta Sawyer, KA9ZDL; Tom Stobble, KB9AJM; (top row) Steve Brichta, WB9ZNL; Dave Donkers (Santa), N9FLA; and Vince Sawyer, KA9ZDM. Although she's not pictured, Santa's lovely wife was also in attendance. (Photo courtesy of N9HFE)





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DX with TC70-1s and KLM 440-16X antennas line of sight and snow free is about 22 miles, 7 miles with the 440-6X normally used for portable uses like parades, races, search & rescue, damage assessment, etc. For greater DX or punching thru obstacles add either of the ATV compatible 15, 50 or 70 watt amplifiers listed below.

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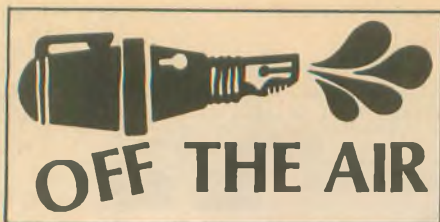
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## Can you help?

Dear Club Pres. & members,  
Could you please read this at your next meeting.

I'm a fully disabled vet and have trouble with my hands. I need an AMECO Model AC-1 Novice CW transmitter if someone has one for sale. Could you pass the word along on the 40, 20, and 80M bands, please. I need a nice QRP rig.

Thanks & 73's,  
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## RF problems

I received the following letter from C.J. Casebeer, K6CE, of Nampa, ID.

*Regarding RF in audio, I had a transmitter reconditioned, which had no RF problems to start. When I got it back,*

*the RF feedback was so bad on 40M I was terribly distorted. But it worked OK on the other bands.*

*No amount of grounding did any good, even though it didn't need any before the work. I am at a loss as to what could have been done to cause this.*

*It works on CW on 40, but the mic is hot! Any solution?*

*P.S. What model Sony SW have you that is all-mode? It is hard to find them for CW and SSB.*

It sounds suspicious that your newly reconditioned rig now has RF feedback problems. But the fact you indicate that the mic is "hot" is a sure sign that additional grounding is necessary. Are you using copper foil or braid? Grounding with wires won't do the job!

The Sony model 2010 has CW and SSB built into it. Same thing with that \$299 Radio Shack shortwave receiver — it too can receive SSB.

Doublecheck your ground and I think you'll find that additional ground will lick the hot mic problem.

**GORDON WEST, WB6NOA**  
Costa Mesa, CA

## Patty's back

I have to tell you that I am now reliving some of my childhood memories.

As a kid, I used to sit on the front porch watching for the ice cream man. Now I'm doing almost the same thing, but it's the mailman I'm looking for.

It's a nice response I've gotten from the Amateur community (see *Off The Air* July and December 1989 and January 1990). It's great the things we have in common.

I got a good letter from Allura Sortland, KA0VWP, of Jamestown, ND. Their home now has two stations, one in the living room and one in the dining room, because feeling left out, she joined "THEM."

WD0HPW got the living room. There is friendly competition for DX-CC and Allura is busy working all states 10-10. She's probably made it by now. Only had two to go.

Television is a thing of the past and they meet daily with Amateur friends for coffee. Allura has been into radio for four years and is planning on working hard this winter to upgrade from Technician. Go for it! About 30 minutes a day for a month or two will do it, but it has to be consistent.

Allura and the OM are planning on retiring in five years or so and will be looking for a place with room for a mini-antenna farm. It shouldn't be hard to find if they stay in North Dakota!

I can't imagine what it would be like to have two competitive Amateurs in

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the same family. With one station you could have scheduled hours, but with two it would seem like you would clobber each other.

It wouldn't work at this QTH. We almost come to blows watching *Jeopardy!* I can just see it: If a rare DX station came up and we both heard it at the same time, I'd have to run outside and stick a pin through his coax. He'd do the same.

As it stands now, I'm in good shape because the OM has no intention of becoming an Amateur. He loves to talk, but it has to be an eyeball type. I have twiddled my thumbs in gas stations, hardware stores, campgrounds and tackle stores while he "communicates." I guess I should count my blessings.

Actually I think Amateur Radio saved a marriage. About 15 years ago, because of the OM's shift work and my regular hours, I had no one to talk to except four kids and PTA mothers. After their bedtime Amateur Radio provided that adult conversation that was really needed.

Sometimes I guess I sound a little hard on the OM. Too bad he doesn't care to write. You should see what he says about me!

Actually he is a great XYM. If only you had seen him a few years ago when I came home from work to find him standing on the garage roof holding on to a snapped guy wire in the wind. It was attached to the "Leaning Tower of Torrance," awaiting emergency supplies from the hardware store. He's really a super guy. The only time I have to watch him is when he gets his big gun out to solder a dinky resistor or diode to a circuit board.

Before I forget, for earthquake preparedness. While visiting the Amateur shack at my former employer, Hughes Aircraft in Torrance, it was brought to my attention that none of the equipment was anchored. It wouldn't take a "big" one to bring it down.

I thought some more about it when I got home and looked at my own station. My desk is big, old and made of wood, with a top shelf attached by L shaped brackets. Not very pretty, but functional.

The top shelf, (most vulnerable) holds a speaker, low band power supply, antenna rotor control, 2M radio and power supply. In the event of a good "quake," I might be out of business just like my buddies at Hughes.

Next project: I have used Velcro in our camper for years to hold things in place. My top shelf will be covered with upholstery fabric of a woven type. You can staple it on. You can buy Velcro in 3/4 diameter pieces and glue them to the feet of your equipment. It's surprising how well it holds.

Whatever method you use, do it soon. Let me know if you have better ways. I'd like to hear them.

Getting back to a previous pain of mine, interference by those hiding behind a microphone. Just like those obscene callers on Ma Bell.

I think we should open nation-wide branches of Amateurs Anonymous. For those who have to remain unidentified, we could have separate cubby holes with microphones and speakers. They could vent their anger and frustrations in a familiar setting.

On the other end, a panel of experts from the FCC, ARRL and just regular people. They might set up a sked with someone to grind the proverbial axe. The biggest benefit would be keeping the airwaves clear. I wish . . . See ya.

PATTY SMITH, WB6DRG  
Torrance, CA

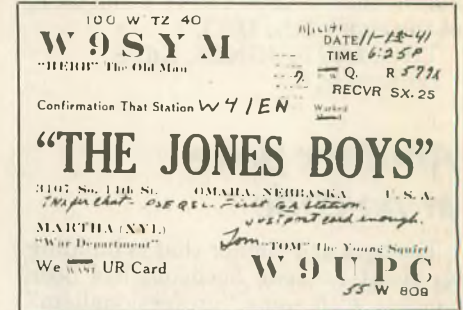
## A little late but what the heck

While chasing DX a couple of weeks ago, I was able to contact Kirby Palmer, 9X5KP, from Rwanda. His

QSL manager is Jim Brigman, W4IEN, who lives near Atlanta, GA.

Well, this rang all sorts of bells — I had my first Georgia QSO with Jim on 40M CW on Nov. 13, 1941. As you can see from the QSL, I was pretty anxious to get his card.

I was 16-years-old at the time and I recall the QSO rather well, as my



Tom sent this card in 1941 . . .



And finally received this reply in 1989.

father, W9SYM, said I couldn't use the bug unless I could send Jim's call perfectly. W4IEN is a string of dots for



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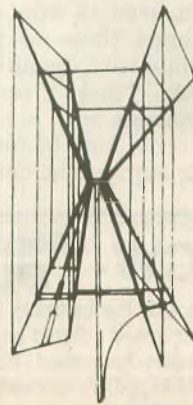
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a new Amateur with a new bug.

By the way, the bug was purchased in 1922 and did lots of service on the CB&Q Railroad.

Anyway, I practiced and practiced and was able to send Jim's call OK, but WW II took over. I never received Jim's QSL until last week, and he noted the 48 year delay as well as noting that he didn't have a mustache at the time of the QSO.

THOMAS F. JONES, K6TS  
Livermore, CA

## Another poke at no-code

The heat and clamor that is building up about no code licensing has been handled with some "professionalism" and the vigor of a Madison Avenue (ad people) campaign. Its best medium is most certainly on packet bulletin board stations where words are really in heavy use. In *QST* much of the "Correspondence" columns are devoted to this subject. Large organizations and giant sized clubs are getting into the spirit of selling the Amateur on "their best interests" with messages and bulletins posted on BBSs all over the country.

Proponents are using every bit of rhetoric (and a lot of strange grammar), conjecture ("I guess..."), supposition ("What if..."), presumption ("Undoubtedly...") and inference ("...therefore it seems to me...") to make their case. And the battle builds, as in 1983. Then, I had sent 11 copies of 30 pages of rebuttal to successfully discourage the FCC Commissioners from their "No Code" proposal (almost single-handedly and I never heard other-

wise!). Copies are still available.

On Feb. 16 one of the really big guns, a ham who is a psychologist, issued a long packet ("Psychological Aspects of No Code Testing") statement which was probably read with great anticipation (hoping for doctoral clarity) and, indeed, gave an insight to a handicapped's aspect of learning any given requirement such as, and specifically, the Morse code. His explanation, which spoke of areas of incapacity, was not substantially convincing and I was disappointed. The next day, in mild opposition, another ham, also a psychologist, presumably of greater caliber (he holds *two* degrees), wrote a "Response to the Psychological Aspects of No Code," and you get the picture of a courtroom scene where one side brings on a "Subject Matter Expert" who says "positively" and the other side's "SME" says "absolutely not."

It would seem that the Class "C" license could be the basis for additional accommodation, such as accepting a note from a psychologist, to the effect that handicaps exist in that area of physiology (I checked the word with a *third* psychologist, a ham), which does not allow learning the code by aspiring "Hams-to-be." Heartbreaking cases, to be sure, but I suspect those cases are not the "large" number of additions to the Amateur ranks that the "no code" people had in mind.

Herein lies a lesson of the mind and the heart that may be applicable to overcoming handicaps, real and imagined. Class "C" made accommodation for the handicapped applicants to take the total Amateur Radio license test in any way justifiable, if possible. Some hams and hopefuls who are deaf, blind, paraplegic, quadriplegic and stroke disabled, "feel" (fingers on the speaker cone) their way through the code, "hear" their way (Braille slate and stylus or tape recorder), "nod" (head-yoke switches) or "toe" (*QST*, March, p. 41) their way and "blow" (*QST*, March, p. 39) their way, to prevail in their areas of need to successful and valorous victory over 5 wpm, even 13 wpm and, yes, 20 wpm. Perhaps those of you who are unfamiliar with the nitty-gritty of "feel," "hear," "nod," "toe" and "blow," in connection with handicapped learning the code, may be unbelieving. I know their stories, the details of their hard-

ships and their call letters. Dramatic stories for another time. I can only hope that these cyclical hooplas of no code testing will provide these irrepressible folks with the humor, bittersweet though it may be, that these wild machinations create in my mind.

Come on TAPR, AMSAT, etc. Turn it around. Expend half the energy that you have and will use in this campaign to teach those good people (the "want-to-be-hams"). At F-I-V-E W-O-R-D-S-A-M-I-N-U-T-E, you have it made! The computers are or can be the greatest teaching machines in the world. Only the people running them can add the humanness of an Elmer. Success in this way will make you feel as good as the completion of debugging a 10 megabyte program. It would be a "shame-on-you" to the computer folks if they failed to take the challenge so much within their interest and capability.

To express my own thought, I point out that the common denominator for all hams is the code requirement. Hard or easy, it can't be faked. And we *all* have conquered it. Without this badge of distinction, we might all have become just "citizens of the band."


What we might need at this time is the reincarnation of the "ole man" and his ancient tool-of-redemption to help us, all of us, to remember that what we have in Amateur Radio is prideful respect for ourselves and each other, time-tested uniformity, proven public service and self serving resourcefulness, among the many attributes that add joy to life and balm to the soul, for oldsters and newsters alike.

LEE ROSENFELD, W2QNL  
Fair Lawn, NJ

## Spread the word

An idea by members of the East Alabama Amateur Radio Club may eventually lead to a batch of new Amateurs.

Club members voted to use funds from door prizes to purchase ARRL books on Amateur Radio for children. The club purchased five sets of books for placement in two libraries and three area school systems. — *ARRL Alabama Section News*



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## Programs & Forums

### Friday, June 8th:

- 1 PM Gordon West's Novice/Tech License Course, WB6NOA
- 6 PM Learn To Teach Code
- 8 PM Slow/Fast Code Techniques

### Saturday, June 9th:

- 9 AM 10-10 International Forum Contest Forum, K1AR Scanning & SWL, N5AUX Packet for Beginners Training to Teach Youth
- 10 AM Hands On Packet
- 11 AM Packet, Using DX Clusters VHF/UHF Technology Forum Traffic Handling, N5TC AMSAT - Microsats, N8IWJ VLF Radio Worldwide, N5SU
- 12 Noon Packet Performance Monitor
- 12:30 PM Packet, Designing Networks
- 1 PM ARRL Forum MARS Forum Soc. for Preservation of AM Microwave UHF Forum YL's In Amateur Radio
- 3 PM Packet Shuttle EXperiment Kids Only - Getting Started DX "Bonanza" Programs Wayne Green's Forum Amateur TV Forum, N5PIU
- 3:30 PM TAPR Packet Radio, TexNet

### Sunday, June 10th:

- 9AM 10-10 International Forum Contest Forum Gordon West's 2Mtr DX Protecting from Surges Packet for Beginners
- 10:00 AM Packet, HARPS NET/ROM
- 11 AM Young People in Ham Radio Rohn 25 Rotating Tower Hazardous Materials Forum AMSAT, Getting Started Satellite Uplinks/Downlinks
- 11:30 AM Packet for RACES & ARES
- 2 PM Skywarn School

## ARRL Affiliation



Ham-Com '90 is a fully recognized ARRL approved Hamfest. There will be a giant ARRL booth, an ARRL Forum and ARRL VIP's on hand.

## Giant DX Lunch - Bonanza DX Program

New for Ham-Com '90 will be a giant 450 seat DX Luncheon featuring Bob Winn, W5KNE, Editor of "QRZ-DX". Tickets are \$10.00 each. After lunch, we will have the DX Program with DX personalities flown in from the four corners: Dave Schmocker, KJ9I, on Mellish Reef & Willis Island, Bob Winn, W5KNE, on Sable Island, Chuck Coleman, K5LZO, on Desecheo Island, and Don Greenbaum, WB2DND, on United Arab Emirates.

## American Is Official Ham-Com Airline

American Airlines is the official airline for Ham-Com '90 affording you 40% off the full day coach fare or lowest possible rate for your travel circumstances. Call 800-433-1790, 7 AM - 12 Midnight, Central Time, 7 days a week, and refer to Star File Number S02604H.

## Ham-Com '90 Hospitality

Ham-Com '90 Hospitality will be open at Noon on Friday at the "Waters Edge" Lobby bar of the Sheraton CenterPark Hotel, adjacent to the Convention Center. At 7 PM Ham-Com will provide a giant round of roast beef and we'll draw the Preregistration Prize at 7:30. The "Lower Side Band", including our own K5VOU, will provide the genuine Texas country music. Be sure to come early enough to join in this great party.

## Get Your Ticket Upgrade!

There will be testing for all levels from Novice to Extra Class. On Saturday there are sessions at 9 AM, 1 PM and 6 PM. The Sunday session begins at 9 AM. Tests are on a first-come basis. Bring your original license, a copy of your license which we may keep, and photo ID. The testing fee is \$4.95.

## Giant Indoor Flea Market

The giant indoor, air-conditioned flea market boasts 444 6-ft. tables with electricity available if desired. Tables are \$15 each for the first three, \$25.00 each for all over three. You will find everything you ever wanted from ham gear to computers, and much more. Don't wait to get your table, it's always a sellout!

## Commercial Exhibits

You will find 100 commercial exhibit booths at Ham-Com. A virtual who's who of amateur radio manufacturers. In addition you will find many national and regional dealers stocked and ready to sell you whatever you want. Bring money!

## Ham-Com '90 Convention Banquet

Plan to attend the Ham-Com '90 Convention banquet at 7 PM on Saturday, June 9th. It's great food, a good time and a very interesting AMSAT program by Rich Ensign, N8IWJ, AMSAT Science Education Advisor. In addition, we will present the North Texas Section's Amateur Of The Year Award. Tickets are \$16.00 each.

## QCWA Continental Breakfast

Sunday morning, June 10th, at 7:30 AM, the Dallas and Fort Worth Chapters of the QCWA will host the QCWA Breakfast and Hospitality gather-

ing at the Sheraton Hotel. Breakfast tickets are \$3.50 each, but you need not purchase breakfast to attend the gathering.

## Convention Schedule

### Friday, June 8th, 1990:

- 12 Noon Exhibit Set-Up, Ham-Com '90 Hospitality Open at Sheraton
- 2 PM Ham-Com Registration Open Flea Market Open for Set-Up
- 7 PM Hospitality & Entertainment at Sheraton.
- 9 PM Set-Ups Closed

### Saturday, June 9th, 1990:

- 6 AM Ham-Com Registration Open Flea Market Open for Set-Up
- 7 AM Flea Market Open
- 9 AM Commercial Exhibits Open
- 11 AM DX Lunch & Forum
- 2 PM Xmtr Hunt
- 5 PM Exhibits & Flea Market Closed
- 7 PM Banquet at Sheraton

### Sunday, June 10th, 1990:

- 7 AM Flea Mkt./Registration Open
- 7:30 AM QCWA Breakfast
- 9 AM Commercial Exhibits Open
- 2 PM Exhibits & Flea Market Closed Skywarn School

## Hotel Accommodations

Ham-Com offers a wide range of hotels for you to choose from, including the Sheraton Center-Park Hotel, headquarters hotel for Ham-Com. Please make your reservations direct with the hotel of your choice. Be sure to tell them you will be attending Ham-Com '90 so you will get the special Convention room rate.

Radisson Suite	\$79	(817) 640-0440
Sheraton Hotel	\$72	(817) 261-8200
Best Western	\$55	(817) 461-1122
Rodeway Inn	\$54	(817) 640-7080
Marriott Courtyard	\$52	(817) 277-2774

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**June 8-10, 1990**  
**Pre-Registration Deadline: June 1st.**

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\_\_\_\_\_ Flea Mkt Electrical Outlet, \$32.00 ea

\_\_\_\_\_ DX Lunch & Program, \$10.00 ea

\_\_\_\_\_ Convention Banquet, \$16.00 ea

\_\_\_\_\_ QCWA Breakfast, \$3.50 ea

\_\_\_\_\_ Tour #1, Shopping, \$12.00 ea

\_\_\_\_\_ Tour #2, Museum, \$12.00 ea

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# SPECIAL EVENTS

## All aboard!

The California State Railroad Museum (Sacramento) will operate special event station WB6RVR/6 on May 5 from 1500 to 2400Z, to commemorate the seventh consecutive year of steam train operations from that site.

Suggested frequencies: *Phone*—7.270, 14.270, 21.370 and 28.370.

For a commemorative QSL send your QSL and a no. 10 SASE to: California State Railroad Museum, ATTN: Steam Trains, 111 I St., Sacramento, CA 95814. □

## Astronomical station

The W/K Amateur Radio Club will operate special event station AE9K from 1400Z, May 5, to 0500Z, May 6, to commemorate National Astronomy Day. Suggested frequencies are 14.250, 21.350 and 28.450 MHz. Also look for AE9K on RS10 in the CW mode.

For a special QSL send an SASE to: Nichols Observatory, 3885 Pioneer Rd., Richfield, WI 53076. SWL reports are welcome and qualify for the special QSL. □

## Mayfest

The Columbia Amateur Radio Club will operate special event station N4QSL from 1500Z, May 5, through 2100Z, May 6, from the South Carolina State Capital grounds, in conjunction with the annual Mayfest celebration.

Suggested frequencies are: *SSB*—28.400, 21.400, 14.250 and 7.200 MHz; and *CW*—28.200, 21.040, 14.040 and 7.040 MHz.

QSL with an SASE to CARC Mayfest, P.O. Box 5802, Columbia, SC 29250. □

## USS Olympia

The Olympia RAC will operate special event station WA3BAT onboard Admiral Dewey's flagship, the *USS Olympia*, from 1400Z until

2000Z May 5, to commemorate the 92nd anniversary of Admiral Dewey's triumph over the Spanish fleet at the Battle of Manila Bay during the Spanish-American War.

Suggested frequencies ( $\pm 5$  kHz QRM): *CW*—7133, 21133 and 28133; *phone*—3865, 7245, 14255, 21355, 28355 and 145.27 MHz FM. RTTY on 20 and 10M.

For a certificate send a QSL and 9 X 12 SASE with three units of postage/IRCs to Olympia RAC, P.O. Box 928, Philadelphia, PA 19105. □

## Golden Spike

The Ogden Amateur Radio Club (Promontory, UT) will operate special event station WJ7H from Promontory Summit to commemorate the 121st year of the driving of the Golden Spike.

Time of operation will be from 0001Z to 2100Z on May 10. Frequency will be on one of the following: 3.970 MHz, 7.270 MHz, 14.280 MHz, 21.375 MHz or 28.415 MHz.

Send a QSL and SASE to Ogden Amateur Radio Club, P.O. Box 3353, Ogden, Utah, 84409. □

## Guacamole anyone?

In conjunction with the annual Avocado Festival, the Escondido (CA) Amateur Radio Society will operate special event station WA6YOO on the festival grounds from 0000Z May 11 to 2400Z May 13.

SSB operation will be at 3950, 7250, 21350 and 28450 kHz. CW operation will be 50 kHz up from the band edges.

For an unfolded commemorative certificate, send a QSL and large SASE (two units of postage) to EARS, 2435 Our Country Rd., Escondido, CA 92025. □

## Armed Forces Day

Special event station W9DUP will operate from the U-505 submarine at the Museum of Science and Industry in Chicago, IL, to commemorate Armed Forces Day May 19 and 20 from 1600 to 2300Z.

Frequencies will be phone 7.250, 14.300, 28.400 and 145.25(600). For a certificate send an SASE to DuPage Amateur Radio Club, P.O. Box 71, Clarendon Hills, IL 60514. □

The annual Armed Forces Day Communication Test is set for Saturday, May 19, and marks the 41st anniversary of this event, which emphasizes a continuing climate of mutual assistance and warm esteem between the military and Amateur Radio communities. The traditional military-to-Amateur cross band operation and broadcast of the Secretary of Defense message are the featured highlights and include operations in CW, SSB, RTTY and packet radio.

These tests give both Amateur Radio operators and SWLs the opportunity to demonstrate their individual technical skills.

Special commemorative QSL cards will be awarded to those Amateur Radio operators achieving a verified two-way radio contact with any of the participating military radio stations. Interception of these contacts by SWLs are not acknowledged by QSL cards, however, anyone who receives and accurately copies the Armed Forces Day CW and/or RTTY message from the Secretary of Defense can qualify to receive a special commemorative certificate from the Secretary.

For more information contact Navy-Marine Corps, MARS, Naval Communication Unit, Washington, DC 20397-5161. □

## Centennial state

The Grays Harbor Amateur Radio Club will commemorate the 100th birthday of the city of Hoquiam, WA on May 19 and 20. Hoquiam, an Indian word meaning "Hungry For Wood," is a small lumber town located on the banks of the Chehalis and Hoquiam Rivers in Western Washington, about 19 miles from the Pacific Ocean.

Look for special event station W7ZA on the lower 50 kHz of the General phone bands on 15 through 80 and on 10M at about 28.310 +/--. There may also be a station on the CW portions of the bands. Times will be 0800 local on Saturday the 19th to 1800 local on Sunday.

For a special commemorative QSL card, please send an SASE to W7ZA c/o ARS: Joe Ledesma, KA7AIR, 516 6th St., Hoquiam, WA 98550. □

## CQ from Earth!

Anyone need a QSL card from Earth? The Lubbock Amateur Radio Club will operate special event station K5LIB from Earth, TX, beginning May 19 through 0200Z May 20. Suggested frequencies: *Phone* — 28.454, 21.370, 14.270 and 7.250; *CW* — 28.140, 21.120, 14.040 and 7.125.

For a QSL card send an SASE to Mike Strong, KT5H, 6405 36th Lubbock, TX 79407. □

## Submarine service

The Maryland Mobileers ARC will operate special event station WA3PJQ from 1400Z to 2100Z May 19 aboard the submarine U.S.S. *Torsk* to honor the submarine service.

Suggested frequencies: *SSB*—7240, 14240, 21340 and 28340 ( $\pm$  QRM); and *FM*—146.805.

For a certificate send a legal-size SASE to MMARC, P.O. Box 784, Severna Park, MO 21146. □

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## 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!

This month's winner is James R. Kerns, N4PUQ, from Oliver Springs, TN. Oh, if only all car trouble incidents had such a simple solution. . .

My wife and I made a trip to California in the Spring of 1988. We were driving a diesel Suburban and pulling a 22 ft. travel trailer and this was the first time I was on the air mobile with my Kenwood.

We had made the trip out with no trouble and were returning on Interstate 40 through a very remote western area. I had brought my key along for CW and, as my wife was driving, I thought it would be a good chance for a CW contact.

I sent CQ a few times and was in QSO talking to a stateside station. About five minutes into the QSO, the Suburban started missing very badly and the vehicle almost came to a stop miles from any service station or town. I hurriedly told the other station I had an emergency with the car and signed off.

As it turned out, while I was sending CW, my wife had engaged the cruise control on the car and the RF from the radio was cutting the cruise off and on with my CW key. As soon as I stopped sending CW, the car picked up normal speed.

No more CW with the cruise control on!

We had a good laugh about this. . . after it was all over. □

## Help needed on ATV list

Rosalie White, WA1STO, the ARRL Educational Activities Coordinator, has asked me to compile a list of current operating ATV repeaters or individuals who are retransmitting the NASA Select Space Shuttle video and audio. She will in turn put out that list with the information and study curriculum the League sends out to teachers about Amateur Radio and SAREX-90. The League presently has over 550 schools with which they have corresponded.

ATV repeater owners and simplex

shuttle retransmit stations please call or send me the following information right away:

1. ATV Repeater call sign
2. Repeater output frequency
3. Repeater location (nearest landmark, city and state)
4. Repeater antenna polarization
5. Call, name, QTH and phone number of a local contact
6. 2M ATV calling frequency.

This is a great opportunity to get young people interested in science and technology, as well as Amateur Radio. If there is an ATV repeater in the school's area, the students might be able to see the shuttle video as easily as

connecting a cable ready TV up to a good outside 70 cm antenna tuned to a cable channel between 57 and 60. In other cases, depending on output frequency, an ATV downconverter connected between the antenna and any TV set tuned to an open channel between 2 and 4 will do the job.

Actually those areas not served by an ATV repeater can benefit if a local ATV'er also has a TVRO and is willing to retransmit the NASA Select video on simplex to other Amateurs and the schools. The composite video and audio is simply plugged into the ATV transmitter. This is the only other service (turn to next page)




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# STATION APPEARANCE

Melvon G. Hart  
W0RV

*This month's winner is Melvon G. Hart, of Des Peres, MO.*

*Melvon retired several years ago after 30 years as a broadcast engineer and has held an Amateur license since 1952; Extra class since 1970. A previous shack of his was on the cover of June 1968 RTTY Journal.*

*Following is a description of his setup.*

The desk, cabinets and shelves were all home-built and are covered with matte finish walnut formica. The main desk is 30 inches by eight feet and the "L" computer section is 30 inches by seven feet.

Under each desk top is an "L" shaped wiring trough fastened to the wall. All of the cables lay in these troughs and are out of sight, but can be easily removed and replaced.

