Worldradio

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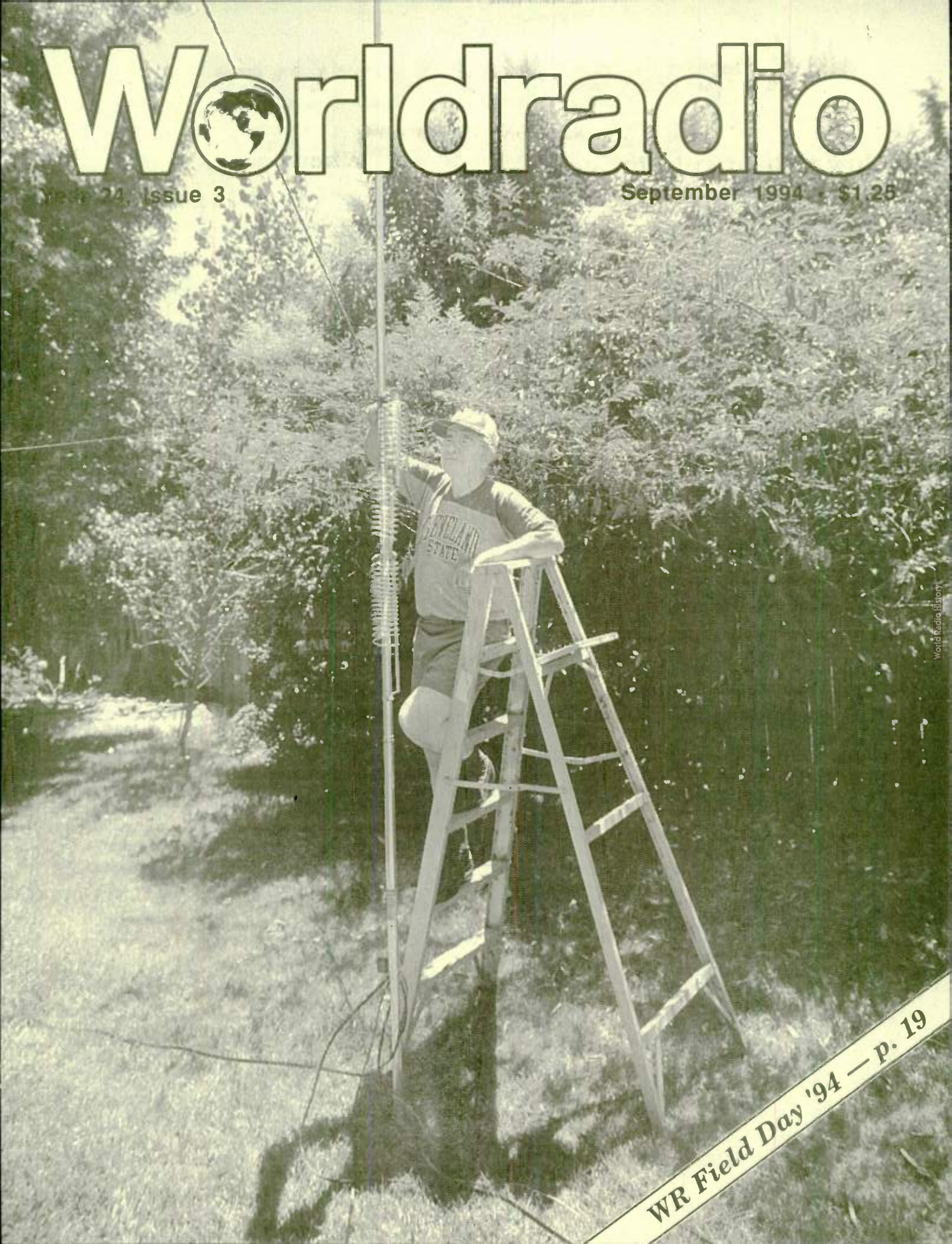

WR Field Day '94 — p. 19

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Words to avoid

STAN HARTER, KH6GBX

Amateur Radio operators have a tendency to use terms that are meaningless to others with whom they work (which leads to confusion) and even cases where Amateurs are not used *due* to that confusion. Accordingly, over the past two years a concerted effort to avoid certain words has paid off in many areas in those organizations cognizant of this aspect of interpersonal communication.

Astute Amateurs do NOT say to the sheriffs deputy at the roadblock "I'm a ham radio operator in the RACES, or the Vista Radio Club." Rather, they reply "I'm with the Vista County Emergency Management Agency reporting to my duty station."

Here, our State Auxiliary Communications Service participants make a conscious effort to avoid these terms: Amateur, ham, ARES, ARRL, DEC, EC, RACES, SEC, section or emergency coordinator, and volunteer. Instead, they say they work for the Governor's Office of Emergency Services. If needed they add that they work for the Telecommunications Branch. Rarely is it necessary to indicate in what capacity, but if needed, they are FCC licensed communications specialists, not Amateur Radio operators.

Recognition of how Amateurs deprecate themselves by their own terminology was emphasized by a California Department of Forestry official who pointedly requested that, "Never say you are just a volunteer, or an Amateur. Say you are a CDF Fire Information Officer, for that is what you have been trained for, and in fact are."

The words we use DO make a difference in how we are perceived by other people. A poor choice of words (no matter how highly YOU think of them) can unknowingly convey a concept or picture that is totally at odds with what you THINK you conveyed!

— excerpt from Stanly E. Harter's "From My Lookout"

California-Hawaii net meeting

BY ARNOLD SAMUELS, KH6COY

The annual get-together meeting of the California-Hawaii Net took place in Ocean Shores, Washington, on June 28 and 29th. Some 35 members and their spouses were in attendance; they had come from all over the west coast.

On the 28th, the group was hosted to a buffet/cocktail party at the QTH of Arnold Samuels, KH6COY. The notorious Washington state weather cooperated. On the 29th, the group dined at the Ocean Shores Golf Club restaurant. It was a well-fed group, indeed.

Three of the six net controllers were in attendance: Howard Downing, K6VDV, chief net controller; Stan Black, KF7BT; and Ralph Bilyeu, KB7DHQ. The three remaining net control stations, KH6DEH, Hank, AH6HN, Ron, and W6VSU, Sid, were unable to attend and were missed by all.

This net operates Monday through Friday on 14.340 MHz, at 1600 UTC. All Amateurs are welcome to join in. Its main purpose is to help boats plying the Pacific between the west coast and Honolulu, and to further Amateur Radio and international friendship. WR

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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.

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PUBLISHER'S MICROPHONE

Here are the latest to become immortalized in the Amateur Radio equivalent of Mount Rushmore. To be noted, as joining the ***Worldradio*** SuperBoosters (Lifetime Subscribers):

- Ed France, K1SVH, Windsor, CT
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- Frank Williams, N1OCK, Ridgecrest, CA
- James Lee, W6VAT, San Jose, CA
- Sovanna Nhuong, AA6HX, San Jose, CA
- James Walsh, W7LVN, Eugene, OR and
- Morikazu Gotoh, JI1DLZ, Nagareyama, Chiba, Japan, who also holds call sign AH6JJ!!

•

A common complaint of amateurs is that they don't receive any publicity for what they do. An answer for that might be "Seek and ye shall find."

Right here in Sacramento, California an annual internationally renowned musical event took place in which Amateur Radio played a role for the first time. No one called us. Now, before we hear the plaintive groaning of "***Worldradio*** already runs too much West Coast news" from our Eastern friends please allow me a moment to explain something.

First, we're happy (quite so) to run items from every corner of the country and the world. You do have to send it in.

Second, an article here is, we believe, more than just an article recounting that such and such happened somewhere. We hope that some of the articles inspire others to do something similar in their own community.

And, part of the lesson (if you desire publicity for the good of Amateur Radio) is to contact your local newspaper (daily and weeklies), local TV or community cable news programs. And, don't forget the city magazines that are looking for local features.

•

Craig Clark, NX1G, runs the Radio Bookstore (P.O. Box 209, Rindge, NH 03461; phone 603/899-6957), and carries many books which may be too esoteric for your local dealer to stock. For example, I just bought every issue of the *National Contest Journal*, 1973 to 1987 from Craig. It's fascinating reading, in many ways.

One contester was puzzled that he would run into so many on the air who would say, "What's a section?" And then, after he explained it, he would hear, "What's an ARRL?" Truly tragic.

After all the necessary studying, there are so many who leave Amateur Radio, never really finding out what it was all about. They never join a club or go to hamfests. They never find out that they are part of something bigger. Yes, in each ARRL Division there is an elected Director whose job really is to see that you get more out of Amateur Radio. In each Section there is an elected Section Manager whose job really is to assist amateurs in enjoying this avocation.

At the ARRL headquarters in Newington, CT, there are about 150 people who earn their living by assisting amateurs to find satisfying avenues. Whatever the subject, DX, contesting, building equipment, public service, emergency communication, RFI, there are ARRL staff who are expert and whose job is to prepare articles and also to answer questions posed by the membership.

Write a query to the League and you'll get an answer.

Sadly, too many amateurs live in a vacuum. They miss the true spirit of the great entity that is Amateur Radio. One element of that is the hamfest or convention. There, some pretty heavy hitters give up their weekend to share their expertise (which would cost a pretty penny if you tried to buy it) and don't get a dime for it. You can pick the brains of those with advanced degrees during or after the seminars.

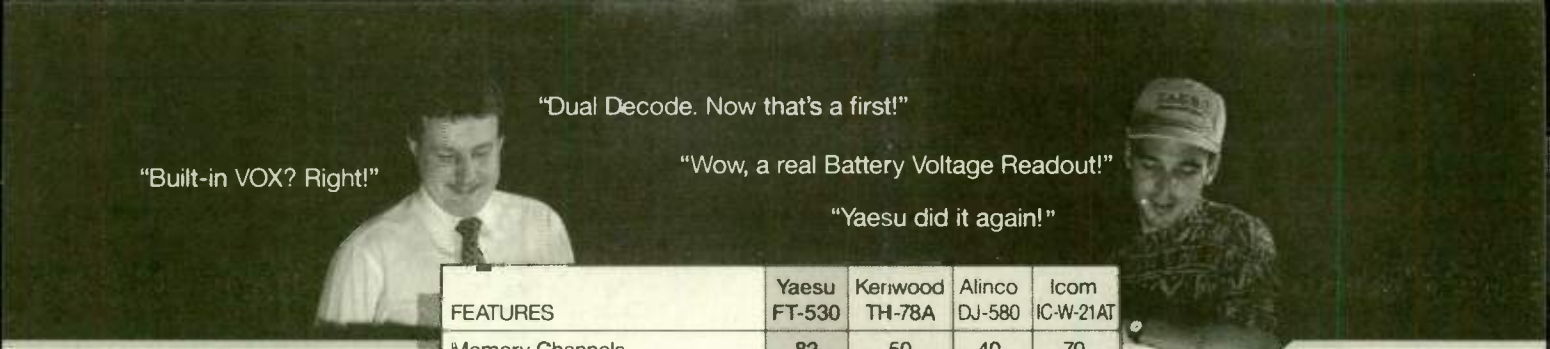
The clubs are great. Whatever their projects — repeaters, community events, Field Day, and on, they welcome all. But one does have to show up to get the benefits.

It's a sad day when a license is allowed to expire. Did the rest of us fail to include that person in the myriad of challenging activities that exist here? (How many clubs send invitations to the newly licensed in their area?) Is it our fault? Or was the individual just beyond hope anyway?

Someway, somehow, too many are not seeing all of this in the same way as was expressed in last month's ***Worldradio*** by Louis Bellock, N2JPR:

"Amateur Radio is more than a hobby to me, it is a fulfilling activity I truly love."

— Armond, N6WR



FEATURES	Yaesu FT-530	Kenwood TH-78A	Alinco DJ-580	Icom IC-W-21AT
Memory Channels	82	50	40	70
Slide-out Lithium Battery	YES	NO	NO	NO
Dual CTCSS Decoder	YES	NO	NO	NO
Battery Voltage Readout	YES	NO	NO	NO
Automatic CTCSS Tone Search	YES	NO	NO	NO
Transmit Battery Saver (Repeater & Simplex Operation)	YES	NO	NO	NO
Built-In Vox	YES	NO	NO	NO
One Touch Reverse Button	YES	NO	NO	NO
Dual In-Band Receive (V+V, U+U)	YES	YES	NO	YES
Programmable External Speaker Audio	YES	NO	NO	NO
Optional Digital Display Mic with "S" Meter	YES	NO	NO	NO
AM Aircraft Receive	YES	YES	YES	YES

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FT-530
Dual Band Handheld

- **Frequency Coverage:**
  2-Meter 130-174 MHz RX
  144-148 MHz TX
  70 cm 430-450 MHz RX/TX
- 4 TX Power leves:
  w/FNB-25: 2.0, 1.5, 1.0, 0.5W
  w/FNB-27: 5.0, 3.0, 1.5, 0.5W
- DTMF Paging and Coded Squelch
- AOT – Auto On-Timer with built-in clock and alarm functions
- IBS – Intelligent Band Select (provides automatic TX band select on scan stop)
- Backlit keypad and display with time delay
- Built-in cross-band repeat function
- APO – Automatic Power Off
- 5 Watts output w/ FNB-27 battery or 12 VDC
- 2 VFO s for each band
- **Accessories:**
  NC-42 1 Hour Desk Charger
  FNB-25 600 mAh Battery (2 watt)
  FNB-26 1000 mAh Battery (2 watt)
  FNB-27 600 mAh Battery (5 watt)
  FBA-12 6 AA Cell Holder
  CSC-56 Vinyl Case w/ FNB-25
  CSC-58 Vinyl Case w/ FNB-26/27
  E-DC-5B 12 VDC Adaptor
  YH-2 Headset for VOX
  MH-12A2B Speaker Mic
  MH-18A2B Lapel Speaker Mic
  MH-19A2B Mini Earpiece Mic
  MH-29A2B LCD Display Mic with Remote Functions
  MMB-54 Mobile Mounting Hanger

No other dual band handheld beats the FT-530 on features for performance and ease of use. With the largest backlit keypad available, 82 memories, exclusive Dual CTCSS Decode and AM Aircraft Receive, the FT-530 is simply the best value there is.

Compare for yourself, then forget "the rest." See your dealer for the best dual band handheld you can buy. The FT-530.

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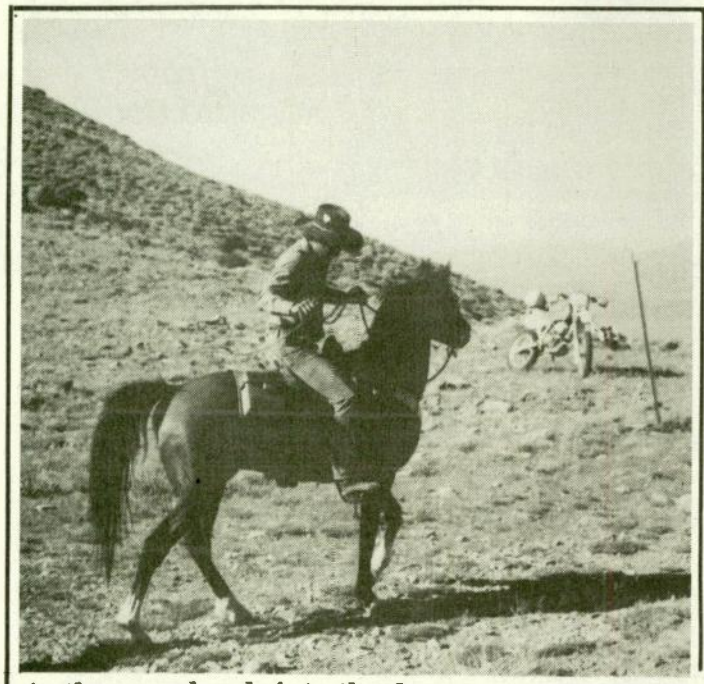
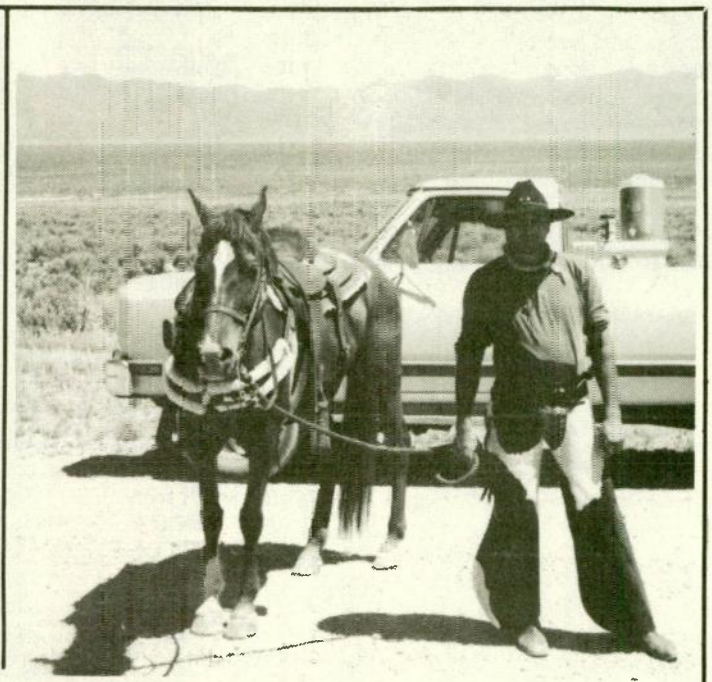
Performance without compromise.℠

Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.





As the pony heads into the desert, a pony rider at the next post awaits the arrival of the mail.

The Pony Express rides again

BY GEORGE S. LYLE, N7TNJ

I'm sitting on a rock. Not a very comfortable rock, either. To two sides, I can look out over vast Nevada desert valleys. Several flying insects are competing for landing slots on my head. I keep one ear tuned to the HT, and with the other listen through the desert wind for hoofbeats. That's how it feels to work a Pony Express communication site!

The Pony Express reride has brought me 700 miles from my home in Southern California to a remote mountain pass in eastern Nevada.

The Pony Express (or simply the "Pony" as it was popularly called at the time) was the fastest long-range communication system of its time. Letters were carried from St. Louis, Missouri to Sacramento, California in 10 days or less. Previously, mail was carried by ship 'round the horn, and took several months to arrive. Pony Express postage was $10.00 for a one-ounce letter. Letters were packed in a *mochila,* a leather vest with stiff padlocked pockets, that was placed over the saddle and held in place by the rider. Horses were changed every 10-20 miles and riders every 80 miles. In this manner, the mail moved day and night toward its destination. The Pony existed from April of 1860 until October 1861, when the transcontinental telegraph made it obsolete.

Each year, the National Pony Express Association (NPEA) reenacts the famous ride, with considerable attention to historic detail. Riders wear period costume, have their revolvers at the ready, and follow the original route as closely as possible. Amateur Radio operators assist the NPEA in coordinating the placement of horses and riders. Since the pace of the mail can vary by several hours, it is important to provide ride captains with up-to-date information concerning the location of the mail.

On June 8-10 of this year, 47 amateurs set up stations along the more than 400 miles of trail across Nevada. Bruce Pfeiffer, N7CPP, served as the project manager, assisted by Jim Murray, KI7GH. Twelve team chiefs led their radio teams in sectors along the route. In western Nevada, the bulk of communication was handled by 2M simplex and repeaters. In eastern Nevada, where repeater coverage is not complete, communication between sectors went via 40M and 80M HF.

Team Chief in the Roberts Creek (East) sector was my father, George V. Lyle, K7ZAU. This sector is located east of Eureka, NV, and about 40 miles north of Highway 50. The last 15 miles to the site is dirt road. We arrived on site early on the morning of June 10. The mail was due to enter the sector a bit before noon local time. We set up the HF station using a Windom antenna erected on a push-up fiberglass mast. A 2M vertical topped the mast for local communications.