The drawer pedestal contains five



plywood drawers mounted on full support ball bearing drawer slides. Four of the drawers are only 2½ inches high inside, to allow easy access to small contents. The lower drawer is six inches high for larger items.

The equipment consists of an Icom IC-735 with an MFJ-949C antenna tuner-VSWR meter, an MFJ-1278 TNC, a Kenwood TR-7400A with a Swan WM-6200 VSWR meter and an

*Win a one-year Worldradio subscription! Submit photos and description of your shack to "Station Appearance." Entries are judged on neatness and accessibility, not monetary value.*

IC-2AT. The computer is an IBM clone with EGA, two floppy disk drives and a 20 Meg hard drive. There is a dot matrix printer, a daisy wheel printer and a Watanabe Digi-Plot intelligent plotter (on roll-away stand under the desk).

## ATV list

*(Continued from previous page)*

that Amateurs can retransmit legally. NASA uses various available commercial TV satellite transponders, such as Satcom 2 transponder 13, during shuttle missions.

The video, in addition to the audio we have enjoyed in the past, is especially significant now that NASA may have up to an hour of time devoted to Amateur Radio activity with STS-35 and STS-37.

Please send the requested information to Tom O'Hara, W6ORG, ARRL Technical Advisor - ATV, 2522 Paxson Lane, Arcadia, CA 91007; or call 818/447-4565, days.

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## DR-510T

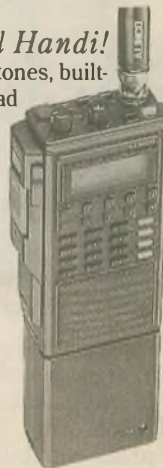
*Best Dual Value on the Market!*

The Alinco DR-510T has most of the outstanding features of its sister the DR-570T, including 14 memory channels, cross band duplex and cross band repeat. The multi color LCD display, and simple tune control panel makes simplicity the key word. The DR-510T with 45/35 watts is the best, feature-packed dual bander on the Amateur market today. See the DR-510T along with the other Alinco "Magnificent" ones at your favorite dealer today!

## DJ-500T

*Power-Packed Dual Handi!*

20 Memory channels, subtones, built-in DC to DC, 700 mah nicad battery, LCD readout with 6W on 2M and 5W on 70 cm (with optional battery) call channels, DTMF Touchtone, and direct keyboard entry, are just the few winning features of the Alinco DJ-500T Dual Band Handheld. Easy to use, and Value Priced at your Alinco Dealer.



## DR-110T&R-410T

*Tiny 2M Power From Alinco!*

DR-110T, this 2M Alinco, enters the nineties a proven winner with the "reputation" of best value. The DR-110T packs a powerful 45W on 2M and sports all the features you expect in today's transceivers. Tuning is a snap with the multi-functioned easy-to-see keyboard, 14 memory channels, subtones, scan, multi-colored LCD readout, reverse, are a few of the many features of the DR110T. The mobile of the future — today! DR-410T available for 70 cm.



## DJ-100T&DJ-200T

*Best 2M Micro Value Anywhere!*

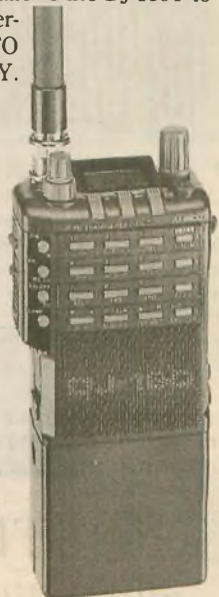
The Alinco DJ-100T is "Magnificent" for its tiny size, but stands up to the competition with power and capability. 10 memory channels store offsets and subtones. Has LCD readout with call channel and reverse at your fingertips. 500 mah battery with direct DC to DC is standard. 3W on standard battery, 6W on optional battery leaves the competition in the dust! DJ-200T for 220 MHz.



## DJ-160T&DJ-460T

*2M H/T is here! And wow!*

"Bells & Whistles" is a tame word to use for the new DJ-160T, newest "Magnificent" one from Alinco. Keyboard entry is just one of four ways to enter a frequency in the extended receiver (137-173.995 Mhz) of the DJ-160T. You can store duplex/simplex pairs in any of 20 Memories, or Call Channel, with offsets, and any of 38 encoding subtones. Choose one of 3 scan modes, "Band" "Program" or "Memory" and one of five step ranges in VFO. Priority mode can be used in VFO, Memory or Call. "Dual Watch" allows the DJ-160T to scan 3 seconds alternately on CALL, VFO or one MEMORY. "Pager" is for group or single person alert. Other features include: Auto "Battery Save", Auto "Power Off", and 2-Memory Autodialer. Get 3-watts on standard 700 mah battery, or increased power from built-in DC to DC, or optional 12V battery. The Alinco DJ-160T, now the "Top Gun" with the competition today! DJ-460T for 70cm.



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# Digital communications moves into the 21st century

**BUCK ROGERS, K4ABT**

Many of us in the hobby of Amateur Radio sometimes find that the novelty of it may wear a bit thin. If this happens to you, try this refreshing new approach in digital communications. Here is a different kind of "high" that whets your appetite for more, and you get it!

As most of the digital world knows, I eat, sleep and live packet, RTTY and AMTOR. I even get in a few hours of CW now and then. Recently, I've been beta-testing a new and radically different kind of terminal software. But in order for me to use this fancy terminal program, I had to purchase the new, and I mean NEW, MFJ-1278/TURBO MULTI-MODE Controller.

Don't even begin to compare the 1278 with the multi-mode data controllers of a year or so ago. This REV-9 TURBO version is very different and it is far superior to any that I've used in a couple of years.

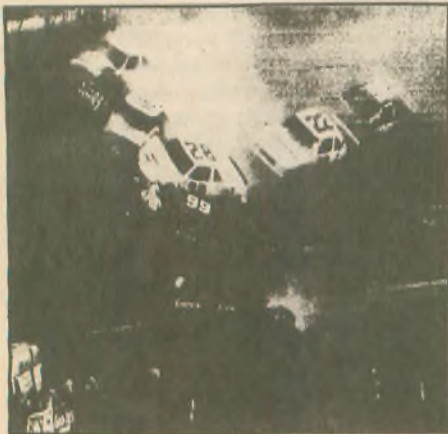


Figure 1. Illustrates FAX 1

The MFJ-1278 with "TURBO" is capable of sending and receiving eight or more levels of gray-scale, and in both the facsimile 1 or the facsimile 3 modes.

For those of you who are not yet into facsimile, the FAX 1 equates to 60 lines per minute and FAX 3 to 120 lines per minute. Figure 1 is an example of FAX 1 and Figure 2 is the FAX 3 mode.

The difference in these pictures are noted in the quality of the finished photos. This system doesn't require anything other than the 1278 and the "user-easy" terminal program, written especially for this new TURBO REV-9 and the PC or clone. (I understand that MFJ will upgrade pre-REV-9 1278s to



Figure 2. Illustrates FAX 3

this new multi-level version for around \$50). The terminal program is appropriately called MFJ MULTICOM.

This is only the beginning of the graphics capabilities that are now included as part of the MFJ-1278/TURBO and the MULTICOM. Here is another "kicker;" these facsimile pictures are not restricted to the ones you receive off-the-air from some of the wire or weather services. With the MFJ-1292 video digitizer and related PICTURE-PERFECT software, these pictures can be generated right inside your PC or clone.

The PICTURE-PERFECT software that supports the MFJ-1292 digitizer

can even be accessed while in the MULTICOM program. By pressing the F9 key, you are taken into the PICTURE-PERFECT software of the digitizer, without ever leaving the



Figure 3. Illustrates FAX 1 8 level

MULTICOM terminal program.

With this capability in the MULTICOM program, you have the best of all worlds. The reason I press this point is because the PICTURE-PERFECT software allows the user to save the a screen of video into any one of several formats, and it will even allow storage of the picture in a raw video format, for use at a later time. Raw video allows the user to reload the data to the PICTURE-PERFECT later and save it out into any of the other different formats, e.g. SSTV, FAX, etc.

The formats of this PICTURE-PERFECT video digitizing system do not stop at the FAX mode(s). Included in this package is the user capability to save the pictures into several slow-scan television modes, PCX format for use with the PC PAINTBrush drawing software (tm/c) ZSOFT) and into a special packet picture format of either CGA, EGA and/or VGA, and this is just for openers.

The hardware and software of the MFJ-1292/PICTURE-PERFECT can be a very useful and a rewarding add-on to this system, but it is not a requirement.

The MFJ MULTICOM is written by Bob Slomka, WD4MNT, who has a knack with software for packet.

Bob makes packet more than just a "type and send" medium. In 1983, he wrote a program that was ahead of its time. It was called PACPRO.EXE, and was one of the first terminal programs written for packet that would pass binary and ASCII files.

MULTICOM incorporates several years of packet technology and takes advantage of Bob's genius in the field of digital communications. When combined with the MFJ-1278 multi-mode data controller, this program becomes one of the most powerful digital cannons ever released.

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MULTICOM enables the built-in features of the MFJ-1278/TURBO to transmit and receive multi-level facsimile and SSTV. It will also transmit and receive eight level wire photos (see Figure 3).

By combining the power of the MFJ-1282 PICTURE-PERFECT Video Digitizer software the user is allowed to capture and save a picture in the eight level facsimile format. The user may then transmit it to another station who is also using the MFJ MULTICOM software.

The MFJ-1278/TURBO and MFJ MULTICOM.EXE may also be enjoyed by every packet, RTTY, AMTOR and CW operator. The program has an "always open" buffer that enables the user to edit, save, print or transmit any portion of the buffer. In addition, there is a built-in text processor with all the previously mentioned features.

For the packet user who enjoys that extra touch of excitement, try the AUTO-ROUTER. This is the equivalent of the automatic routing that we find in all the NET/ROM and TheNet nodes. All the user has to do is use the text processor (F10) portion of MULTICOM to quickly build a node route listing and save it to the disk with an extension of .RTR. From the moment you set up the RTR files, you will never again have to type in the connects to those many nodes.

Once the AUTO-ROUTER™ files are built, the only effort necessary to make a connect to a friend who is three, four or even 10 nodes away, will be to press ALT A and highlight the title of a call sign-RTR file and press enter. You may build as many node routes (RTR files) as you like.

When the ALT A keys are executed, a directory of files with only RTR extensions are displayed. Here is how an AUTO-ROUTER file would appear in the text processor:

**;AUTO-ROUTER**

- C ABT8 ;Connects me to ABT8 node at MACON, GA
- C GFN5 ;Connects to the next node at Griffin, GA
- C WGA5 ;Connects to West GA LAN node
- C N4NAU ;Connects to my brother in Aniston, AL

*Note: All text to the right of the*

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FAX FORMATS and FREQUENCIES					
FAXMODE (n)	Lines Per Minute (LPM)	Line Per Second (LPS)	Type of Service		
1	60 line/min.	1 line/sec.	Wire Photographs Weather FAX Satellite Weather		
2	90 line/min.	1.5 line/sec.			
3	120 line/min.	2 line/sec.			
4	240 line/min.	4 line/sec.			
5	360 line/min.	6 line/sec.			
FAX STATION FREQUENCIES					
Service	Band	Frequency (KHz)			
Weather	USB	3,357.00	4,268.00	4,975.00	6,946.00
		10,865.00	12,125.00	20,015	
Photographs	LSB	10,680.70	17,673.90	18,434.90, 20,738.00	
FREQUENCIES by location			LOCATION		
4,271.00	9,890.00	13,510.00	Halifax, Canada		
8,502.00	12,750.00		Boston, MA		
9,389.50	11,035.00		Brentwood, NY		
4,793.50	10,185.00	12,201.00	Washington, DC		
9,157.50	17,447.50		Mobile, AL		
8,080.00	10854.00	16,410.00	Norfolk, VA		
4,802.50	9,440.00	13,862.50	Hawaii		
7,770.00	11,090.00	13,627.50	Hawaii		
8,459.00			Alaska		
4,346.00	8,682.00	12,730.00	San Francisco, CA		
8,646.00	17,410.50	17,151.20	San Diego, CA		

To assist you in getting started with facsimile picture receiving, here is a small list of frequencies where FAX transmissions may be found.

semicolon is not sent to the AUTO-ROUTER, and thus serves as comment and notation for each command.

These are just a few of the advanced features of this "user easy" program. Just about the time you think you've used all the features in the MULTICOM or the 1278, up pops another one.

Here is another "goodie" that gives us total control over the MFJ-1278/TURBO. Press F6 and up pops a menu that enables us to access any one of its nine or more modes. It is no longer a memory test when trying to remember each and every one of the commands within the controller.

Let's say we want to move from packet to RTTY. Simply press F6 and F3 (F3 = RTTY on the menu). For that matter, you can go to any mode you desire from the F6 menu, just press the key associated with the function, and BINGO!, you're there.

Not only are you able to move from one mode to the other with finger-touch ease, but you are also able to move to either of the MFJ-1278 ports with the same menu.

In fact, you are now able to move

from not two, but three speeds, with the same ease. The new MFJ-1278/TURBO offers the standard 300 (HF) and 1200 (VHF) bauds, and in addition it offers the new packet speed of 2400 bps Phase Shift Keying. I invite you to try this well-matched combination and you will soon discover, as I have, that the "type and send" QSO is only the beginning of the fun you can have. □

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# The LOGic Logging Program

## NORM BROOKS, K6FO

I finally did it! I operated in a contest and didn't write a log. I used my IBM compatible computer with the LOGic program. Even when I had control of the frequency and they were calling me in a pileup, I was able to keep up with logging and the computer was automatically logging the correct up-to-the-minute time. This is "the only way to go!"

Those of you who have IBM compatibles know that the general purpose programs available for your computer are huge. They occupy large segments of your memory and require a lot of study to learn how to use them. On the other hand, there are a lot of programs for Amateur operating that are comparatively simple and apply to only one or two specific contests or applications.

LOGic is in between. It is a large, comprehensive program, but it does all the things a collection of smaller programs will do, and it is not difficult to "learn."

The most valuable feature of LOGic is that you can tailor the logging screen to anything you want. You decide what

items you will log with each contact. When it comes to printing the final log to send in, you set up the way the form will be printed.

The next most valuable feature of LOGic, in my opinion, is its ability to search your log and find anything there. If you like to keep track of first names of the people to whom you talk, you can later ask LOGic to find that fellow named Wendell in Idaho, who was operating mobile on the 15M band. He will be found in seconds — it sure beats thumbing through pages of a logbook.

Your log is kept in one large file, not broken down by prefixes, states or whatever. (You can, however, keep your log in separate sections if you want to do it that way.) Generally, if you want to make any kind of a breakdown, you do it later and LOGic separates (and prints, if you want) whatever you tell it to.

To me, the most mind-boggling feature of this log keeping is this: You can keep it by date and time, as you would a written log book, or instantly sort the complete log into call sign order.

The documentation consists of two 50 page manuals, one for the logging functions, the other on report writing. Just as with all sophisticated computer programs, it is best to start using LOGic on simple tasks, such as ordinary day-to-day logging, and then work into additional features as you become confident in the use of the ones you have learned. Also, function key F1 brings you help screens for the area you are in.

Entering the call or state will display the direction, long and short path distance, time zone, DXCC country, third party traffic status and ARRL outgoing QSL bureau status. You will be automatically notified if you had worked the station before.

If you like to make a lot of comments in your logbook, LOGic will accept them — up to 64,000 characters of notes per QSO!

You can set frequency limits into the program, and it will remind you when you are out of your frequency sub-bands.

If you have a computer compatible radio, you can control that radio from the keyboard or memories in the computer, and the radio can simplify your logging by providing frequency, mode and time to LOGic. If you don't yet have such a radio, it's nice to know your program will handle it when you ultimately get one.

You can track your progress on awards. LOGic will track countries, counties, states (WAS and 5BWAS), WAZ, DXCC, WAE, 10-10, etc. LOGic supports all contesting requirements, as you tell it what constitutes a duplicate contact. During the contest, it tells you when you are about to log a "dupe."

As I said earlier, there are many programs offered that handle one or two awards or contests, but to quote LOGic's manual, "It is unlikely that any award will ever be offered that LOGic cannot handle."

One more plus — support. You can get telephone answers to any support question from 4 to 9 p.m. ET, Monday through Thursday. Dennis Hevener, LOGic's creator, is very helpful and is looking for suggestions to make LOGic even better.

You probably get the idea that I am enthused about LOGic. I am. And as I said earlier, I have not yet mastered all the things it can do. Hardly a week goes by that I don't discover a feature I overlooked before.

The program sells for \$75 postpaid in the United States. It is available from Personal Data Base Applications, 2634 Meadow Bend Court, Duluth, GA 30136. A free 10 page information packet is available upon request, no SASE needed.

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provide some sort of signal to en-  
courage the sale of receivers until the  
GE transmitter was delivered and  
placed into service.

Art was also an early experimenter  
with facsimile. *The Chicago Tribune*,  
WGN's parent company, wanted to ex-  
periment with home delivery via a sub-  
carrier on WGNB, the FM station.  
That project was given to Art, but was  
abandoned because it was not commer-  
cially practical with existing technol-  
ogy.

W9IUJ was heard regularly on the

Monday, Wednesday, Friday WGN  
net on 40 and 20. He will be missed by  
his many friends. — *Information sub-  
mitted by Roy R. Cone, W9YLU* □

# Scholarships available

The Foundation For Amateur Radio  
Inc., a non-profit organization with  
headquarters in Washington, DC,  
plans to award 33 scholarships for the  
academic year 1990-1991 to assist  
licensed radio amateurs.

The Foundation, composed of 50  
local area Amateur Radio clubs, fully  
funds five of these scholarships with the  
income from grants and its annual  
hamfest. It administers, without cost  
to the donors, seven scholarships for  
the Quarter Century Wireless Associ-  
ation; three each for the Baltimore (MD)  
Amateur Radio Club, the Radio Club of  
America and the West Allis Radio Club  
of Milwaukee (WI); and two each for  
the Dade (FL) Radio Club, the Ama-  
teur Radio News Service and the 10-10  
International Net. It also administers  
one each for the Richard G. Chichester  
Memorial, the Young Ladies' Radio  
League, the Columbia (MD) Amateur  
Radio Association, the Frederick (MD)  
Amateur Radio Club, the Vienna (VA)  
Wireless Society, the Goddard  
Amateur Radio Club and the Kevin B.  
Perdue Memorial.

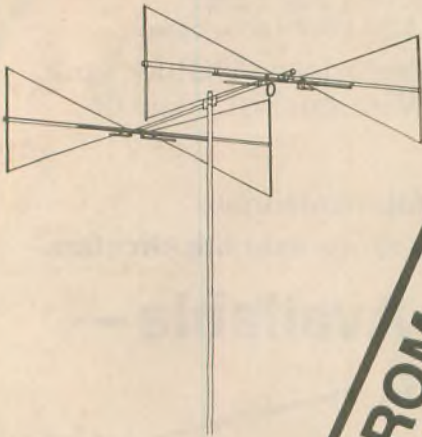
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pete for these awards if they plan to  
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May 31, 1990, from: FAR Scholar-  
ships, 6903 Rhode Island Ave., College  
Park, MD 20740. □

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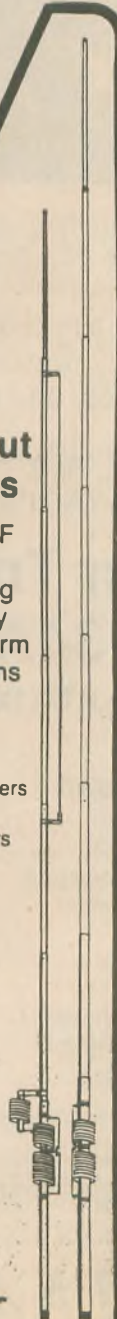
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# DX WORLD

John F.W. Minke III, N6JM

6230 Rio Bonito Drive Carmichael, CA 95608

## Activities Calendar

- 12-13 May RSF CQ M Contest
- 26-27 May URE Ibero-America Contest (SSB)
- 26-27 May LABRE World Telecommunications Day
- 26-27 May CQ Worldwide WPX Contest (CW)
- 02-03 June DARC National Field Day (CW)

For details on contest activity, consult your favorite contest column.

## W-100-N

The following DXers recently completed the requirements for Worldradio's Worked 100 Nations Award:

373. KA3DBN John L. Rouse

374. WA6WHQ Louis C. Berry

## Armond's DXathon

We have about finished checking the entries for the 1989 DXathon. We had to make point reductions to many of the applications based on the following reasons:

1. DX contest periods were included. These contacts were not accepted according to the rules. However, a CW contact made during an SSB contest weekend was valid.

2. Non-nations were counted. Some DXCC countries, such as Hawaii, count only as the United States and are not separate nations.

3. Counted own nation. The rules clearly stated that these contacts do not count.

4. Slims were counted. One entry used ZA2RA for an Albanian contact. This was obviously bogus.

5. Incomplete log information. One entry listed only the prefixes he worked. No complete calls, no times, no dates or other data was included.

We appreciated the entries from those applicants who took the time to prepare their submissions. Some logs were not very neat. Would you turn in a term paper like that? I think not.

We are presently working on log forms for the 1990 DXathon. The Nations List is still in the mill and probably will not be much different than the 1984 list we have been using for Worldradio's W-100-N. We sure hope this is an incentive to encourage more participation.

## Liberia (EL)

The most reported station signing from Liberia is EL7X, mostly on CW on six bands. On 80M he is usually found down around 3.501 MHz after 2330 UTC. For a 40M contact listen for him around 0630 UTC on 7.005 MHz.

There were two reports of EL7X on 30M. One was Feb. 3 near 10.100 MHz at 0030 UTC and the second was Feb. 27 on 10.104 MHz at 2230 UTC. On 20M he can be found between 14.005 MHz and 14.020 MHz after 2230 UTC. On 15M he can be found between 21.009 and 21.025 MHz from 2230 UTC and on 10M try 28.009 to 28.013 MHz after 2000 UTC.

As I said before, EL7X seems to like CW. However, he has also been reported on SSB, but 10M only and in the Novice segment of the band. Look for him between 28.450 and 28.490 MHz after 1400 UTC.

Inside DX reports that EL2CX hopes to acquire a special call sign for both WPX contests. He is an active contester and was busy with the pileups during the CW weekend of the ARRL International DX Contest.

From the various reports he seems to operate only on CW. The first couple of weeks in February EL2CX was worked near 3.514 MHz at 0615 UTC, 14.033 MHz at 0300 UTC, 21.033 MHz at 1730 UTC and 28.019 MHz at 1330 UTC. His signals were reported from all areas of the United States.

Need Liberia on 75M? Check 3.795 MHz and the vicinity around 0600 UTC for EL2DK and EL2WK.

The following calls were also reported, but were not as active:

EL2AB	14.089 MHz	0300 UTC
EL2B	21.249 MHz	2015 UTC
EL2E	21.260 MHz	0100 UTC
EL2FO	28.535 MHz	1530 UTC
EL2MR	28.490 MHz	1230 UTC
EL7TH	21.014 MHz	0015 UTC

## Haiti (HH)

An occasional check-in to the Friendly E.T. Net on 14.160 MHz is HH2MC. Look for him after 0130 UTC. He has also been reported on 75M near 3.795 MHz at 0400 UTC.

Also reported on 75M was HH2JR, who was found on 3.793 MHz with signals into western Europe at 0100 UTC.



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Reported on at least three bands in February was HH2LB. Check 14.200 MHz at 0430 UTC, 21.298 MHz at 0100 UTC and 28.511 MHz at 2230 UTC. Other calls reported were HH2BN on 21.157 MHz at 1200 UTC and HH2BZ running RTTY near 14.084 MHz at 0015 UTC.

## Jan Mayen (JX)

The DX Bulletin reports that Per Dahlen, LA7DFA, will operate as JX7DFA from April 1 through July 27. He seems to favor CW and will be in the lower reaches of the band.

Reported several times in February was JX9CAA. If you need an RTTY

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contact, try 14.083 MHz after 1730 UTC, or look for him on SSB between 14.222 and 14.227 MHz between 1500 and 2200 UTC.

JX9CAA was also worked on 75M at 2100 UTC on 3.795 MHz. Unfortunately, this time of day made it of no use to North America.

A third station, JX8KY, was

## DX Prediction

Maximum Usable Frequency from West Coast, Central U.S., and East Coast (courtesy of Engineering Systems Incorporated, Box 939, Vienna, VA 22180).

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.

### MAY 1990 WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(20)	27	24	(17)	27
12	(26)	21	22	22	24
14	32	25	20	27	32
16	36	25	(19)	30	38
18	38	20	(19)	29	42
20	38	28	37	26	45
22	31	33	44	21	43
24	27	37	47	18	35
2	24	39	47	16	30
4	25	39	45	23	26
6	31	36	38	26	23
8	26	32	27	21	21

### CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(25)	21	25	20	21
10	30	17	23	19	22
12	38	22	21	25	28
14	43	27	(20)	28	35
16	46	25	(19)	31	40
18	46	(21)	(19)	29	44
20	38	29	37	27	46
22	31	33	44	22	44
24	27	32	47	20	36
2	24	31	46	16	30
4	25	28	44	24	26
6	32	26	38	23	23

### EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	27	21	30	17	22
9	28	(17)	24	22	25
11	36	23	22	26	28
13	42	26	(20)	29	35
15	45	21	(19)	31	40
17	45	(17)	(19)	30	43
19	41	(21)	(28)	29	45
21	34	26	41	26	44
23	29	29	45	22	41
1	25	30	46	18	34
3	20	28	46	22	29
5	30	26	38	21	25

reported on 21.209 MHz and 28.704 MHz at 1515 UTC.

### Central African Republic (TL)

After reviewing the reports of activity from the Central African Republic, I see that 15M is the band to check for this one:

TL8CK	21.267 MHz	1315 UTC
TL8DO	21.235 MHz	2130 UTC
TL8HW	21.264 MHz	2000 UTC
TL8JL	21.345 MHz	1900 UTC
TL8PN	21.345 MHz	1200 UTC
TL8PS	21.335 MHz	2130 UTC

Finally, TL8TM was worked via RTTY on this band on 21.088 MHz at 1500 UTC.

There were a few other reports of activity besides 15M, however. TL8WD was worked several nights down on 75M between 3.795 and 3.799 MHz from 0400 UTC. On 20M TL8WD and TL8JL were reported as net regulars on 14.222 MHz; try 0200 UTC.

### Brunei (V8)

Brunei is one still needed by many. If 20M is your favorite band, check the following:

V85DA	14.027 MHz	2200 UTC
V85GA	14.196 MHz	1300 UTC
V85NR	14.240 MHz	1630 UTC

If you have RTTY capabilities, look for V85DA near 14.092 MHz around 1645 UTC. On both 80 and 40M, V85DA has been active. Try 3.507 MHz around 1330 UTC or 7.002 MHz at 1430 UTC.

He has also been on 75M near 3.795 MHz along with V85HG. Look for them after 1230 UTC.

Ten meters produced some activity from this one. On 28.482 MHz V85GA was worked about 0100 UTC and V85SS was reported on the East Coast on 28.149 MHz at 0130 UTC. Be aware that is the Novice CW band.

### Burkina Faso (XT)

Reported to be a YL operator is XT2BX. This station has been found in the DX bulletins at least twice during the month of February. Try the E.T. Net on 14.160 MHz after 0100 UTC or on 21.335 MHz at 2130 UTC. Also found on 21.335 MHz was XT2PS around 1945 UTC.

XT2BW was reported many times. Try looking for this one between

21.233 and 21.307 MHz from 1900 UTC and around 28.346 MHz at 1730 UTC.

### Franz Josef Land (4K2)

A few years ago Franz Josef Land was one of the rarer ones on the charts. No so any more, and with the new 4K2 prefix allocated to this group of islands, it is easier to identify the calls than with the former UA1 prefix.

Very active is 4K2OT, who has been reported on several bands. Not only that, but he has been known to give out RTTY contacts. Try 14.089 MHz at 1630 UTC or 21.090 MHz at 1630 UTC.

Forty meters may also produce a contact with 4K2OT. Try 7.004 MHz after 1230 UTC. On 20M listen between 14.009 and 14.020 MHz after 0030 UTC and on 15M try around 1900 UTC between 21.023 and 21.053 MHz. He has also been on the new WARC bands, such as 10.101 MHz at 2315 UTC and 18.071 MHz at 1230 UTC.

Also from Franz Josef Land is 4K2OIL. Most of his activity is 20M CW. Look for this one between 14.002 and 14.019 MHz after 0300 UTC.

Finally, 4K2BDU has been on a few times, including the CW portion of the ARRL DX Contest. This one has been on both 20 and 15M, near the same frequencies and times as the others.

### Rwanda (9X)

We only have activity from one station for this one. Fortunately, this station has been fairly active, all on SSB.

Try 75M near 3.798 MHz around 2330 UTC, where that time favored only the East Coast. On 20M he was near 14.265 MHz at 0115 UTC and on 15 he was reported between 21.228 and 21.291 MHz from 2000 UTC.

### Walvis Bay (ZS9)

By unanimous vote the ARRL Awards Committee accepted the DX-AC recommendation that Walvis Bay be added to the DXCC countries list, by virtue of Point 3 of the Countries List Criteria.

An enclave of the Republic of South Africa, Walvis Bay is surrounded by Namibia. The distance is over 300 miles.

Credit will be given for all contacts made since Sept. 2, 1977, the date when administration of Walvis Bay was transferred to the Republic of South Africa. QSL cards may be submitted to DXCC credit on or after June 1, 1990. Cards received before that date will be returned with no action.

If you worked a ZS9 call in the recent ARRL DX contests, you may count the contact as a multiplier.

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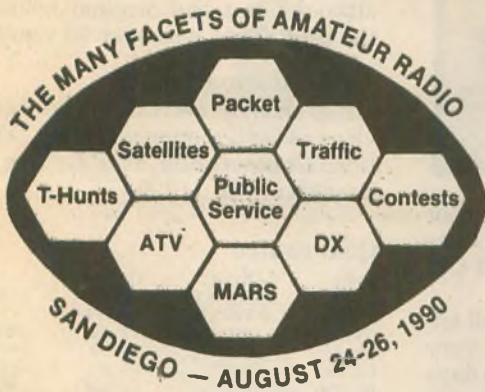
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## 6M QRP WAC

N8AXA is one happy DXer. He reports that he was the first to apply for WAC 6M using QRP mobile.

The contacts include W6JKV/CT3 (Africa), JA9IPF (Asia), CT1DTQ (Europe), KL7NO (North America), KG6DX (Oceania) and DL3ZM/YV5 (South America). All contacts were made during the month of November 1989. The first was a CW contact with Europe, on the 7th, and the final contact was with Japan on the 26th, also a CW contact. The other contacts were SSB.

Our congratulations to N8AXA.

## The Kenyan Award

The Kenyan Award, sponsored by the Radio Society of Kenya, is available to all licensed radio amateurs located outside the Republic of Kenya, for contacts made with members of the society. The requirements are as follows:

—A total of 10 points must be collected. Each 5Z4 call counts two points, and a contact with 5Z4RS is worth five points.

—Only contacts made after Dec. 31, 1977, are valid. All modes and bands are applicable.

There is no mention of QSL cards. However, they require a submission of logbook photocopies witnessed and signed by a responsible official of the local radio society/club or the licensing authority.

I am not sure what that means. Do they mean the ARRL in Newington? The League is not set up for this. Besides, who wants to mail their log to be certified. Perhaps they will accept something on the local club level. And Heaven forbid, we are not about to send our logbook to the FCC.

There is a charge of five IRCs or \$5 US. Checks are also accepted and must be made payable of the Radio Society of Kenya. Enclose a self-addressed adhesive label with your letter of application addressed to the Society. Kenyan Award should be marked at the upper left hand corner of the envelope. Send your application to Ben Pont, 5Z4BP, P.O. Box 73029, Nairobi, Kenya.

## Antique QSL department

The Baltic states continue to be of interest. During the early stages of WW II, Stalin decided to annex Estonia, Latvia and Lithuania into the Soviet Union to "protect" them from Nazi Germany. The little nations had gained independence from Imperial Russia in 1918 when the Bolsheviks had taken over.

Now, within the past year, the Amateur Radio stations in the Baltic states have reverted to the prefixes

used prior to the war. There is also a possibility that one or more of them may regain independence.

Jules Wenglare, W6YO, submitted cards from the three Baltic states, all made back in the 1930s. Some of the calls have been in previous issues of this column.



Jules worked ES5C, located near Tallinn, on the first day of 1938. Jules was signing W8OSL for this 20M CW contact.

This particular card had the call letters printed in red. ES5C was a very active Estonian station in those days and many long-time DXers have his card still in their collection, some with the call letters in blue.



In 1934 Jules was operating as W8DVS, when he worked LY1J, located in Kaunas, Lithuania. We ran this same card in the February 1985 issue.

The third card Jules submitted was for a 1935 contact made with YL2BB, in Riga, Latvia. Like the other two, this was a 20M CW contact.

I don't know what happened to the



above operators. Perhaps with the old calls coming back, you might just hear ES5C, LY1J or YL2BB again, although not the original holders of the calls. That was over 50 years ago.

## QSL information

Ron Harris, WG2I, offers his services as QSL manager for any DX station. Contact Ron at P.O. Box 500, Brooklyn, NY 11229.

## QSL routes

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AT0U	—WA4FVT	UA8T/	—1K8HVJ
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CN8FC	—WA4QM/Q	V21AJI	—W2BJJ
CT2A	—CT1BOH	V29OA	—W7KNT
D68TW	—K3ZO	V31B	—V31BB
DL3ZM/YV5	—K8EFS	V47KJ1	—W2BJ1
ED3QD	—EA3BOX	V63AN	—JA2NQG
ED4KK	—EA4KK	V63CQ	—KB5FGL
ED7TDP	—EA7CZR	V63GZ	—JA0GZ
EL2CX	—N2AU	V73AS	—KK4QY
EL2DK	—G3OCA	V73AT	—K2CL
EL2FO	—KN4F	V73AU	—N8BZ
EL2WB	—G3OCA	VK9LE	—VK3OT
EL2WK	—G3OCA	VK9LG	—AE6H
FG5R	—W7EJ	VP2V	—W8QKP
FK8GJ	—F6CXJ	VR6JR	—G3OKQ
FO0XXL	—YASME	VR200P1/**	—KB6ISL
FO0PT	—DJ0FX	VU2NBT	—WA4FVT
FR4FD	—F6FYA	XE2EBE	—AA6DP
FV0NDX	—F6AJA	XE2MX	—KA6SAR
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HR3JEP	—WB6QPG	YJ0ABF	—DF5WA
190M	—11RBJ	Y51GMV	—W3HKK
IU4K	—14ABF	Z04CZ	—G4SSH
J20TW	—K3ZO	ZD8Z	—W6CF
J34A	—W5PWG	ZF2KE	—K9QVB
J6LSN	—KJ8J	ZF2KH	—W7KNT
JJ2IMX/J8	—JJ3IMX	ZF20Z/ZF9	—WB8YUC
JX8KY	—LA7ZO	ZK1XK	—DL4FP
JX9CAA	—LA5NM	ZL7TPY	—ZL2TPY
KY6ITU	—N6JM	ZL0A1C	—HB9AAA
L2E	—LU8DPM	ZL0AKH	—YASME
LZ5W	—LZ1YE	ZY0FX	—W9VA
LZ5X	—LZ1HA	ZZ4Y	—PY4OY
LZ6G	—LZ2RS	3DA0BJ	—AA4RL
LZ6W	—LZ2KSQ	3D21J	—DJ41J
N6AMG/KH8	—AE6H	4B2A	—N7BSA
P40V	—A16V	4K2OT	—UB5KW
PA3CX/ST0	—PA3CXC	4K2QQ	—RA1QX
PJ9M	—OH6RM	4M5E	—YV5MBX
PJ0B	—WA2NHA	4M5Y	—YV5JMS
PS2A	—PT2BW	4N4T	—YU4JLM
	(See Note 1)	4U11TU	(See Note 3)
		5H3TW	—K3ZO
RX9J	—UC2ABA	5W1HK	—SM7PKK
S01LNDX	—EA2JG	5Z4B1	—W4FRU
SN3A	—SP3GEM	5Z4E1	—N6DFT
ST4/WZ6C	—W4FRU	617CQ	—ZE2TCQ
T32B1	—KH6DFW	8Q7DG	—AA5H1
T32LB	—JH1LBR		(See Note 2)
T32T	—KH6VP		—DJ0MBU
T32VP	—KH6VP	8Q7JC	(See Note 1)
T5YO	—12YO		—D6GZA
TL8HW	—WB4LFM	9L1EY	—WA8JOC
TL8RM	—F6FM	9L1US	—KD3P
TL8SC	—K4UTE	9S5G	—KD3P
TL8WD	—DL8CM	9T5MD	—W4FRU
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The performance by Amateurs during a mock disaster in which mass casualties were flown to Birmingham, AL, is being given high marks.

The National Disaster Medical System drill consisted of an earthquake in Tennessee, with thousands of deaths and critical injuries. Victims were flown aboard a military aircraft to the Birmingham Airport, where they were transported to local hospitals. Amateurs were called upon to keep the staging area in contact with hospitals and to assist in relaying patient information.

Stations elsewhere in the state also had a major role. Russ Speake, WB4STZ, handled traffic for the Fox Army Hospital at the Redstone Arsenal near Huntsville. John Venters, K4UR, served as a back up station on 40M. HF operations were handled in Birmingham by Frances Pilman, N4LYV.

"The amateurs involved in this effort did an absolutely outstanding job," said Boyd Bradshaw, KB4GDN, Section Emergency Coordinator and Net Control station for the drill. *ARRL Alabama Section News*

Deserving DXers who are attending the Dayton Hamvention at the end of the month should be sure to take in the DX Forum on Saturday. That along with the fifth annual DX Dinner on Friday, followed by hospitality suites of the Western New York DX Association and others, ought to make up for the DX you may have missed while attending this super colossal bash. See you there! *Very 73 es gl DX, de John N6JM.*

This smiling gentleman is just waiting for you to work him. Meet Ben Pont, 5Z4BP, of Nairobi, Kenya. He is a DXer and has many awards for his efforts. Active on all bands, Ben is also the awards manager for The Kenyan Award. (Photo courtesy of 5Z4BP).



Many thanks to the following contributors: WG2I, W3AZD, N4QMK, K4RPO, AA5HI, W6YO, KH6DFW, KH6VP, N8AXA, UJ8JRK, 5Z4BP, Western Washington DX Club (K57L), Northern Arizona DX Club (NNTF), Salt City DX Association (KB2G), The DX Magazine (VP2ML), Long Ship (VE3IPR), DX News Sheet (G4DYO), The Long Island DX Bulletin (W2IYX), Inside DX (N2AV), QRZ DX (W5KNE) and The DX Bulletin (VP2ML).

Most of our DX reports come from the various DX news bulletins listed above. We also appreciate input from our readers. We request any information submitted to reach us within the first week of each month for the issue that is mailed the following month. However, do not include reports on countries that you have just read about. We will not be covering that particular country unless it is considered extremely rare. Be sure to include the exact frequency you worked them on, the time and date, plus any other pertinent data. Use my address

Notes:  
 1. Please send your QSL cards direct — not via the bureau.  
 2. You may also QSL this one via W5ODD.  
 3. There are various routes for this one. For the ARRL DX test in March, QSL via IK2GPV; the period Feb. 24 and 25 via PD1OWK.

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- R02R — P.O. Box 253, Kamchatka 683 000, USSR
- RM8MA — P.O. Box 1790, Funze 720 023, Kirghiz, USSR
- RX8C — P.O. Box 1273, Khabarovsk 680 051, USSR
- S4ZLK — P.O. Box 1, Hamburg 5614, Republic of Ciskei, SOUTHERN AFRICA (See Note //)
- TU2VC — P.O. Box 757, Bouake, IVORY COAST
- UJ8JRK — Vladimir V. Vronsky, P.O. Box 1097, Dushanbe 734032, Tadzhik, USSR
- VK8KTC — P.O. Box 142, Aljanguia, 0885 Groote Eylandt, Northern Territory, AUSTRALIA
- W4U — P.O. Box 9369, Bayamon, PR 00621-8040
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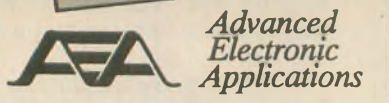


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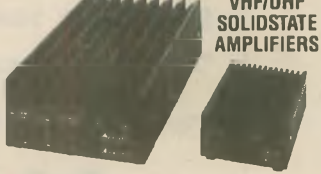
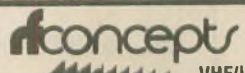
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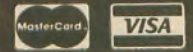
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Florida abounds in Amateur activities in winter that attract both permanent residents and the annual snowbirds. QCWA boasts over 20 chapters in that state, and this season has been an especially active one for the presentation of QCWA awards to members enjoying the warm climate.

At the Miami Hamboree QCWA's *John DiBlasi Award* was presented to Nat Burnett, K4OL, by president Harry Dannals, W2HD. Nat, charter member #43 and one of the founders of QCWA, was especially pleased to be honored by a second generation Amateur. Years ago, he won a code contest sponsored by Harry's dad, Earl, W2GG. Nat had to build a six foot rack and panel to hold his prize, an immense tube.

Pelican Chapter #128 in St. Peters-



The 75-year award was presented to Bill Franklin, W4KC (center), who is flanked by Wes Randles, W4COW, and W2HD.

burg was the scene of another prestigious award presentation by President Dannals. Bill Franklin, W4KC, was honored with a 75-year plaque.

First licensed as 4BC in 1915, Bill served in WW I as a wireless operator in the US Navy. In 1929 he was hired by Pan American Airways as one of its earliest radio operators and flew between Keywest, FL, and Cuba. In 1931 he went to work for the government as both radio operator and maintenance engineer in what is now the FFA, from which he retired in 1963. He received his present call in 1946, following WW II.

QCWA looks forward to enrolling Judi Beth Lansdell, KC6EQU, sometime in 2014. This young lady obtained her Amateur license last year at age 7, and will be 32 years old when her QCWA eligibility comes around. Her maternal great grandparents, Esther, WA6UBU (SK), and Lyle Gardner, N6LB, both QCWA members, obviously passed on dominant genes to this



QCWA's *John DiBlasi Award* was presented to Nat Burnett, K4OL, by QCWA president Harry Dannals, W2HD.

accomplished YL, who is following in their footsteps and is Great Gramp's pride and joy.

QCWA will award seven \$750 scholarships again in 1990, for which an applicant must be a licensed Amateur and must be sponsored by a QCWA member in good standing. The scholarship awards are handled through the Foundation for Amateur Radio, which screens applications and announces winners. By submitting one FAR form, the applicant is eligible to compete for some 30 scholarships, as long as the donor's conditions are met.

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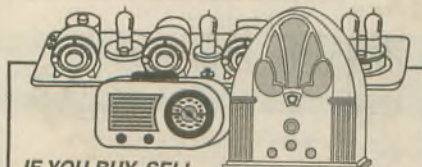


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## Mobile automatic tuners

Here are some applications where a mobile remote-mounted, automatic tuner is an ideal substitute for a conventional mobile-whip system:

- Insulated backstay aboard a sailboat
- 23 ft. white fiberglass whip for power boats
- Portable long wire antenna on camping trips
- Attic-hidden long wire or loop antenna system
- All-band sloper antenna

The fully automatic end-fed tuner is unlike the built-in tuner found in the Kenwood TS-440 or the built-in tuner found on Yaesu and Icom base station setups. The built-in automatic tuners are really more like trimmers — they only assist in reducing a relatively low SWR to a regular antenna system.

Built-in automatic tuners won't tune up random-length wires. Only the remote-mounted, long-wire antenna tuners will do that.

Fully automatic, remote-mounted antenna tuners are expensive. The one I like best is the SGC Model 230, for a little under \$600 or, completely wired up, tuned and tested, with all cable assemblies for just under \$800. It will work with any high-frequency transceiver. No additional four-conductor data line is necessary.

If you own an Icom rig, your best tuner is the remote-mounted Icom AT-120, AH-2 or AH-3. These sell for about \$600, but only work with Icom rigs.

With Kenwood and Yaesu trans-

ceivers, you will need the fully-automatic SGC Model 230. It does not require the additional data line for start-tune and stop-tune.

The tuner mounts several feet away from your transceiver. The further the better. In boats mount it near the antenna feedpoint, back aft or up in the flying bridge. In homes mount the automatic tuner up in the attic. In vehicles it goes in the trunk, feeding a very long whip antenna. The automatic tuner requires no manual adjustments, so keep it away from the rig.

The automatic antenna tuner needs a superb ground in order to perform properly. Aboard boats, this is your ship's green conductor bonding and foil ground system. In cars and motorhomes the ground is the chassis of your vehicle. In portable operation ground foil runs to a ground stake or to a nearby stream. In a condo, house or apartment, ground foil is run to anything of good ground potential in the attic. This could include attic metal vent pipes, metalized attic insulation or, in some cases, ground foil over to the chicken wire holding the stucco on the outside of the walls. In real hard-to-ground cases copper foil must be run from the tail of the tuner all the way to the earth ground.

The fully automatic tuner is complex on the inside, but smart on the outside. It senses your high-frequency signal, automatically tunes up and puts the 100W right onto the random length wire antenna.

It tunes up in seconds with most rigs. Just speak into the microphone and zip, reed relays key in the proper amount of L and C, giving your antenna system the proper match.

On Kenwood TS-440 transceivers, you will need to adjust VR-2 in the transmitter section for a little bit more output while the tuner is "learning" your new antenna system. On the Kenwood TS-140 you will need to up your "protected" power output slightly by

adjusting VR-16.

On both rigs, you are adjusting *down* the SWR protection circuitry for a little bit more output into an elevated SWR during tune-up procedures. Don't overdo it — the SWR protection circuitry is built into these Kenwood rigs for the ultimate protection of your final output circuits.

The best use of the fully automatic, remote-mounted antenna tuner is aboard boats. Second best, use it in attic installations where nothing else seems to work. Lastly, it could be used

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**ICOM** - Order Model I for all Icom (2AT/02AT). Slides on bottom of radio.  
**TEMPO, SANTEC** - Order Model T (Simple mod). Write for spec sheet/info on other radios.

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The Kenwood 440 has a built-in tuner. However, the 440 tuner will *not* tune a long-wire.

in motor vehicles, but only if you use a real tall whip. Trying to push 100W into a little 96-inch, stainless steel CB whip will result in miserable performance. Don't use the automatic antenna tuner in this application — it only works well if it sees more than 20 ft. of something conductive, as the antenna.

While there are a half-dozen automatic antenna tuner manufacturers, only SGC (Bellevue, WA) has taken an interest in building an automatic antenna tuner specifically for the Amateur Radio market.

The folks at SEA, with their Model 1612, indicate they have no interest in their tuner being matched with an Amateur rig. Same thing with Hull and R.F. Harris.

If you're looking to tune up a piece of wire on high frequency, do consider the fully automatic, remote-mounted SGC Model 230 antenna tuner.

And also consider finding out more about Maxcom, too, as an end-fed autotuner. The Maxcom antenna matching device utilizes no moving parts and will match your worldwide rig to just about

Automatic SGC autotuner for longwires on boats and portable operation.



any type of long wire antenna configuration. It works well on Amateur bands where you have an extremely strong signal to the other station.

Yes, there may be several S-meter units of lost signal strength with this type of matching network, but the beauty of Maxcom is it's truly fail-safe,

with nothing to burn out and nothing to go wrong. And if you regularly put in a 40 over S-9 signal to the other station, what's a few less S-units of signal strength from Maxcom?

For a technical spec-sheet and grounding considerations on the SGC, you may write to me directly. □

## Fast Scan TV ideas?

With manifest pre-approval given for the go ahead for NASA Space Shuttle Flights STS-35 (*Columbia*) and STS-37 (*Discovery*), which will both carry licensed Amateur Radio astronauts, officials at the Johnson Space Center Amateur Radio Club (under direction of Lou McFadin, W5DID), are looking for Fast Scan Television transmission and reception communication ideas from the active UHF ATV community.

The November/December 1989 issue of *The SPEC-COM Journal* (official publication of the United State's only organized 1,200 member HAM-TV fraternity) detailed specific space flight developments on the two shuttles, which will launch early in 1990. This issue also contains an annual

questionnaire asking ATVers what they would like to see from future ATV in space operations.

Approval for ATV and Amateur Radio gear onboard a planned US Space Station has not yet been approved officially. The USATVS is asking all its members and all non-members who are currently active on both FSTV and SSTV to write to them as soon as possible. A sample copy (with questionnaire) is available by mail to non-members for \$3.50.

Write to: *The SPEC-COM Journal* Administrative Office (Attention Mike Donovan, KA0JAW), 1520 Cerro Dr., Dubuque, IA 52001. Messages can also be left on the USATVS telephone hotline (recorder) in Iowa at 319/557-8791. □

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Throughout the last four years of writing the Worldradio QRP column, we have covered a lot of territory. But one thing I have noticed from the reader mail is that there are a lot of newcomers to QRP and, therefore, we need to go back to basics and review some material.

The most important part of the QRP station is the antenna(s). Remember, you, as a QRPer, are going into the arena with a 12 to 18dB handicap in signal strength! If you don't spend the time to erect and optimize your HF antenna(s), you are going to be bitterly disappointed in the results of your first attempts at QRP operating.

Tons of words have been written about how to design, erect and optimize antennas for HF work. If you don't already have a copy of the following books, by all means, make an attempt to procure them at your earliest convenience: *ARRL Antenna Handbook*; *W1FB's Antenna Notebook* and *Novice Antenna Notebook* (all available via the ARRL Book Shelf); *Easy Up Antennas for the Radio Listeners & Hams*, by Ed Noll (available from Howard W. Sams books) and *The Joy of QRP, Strategy For Success*, by Adrian Weiss (long out of print, so try hamfest flea markets). Read, memorize and follow the examples for an outstanding antenna farm.

Remember: End-fed wires work; dipoles work better; rotatable beam antennas work best and trapped vertical antennas are vertically polarized, omnidirectional air-cooled dummy loads!

Now that you're committed to QRP operation, no compromise of the antenna system can be tolerated. The watts (or fractions there of) lost in lossy transmission line, poor solder connections and improperly tuned antennas and poor ground systems will only serve to frustrate your dedicated efforts, a handicap you can least afford.

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Next comes the station transceiver or transmitter/receiver combination. YOU DO NOT NEED TO SPEND A FORTUNE ON A NEW OR USED QRP RIG TO ENJOY LOW POWER OPERATION.

Go back and re-read the last sentence. The rig you currently operate on HF is perfectly capable of being used as a QRP CW rig. SSB will take a bit more doing, but it is possible to read-just the ALC circuitry of most transmitters to allow them to function as low power SSB rigs.

In short, don't go out and blow a bundle on a new (or used) radio just to try your hand at a new mode of operation. Back the drive control down on your main station radio and give QRP CW operation an honest try before you end up spending some hard-earned cash on a dedicated QRP rig. There are some super deals on used Ten-Tec Argonauts (2W output SSB/CW rigs featuring full QSK) and Heath HW-8 QRP CW transceivers. Tread cautiously and recite the Ham Hoss Trader's creed: *Caveat Emptor*.

Speaking of CW . . . how's your copy speed? If you "Bashed" your way to Extra and can't receive CW any faster than 5 or 7 wpm, you might want to get some code practice tapes and work on your CW copy speed. Most QRP CW is done in the 18 to 20 wpm range. Anyone who honestly passed their General ticket should have little trouble increasing their copy speed a few more wpm to enjoy QRP.

CW is a lot of fun . . . "trust me"! Just get down and work on increasing your speed. With today's proliferation of CW keyboards and microprocessor keyers, it is simple to transmit flawless CW at 20 to 30 wpm.

Now a word about operator habits. Tenacity is a virtue in the QRP arena. A positive mental attitude (based upon some initial success) will also go a long way toward strengthening the fledgling QRPer's desire to "stick it out" when the QSOs are few and far be-

tween. One thing that is learned by virtually every QRP operator (if I may paraphrase Sir Winston Churchill): "Never, never, never give up"! You may find yourself in the middle of a band opening and the only station available to work some rare DX! I know, it's happened to me more than once.

Get use to ridicule from fellow Amateurs who are unenlightened QRO-types. I have actually been in QSO on 80M with a well-known East Coast Amateur, who, after having learned that I was running only 2W output, refused to continue the QSO unless I brought up a kilowatt linear!

Needless to say, this kind of nonsense is what makes for some horrendous QRM on the bands. Anyone overhearing our short and not-too-sweet QSO would be hard-pressed to oppose reallocation of our treasured Amateur frequencies to other users. A martyr complex can come in very useful at times like this!

It is a well-established fact that QRPer's are a breed apart. Most of the QRO-types don't take them seriously, even when it is proven on a daily basis that the QRPer can work the same DX, excel in international contest competition and handle traffic using only a fraction of the power of the average household light bulb.

Quite frankly, I have a few pet theories about the QRO-types, starting with the hypothesis that certain portions of the QRO Amateur anatomy are inversely proportional to the amount of RF output power being used (I'm talking about brain size here . . .)! Fact is, the QRPer does more with less,

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a fact that the QRO-types have a hard time swallowing.

**QRP operating tips:** Unless the band is *really* open, do not waste time calling CQ DX or CQ QRP. Instead, look for a relatively strong station calling CQ and make your first dozen or so QSOs that way. Once you have some initial success under your belt, you can try some new techniques.

**Remember:** By using only 2 to 5W output, you are about 12 to 18dB below the rest of the stations on the band. Don't let this deter your efforts. Just keep in mind that you are not going to be busting many pileups using QRP power levels.

Learn tricks like tail-ending, calling slightly off frequency, tracking the target station's operating habits, etc. Absolutely the *best* book on how to work DX is *The Complete DXer*, by Bob Locher, W9KNI (available through Idiom Press, P.O. Box 583, Deerfield, IL 60015). Bob *really* knows his stuff and presents the reader with easy to understand steps to improve his/her DXCC score. This book will do more to improve your operating habits than any other three books on the market today!

*The SW Propagation Handbook*, by George Jacobs, W3ASK, and Ted Cohen, N4XX (available via CQ Bookshelf, CQ magazine), is an absolute must read book, also. If you, as a QRPer, do not understand the workings of ionospheric propagation, you will be almost totally ineffective in your efforts to work DX. And, after all, working DX is about the only "true test" of your abilities as an Amateur Radio operator. Besides, it's a tremendous ego boost to walk into your club meeting with a stack of rare DX QSOs for the QRO-types to drool over!

*The SW Propagation Handbook* takes the fundamentals of propagation and breaks them down into bite-sized chunks of easily digestible information. This is absolutely the best book ever on the topic of ionospheric propa-

gation. Read and learn.

If you new QRPer are firmly convinced that QRP operation is about 75 percent reading and 25 percent operating, you're getting the picture. The reason for this is quite simple. Why reinvent the wheel? Reams have been written on all aspects of QRP operation, so sit back and enjoy the fruits of other's trials and tribulations. Learn the ropes from the experts.