With the Team Chief's HF station operational, I rode out west along the Pony Express Trail to check on trail conditions and on the other amateurs working the sector. Being modern, my mount was a Honda dirt bike. I carried a portable 2M station consisting of an Icom W2A HT, a small gel cell battery, and an AEA Hotrod antenna. I rode over rocky Overland Pass and down into the next valley. There I performed a communications check and moved on across the valley and into the next mountain range. This site was being handled by Roger and

Peggy Carl, W6SXX and N7MXC. I continued on the trail across the mountain range to the next site and met Mac MacConnell, KB6ZSZ. This was the western boundary of the sector, 30 miles from the Team Chief's site. I started to ride back and promptly got lost (the trail is very faint in this area!). I regained the trail and followed it back out to where W6SXX and N7MXC were waiting. A local Sheriff's Deputy had dropped by, who turned out to be a ham. He showed off his four-wheel drive patrol vehicle which was equipped with both VHF and HF ham rigs! After socializing for a while (and borrowing a new gel cell from Roger), I continued back across the valley and Overland Pass.

Traffic had been received that indicated that the mail was running nearly four hours late due to a rider getting lost, among other problems. This information was relayed to the sector's ride captain. Our sector's ride captain was having problems with his horses pulling up lame.

We coordinated with the ride captain of the next sector, who had a surplus of horses, and arranged for the mail to be passed to the next sector at the top of the pass, rather than down in the valley as originally planned. This required some fast footwork as horses and riders had to be dispatched to the west to meet the mail. My pre-riding of the sector came in handy as I knew that the replacement horse and rider would have to move quickly to arrive at the pass in time to pick up the mail. I returned to the pass to await the riders.

In the pass, I moved from one side to the other, hoping that the relief rider would show up before the mail. My hopes were answered when the relief arrived a scant 30 seconds before the very tired mail rider. The mail was transferred, and the fresh rider and horse set out. The rider had gone less than 50 feet when his horse suddenly shied to the left. Seems the horse had scared up a good-sized rattlesnake which slowly wriggled off into the bushes.

I passed the traffic concerning the transfer of the mail, then packed up my gear and made my way down the hill. The mail was passed again at the Team Chief's site and then traffic passed into the next sector.

Having completed our task, we socialized a bit with the ride captain and riders for our sector. They had set up a nice campsite in an idyllic spot complete with a babbling brook and a lamb roasted on a spit over the fire.

Due partially to the coordination of

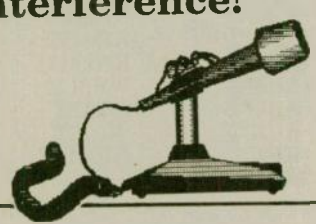
the amateurs, the mail was only one hour late by the time it passed into Utah. This was a net gain of three hours in the previous two sectors!

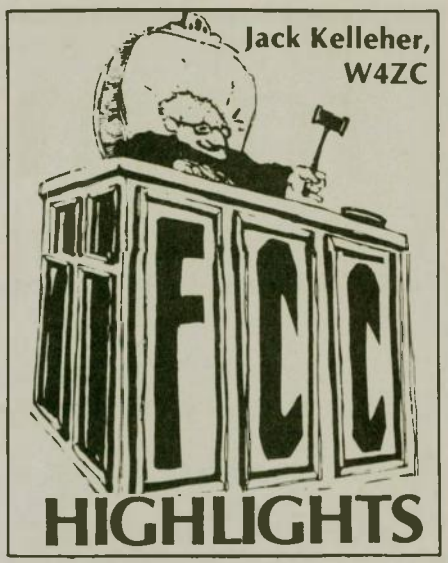
A good time was had by all, and a celebratory picnic was held on the 13th of June. This was the first time many of those working this event had a chance to actually see each other!

Your local Public Service events may not be as colorful as the Pony Express; perhaps they are more so! Get involved. Those skills acquired in events such as these can keep your community safer. — ed. WR

Above: Team Chief George V. Lyle, K7ZAU, at his operating location in Diamond Valley, while George S. Lyle, N7TNJ (left) is in position at Overland Pass. —*All photos by George S. Lyle, N7TNJ*

VOX: (noun)
An automated circuit designed to place an operator's feet in his or her mouth,with a minimum of user interference!





Reciprocal operating agreements

The 1994 issue of the *CQ 1994 Amateur Radio Almanac* lists 77 countries with which the United States has reciprocal licensing agreements. This means that U.S. amateurs can obtain an operating permit in a country with which the U.S. has a reciprocal agreement without taking a written examination and with a minimum of paperwork. Detailed requirements vary from country to country. Some allow same-day reciprocal licensing, while others require waiting periods which may be weeks or months.

There is an article on reciprocal licensing in *QST* for May 1993. It is noted therein that amateurs from many European countries can operate in other European countries if they have a special form of "CEPT license" issued by their own administration (CEPT is the French acronym for Conference of European Posts and Telecommunications which, among other things, coordinates telecommunications operations and plans throughout Europe). The CEPT arrangement is based on a two class license structure: Class 1 requires telegraphy skill; Class 2 does not.

The lead article in the *W5YI Report* for June 15, 1994 is titled "FCC considering Joint CEPT Agreement - Reciprocal operating privileges with European Community could result." And in its July 1st issue, John Johnston, Chief of FCC's Personal Radio Branch, is reported to have said, at the annual VEC convention, that the adoption of CEPT and CITEL international licensing could lead to a possible simplification of our own license structure.(CITEL is the acronym of the Inter-American Telecommunications Conference, a permanent body of the Organization of American States, OAS).

Mr. Johnston said that twenty-two European countries recognize each others' amateur license for temporary operation in their country. A similar situation could exist in certain North, Central and South American countries. The CITEL approach is an international Amateur Radio permit modeled after the international driver's permit. It is also based on a two-class system.

The CEPT agreement, with revisions made in 1992, makes it possible for non-CEPT countries to participate in the licensing system, and two non-European countries — Israel and New Zealand — have done so. It is our understanding, however, that non-CEPT countries who subscribe to the system do not thereby agree to reciprocity with each other.

Your columnist's information from an authoritative source indicates that while U.S. representatives are discussing the possibilitiese with their foreign counterparts, no decisions have been made. The benefits of such an agreeement are already available, in principle, in the reciprocal licensing/operating agreements which the U.S. has with all but seven of the countries involved. (see the *CQ Almanac* list referred to earlier).

HF digital communications

The FCC issued, on June 23, 1994, a Notice of Proposed Rule Making (Docket 94-59) proposing to amend the amateur service rules to authorize automatic control of stations transmitting a digital emission at HF. The deadline for comments is October 1, 1994. Reply comments are due November 1, 1994.

This is the latest and probably the final action on a question which was raised in 1986, when automatic control of amateur stations transmitting digital communications on VHF and higher frequency bands was authorized. At that time the Commission indicated an interest in also authorizing automatic control of amateur stations transmitting digital communications in the HF band. The Com-

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 the first of July 1994.

For more information about the call assignment in the Amateur Radio Service, see Section 97.17(f) of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17325-7245.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	AAØRE	KGØNM		KBØNHL
1	AA1JH	KD1VH	N1SCZ	KB1BIG
2	AA2SM	KF2VW	N2ZDJ	KB2QZR
3	AA3HY	KE3NH	N3SFO	KB3BCL
4	AD4SV	KR4TT		KE4MXM
5	AB5UN	KJ5YG		KC5HFC
6	AC6CT	KO6DF		KE6IFY
7	AB7CQ	KI7ZD		KC7DBL
8	AA8OZ	KG8JG		KB8TAT
9	AA9KY	KF9WC	N9XGH	KB9IYT
N. Mariana Is.	KHØD	AHØAS	KHØCS	WHØAAY
Guam	WH2E	AH2CU	KH2JW	WH2ANK
Midway Is.		AH4AB	KH2AG	WH4AAH
Hawaii		AH6NI	WH6UZ	WH6CRG
Amer. Samoa	AH8J	AH8AG	KH8BF	WH8ABB
Alaska		AL7PQ	WL7ST	WL7CHQ
Virgin Is.	WP2N	KP2CC	NP2HM	WP2AHU
Puerto Rico		KP4WW		WP4MPP

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Worldradio is a two-way communication. Send in Amateur Radio information and news. Share your knowledge with your fellow amateur and Worldradio reader. We are most interested in your comments and suggestions. We would appreciate being placed on the mailing lists of amateur club bulletins.

mission also noted, in that regard, that a feasibility study planned by the ARRL would be helpful in determining if any rule changes were necessary to prevent interference to and from other amateur service communication (in the event that automatic control was authorized at HF).

The ARRL study was conducted using actual transmission experiments, under Special Temporary Authority (STA) which was first granted in July, 1987, and was extended several times, with a final expiration date of February 3, 1993. On February 1, 1993, the ARRL requested that the FCC grant a final extension of the STA, and at the same time filed a petition for rule-making to establish permanent rules governing automatic control of MF and HF data operation in the amateur radio service (RM-8218). A separate petition (RM-8280) was filed in June, 1993, by the American Digital Society Inc. whose members are all amateur radio operators. The subject Notice of Proposed Rule Making is in response to these two petitions.

The Rule changes proposed by the Commission are:

1. Paragraphs (d) and (e) of Section 97.109, Station Control are revised to read as follows:

"(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this Part may be automatically controlled. Automatic control must cease upon notification by an EIC that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the EIC.

"(e) No station may be automatically controlled while transmitting third party communications, except a station transmitting a RTTY or data transmission. All messages that are retransmitted must originate at a station that is being locally or remotely controlled."

2. Subpart C of Part 97 is amended by adding new Section 97.221, to read as follows:

"97.221 Automatically controlled digital station.

"(a) This rule section does not apply to an auxiliary station, a beacon station, a repeater station, an earth station, a space station, or space telecommand station.

"(b) A station may be automatically controlled while transmitting RTTY or data emissions on the 6 meter or shorter wavelength bands, and on the 28.120 - 28.189 MHz, 24.925 - 24.930 MHz, 21.090 - 21.100 MHz, 18.105 - 18.110 MHz, 14.0950 - 14.0995 MHz, 14.1005 - 14.112 MHz, 10.140 - 10.150 MHz, 7.100 - 7.105 MHz, or 3.620 - 3.635 MHz segments.

"(c) A station may be automatically controlled while transmitting an RTTY or data emission on any other frequency authorized for such emission types provided that:

(1) The station is responding to interrogation by a station under local or remote control, and

(2) No transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz.

Packet message forwarding rules

Our July, ***(WR)*** 1994, column covered the amendment by the FCC of its Rules (Report and Order, Docket 93-85) to enable packet message forwarding systems to operate while retaining safeguards to prevent misuse. Inquiries to the FCC since this decision was released indicated that there was a misunderstanding about this rule change. The inquiries generally asked if the Commission's decision authorized automatic control of amateur stations transmitting RTTY or data emissions below 50 MHz.

On June 2, the Commission issued a news bulletin emphasizing that Section 97.109(d) limited automatic control to stations transmitting RTTY or digital emissions on amateur service frequencies above 50 MHz. (The subsequent action on RM-8218 and RM-8280, described in the item above, proposes to remove this limitation).

Still more on RFI to telephones

The "bullet proof" telephones mentioned in our previous coverage of the telephone RFI survey by FCC's Field Operations Bureau were the Western Electric/AT&T Desk Model available from Pro Distributors of Lubbock, Texas and the TPXL-D Desk Model available from TCE Laboratories Inc. of Canyon Lake, Texas. Both telephones were designed and built by companies owned by ham operators, and both firms initially got in the business to relieve amateurs from telephone RFI complaints.

License fees

The FCC issued a Report and Order on June 8th covering Regulatory and Application Fees. The Commission is exempting amateur radio operators from Regulatory Fees, but says further: "However, Congress included in the Schedule of Fees an annual regulatory fee covering van-

ity call signs . . . if our proposal to issue vanity call signs is adopted, we will assess a Regulatory Fee' ($70) 'in FY-1994 upon persons filing applications..."

"The first 10-year fee must be paid at the time a request for a vanity call sign is made. If a vanity call sign is not available or otherwise cannot be issued to the requestor, the regulatory fee will be refunded since amateurs are expressly exempt under the statute from regulatory fees, unless they have received their vanity call sign."

"The American Radio Relay League Inc., asserts that it has requested Congress to change the vanity call sign annual regulatory fee to a one time application fee. We, of course, will modify our fee schedule to be consistent with any congressional amendment of the fees."

Slow code

This is the title of an article by Bill Pasternak, WA6ITF, in *Westlink Report* for June 6, viz:

"Slow-code, the name given to an Amateur Radio Industry Association proposal to lower the General Class code speed requirement to 10 words per minute, has so far gained far more support than criticism in ham radio circles. Most of the packet radio postings on slow-code have praised the industry group's leadership in this area. Some even say that the proposed lowering of the code speed does not go anywhere far enough with five words per minute being suggested instead.

"Hams who favor the 5 wpm Morse code say that this will allow some 60-70,000 Technician Class operators, licensed prior to the Novice Enhancement action of the mid 1980s, to buy high frequency radios and immediately go on the air. This is because any Tech licensed prior to Novice Enhancement has already passed the General Class theory test and a 5 wpm code exam.

"A five word per minute General Class code speed would also stimulate the sagging ham radio support industry and, some say, the nation's econ-omy. One industry member has calculated that it could conceivably generate an instant $60-100-million in sales of transceivers, antennas and associated equipment. With the continually shrinking dollar-to-yen exchange ratio, slow-code, it is theorized, might even stimulate the creation of new ham radio manufacturing plants here in the United States and create thousands of new jobs.

"Slow-code is also getting support from users of various public bulletin boards. An unofficial poll being conducted on America Online by Newsline is so far five-to-one in favor of the Amateur Radio Industry Association's slow-code proposal.

"The Industry Association has not announced any firm date when it plans to file its slow-code rule making request before the FCC. And at press time, there has not been any reaction to this proposal from either the American Radio Relay League or the National Amateur Radio Association. Tnx Newsline." **WR**

CW Cycle

How can you tell a happy motorcyclist?

By the sound of his "fist" while going down the road.

Yes, it's true and at the SeaPac convention in Seaside, Oregon, Tom Wilson, KA7W, and John Shoemaker, KG7GD, showed just how it's done. No, not with a J-38 strapped to the leg but with a microswitch on the handlebars.

Tom said he has made between 400 and 500 QSOs on the road and even worked a "3" motorcycle-to-motorcycle mobile. He has plans to go PACTOR or AMTOR (in motion) with a laptop computer.

The HF antenna on the back of their motorcycles is one of their design and they built it to be RUGGED.

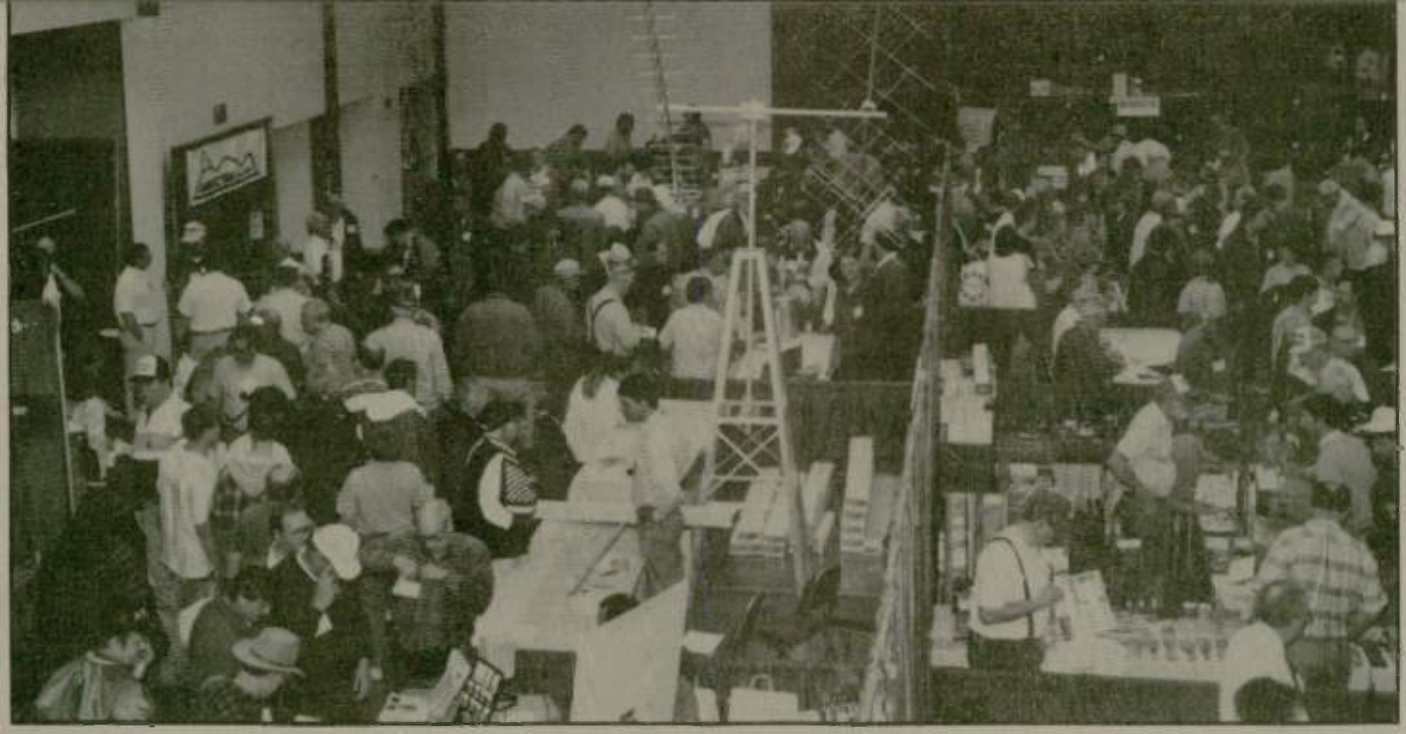
No, officer, I was only going 20. Words-per-minute, that is.

It's tuned band to band and within a band from the driver's seat by a motor driving the coil up or down and 66 fingers making contact. Previously, Tom (licensed in 1960) had been in the industrial antenna business.

In this case the /MM isn't Maritime Mobile but Motorcycle Mobile. And CW yet!

Their company, T.J. Antennas, in Irrigon, OR, now manufactures the antenna priced at $185 plus shipping costs of $7.50. A spec sheet can be obtained by calling 503/922-5109. **WR**

Experiment, that's the ham way.



Hams by the Seaside

Story and photos by Armond Noble, N6WR

It's not the biggest, by far, but those who attend a great number of hamfests say it's their favorite.

We're talking about "SeaPac" which was held in Seaside, Oregon, on 04-05 June.

Maybe it's that the Convention Center is such a fine facility. Everything is so close there is very little walking from exhibit hall to seminar rooms. The Flea Market is inside. Hotels are reasonably priced. And, maybe it is

Stan Harter, KH6GBX, Asst. Chief of Telecommunications, Office of Emergency Services, State of California, spoke on "Earthquakes, Forest Fires, Urban Firestorms and In-Between."

Ken Kopp, K0PP, delivered forums on antennas. And since he was top Phone station in his entire division in the last Sweepstakes contest, he deserves being listened to.

Roy Lewallen, W7EL, star of articles, books and computer programs.

Mary Lou Brown, NM7N, covered the spectrum of DX pileup do's and don'ts, repeaters and simplex, personal safety HF operating hints and more. Mary Lou is ARRL Northwest Division Vice Director. Her OM Bob, NM7M, writes the "Propagation" column for *Worldradio*.

The fingers of Anne Wright, N6BOP, were kept busy all weekend at the Hats for Hams booth.

At the *Worldradio* booth, world-famous Don Johnson, W6AAQ, autographs copies of his famous book, "*40+5 Years of HF Mobileering*."

The man from AmSoft tells the gathered, "Have I got a disk for you."

that in this area the people are just genuinely friendly!!!

Now here is something we have never seen at any other convention: "Kids, Krayons & Kartoons" — all day activities for children 5 to 12. (Younger children could be cared for at an additional cost.) That's being really considerate.

Friday afternoon, Jon Bloom, KE3Z, of the ARRL technical staff (who must be keeping the airlines in business all by himself) presented the six-hour "Digital Signal Processing for Amateur Radio" workshop.