Our SW listener brethren have an outstanding volume entitled *SW DXing with the Experts*, by Gerry Dexter (available via Howard W. Sams books). It features 25 chapters of valuable information on all aspects of SW listening and DXing, everything from setting up the shack to an in-depth look at the noisy, spectrum-eating "woodpecker" over-the-horizon RADAR. I only wish the QRP fraternity had something similar in print to help the neophyte QRP operator.

My final thought on the subject of the printed word is to check out hamfest flea markets and pick up back issues of CQ magazine (1970-80) for the QRP column by Ade Weiss, K8EEG. These back issues with Ade's column are an invaluable source of QRP operating techniques, homebrew projects and QRP philosophy.

One final bit of solid advice for the

QRP newcomer and old timer alike is to join a QRP club. The oldest is the QRP Amateur Radio Club International (QRP ARCI), which puts out a very professional quarterly newsletter called the *QRP Quarterly* (QQ for short). Each QQ contains loads of information on QRP operating techniques, homebrew construction projects, contest info, propagation info and more.

To obtain the latest membership information, write to the Membership Chairman: Mr. Bill Harding, K4AHK, 10923 Carters Oak Way, Burke, VA 22015.

Another outstanding QRP organization is the Michigan QRP Club (M-QRP-C), which publishes *The Five Watter (T-5-W)* on a quarterly basis. This newsletter is very similar to Ade Weiss' original QRP publication of the early to mid-'70s, *The Milliwatt Journal*. Down-home projects and information abound in *T-5-W*.

For more info contact Gerry Totten, K8JRO, 5346 W. Frances Rd., Clio, MI 48420.

Well, gang, that's it for this month. 73es gud DX. □

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## Visit Your Local RADIO CLUB

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

### ALABAMA

**Montgomery Amateur Radio Club (W4AP).** Alabama State Trooper Dist. Office. Intersection of Coliseum Blvd. & Federal Dr. Fred Springall, KB4EGH, (205) 288-5831. Meets 3rd Mon./monthly, 7:00 p.m.

### ALASKA

**Arctic Amateur Radio Club.** Geophysical Institute West Ridge U of A, P.O. Box 81389, College, AK 99708. 1st Fri./monthly, 7:30 p.m.

### ARIZONA

**Tucson Repeater Assoc.,** P.O. Box 40371, Tucson, AZ 85717-0371. 2nd Sat./monthly, 7:30 p.m., Pima Co. Communications Bldg., 2545 E. Ajo. Net Thurs. 7:30 p.m. 146.22/82 (146.88-, 147.08+ & 145.01s & 15-PKT), 448.550.

**Western Arizona Radio Club.** Meets 2nd & 4th Thur./monthly, 7:30 p.m. at Fort Mohave Mesa Fire Dept., 1/2 mi. East of Hwy. 95 on Joy Ln., Mohave Valley, AZ. Net Tues. 7 p.m. 147.12 or call (602) 758-5171.

### CALIFORNIA

**Amador County Amateur Radio Club.** P.O. Box 1094, Pine Grove, CA 95665. Senior Citizens Center, Jackson, CA. Meets: 1st Thur./monthly, 7:30 p.m. WA6WYI Rptr., 146.835, 146.235. Net Tues. 7:30 p.m.

**Associated Radio Amateurs of Long Beach, W6RO.** P.O. Box 7493, Long Beach, CA 90807. Meets: 1st Fri./monthly, 7:30 p.m. Signal Hill Recreation Hall, 1708 E. Hill St., Signal Hill, CA.

**Butte Amateur Radio Club.** Meets 1st Fri./monthly, Loma Vista School, 8:00 p.m. Marigold and East Avenue, Chico, CA. For info KE6EP or KB6COH, 893-5208.

**Citrus Belt Amateur Radio Club.** P.O. Box 3788, San Bernardino, CA 92413-3788. Meets: 1st Fri./monthly, 7:30 p.m. at 777 E. Rialto Ave., San Bernardino.

**Contra Costa Communications Club WD6EZR/C.R.** P.O. Box 661, San Pablo, CA 94806. Meets 2nd Sun. at 9:00 a.m. Hickory Post Restaurant/Lucky Lanes. For info call Don K6DPQ, (415) 222-2449.

**Downey Amateur Radio Club.** 12708 Glynn Ave., Downey, CA 90242. Meets 1st Thur./monthly, 7:30 p.m., South Middle School, 12500 S. Birchdale, Downey, CA. Weekly nets Thurs. - except 1st, 7:30 p.m. 144.930 (S) Voice - Tues., 8:00 p.m. 145.700 (S) RTTY.

**East Bay Amateur Radio Club.** P.O. Box 1393, El Cerrito, CA 94530. Meets: 2nd Fri./monthly 8 p.m., Salvation Army, 4600 Appian Way, El Sobrante. Nets: Slow CW, Wed., 8 p.m. & SSB Net, Wed., 9 p.m., 21.395. Info, Bob Fields, KC6AOH.

**The Electronic Museum ARC.** Meets 1st Fri./monthly, 7:30 p.m., Electronic Museum at Foothill College, Los Altos, CA 94022. Call-in 145.27/145.67.

**Fresno Amateur Radio Club, Inc.** P.O. Box 783, Fresno, CA 93712. Meets 2nd Fri./monthly, 8:00 p.m., Manchester School, 2307 E. Dakota, Fresno, CA. W6TOR/146.34/94.

**Fullerton Radio Club, Inc. W6ULI.** P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Center, 340 W. Common Wealth, Fullerton. Net: ea. Tue., 8 p.m. 147.495 simplex. Info, Gracie Hastings, N6FSL (714) 990-9203.

**Gabilan Amateur Radio Club GARC.** P.O. Box 2178, Gilroy, CA 95020-2178. Meets: South Valley Jr. High School, 385 I.O.O.F. Ave., Gilroy. 2nd Thur./monthly, 7:30 p.m. Talk-in 145.47/144.87.

**Golden Empire Amateur Radio Society (VEC).** P.O. Box 508, Chico, CA 95927. Club call W6RHC, Repeater 146.25/85. Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Room 110B, Chico.

**Hilltop Amateur Mastertie System (HAMS).** Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza, 12924 Washington Blvd., Mar Vista, CA, except 3rd Mon. Call for location. Info, N6FD 213/823-0767.

**Kern River Valley Amateur Radio Club.** P.O. Box 2611, Lake Isabella, CA 93240. Meets 4th Sat./monthly at 4 p.m. (Pot Luck). Veteran's Hall, Lake Isabella WA6UYW Rptrs. 146.085/146.685 224.22/Down 1.6 WB6ODZ Rptr.-224.58 Down 1.6 Low-Level.

**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+. Elizabeth Zalaznik, KB6DLT, (415) 455-0361.

**Marin Amateur Radio Club (MARC) W6SG.** Box 1231, San Rafael, CA 94901. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA (415) 883-9789 (Summer exceptions; contact Pete N6IUY, 924-1578). Sun. AM Club at Red Cross, San Rafael.

**Moreno Valley Amateur Radio Assoc. P.O.** Box 7642 Moreno Valley, CA 92503. Meets 4th Mon./monthly 7 p.m., Park & Rec. Bldg., 13671 Frederick Ave. Net: Tues. 8 p.m. 146.655- (PL 1A) & 224.460. Info: Larry KA6GND (714) 656-1643.

**Mount Diablo Amateur Radio Club.** P.O. Box 23222, Pleasant Hill, CA 94523. Meets: 3rd Fri./monthly, 8 p.m., Grace Presbyterian Church, 2100 Tice Valley Blvd., Walnut Creek, CA. Net Thur., 7:30 p.m. 147.06+. Info, Vicki, (415) 458-4527.

**Orange County Amateur Radio Club.** Meets 3rd Fri./monthly, 7:30 p.m. at Mercury Savings, Tustin, CA, 1095 Irvine Blvd. 2 Meter Net Wed. at 9 p.m. 146.550 simplex.

**Radio Amateur Mobile Society.** P.O. Box 214091, Sacramento, CA 95821-10091. Meets 2nd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress Ave., Carmichael, CA. Net Saturday a.m., 224.84 at 8:30 & 146.79 at 9:00.

**River City A.R.C.S.** Meets: 1st Tue./monthly, 7 p.m. SMUD Bldg., Room B & C, Elkhorn & Don Julio, Sacramento, CA. For info: (916) 483-3293.

**Riverside County Amateur Radio Assoc.** c/o County Emergency Services Div., 4080 Lemon St., Ste. 8, Riverside, CA 92501. Meets: 2nd Thur./monthly, 7:30 p.m., Riverside County Office of Ed., 3958 12th St. Nets: Mon., 7:15 p.m., 222.860/224.46 and 7:30 p.m., 146.28/88. Info, call Mike Burton, N6KZB, (714) 682-6212.

**Sacramento Amateur Radio Club.** Contact: Gary Bryant, KB6KZZ, (916) 646-1171. Meets Sacramento Blood Bank, 32nd St. & Stockton Blvd., Sacramento, CA, 2nd Wednesday/monthly, 7 p.m.

**Sacramento "Old Timers" Ham Radio Brkfst. Club and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.).** Meets 2nd Wed./monthly, 8 a.m., Carrow's Restaurant near Watt Ave., and Hwy 80 exit. For info contact Paul Wolf, W6RLP (916) 331-1830.

**San Gabriel Valley ARC.** P.O. Box 88, Monrovia, CA 91017-0088. Meets 1st Tues./monthly, 7:30 p.m. (except Dec.) at Bowling Green Clubhouse, 405 S. Santa Anita Ave., Arcadia, CA 91006. W6QFK, Rptr. 147.165765.

**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. at Agnews Developmental Center Aud., corner of Circle Dr. & Palm Dr., Santa Clara. Net all other Mon., 7:30 p.m. W6UU/R 146.385 + PL 100.0 / 442.425 + PL 107.2

**Santa Clara Valley Rptr. Society (SCVRS).** P.O. Box 2085, Sunnyvale, CA 94087. (408) 247-2877. 146.76 (-600 kHz), 224.26 (-1.6 MHz), 444.60 (+5 MHz), 2 meter/220 net Mon. 9 p.m. Mtgs.-3rd Fri.

**Shasta Cascade Amateur Radio Society (SCARS) P.O.** Box 664, Anderson, CA 96007. 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.

**Simi Settlers Amateur Radio Club.** P.O. Box 3035, Simi Valley, CA 93063. Meets: 2nd Thur./monthly, 7:30 p.m., at Seventh-Day Adventist Church, 1636 Sinaloa, Simi Valley. Rptr. 147.93/33.

**Solano County Amateur Radio Society.** P.O. Box 457, Fairfield, CA 94533. Meets: 3rd Wed. 7:30 p.m., Vanden High School. 441.150+5 (Remote 145.69 simplex) PL 77Hz, (707) 448-1461.

**Southern California Amateur Transmitting Society, SCATS, WB6LRU.** P.O. Box 1770, Covina, CA 91722. Meets 1st Mon./monthly, Community Presbyterian Church, 540 E. Vine St., West Covina, CA. Net, Sun., 7 p.m. 147.765-, W6QFK/R. Classes. Contact: Pat McNulty, N6GXZ (714) 622-8315.

**Southern California DX Club.** P.O. Box 56292, Sherman Oaks, CA 91413. Meets: 2nd Thur./monthly, 7:30 p.m. at Dept. of Water & Power, 111 No. Hope St., downtown Los Angeles. Weekly DX roundtable, Thur., 7:30 p.m., 145.480-PL 100hz DX Packet system 145.680. Info: Gary WB6PSY (818) 710-1705.

**Southern California Six Meter Club.** P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150 and 8:30 p.m., 28.400. FM Rpt. Net Wed., 7 p.m., 52.18/98 and Thur., 8 p.m., 52.28/88. FM Smpix call freq. 50.300.

**Southern Humboldt Amateur Radio Club, (SHARC).** P.O. Box 701, Redway, CA 95560-0701. Meets 4th Mon./monthly, 8 p.m. SHARC Clubhouse, Garberville. Rptr. 146.19/79. Info (707) 923-2373.

**Stanislaus Amateur Radio Assoc. (SARA).** P.O. Box 4601, Modesto, CA 95352. Stanislaus Co. Administration Bldg., 12th & H Streets, 3rd Tues./monthly, 7:30 p.m. 145.39 MHz WD6EJF, 223.68 MHz.

**The Trinity County ARC.** P.O. Box 228, Weaverville, CA 96093. Meets 2nd Wed./monthly, at the CD Hall in Weaverville, 7:30 p.m. WD6FHX Rptr. 146.13/73.

**Tri-County Amateur Radio Assoc.** P.O. Box 142, Pomona, CA 91769. Meets: 2nd Mon./monthly, 7:30 p.m., 703 N. College Way, "The Faculty House," (lower level), Claremont, CA.

**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., 8:00 p.m. Talk-in 145.58 Simplex.

**Vaca Valley Radio Club Inc.** Meets 2nd Wed./monthly, 7 p.m. at Vacaville Fire Dist. Station, 420 Vine St., Vacaville, CA. Net: WX6F club net every Tues., 7:30 p.m. 147.475/146.475 rptr. (1MHz split) PL removed during nets.

**West Coast Amateur Radio Club.** Fountain Valley School. Talbert/Bushard. Fountain Valley, CA. Meets 3rd Thur./monthly. 145.44-42.

**Western Amateur Radio Assoc.** Meets 1st Tues./monthly, 7:00 p.m., Cerritos Park East, 166th St. and Carmentia Ave., Cerritos, CA. Rptr., N6ME 145.400/224.180MHz.

**West Valley Amateur Radio Assoc.** 18011 Saratoga - Los Gatos Road, Los Gatos, CA 95030. Meets: 3rd Wed./monthly, 7:30 p.m. W6PIY/R. Net Tue., 8:30 p.m., 147.39+ & 223.96-.

**Yucaipa Valley Amateur Radio Club (YVARC).** Meets 3rd Mon./monthly, 7:30 p.m. Far West Savings & Loan Community Rm., 1195 Calimesa Blvd., Calimesa, CA 92320. Pres: Don Ames W6RTM, (714) 795-5743.

### CONNECTICUT

**Tri-City ARC.** Groton Public Library, Route 117, P.O. Box 686, Groton, CT 06340. Meets: 2nd Tue./monthly. 7:30 p.m.

### FLORIDA

**Gulf Coast ARC, Inc.** P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Colonial Hills Civic Ctr., 87 Peacock Dr., New Port Richey. WA4GDN Rptr. 146.67/07.

**Indian River ARC, Inc. (IRARC).** 597 Capri Rd., Cocoa Beach, FL 32931. Martin Andersen Senior Center, 1025 S. Florida Ave., Rockledge, FL. Meets: 1st Thur./monthly, 7:30 p.m.

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

**West Palm Beach Amateur Radio Club, Inc.** P.O. Box 6834, Southbore Station, W. Palm Beach, FL 33405. Meets: 2nd Tue./monthly, 7:30 p.m., Palm Beach Emergency Op. Cntr., 3723 Belvedere Rd., W. Palm Beach. Info: Jeff, WB2OUK, 586-5120, Henry, WA4HXZ, 655-4632 or Hyacinth, N4QWN, 848-0513.

### GEORGIA

**Dalton Amateur Radio Club (DARC).** P.O. Box 143, Dalton, GA 30722-0143. Meets 4 Mon./monthly, 7:30 p.m., Dalton College Voc. Tech. Bldg., Dalton, GA. Info net: Sun. 9:30 p.m., 145.230 MHz; Wed. 9 p.m., 147.135 MHz.

### HAWAII

**Big Island Amateur Radio Club.** P.O. Box 1938, Hilo, HI 96721-1938. Meets: 2nd Tue./monthly, 7:00 p.m., Heico Auditorium, 1200 Kilauea, Hilo. Talk-in on 146.76(-).

### ILLINOIS

**Amateur Cross Link Repeater.** 10, 6, 2 mtrs., 220, 440, 900, 1.2 MHz, ATV. Meets: 1st Sat./monthly, 7:30 p.m. Info: net Sun., 8 p.m., 147.225 MHz. KD9FA Rptr./Chicago.

**Bolingbrook Amateur Radio Club.** Meets 3rd Mon./monthly, 7:30 p.m., Bolingbrook Pk. Dist. Rec. Ctr., Briarcliff Rd., Bolingbrook, IL. Info net Thursdays, 8 p.m., WD9AKO/R 147.33 MHz +600 and WA9DIP/R 224.54 MHz -1.6. Info hotline (708) 759-7005. ARRL affiliated club.



**Central Illinois Radio Club, W9AML.** Meets 4th Wed./monthly, 7:30 p.m. (from Sept. to May), McLean Co. Law & Justice Center, ESDA Rm., Bloomington, IL. Club Rptr. 146.94 - 600kHz.

**Chicago Suburban Radio Assoc. (CSRA).** P.O. Box 88, Lyons, IL 60534. 447-HAMS. Meets: 2nd Wed./monthly, 8 p.m., Clyde Bldg., 7222 W. Cermak, N. Riverside, IL. Net Mon. at 8 p.m., 147.225+ and 29.68 -.

**Dupage Amateur Radio Club W9DUP.** Mid-America Savings & Loan, 55th & Holmes (55th St. near RT 83), Clarendon Hill, IL. 4th Mon./monthly, 7:30 p.m. Club rptr. 145.250 - 600 kHz.

**Elgin Amateur Radio Society.** P.O. Box 1351, Elgin, IL 60120. Meets in EOC Rm. of Elgin Municipal Bldg. 2nd Fri./monthly, 8:00 p.m.

**Fox River Radio League.** Valley National Bank, Lower Level, Northgate Shopping Ctr. & RT. 31, Aurora, IL (312) 584-4925 for more info. Meets: 2nd Tue./monthly, 7:30 p.m.

**Hamfesters Radio Club, W9AA.** P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m., Crestwood Civic Center, 139th & Kostner Ave., Crestwood, IL. Nets: Sun. 8 p.m., 28410 MHz and Mon. 9 p.m., 146.43 MHz.

**Northwest ARC/W9LM.** Meets: 2nd and 4th Tue./monthly, 7:00 p.m., Oehler Funeral Home downstairs community room, Lee & Perry Street, Des Plaines, Illinois.

**Schaumburg ARC (SARC).** Meets: Schaumburg Park District Community Rec. Cntr. at Bode and Springinguth Roads, Schaumburg, Illinois. Third Thur./monthly, 7:30 p.m. Net 28.350, 8:00 p.m. Thur.

**Six Meter Club of Chicago K9ONA.** Bank of Lyons, Lower Level, 8601 West Ogden Ave., Lyons, IL. 2nd Fri./monthly, 7:30 p.m. Club Rptrs: 146.37/97, 448.30/443.30.

**York Radio Club.** Meets: 3rd Fri./monthly, 8 p.m., Elmhurst College (Science Bldg.) Elmhurst, IL. Net Mon., 8 p.m. W9PCS/147.42 simplex.

## KENTUCKY

**Kentucky Colonel's Amateur Radio Club, Inc. (KCARC).** P.O. Box 9781, Bowling Green, KY 42102-9781. Meets 3rd Thur./monthly, Greenwood Mall mtg. place, Scottsville Rd., Bowling Green, KY. ARES Net 7 p.m. each Thur. 146.85 (-)KA4CLLR.

## LOUISIANA

**Baton Rouge Amateur Radio Club W5GIX.** P.O. Box 4004 Baton Rouge, LA 70821. Meets last Tue./monthly, 7 p.m., Catholic High School cafeteria, 855 Hearshstone Dr., Baton Rouge, LA. Net 8:30 p.m. each Sun. on 146.79.

## MARYLAND

**The Peninsula Radio Operators Society (PROS).** Family oriented activities, training and exams held throughout the year. PROS Rptrs. 146.925 and 146.625. PROS, P.O. Box 2315, Salisbury, MD 21801.

## MASSACHUSETTS

**Mt. Tom Amateur Rptr. Ass'n., Inc.** P.O. Box 3494, Springfield, MA 01101-3494. Meets: 3rd Thurs. (Sept.-May), 8 p.m. Holyoke Com. College, Holyoke, 2M, 220, 440 & packet. Info net Wed., 7:30 p.m. 146.94/R. Emer. net Sun., 8:45 a.m.

## MICHIGAN

**Black River A.R.C.** Meets 2nd Sat./monthly, 7 p.m., Chicken Chalet, Hwy 43 East, Bangor, MI. Contact Wm. Lee, KB8DWQ, (616) 764-8480. Rptr. 147.360 +.

**Farmington Amateur Radio Club.** Meets 2nd Wed./monthly, 7:30 p.m., Wheeler Street Fire Station, Farmington Hills, MI. Contact: Jim, WA8SEL, 474-8765. Talking: 146.49MHz.

**Hazel Park Amateur Radio Club.** Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 147.51 Simplex Call-In.

**Oak Park Amateur Radio Club.** Oak Park Community Center, 14300 Oak Park Blvd. (same as 9 1/2 Mile Rd., west of Coolidge). Oak Park, MI 48237. 2nd Mon./monthly, 7:45 p.m. Talk-in on our 224.36 MHz or 146.64 MHz.

## MINNESOTA

**Minneapolis Radio Club.** P.O. Box 25167, Minneapolis, MN 55458. Meets 3rd Fri. (exc. June, July, Aug.), Mpls. Red Cross, 11 Dell Place, Mpls, 7:30 p.m. Making waves since 1916.

## MISSOURI

**PHD Amateur Radio Assn. Inc.** P.O. Box 11, Liberty, MO 64068. Meets last Tue./monthly, 7 p.m. Red Cross Bldg. (816) 781-7313, Volunteer Examiner Coordinator.

## NEVADA

**Las Vegas Radio Amateur Club (LVRAC).** Meets: 2nd Tue./monthly at 7 p.m., Nevada Power Bldg. Wengert Rm., 6226 W. Sahara Ave. (Near Jones). Net Tue. 8:00 p.m. on 146.94 MHz. Info: Call Jeff at 363-9013.

**Sierra Intermountain Emergency Radio Assoc. (SIERA).** P.O. Box 2348, Minden, NV 89423. (702) 782-8266. Meets: 2nd Tue./monthly, 7:30 p.m., Douglas County Lib., Minden, NV. Talk-in: 147.330.

## NEW HAMPSHIRE

**Great Bay Radio Assn., WB1CAG.** P.O. Box 911, Dover NH 03820. (603) 742-0130/742-1374. 2nd Sun./monthly, 7:00 p.m. Dover City Hall. Talk-in 147.57.

## NEW JERSEY

**Bayonne Emergency Mgt. ARC (BEMARC).** 16th St. & Ave. A Firehouse, Bayonne, NJ 07002. Meets: 2nd Tue./monthly, 7:30 p.m. Rptrs: 53.09/145.430/224.280/445.575 MHz.

**Delaware Valley Radio Assoc. (DVRA).** Our Lady of Good Counsel Church, 137 W. Upper Ferry Rd., West Trenton, NJ 08628. Meets: 2nd Wed./monthly, 8:00 p.m.

**Gloucester County Amateur Radio Club (GCARC).** Woodbury V.F.W. 1st Wed./monthly, 8:00 p.m. Woodbury, NJ. Talk-in 147.18/78. For info call K2JF (609) 589-2318.

**Jersey Shore Chaverm.** Meets 1st Sun./monthly, 9:30 a.m., JCC, 100 Grant Ave., Deal, NJ, Sept. thru June. Net 1st Thurs./monthly, 9 p.m. local on 145.110, KC2Q. For info call (201) 222-3009.

**South Jersey Radio Assoc. (SJRA).** Pennsauken Sr. Hi Sch. at Hylton Rd. & Remington Ave., Pennsauken, NJ 08109. Jan.-Oct. 4th Wed./monthly, 7:30 p.m. Nov.-Dec. 3rd Wed. due to Thanksgiving and Christmas. Talk-in 145.290 rptr. Club call K2AA.

## NEW YORK

**Communications Club of New Rochelle, NY.** Harrison Street Firehouse. Bill McCarran, K2LV, (914) 738-0768. Meets: 1st Mon./monthly, 8 p.m.

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

**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 at 7:30 p.m. The tristes' only 3-band linked rptr. system 144.300 S/223.600 - /445.225 -.

**Lancaster Amateur Radio Club (LARC).** Meets 1st Tues./monthly, 7:30 p.m., Aurora Middle School, 147 Aurora St., Lancaster, NY. Net: W2UJR every Monday, 7:30 p.m. 146.55. Contact Luke Calianno, N2GDU, (716) 683-8880.

**Orleans County Amateur Radio Club (WA2DQL).** Meets: Office of Disaster Preparedness (CD), West County House Rd., Albion, NY 14411, 4th Wed./monthly, 7:30 p.m., 145.270 - WA2DQL.

**PROS, Pioneer Radio Operators Society.** Meets: 1st Wed./monthly (except July/Aug.) 7 p.m., Masonic Temple, Rt. 78, Java Village, NY. Other Wed., 8 p.m. 145.170/144.57- Repeater KC2JY.

**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. Non-profit org. uses Amateur Radio to enhance education of young people, nationwide. Join us - "Classroom Net", 7.238 MHz, 7 a.m. E.S.T. PSE QSL!

**Suffolk County Radio Club.** 3rd Tue./monthly, 8 p.m. Bohemia Rec. Ctr., Ruzicka Wy. W2DQ/R 144.610/145.210, 223.080/224.680 rptr. Info call Jim Heacock (516) 473-7529.

**Westchester Amateur Radio Assoc. (WARA).** Scarsdale Village Hall, Scarsdale, New York. Meets: 1st Wed./monthly, 8:00 p.m. For info call Dan Gabel, N2FLR, Pres. (914) 723-8625.

**Westchester Emergency Communications Assn. (WECA)** 147.66/147.06, 222.80/224.40, 447.475/442.475. Meets: 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Info: P.O. Box 831, N. Tarrytown, NY 10591. (914) 631-7424.

## NORTH CAROLINA

**North Carolina Chapter TSARC.** Meets: Mondays, 28.350 on the air, 8 p.m. local time. "The Alligators" - all mouth, no ears.

**Raleigh Amateur Radio Society, Inc.** P.O. Box 17124, Raleigh, NC 27619. Clubs net nightly, 8 p.m., W4DW, 04/64. Meets: 1st Wed./monthly, 7:30 p.m., YMCA. 18th Annual Hamfest, April 8, 1990.

## OHIO

**Amateur Radio Fellowship (ARF).** Keith Melvin, KA8TKE, Sec. P.O. Box 2486, Streetsboro, OH 44241. Meets: 1st Sat./monthly, Kent Wally Waffle. KA8YKT rptr. 147.675/075.

**Ashtabula County ARC.** Ken Stenback, A18S (964-7316). County Justice Center, Jefferson, OH. 3rd Tue./monthly. 7:30 p.m. County Rptr., 146.715.

**Clyde Amateur Radio Society (C.A.R.S.)** Meets: 2nd Tue./monthly, 7:30 p.m. Municipal Bldg., Clyde, OH 44811. NF8E Repeater 144.75/145.35. Net Sun. 9 p.m.

**Dayton Amateur Radio Assoc.** P.O. Box 44, Dayton, OH 45401. Meets 1st & 3rd Fri./monthly (Sept. thru June) 8 p.m., Career Academy on River Corridor Dr. Info on W8BI 146.34/94 & 222.34/223.94.

**Lancaster & Fairfield County A.R.C.** Meets 1st Thur./monthly, 7:30 p.m., City Hall, Basement Club Rm., Broad & Main. Info Net every Mon., 8 p.m. K8QIK/R 147.63/03 Rptr.

**North Coast Amateur Radio Club.** P.O. Box 30529, Cleveland, OH 44130. Meets 2nd Thurs./monthly at the Old North Olmsted Town Hall, at Dover Center and Lorain Roads, between City Hall and the Police Station. Repeaters - (all K8SCI/R) 145.29, 224.76, & 443.15.