On Saturday, noted knowledgeable person Roy Lewallen, W7EL, devoted an entire morning to antennas. There were also forums entitled:Trouble-shooting, Emergency Communications in Oregon, Packet Radio for Beginners, and an Introduction to Data Communications by Alan Chandler, Ph.D., K6RFK.

In the afternoon you could choose from Intermediate Packet BBS Usage, Advanced Packet, HF Data — CW to Clover, Construction, RFI and Interference, Direction Finding, ARRL, Programs for Youth and Newcomers to Amateur Radio. And if you still shine your shoes and do pushups, there may be a place for you in Navy-Marine Corps MARS.

Sunday morning, more forums on Antennas, Packet, Bipolar and FET Power Amplifiers. (Is my 6V6 obsolete?)

The previous evening there was a truly good meal at the banquet and the usual after-dinner entertainment.

We've already made our hotel reservations for next year! WR

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MFJ-784

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MFJ's *super* DSP filter automatically eliminates heterodynes, reduces noise and interference *simultaneously* on SSB, AM, CW, packet, AMTOR, PACTOR, RTTY, SSTV, WeFAX, FAX, weak signal VHF, EME, satellite -- nearly any mode you'll ever encounter.

You get MFJ's *tunable* FIR linear phase filters that minimize ringing, prevent data errors and have "brick wall" filter response with up to 60 dB attenuation just 75 Hz away.

Only MFJ gives you *tunable* DSP filters. You can tune each lowpass, highpass, notch and bandpass filters and *vary* bandwidth to pinpoint and eliminate interference. The last tunable filter setting is saved -- it's ready to use when you switch back to it again.

Only MFJ gives you 6 *factory pre-set* filters and 10 *programmable pre-set* filters that you can customize. Instantly remove QRM with a turn of a switch!

You get MFJ's *automatic notch filter* that searches for and eliminates *multiple* heterodynes.

You also get MFJ's advanced *adaptive noise reduction*. It silences background noise and QRN so much SSB signals sound like a local FM repeater.

The *automatic* notch filter and *adaptive* noise reduction can be used with *all* tunable and pre-set filters.

Automatic notch filter

MFJ's *automatic* notch filter searches for and eliminates *multiple* heterodynes in *all* filter modes -- it's so fast interfering CW and RTTY signals are also eliminated.

If you leave the *automatic* notch filter on during a phone contest, you'll never be worn down by the heterodynes of tuner-uppers.

Voice signals aren't degraded. The *narrow* automatic notch is silently working in the background destroying unwanted tones when they appear.

With up to 50 dB attenuation, you'll copy stations that would otherwise be masked by heterodynes. You'll miss fewer calls and be less exhausted when the contest is over.

When you need to *selectively* remove tones -- like when you're enjoying a CW ragchew and a couple of annoying CW stations appear nearby -- you can use the *two* MFJ *tunable* notch filters to completely knock them out.

Adaptive noise reduction

Pressing the "ON" button silences background noise. Some SSB signals sound like a local repeater! It makes noisy FM and AM signals readable and works with CW, Data and other signals.

It works in all filter modes and on all types of random noise including -- white noise, impulse noise, static, ignition noise, power line noise, hiss and atmospheric noise.

The LMS algorithm gives you up to 20 dB of noise reduction depending on the type of noise. You can adjust the amount of noise reduction to prevent distorting some signals.

Reducing random noise reduces fatigue and makes QSOs more fun -- especially, when the band is full of tiring noise.

Tunable highpass/lowpass filters

For Voice and Data nothing beats MFJ's exclusive *tunable* highpass/lowpass FIR linear phase "brick wall" filters.

You can *tune* the lower cutoff frequency 200 to 2200 HZ and the upper cutoff frequency 1600 to 3400 Hz.

Signals *just 75 Hz* away literally disappear -- they are reduced a *thousand* times, 60 dB!

Unlike other filters, speech clarity is not reduced by envelope distortion caused by unequal time delay.

By adjusting the highpass and lowpass filters you can create *custom* filters for Voice, Data and other modes.

When signals are weak, you can improve copy by removing high and low speech frequencies. They contain little information but are full of noise that reduce readability.

On crowded HF bands, overlapping SSB signals make copying difficult. You can improve copy by slicing off some overlap with razor sharp "brick wall" responses.

You can also highpass filter out hum, pulses, rasp and other irritating low frequency noise.

Tunable bandpass filters

Narrow band signals like CW and RTTY jump out of QRM when you switch in one of MFJ's three *tunable* FIR bandpass filters.

You can *tune* the center frequency from 300 to 3400 Hz. And *vary* the bandwidth from 50 Hz to 680 Hz -- from super tight CW filters to wide razor-sharp Data filters.

As you narrow the bandwidth, interfering signals just drop out because, just 60 Hz away, they're down by over 50 dB.

You can use *narrower* bandwidths to fight tough QRM because these linear phase filters don't distort signals with unequal time delays.

Even with the narrowest 50 Hz bandwidth, you'll never have a problem with ringing.

One position gives you *two* tunable filters you can use together on one signal. For example, on RTTY, tune one filter to mark, the other to space and set each bandwidth tight for an incredibly sharp RTTY filter.

16 *pre-set* filters -- use factory set or program your own

With a turn of a switch you can select from *sixteen* convenient *pre-set* filters. You can use them for SSB, AM, CW, packet, AMTOR, PACTOR, RTTY, SSTV, WeFAX, FAX or any other mode you can think of.

If you don't like our *pre-set* filters, you can define your own filter by programming bandpass center frequency and bandwidth, lowpass and highpass cutoffs. *An MFJ exclusive!*

Only MFJ gives you the best of both worlds -- *tunable* filters to eliminate nearly any QRM and fast convenient *pre-set* filters customized for any mode.

Plus more . . .

A push-button quickly bypasses your filter so you can hear the *entire* unfiltered signal and see if anyone is calling you.

Built-in two watt amplifier. Has volume control, input level control, speaker jack, headphone jack, accessory jack, PTT line and PTT sense and line level output. 9x2½x6 in.

It plugs between your transceiver or receiver and external speaker or headphones. Use 12 VDC or 110 VAC with MFJ-1315, $14.95.

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More reasons why more hams use MFJ-949's than any other antenna tuner in the world . . .

Full 1.8-30 MHz Operation

1000 volt tuning capacitors, extra heavy duty inductor switch, Teflon® insulating washers and proper L/C ratio gives you arc-free no worries operation with up to 300 watts from 1.8 to 30 MHz.

Lighted Cross-Needle Meter

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

The meter is illuminated for easy reading in dim light and has an ON/OFF lamp switch. The meter lamp uses 12 VDC or 110 VAC. A *free* AC adapter is included at no extra cost.

Tunes *any* Antenna

The MFJ-949E tunes out SWR on dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave receiving antennas . . . nearly anything!

Use coax feed, random wire or balanced lines. Has oversized *heavy duty* 4:1 balun.

Super Antenna Switch

MFJ's 8 position *super* antenna switch lets you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through your MFJ-949E or direct to your transceiver.

MFJ s Cross-Needle SWR/Wattmeter is always active for monitoring forward and reflected power and SWR.

QRM-Free PreTune™

MFJ's *QRM-Free PreTune*™ lets you pre-tune your MFJ-949E off-the-air into a built-in dummy load without causing QRM.

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

Full Size Dummy Load

The MFJ-949E has a *full size* non-inductive 50 ohm dummy load measuring 3/4 inch diameter by 5 inches. It *easily* handles 300 watts of abusive tune-up power.

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

Watchout for cheap midget size dummy loads that changes resistance as it heats up -- marginal ones could burn up your transceiver.

Custom Inductor Switch

The inductor switch is the most likely component to burn up in *any* antenna tuner.

The inductor switch in the MFJ-949E was *custom* designed to withstand the extremely high RF voltages and currents that are developed in your tuner -- it's not a flimsy *plastic* switch made for small signals and wired with *tiny* gauge wire.

Superior Cabinet

Each MFJ-949E cabinet is chemically treated and has a new tough scratch-proof *vinyl* cladding -- not paint that can scratch or chip off. You won't find a tougher, longer lasting finish anywhere.

Detailed logging scales and legends are *permanently* silk screened on a *real* aluminum front panel and back panel -- it's not merely a plastic decal or glued-on paper strip that can peel off.

Superior Materials . . . *Superior* Construction

Every MFJ-949E use Teflon® insulating washers, countersunk screws for meter bracket, wing-nut for ground post, fire-retardant epoxy glass PC board (*not* canvas based), heavy .063 inch thick aluminum chassis (*not* flimsy .050 inch), heavy gauge wire used throughout (*not* small gauge), custom cabinet (*not* multi-purpose with unused holes and internal protruding screws).

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Every MFJ-949E is backed by MFJ's famous one year *No Matter What*™ unconditional guarantee. That means we will repair or replace your MFJ-949E (at our option) *no matter what* for a full year.

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But what do you do if it burns up and they say, "Sorry, your *limited* warranty does not cover that?"

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Activity on the Magic Band

BY KEN NEUBECK, WB2AMU

There has been a tendency by some hams to stop listening to six Meters when the sunspot count declines and F-layer activity goes away on this band. However, as the following report will show, this would be a big mistake because of the improved sporadic-E conditions during this point in the sunspot cycle, in between the peak and the minimum.

This past summer of 1994 saw an increase in the number of sporadic-E openings and also in activity on 6M from the previous year. This report focuses on sporadic-E activity from April up to June 21st, the summer solstice which is the traditional dividing point for the summer sporadic-E season. The summer saw a number of DX expeditions and grid square expeditions that made things exciting for the users of the "magic band." In addition, there was a significant number of double hop E openings during this time. Double-hop or triple-hop sporadic-E openings can really make up the loss of F-layer skip and in some ways the reflection off the cloud formations in the E-layer is more efficient than F-layer propagation. This latter fact can explain why low power seems to do well many times during these types of openings.

The band seemed to increase in activity from not only newcomers from the Technician Class ranks, but also from higher class licensees who have picked up new HF rigs that come with six Meters. The HF bands have been fading recently with the exception of sporadic-E showing up on 10 Meters as well as 6 Meters.

There were a number of spring openings that were seen at my QTH in Long Island, NY (grid square FN30), with the first big opening of the season occurring on the last day of April. That opening was to the midwest and to the south and we worked a number of hams attending the Hamvention. Prior to that big opening, there was a big aurora opening between here and the north during the late hours of April 16th. Things were really looking promising for the "magic band" at our QTH for the summer season.

My friend Tom, KC4SUS, from Miami, Florida, saw almost a dozen days of sporadic-E openings during the month of April! This was one of the best Aprils that Tom had seen in quite a while. The month before he had some transequatorial openings into Argentina on one afternoon, but the large amount of sporadic-E openings in April seemed to top that. Tom reports that on several occasions, he could hear the YV4AB beacon coming in at 599 signal strength. One time, he even called me up so that I could hear the beacon in the background. In Florida, it looked good for six Meters also.

The month of May saw about a dozen sporadic-E openings here with the biggest one occurring on Friday the 13th. On that day it was wall-to-wall signals to the southern states of Alabama, North Carolina and Virginia both SSB and FM. Later in the day, we completed a double-hop QSO to New Mexico with KN5S, and immediately after that we worked VE1PZ, in Nova Scotia. This indicated the presence of three sporadic-E clouds over the United States at that moment. There were additional openings through the end of the month with periods of several days during which sporadic-E openings were heard.

June in North America is traditionally the best month for sporadic-E activity and bands such as 10 and 6 Meters become the sporadic-E bands. June of 1994 started slowly with a few short openings on the days immediately preceding the ARRL VHF contest on June 4th and 5th. The contest was moved from its traditional place on the second weekend in June, to the first weekend in June, in order to accommodate hams wishing to attend the ARRL National Convention in Texas on the weekend of June 12th and 13th. Unfortunately, it might have been wrong to meddle with the natural order of things, as band conditions did not comply with this change and were dismal during the VHF contest for much of the country, particularly the east coast.

During the June contest, everybody knows that there are many people listening, particularly in the early hours of the contest, but noise conditions were very high without a sporadic-E opening in sight. Some meteor shower activity was present and short bursts of callsigns were heard from Canada and the midwest.

I was operating portable with 150 watts into a two element Yagi at 20 feet and was working mostly nearby states. Twenty minutes into the contest, one of these bursts was long enough for me to work AA9D in EN52. But the first three hours saw primarily ground wave QSOs in this area.

At the three hour mark a sporadic-E opening developed from here to the Caribbean/Florida area and we were able to work three stations in Cuba (COØFRC, CM2JG, CO2OJ), VP5/W6JKV from Grand Turks and Caicos and WB2QLP in Florida. And that was it for the rest of the contest in terms of sporadic-E openings for us on the east coast. I received a report from Bill, KJ6GR, that there was sporadic-E activity for the west coast and he was able to work as far east as Iowa. There were also reports of some openings in the Texas area but much of the country only saw ground wave activity during this contest and in general seemed like a January VHF contest in terms of conditions.

What made it difficult to accept about the VHF contest, was the phenomenal conditions that were seen on the following weekend everywhere on the North American continent. Action developed on June 8th and 9th with moderate sporadic-E openings between North and South. On June 10th, the whole 6 Meter band exploded.

I brought my portable beam setup with me so that I could operate during my lunch hour at my work QTH, with 60 watts out powered by my car battery, into a two element beam at 15 feet. I was working many of my friends in Florida and started listening on the DX calling frequency (50.110) where I heard and eventually worked Dave, ZF1DC, from Grand Cayman Island. Then I pulled in two Mexican stations, XE1ABA and XE1GRR, from the relatively rare grids of DL89 and DL80 respectively.

I wanted to stay out there in the parking lot for the rest of the afternoon, but did manage to sneak out during break time to work some Tennessee stations using my vertical. With the weekend approaching, I was hoping for continued good conditions.

Saturday, June 11th, started off slowly with some weak sporadic-E openings towards the south from this location. At 5:00 local time, I started to hear some terrific things on 6 Meters. I heard stations that I normally did not hear, as a shortened

skip was occurring. From here, we were hearing stations in West Virginia, Virginia, Delaware and Pennsylvania at high signal strength. I suspected that 2M would open also with this indication on 6 Meters and this was confirmed to me later on. I could not believe the number of new grid squares that I was working and hearing. The holes in my grid square map on six Meters were being filled in with this opening. What made it even nicer was that I was using my home QTH setup of only 10 watts out from my TS 670, and fed into an ordinary dipole! It seemed like the band was opened in several directions, mainly to the west and to the north. The crowning moment for me came at about 10:45 when I heard OX3LX from Greenland on CW! At that point, I wanted to retrieve my linear amplifier which was in my car's trunk and hook it up. However, patience prevailed and the second time I heard OX3LX, I was able to work him using the 10 watts, and received a 559 report!

I heard from a number of midwest stations that the west coast was open to them, and I even heard AA6TT from Colorado at one point. This may be as good as it gets on 6 and 2 Meters! What a shame that the VHF contest was not that weekend. Many records would have been broken.

Besides the DX that I have reported above, there were some other good things to work. There was a station operating on 6M from St. Paul Island (portable CY9) which gave many hams to the south a new country as well as a new grid. Many US stations were able to work other countries in the Caribbean and Central American region.

There was a 6M expedition to Jordan during June and an early report, which has yet to be confirmed, has it that a ham in North Carolina worked him. This is probably a three- or four-hop sporadic-E skip. It should not be too surprising that hams on 6M should see some three- or four-hop E skip as there have been some days where at least three or four clouds can be counted by simple mapping of stations heard and worked during any one time period. It is expected that there will be some openings this summer from the east coast to Europe. It can be seen that sporadic-E openings can fill the bill for DX with the absence of F-layer skip. I still can't get over working three new countries in two days!

Good conditions extended into Sunday for the whole day with the normal-type skip that we hear on a 6M sporadic-E opening. I worked my friend Tom, KC4SUS, who used 5 watts into a 7 element cubical quad while I used 2½ watts into a roof-mounted vertical. We carried on a ragchew for over 30 minutes without much fade. Band conditions continued up through midnight with openings towards the southeast and the midwest. The next day was similar to Sunday and low power contacts could be made because of the excellent reflections of the E-clouds.

These types of openings make it fun to operate 10 watts and achieve good results. It is particularly nice to run the low power and not have to worry as much about TVI and RFI problems. It is also unusual to see over five days of good and excellent openings for extended periods. Six Meter operators may start to develop a feeling of complacency and expect the band to be open on any given day!

The band finally seemed to die down by June 16th after eight consecutive days of openings. However, scattered sporadic-E activity would resume again on the 16th through the 20th. These openings were not as strong as the previous weekend as they were characterized by rapid fade. But skilled operators managed to pull in new grids on peak signals.

Among the new grids that were contacted was that of K4FHQ, Ken, who was operating from the rare grid EL79 in Florida and N1KTM, portable maritime mobile in grid squares off of the east coast of Florida. I worked the latter in grid FM00 after receiving a phone call from Ron, N2NBY, and it was like riding a wave with the combination of his low power and the fading band conditions. N1KTM operates from a freighter that makes regular runs off the east coast of the United States, and he activates many all water grids.

A number of New England stations got lucky when a double-hop opening occurred on June 19th and the Netherlands was worked. The number of days when openings occurred during the period of June 8th through June 20th was an incredible 13 out of 14 days.

There seems to be a general improvement in sporadic-E openings from last summer's results. What is the reason for this? Some hams who subscribe to the thunderstorm/sporadic-E correlation theory would say that the increased activity would be due to more thunderstorms this year. But there was more thunderstorm activity last year with the severe rainstorms in the midwest during the summer of 1993. On the other hand, it has generally been observed that sporadic-E activity has increased during average sunspot count years and this fact would imply a solar factor to the sporadic-E equation along with factors of temperature, wind shear and the resident metallic ions in the E-layer.

For more information on a possible solar factor, refer the article, "Sporadic-E and Aurora Propagation" in the March, 1993, issue of ***Worldradio*** or to Chapter 9 of the new book, *Six Meters, A Guide to the Magic Band*, by **Worldradio Books**.

This concludes our report covering the first part of the Six Meter summer season. A second report is planned for a future issue of ***Worldradio*** that will cover the period of June 21 through the month of August.

Ken, WB2AMU, has recently written a book on six Meters that is published by **Worldradio Books**. *The book is called,* Six Meters, A Guide to the Magic Band *and it provides a complete look on this incredible band. It costs $12 plus $2 shipping and handling (California residents, please add sales tax of $.98) and it can be ordered from:* **Worldradio Books**, *P.O. Box 189490, Sacramento, CA 95818.* **WR**

If you are involved in any emergency communications incident, send story and photos to *Worldradio*, 2120 28th St., Sacramento, CA 95818.

When the fox is black and white

BY RICK McCUSKER, N6UBJ

In September and October of 1993, the Sacramento (California) Police Department was experiencing interference on several of its frequencies.

The problem began with the theft of a probation officer's car. The car was recovered within hours, but the portable radio complete with a charger was missing. This radio was equipped with all of the Sacramento Police, Sacramento County Sheriff and various other law enforcement frequencies. Shortly after the theft, the Sacramento PD began having problems with interference on its frequencies.

There were never any malicious voices, just a carrier disrupting channels. The signal would also change channels. Often, these channel changes would occur when a major event such as a pursuit or robbery-in-progress was occurring.

For three weeks, the dispatchers would try changing channels and whenever the interference was heard, a warning was broadcast alerting the individual about violating FCC regulations and that fines and/or jail time would be the result of continued interference. None of the warnings had any effect on the interference.

The FCC was contacted, but they did not have anyone available to help with tracking down the violator. The City of Sacramento assigned one of the technicians in the communications division to try and find the jammer. After several sleepless nights, the technician asked for more help.

A call went out to the Sacramento Police Department's S.T.O.P. Amateur Radio detail, the Sacramento County Sheriff Department's S.H.A.R.P. Amateur Radio detail and to the Governors office of Emergency Services assistant director of telecommunications, Stan Harter, KH6GBX. A very select group of hams with VHF/UHF direction finding skills was contacted to assist, with the emphasis made on the need for secrecy. A meeting was scheduled at the City of Sacramento 911 dispatch center to plan the search.