**Triple States Radio Amateur Club.** Meets Wed./weekly on 28.480 at 9 p.m. Rptrs. 146.31/91 and 146.115/715. P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

## OREGON

**Keno Amateur Radio Club.** P.O. Box 678, Keno, OR 97627. Meets 3rd Thur./monthly, 7 p.m., Keno Fire Station. Rptr. 147.32 + W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736.

## PENNSYLVANIA

**Butler County Amateur Radio Club.** P.O. Box 1787, Butler, PA 16003-1787. Meets 1st Tue./monthly, 7:30 p.m. at Red Cross Bldg., 312 Mercer St., Butler PA 16001. Call-in: W3UDX 147.96/36. Net 10:10 p.m. nightly. **West County Amateur Radio Club W3LIF.** P.O. Box 996, Sharon, PA 16146. Meets: 4th Tue./monthly at 7:30 p.m. at Shenango Valley Medical Center, Farrell, PA. Net, Thur. 9 p.m. on 147.75/15 W3LIF/R. **Warminster Amateur Radio Club, WA3DFU.** P.O. Box 113, Warminster, PA 18754. (215) 443-5428. Meets 1st Wed./monthly, 8 p.m., St. John's Evangelical Lutheran Church, Hatboro, PA. Net on 147.690/147.090 Wed., 8:30 p.m.

## TEXAS

**Beaumont Amateur Radio Club.** Meets last Tues. of each month at the GSU Aud., South and Oxford Streets, Beaumont, TX, 7:30 p.m. Talk-in on 146.16/76 or 146.10/70. Join the fun!

**Sun City Amateur Radio Club.** Meets 1st and 3rd Fri./monthly, 7:30 p.m., 3709 Wickham Ave., El Paso, TX. K5WPH 147.240/147.840 Rptr. with remote operation on 220, 440, 6M, and 10M.

## VIRGINIA

**Southern Peninsula Amateur Radio Club (SPARK).** Meets: 1st and 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Operates 146.13/73 Rptr., VEC Information (804) 898-8031.

**Virginia Beach Amateur Radio Club (VBARC).** Open Door Chapel, 3177 Virginia Beach Blvd., Va. Beach, VA. Meets First Thur./monthly, 7:30 p.m. For info (804) 497-1235.

## WEST VIRGINIA

**Jackson County Amateur Radio Club.** D. General Bailey, NK8P, Sec. Treas. 113 Winters Dr., Ripley, WV 25271. First National Bank of Ripley. Meets: 1st Thur./monthly, 7:30 p.m. Net Mon. 9 p.m. on 146.67/07 WDBJNU/R.

**Tri-state Amateur Radio Assn.** Meets: 3rd Tue./monthly, 7 p.m., Green Valley Vol. Fire Dept., Norwood Rd. & 16th Street Rd., Huntington, WV. ARES net Thur. 9 p.m. on 146.76(-) W8VA/R. Info KB8EHJ (304) 824-5958.

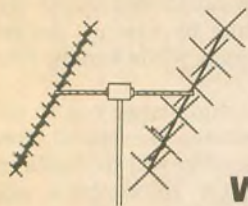
## WASHINGTON

**Mike & Key Amateur Radio Club.** 3rd Sat./monthly, 10 a.m. Tukwila Com. Ctr., 4101 So. 131st St., Seattle, WA. Net. Wed. eve., 7:30 p.m. 146.22/146.82 rptr.

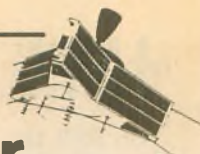
**North Seattle Amateur Radio Club (NSARC).** Meets: 3rd Tue., 7:30 p.m. (except Jul. & Aug.) at the First Interstate Bank, 30th Ave. NE and NE 125th St. (Lake City) in basement. Info: Mike Jr., W7WHT, (206) 282-1438 or P.O. Box 20279, Seattle, WA 98102.



# Amateur Satellites



**WB5ZDP**  
**Keith Berglund**



You don't have to have a permanent satellite station. Set up the equipment with jumper wires and temporary omnidirectional antennas if necessary. Just do it!

I made my first several satellite QSOs Field Day style. On the receive side I used a 10M dipole tied between two trees into a Kenwood R-599D. On the transmit side, I used an IC-245 and 10W into a hand-held, hand-pointed 4-element yagi taped to a broom pole (the broom was still attached!). As the satellite came overhead, I just pointed the 2M antenna for best receive signal out of the receiver.

(Attention first time satellite QSO makers: If this column has inspired you enough to make at least one satellite QSO, send me a short account of what happened and I'll see if we can get it reprinted here. Everybody loves a "how I got started" story.)

## Mode-A QSO preparations

In recent months RS-10 has been turned on and RS-11 seems to be dormant. Both satellites are actually bolted to another Russian navigation satellite called Cosmos-1860.

A chart showing the uplink and downlink frequencies of RS-10 can be found in the illustration. This type of transponder is a linear and non-inverting. This means that whatever you transmit to the transponder will be repeated. If you transmit USB on 2M, you will hear yourself on 10M USB. CW = CW, RTTY = RTTY, etc.

Another way to look at the RS-10 transponder is that it is a "linear translator." In other words, it hears what you send to it on 2M, subtracts 116.5 MHz from it and then retransmits it. So, for example, if you were to transmit on 145.870 MHz, you could reasonably expect to hear yourself on 29.370 MHz (145.870 - 116.5 = 29.370).

A good way to use this information is to place this "translation constant" into the memory of a small hand-held

calculator. If you are looking at your 10M VFO you can *ADD* the constant to the reported 10M frequency and immediately determine where to tune 2M VFO. If you are looking at your 2M VFO, the constant can be *subtracted* to determine the expected 10M downlink frequency.

## Equipment

The first step is to take inventory of what you have and then determine what you need. Here is a check list:

- 29 MHz receiver
- 29 MHz antenna (dipole, yagi, etc.)
- 2M SSB / CW transmitter
- 2M amplifier (25 to 100W, depending on the TX antenna)
- 2M antenna (yagi, J-pole, etc.)
- Computer printout of the satellite pass to be worked
- Straight-key
- Headphones

## When it rains it pours!

Last month six new OSCARS were blasted into orbit. With the exception of OSCAR-15 acting a little "funny," all are doing well.

This month, we have yet another new Amateur spacecraft. On Feb. 7, at 0133 UTC, the National Space Development Agency of Japan (NASDA) launched Japan Amateur Spacecraft-1B (JAS-1B), now known as Fuji-OSCAR-20 (FO-20).

FO-20 is a Mode-J satellite with two transponders on board. As you recall, on Mode-J you uplink (transmit) on 2M and downlink (receive) on 435 MHz.

The first transponder on FO-20 is an ordinary analog transponder with a passband of 100 kHz. This transponder is used for SSB, CW, RTTY, etc. The uplink passband is 145.900 to 146.000 MHz, while the downlink frequencies are 435.800 to 435.900 MHz. The beacon on this Mode JA transponder (Mode J-Analog) can be found on 435.795 MHz.

The second transponder is a digital packet store and forward mailbox. The protocol is AX.25, however, the modulation format is Phase Shift Keying (PSK) and is, unfortunately, not compatible with regular terrestrial packet. A PSK modem can be purchased, though. The beacon for Mode-JD can be heard on 435.910 MHz.

## An RS-10 QSO

Well, it's time to do it. Over the past several months we've covered quite a lot of material on Mode-A operation. We've discussed orbits, uplinks, downlinks, equipment, antennas and computer tracking. But now, as the advertisement says, "Just Do It!"

What I want you to do is beg, borrow or otherwise appropriate the equipment necessary to make at least one Mode-A QSO. Go over to a friend's house and combine equipment, or perhaps borrow an all mode 2M rig from the guy across town. Just Do It!

UPLINK	DOWNLINK
145.900 MHz.....	29.400 MHz
.898	.398
.896	.396
.894	.394
.892	.392
145.980 MHz.....	29.390 MHz
.988	.388
.986	.386
.984	.384
.982	.382
145.980 MHz.....	29.380 MHz
.978	.378
.976	.376
.974	.374
.972	.372
145.970 MHz.....	29.370 MHz
.968	.368
.966	.366
.964	.364
.962	.362
145.960 MHz.....	29.360 MHz
BEACON.....	29.357 MHz

## RS-10 transponder frequencies

When you've finally assembled all of the necessary equipment, the next step is to determine when the bird will be over your QTH. The best way to do this is with a computer (see March 1990 *Worldradio*). With your longitude and latitude entered into the program and a reasonably up to date set of orbital elements, you can get an accurate schedule of when the satellite will be in view.

For your first attempts, try to work a pass that has a maximum elevation of higher than 30 degrees above your horizon. This will ensure that the satellite will be in view for a reasonable length of time and that the downlink signal will be easy to hear.

## The Mode-A QSO

When you've assembled all of the equipment and you've picked the pass in which you want to participate, it's time to watch the ol' WWV clock and

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wait. Tune your receiver one or two kHz higher than the beacon frequency (29.357 for RS-10) and listen.

The reason that you listen above the real beacon frequency is because of the doppler shift. Because the satellite is traveling toward you at three miles per second, the radio waves are compressed and appear as a slightly higher frequency.

What you'll hear first is the CW telemetry of the beacon (see April 1990 *Worldradio*). If you have time, copy a frame or two of telemetry. Now tune up into the 10M passband and listen to a few QSOs. The phone QSOs will be in the upper 1/3 of the passband, CW in the lower 1/3 and mixed SSB/CW in the middle 1/3.

When you think that you've got the hang of things, it's time to talk to yourself. I suggest beginning with CW, using a straight-key. Pick a place low in the passband that is unoccupied. With your calculator or the illustrated chart, determine where to place the 2M VFO.

Start out by sending a few dit dit dits, while carefully tuning your receive VFO  $\pm$  three or four kHz. *DO NOT widely swish your transmit VFO up and down the band!*

When you hear your own downlink, congratulations! You're talking through an orbiting Amateur satellite.

It's that simple!

After sending dits for 10 or 15 seconds, you'll notice that the tone of the CW note drifts steadily lower and lower. Again, this is due to the doppler shift and not your receiver drifting. While in QSO with someone, the standard is to correct for doppler by tuning your transmitter and leaving your receiver alone. This prevents QSOs from colliding into each other.

Now it's time to make a QSO. My advice is to call CQ and let a more experienced satelliter find you.

Start out by calling CQ as you would on HF. When you find yourself drifting, remember to retune your transmitter only. With the satellite only in view 10 or 20 minutes, QSOs seem to be almost contest style.

CQ CQ CQRS DE WB5ZDP WB5ZDP K

CQ CQ CQRS DE WB5ZDP WB5ZDP K  
WB5ZDP DE K7NWS K7NWS K  
R R K7NWS DE WB5ZDP UR RST 559  
559

NAME IS KEITH KEITH IN TEXAS  
TEXAS BK R R KEITH DE K7NSW UR  
RST IS 569 569 IN SEATTLE, WASH  
SEATTLE, WASH ES NAME HR IS  
LARRY LARRY BK

R R LARRY TNX FER QSO CU ON  
OSCAR-13 73 K7NSW DE WB5ZDP SK  
R R 73 ES WILL QSL DE K7NSW SK ..

On SSB the procedure is much the same. In order to find your own downlink, place your 10M VFO on an unoccupied spot and then place your 2M VFO on the calculated uplink frequency. Fine tune by saying "helllo, helllo" a few times, while tuning your receive VFO.

On SSB, I strongly urge you to use headphones, because the sound coming out of the receiver will feedback into the transmitter microphone and cause quite an oscillation. This is exactly the same as placing a microphone too close to a loudspeaker of a public address system.

Next time

With the launch of OSCAR-20, we now have 10 active Amateur satellites (UO-11, AO-13, RS-10/11, UO-14, UO-15, AO-16, DO-17, WO-18, LO-19 and FO-20). Next time we'll cover what each of these satellites does and where to hear them.

Keep those cards and letters coming. Thanks N2FZ and KB6WKY. See you on RS-10.

## That elusive DX (a la 1929)

For several years the hams had only the 160M band, which was not known for its DX properties, and so when the "shortwave" frequencies were allotted, everyone was talking about "DX."

We had one ham in town who was trying desperately to log a DX station. Every morning he would come to work and we'd ask him, "Did you make it last night?", and he would say, "No, but I bet I do tonight."

One night two of us got together and decided to play a joke on him. These were the days of the "regenerative" receivers and the "squell" could be heard for several blocks if you screwed the coupling up real tight. We put a hand key in the ground lead of our receiver and waited for our friend to call "CQ DX" and then we answered him with a fake French call. We carried on a short QSO with him and then pleaded QRN and signed off.

Next morning he dashed into the store, "I did it!", he shouted. "He was pretty weak but I worked a French station last night!"

We hated to tell him but we finally did. Actually, I don't think he believed us and went right on thinking he had really worked the French station. At least he never mentioned it again and neither did we. — *Excerpt from A Radio Journal, by Russ Rennaker, W9CRC, contained in Those Golden Years of Radio, available from And Books, 702 South Michigan, South Bend, IN 46618.*



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# 10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ  
10-10 19636

There have been some changes  
The 10-10 organization is run by a group of volunteers. There is not one paid person in the entire organization.

When dealing with a group of volunteers, there are numerous reasons why, at one time or another, someone needs to be relieved of their duties. This month, for one reason or another, several of our good volunteers have had to resign their jobs with 10-10. To each we owe a debt of gratitude, for without them, there would be no 10-10.

First, we must say goodbye to our editor, Frank Hicks, KF7CD. Frank did not have the job very long, but he did a heck of a job while he was editor of the 10-10 News. In all of my years in 10-10, Frank published the finest looking and most professional News that 10-10 has ever had. We are sorry that he could not continue in this difficult and time-consuming post.

If you or anyone you know would be interested in accepting this volunteer job, contact our president, Norm Lefcourt, W6IRT. Requirements: A computer with a word processor program like Word Perfect would make the job a little easier; knowing how to type is not required, but it sure would help; having some experience in writing is not mandatory, but publishing the church bulletin or *Boy Scout Monthly* or the office newsletter would make the job a natural.

If I haven't scared you away, drop Norm a note and maybe, just maybe, you will be "hired." Norm's address is 7713 Wilkerson Ave., North Hollywood, CA 91605.

By the way, Norm is always looking for volunteers, so if you are inclined to be one of the "helpers," send Norm your request for a job and when something opens up, he will have a list of candidates.

We also say goodbye to another hard-working volunteer who has served 10-10 for about 16 years as the 3rd District Manager. Jim Duppung, WA3RBQ, has agreed to ease his load by becoming the 3rd District Manager emeritus, and will be a consultant to our new 3rd District Manager, Chester "Gump" Gardner, N3GZE.

Gump's address is 9028 Overhill Dr., Ellicott City, MD 21043. All corres-

pondence for the third district should be sent to him.

Although not going into retirement, Judy Long, WD0DHH, will have help now that 10-10 will be splitting the 10th district. Judy will continue as 10th District Manager for the states of Colorado, Kansas, Missouri and Nebraska. Our new manager for the 10th District states of Iowa, Minnesota, North Dakota and South Dakota will be Debbie Peterson, N0KQC. Her address is RR #1 Box 35, Duncombe, IA 50532. Please send all correspondence for these states to Debbie.

Our treasurer, Jerry Gross, WA6-POZ, has relocated from Southern California to Nebraska, and his new address is 9011 Burt St., Omaha, NE 68114. His correspondence should be sent there.

## Letters

With the 10-10 Information Package that I send to potential new members and the number of "lost sheep" writing to find their lost 10-10 numbers, I get a lot of mail each week; as a matter of fact a whole lot of mail.

It is not possible to answer each letter, but every one is read. Every so often a letter is received that is particularly noted, and one such letter was from Larry Lange, W1CJU.

Larry wanted to be reinstated in 10-10 after letting his dues expire losing track of who his District Manager was. I believe Larry's letter is worth passing along for all to read.

"Dear Chuck,

I'd like to be reinstated in the 10-10 association. Below is a copy of my first 10-X International card, and after over 20 years in my wallet, it's in pretty bad shape, so would appreciate it if you would please send me a new card. I'm enclosing \$1 for the card, plus \$4 for my membership.

"I've been a "ham" since 1931 and had many pleasant QSOs with so many

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This General course includes 6 tapes for speed building from 5 to 13 wpm.

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#09 ADV. THEORY COURSE \$32.95

4 tapes and 1 illustrated textbook

#10 COMPLETE EXTRA. . . \$62.95

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#12 EXTRA THEORY COURSE \$32.95

4 theory tapes and 1 illustrated textbook for Extra class theory.

#11 EXTRA CODE COURSE \$32.95

6 tapes for speed building from 13 to 22 wpm for the Extra code exam.

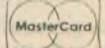
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- #26 13 wpm Random Code
- #27 13 wpm Test Preparation
- #28 13 wpm Car Code
- #29 13-15 wpm Speed Builder
- #30 15-17 wpm Speed Builder
- #31 17-19 wpm Speed Builder
- #32 20 wpm Random Code
- #33 20 wpm Test Preparation
- #34 20 wpm Car Code
- #43 3-15 wpm Code Review
- #40 12-21 wpm Code Review

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of the guys and gals on the net. Especially remember Grace, W5MRU, of La Feria, TX, and the many contacts with her.

"I'm 80 years of age and started in the days of regenerative receivers and UV201A transmitters and then graduated to UX210s and on up the ladder. My health is not all it should be and my operations these days are quite limited.

"So thanks for your cooperation and will enjoy reading 10-10 International News as much as I enjoy reading Worldradio.

"73 to you and all the gang.

P.S. Some of my previous calls have been W1FXJ and W1BAO. Also operated from 1QBW and 1UP in the days before prefixes in the late 20s."

Larry reproduced his original 10-X International Net of Southern California Membership card by hand drawing it the best he could, as it was a little worse for wear.

By the way, Larry's 10-10 number is 468 and he joined 10-10 on June 9, 1969.

It is always a pleasure to receive letters like the one above. It proves that Amateur Radio is more than just a hobby, it is a fraternity of lifelong fellowship and goodwill between people with a common bond.

I checked my 10-10 log and I am sorry to say that I have never worked Larry, but I wish I had. Maybe someday I will have that pleasure.

Maybe many of you that read this have worked Larry and have a remembrance of that contact.

### OM/YL teams

There are a number of OM/YL teams in 10-10. They consist of the OM and YL, both Amateurs and both 10-10 members.

With all of the new members that 10-10 has taken in during the last year or so, now there must be an even larger number of OM/YL teams. This came to the forefront during the recent Phone QSO Party, when I alone worked a dozen or more teams. This is great in the contests because you get "two contacts for the price of one."

Some time ago, I started recording OM/YL teams in my log, with the hope that someday 10-10 would have some kind of an OM/YL Award. Well, how about it? Would one of you teams be willing to put it together and run such an award? I have some ideas, but better yet, how about some of yours. Would someone be willing to get this off the ground and volunteer to be the award manager.

To make it an official 10-10 award, you would have to propose the award, draft the rules and present a rough draft of a certificate for the Board of

Directors to approve. It will take some time to get organized and approved and then a few hours a month to keep the records and issue the certificates. If you are interested, drop me a line with your ideas and let's see where we can go from here.

I have been collecting OM/YL team names, calls and addresses for some time and have these in a data base file. This will be a big help in getting something started for an OM/YL "Chapter" or Award or whatever is finalized.

If you are a member of an OM/YL team and would like to get on my list, send me your info. A QSL card will do, as long as it lists both members along with each 10-10 number.

### Finally

In order to keep this column going each month, I need information from the membership and chapters. If you are a member with another hobby in addition to Amateur Radio, let me know. In the past we have written about members with antique cars, old and antique radio collections and many other items.

Do you have a unique job or occupation? Let me know about it. What is going on with your chapter? What has

your chapter done out of the ordinary and what are your future plans. DX members, how about information about yourself, your station equipment, your location, your work, etc.

If you are not now a member of 10-10 and are interested in learning more about the 10-10 International Net Inc. and how you can become a member and have your own 10-10 number, send me an SASE (#10 large business size envelope with 25¢ postage) for a complete information package and application form. Standard size letter envelopes are *not* large enough to accept the Info Pack and you will receive only the application form. My address is 18130 Bromley St., Tarzana, CA 91356-1701. If you would like the latest copy of the 10-10 International News, the 10-10 quarterly magazine, send \$1 and an address label (no SASE required when you send a buck).

If you are one of the "lost sheep," that is one who has lost his 10-10 number, send me your current call and *all* previous calls for a computer check of your previously issued number. An SASE will be appreciated.

That's it for this month. 73s es cu next month. □

## Don't just do something! Sit there

KAY CRAIGIE, KC3LM

You tune onto a frequency and hear a situation in progress. You don't know what is going on. What should you do?

First, turn your VOX off. Then:

1. KEEP QUIET: Don't ask what is going on. Don't ask if it's real or a drill. Don't offer to help. Don't answer questions. Don't relay. Don't tell other people to shut up. Don't ask weak stations to say again. Don't ask where this repeater is located. Don't ask if your friend Alonzo who used to live up this way has checked in because he had a real good signal on this band back in 1956. KEEP QUIET.

2. Tips 2 through 9 are the same as Tip 1.

10. If, after carefully listening long enough to understand what is going on, you discover that you can definitely be of specific assistance, check in at a time when it is not disruptive of the ongoing activity on frequency. If Net Control

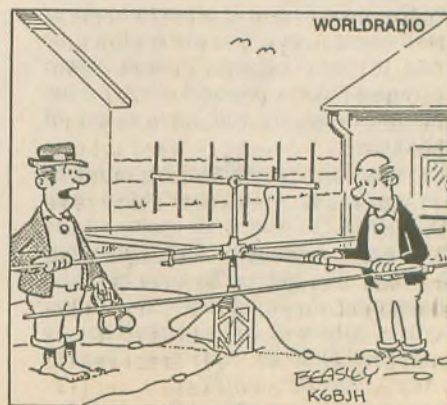
asks for stations in Guatemala or the Yukon, it is disruptive to check in from Bushwhack County, PA. After acknowledgement by Net Control, return to following Tip #1 until asked to transmit again.

Of course we can't hear the 500 operators who are following Tip #1, only the dozen who don't — so we can't gauge the true percentages. However, it doesn't take many unhelpful helpers to cause serious, maybe even dangerous, delay. Please consider including these tips in your next licensing course or training net. — *The Delaware-Lehigh ARC Inc., Nazareth, PA* □

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I TOLD YOU YOUR GROUND WASN'T SOLID ENOUGH TO SUPPORT A 60 FOOT TOWER!





Last month's column (or harangue as I called it) dealt with the horrible proliferation of "junk mail" on the packet system. The pile of junk is getting worse every day.

I usually service my 2M BBS each morning immediately after I wash the sleepy seeds out of my eyes and turn the lights on in the shack. This morning I couldn't get into my board to survey the night's incoming traffic, because it was busy forwarding junk mail to the next BBS in our network chain.

I watched a string of junk bulletins go out and as they left I made notes of their contents. The first "ALL" message was searching for the solution to a police video game. Apparently some California video game freak could not solve the crime presented on his computer screen, so he was seeking help from the packet world at large. Come now, kiddies, is that a good use for a communications system designed to aid the world in time of emergency.

The next "ALL" was a simulated display advertising card for a flea market in California. It explained the table layout and fee structure for an obscure Amateur gathering in the earthquake zone of that state. I'm sure no North Dakota exhibitor was interested in going to such a show.

Then came a string of stuff for sale: A 5 MHz oscilloscope with attachments for \$75, a Kenwood antique and a couple of hand-held transceivers. All were California originations and every one of these "ALL" messages were at least two weeks old. (North Dakota ain't in the mainstream of packet traffic, we're on the far end.)

Then came a message looking for an operations manual to be used with a Drake something or other. That bulletin was nearly a month old, and it was followed by a "WANTED" request for any ICOM 32 AT modification instruction. This last message was even older than the previous one.

And so it goes — day after day after day. A steady stream of junk mail comes and goes like the Mississippi river at flood stage. And the sad part is my BBS users ignore about 99 percent of the bulletins presented for their use. There is so much junk that local Amateurs check in, list the traffic arrivals since they last hooked up, then immediately check out without reading one single bulletin. The only exceptions are the local bulletins for club meetings, etc. These get a fair amount of attention.

So, I ask, is running a bulletin board really worth it? Maybe I should switch to a PacketCluster DX BBS.

A few columns ago I asked packet readers to play a prank on my good friend Jack Frost, W8PHG, of Midland, MI. Jack and I used to play tricks on each other when Jack lived a few blocks from me 40 plus years ago. My request was to send him a goofy message on packet.

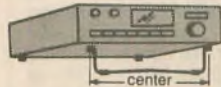
Well, I heard from a few Amateurs around the country that they did send Jack a message. So, the other day I called Jack on the land line to see what happened. Well, the whole prank was a dud. If my mathematics are correct only about a third of the messages to Jack, ones I was aware of, made it through the packet system to Midland. That doesn't say much for our system, does it?

What happened to the missing messages? I have been doing some speculating on the cause, or perhaps I should say causes, of the loss. The first one could be the fact that the software, although adjustable, has a feature that tags messages as "old" in two days (mine is set for 10). When I look at the "audit trail" heading list on personal messages, I see lots of them with more than two-plus day delays due to sitting in a BBS waiting to be forwarded. So, I would speculate that many of them "age" while waiting to be passed on and are killed as "old" messages, either automatically by the software or manually by the SYSOP trying to clean house.

There are probably other reasons. Please give me your ideas of why.

### PacketCluster stuff

PacketCluster DX BBS seem to be popping up all over the country. Not so in North Dakota; we can almost get by



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with a simple party line telephone system. So anything I write about PacketClusters is hearsay gleaned from my friends in the bigger DX centers.

PacketCluster stations provide audible alert warnings to a local network when a member hears (or sees on RTTY) a DX station worth chasing and wishes to share the information. To alert all the members instantly, all he has to do is put a message with frequency and call sign information into the BBS.

Bob Stanek, W0HAH, in Minneapolis, told me his computer was beeping like crazy during the March ARRL DX contest weekend. Bob also indicated that the new arrangement has quieted the local voice DX repeater down to a whisper.

In addition to instant notice of DX operations; the BBS can calculate beam headings; give sunset/sunrise times for any DX location; calculate MUF and distances between stations; display past DX reports by band, station or prefix and send private mail between users. In addition, the BBS usually have propagation and DX bulletins available for the users to download.

One of the other big features is that the BBS can have data bases for use by all the users.

I understand that the next version of the copyrighted PacketCluster software will even keep track of the DX needs of each of the local users. When a rare one shows up, all one will have to do is query the data base in the BBS and find out which operators need the new one. Pretty slick, I would say. Better than our landline alerting procedures in North Dakota.

Another feature that can be available to each system is the W6GO/K6HHD QSL Manager List. Because the "GO List" is protected by copyright, the SYSOP of each PacketCluster BBS must sign an agreement not to copy or distribute the informa-

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tion other than on the BBS. Also, each SYSOP must send a disk a month to W6GO List publishers with QTH information collected during the month. That way the GO List is continually upgraded and checked for accuracy by input from the various BBS stations.

Not all the information printed in the List is available to BBS users. The information on page four (new addresses, special notes, etc.) is only provided in the printed version. This is done purposely to keep List subscribers as "sponsors" of the List in the local BBS system.

Without paying customers there would be no List for anyone. I personally have subscribed to the GO List for many years. I find it a very handy utility publication for DX QSL operations.