At the meeting it was decided that the best way to find the jammer was with mobile and fixed direction finding equipment and to mainly operate at night, when the jamming was most frequent. During the meeting, the jamming started again, and we hit the road headed for our assigned areas. Shortly after arriving at our locations, the jamming stopped, and was not heard for the rest of the night.

The second day, the jamming began about 4 p.m. and was almost continuous. One ham sat in the back of the 911 center watching the LED lights indicating which receiver was picking up the signal, and alerting the rest of the team as to the area where the signal was. The only problem was that the signal was mobile! It moved several times to different areas of the city.

Around 9:30 p.m., our state-of-the-art DF mobile van, (owned by the State Police) started to get strong indications of the signal being nearby.

". . .channel changes would occur when a major event such as a pursuit or robbery-in-progress was occurring."

The signal was tracked out of the city in a northeast direction, and then started moving back into the city. I was manning a station in the control tower of the airport in the south/central area of the city and was able to get two or three good bearings on the jammer. Our mobile unit was getting a good bearing indicating that the jammer was somewhere between the two of us, but the signal was still mobile. The signal started getting stronger at the airport, indicating it was moving in my direction. Jim Hutchings, N6OZH, the operator of the mobile unit was getting a good bearing on him also. As luck would have it, the signal became fixed, and our mobile unit started to close in. Jim obtained several good bearings, narrowing down the area to two square blocks of the area just south of downtown, an old and prestigious residential area.

The word was passed to the Sacramento PD, and the area was quickly sealed off. As the area was being closed, the signal stopped for several minutes, and we had thought that the jammer was monitoring. As Jim started cruising the area, the signal started again, and more bearings were obtained, narrowing the area to a single block of homes. The police officers started to move in and seal off that small area.

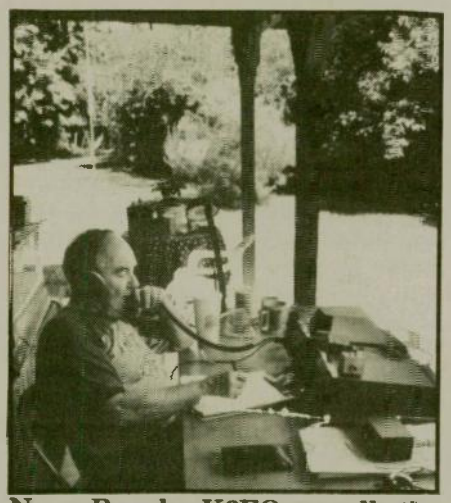
About this time, bearings indicated one particular house! But there was a problem. Parked in front of the house was a Sacramento Police Department patrol car. The officer assigned to that unit was at lunch, at home. Later, he started to leave the area, but was stopped before he could do so. It seemed at first that the officer might be the jammer. His patrol car radio was checked, but was on a different channel. His portable radio was on the channel being jammed, and after a quick test, was determined to be causing the jamming signal!

The next day the Motorola portable radio suspected of causing the problem was taken to the local Motorola shop and tested. The problem turned out to be a pinched wire shorting out an IF can causing an intermittent keying of the transmitter, but also shorting out the microphone, so that very little if any background noise was being transmitted. The interference was not occurring all of the time, because periodically the defective portable radio was sitting in a charger in the squad room!

All of the hams involved received a very nice letter of thanks from Chief Arturo Venegas of the Sacramento Police Department congratulating us on solving the problem in two days.

Isn't it amazing what hams can accomplish?

Hams involved with the "Zebra" (black and white bunny hunt) team were N6OZH, KD6NDT, N6UBJ, KH6GBX, K6RTV, WA6TRZ, WA6EQQ, N6PSR, KA6MHT, N6MPH, WD6EFM, WA6BYD, KD6HOU, WA6IAB and KD6AQS. WR



Norm Brooks, K6FO, usually the high-speed CW op, goes on VHF with a microphone.

Worldradio staff ARC Field Day '94

For us it is truly the event of the year. Lots of radio fun and our favorite FD snack: fig bars! (What is your favorite FD snack? Send it in and we'll print the list.)

Norm Brooks, K6FO, John Minke, N6JM, and Armond Noble, N6WR, this year, chose the Running Start entry. From the equipment locked in a station wagon, unlocked at exactly 1800:01Z, it was the Stumble, Bumble and Fumble race to get set up.

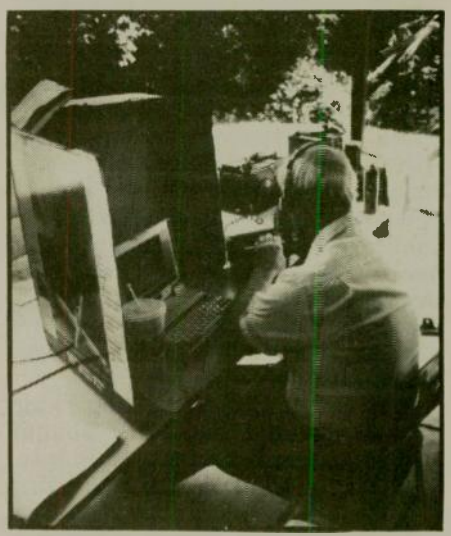
Moe carried the antenna. Larry carried the transceiver and Curly lugged the 12V battery. (Odd, how that battery gets heavier every year.)

A Lakeview Ham Stick with a magnetic mount was put up at about nine feet. Connections were secured and the first contact was at 1809Z on 20M with VE6FD! Next one was at 1810 with W6CX.Over the next hour, while a Butternut vertical antenna was assembled and erected, 24 contacts were made.

We made 502 QSOs on 80-10 and 11 on 2M. VHF ability, in a true emergency, would obviously be of more benefit than being able to contact Vermont from Sacramento on HF, but, really FD is half preparation and half just pure fun.

Our best clock hour for contacts was on Sunday 1800-1859Z with 34 QSOs on 20M SSB. But, on 20M CW at 0202-0244Z, CW Flash Norm made 20 QSOs which netted double points over phone contacts. Another good run for us was 31 QSOs on 75 SSB from 1009 to 1054Z.

And, thanks to all who worked us and said: "Hello ***Worldradio***." **WR**



A hastily-built barrier keeps the sunlight off the computer screen as John Minke, N6JM, snags another contact.

Wildfires threaten desert communities

BY SIDNEY R. ROSE, W9VKC

Lightning struck the northeastern sector of the Cleveland National Forest early on the morning of July 1, setting several fires in the overly dry brush and trees on the sides of the mountains and valleys in that part of California's Riverside County, the state's largest.

The blazes threatened Palm Springs on one side of their main thrusts and Palm Desert on the other side, two of the major cities of the Coachella Valley. Meantime, the smaller blazes were controlled early, and the major effort for the more than 2,000 fire personnel that joined in the battle settled around the Santa Rosa Mountains town of Anza.

The first Amateur Radio operator on the scene was Paul Boggs, AB6WU, who left his home in Pinyon Pines on the eastern edge of the fire to assist the Red Cross, which had mobilized early, to provide evacuation and other communications for campers threatened with evacuation at Lake Hemet in the western sector of the blaze. Walter Manning, K6VI, joined the effort, putting in 18 consecutive hours in the fire zone operating the Red Cross 220 circuits. At the same time, Jay Duncan NA6S, was surveying the situation from the air in his own plane and providing early information on the total involvement of the fire. Boggs later returned to his home to evacuate his two dogs as the fire approached within 175 yards of his property. He then continued as one of the most active amateurs involved through the full spectrum of the fire.

By Sunday, July 3, the Radio Amateur Civil Emergency Service (RACES) was called in by the United States Forest Service, which had taken over jurisdiction from local authorities, to provide backup and certain primary communications. In the interim before the official call, Brett Romer, N6NLN, RACES Officer for the eastern part of the county, and Dean Chambers, KG6YS, RACES Officer for the western segment, were preparing their contingency plans and were ready to cooperate.

Immediately following the request by the USFS, the Santa Rosa repeater in Anza, almost in the heart of the fire zone, which was still raging uncontrolled, was activated as the key station for RACES operation by the Anza Valley EC, John Moses, WB6MMA. He was assisted by Garland Moore, WB6NSX, the Assistant EC, for the full term of the fire. The repeater operated on 145.34, with a standby repeater on 145.200. The Palm Springs Tram repeater on 145.48, WØGFQ, was manned by Don Doughty, RACES EC for the Coachella Valley, with his efforts being concentrated on recruiting and organizing the dispatch of operators with equipment to the fire area and to the evacuation center being set up by this time in the Palm Desert High School gymnasium. He was assisted in this task by Hazel Kirk, NR6P.

By Monday, the Pinyon Pines section of the more than 20,000 acres engulfed by the blaze was being evacuated and the RACES group continued as the key communications facility in reporting on the availability of equipment for the firefighters as well as the civilians involved. The USFS had set up its camp that encompassed a city-block in size, completely self-contained. The amateurs posted at this encampment provided the communications both on simplex and via the repeater for this operation, with special emphasis on the ground support system that included control and dispatch of the large volume of equipment made available by all of the jurisdictions involved.

On Tuesday, with the conflagration coming under control, it was reported that 17 homes and nine out buildings had been totally destroyed in the Pinyon Pines area, but no fatalities or major injuries had occurred. Total value of the losses incurred were over $4 million. By Wednesday, the fire, which had begun to threaten the southern reaches of Palm Springs and adjacent Agua Caliente Indian Reservation plus the main artery into Palm Desert was almost contained, and RACES leveled off in its auxiliary role. Some hams continued to support the Red Cross in its evacuation and damage assessment into the end of the week.

More than 60 amateur operators from Riverside, Perris, Temecula, Corona, Hemet, Idyllwild and the Coachella Valley were involved in the operation, according to RACES officials, with special mention of such operators as Denny Trunnelle of Rancho Mirage, KE6AMT, and Maureen Hiemstra, KD6BSC, Palm Desert, who put in extra-long hours in their various assignments during the height of the battle to stem the fires. list of the radio amateurs who participated in the various elements of the weeklong activity will be published in the *QST* Section reports.WR

Outstanding quad

JIM REID, KH6/W6KPI

I chose the cubical quad as my first five-band directive antenna. This four-element quad seems a "best buy." Five bands, no traps, full wavelength elements for high received signal capture area, 8-10dBd transmit gain and nearly identical weight and wind cross-section to typical triband plus dual WARC band trapped and stacked beams.

But it is a 30 ft. long, 18 ft. square "box" rotating up there! A four-element Cubex 20 through 10M quad weighs only about 65 pounds, has a wind area of about 9½ square feet, all within the "loading" specs of my US Tower MA-550 telescoping tower (up to 50 mph wind).

Using the air-core H&H transformer sold by Cubex at the quad input plus the MFJ Versa Tuner V transmatch at the amplifier output, the VSWR seen by the amplifier is about 1:1 across each of the five bands. The on-the-air performance is just outstanding.

I'd like somebody with their computer antenna analysis programs to answer this: "What is the radiation pattern of a quad, or any other directive antenna which is not operating at its own natural resonant frequency, but a few percent off resonance, which is radiating all the transmitter energy, less only transmission line losses, since the entire system has been tuned with a transmatch?" WR

•••••DON'T FORGET•••••
INCLUDE FIRST AND LAST NAMES with call signs.

Power line noise

JIM LAWRENCE, N5CT

Power line noise is a subject that will come into the life of every HF operator sooner or later. When I returned to Utah and rejoined the active group of Amateur Radio operators in February 1993, my power line noise was terrible. The noise was present on all amateur frequencies from 10 through 160 Meters. The noise completely covered WWV on 10 MHz during the daylight hours. I'd had the fortune of not having to deal with power line noise for many years. My memories of the techniques for finding the sources of the problem were outdated.

In the early 1960s I was fortunate enough to have a seventy foot tall tower. The antenna array was a TA-36 tribander on the bottom of the stack and a 2 element 40 Meter Yagi eight feet above the TA-36. By changing bands and frequencies and rotating the antennas I was able to get a fix on most of the line noise I encountered. Then driving around and using the car's AM radio I'd listen for the strongest noise source. Unfortunately I was wrong about the specific pole causing the problem most of the time. I wasted a lot of the power company's time and energy. They were not any better at finding it than I was.

Here is what I didn't know about power line noise back then — the actual mechanism responsible for power line noise is a commutating or rectifying junction. In other words, it's a loose connection or insulation arc that's generating a square wave at ultrasonic frequencies (500 Hz to 100 kHz). Because the square waves are very steep, the frequency spectrum of power line noise is rich in harmonic energy, extending well into UHF. The lower frequency components (those your HF rig is hearing) couple very well into the power grid's distribution lines. These low frequency waves propagate for miles as a traveling wave, making low-frequency detection impossible. That's why my broadcast band car radio detection technique did not work.

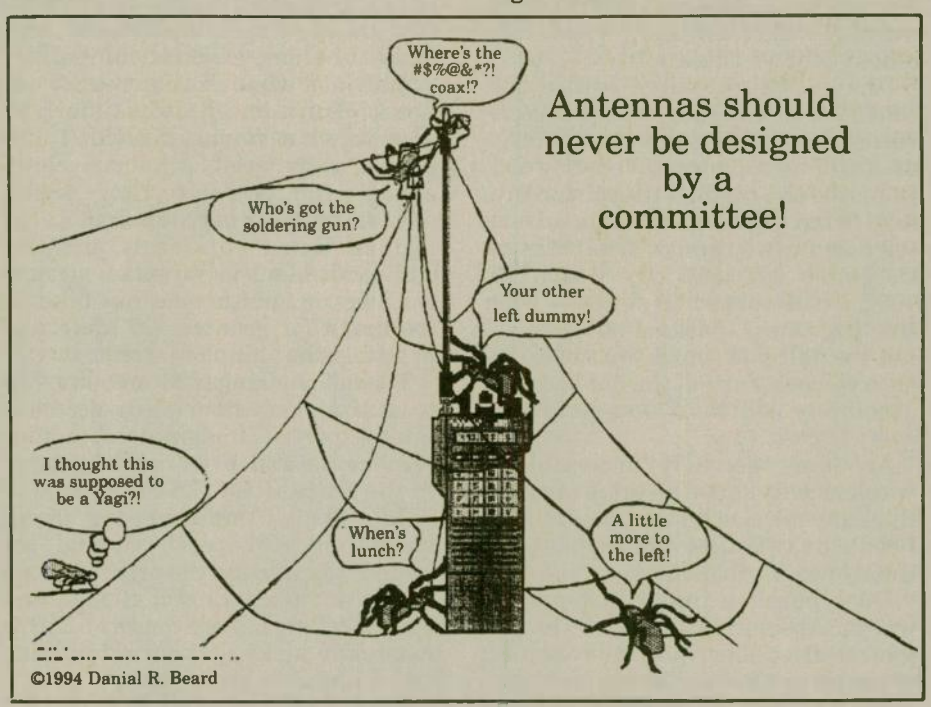
Don't be fooled by an HF beam heading, you could very well be listening to main beam or side lobe of a power line (in effect the line is acting like a Beverage antenna). On the other hand VHF/UHF can be very effective in tracking down line noise. The higher frequency spectrum decays fast near the signal source because the energy does not couple into the distribution system. VHF/UHF detection is nearly true line of sight. The radiator becomes a point source which can be spotted with accuracy.

My experience says that you will save time by hunting for the noise source yourself. Power companies typically have limited RDF training, time, and resources. I have found that they are willing to cooperate and will usually try hard to find noise. However, many times the source they find is not the one you're hearing. They usually have a 300 MHz "super snoop" noise detector with a 3 element Yagi. This usually is too broad to locate a specific pole or piece of hardware.

So how did I solve the problem of locating my power line noise sources? My first purchase was a Radio Shack PRO-43 scanner. It's capable of receiving AM signals on any frequency in its range. Remember an FM detector will not work for locating power line noise, it discriminates against noise. I also purchased a three element 2 Meter beam and 450 MHz 6 element beam.

Starting from my QTH with the 2 Meter beam, I performed an omnidirectional search of the area. When the noise source peaked in a direction I started in that direction. When the direction of the noise reversed 180 degrees I then went back toward the source. The discrimination of the 2 Meter was good, but not superb. As soon as I was sure of my findings I switched over to the 450 MHz antenna. Not only did it find the pole, it was able to identify the offending piece of hardware.

Some final words of advice in dealing with the power company. If the pole is in a distribution network about your QTH, it could very well be the one, but be very sure before you cry wolf. If you are more than 2 miles from a low amplitude source, check carefully for another source closer to you. Have a friend listen to your receiver while you are locating noise sources. Determine that you are right before calling the power company. When you are confident that you have identified the noise location, give the power company a call. Be prepared to provide the exact location and pole number. Good luck! — *Watts News*, Ogden ARC



GERATOL - that something Extra

DR. TOM LINDE, KZØT

What's all this hoopla about getting an Extra Class license? Is it really worth the effort and time needed to master some rinky-dink theory, and copy 20 wpm? And, after you get the upgrade, what can you do with it?

Frankly, I didn't know what to do with mine. I don't send fast code. So I had a sexy 2 by 1 call sign, and could frolic around a couple of 25 kHz subbands. Big deal!

Then I discovered a most amazing Worked All States Net down around 3.768 named "GERATOL." For a long time the name put me off! Who wants anything to do with a patent medicine to help you get old slower? GERATOL stands for "Greetings Extra-Class Radio Amateurs Tired of Operating Lately."

The net meets every night at 01:00Z (that would be 8:00 eastern, 7:00 central, etc.) on 3.768, plus or minus QRM. The net is dedicated to helping properly licensed radio amateurs get the serially numbered ARRL two-letter Worked All States certificate. Members of the net work with warmth, dedication and verve to help others achieve this goal.

I have cerebral palsy, with a big-time speech impediment. I had convinced myself I certainly could never dream of earning the coveted award. But then one night, I thought to myself, "what the heck, check in. . . let's see how far we can go." That was on December 12, 1991. By March 16, 1992, I had worked all states — even the "Big Ones (Alaska and Hawaii)." Let me tell you: once you check in, once you get started, the net becomes absolutely addictive. You can't stay away from it.

About my speech: if I'm careful, if I speak slowly, I have no more problem than anyone else on that goofy band. People do call me every night to get their Iowa confirmation.

Does being a member have rewards? Absolutely. I have never met a nicer, friendlier, more polite group of people in all of my 28 years of hamming. There is an ever-growing group of us who meet every night the net is on, which is from the first of October to the end of April. There are new members every night. How do you get to be a member? Just check in. That's all there is to it. Once you have checked in for the first time you are an official member of the net.

What does that mean? It means that you have over a thousand people across the United States who are there working for you, and others like you, to help you work all states. They will tell you if someone is calling you, and you better listen extra carefully. They will tell you if you got someone's call or state, or signal report right or wrong. What the people on the net will *not* do is tell you what you need to hear for yourself; the call sign, the state, or the report. But it's the support of all the other members on the net, all those hundreds of men and women who are there to steer you and others in the right direction that makes this net very special.

Sometimes those of us with operating difficulties may be a bit timid about going after lots of contacts with lots of people, under band conditions which can, at times, be lousy. The people who make the net, repeatedly offer the support every one needs to "Dream the Impossible Dream" and make it become a wonderful reality.

And just what is that reality all about? Truth to tell, it has much to do with what Wayne, W2NSD/1, describes as the need for hams to chart out new frontiers on territory which may only appear to be familiar. Earning our "Extra" entitles us, and possibly emboldens us, to stake out new frontiers on territory we may take all too much for granted. 75 Meters is precisely that kind of territory.

The net challenges its membership to utilize every fiber of its accumulated expertise, imagination, and interpersonal skill to work all 50 states in the Extra Class (LSB) subband of 75M, not just one time, but many times. Believe me, each national "go-'round" tends to top the preceding one as far as fascinating challenge and breath-taking fun are concerned. This net really kicks up your adrenaline and endorphin levels.

Keep firmly in mind that the net offers over two dozen endorsements for pulling off its awesome little trick on, or near, 3.768 megs. For example, can you work "all 50" QSOing with folk having 1 x 2 or 1 x 3 K, N, or W prefixes? How about all 2 x 2s, or, trickier still, 2 x 2 double As?

In the past, some members choose to swap their ARRL certificate numbers. This time-consuming practice has nothing to do with the net's primary mission of working ALL States with zesty variety.

The GERATOL NET has put together a wonderful information packet which is easy to get. All you need to do is send a number 10 envelope (that's a business size, 3½ x 11 inches) with your address on it, and two units of postage to the following address: Richard Beran, WØYTZ, Information Officer, 300 Valley View Dr., Ord, NE 68862

Dick will send you 14 pages of very useful and exciting information about our net. Give it a try, you Extras! It will make all that effort you made getting your Extra very worthwhile. WR

FCC — like the FAA?

STEVE WOLF, NO8M

As a member of the Experimental Aircraft Association (EAA), I receive their journal, *Sport Aviation*. The EAA is to the FAA as the ARRL is to the FCC. Although representing a small constituency, they have positioned themselves as the mouthpiece of hobby aviation. The November issue was quite interesting. It was amazing how many issues facing sport aviation have counterparts facing Amateur Radio. The editorial touched on the need to get kids turned on to aviation. The EAA is publishing special materials for kids. (The ARRL publishes novels, comic books and other materials for kids.) "EAA News" comments on the FAA considering doing away with the medical certificate for the FAA entry level pilot's license. (Like our CW, eh?) On page 6 we read about what amounts to government preemption of local noise laws regarding airports. (An echo of our PRB-1.) Page 10 describes what amounts to faster recertification by volunteer examination posts (as in our issue regarding VECs.) There are comments on the Oshkosh airshow (our Dayton Hamvention). Results from various contests parallel ours. Page 98 cites the relationship to Federal Aviation Regulation violations and their fines. Prior to crabbing about rights and writing to our representatives, some of our more vocal members need to examine what's happening in other areas similar to ours. Perhaps we will find that we are not alone in areas that are most affecting our hobby. Perhaps changes we face are motivated by concepts outside our narrow view. Perhaps there's evidence that some changes have worked in other services and will probably work here.

73, Steve Wolf, NO8M, @NO8M.# NEOH.OH.USA.NA Via Packet.

— *Spark Gap,* Motor City RC, MI

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PRODUCT REVIEW

The Carolina Bug Katcher

BY PHIL SALAS, AD5X

For you up-and-coming (or already there) HF mobile folks, an excellent antenna to consider is the Carolina Bug Katcher from The Lakeview Company (the same people who make the Hamstick antennas). This antenna is very light weight, has low wind resistance, and requires no guying yet it gives you excellent 40-10 Meter performance.

I'm sure many of you have seen bugcatcher antennas. They normally have a 3-4 foot aluminum rod, the bugcatcher coil, and the top 3-4 foot whip. They tend to be a little heavy, and must be guyed or otherwise supported.

The Carolina Bug Katcher is constructed a little differently. The bottom section is a fiberglass rod with a heavy wire spiral. The top of the bugcatcher coil is actually located about six inches below the top of the fiberglass rod, i.e. the spiral stops at the coil, the coil mounts on the rod, and then the spiral starts again at the top of the coil continuing up another six inches of rod. At the top of the rod, a connector is provided to attach the adjustable upper 3½ foot whip. The whole assembly is extremely light (it even comes with a quick-disconnect base) and has very little wind resistance. My Carolina Bug Katcher is mounted on a Hustler SSM-2 ball mount on the side of my little GEO Metro with no springs and no guying. The antenna itself sells for about $90 and consists of just five pieces: the male & female quick disconnect connectors, the bottom rod/coil assembly, the top whip, and a base inductive matching unit. The bugcatcher coil has a clip lead attached to the base of it for shorting out turns as you change bands. With no turns shorted, you get 40 Meter operation. This is a high Q antenna and you only get about 30 kHz of bandwidth (2:1 SWR) on 40 Meters. I used a permanent marking pen to draw and label lines on the top whip for frequencies across 40 Meters for easy whip length adjustment. Clips are provided for you to attach to the bugcatcher coil for the higher bands (you connect the alligator clip lead from the base of the coil to these clips). I found that I needed clips for 20 Meters, 17 Meters, and 15 Meters (full phone band operational bandwidth on these bands with one common top whip length). For 12 Meters you short out the entire coil. Ten Meter operation requires a shorter top whip (an additional $6 when ordering). I only have to adjust the top whip to move around on 40 Meters. It stays at a fixed length for all other bands.

I made a few changes to the antenna to make it easier to adjust and change bands. First, I replaced the set screws for holding in the top whip with #6 thumbscrews (your local hardware store). This lets me quickly break down the antenna for storage in the trunk, or quickly lets me remove the top whip so I can get into my garage (I remember to do this most of the time!). I also decided not to use the base matching coil provided (The Lakeview Inducti-Match) since it also requires clip settings for different bands. Instead, I put an in-line capacitor switch box for base capacitive matching inside the car. To change bands, I open the hatchback and switch in the appropriate capacitor, then close the hatch and tap the bugcatcher coil for my band of interest. This whole operation takes about 10 seconds. The capacitor switch box is a home-made one consisting of a Radio Shack #275-1385, 1-pole 12-position rotary switch, a Radio Shack #270-235 aluminum box, a pair of SO-239 connectors, and capacitors as follows: 750 pf (40 Meters), 560 pf (30 Meters), 220 pf (20 Meters), 100 pf (17 Meters), and 33 pf (15 Meters). No base capacitors are needed for 12 and 10 Meters. For 100 watts of power, you need at least 300 volt capacitors. I used 500 volt silver mica capacitors. Just wire up the capacitors so that the rotary switch shunts each capacitor from the antenna center conductor to ground. Mark the band positions on the aluminum box with a permanent black marking pen.

So — the bottom line: This is a great high performance mobile antenna that is light weight, has low wind resistance, and is easily attached to your car. It comes with everything you need for 40-12 Meters (you need a shorter top whip for 10 Meters) including the male and female base quick disconnect connectors and a base matching coil. It also actually looks pretty unobtrusive - i.e. the bottom fiberglass section is all-black and the bugcatcher coil is reasonably small and also looks good. It is not much more noticeable than a Hamstick! I've had a good time with this antenna. My most memorable contact was with an Alaskan ham on 17 Meters who gave me a S9+5 (I was running 50 watts output from my TS-50S) when I was mobile in Richardson, Texas.

The Carolina Bug Katcher, Hamsticks, and other Lakeview products are available from Tucker Electronics, 800/527-4642; Radioware, 800/950-9273; AntennasWest, 801/373-8425; and Lakeview Company, 803/226-6990. WR

Awards

DXCC field check DX hunt winners

BY KEN MILLER, K6IR

To stimulate interest in pursuing DX among the members of the National Capitol DX Association members the NCDXA has recently completed a twelve month long competition.

The objective of the contest was to work the 250 countries listed on the ARRL DX Century Club (DXCC) active countries list which are eligible for field checking for initial DXCC applications.

The rules stated that the countries which are noted with the large dot on the ARRL DXCC countries list were eligible for this competition. Each country may be worked on any band and in any mode. Only one QSO per country worked was counted.

A plaque was awarded to each club member who worked 200 or more countries during the 12 month duration of the contest.

Club members who qualified by working 200 or more countries were:

NCDXA member	Number of countries worked
N4MM	237
K6IR	227
N3II	222
W3UJ	216
WA3DVO	215
N4YKD	215
W3GG	208
W3GOH	206
WC4B	201
WE6H	200
N3TO	200

Three NCDXA members collectively work 665 countries in NCDXA 12 month DX hunt. (L-R) Dave Hammond, WC4B (201); Ken Miller, K61R (227) and ARRL Director John Kanode, N4MM (237).

In addition to the above "200 Plus" plaque winners a number of other NCDXA club members worked 100 or more countries.

This very successful National Capitol DX Association program demonstrated clearly to Amateur Radio operators everywhere that one can work the required 100 countries to qualify for DXCC in less than 12 months. . . . and that over 220 countries can be worked in a 12 month period which are eligible for field checking by the ARRL appointed DXCC Field Check representatives. The NCDXA club membership is primarily located in Maryland, Virginia and Washington, DC. **WR**

QCWA 50 Year award

Archie Willis, W6LPJ was presented a QCWA Fifty Year award 21 May, 1994 by Vi Barrett, W6CBA, President of QCWA Chapter Seven. In his 50-year Amateur Radio career Archie, manager of the ARRL incoming sixth district (CA) QSL bureau and an Assistant Director in the Southwestern Division, has been active in QCWA, OOTX, SOWP and many local Amateur Radio organizations.

SILENT KEYS

Oliver Dix Perkins, K2MH

Oliver Dix Perkins of Yamhill, Oregon, died June 28, 1994 at Yamhill, Oregon. Perkins held amateur radio Extra Class license, K2MH. He was born at Milwaukie, Oregon in 1910, a fifth generation Oregonian.

Perkins was a graduate of Oregon State University with a bachelor's degree in electrical engineering and a master's degree in physics. His first job after college was as chief operator for KOIN radio in Portland. He did pioneering work for the U.S. Army in radio microwave relay for which he received the Legion of Merit. He is credited with creation of the first radio relay protocol for the Army.

K2MH was interviewed about his radio interests in 1957. In that interview he cited his interception of communications from the Richard E. Byrd expedition at the South Pole in 1928 and of novelist Zane Grey's Pacific fishing expedition as his radio highlights.

Perkins made his career in the military doing radio microwave development. He was involved in the 1957 study of radio transmissions across Antarctica and transported himself and his equipment by dog-sled in the installation of the Distant Early Warning system at Hudson's Bay in northeast Canada.

Following his retirement from the Army, he served as professor of electronic science at the City College of New York. He moved back to the family farm in Yamhill, Oregon in 1976.

Oliver Dix Perkins is survived by a son, Stephen Dix of New York City; a daughter, Suzanne Vincent of England; and brothers Norris H. and James G. of Portland, Oregon. He was preceded in death by his wife, Rose. *— submitted by Everette W. Curry, Jr., K6VGL.*

Carle F. Bumpus, K7EI

K7EI, Carle Franklin Bumpus became a silent key this past February. Carle was a continuously licensed amateur from 25 June 1931, and had operated unlicensed since 1927 as 1CB from Plymouth. MA, his birthplace. He held 21 different amateur calls during his lifetime, beginning with W1CUY, then including W1DFY, W1FFW, W1LTU/EG1E, W1MII/AJ12, W6ZDO, K3RJK, W6RP, XEØRP, VP1RP, TG9XG, YSØCBE, YN1RP, XP1XRP, KZ5AHT, K7EI and several portable calls from other foreign countries.

After retirement in 1967, Carle and his XYL Charlotte exercised all the reciprocal licensing agreements available in North and Central America by applying in each country and staying a month or so, helping to satisfy the home-based DXer with a new country or two. They also gave out counties across the US. . . from their VW camper van, more than 2,000 counties for the county hunter award hunters.

Carle was extremely active in radio from his early childhood, starting with a radio repair job in the 30s, then for the U.S. Government during WWII as a civilian engineer installing and servicing Radar for the Navy when Radar was still top secret.

Following the war, Carle joined the Bendix Corporation and worked for them in an engineering capacity on projects as diversified as long range sonar receivers and microwave telemetry design, atomic energy testing in Nevada, and breaking the sound barrier on land at the China Lake test center in California.

His amateur experience included just about every facet of communication available. Recently he built and operated a "mobile" AMSAT station, with a satellite tracking antenna system mounted to the front of his VW camper van. A UHF pioneer in the Los Angeles area, he had 13 complete stations set up in his shack operating from 160 Meters through 10,000 MHz, all homebrew.

In addition to keeping "slightly" busy with his radio hobby in retirement, Carle also wrote and published five books documenting his and Charlottes family history. . . they were both members of the Mayflower Descendants Society in Plymouth. MA.

Carle leaves his wife of 59 years, Charlotte, and his sons Carle Jr., KB6QQJ, and Robert, and grand daughter Christie.

I am privileged to have known Carle for the past forty years, and can testify to his inspiration for my own ham radio experience. Carle will be sorely missed by his many friends and ham buddies. *— submitted by Reg Armstrong, W7JQM.*

SPECIAL EVENTS

Struggle for Freedom

The Nijmegen Radio Amateur Club will operate a special event station, PA6OMG, commemoration of Operation Market Garden on 15-20 September. The station will be located near the Liberation Museum in Groesbeek-Nijmegen. Operation will be on all HF bands in CW and phone. If possible, WWII radio equipment will be used to make connection. QSL cards should be sent to our local club station QSL manager, PAØKHS, NL-Region 35 via the Dutch QSL-buro. For local visitors, 2 Meter and 70 cm. talk-in will be standby. A QSO with PA6OMG will be valid for the Noviomagum Certificate.

150th anniversary celebration

The Hiawathia ARC will operate W3KGW 1300Z-2030Z on 17 September to commemorate the 150th anniversary of the locating of iron ore on the Marquette Range. Operation will be on the General band, also on 146.91. Send QSL and SASE to Charles Waters, 970 N. Westwood Dr., Ishpeming, MI 49849. Please put your contact number on the envelope.

81st anniversary

The Corona/Norco ARC will operate KN6CV as a special events station from 1600Z to 2400Z on 10 September to commemorate the 81st anniversary of the 1913 Corona Road Race, locally referred to as "Barney Oldfield Day." Operation will be in the lower portion of the General 80, 40, 20 and 15 Meter subbands and 28.400. For QSL, send an SASE to Corona Norco Amateur Radio Club, P.O. Box 1783, Corona, CA 91718.

Ghost Town

The Cochise ARA will operate WA7KYT from the ghost town of Paradise, Arizona, in the Chiricahua Mountains 1800Z 3 September - 1800Z 5 September. CW: 7.040; phone 3.885, 14.288, 18.135, 21.315, 28.385. To receive the special confirming certificate, send a 9" x 12" SASE to Cochise ARA, P.O. Box 1855, Sierra Vista, AZ 85636-1855

Gala Birthday Celebration

The Grumman ARC will celebrate its 50th birthday with a special event station on 10 September, 1000Z - 2400Z. The frequencies will be 14.275 MHz, and 21.275 + or – QRM. A specially designed QSL card depicting the Grumman Aircraft will be available. Send SASE to Grumman ARC, P.O. Box 0644, Bethpage, NY 11714-0644.

BOC Challenge

The Charleston Amateur Radio Society will operate WA4USN, 1300Z to 2300Z on 16-18 September to commemorate the BOC Challenge 1994-95, a single-handed round the world yacht race. Frequencies will be on 7.250, 14.045, 14.250, 21.045, 21.250, Novice CW portion of 40 Meter band and 146.790. All frequencies are plus or minus 5 for QRM. 2 Meter operation will be on 17 September only. For QSL, send QSL and an SASE to Sheila Frank, KC4UDD, 614 Longstreet Circle, Summerville, SC 29483.

100th anniversary

The B.P.O. Elks Lodge #287 of Walla Walla, Washington is celebrating its 100th anniversary with a special event station at the lodge on 23-25 September. Certificates will be awarded for stations who have worked 5 Walla Walla stations; the special event station need only be worked once during the event to earn a certificate. Operation will be in the lower part of the general portion of as many bands as possible. Contact Robbie Gallo, KB7OBW at 351 E. Rose, Walla Walla, WA 99362.

Roller coaster fair

The Mammoth Cave ARC will operate KD4SS 1500Z 30 September to 0400Z 2 October along the route of the 8th annual Roller Coaster Fair in historic Temple Hill, KY. Operation will be in the lower portions of 80, 40, 20, 15M General subbands, 28.475, 146.94, and 2M packet. For certificate, send QSL and 9 × 12 SASE to MCARC, P.O. Box 1062, Glasgow, KY 42142.

"Little House on the Playground"

Liberty-Valley Elementary School will operate WC3A, N3IRN and N3LQS on all amateur bands 19 September, 1300Z - 1900Z. For certificate, Send QSL to D. Miguelez, N3POB, Liberty-Valley School, 175 Liberty-Valley Rd., Danville, PA 17821.

Auburn Cord Duesenberg Days

Northeastern Indiana ARC will operate a special event station to commemorate Auburn Cord Duesenberg Days in Auburn, Indiana over Labor Day Weekend, 4-5 September, 1400Z - 2200Z. Operations will be in the lower 25 kHz of the general bands on 40M and/or 80M. For a commemorative QSL, send confirmation and SASE to NEIARC, P.O. Box 745, Auburn, IN 46706.

Tennessee Apple Festival

To commemorate the 15th Annual Erwin/Unicoi County Apple Festival in Erwin, Tennessee, the Unicoi County ARS will operate AC4QF 24 September, 1300Z - 2100Z. Phone 14.265 and 7.265. For QSL, send a QSL and a #10 SASE to UCARS, P.O. Box 185, Erwin, TN 37650-0185.

Fall Fair

The Clyde ARS will operate NF8E from the Winesburg Fall Fair, 1600 - 2400Z 17 September, and 1600 - 2200Z 18 September. CW: 7.125, 21.150; phone: 3.900, 7.250, 14.300, 21.400. For certificate, send SASE to Steve Karr, NF8E, 302 Hamer St., Clyde, OH 43410.

Hiram P. Maxim, W1AW, Founder of the ARRL

The Antietam Radio Association of Hagerstown, Maryland has announced plans to operate club station, W3CWC, as a joint commemoration of what would have been Hiram Maxim's, 125th birthday and to celebrate the installation of a brass headmarker at his grave site in Rose Hill Cemetery in Hagerstown. Operation will be from Friday, 2 September at 1500Z until Saturday, 3 September at 0400Z and also Saturday, 3 September from 1200Z to Sunday, 4 September at 2400Z. Suggested frequencies are the following: CW—3.640, 7.045, 14.040, 21.040, 28.040; SSB — 3.920, 7.240, 14.240, 21.295, 28.350. For a commemorative certificate, send your QSL and an SASE to Antietam Radio Association, Attn.: Special Event Station W3CWC, P.O. Box 52, Hagerstown, MD 21741-0052. **WR**

OFF THE AIR

Contests, and CW code requirement

This letter could be an exercise in how to make one unpopular, but never mind; one's opinion is as valid as another's:

Contests. I'd very much like to see contests limited to a portion of the HF bands only, such as the General license section "and up." I'm tired of contesters QRMing the band, to the virtual exclusion of anyone else who might desire a simple rag-chew. Besides, it is imminently clear that contests foster and breed very poor operator technique. And the guise of "keeping the bands open for possible emergency use" is just that, a guise, a ruse for public consumption, which just doesn't wash. Listen in on a contest, and take note of the rudeness, the viciousness, the use of illegal power, and the bald-face lie of "5-9" signal reports.

Clearly, contests are not now doing any good for Amateur Radio. Quite the contrary.

CW as a license requirement. Not only do I believe that CW must be retained, but in addition, demonstrated proficiency in CW sending must be a requirement of licensing. The number of good CW operators is dwindling. . . and the number of very poor ones is on the increase. I won't attempt to justify the continuation of CW. . . such is self-evident to anyone who has worked HF for very long, and is especially apparent to anyone who has attempted the various high-tech modes nowadays. CW is not only here to stay, but more so than in the past. And if one can pass a test of copy, they had best pass a test of sending, lest they so butcher the message as to make it uncopiable. Testing can be done via high-tech micro reader which is impartial in its judgment of CW sending proficiency.

DEAN FRAZIER, NH6XK
Mililani, HI

6M is alive

I have been a ham radio operator for over 36 years. Tuesday, June 28, 1994, was one of the greatest days in my years as a ham. I have always been fan of 6 Meters AM a long time ago, now 6 Meters SSB. About 8 a.m. on that Tuesday I turned on my old TS-600 to the calling frequency of 50.125 MHz. The sound coming from my speaker was like 40M on Field Day. The KD7s, KE7s, K5s and even Cuba (yes, CM3ZD in Cuba). The band went from 50.110 to as high as 50.200, each 5 or 10 kc had a QSO on it.