### Eavesdroppings

"I WORKED 206 COUNTRIES WITH 100 WATTS AND A BEAM THAT THINKS IT'S A DIPOLE ... HAM RADIO GRABS ME SO GOOD ... 73 AND WATCH YOUR MAILBOX ... WE GOT A BLAST OF CANADIAN COLD AIR WHICH MODERATES THE HOT AIR WE GENERATE ON SSB ... THEY TELL ME THAT IN YOUR TOWN YOU DON'T GO OUTSIDE AFTER DARK UNLESS YOU WANT TO ROB SOMEBODY OR GET

ROBBED YOURSELF ... WELL, I'M QRUUU NOW, WHICH MEANS I AM COMPLETELY OUT OF JUICY GOSSIP ... I'M LEARNING FAST HOW COMPUTER PRICE CREEP WORKS - BUY NEW COMPUTER SOFTWARE AND IT RIGHT AWAY ASKS YOU TO BUY ANOTHER PROGRAM TO MAKE THE FIRST PROGRAM WORK BETTER ... I HOPE WE MEET AGAIN BECAUSE I STILL HAVE A BUSHEL AND A PECK OF QUESTIONS TO ASK YOU ... MY FINGERS ARE STILL NUMB FROM THE CW CONTEST ... I KNOW YOUR AREA REAL WELL - THEY HAVE MEAN TRAFFIC COPS ... NOW I WILL STAND BY AND PATIENTLY WAIT FOR YOUR FINAL FINAL ... HIS RIG SOUNDS LIKE A BAGPIPE SOLO IN A WHISTLE FACTORY TEST ROOM ... A LOT OF US HERE ARE USING WIRE ANTENNAS ... I WOULD LIKE TO SEND HIS SIGNAL BACK TO HIM, QRM AND ALL ... MY VERY BEST TO YOU AND WISH YOU AN EARLY SUMMER ... SO I WILL LET YOU GO NOW AND CATCH YOUR CAT ... I HAVE A LARGE APRICOT ORCHARD FULL OF ANTENNAS ... IN ENGLAND WE DON'T HAVE DX SPOTTING NETS - IT'S FIND 'EM, WORK 'EM AND KEEP MUM ABOUT 'EM ... I KNOW I AM NOT PARANOID, BUT THEY ARE OUT TO GET ME ... I TEND TO IGNORE ALL DX INFO EXCEPT ABOUT RTTY ... CATCHING THAT DX STATION IS LIKE TRYING TO EAT THIN SOUP WITH A SLOTTED SPOON ... I'M STILL USING A SLIDE RULE BECAUSE OLD DOGS HATE NEW TRICKS ... I'VE BEEN WONDERING WHAT JIM

AND TAMMY BAKKER HAVE BEEN PRAYING FOR THESE DAYS ... YOUR SIGNAL IS 599 IN THE POWER-LEAK CAPITAL OF THE WORLD ... IF I COULD SQUEEZE THE WATER OUT OF HIS SIGNAL THEN I COULD READ HIM OKAY ... I WORKED THE 8Q7 YESTERDAY BUT I NEED QUITE A FEW NEW ONES TO MAKE DXCC BECAUSE I HAVE ONLY BEEN ON RTTY TWO WEEKS ... I REALLY LIKE THE SPLIT SCREEN - IT GOES WITH MY SPLIT BRAIN ... NICE TO MEET YOU ON THE AIR AND HOPE TO MEET YOU ON THE GROUND ... 73 AND HAVE A NICE DAY OFF AND A NICE DAY."

Dr. Jeff Wolf, WA6DAL, reports this little hogpile incident: "I was trying to get through the pileup on a rare DX station when a local (Los Angeles county) DXer practically blew out my receiver's front end to tell me, 'Why don't you get an antenna!'" (For the record, Jeff has a tri-band beam up at 40 ft.)

Thanks to W7NSU, W7VFR, W0HAH, W1TTQ, W8PHG, W1DA, W0ML, 9J2AL and a host of others for the help with this column. I can be reached on packet at W0LHS @ W0LHS.ND.USA.NA or by writing Bill Snyder, W0LHS, 1514 S. 12th St., Fargo, ND 58103. 73. DITDIT. □

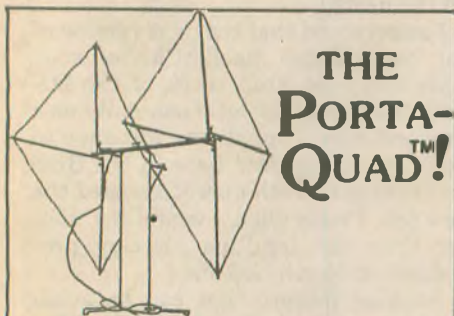
## Hams assist at Walkathon

### WILL CARRIER, WA6HVX

Assisted by radio Amateurs, the Fourth Annual Golden Gait Walkathon '89 took place from 8 a.m. until about 11 a.m. on Saturday, May 13, 1989.

About 1,650 people took part in this benefit walkathon for Seniors at Self-Help for the Elderly. The route is an exciting and eclectic one, passing through the streets of San Francisco's Financial District and Downtown, historic Union Square, Market Street, the booming South Market area, Justin Herman Plaza, The Embarcadero, the bustling Waterfront, Aquatic Park, Ghirardelli Square, The Cannery and back to Washington Square.

There were two routes of 8 km and 12 km leading to a FB picnic at the end. Radio Amateurs assisting with the coordination of this event were: Bob Lee, W6ZHO; Ruben Lugtu; Dave Billeci, WA6UHA; Art Samuelson, W6VV; Francis Gong, W6TPW; John Yee, W6ZXW; Howard Yuen, W6OAA; Dave Buell, KA7JAN; and Allen Yu, WA6GTU. □



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# SAR

## communications

Jerry E. Wellman, WB7ULH

In 1970 a boy became lost in the mountains of central Wyoming. For 11 days volunteers scoured the mountains. Dogs and planes and people covered trails and terrain; many had given up days earlier. Fresh search teams replaced tired ones. And miraculously, after 11 days, the lad was found — tired and hungry, but alive.

I wasn't an Amateur or a search and rescue team member then. I was just a volunteer. What impressed me then (and got me interested in Amateur Radio!) was the dedication and professionalism that a handful of radio operators displayed as they established communications for this massive operation and supported the search until its conclusion.

Another massive search, near Provo, UT, impressed me when Amateurs responded with a mobile van, radios, direction finders and volunteers. They organized, staffed and supported the mission until its conclusion. And that's the key part to SAR communications — quality support until it's all over.

For 20 years I've watched as SAR people and teams come and go. Those who stick it out have a vision of what can be accomplished and often try their darndest to pass this vision on to other SAR people. Many SAR people join up with grand expectations, spin their wheels for a couple of years and then quit after burning out.

No matter what the emergency, the cardinal rule is that without effective communications, not much happens. Without preparation your volunteers spin their wheels until they burn out and quit.

Search missions are an emergency. Unlike earthquake or the automobile accident situations, searchers are immediately behind the time curve because their victim's survival chances have already diminished — they've been lost for hours or even days.

You'll often see statistics that the first minutes are critical for a paramedic response team. The same holds true for a SAR team response. There is NO time to get ready to respond. When communications are needed for a search, they were needed even before the callout began.

While most SAR coordinators realize

that communications play a vital role in the success or failure of a mission, few are conversant in what you as a communicator can offer. You may show up with a truck full of goodies and say neat words such as "packet," "RTTY," "simplex," "duplex," "cross-band repeater," "VHF" or "low band relay" — but to the SAR coordinator you represent the means to get a message quickly and reliably from point A to point B.

The time to discuss the "how to" of communications is before or after the emergency. Planning, educating and post-mission critique allow you to better serve during a search mission.

Next question — who are you working for on a search mission? You may think it's the SAR boss or sheriff or the Air Force Rescue and Coordination Center. Actually, you're all working for the victim. The SAR boss is coordinating the effort, but the reason you have responded and everything you do from the moment you are alerted should be directed to saving that human life.

Let us go back to square one. You've been asked to head up your county Amateur Radio Emergency Services team or your club's emergency team, or, because you're an Amateur, recruited by the local Civil Air Patrol to lead their communications effort. You have an important role. Your success or failure to organize communications could mean life or death for that victim, say of a plane crash.

What if a larger plane with hundreds aboard crashes in a remote area? Your responsibility to establish effective communications is critical.

Place yourself in the role of the SAR coordinator. Better yet, put yourself at 9,800 ft. in the wreckage of a small plane in early March. Would you want someone in your comm team's state of readiness helping to look for you?

It is fine to be willing to help and to have a fine inventory of equipment, but will your equipment and skills be of use?

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There are two important "gotta do" items BEFORE you can volunteer your team to a SAR mission coordinator (or to a sheriff or emergency services official). First is to define your team's VITAL FUNCTIONS. What are your reasons for existence.

Your vital function can be as simple as providing technical manpower to re-string antenna cables after a disaster, to having enough well-trained and equipped warm bodies to sustain complete communications for a 10-day search mission 50 miles from the nearest community.

Define what you hope to provide. Be realistic and accurate. Ask the SAR coordinator for input. Ask the sheriff or Red Cross.

One realistic request from several rural sheriffs has been to have Amateurs trained and equipped to handle central dispatch duties at the search base. Often there are not enough paid (and trained) dispatchers who can set up an antenna and field radio and handle emergency traffic as well.

Your vital functions are the things your team, your members and your group MUST do. They can include equipment ready to go NOW or a way to alert your members and guarantee a response. Whatever your group does in the coming months must support

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your vital functions.

Next, as team leader you must have performance expectations for EACH team member. You cannot have a group of clones, each with like abilities and similar equipment.

Some will be able to help in the day, others at night. Some can stay for days, others have jobs or responsibilities that restrict the level of their response. As team leader you should determine with EACH member what your expectations are and exactly what each will be held accountable to accomplish.

One of the great SAR team killers is having a huge roster of people unwilling to participate. Most of the time they drain all the energy of your good people. If you have members unwilling to agree to perform, these people are of no use to the victim.

A small group of well-trained communicators who can respond is critical, more so than a tribe of inept, lachadaisical "helpers."

As you develop vital functions and member performance expectations, write them down and give copies to each member. Make it clear that each understands the team's purpose and their role in helping to reach that goal. It takes work and dedication.

The bottom line is that you want volunteer professionals, not profes-

sional volunteers (you can always find the latter at the top of the sign-up list but never on the missions).

Several months ago there was a search initiated for a possible plane down. SARSAT (search and rescue satellite) was reporting ELT (emergency locator transmitter) hits over a wide area. Soon, two CAP planes had isolated the signal to a remote mountainous area. Terrain was rough, with peaks to 10,000 ft. and covered with fresh snow.

There were Amateur Radio repeaters that covered the area, as well as a circling CAP plane providing radio relay. Responding to the call for ground direction-finding teams was a very dedicated SAR team member. He had quality equipment for tracking ELTs, a four-wheel drive vehicle and a great desire to help. Yet his participation would have placed a great liability on the search coordinator.

Why? Because the volunteer was not prepared to respond off road into an area that would have been a strenuous three hour snow hike. He could have become a victim himself.

For this volunteer, the expectations were not made clear, nor were his abilities tested prior to the incident. He had no idea how tough it would have been to tackle tracking this ELT.

About nine years ago, during a

plane search, many Amateurs responded to assist. They hiked in the snow, they flew in sheriff planes, they installed equipment and sustained the operation for many days. The plane was found with no survivors.

On this SAR mission one Amateur had volunteered to provide communications for a team tracking the ELT signal. They were in deep snow and on skis. The team was caught in an avalanche and the Amateur was injured. His femur was badly broken. Ultimately his insurance ran out and he lost his job because of all the recovery time needed.

It is vital that your team volunteers understand that participation in any kind of emergency is risky. Does each member have adequate insurance? Is each able to bear financial costs should an accident happen?

Participation in SAR missions also costs money. Missions can sometimes go on for days. It's great to have 30 folks show up the first day and then leave at 5 p.m. Unfortunately, that plane crash victim or lost hiker doesn't have that luxury.

Chances of survival depend on the type of incident (missing plane, hiker, boater, etc.), and those decrease hourly. The need for communications is just as critical on day one as it will be on day five or day nine.

After you have defined your vital role and determined what your members are expected to accomplish, you can begin to prepare. You can then approach the SAR coordinator and offer your unique services.

As you prepare and train, look to ways of identifying your team. Civil Air Patrol members wear a military-type uniform; sheriff teams often wear a uniform too. Many rescue teams wear a bright orange hat or jacket with a team insignia.

Having a way to identify members serves several purposes. It makes you feel like a team and it identifies you to those with whom you are working. You'll also attract new people to the fold — new people you can screen carefully to see if they can contribute!

Last in your team planning should be to have a sure-fire alert method. The SAR coordinator has limited time in launching the search. He needs communications now!

Often he isn't an Amateur and cannot spend an hour trying a lot of home phone numbers. Pagers work well and can be passed to your "on call" person. If your company has an in-house paging system, they might be willing to allow you to use it for alerting a few key people (and it would be free). Other groups have working agreements with a public service agency to

*please turn to page 57*

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the QSL Info or 6M beacon lists, so if that continues, I will delete them from the board to save space.

### The DX report

Most of the DX reported during February was into the Caribbean and Central and South America, with some reports of African to United States beacon receptions. There were occasional contacts between Africa, Europe and the eastern United States. This part of the world experienced its usual South American activity.

### DXpeditions

VR6JR will be on daily at 1900Z, I am told. I think the West Coast guys have also asked him to be available, if possible, for nighttime TE activity.

A November DXpedition to the South Sandwich and South George Islands in the Falkland Islands area will have 6M with them. They will be there for two to three weeks.

### QSL info

Arnie Coro Antich, CO2KK, has a new QTH. Try this: Avenida 23 3413 Altos, Entre 34 y 36, Playa C, Havana 1130, Cuba. Evidently Arnie has been able to get his HF gear fixed.

I believe that efforts are being made to get his contacts confirmed. He said US mail goes through various third party countries to get to him. No 6M QSLs for him have arrived through his bureau yet.

He said to send IRCs, not US dollars. Stamps cost from 26¢ to 51¢.

It is reported that PJF9EE now has a QSL manager, Benny Wyenantea, YB3CN. I do not know how far back he will have the logs.

### Scatter shooting

David Underwood, WB5HJV in Houston, TX, has started inputting these reports into the National Packet System for US-wide dissemination. We now truly are an internationally distributed *Six Shooter* news bulletin with this capability. All you have to do is pick it up!

Those who do not have AMTOR but have packet should start seeing this info by now. I hope you enjoy it.

Jimmy Treybig, W6JKV, lost his four M2 antennas and tower in winds that hit his part of California recently. Winds were reported up to 85 mph.

Jimmy did not know his antennas were gone until the next morning because he came in late at night and could not see anything. When he went out he found one big pretzel in his yard. He went jogging after that, to prepare for the marathon in which he is running during an upcoming trip to Europe. I guess Jimmy figured he couldn't do anything about it now, so he might as well get his training done!

What a loss of antennas and tower!

### Who's on Six!

Joel Paladino, N6AMG, reports 5W1KT has the KLM661 provided to SMIRK by Mike Staal, K6MYC, and fixed by Joel, who also sent along an amplifier. Joel will hand-carry the antenna to him.

Joel shipped Dave Heil, 9L1US, a 5-element yagi to replace the beat up old 3-element Dave was using. Joel has

there in June for a four year tour in DC.

Cliff Hubert, HP3XUH, returned to the United States on Dec. 1. He is OK, but does not plan on going back to Panama anytime soon.

He can be reached through his state-side QTH. I am told he has been busy getting out his QSL cards.

ZD7VC may borrow the SMIRK supplied rig that ZD7CW has, since the latter has such a lousy location. ZD7VC is said to have a much better

## SMIRK/Worldradio subscription combo

The Six Meter International Radio Klub members whose dues are current (check your address label) are eligible for a combined SMIRK membership and subscription to Worldradio magazine.

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Put the \$3 savings in your piggy bank for that new rig!

been doing a super job of providing equipment, but he needs help. He has about exhausted his resources.

Lothar Schmitde, A22BW, is back on Six with an IC-551.

Tom Dewitt, AK5E, is looking for mods to the Yaesu FT-620B and the Hallicrafters HA-6. If you have any send him copies to: 8403 Silver Ridge Dr., Austin, TX 78759. Send a copy to Lisa Lowell, KA0NNO, also please.

Dick Kwiatkowski, 9Q5DX, wrote me to say that he hasn't turned on the 6M rig since he got it. He didn't have an antenna, mike or key and is not sure it even works. He has passed it on to 9Q5EE, who has an FT-737 with amp and 6-element yagi for 6M.

9Q5EE has about 20 countries logged so far, but none in the United States. He wants to work Dick on 6M before Dick leaves, so they are going to see if the rig works.

9Q5EE wants to work DXCC on 6M from Zaire before he leaves. Dick leaves

one.

WF8C told me the results of his and D8WW/VP9's DXpedition. They worked from Grid FM72 from Feb. 11 to 19 and had 24 QSOs. This was disappointing to them, but they know it could have been worse.

They contacted seven countries, the United States, HC, HC8, OA, LU, VP and 6W1! That was the highlight for them.

C53GB is asking for 6M permission from the Gambia. Alain Combelles, TR8CA, is running a beacon on 50.090 I am told.

Romanian Amateurs expect 6M licenses soon! Mincho Petkoff, LZ2DF, has asked for an experimental 6M license!

By the time you read this, you should have been working Italian Amateur Radio operators on 6M. They were given 50.151 to 50.163, 100W ERP, 24 hours a day, effective March 12, 1990.

See you on the Magic Band all of a sudden! □

## A yell from an XYL

She had just received her General, so she got right on the air.

CQ'd and made a contact without a bit of care.

The QSO was a good one, with

signals loud and clear.

Not a sign of QRM, or QRN to interfere.

Now you'd think she'd have been delighted, with a contact.

The report that she was given would have filled another ham with bliss,

But she stomped out of the ham shack, and announced that she was through,

"That man said I was 40, but I'm only 32!"

—Mike & Key, Cincinnati, OH □

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The cartoon shows a doctor finishing a rigid exam on an airline pilot, declaring, "You're in fine physical and mental condition, but you have a bad birthday!" Well, Richard Russell, AC6M, just had one, reaching 60 a couple of months ago. He points out, "One day I was fully qualified to fly a 747 and the next day I was not." (FAA regulations for airline pilots.)

However, after 35 years with United, this captain has plenty to look forward to. He is still welcome to fly sophisticated corporate jets (being in the good physical shape he is), investigate crashes and serve as an expert witness or as an aviation consultant.

But he will miss the 747, "a magnificent piece of equipment," and especially the new 747-400, "which is fantastic, with its nine CRTs in the cockpit showing all flight information, navigational displays and alerting systems — a thrill and delight to fly." Dick was the first United line captain to be qualified for this aircraft.

As an enthusiastic member of the AirLine Pilot's Association, he has spent 24 years working in Safety, one of its main concerns. He's investigated a number of aviation accidents, "such as the Flight 811 out of Hawaii, which lost a door;" he was the first aviation expert to arrive.

"Then there was the DC8 which crashed at the Detroit airport," he said. "It was very sobering as two of the three pilots killed were my friends."

But he points out that, "once you get involved with air safety, you never get out."

We all do, or should, know that a passenger must not use a hand-held VHF transceiver aboard an airline unless it has been completely tested and approved. However, some captains with Amateur tickets, during long flights, have proper rigs aloft, and Dick has been one of them.

He liked 20M, running about 125W

"to an antenna tuner and a stick about five feet long on each wing tip of the 747, designed by the Boeing antenna research department." (The DC8's top third of the vertical stabilizer is insulated from the rest of the plane, and one tunes that, giving an even better radiation pattern than from the 747.)

"I've had wonderful contacts flying at 33,000 over the Pacific. But I was over Las Vegas when I heard 'Shorty' Powers in Omaha talking to Gen. Curtis LeMay in California, as well as to a retired Pan American captain who formerly had been their adjutants. They welcomed me into their 20M QSO."

In fact, Dick is extremely impressed



Richard D. Russell, AC6M

with the friends he has made since his ticket arrived in 1960 — "truly lasting friendships with fascinating and accomplished people."

Two are Earle Grandison, K6WS, and his wife Helen. "We met at a Fresno DX meeting and became fast friends — in fact, Wilma (WB6DJB) and I became godparents to their fine kids. He joined my family and me on my final flight, from Honolulu to San Francisco." (It was aired on CNN and other stations.)

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Dick earned his Amateur license along with a captin he was flying with. On layovers, they would send each other code and drill with theory. "It's played a very important role in my life."

During the "Vietnam period" he flew often to Guam and made many Amateur friends, running patches for them when he was home later. (On one trip the plane carried 80,000 pounds of live hand grenades!)

Whenever possible Dick checks into the International Association of Airline Hams net on Sunday mornings at 8:30 a.m. PST near 14,280 MHz, where those working in or are retired from the industry exchange up-to-date information as well as share experiences. They are moderated by George Boring, W3KS (a radar expert), and Loren Brown, K6RI. In fact, members frequently are found at that frequency.

At home in the San Fernando Valley, Dick enjoys music, playing the piano, organ, clarinet and ukelele, "for my own amusement only!"

And of course, his computer is of great importance, with the modem being "my link to the outside world and particularly to our ALPA office in Washington, DC." Packet, too, is becoming a great interest.

His entire family seems to be involved in aviation: Wilma was formerly a flight attendant, as is their daughter, who also is about to become a private pilot; the two sons are United pilots; their daughter-in-law, Sherry Russell, KB6LFU, is a 727 pilot and gave them two grandbabies; a nephew and godson flies for United out of Chicago.

Happy flying, you all! □



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### Traffic computer programs

You've struggled in the trenches for some time and at last the system has recognized your talents and moved you into management. You have become a net manager. This might be a local VHF or HF net, a region or even an area net. Pretty impressive.

Now you have a chance to show off your record keeping talents. A manager can expect to receive 30 or 31 reports per month. Each report should contain the QTC, QND, QNI and QNS. The QTC (traffic listed/passed/relayed), QND (time net took/time traffic took to pass) and the QNI (how many people checked in — including the NCS) figures are adaptable to being written down in three columns and added (hopefully a calculator is available) at the end of the month.

But how does one sort the QNS (listing of calls which checked in)? Why does a net manager need the QNS? Certificates should be issued at some random period of time by the net manager, and it's good to examine traffic trends.

A computer program turns out to be

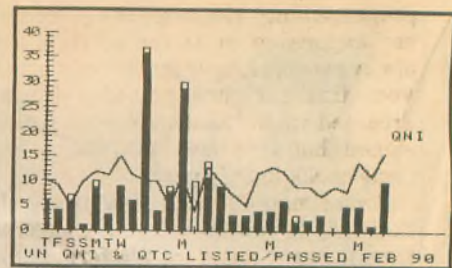
the perfect answer. By typing in the data from each net report, you can examine, sort, chart and list any of the data in any format.

Record keeping began here with an Apple 2+ and progressed to an IBM clone. Any number of programs from File Cabinet and Visicalc to DBaseIII+ and Lotus 123 to home grown programs have been experimented with to come up with a program to manage a net.

There is probably no best program for everyone. Each has their strengths and weaknesses. The attributes we have looked for are: 1. The Input section of the program would require a minimum of translation from the report. 2. It should have error checking routines and prompt you for expected entries. 3. It should provide for data verification after entry and allow for easy correction of mistakes. 4. The data manipulation section should clean up extenders like AA4AT/4RN, stripping the /4RN off and adding AA4AT to the 4RN rep file. 5. It should rapidly and accurately sort on call suffixes and level of activity, and would provide an output not only for the report, but for trend analysis. 6. The report section would provide a report in the format that was expected by the STM (or to whomever the monthly report must go), with highlighted important data. 7. It should provide graphics for the presentation of trend analysis.

General purpose commercial programs divide into three classes: Data base management programs, spreadsheet programs and graphics/trend analysis programs.

The early programs that ran on the



Apple were slow and inflexible, with limits on the data that could be handled. That drove N6ANQ (my better half) to the first job-specific program which I used; i.e. a customization of the old Apple File Cabinet Program. The currently available software (e.g. Lotus 123 and DBase III+) have so much capability and capacity (the 12 MHz clock on the AT clone doesn't hurt either) that any of these programs can handle the job. They are a bit expensive to buy just for the net records, but if you have them available . . .

The input format can be customized to fit just your net reports, the data manipulation functions are fast and well debugged and the report writing capability is normally good. Best of all (within limits), no matter how much data you push at them, you'll probably never come close to denting their capacity.

Worst of all, though, they still require a lot of accommodation, such as generating your own call suffix lists and stripping your own extenders. In many cases you can write simple data conditioning programs that use the files from the commercial programs, and have them do the busy work for you. This is a lot easier than writing the whole Net Reporting Program for yourself, but still allows you to customize.

But then you can roll-your-own. We became spoiled by the Apple program built by N6ANQ for the Virginia Net, because it provided all the features we wanted. Applesoft was easy to use.

It seems that all the current language development for the PC is going toward "C." Notwithstanding, the program was rewritten from the Apple for the AT, and it is still the program of choice for us. It remains flexible and can be continually modified. That's a real strength if you have a programming talent. For anyone who does not, a prepackaged program will have to do.

If anyone would like a listing of our program, or a copy for the IBM (MS DOS) or Apple II series computer, just send me an SASE and/or disc. Geri Sweeney, 4728 Neptune Dr., Alexandria, VA 22309.

The final choice seems to hinge on what one wants to achieve. Commercial programs are proven, relatively easy to use and require no writing/

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programming. Home grown programs are expensive in terms of time and always seem to have one little bug that you didn't figure on (who'd have dreamed when the arrays were dimensioned that we'd have 500 different stations check in this year).

Sometimes \$\$\$ and time drive the decision. If you do use your own creation, using a standard file format like the DIF format, which can be used by Lotus 123, helps to keep from burning too many bridges behind you.

From 31 net reports (such as the following), which are typed into the computer program, the graph is created. A listing is also produced for my Virginia newsletter, of how many times each station checked into the net. If desired, a check could be made to determine which weekdays a particular station is generally on the net and/or who was a particular liaison throughout the month.

It also prints out the data for your monthly (QNI/QTC/QND) section report with totals and percents.

NR 1 R N6ANQ 20 Mt Vernon VA Feb 3  
N4GHI  
VNE Feb 25 QTC 5/5 QND 13/20 QNI 10  
QNS  
N6ANQ/NCS WB4FLT/4RN W4TZC/VSN  
KJ4VT/STARES N4KSO AA4AT K4VWK  
W4YE WB4KSG/SVEN K4MTX  
John

Note that the QNS no longer needs to be alphabetized.

### Packet bulletin board responsibility

What responsibility does a PBBS sysop have for what passes through or comes to rest on their board? Avoiding the political issue of whether third party traffic should be accepted from European stations because it has been "washed" through a country which has third party agreements with both the United States and Europe, let's just dwell on the obvious . . . domestic NTS traffic.

When a piece of NTS traffic lands on a local PBBS, whose responsibility is it? Are traffic handlers in the area responsible? What if there are no traffic handlers on packet? What if the traffic handlers aren't aware the board exists or has traffic?

It would seem reasonable that most select a "home" board and keep track of traffic on it. Do traffic handlers have an obligation to check into boards within their reach and check (on a regular basis), if there is any traffic? A traffic handler can "show up" for a net or not, as s/he wishes. It is not assumed that you must check the net and become responsible for a message.

Is the sysop responsible? Did the sysop request the traffic? Does s/he

understand anything about handling NTS traffic? Is there even a file to explain NTS traffic for the uninitiated? What if the message has an ARL numbered text and the sysops has no idea what ARL forty six means? So, who has the responsibility for the message when it lands on a bulletin board? Shouldn't someone?