I got my log and pen to write down all I could work. 40 contacts later I stopped calling "CQ 6."

The best news was still to come; at about 19:47 GMT it was time to turn on the 2 Meter SSB rig, an old TR-9130, all mode. I set it on 144.200 upper sideband. Within 2 minutes I contacted N7DB at 19:50 on 144.200.

He had a 5-3 signal with QSB. Then at 19:58 I worked W7INX. The two were both in grid square CN-85. I also heard NØXX/7, in CN-84 at 20:02 GMT. All on 2 Meter SSB. Within 2 hours my QSL cards were on the way in the U.S. Mail.

This summer keep your 6 Meter and 2 Meter radios on!

73,

JACK DOBBS, WB6AXW
San Diego, CA

Thank you Field Day

Thank you for leaving a space on the bands not participating in the contest to allow "regular QSOs."

Thank you for respecting the daily operating nets and giving space for them to operate efficiently.

Thank you for being considerate and moving slightly when asked (nicely).

A question regarding the validity of the Field Day signal reporting process.... What does it mean when the operator says "5/9 old man, can you repeat your call and location again?"

73,
MARTIN I. SHAPIRO, KA7GKN
Glendale, AZ

Kind words

Worldradio is tops. It is readable, newsy and no slick, glossy pages or ads.

Also, by far, you are the most informative, pushing no contests, but all necessary information for various types of operation and interests out there.

Keep up the good work.
CARL DIERKS, AA7WQ
Cheyenne, WY

Coast Guard update

My sincerest thanks for printing "Coast Guard Ham Club."

Before I received my copy, four Coast Guard hams wrote to me saying they saw my notice in the June edition of ***Worldradio***.

At this time I have the names and call signs of approximately 250 Coast Guard hams. A number of hams who responded said they have been waiting for something like this for a long time. So, thanks to you for printing my notice — getting the information out has been beneficial.

Thanks again for printing the information for me.

73,
RMCS DON GARDNER, AD4PT
High Point, NC

QSL OM? QSL

I keep seeing articles against ham radio "jargon," especially the CW Q signals on phone. Q signals on phone are a hangover from way back when everybody served an apprenticeship on CW before graduating to phone. There wasn't much money those days, but lots of homebrew, and it took some time to work up to phone. By that time using Q signals was natural, and these basically CW operators continued it on phone. Newcomers continue the practice, learning it from old timers. Admittedly, some of it is artificial, made up, forced, like saying "I'll see you on the lima lima" — that kind of thing, meant to be cute, only makes me cringe. I wouldn't honor it by calling it ham radio jargon.

But ham radio is not a basic pursuit, and the "pursuers" have occupations which have their own jargon. How come these critics don't criticize their own jargon? A recent writer even admitted that his own field, teaching, has more jargon than any other! I wonder if he has written letters to the national Department of Education. 'Tis to laugh.

73,
TED CHERNIN, KH6GI
Honolulu, HI

South Georgia Island DXpedition

SGI DXpeditions — VP8

Al Hernandez, WA3YVN (VP8SSI co-organizer/operator) and Jan Heise, WA4VQD recently founded the SGI DXpeditions Group to organize and conduct DX operations from high demand DX locations around the world, including many of the low latitude Antarctic Islands. The group's first DXpedition will be a three-week South Georgia Island operation starting in early January 1995. DXpedition gear for four complete HF stations was put aboard the Research Vessel ABEL-J in June at Fairhaven, Massachusetts, the same ship that transported the VP8SSI team to the South Sandwich Islands in 1992.

The team will operate on all open bands with emphasis given to CW and low band operation. Once on the air, they will transmit on 1.826, 3.522 (3.504 for EU), 7.022 (7.004 for EU), 10.104, 14.024, 18.074, 21.024, 24.894 and 28.024 kHz on CW, and 1.845, 3.785, 7.065, 14.195, 18.145, 21.295, 24.945 and 28.475 kHz on SSB. On RTTY try 3.580, 7.040, 14.080, 21.080 and 28.080 kHz.

Please QSL via W4FRU, INDEXA, P.O. Box 5127, Suffolk, VA 23435 USA.

One or two high caliber CW operators are still being sought to complete the team. Al, WA3YVN can be contacted at the SGI DXpeditions address below or by phone 407/727-0201 or fax 407/728-8072.

At a cost of over $50,000 the SGI DXpeditions Group still needs help with the cost of the charter vessel, generators, and fuel. Contributions (checks payable to SGI DXpeditions) may be sent to: SGI DXpeditions, P.O. Box 2235, Melbourne, FL 32902 USA. Clubs and significant contributors will be noted on the QSL cards. WR

John S. Bushell, KC7WP

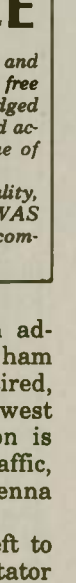
STATION APPEARANCE

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

Winners will also receive a top quality, Laserjet-printed copy of the DXCC and WAS BeamHeadings list (a $15.95 value) compliments of Jack Hurray, W8JBU.

The call is KC7WP. I am an advanced operator, and have been a ham since 1980. I am 69 years old, retired, and live in a rural area in southwest Washington where the elevation is 1500 feet. Few neighbors, little traffic, with no BCI or TVI. Also no antenna restrictions.

My station consists of (from left to right): Top photo, top shelf: Rotator control box for 12 and 17 MTR beam, speaker, world time clock, AEA CRI computer patch, MFJ Versa Tuner II (941D), digital clocks for UTC and local, and phone. Lower shelf: Rotator control box for 10, 15, 20 tribander and 10M, 5-element Yagi on one tower, TS450SAT transceiver, mounds key HH408, and Shure 444d mic. Bottom: VIC 20 computer for ASCII, RTTY, and CW, Commodore 64 computer disk drive.



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!

David Perkins, KB6ZBE, reminds us about Part 97 and the prohibitions against music, and broadcasting, and, and. . . gulp!

My mother and I were driving around town shopping, and of course I had 2 Meters with me. After talking a while on the main repeater where "everyone" is, I cleared off. A song came on the broadcast radio which mom and I knew. We started to sing along with the volume up to a pretty high level (make that loud).

When the song was finished, I glanced down at the rig-funny that it was so quiet. You guessed it-the speaker mike was keyed. Our awful singing had gone out over the air! As soon as I unkeyed, I heard someone say "Amen to that." After many apologies, it seemed as if everyone came on to tell me of their own similar experiences. WR

DX WORLD

John F.W. Minke III, N6JM
P.O. Box 310 Carmichael, CA 95609-0310

W-100-N

The following DXers have completed the requirements for ***Worldradio's*** Worked-100-Nations Award.

475. W4OGG, David C. Goggio, 02 Jun 94.

476. WA1PFC, John A. Bosse, 24 Jun 94.

Dave Goggio, W4OGG, who received W100N #475 asks our reason for choosing the starting date of 1978. That's a good question, which requires some history. The present W-100-N is really Series II which was developed by Charles Signer, WA9INK, a former DX Editor. Prior to that date an older form of W-100-N was in effect and with the new award, it would have been logical to allow contacts only after that date.

Since the recent collapse of the Soviet Union those former republics have now all become separate nations. However, please observe the date these former republics became nations. A contact prior to those dates would count only for the Soviet Union. There is an exception, and that is that of the three Baltic states; Estonia, Latvia and Lithuania. They never were really legally part of the Soviet Union in the first place.

East Germany can also be counted, provided that the contact was made prior to the reunionification date. And, those former Yugoslav republics count too. Watch those dates as well.

Mauritius (3B8)

If you need a 30 Meter contact with Mauritius listen for 3B8CF who is on often near 10.101 MHz from 0300 UTC. He also operates other bands, as he was reported on 3.505 MHz at 0130 UTC and 7.004 MHz at 0230 UTC.

Other activity from Mauritius includes 3B8FG, who was reported on 14.025 MHz at 1230 UTC, 18.073 MHz at 1300 UTC and 21.011 MHz at 0600 UTC.

Two other calls were found with 3B8AD, on 7.036 MHz at 0530 UTC and 3B8FC, on 10.103 MHz at 1315 UTC.

Guinea (3X)

If you hear the strange call of 3XYØA, it is the call being used by Dragon, 3XØYU. The reason for the call change is not presently known. Anyway, look for him on 20 Meters between 14.194 and 14.217 MHz after 1800 UTC or on 15 Meters near 21.218 MHz at 1900 UTC.

Also reported from Guinea was 3XØDEX, who was found on 3.794 MHz at 0415 UTC, 14.260 MHz at 1800 UTC and 18.135 MHz at 1200 UTC.

China (BY)

Club station BY1QH has been reported on various bands recently, such as 7.007 MHz at 1130 UTC, 10.103 MHz at 1330 UTC, and on 20 Meters between 14.194 and 14.209 MHz after 1500 UTC.

Individual Chinese DXers with their own calls included the following:

BZ1BLH	21.220 MHz	0930 UTC
BZ1QL	14.210 MHz	1500 UTC
BZ5HAN	21.294 MHz	0045 UTC
BZ5RAN	7.009 MHz	1145 UTC
BZ5SAN	14.000 MHz	1600 UTC

In addition *The Low Band Monitor* reports BZ5HAN on 40 Meters near 7.005 MHz at 1300 UTC on May 11th.

Uruguay (CX)

Several calls were reported during May and June from Uruguay. These calls included the following:

CX2BP	10.102 MHz	0300 UTC
CX2SA	7.205 MHz	0645 UTC
CX3AL	3.507 MHz	0145 UTC
CX4CR	3.798 MHz	1015 UTC
CX4SS	3.505 MHz	0300 UTC
CX5BW	28.491 MHz	2045 UTC
CX5SSF	14.256 MHz	0030 UTC
CX6CG	3.799 MHz	0930 UTC
CX6CR	3.799 MHz	0930 UTC
CX6VM	21.017 MHz	2200 UTC
CX7BF	28.209 MHz	2045 UTC
CX7BY	14.050 MHz	2200 UTC
CX8AT	28.455 MHz	2030 UTC
CX8BR	7.014 MHz	0030 UTC
CX9AU	3.794 MHz	0430 UTC
CX9DH	28.502 MHz	2100 UTC

Bosnia (T9)

We found several calls reported from this former Yugoslav republic. Many of the reports were for contacts made on 80 Meters and maybe that is all we will have this season. However, things should pick up as fall approaches. Here is a selection of what was worked during the months of May and June:

T91AVW	14.015 MHz	2200 UTC
T91EBG	7.004 MHz	2015 UTC
T91EL	14.031 MHz	2200 UTC
T91ELD	14.004 MHz	2300 UTC
T91ENS	14.020 MHz	2115 UTC
T91EVC	3.511 MHz	0300 UTC
T91EVK	7.001 MHz	2345 UTC
T91FNO	7.051 MHz	2115 UTC
T92A	14.005 MHz	2130 UTC
T92X	10.105 MHz	2230 UTC
T94KW	3.509 MHz	2200 UTC
T94ON	14.225 MHz	1945 UTC
T94TF	7.086 MHz	2200 UTC
T94WS	14.038 MHz	2030 UTC
T95X	14.197 MHz	0545 UTC
T97M	14.178 MHz	2230 UTC
T97O	14.015 MHz	2130 UTC
T97T	3.791 MHz	0300 UTC
T99A	7.076 MHz	2015 UTC
T99T	14.008 MHz	2015 UTC
T99W	7.005 MHz	0200 UTC

With all these calls reported you should be able to grab one of these for a new one.

Guatemala (TG)

Here is one country close to home. Many a budding DXer may not have worked it yet, so we checked the reports for this one.

On 40 Meters TG9AKC has been reported between 7.001 and 7.026 MHz at 0100 and 1030 UTC, with TG9YV reported near 7.008 MHz at 0130 UTC early June.

Twenty meter reports include TG9AQ on 14.007 MHz from 0015 UTC, TG9GI on 14.225 MHz at 1530 UTC, TG9RV on 14.165 MHz at 2200 UTC, and TG9YV on 14.028 MHz at 1515 UTC. Under reciprocal agreements TG7/KØBJM was reported on 14.185 MHz at 1230 UTC on June 17th.

Other activity included TG9AC on 18.076 MHz at 2145 UTC and TG9AJR on 3.794 MHz at 0245 UTC.

Gabon (TR)

TR8XX was handing out contacts this past May and June. Try looking for this one on 40 Meters between

7.006 and 7.015 MHz between 2000 and 2100 UTC.

On 15 Meters look for TR8LT who has been active between 21.002 and 21.009 MHz around 1600 and 2000 UTC.

Other calls from Gabon included TR8CA on 18.136 MHz at 1600 UTC, TR8KPJ on 21.349 MHz at 1500 UTC, and TR8/F5JDG on 21.013 MHz at 1500 UTC.

El Salvador (YS)

Check out 40 Meters for YS1DRF who can often be found between 7.001 and 7.008 MHz after 0300 UTC and again around 1100 UTC. He has also been worked on 20 Meters between 14.001 and 14.011 MHz at 0030 and 1300 UTC. He evidently works SSB too, as he was reported on May 22 near 21.319 MHz at 1730 UTC.

Also reported from El Salvador were:

YS1AG	3.797 MHz	0400 UTC
YS1JRG	18.160 MHz	2145 UTC
YS1VVK	18.078 MHz	2300 UTC
YS1XLH	14.243 MHz	2230 UTC
YS1XS	18.129 MHz	2330 UTC

IOTA

Dr. Rick Dorsch, NE8Z, has been running around activating IOTA islands. Unfortunately, by the time you read this his activity will be over. We received this information in June for June and July activities. However, in August, Rick plans to activate various fresh water islands in Ontario for the Canadian Islands Award.

The OH-KY-IN Amateur Radio Society will active rare Assateague Island (NA-139) September 16 to 18, 1994. Signing with the call K8SCH/4 they will operated around the clock on all bands, 10 through 80 Meters. This will be an SSB operation only. QSL cards should be sent to N8FU. Please include an SASE

Our trip is still on schedule and should be operating from Fox Island in Resurrection Bay (Gulf of Alaska West group) from August 20th. We will be there for three nights and will sign N6JM/KL7.

Other IOTA activity includes the following:

AS-053	Phuket Island	HS8EFF
	14.197 MHz	1500 UTC
AS-062	Habomai Islands	UAØFHD
	14.256 MHz	1730 UTC
EU-120	Lundy Island	GB2BLE
	14.260 MHz	0700 UTC
EU-143	Sancti-Petri Island	ED7SPI
	21.260 MHz	1845 UTC
NA-047	Baffin Island	WB1CBY/VE8
	14.260 MHz	2130 UTC
NA-055	Vinal Haven Island	AK1L
	14.260 MHz	1630 UTC
NA-067	Ocracoke Island	WB4SRH
	14.260 MHz	0245 UTC
NA-072	Ilas Contadora	HP1XVH
	10.105 MHz	1245 UTC
NA-128	Orleans Island	KA2PHQ/VE2
	14.258 MHz	1500 UTC
NA-193	Herschel Island	VE8YEV/VY1
	14.260 MHz	0430 UTC
OC-063	Akamaoru	ZS1FJ/FOØ
	14.260 MHz	0515 UTC

Gunther, HP1XVH, has been active from Contadora Island (NA-072) located in the Gulf of Panama. Reports have had him on 40 Meters near 7.006 MHz around 0045 UTC and 30 Meters on 10.105 MHz around 1245 UTC. He also shows on the 20 Meter IOTA frequency creating a massive pileup. Never before have we seen such a mob for Panama. Has IOTA become that popular?

DXAC Matters

The ARRL DX Advisory Committee has voted 15 to 1 against the reistatement of Aldabra to the DXCC Countries List. The DXAC decided that Aldabra does not meet the criteria of the present rules.

In another ballot, the DXAC voted to approve call area calling guidelnes. The DXAC guidelines call on DX stations to operate in a manner perceived to be fair and balanced to all areas, and to work portable stations in the specific call area they are listening for.

The vote on this was 11 yes votes, 2 no votes and with 3 members abstaining.

We would like to hear the definition of fair and balanced. Surely, they don't mean the same number be taken from each call area. If so, then we should all move to Maine!

DXCC Desk

The DXCC Desk has received documentation and approved the following operations with the dates beginning:

3D2MD	25 Jun 1991
3D2/ON4QM	24 Sep 1990
5W1JW	09 Sep 1991
A35DM	08 Aug 1990
C56/ON4QM	30 Oct 1989
DPØRIM	13 Feb 1993
H44QM	30 Oct 1991
S92QM	16 Mar 1992
T2ØCB	09 Sep 1992
T3ØMD	24 Sep 1992
V63SB	24 Mar 1994
VS6/WA6TJM	02 Jun 1992
XT2TX	19 Nov 1993
YJØAMD	01 Oct 1990
ZK1DM	25 Sep 1991
ZK2XX	29 Oct 1993
ZK3DM	09 Aug 1993

The DPØRIM was a special agreement call sign and counts the same as 5T5 Mauritania.

At the end of May, the DXCC backlog at the DXCC Desk was 447 unprocessed applications, which included some 49,835 QSL cards. During the month of May, 530 applications (46,156 QSL cards) were received for endorsements and new awards.

Applications being sent out at the end of the month were received three and one-half weeks earlier. A few of the applications received prior to that time were waiting for paper records to be converted, and so had not yet been completed.

NCDXF

The Northern California DX Foundation's Board of Directors re-elected Eric Edberg, W6DU, as President for another full term. All other officers were also re-elected for full terms: Lou Beaudet, K6TMB, Vice President; John Troster, W6ISQ, Corresponding Secretary; Stanley Kaisel, K6UD, Recording Secretary, and Bruce Butler, W6OSP, Treasurer.

Josephine Clarke, WB6ZUC, and Kip Edwards, W6SZN, retired from the Board after many years of service. Bob Vallio, W6RGG, and Len Giraldi, K6ANP, were elected to fill these vacated positions. NCDXF members John Troster, W6ISQ; Rusty Epps, W6OAT; Dave Leeson, W6QHS; Steve Thomas, N6ST, and Howard Brainen, WZ6Z, were re-elected to serve another term.

In special acknowledgement, the Board of Directors gratefully thanks and highly commends Josephine Clarke, WB6ZUC, for her dedicated service to the NCDXF. For more than 10 years, she has managed, organized, and overseen the NCDXF film library. This is one of the Foundation's most interesting activity, whose collection has expanded from two slide shows to 128 different slide shows and video tapes with 450 copies for distribution to requesting organizations. In 1993 Jo shipped 364 shows to radio clubs all over the world. Thanks, Jo!

Clubs interested in presenting a slide or video program from the NCDXF, may send an SASE to NCDXF, P.O. Box 2378, Stanford, CA 94305, and request a listing of programs now available. These presentations are available free of charge. However, clubs are requested to pay the postage.

3YØPI by KK6EK

The book - *3YØPI* - written by Bob Schmieder, must be read to appreciate the work and effort that went into planning and running the famous 3YØPI Peter I Island DXpedition. Bob

DX Prediction — September 1994

Maximum usable frequency from West Coast, Central US and East Coast *(courtesy of Engineering Systems Incorporated, Box 939, Vienna, VA 22183)*.

The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Tokyo, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio de Janeiro. Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in parentheses for poor. UTC in hours.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(10)*	*12	*18	*(9)*	*15
12	*(15)*	*11	*15	*(13)*	*(13)*
14	*(21)*	*14	13	17	22
16	*(23)*	12	*(15)*	18	27
18	24	*(11)*	*(12)*	16	29
20	23	18	22	*(12)*	30
22	19	23	27	*(10)*	*31
24	*(17)*	*25	30	*(9)*	*26
2	15	23	30	8	*21
4	*14	19	27	*12	*18
6	*(12)*	16	25	*(10)*	*16
8	*(11)*	14	*21	*(9)*	*14

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(14)*	*(9)*	*17	*(9)*	*14
10	*(17)*	9	*15	*(8)*	*15
12	25	*12	13	16	18
14	29	*(13)*	*(16)*	18	24
16	29	*(12)*	*(14)*	18	*28
18	28	*(11)*	*(12)*	16	*30
20	23	19	23	*(12)*	*29
22	19	20	28	*(10)*	*31
24	*17	*(18)*	30	*(9)*	*26
2	*15	*(15)*	26	8	*21
4	*15	*(12)*	24	*11	*18
6	*(15)*	*(10)*	20	*10	*16

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*14	*(9)*	*17	*(9)*	*15
9	*(15)*	9	15	12	*15
11	25	*12	13	17	17
13	29	*(11)*	*(17)*	*19	*24
15	29	*(10)*	*(15)*	*19	*27
17	28	*(9)*	*(14)*	17	*29
19	*25	*(12)*	*(19)*	14	*29
21	21	*(17)*	26	*(10)*	*29
23	*18	*(18)*	29	9	*28
1	*16	*(14)*	26	9	*23
3	*13	*(11)*	24	8	*19
5	*16	*(10)*	20	*9	*17

was one of the operators. The book contains some 228 pages and contains such subjects as preparing for the DXpedition, a log of the operation, which is divided into four parts, and comments.

For those of you who like facts and figures, radio science results, and natural science results are included.

The book is also "a must" to those planning future DXpeditions to other remote locations. It also stresses the importance of having a leader who can keep things in control.

If you have complaints of the operating habits of the group you definitely must read this book, which includes some 64 black and white photographs and 78 illustrations. If, after reading the book, you still have complaints, then you must have only looked at the photos.

The cost of this paperbound book is $20, plus shipping ($2.00 in the United States and $15.00 elsewhere.) There is also a limited collector's edition, hardbound, numbered and personally signed by all of the nine team members. The cost of this special edition is $75 plus shipping. Please order from Robert W. Schmieder, KK6EK, 4295 Walnut Blvd, Walnut Creek, CA 94596 U.S.A. All profits go to help pay for the cost of the DXpedition.

3YØPI Op in trouble

Not mentioned in Bob's book is this unfortunate item. According to *The DX Bulletin*, Bob Wilbur, N4GCK, one of the DXpedition operators, pleaded guilty to one count of bank fraud and one count of theft of mail in connection with his theft of four checks totalling more than $133,000 last year. When his photo appeared in an Ann Arbor newspaper last December 20th, he knew that he was caught, but decided to go on the trip anyway. The newspaper had claimed that the stolen money was used to finance a six-week trip to Antarctica. For this Mr. Wilber received a 24 to 37-month sentence in a federal prison.

This is rather sad indeed. Surely, if he didn't have the finances to go on the DXpedition, he could have cancelled out. Was his presence on the DXpedition that important to him? How will this affect the outcome of the 3YØPI operation – or any future DXpedition for that matter?

However, there must be more to it as he wasn't expected to come up with $133,000 as his share. Bob is a commercial pilot by trade. With this criminal action no doubt his career has ended. Unless the laws regarding Amateur Radio licensing have changed, he will lose his ticket as well.

"Worked Ontario Ports" Award

Bob Morden, VE3EIM, offers an award for working ports in the Province of Ontario. There are no band or mode limitations, but all contacts must have been made since January 1, 1990. QSL cards are not required.

North American amateurs must contact at least ten different port stations located along the shores of Ontario. All others need only work five. Such port stations are Port Albert, Port Burwell, Port Royal, etc.

To apply for this award, please prepare a list of contacts showing call, date, time, mode and the location of the station worked. Include a fee of $2.00 (U.S.) or 10 IRC and send to: Mr. Robert Morden, VE3EIM, 106 Renny Cres., London, ON N6E 2C5, CANADA.

New Orleans DX Convention

The DX gathering in New Orleans this year will be Labor Day weekend, September 2 and 3, at the Royal Sonesta Hotel. This is the weekend prior to the W9DXCC gathering near Chicago, so here is a chance for visiting DXers to kill two birds with one stone. These back to back DX conventions will allow some sightseeing in New Orleans and Chicago.

The Royal Sonesta Hotel is in the French Quarter, so if you bring the XYL she can walk around as a tourist while you gather with the DXers.

The usual DX activities include QSL checking by Bill Moore, NC1L, of the ARRL DXCC Desk; presentations such as E31A, Eritrea DXpedition, by Vince Thompson, K5VT; VK9MM, Mellish Reef DXpedition, by Murray Adams, WA4DAN; 3Y0PI Peter I Island DXpedition, by Tony de Prato, WA4JQS and Terry Dubson, W6MKB; etc. Dick Ehrhorn, W4ETO, will be there to discuss his Alpha amplifiers.

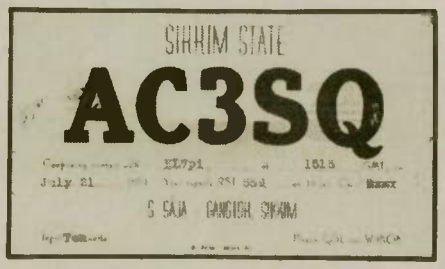
Advance registration is $50 which includes all DX sessions, Banquet, and ticket for registration prize. The deadline is August 15, where registration after that date is $60. Send your registration to: New Orleans International DX Convention, c/o Michael Mayer W5ZPA, 5836 Marcia Avenue, New Orleans, LA 70124. Additional information can be had by calling (daytime only) (504) 283-4143. The FAX number is (504) 524-2129. Checks should be made payable to New Orleans International DX Convention.

The Royal Sonesta Hotel has a special rate of $99 if made prior to August 1. This convention material was received too late to be included in last month's issue. Perhaps you could convince the reservations desk to give you the special rate. Call the hotel direct at (504) 586-0300.

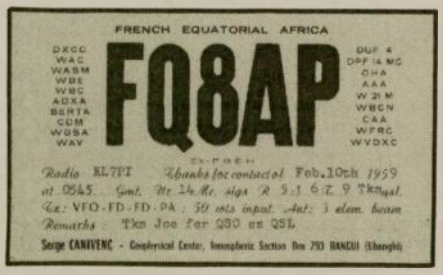
We were at the convention last year and had a good time. Unfortunately, we will be arriving in Bremerton, Washington, on the Alaska ferry the day the convention begins.

Antique QSL Department

John Munroe, W7KCN, provides our old-time QSL cards for this month. They are from the estate of Joe Paquette, KL7PI, who at one time resided in Juneau.



The first card is that of AC3SQ, operating from Sikkim. For this 21 July 1951 contact on 20 Meters the card indicates that he was running only 10 watts. Sikkim no longer counts as a separate DXCC country and since 1975, counts as India.



The next card is from another deleted DXCC country. On 10 February, 1959, Joe worked Serge Canivenc, signing FQ8AP in Bangui, French Equatorial Africa. The card indicates that his former call was F8SH. The following year this country was broken up into several new nations, with this particular one going to Central African Republic (TL).

QSL Routes

3AØJD	—HB9JD	3W3AV	—AA2AV
3D2RF	—WA6SLO	3XYØA	—YU1FW
3G1X	—CE1IDM	3Z3PLC	—SP3PLC
3G1Z	—CE1IDM	4F3AAL	—AA7AN

4K4/UZØQXL	—UAØKCL	JY8ED	—G3SED
4K8F	—UA9AB	JY8FN	—DK4FN
4L1AA	—CT1CJJ	JY8IC	—GJ4ICD
4L1FL	—4X6UF	JY8JH	—GØJHC
4M5X	—YV5ARV	JY8OX	—G3KOX
4N7DW	—YU7BJ	JY8VA	—DL7AV
4U1ITU	—I1RBJ	JY8ZC	—G4CCZ
	(See Note 1)	KØSN/CY9	—KØSN
5B4/DK7PE	—DK7PE	K5MK/VE1	—K5MK
5B4/OK1CZ	—OK1CZ	KH6M/C6A	—WA4WTG
5NØMVE	—ON7LX	L50D	—LU8DPM
5NØSVL	—WA4WTG	LB3RC/JW	—LB3RC
5W1AU	—W6KNH	LQØA	—LU1ARL
5Z4EO	—DLØMAR	LU7PAK	—LU1ARL
6E2T	—KD6QK	LVØA	—LU1ARL
6Y7M	—KF9PL	LX94IPA	—LX1NX
8P9GU	—DL7VOG	LY1DF	—LY3BP
9G1PW	—WB2YQH	LY6K	—LY3BH
9G1WJ	—K1SE	N9JCL/CY9	—KØSN
9J2CW	—JF2XTZ	NE8Z	—K8LJG
	(See Note 2)	NE8Z/XL3	—K8LJG
9J2HN	—JH8BKL	OD5JY	—JY5EC
9L3BM	—VE6VON	OHØ/DJ2PJ	—DJ2PJ
9M6JC	—JS1QHO	OHØ/DL5FF	—DL5FF
9V1XQ	—G4PKP	OHØAAQ	—OH2NRV
9Y4/HB9TU	—HB9TU	OHØX	—OH1NOA
A24KH	—DL6NW	OH6T	—OH6EI
A35MW	—VK2BEX	OI3AV/1	—OH3GZ
A35VI	—K8VIR	OI5AY	—OH3AY
AA9GZ/CY9	—KØSN	OK8ECX	—K8AAI
AHØG/NP4	—WA4WTG	OL5A	—OK1FYA
AHØT	—JA6BSM	OM1X	—OK3LZ
AH8J	—KH8AM	OM3A	—OM3KAG
AZ4F	—LU4FM	OM5A	—OM3BA
BVØL	—BV7FC	OM5M	—OM3KFF
C48A	—9A2AJ	OM7M	—OM3PA
C56/DK2OC	—DK2OC	OM9SMP	—OM3LA
C56/GØUCT	—G1GMZ	OO5ØUSA	—ON4TG
C6AHY	—WA4WTG	ORØTT	—ON7TK
C93BQ	—JH8OUZ	OR5ØUSA	—ON5PL
CG7G	—VE7YL	OS5ØUSA	—ON5WA
CI3LDT	—VE3LDT	OT4IPA	—ON4IPA
CI6AO	—VE6AO	OY/SM3TLG	—SM3TLG
CO2/K7JA	—K7JA	PØXJ	—K9XJ
CQ5MEG	—CS1AAS	PA6WPX	—PA3DMH
CS6T	—CT1AES	PJ5CX	—W1AF
CZ7Z	—VE7ZZZ	PJ8H	—W1AF
D3X	—CT1EGH	PYØZFB	—JH2MRA
DK3LQ/6W1	—6W1 Bureau	RK1OWZ	—WA7OBH
DLØHRO/P	—DL5KZA	RP4P	—RA4PO
DLØUDS	—DL8BL	RW1ZZ/1	—RA1ZA
DU7/SMØCNS	—SMØCNS	RX1AD	—UV1AD
EA8/DJ2IO	—DJ2IO	SN7L	—SP7PGK
EA9/EA7JB	—EA5OL	SO8DSX	—KB6DSX
ED1URS	—EA1EXY	SPØKO	—SP1PEA
ED2LAE	—EA2CBY	SU1KR	—OK2EC
ED5MCC	—EA5JC	SV5/DL3RAI	—DL3RAI
ED5MCC	—EA5JC	SV9/HA6NY	—HA6NY
EG7ITU	—EA7GFG	T9/SP2EXN	—SP2EXN
EL2FD	—K4XG	T91AAW	—9A2OT
EM2I	—UB5IIA	T91ELD	—S51VQ
EO5WJH	—LY1DS	T91ENS	—DJØJV
ER1PE	—I8YGZ	T92A	—S57MX
ER5AL	—YO4BII	TI4/AA7JM	—WA5TUD
EW2CR	—NF2K	TK/IK4HAL/P	—IK4HAL
EX8F	—DL8FCU	TK/IK2QIN/P	—IK2QIN
F/ON6JUN/P	—ON6SI	TM2T	—F6KDF
FK8FU	—NA5U	TM5COL	—F2VX
GBØPUO	—G3PRI	TM5FFI	—F6KDF
GBØSA	—Bureau	TM5OVL	—F2AI
GB4WCO	—GWØTKX	TM5OYO	—F3NV
GB5ØDBX	—Bureau	TM6JUN	—F6FKW
GB6PX	—G4MVA	TO5ORC	—FM5CW
GB8SH	—GM3ITN	TO9IS	—FYØEK
GMØ/W5ASP	—W5ASP	TT8PS	—F5OIJ
GS4TMS	—GMØKW	TU8SR	—OH8SR
HBØDA1WA	—DJØLC	UAØFHD	—UB5EOB
HB9G3GRC	—VE2GSX	UA3/KB6DSX	—KB6DSX
HH2CL	—F6AXY	UN7ID	—G3UKH
HI/DL5PV	—DL5PV	UN9PQ	—UL7PJQ
HKØ/DJ2PJ	—DJ2PJ	UR7GW	—VK4CRR
HSØZAA	—KM1R	US4IXQ	—WB7QXU
HSØZAK	—N4TMW	UU1JA	—N4NWT
HSØZAL	—N4TMW	UX7IB	—KA5TUF
HS8EFF	—HS1HSJ	UX9IO	—NA3O
HT1T	—SMØKCR	V21AK	—WA4WTG
IBØC	—IKØAZG	V31PH	—AI5P
II2M	—IK2SGC	V31WE	—WB5JHK
IO2L	—IK2QEI	VE8YEV/VY1	—VE8NC
IO9T	—IT9TQH	VE9AA/FP	—VE9AA
IQ2H	—IK2ILH	VE9ST	—VE1NJ
IQ4A	—I4EAT	VK9WO	—VK4CRR
IQ5RC	—I5VXG	VP5NC	—AA5NC
IR5R	—I5JHW	VQ9MD	—K8XF
ISØ/DJ8QP/P	—DJ8QP	VR6AB	—ZS1FJ
IT1ITU	—I1RBJ	VX7A	—VE7SV
J8/AHØG	—DK7PE	WB1BRE/VP9	—WB1BRE
JA1OEM/H44	—JA1OEM	WB1CBY/VE8	—WB1CBY
JWØH	—LA5NM	WB9OBX/CY9	—KØSN
JW4LN	—LA4LN	WC9E/CY9	—KØSN
JY6SIX	—G4CCZ	XK3QF	—VE3IMT
JY7SIX	—G4CCZ	XL1YX	—VE1YX

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Chuck, KM4NZ, Mgr.
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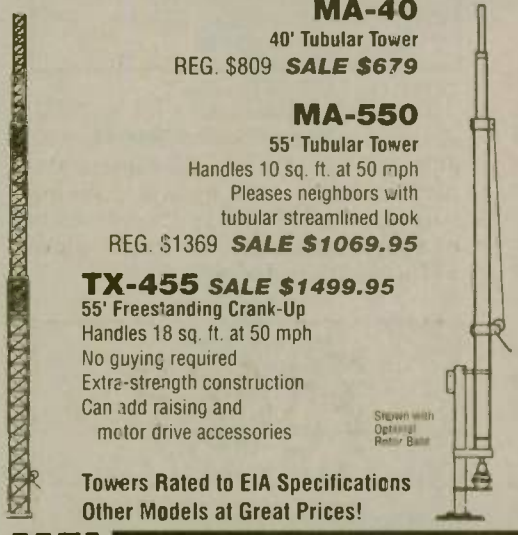

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40' Tubular Tower
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Handles 10 sq. ft. at 50 mph
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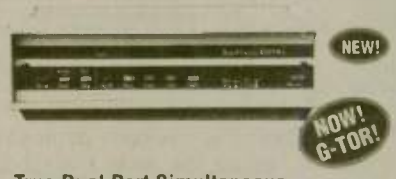

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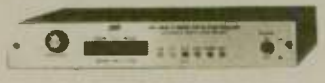

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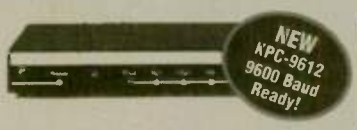

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Global Time Indicator

• Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world. Continuously moving - areas of day and night change as you watch • Mounts easily on wall • Size: 34 1/2" x 22 1/2"

Reg $1295. ***SALE $999.95***

From Bulgaria we have George, LZ2VP, one of the many contesters active from that country. Obviously, George's equipment is homebrew. Photo courtesy of LZ2VP.

XO1TK	—VO1TK	ZA/Z32KV	—YU5FCA
XQ8ABF	—CE8ABF	ZA3C	—IK7USP
XT2BW	—WB2YQH	ZD8OK	—N8ABW
YJ0AVH	—VK4CRR	ZF2GT	—NØTG
YS1VV	—WD4DCY	ZF2SP	—KAØJBX
YS1XS	—WD4PDZ	ZF2SQ	—WAØJTB
YXØAI	—WS4E (See Note 3)	ZF2WQ	—WB6SFA
		ZL3KG	—WB6EQX
YZ7A	—YU7JDE	ZS6IR	—DJ4JZ
Z39HAM	—YU5GBC		

5H3EM — Steve, P.O. Box 8903, Moshi, TANZANIA

6W1/F5PHW —Philippe Berger, F5PHW, 24 Lot Labracat, F-30800t Gilles, FRANCE

9G1MX — Shalom Melzer, P.O. Box 781, Accra, GHANA

9V1XQ — J. Jones, Jason Photo, 24 Mathew St, Liverpool L2 6RE, ENGLAND

A71EM — P.O. Box 9784, Doha, QATAR

A71FM — P.O. Box 1232, Doha, QATAR

AP2MMN —P.O. Box 9011, Lahore, PAKISTAN

CE7AOY — Percy Rauirch, CE7ZK, P.O. Box 15, Puerto Montt, CHILE

CY9CWI — WIARC, P.O. Box 884, Point-Claire/Dorval, PQ H9R 4Z6, CANADA

ET3SID — S. May, P.O. Box 60229, UNECA, Addis Ababa, ETHIOPIA

FM/F5PHW — Philippe Berger, F5PHW, 24 Lot Labracat, F-30800 St Gilles, FRANCE

FY/F5PHW — Philippe Berger, F5PHW, 24 Lot Labracat, F-30800 St Gilles, FRANCE

HR1/DK3JX —Wolfgang Schucht, P.O. Box 1793, Tegucigalpa, HONDURAS

HSØAC — HSØAC, P.O. Box 1300/NANA, Bangkok 11112, THAILAND

J28BS — Philippe Berger, F5PHW, 24 Lot Labracat, F-30800 St Gilles, FRANCE

KC4USB —Department of the Navy Byrd Surface Camp Antarctica, FPO San Francisco, CA 96601

KH2/VP9BP — Burton S. Paynter, 321 Johnson Road, NAV Hosp, Agana Heights, Guam 96919

LQØA — Sergio Daniel Vilchez-Temporini, LU1ARL, P.O. Box 454, C.P. 1000 Buenos Aires, ARGENTINA

LRØA — Sergio Daniel Vilchez-Temporini, LU1ARL, P.O. Box 454, C.P. 1000 Buenos Aires, ARGENTINA

LVØA — Sergio Daniel Vilchez-Temporini, LU1ARL, P.O. Box 454, C.P. 1000 Buenos Aires, ARGENTINA

PP5LL — P.O. Box 08, 88010-970 Florianopolis, SC, BRAZIL

T30DW — David Olley, P.O. Box 66, Bairiki, Tarawa, KIRIBATI

TR8VP — P.O. Box 264, Moanda, GABON

UNØAA — Yuri Ermolayev, P.O. Box 70, Aktau 466200, KASAKHSTAN (See Note 4).