When a sysop puts up a BBS, s/he is responsible for knowing what is happening on that board. There are maintenance chores that must be dealt with, items will have to be deleted after a reasonable amount of time, some time must be given to review what type of material is on the board. A policy about NTS traffic must be determined by the sysop.

The first choice s/he has to make must be, "Is NTS traffic to be accepted or not?" If "not," a note should be sent to the station forwarding the traffic and ask it to cease.

Accepting NTS traffic requires the sysop to consider how and/or who is

available to maintain the traffic. The traffic can not be left to sit on a board for weeks until it becomes automatically deleted. If it cannot be delivered, it needs to be serviced back.

While it's not the sysop's job to do any of this, it is essential that s/he is aware that someone must. How does the sysop find that someone?

Each section has an STM (section traffic manager). This STM is listed each month in QST under section news. The STM and/or his/her appointed "data person" should be able to assist the sysop to find someone in their area to take responsibility for NTS traffic. Or the sysop may ask those checking in to the board, via a bulletin, if anyone is interested in NTS traffic.

Each mode has a following. Which ever mode is your favorite, being able to work them all is an advantage. Responsibility for traffic routed on packet must be maintained. We must be accountable for all traffic. □

## SAR Communications

(continued from page 52)

take an alert call and will monitor a dispatch frequency.

If you've got suggestions on better ways to respond or your group has some nifty qualification classes or equipment lists, I'd like to hear from you. If you have questions on how to get involved with the CAP, Mountain Rescue, Ski Patrol, Cave Rescue, Scouting, etc., please write. If you're a SAR coordinator and have sugges-

tions for ways communicators can serve the effort better, please let me know.

### SAR suggestions

Gather up all your coaxial connectors and put them into a box or bag. Keep the bag handy. You would be surprised how important a BNC-to-PL259 adapter becomes when you're 100 miles from the nearest parts place.

## VE teams sought

Since Feb. 23, 1984, The DeVry Amateur Radio Society has been a national VEC. It started as a Regional VEC, but one year later became a national. There are over 40 testing groups nationwide, and this is growing. The program is based upon integrity and creativity. The forms the VEs are required to fill out are simple and to the point. They are not burdened with cumbersome forms. For VEs this means test sessions are easier to grade. For YOU, as an applicant, it means your papers get processed quicker.

Less paperwork means operation on a more efficient basis.

The VE teams are offered test generation software, which they can use to generate written exams. Testing groups are also reimbursed for out of pocket expenses.

If you would like to start a Devry VE team in your area, just write or call. You will be sent all the materials you will need. The VEs will receive attractive certificates, confirmation letters and badges. You may call 800/327-2444, ext. 2221, or 312/929-8500. You may write Devry VEC, 3300 N. Campbell Ave., Chicago, IL 60618. □

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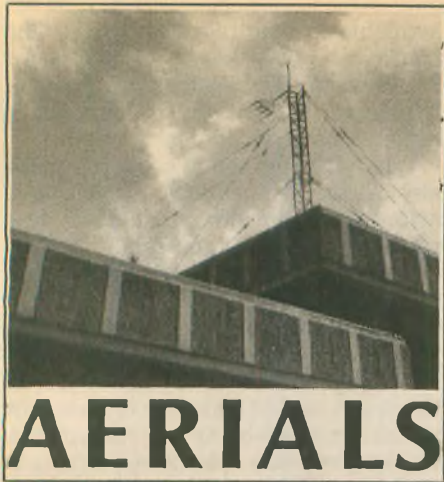
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Barth's distinction - there are two types of people: those who divide people into two types, and those who don't.





## KURT N. STERBA

Has money lost its value? Or are Amateurs bereft of their senses?

A new antenna product has come on the market priced at well over \$300. Will it actually be bought?

It is a square loop, less than three feet on a side. The manufacturer claims that it will accomplish the same gain as a dipole and that the effectiveness isn't reduced by the lesser dimensions.

Wow! Magnificent! They have repealed the laws of physics.

There is also some humbug about the greatest radiation being at the low degrees, which is desired for DXing.

The verbiage rolls on. Momentous leap forward. Great effectiveness. Alas.

Now, what really controls the angle of radiation is the height above ground of the (horizontal) antenna, and nothing else.

To show you how balled up this whole thing is, the claim is made that it radiates equally to all points of the compass and that it also has the dipole's net effect. (These are educated people putting this out?)

It is a flat false hope that a little scrunched up bunch of aluminum will radiate a field resembling a dipole. (There's no free lunch.) If you should believe otherwise, send me just \$30 and I'll send you some wire, a big ball of tin foil and a capacitor for a command set. However, I won't tell you that many years of scientific inquiry went into it. Nor will I promise that it will be a champion DX antenna.

Friends, you just can't fool Mother Nature! The physical laws are the physical laws and that's it! You can deplete your resources to the tune of



Let Worldradio know what you do in Amateur Radio; many others will be interested in your experiences.

over 300 bucks, but a hula hoop (squared) and a capacitor ain't a dipole. That big company should know better.

Let's turn now to a little company that says in their literature: "Remember the basic electrical laws will always apply, there is no magic involved." (*Bless their soul!*)

Who is this defender of truth and justice? George Shira, WD4BUM, of Anderson, SC. He runs the Lakeview Antenna Company.

Have I, the Diogenes of aeriels, finally found my man?

Why, he speaks of shortened antennas being compromised. The other people speak of no compromise. Hmmmmmm.

Now, this guy sells a 20M vertical that's about eight feet tall, for \$15. (The information on the accompanying sheet would be worth \$15 for some people.) OK, I used this in the ARRL DX Contest the 3rd and 4th of March.

You are starting to laugh? What chance does a \$15 antenna have against the \$1,500 systems? Well, did anybody work 100 times the countries I did, NO. Did anybody make 100 times the contacts I did? NO. There was one time I worked two different continents in the same minute.

I didn't want power to influence the results of this test, so I ran just 100W output. The MFJ 949C tuner and the Collins 302C-3 wattmeter both measured exactly 100W. The little antenna was in the back yard, a couple of feet off the ground, with four full-size radials.

I was prepared to slug it out with the big guys on 20. Contacts at :22, :23, 24. Remember, this isn't Sweepstakes, working one hop, this is DX! :35, :36, :37. Caribbean, South America, USSR, Japan, Korea and another two contacts in one minute. And again. Getting them on first call.

Today, as opposed to the days of yore, when contest certificates would pour into my mailbox, I stop and eat leisurely meals, read the paper and get

a good night's sleep. Plus, my pace was slower. I stop and listen to the really good ops, such as AH3C, VP2E, PJ0B, P40V.

I'm impressed with this little \$15 antenna. Interesting is that where the adjustable rod goes into the antenna proper, there are TWO set screws. Just a little extra thoughtful touch.

I decided to go on 15M, so I put up the \$15, 15M antenna. (I could buy this guy's 75, 40, 30, 20, 17, 15, 12, 10, 6 antennas at \$15 apiece and still have a lot of change left over from my \$300. Plus, these antennas take 600W instead of the 150W-rated other one.) Two continents in two minutes!

Went to 10M. Took me three minutes to get two continents, so I went back to 15. Italy, England, Portugal, Germanies, West and soon to be West, Yugoslavia, Japan, Bulgaria, Alaska. I go get a peanut butter sandwich on raisin bread.

Ten brings contacts at :12, :13, :14, :15, remember I'm going up and down the band answering CQs. Finland, Italy, Hungary, Spain, Belgium, France, what fun! GM, CE, LU, UZ, and tired old bones don't like sitting in the chair so long.

What a blast. Have I ever told you that my house sits on top of an abandoned copper mine? (Just kidding.)

How far down was I from the big guns? Theoretically 10dB amplifier gain, 10dB yagi gain, and how much does a 100 ft. tower give gain over ground mount? Ten plus ten, plus another four for tower height, is 24dB. Let's deduct 6 dBs for this small antenna, and we have a total of 30 dB difference between the big gun and my operation. So I'm five S units lower assuming equal propagation conditions. Big deal! Big Gun is S-9 plus 18 dB and I'm S-7!

I was getting them on first, second, third call. Now, there were some I stood in line for a long time and some that just never heard me. But remember, this was all with a small antenna. Frankly, I don't know how he makes them for \$15. (Honest folks, I don't know him. Wouldn't recognize him if I saw him, and vice versa.)

The address for Lakeview is Route 7, Box 258, Anderson, SC 29624. Ask for the catalog. He also has lots of VHF antennas, brackets, bumper mounts, a mount to make a dipole out of two verticals and more.

While these are basically mobile HF antennas, one could be (they are a dark color, not shiny aluminum) elevated a bit (say 17 ft. on 20M) and not attract a bit of attention at the home QTH. Buy a bunch and phase them for some gain.

One suggestion. He should charge a dollar more and engrave what band the antennas are for instead of using those

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little stickers, which could eventually fall off. When I mentioned that to Lil, she said, "Put a piece of clear tape over it."

Call 803/226-6990 for your free catalog. Yes, you may have deduced

## IARU officers

The member societies of the International Amateur Radio Union have ratified the nominations of Richard L. Baldwin, W1RU, and Michael J. Owen, VK3KI, to serve as IARU President and Vice President, respectively, for five-year terms.

Their election was by unanimous vote of the 75 IARU member societies who cast ballots. Mr. Owen's election marks the first time that a radio Amateur from outside North America has served as an officer of the IARU.

Mr. Baldwin, of Breman, ME, has served as IARU President since 1982. Previously he served as IARU Secretary from 1976 to 1982, while employed as General Manager of the American Radio Relay League. While on the ARRL staff, he spent 15 years in preparation for the 1979 World Administrative Radio Conference of the International Telecommunication Union.

During his previous term as IARU President, Mr. Baldwin inaugurated the teaching of training courses in Amateur Radio Administration for staff members of telecommunications administrations in developing countries, under the auspices of the ITU and the US Telecommunications Training Institute. He has traveled extensively and has attended every IARU Regional Conference held in recent years.

Mr. Baldwin regularly attends meetings of the International Telecommunication Union in Geneva in order to represent the Amateur Radio Service.

Mr. Owen, presently residing in London, England, has been involved in IARU affairs for 20 years. He was Federal President of the Wireless In-

stitute of Australia for four years. He served as a Director of the IARU Region 3 Association from its inception and was a member of IARU President Noel Eaton's ad hoc WARC Advisory Committee in the years prior to the 1979 WARC.

*(Kurt N. Sterba is a nom de transducer. He, of the BC-342, BC-610 generation, insists upon his anonymity.)* □

stitute of Australia for four years. He served as a Director of the IARU Region 3 Association from its inception and was a member of IARU President Noel Eaton's ad hoc WARC Advisory Committee in the years prior to the 1979 WARC.

At the 1978 Special Preparatory Meeting of the International Radio Consultative Committee and at the 1979 WARC, Mr. Owen was a member of the Australian delegation by nomination of WIA as representing the Amateur and Amateur Satellite Services. He has served, on occasion, as the Region 3 representative on the IARU Administrative Council between 1983 and 1986.

Mr. Owen is presently the resident partner for the London office of his Australian law firm. He is also licensed as G3ZML and ZL1BGY.

Mr. Owen replaces Carl L. Smith, W0BWJ, as IARU Vice President. Mr. Smith is retiring after long service in the office.

On being notified of his reelection, Mr. Baldwin observed: "Michael and I are grateful for the mandate given to us by the member societies to lead them during what may be a critical period for Amateur Radio. Another ITU WARC with frequency allocation authority may be scheduled for as early as 1992. If so, Amateur Radio will face even more difficult challenges than those we faced successfully in 1979."

The IARU was founded in 1925. It is a federation of national Amateur Radio organizations, representing Amateur Radio in 126 countries. The ARRL serves as IARU International Secretariat. —*ARRL Letter* □

## Product merger

The Pohorences, Robert, N8RT, President; and Margaret, WB4LRQ, Vice President, of International Radio and Computers Inc., have successfully negotiated to be the exclusive distributor of Fox Tango crystal filters and all other Fox Tango products, which will complement their line of high performance 8 and 10 pole crystal filters with the Fox Tango brand name, expanding the MO.

Adding the famous Fox-Tango filter to their own well received filter will

enable them to offer one of the best high performance crystal filters in the world. With the purchase came back issues of the Yaesu Newsletters, the newly developed Warc Kit for the FT101/901 and various kits developed by Fox-Tango Corporation.

Peggy and Robert are grateful to the Lowens for their contributions to the Amateur Radio world and their 13 years of endeavor. Through their experience and inventiveness, Fox-Tango will live on. □

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# HAMFESTS



## Colorado

A swapfest sponsored by the PIKES PEAK RADIO AMATEUR ASSOCIATION will be held May 19 in Colorado Springs. There is no entry fee.

ICOM, AES and other vendors are attending. The site, Rustic Hills Mall, is wheelchair accessible.

Tables are \$10 in advance, \$12 at the door. For information contact WB7THT at 719/599-7665, or write P.O. Box 16521, Colorado Springs, CO 80935. □

## Illinois

The SIX METER CLUB OF CHICAGO INC. is sponsoring its 33rd annual hamfest on Sunday, June 10, at Santa Fe Park in Willow Springs. Advance registration is \$3; at the gate \$4. Advance tickets may be obtained from Mike Corbett, K9ENZ, 606 S. Fenton Ave., Romeoville, IL 60441; or any club member.

Featured will be a large swapper's row; prizes, first being a Zenith color TV and second an IC02AT or Bearcat 210XW; displays in the pavillion, refreshments and many other goodies.

Picnic grounds are on the site, where there is plenty of parking space. Overnight camping is not permitted.

Gates will open at 6 a.m. Talk-in on K9ONA 146.52 or K9ONA/R 37-97. □

The STARVED ROCK RADIO CLUB hamfest will be held at the Bureau County Fairgrounds in Princeton on June 3. Doors will open at 6 a.m.

Advance tickets are \$3.50, before May 20th, and \$4 at the gate. Eight foot tables indoors are \$10 each. Camping and outdoor flea market area is free.

A food stand will be operated by the Bureau County 4-H Inc., providing breakfast, lunch, snacks and refreshments. Talk-in is on 146.355/955 or 147.72/12.

For more information contact Pete Jacobson, AA9R, 19 Briarcliff Dr., Spring Valley, IL 61362-1001; 815/664-5580. □

## Iowa

The CLINTON AMATEUR RADIO CLUB will hold "Hamfest 90" on Saturday, May 12, at the Iowa National Guard Armory in Clinton. The gate opens at 8 a.m.

Tickets are \$3 in advance and \$4 at the gate. Tables are \$5.

VE testing will be offered on site. There will be a limited outside area for trunk sales.

Talk-in on the 145.43 repeater.

For additional information, advance tickets or table reservations, contact Darryl Petersen, KD0PY, R.R.#1 Box 84, Bryant, IA 52727; 319/682-7359. □

The 3900 CLUB and the SOOLAND AMATEUR RADIO ASSOCIATION will once again sponsor a Hamboree, combined this year with the Iowa State Convention. It will be held May 11 and 12 at the Marin Inn in South Sioux City, NE. The convention is ARRL approved.

Admission tickets are \$6 and the Saturday night banquet is \$11. A get-together dinner will be held Friday night, with professional entertainment both nights. Fifteen seminars will be featured, including such things as complete packet coverage from the entrance level to the advanced, an FCC program, nine band dipole discussion, the story of the flight 232 disaster in Sioux City, exams, an ARRL Forum, QCWA luncheon, early radio nostalgia, MARS, cellular telephones, UHF/VHF, sessions for beginners and advanced DXers, story of and use for choke baluns and more. Nearly 100 flea market tables, exhibitors and exhibits will be there, all inside.

Ladies programs will be offered all day. There will also be a ladies bazaar and a coffee and sandwich bar.

Talk-in on 31/91.

For flea market information or reservations contact Al Smith, W0PEX, 3529 Doglas St., Sioux City, IA 51104; 712/258-7475. For Convention information and motel reservation information, contact W0FZO, Dick Pitner, 2931 Pierce St., Sioux City, IA 51104; 712/258-1520. □

## Michigan

The WEXAUKEE AMATEUR RADIO ASSOCIATION is sponsoring a hamfest from 8:30 a.m. to 2:30 p.m. May 19 at the Cadillac

Middle School in Cadillac. Admission is \$3; tables are \$6.

Featured will be swap tables and food. Talk-in on the 146.38/98 repeater.

For information contact John Craddock, KX8Z, at 616/797-5491; or write: Wexaukee ARA, P.O. Box 163, Cadillac, MI 49601. □

The 13th annual Chelsea Swap 'n Shop, an ARRL approved hamfest sponsored by the CHELSEA AMATEUR RADIO CLUB INC., will be held June 3 at the Chelsea Fairgrounds.

Table space is \$8 per 8 ft. and there is a trunk sale at \$2 per space. Gates will open to sellers at 6 a.m.

Prizes will be given away hourly, the first prize being a 2M HT.

Plenty of parking will be available, as will special handicap parking. Admission requires a \$2.50 donation in advance; \$3 at the door. YLs, XYLs and children under 12 enter free. Ladies tables are welcome.

Breakfast will be available in the service center.

For more information send an SASE to Robert Schantz, 416 Wilkinson St., Chelsea, MI 48118; or call 313/475-1795. □

## Minnesota

The PAUL BUNYAN AMATEUR RADIO CLUB of Bemidji, will hold its annual hamfest on Saturday, May 5, at the VFW Club from 8 a.m. to 3:30 p.m.

Featured will be dealers, exams and a flea market. Coffee and lunch will be served. Talk-in on 146.13/73.

For more information write Carol Johnson, KA0AJD, 1503 Jefferson Ave. SW, Bemidji, MN 56601; 218/751-7920. □

The ARROWHEAD RADIO AMATEUR CLUB of the Duluth/Superior area is sponsoring Swapfest '90, which will be held on Saturday, May 5, at the First United Methodist Church in Duluth from 10 a.m. to 3 p.m.

There will be hourly prize drawings during the day, in addition to the main door prize. Admission will be \$4, with four foot tables going for \$5. Talk-in will be held on 146.34/94 MHz.

For more information contact Duane Flynn, KB0LC, 4907 Peabody St., Duluth, MN 55801; 218/525-4580.

There will also be Amateur license exams held the same day at the Government Services Building in Duluth. Pre-registration or information for the exams can be directed to: John Crow, KA0SYN, 1365 Roland Rd., Cloquet, MN 55720; 218/879-5356. □

## New York

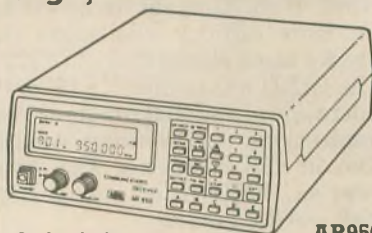
The Southern Tier Hamfest, sponsored by the SOUTHERN TIER AMATEUR RADIO CLUB, will take place in Owego on May 5 from 8 a.m. to 5 p.m. at the Marvin Park Fairgrounds. Features will include a banquet, VE testing, seminars, an ARRL forum, vendors exhibits, indoor and outdoor flea markets, refreshments and tailgating. Talk-in on 146.16/76 or 146.52/52.

Admission is \$4; tailgate will be \$2 extra. Tables are \$15, as are banquet tickets (banquet includes general admission.) Tickets for the banquet must be purchased in advance.

For information contact STARC, P.O. Box 7082, Endicott, NY 13760. □

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be held on June 3 at the New York Hall of Science parking lot-Flushing Meadow Park in Queens. Doors will open at 9 a.m. to 3 p.m. Set up will begin after 7:30 a.m.

Featured will be an Amateur Radio exhibit station, VE exams at 10 a.m., a tune-up clinic and films. Required donations for buyers are \$3; sellers \$5 per space.

Talk-in on 144.300 simplex link, 223.600 repeat and 445.225 repeat.

For further information call (at night) Steve Greenbaum, WB2KDG, at 718/898-5599; or Phil Kubert, N2YHE at 212/777-8648. □

## North Carolina

The DURHAM FM ASSOCIATION will hold its 16th annual "DUR-HAM-FEST" on Saturday, May 26. This ARRL approved hamfest will be located under the south parking deck of the South Square Mall shopping center in Durham, rain or shine.

The dealer, flea market, license exams and forum meeting rooms are wheelchair accessible. Limited AC power will be available for dealer requirements and equipment testing.

Talk-in will be on the W4WTX/ 147.825/225 repeater.

Advance tickets are \$4 (\$5 at the door) and may be obtained from R.P. Buehlmann, N4IQA, 1314 Chaney Rd., Raleigh, NC 27606. Please include an SASE with your ticket order or else tickets will be held until the hamfest.

Dealer inquiries for tables (\$6/table), reserved space and advance tickets may be directed to E.R. Lappi, WD4LOO, 203 Lynn Dr., Carrboro, NC 27510. Day phone: 919/541-7688, evenings prior to 9:15 p.m. 919/942-4076.

General hamfest information may be obtained by contacting Sid Edwards, W4QWM, 1700 High St., Durham, NC 27712.

FCC exams will be given by VECs and information is available from Pete Goolsby, KY4Y, 120 Radcliff Circle, Durham, NC 27713. □

## Ohio

The ATHENS COUNTY AMATEUR RADIO ASSOCIATION will hold its 11th annual hamfest on Sunday, May 13. The event — featuring a large flea market, door prizes and good food — will run from 8 a.m. to 3 p.m. at the City Recreation Center in Athens.

Admission is \$4 a person, but spouses of Amateurs will be allowed in free.

Free paved outdoor flea market space adjacent to the building for tailgaters and those bringing their own tables can be claimed the day of the event. Indoor space is only available by advanced registration. If interested contact John Biddle, WD8JLM, 80 Wonder Hills Dr., Athens, OH 45701; 614/594-8901.

Talk-in on the club repeater at 145.15/55 MHz.

For general information write to Carl J. Denbow, KA8JXG, 63 Morris Ave., Athens, OH 45701. □

## Pennsylvania

The WARMINSTER AMATEUR RADIO CLUB will sponsor its 16th annual hamfest on Sunday, May 20, at the Middletown Grange Fair Grounds in Wrightstown. The event will open at 7 a.m., with vendors being admitted at 6 a.m.

Admission is \$4 per person (XYLs and children enter free).

There are approximately 80 indoor spaces and unlimited outdoor spaces, with plenty of

free parking. Food and drink will be available.

Talk-in on the 147.69/09, 223.76/222.16 or 52.04/53.04 repeater or 146.52 simplex.

For additional information and vendor pre-registration contact Bill Cusick, W3GJC, at 215/441-8048. □

The 36th annual Breeze Shooters hamfest will be at the Butler County Farm Show grounds in Butler on Sunday, June 3, from 8 a.m. to 4 p.m. Admission is \$1 at the gate.

There will be a large free tailgate flea market and large parking area available, with plenty of indoor space for tables, which are \$10 each.

Features will include dealers, both Amateur and computer; refreshments; RV facilities; designated handicapped parking; fly-in at Butler ROE Airport and more.

Directions and talk-in will be on 147.96/36. Check-in on 146.52.

For more information contact: H. Rey Whanger, R.D. 2, Box 8, Cheswick, PA 15024; 412/828-9383. □

## Rhode Island

The RI AMATEUR FM REPEATER SERVICE INC., which operates the 146.16/76, 146.34/94 and 222.16/223.76 repeaters, will hold their annual Spring flea market and auction on Saturday, May 19, at the VFW Post 6342 in Forestdale.

The flea market opens at 9 a.m. and spaces are \$5 each. Some spaces under the pavillion are available on a first-come-first served basis.

The auction begins at noon, continuing to about 5 p.m. Admission is free. Food and beverages are available.

Talk-in on 16/76 and 52 simplex. For further information contact Rick Fairweather, K1KYI, Box 591, Harrisville, RI 02830; call 401/568-0566, from 7 to 8 p.m.

## South Carolina

The BLUE RIDGE AMATEUR RADIO SOCIETY is sponsoring a hamfest and electronic flea market on May 5 and 6 (the 5th from 8 a.m. to 5 p.m.; the 6th from 8 a.m. to 3 p.m.) at the American Legion Fairgrounds in Greenville. Featured will be Amateur Radio license exams (walk-in), an indoor/outdoor electronic and computer flea market, food, free parking, camping and prizes.

There is 25,000 square feet available for indoor dealer displays. Early dealer flea market setups can be arranged with advance registration.

Advance admission to the event is \$4. Tickets bought at the gate are \$5.

For advance tickets or additional information, please send an SASE to: Blue Ridge ARS, P.O. Box 6751, Greenville, SC 29606. □

## Tennessee

The 24th Annual Knoxville Hamfest and Computer Fair, sponsored by the RADIO AMATEUR CLUB OF KNOXVILLE, will be



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held from 8 a.m. until 5 p.m. June 2, at the Knoxville Convention Center at the World's Fair Park in downtown Knoxville. Admission is \$5 per person.

An ARRL approved event, the hamfest features a new site with an all indoor air conditioned exhibition hall and flea market. Vendors will offer Amateur Radio equipment and electronics parts, both new and used, as well as computer hardware and software. Crafts and home products will also be featured.

Food will be available on-site and nearby restaurants, shops, and lodging are abundant. Garage parking and a trailer compound are available. Easy dealer loading and unloading features traditional RACK assistance.

Top prizes consist of an all-Icom line-up, which includes an IC-735 with power supply. Talk-in will be on W4BBB 147.30+, 145.37-, and 224.500. The program offers Amateur license examinations and forums on electronic and communications topics, including a featured appearance by educator Joe Fairclough, WB2JKJ.

Dealer and flea market tables will be \$11 and include two chairs. For table reservations contact Frank Ambrister, N4OQJ, P.O. Box 9605, Knoxville, TN 37940; 615/933-2539. For license exam reservations, contact Ray Adams, N4BAQ, 4325 Felty Dr., Knoxville, TN 37918; 615/687-5410. □

## Washington

The YAKIMA AMATEUR RADIO CLUB, W7AQ, is celebrating its 60th anniversary and holding its hamfest on May 19 and 20 at the Queen Gym in Yakima. Hours Saturday are from 9 a.m. to 4 p.m. and Sunday from 9 a.m. to 1 p.m.

As a special feature of the hamfest, the club will be hosting six visiting Soviet Amateur Radio operators. A swap 'n shop, exhibits, VE testing, a banquet and program (at which Eugene Kostromin, UA4RZ, will be the guest speaker) and a consignment table will also be part of the festivities. Talk-in on 146.06/66.

Advance admission is \$5; \$6 at the door. Tables are \$7 each.

For more information contact: Yakima ARC, W7AQ, P.O. Box 9211, Yakima, WA 98909; or Mary Wildman, KB7AMF, at 509/248-5007. □

## West Virginia

The 12th Annual TRIPLE STATES RAC Wheeling Hamfest/Computer Fair will be held Sunday, May 20, at Wheeling Park in Wheeling from 8 a.m. to 3 p.m.

Women and children 16 and under enter free. Admission is \$2 in advance, \$3 at the door.

Refreshments, two restaurants, city and park entertainment areas will be available.

For information contact TSRAC, Box 240, RD 1, Adena OH 43901; 614/546-3930. □

The JACKSON COUNTY AMATEUR RADIO CLUB's 12th annual hamfest will be held at the Ripley Middle School in Ripley on Saturday, May 5, from 9 a.m. to 4 p.m. Included will be a flea market, prizes, VE exams and refreshments. Admission is \$4.

Talk-in on 146.07/67.

For more information contact Bob DeHart, KF8AR, Rt. 3, Box 229, Ripley, WV 25271; 304/372-8566 in the evenings. □

## Wisconsin

The OZAUKEE RADIO CLUB will sponsor its 12th annual Cedarburg Swapfest from 8 a.m. to 1 p.m. May 5 at Circle B Recreation Center in Cedarburg. Admission is \$2 in advance; \$3 at door.

Four foot tables are \$3. Seller's setup is at 7 a.m.

Food will be available. License exams start at 9 a.m.

Talk-in on 146.37/97, 224.180/222.580 and 146.52.

For admission tickets, table reservations, maps or information, send a business size SASE to ORC Swap, N5415 Crystal Springs Ct., Fredonia, WI, 53021; 414/692-2329. □

## Dedicated ham

Armas Valste, OH2NB, of Helsinki, Finland, is a real sport. As an active athlete in the high jump and shot put, he was a member of the international



OH2NB's tower from the ground up (located in Portugal)

Finnish team from 1925 to 1931. He was a member of the Olympic team in Amsterdam in 1928 and, although unable to participate in the decathlon, his usual event, due to a sore Achilles tendon, Armas still managed to place 5th in the shot put.

On the air since 1923, 83-year-old Ar-

The MANCORAD RADIO CLUB is sponsoring a hamfest on May 12 from 8 a.m. to 5 p.m. (vendors at 7 a.m.) at the County Expo Center in Manitowoc.

Featured will be a flea market, Amateur and computer equipment, VE exams (all classes) and refreshments. Camping will be available via the Expo Center. Call 414/683-4378.

Talk-in on 147.03/63 or 146.01/61.

Admission will be \$2 in advance; \$3 at the door. Eight foot tables are \$3; \$5 with electrical outlet.

For information send a SASE to Mancorad RC, P.O. Box 204, Manitowoc, WI 54221-0204; or during the day call Red at 414/684-9097, or at night call Lou at 414/682-2557. □

mas is still quite active. He spends eight months annually each winter in Albufiera, Portugal, as CT1BCM, and four months in the summer at home in Finland.

OH2NB is a well-known CW operator, with 363 countries to his credit. A couple of years back Armas attended the Northern California DX Foundation meeting in Palo Alto, CA, and a meeting of the Sonoma County Radio Club in Santa Rosa. He took a Yaesu 767GX back to Portugal with him.



The picture on Armas' QSL card illustrates his station circa 1923.

In a ham career spanning over half a century, Armas has garnered several Amateur distinctions: President of SRAL (The Finnish Amateur Radio Association) from 1968 to 1971; ARRL DXCC Honor Roll; Honorary President of the OHDX Ring OH2AM; and honorary member of the OH2 Club.

Not just a one cart pony, OH2NB has remained involved in athletics throughout his life. He was a physical education teacher and head coach of the Finnish Athletic Association from 1935 to 1960 and general secretary of the same until 1969. He was also a member of the European Athletic Association until 1979, and remains a honorary member.

Do you think Armas' middle initial might be "D" (Dedication)? —*Information submitted by Bob Damon, N6PLQ*

.....

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## MARAC County Hunters CW Contest

The Mobile Amateur Radio Awards Club is sponsoring the 22nd annual County Hunters CW Contest from 0000Z Saturday, May 5, to 2400Z Sunday, May 6. Mobile, portable and fixed operation from every county in the United States is welcome and operation from less active counties is encouraged.

**Rules:** Fixed stations may only be worked once on each band. Mobiles and portables may be worked each time they change counties. Mobiles operating on a county line give and receive one QSO number, but each county is a separate multiplier. Mobiles and portables must identify by signing /M or /P after their call. To be eligible for an award, a station must not operate more than one transmitter at any one time.

**Exchange:** QSO Nr; category (Mobile or Portable only); Signal Report; county and state for United States, Province (Canada) or country for others.

Sample Mobile report: 123M 599 MODOC CA

**Scoring:** QSOs with fixed US/Canadian stations are worth one point; mobiles and portables are worth three points. US/Canadian contacts with DX stations are worth three points. Contacts with stations operating under "Net Control" are invalid. Final score equals total QSO points times the total number of US counties worked.

**Frequencies:** 3.575, 7.055, 14.060, 21.060 and 28.060. Fixed stations should CQ or QRZ above the suggested frequencies and mobiles or portables operate below them.

**Awards:** Certificates to winning stations as follows:

**F** — First Place Fixed in each state, province and county with 1,000 points or more

**P** — First Place Portable in each state operating from a county other than their normal location with a score of 1,000 points or more.

**M** — First Place Mobile in each state operating from three or more counties with a minimum of 10 QSOs from each county.

**MARAC Plaques** to the highest scoring: Mobile and portable station in the United States, North American fixed station and DX station scoring at last 50,000 total points.

Mobiles and portables who change states

should calculate their scores 1. for individual state certificates and 2. for total score for the overall plaque. Total overall score must not count a county as a multiplier more than once, regardless of the state from which it was worked.

Sample log and summary sheets are available for an SASE to the address below. A check list of counties is required for entries with 100 or more counties worked. Completed logs, summary sheets and county lists must be received by June 4. Send to: Jerry Burkhead, N6QA, 7525 Baltic St., San Diego, CA 92111 (Include a business size SASE for personal copy of contest results). □

## Nevada QSO Party

Sponsored by the Frontier Amateur Radio Society, the contest will take place from 0000Z May 5 to 0600Z May 6. Work stations once per band and mode.

**Exchange:** RS(T) and state/province/country (county for Nevada stations).

**Frequencies and modes:** 6 through 160M; CW, SSB, RTTY, SSTV and packet.

**Scoring:** One point per phone QSO and two points for QSOs on other modes. Multiply by the number of states/provinces/countries for Nevada, others multiply by the number of Nevada counties.

**Awards:** Certificates will be awarded to the top scorer in each state, province and DXCC country; one each for General and above and Novice/Tech.

Mail entries by June 1 to Jim Frye, NW7O, 4120 Oakhill Ave., Las Vegas, NV 89121. □



## AMSPEC-3

H.F. SPECTRUM DISPLAY RECEIVER FOR THE RADIO AMATEUR

Open a window on your Amateur radio operations with this computer accessory for the IBM-PC or Commodore C64/128 computers. The AMSPEC-3 displays up to a 500 kHz segment of a pre-programmed 160-10 meter Ham band or general coverage segment in the 1.8-30 MHz range on your computer screen. The broad-banded input allows connection to suitable antennas or, through an appropriate adapter, to the station transceiver for common antenna use. Use the AMSPEC-3 to enhance station operations such as finding holes in DX pile ups, looking for open frequencies during net operations and CQs, and checking for propagation on other frequencies.

### FEATURES AND SPECIFICATIONS:

- 1.8-30 MHz input range
- 70 db dynamic range (S9+25db)
- Modern up-conversion design with 2 IF's of 40 & 8 MHz
- 500 Hz filter for useable display width of 125-500 kHz
- Digital signal processing (DSP) for signal enhancement
- Moving pointer that can show station operating frequency
- Computer keyboard control of all functions including:
  - Band select
  - Signal processing mode select
  - Scale expansion
  - Pointer lock and scroll
- C64/128 model plugs into user port
- IBM-PC model plugs into parallel printer port and auto-installs for CGA, VGA, or EGA

Send SASE for additional details

Prices: \$209.00 for C64/128 model and \$279.00 for P.C. model. Power transformer \$10.00 additional. California residents add sales tax.

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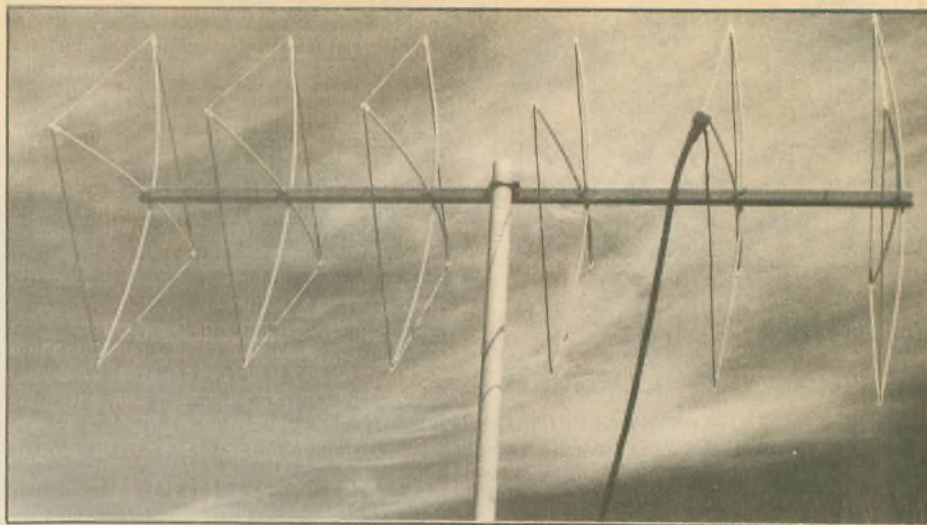
PASS Publishing, Box 570, Stony Brook, NY 11790





**NEW PRODUCTS**

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



## All-fiberglass quad antennas

Alabama Amateur Electronics, Birmingham, AL, has launched a complete line of Amateur service, light-weight all-fiberglass quad antennas for Amateur bands 10M through 70cm.

Utilizing advanced construction techniques and tool-free assemblies, AAE's Bandmaster Quads are available in an assortment of two to six element versions. Boom sizes range from 24 inches for 440 MHz, to 15 ft. for the 4-element 10M system, weighing 18 ounces to 39 pounds, respectively.

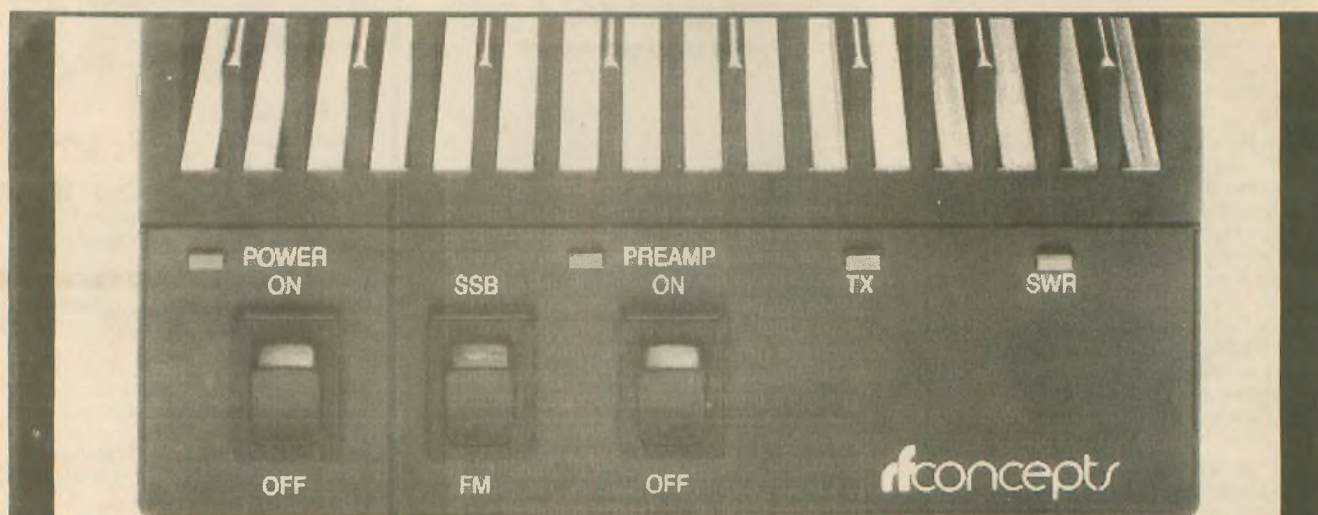
"A breakthrough in simplistic design, highly durable construction and extremely light weight polymers is a clear indication that our quads will set new standards in antenna design and performance," said engineer and co-founder, Jay Ross, AB4MX. "We have achieved higher gain and narrower beamwidth on all our models in an exceptionally light, tightly-designed package that can withstand the harshest elements and still significantly outperform traditional quads and multi-element yagis for much less cost."

Bandmaster Quads are not kits, reports AAE. They come fully assembled or ready to snap together, require no balun or matching network and are maintenance free. Complete assembly and installation instructions show

vertical and horizontal polarization. AAE offers a full replacement guarantee for one year on all lines.

Alabama Amateur Electronics, founded in 1989 by Bill Levey, WA4FAT, and AB4MX, first introduced 3, 4 and 6-element 2M quads for FM, packet radio and direction finding (fox hunting).

"Growing demand for our Bandmaster Quads led to new models," said Ross. "I fully expect that the quality of our construction, the ingenuity of our design and their exceptional light-weight and unequalled performance will make all Bandmaster Quads outstanding contributions to the Amateur service for many years to come." □



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 RFC 3-211, 2W in=110 out  
 RFC 3-112, 10W in=120 out  
 RFC 3-312, 30W in=120 out

### 440 MHz Amps

RFC 4-32, 3W in= 20 out  
 RFC 4-310, 30W in=100 out  
 RFC 4-110, 10W in=100 out

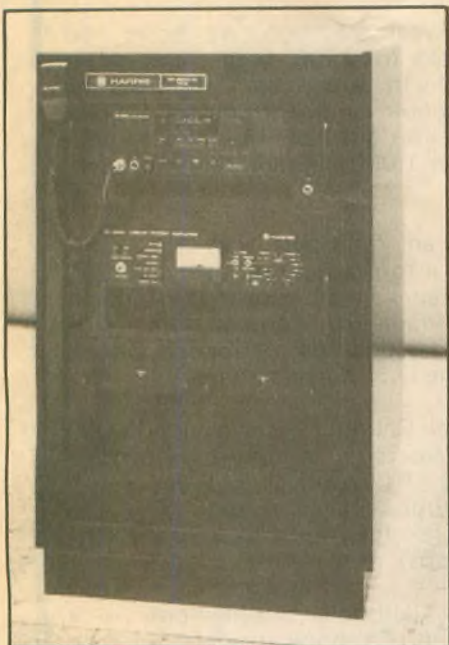


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 Service: 1202 E. 23rd St., Lawrence, KS 66044 - 913.842.4476



## Marine HF/SSB amplifier

The Harris Corporation Long Range Radio Division has created a 1kW power amplifier for the RF-3200 marine HF/SSB radio.



**Harris RF-3200-10 1kW HF SSB radio**

The new Harris RF-3230 is a solid-state linear power amplifier which provides one kilowatt output for the RF-3200. The RF-3230 uses advanced broadband techniques to provide 1kW PEP/average power over the 1.6 to 30 MHz range, without vacuum tubes or motor-driven band switching.

This is the latest enhancement to the RF-3200 series, which has earned a strong reputation throughout the marine industry as a result of its advanced operating features and reliability. The RF-3230 extends the transmitting range of the RF-3200 radio and opens a

large market for the radio in larger commercial vessels.

The RF-3230 uses solid-state MOS-FET technology to provide reliable performance while minimizing undesired intermodulation distortion and harmonics. Voltage optimization techniques are used to maximize power supply performance and amplifier efficiency. A high-low power control permits two power levels to be pre-set.

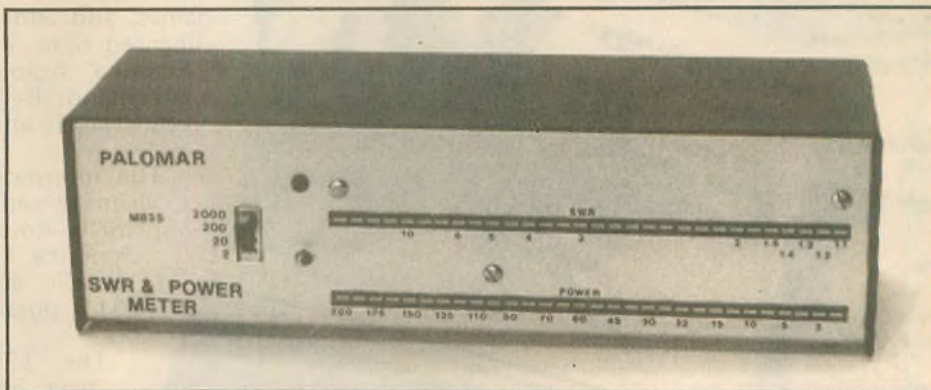
An important feature of the RF-3230 is its redundant, modular concept, which permits the unit to continue functioning at reduced power in the event of a malfunction in one of

the identical final amplifier or power supply modules. Built-in test procedures permit quick fault isolation and service through front-panel indicators for all critical functions.

Another unique advantage of the RF-3230 is that it tunes automatically in less than 50 milliseconds using a digital low pass filter tuning network.

Inquiries about the amplifier should be referred to Marketing Communications Manager, Long-Range Radio Division, Harris RF Communications, 1680 University Ave., Rochester, NY 14610; 716/244-5830; telex 240313 RF COM ROC; FAX 716/244-2917. □

## SWR and power meter



Palomar Engineers offers a deluxe SWR and Power Meter. Model M-835 uses Palomar's patented system that gives accurate readings continuously even while operating CW or SSB.

M-835 has four power ranges: 2, 20, 200 and 2000W. Both power and SWR are displayed continuously on six inch light bars with three

percent resolution. It operates from 1.8 to 30 MHz and requires 12-volt DC power.

The meter sells for \$189.95. An AC adapter is \$15.

A free catalog is available from Palomar Engineers, P.O. Box 455, Escondido, CA 92025; 619/747-3343. □

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### Jun's Electronics

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# VE exam schedules

As a service to our readers, **Worldradio** presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is two months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid July.

Worldradio, 2120 28th St., Sacramento, CA 95818.

Please mark the envelope "VE Exams."

List the location, and information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

p/r = pre-register

w/i = walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
<b>Arizona</b>				<b>Michigan</b>			
May 5	Tucson	K7OPX (602) 886-7217	w/i OK	May 26	Laurel	(301) 572-5124	ltd w/i
<b>Arkansas</b>				<b>Missouri</b>			
May 12	Russellville	Ben Hillis (501) 964-6885	w/i	May 5	Duluth	KA0SYN (218) 879-4010	
<b>California</b>				<b>Nebraska</b>			
May 5	Burbank	KE6AR (818) 349-0927	w/i OK	May 5	Antonia	WD0GDY (314) 671-4243	no w/i
May 12	Apple Valley	NF6I (619) 241-4732; K6BET (619) 244-6080	w/i OK	May 12	South Sioux City	K0AAR (712) 277-2636	p/r; ltd w/i
	Redding	NT6E (916) 243-REVA	w/i OK	<b>Nevada</b>			
	San Marcos	(619) 465-EXAM	p/r by 5/2	May 5	Las Vegas	(408) 255-9000	w/i
	San Pedro	N6DYZ (213) 325-2965	ltd w/i	May 12	Minden	W7QO (702) 265-3430	w/i
	Santa Barbara	KB5AH (805) 682-2665	w/i OK	<b>New Jersey</b>			
May 16	Eureka	KB6FIW (707) 442-9245	p/r pref by 5/14	May 9	Fort Monmouth	N2XJ (201) 905-3146 or (201) 370-8055	w/i
May 20	Porterville	KG6WG (209) 539-2429	w/i OK	May 12	Cranford Pennington	N2XJ (201) 635-7686 AA2F (609) 737-1723	p/r pref; w/i OK
May 26	Hawthorne	NO6I (714) 823-7158; WS6T (213) 600-4160	w/i OK	May 14	Hopatcong	WK2R or WS2D (201) 347-7723	w/i
	Eagle Rock	KB6RXE (818) 791-1779; AA6HE (213) 256-2904	w/i	May 17	Bellmawr	WA2VQG (609) 546-7710	no p/r
June 2	Riverside	(714) 780-2680	p/r 7 days prior; ltd w/i	May 19	Bayonne	WA2QYX (201) 451-9471	w/i OK
June 9	San Marcos	(619) 465-EXAM	p/r by 5/30	<b>New York</b>			
<b>Colorado</b>				May 18	Verona	KA2NIL (315) 363-4297	w/i
May 12	Pueblo	(719) 948-2291	p/r; w/i	<b>North Carolina</b>			
May 19	Westminster	N0HNR (303) 451-1231; (303) 278-4280	p/r or w/i	May 12	Yadkinville	N4UAN (919) 679-8954; N4AAD (919) 679-8059	p/r; ltd. w/i
<b>Connecticut</b>				<b>Ohio</b>			
May 12	Gales Ferry	KY1F (203) 536-0187	w/i	May 13	Independence	WT8A or WT8B (216) 526-3807	w/i
May 20	Milford	NB1M (203) 933-5125; WA1YQE (203) 874-1014	w/i	May 15	Canfield	WA8FCH (216) 788-0405	w/i OK
<b>Florida</b>				<b>Pennsylvania</b>			
May 19	W. Palm Beach	W4SS (407) 967-1477; KG4U (407) 582-7617	w/i	May 5	Erie	W3CG (814) 665-9124	w/i OK
<b>Georgia</b>				<b>South Carolina</b>			
May 27	Atlanta	KC4MJ (404) 449-3340	w/i	May 19	North Charleston	AA4IX (803) 873-9465	w/i
<b>Idaho</b>				<b>Tennessee</b>			
May 12	Boise	W7JMH (208) 343-9153		June 2	Memphis	W4MI (901) 357-8148	p/r by 5/31
<b>Illinois</b>				<b>Texas</b>			
May 12	Oak Forest	KA9HDN (312) 247-0650	w/i	May 5	Lubbock	KG5BL (806) 794a-8317	p/r; w/i
May 19	Bolingbrook	NW9K (815) 886-5135	w/i	May 12	Eddy	N5KZD (817) 859-5374	w/i
	Galesburg	KA9PCU (309) 342-5977	w/i		Midland	KT5G (915) 694-9450	
	Loves Park	W9SS (815) 877-6768	p/r; w/i	May 15	Sherman	AA5MF (214) 786-3847	w/i OK
May 20	Danville	KC9V (317) 793-3573; WA9Z (217) 442-8949		<b>Vermont</b>			
<b>Indiana</b>				May 19	Montpelier	WB1AJG (802) 433-6172	p/r pref; w/i OK
May 5	South Bend	NI9Y (219) 255-4455	w/i OK	<b>Virginia</b>			
May 19	Rushville	N6RS (317) 763-6090	w/i	May 5	Middletown	NC4B (703) 869-5241	p/r; ltd w/i
<b>Iowa</b>				<b>Wisconsin</b>			
May 20	Des Moines	NA0R (515) 964-0900 or (515) 967-3890	w/i	May 5	Racine	NW9P (414) 658-8390	w/i
<b>Maryland</b>							
May 5	College Park	NF3I (301) 963-4008	w/i				

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signs erected. The Amateur parking his vehicle must display the call sign on the dashboard of the vehicle. Parking tickets will be issued for those not obeying the rules. — *Triple States Radio Amateur Club, Adena, OH* □



# When will AMSAT-OSCAR-13 be in range?

## ROSS FORBES, WB6GFJ

Those just starting out in the world of OSCAR communications would like to know when they can hear a satellite. The following charts are produced to give you a rough idea as to when OSCAR-13 will be within range of your location. The three charts as printed are centered on the following geographic locations: East = New York City; Mid = St. Louis, MO; West = Reno, NV.

As you read the chart nearest your location,

keep in mind the following details — all dates and times are given in UTC. The date is printed on the left hand column and the UTC hour along the top.

A dash mark indicates the satellite is out of range and therefore not able to be heard. The letter "B" indicates OSCAR-13 is audible at that location and signals should be heard between 145.810 and 145.880 MHz (SSB and CW). A letter "O" indicates the satellite is audible, but the only signal you will hear is the

telemetry beacon on 145.810 MHz. The letter "L" indicates the satellite is audible but you will hear signals between 435.650 and 436.000 MHz (SSB and CW).

Remember, if a letter is printed on the chart, you should be able to hear OSCAR-13.

For more information about OSCAR, please send a SASE to either of the following: Project OSCAR, P.O. Box 1136, Los Altos, CA 94023-1136; AMSAT-NA, P.O. Box 27, Washington, D.C. 20044. □

Station East	HOUR - UTC
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
6/01	-----B-----L-----B-----
6/02	-----B-----L-----B-----
6/03	-----B-----L-----B-----
6/04	-----B-----L-----B-----
6/05	-----B-----L-----B-----
6/06	-----B-----L-----B-----
6/07	-----B-----L-----B-----
6/08	-----B-----L-----B-----
6/09	-----B-----L-----B-----
6/10	-----B-----L-----B-----
6/11	-----B-----L-----B-----
6/12	-----B-----L-----B-----
6/13	-----B-----L-----B-----
6/14	-----B-----L-----B-----
6/15	-----B-----L-----B-----
6/16	-----B-----L-----B-----
6/17	-----B-----L-----B-----
6/18	-----B-----L-----B-----
6/19	-----B-----L-----B-----
6/20	-----B-----L-----B-----
6/21	-----B-----L-----B-----
6/22	-----B-----L-----B-----
6/23	-----B-----L-----B-----
6/24	-----B-----L-----B-----
6/25	-----B-----L-----B-----
6/26	-----B-----L-----B-----
6/27	-----B-----L-----B-----
6/28	-----B-----L-----B-----
6/29	-----B-----L-----B-----
6/30	-----B-----L-----B-----

Station Mid	HOUR - UTC
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
6/01	-----B-----L-----B-----
6/02	-----B-----L-----B-----
6/03	-----B-----L-----B-----
6/04	-----B-----L-----B-----
6/05	-----B-----L-----B-----
6/06	-----B-----L-----B-----
6/07	-----B-----L-----B-----
6/08	-----B-----L-----B-----
6/09	-----B-----L-----B-----
6/10	-----B-----L-----B-----
6/11	-----B-----L-----B-----
6/12	-----B-----L-----B-----
6/13	-----B-----L-----B-----
6/14	-----B-----L-----B-----
6/15	-----B-----L-----B-----

Station Mid	HOUR - UTC
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
6/16	-----B-----L-----B-----
6/17	-----B-----L-----B-----
6/18	-----B-----L-----B-----
6/19	-----B-----L-----B-----
6/20	-----B-----L-----B-----
6/21	-----B-----L-----B-----
6/22	-----B-----L-----B-----
6/23	-----B-----L-----B-----
6/24	-----B-----L-----B-----
6/25	-----B-----L-----B-----
6/26	-----B-----L-----B-----
6/27	-----B-----L-----B-----
6/28	-----B-----L-----B-----
6/29	-----B-----L-----B-----
6/30	-----B-----L-----B-----

Station West	HOUR - LOCAL
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
6/01	-----B-----L-----B-----
6/02	-----B-----L-----B-----
6/03	-----B-----L-----B-----
6/04	-----B-----L-----B-----
6/05	-----B-----L-----B-----
6/06	-----B-----L-----B-----
6/07	-----B-----L-----B-----
6/08	-----B-----L-----B-----
6/09	-----B-----L-----B-----
6/10	-----B-----L-----B-----
6/11	-----B-----L-----B-----
6/12	-----B-----L-----B-----
6/13	-----B-----L-----B-----
6/14	-----B-----L-----B-----
6/15	-----B-----L-----B-----
6/16	-----B-----L-----B-----
6/17	-----B-----L-----B-----
6/18	-----B-----L-----B-----
6/19	-----B-----L-----B-----
6/20	-----B-----L-----B-----
6/21	-----B-----L-----B-----
6/22	-----B-----L-----B-----
6/23	-----B-----L-----B-----
6/24	-----B-----L-----B-----
6/25	-----B-----L-----B-----
6/26	-----B-----L-----B-----
6/27	-----B-----L-----B-----
6/28	-----B-----L-----B-----
6/29	-----B-----L-----B-----
6/30	-----B-----L-----B-----

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