V31IJ — P.O. Box 625, Belize City, BELIZE

V7X — Ken Hoppe, KH6HH, P.O. Box 31241, Honolulu, HI 96820

V73OR — Brian Grdosic, P.O. Box 1005, Majuro, Marshall Islands, MH 96960

V73XP —P.O. Box 30316, Honolulu, HI 96820

VKØCS — P.R. Hansen, 16 Rotuma St, Oakhurst, NSW 2761, AUSTRALIA

VK4YI — L.D. Peters, MacLeay Island, Moreton Bay, QLD 4165, AUSTRALIA

VR6ME —Mark Elmoos, P.O. Box 24, PITCAIRN ISLAND via NEW ZEALAND

VR6PAC — P.O. Box 73, PITCAIRN ISLAND via NEW ZEALAND

ZA/OK2PZW — P.O. Box 66, 678 11 Blansko, CZECH REPUBLIC

ZD7CTO — P.O. Box 24, Jamestown, ST HELENA ISLAND

ZD7WRG — John, P.O. Box 156, ST HELENA ISLAND

NOTES:

1. The 4U1ITU route applies for May 30 and 31, 1994, only.

2. This manager requests cards via the bureau.

3. This is a forwarding point. Please include sufficient funds or IRC for return from Venezuela.

4. This route applies for all contacts made since 1 January 1994.

Many thanks to the following contributors: LZ2VP, NL7TB, KD4YOT, KC5ALW, W5VBX, W6ISQ, N8FU, NE8Z, KDØJL, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7YS), Salt City DX Association (KB2G), The American Radio Relay League (K5FUV), The Low Band Monitor (KØCS), Long Skip (VA3JS), Inside DX (N2AU), DX News Sheet (G4DYO), QRZ DX (W5KNE), and The DX Bulletin (VP2ML).

Hope you are having a nice summer. 73 de John, N6JM. WR

434.0 MHz ATV DX record

TOM O'HARA, W6ORG

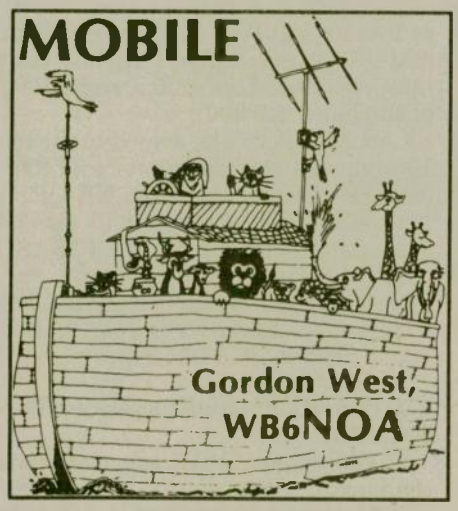
The summer tropo duct between Hawaii and the mainland opened strong enough 12 July for the first fast scan ATV reception of this 2509+ mile path.

Paul Lieb, KH6HME, switched the 432.0 CW beacon horizontal beams over to the 434.0 ATV transmitter system consisting of a 10 watt P.C. Electronics TC70-10 ATV transceiver driving a 100W Mirage D1010NR-ATV linear amp in the early afternoon of July 11th.

Video was plainly visible by Gordon West, WB6NOA, in Costa Mesa, CA. Gordon and Paul have been attempting this ATV path for over two years. He alerted me to start calling Southern California ATVers about the opening so they could switch their polarity and give it a try.

Mike Henkoski, KC6CCC, in San Clemente, CA got a good video tape recording and retransmitted it over two of the local ATV repeaters. The Elktronics call ID, and other detail was plainly visible in black and white, but just below signal strength for color, when the signal peaked at 2:35 p.m. PST.

Paul would transmit the video for 15 minutes on the hour and half hour. He did not have the TV at the Mauna Loa Volcano site 12 July but will try to receive for the first two-way in August when Gordon is there to help. WR



"Which will it be — Amateur or Marine SSB?"

Maritime mobile operators usually hit the high seas in September when their insurance kicks in, and hurricanes go out.

Long-range communications depend on high-frequency single sideband. Mariners do not need an Amateur Radio license to operate on marine ITU (International Telecommunications Union) ship-to-ship and ship-to-shore channels. Mariners need only hold a restricted operator's permit (ROP) and utilize marine SSB equipment specifically type-accepted to marine Part 80 rules and regulations.

Licensed amateur operators with a General class ticket or higher have full access to all worldwide ham bands when cruising within U.S. territorial waters, or cruising on an American flag vessel out on the international high seas. Hams cruising within the jurisdiction of other countries would need a reciprocal operating permit before transmitting on ham SSB within sight of shore.

Since ham bands and marine ITU channels are located within a few hundred kHz of each other, it seems natural that one common radio could serve both purposes. In an emergency, a ham is perfectly legal with rule 97.403 to use "any means of radio communication at its disposal. . . ." to call the Coast Guard for help — including dialing out of the ham band, into the Coast Guard duplex band, and squawking Mayday.

But for routine ship-to-ship and ship-to-shore communications, marine rule 80.203 clearly spells out that the HF SSB transceiver must have FCC Part 80 type acceptance and be listed on their type-accepted transmitter roster. Typical Amateur Radio HF equipment does not carry Part 80 credentials.

In the quest for a single HF SSB transceiver to meet both marine as well as ham radio requirements and rules, an old ham rule 97.11(b) seems to rule this out: ". . .the station must be separate from, and independent of, all other radio apparatus installed on the ship or aircraft. . . ." Well there goes a great idea of using a Part 80 marine SSB as both a marine set as well as a ham set — the popular SGC Model 2000, popular ICOM M-600 and M-700, the popular Kenwood TKM-707 and a new marine SSB coming out from Yaesu.

But within the Federal Communications Commission, there are two opinions about this old ham rule. George Dillon, Chief of the Marine & Aviation Division of the Commission, says the rule is clear, and the prudent mariner-ham would have both types of equipment onboard, coupled to one antenna system which is indeed permissible. Yet FCC Norfolk Engineer-in-Charge, Jerry Freeman, W4JJ, raises an interesting point that makes this rule more suited to compulsory radio equipped vessels than a private boat that a ham is going out on where no radio equipment is required. The point is, since ham rigs do not require type acceptance, and a ham rig can be any type of radio within good engineering practice for a clean output — from an old military surplus rig to a new HF radio with or without part 80 type acceptance — a ham could very well operate the SGC Model 2000 on the 64 ham frequencies preprogrammed into the equipment, plus any ham frequency available via the keypad, and then switch hats and use this Part 80 radio with the marine call letters on marine SSB to talk ship-to-ship, and ship-to-shore.

The best advice is to follow the letter of the law, and install a marine Part 80 SSB onboard for ship-to-ship and ship-to-shore, and a ham SSB for long-range ham calls with a General class license or higher. Other options could be the SGC Model 2000 advertised for both ham and marine use, or some of the other Part 80 marine radios from other manufacturers that work quite nicely on ham frequencies, too.

Under no circumstances would you modify a ham rig for marine SSB operation unless this was a last resort for emergency-only Mayday calls. In this case, anything goes.

As HF SSB equipment becomes more versatile, the idea of one radio serving multiple purposes certainly makes sense. By carefully reading over the Part 80 and Part 97 rules, you should be able to end up with equipment that will give you long-range SSB anywhere out on the high seas, keeping you in touch and part of the radio safety system when your nearest help is thousands of miles away. WR

YOUNG HAMS: Send in your news, features and ideas . . . let your voices be heard in ***Worldradio!***

Richard Fisher, KI6SN
1940 Wetherly St.
Riverside, CA 92506

"Quit Running Power," in Wisconsin

The proliferation of regional QRP organizations across the North American radio landscape in the last couple of years has been truly remarkable.

It was not too many log pages ago that QRPers could count on one hand the number of U.S. QRP clubs — chief among them QRP Amateur Radio Club International and the Michigan QRP Club. That was about it.

But a survey conducted in late 1993 and published in January 1994's ***Worldradio*** QRP column found more than a dozen regional groups have sprouted across the country, and the growth hasn't stopped yet.

The lastest organization to join the growing parade is WI-QRP, an association of Wisconsin QRPers formed June 1.

In its infancy, WI-QRP membership has quickly blossomed to more than two dozen, according to Tom Mitchell, KC3YD/9, who, incidentally, has club membership No. 001.

"Until 1 Sept. 1994, dues are voluntary — $5 or $10 would be appreciated — and whatever amount is contributed will pay that member's dues for the remainder of 1994 and all of 1995," Tom writes. "After 1 Sept., dues will be $10."

The club's newsletter was set for distribution in July, featuring the WI-QRP's logo.

"The response we've received thus far is most encouraging," Tom says, "and shows that Wisconsin amateurs really do want to 'Quit Running Power.'"

Radio amateurs interested in joining the club should write to: WI-QRP, P.O. Box 111, Brandon, WI 53919-0111.

This month: "QRP Afield - 1994"

Anyone who missed the fun of Field Day 1994 will have a chance this month to head out into the wild for a five-hour contest, compliments of the New England QRP Amateur Radio Club.

"QRP Afield-1994" is set for 17 Sept., from 1600Z to 2200Z, when NE-QRP is encouraging QRPers everywhere to "field test their radio equipment, using temporary antennas and non-commercial sources" of power.

The contest exchange for NE-QRP members will be RST, state/province/country (SPC), and NE-QRP membership number. For non-members it's RST, SPC and power output.

Stations will be classified by location and power output. The club offers these definitions:

Field location — Any location using battery/solar/natural power and temporary antennas.

Permanent location — Any location using commercial power and/or permanently installed antennas.

Low power QRP — Less than 1 watt output.

High power QRP — 1 to 5 watts output.

Scoring is based on location and output.

+1 point for each contact from a permanent location using high power QRP.

+2 points for each contact from a permanent location using low power QRP.

+4 points for each contact from a field location using high power QRP.

+8 points for each contact from a field location using low power QRP.

All contacts must be made from the same location. Each SPC worked counts as 1 unit in determining your end-of-contest multiplier, but they may be counted only once, regardless of the band worked.

Certificates will be issued to the top 10 highest scoring stations, and complete results will appear in NE-QRP's newsletter "72." Results will also be available by enclosing a No. 10 SASE with your contest submission.

Contest logs should be sent to Chet Bowles, AA1EX, RFD No. 2, Box 335L, Sharon, NH 03458.

Also: M-QRP's "Labor Day CW Sprint"

The Michigan QRP Club, one of the stalwarts of regionally-based QRP organizations, is hosting the "Labor Day CW Sprint" from 0000Z to 0400Z 5 Sept., in concert with the U.S. holiday.

Contest activity should principally be found on and around each of the internationally recognized QRP frequencies from 160 through 6 meters — excluding WARC bands. If you're interested in joining the fray, plan on listening on, or around 1.810, 3.560, 7.040, 14.060, 21.060, 28.060 or 50.060 MHz.

The sprint exchange is RST, state/province/country (SPC), and M-QRP membership number.

Non-members send RST, SPC and power output.

Stations will be divided into four power output classes:

A — 250 milliwatts or less.
B — 250 milliwatts to 1 watt.
C — 1 watt to 5 watts.'
D — More than 5 watts.

For specific information about scoring and multipliers, contact the club by writing: Michigan QRP Club, 654 Georgia, Marysville, MI 48040.

QRP reports from "The Spidermen"

The SP-1 "Spider" QRP transceiver kit, designed and distributed by Mike Agsten, WA8TXT, of the Sandusky, Ohio-based Lectrokit Co., continues to be of keen interest among many operators on the low power scene.

"I've had a ball with my 'Spider,'" writes Jim Lageson, WA0RPI, from Minneapolis. "I was impressed with the kit and building it was a breeze with the manual. The only changes I did were to mount the standard antenna, headphone and key jacks on the case to make it fully compatible with my station.

"The key on top is a nice touch, even though I never use it. I made the mistake of waiting to order the crystals, so had to sit and wait for them to arrive before I could fire it up." Jim says

he built his "Spider" for 30 Meters, "and use a delta loop for an antenna, and get about 800 milliwatts output.

"I've worked about 35 states, but my big thrill was working a Russian station one night. I still have not worked another 'Spider,' but being crystal controlled can limit you.

"My favorite frequency is 10.123 MHz. There seems to be a lot of other QRP stations up there."

Jim Cates, WA6GER, used jeweling on the front plate.

Jim says that the only mutations he'd recommend for future "Spiders" would be "to make a 20 Meter version of the kit, and more audio output.

"I usually connect my Autek audio filter to give me more audio and selectivity on the receiver.

Jim writes that he's interested in reading about other "Spidermen" in the ***Worldradio*** QRP column, "and what they have done to their rigs."

Jim Cates, WA6GER, of Sacramento, CA, built the "Spider," too, and fashioned a special front plate. "The panel is done in what the gunsmiths call 'jeweling,'" Jim writes.

The rig has an optional audio filter installed, "and all the RCA jacks and phonos are to accomodate various keyers, headphones, and accessories.

"The meter measures RF output. One LED is 'Power On,' the other is 'Transmit.' I used this little rig exclusively for four months of morning operation. I confirmed nine states, but more importantly, had many fine ragchews, which is my reason for getting on the air."

If you've got a tale to tell about building and operating the SP-1 "Spider," why not drop a line to the address at the head of this column and share your experiences with other QRPers. Pictures, of course, are always welcomed.

The "Spider" was the subject of a comprehensive review in July 1993's ***Worldradio*** QRP column.

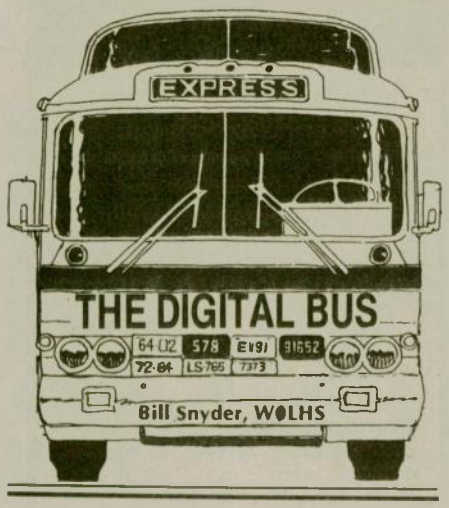
Catalog of the month

Any successful QRPer will atest to the fact that a good station antenna is a critical element of low power operation.

If you're interested in exploring the possibilities of using commercially-made wire antennas, then the free catalog from SPI-RO Manufacturing is worth a call to the company's Lakeland, Florida office.

SPI-RO offers a wide range of antennas spanning from all band trap dipoles and verticals to single band and limited space dipoles. There's also a selection of coaxial cable to choose from, and a variety of baluns.

For a free brochure, contact SPI-RO Manufacturing, Inc., P.O. Box 5500, Dept. 106, Lakeland, FL 33807; phone 813/646-7925. **WR**



Sometimes looking at the header on a packet message is more interesting than reading the text body. When I make a printout of a message, I always include the header so I can see how most long distance packet traffic jumps all over the country, while a few pieces sail straight as arrows to North Dakota. Long messages that are dispatched in numbered parts sequentially will many times use two or three different paths to find our Flickertail State. Rarely does a five-part message arrive in proper sequence; and, now and then, one or more of the five parts never gets here at all. So, I know there are flaws in the packet network that need fixing, but I have no solutions to offer at the moment. All I can do is squawk.

The following yarn started in a message exchange with Benjamin Young, KA6SIQ, in Milpitas, California. In his first message to me, Benjamin mentioned stereo FM propagation and that triggered my memory to recall two experiences of mine in New Guinea during the big war of the 1940s.

My duty assignment was communications officer of an Amphibian Engineer unit in General MacArthur's Southwest Pacific Theater of Operations. Our boat and shore troops ran the LCVP and LCM landing craft that put the infantry troops ashore in the Allied amphibious operations against the enemy.

As the war progressed, MacArthur's staff wanted to establish a VHF radio link to a little island off the coast of New Guinea that would become a staging base for the future military invasions of New Britain and Dutch New Guinea. I'm not sure of the exact intent of the experiment, but I was ordered to take a two-way VHF radio, normally used in communication between tanks, to a place called Tufi Harbor and test communications with Goodenough Island.

For the trip, we used a small 30 foot cabin cruiser that the Amphibs normally use for navigation training and landing craft guidance. It had an enclosed cabin to keep our equipment dry.

Before the moment the rig was carried onto our boat, I'd never seen the radio set we were to use in the test. I can't remember the frequency range of the unit (in the five or six Meter area, I guess), or what actual frequencies we were to use; my instructions were simply to use a certain numbered channel.

As this was a rush assignment and our boat was rather slow, we had to get under way immediately to meet our radio schedule. So that we could get familiar with the radio we set it up in the cabin of our Australian made boat, jury-rigged a mobile whip antenna on top of the cabin, and headed east out of Oro Bay in Papua for Tufi Harbor. The sun was setting, so we were in for an over-night trip.

Although this was a war zone, the water depth was such that submarines were not a threat to even large vessels, so the use of running lights was permitted in the area.

My operating crew and I settled down to learning about the radio. The operation was rather simple; a number of push buttons controlled the frequency. As we rocked and sloshed along in the sea at rather slow speed we tested with the Oro Bay shore station. Everything worked okay.

My curiosity got the best of me, so I tried the other push buttons. One by one, I punched the buttons. After a few dead channels, the cabin suddenly filled with music! Music on a tank radio? What a surprise. So I left it on and waited for some hint of the source.

When the station identified itself as required by the FCC, I discovered it was a commercial FM station in southern California. It was using a W6X?? experimental callsign. (In those days the FCC issued calls from the tail end of the alphabet for commercial licensees of "experimental" services. I know, I had one for taxi cab two-way service right after the war).

The signal was 5x9; propagation must have been perfect from California. Needless to say, we let the music play until it faded out. That was my only experience with that equipment, but it was a memorable one.

Benjamin had sent me that bit about stereo FM, so I related the above story to him.

Here's part of his reply:

"On my message number one I got sidetracked into stereo FM and never got to the real story. I wanted to comment on the crazy pathways that packet messages take.

"I just set up a packet station for a friend and sent a test message to myself. Her PBBS is Menlo Park (you can read that as Palo Alto/Stanford) and mine is Sunnyvale. This should have been a piece of cake. They are line of sight, less than ten miles apart, and on the same side of the bay.

"This was not to be the case. Instead, the little message went out of the Menlo Park PBBS and north up the peninsula to Daly City (just short of San Francisco), across the bay to Berkley/Oakland, down to Fremont and across the bay again to land in NØARY in Sunnyvale. Now that should have taken three hours to make the hop, but it spent the sunny weekend in Berkely for 40 hours.

"It looks like the "pipe" going into Menlo Park is through Daly City and the "pipe" into Sunnyvale is via Fremont. Now if we could just install a JUNK@ALLUS filter, things would be nicer — not fixed, but nicer."

I agree with Benjamin whole heartedly. I sort of have it that way in my BBS. Because mine is now only a standby backup for the local club machine, I filter my incoming messages through the club station. They forward only those categories I want; plus, of course, any personal traffic for me. Instead of having thousands of messages in mine, my total stored traffic runs about 50 to 100 most of the time. I get all the AMSAT type

traffic and those of local interest. Works great.

Meanwhile back at Tufi Harbor. We hauled the radio up to the top of the cliff, set it up in the Australian District Commissioner's grass shack office, and put it on the air for the test. The DC's house was on a high plateau overlooking the Pacific Ocean. It was a beautiful spot for vista, radio and breeze. I had been given a fifth of gin to bring to the DC as a present from a missionary friend of his, so I gave it to the Commissioner and we shared it with ice cubes made in his kerosene driven refrigerator.

The radio, as I recall, worked fine with Goodenough Island. I tried to demonstrate to the DC how FM broadcast radio from the states worked but no luck. Before I left Tufi Harbor, I carefully marked our location of the antenna on the nautical chart of the area, which by the way, had been copied from a German survey chart made during the days of World War I. All of this took place in November, 1943. Now let's jump from Papua, New Guinea to Hollandia in Dutch New Guinea, and in time, about seven months later. I was then the radio officer for the Signal Corps unit that supported the task force headquarters that invaded and recaptured the area.

My radio platoon regularly helped the US Army Topographic Mapping Company by tuning in radio time signals from the USA so the survey platoon could rate their chronometers. Chronometers were being used to provide highly accurate clock time for the latitude and longitude calculations necessary when using star-sight observations. The topo company was revising the maps and nautical charts used by army and navy personnel.

One night I was in the radio tent when the topo company crew arrived to get the daily time tick from the US. I asked the sergeant in charge of the survey platoon how accurate the charts and maps really were. "Not so bad around here," he said, "maps are maybe two or three miles off from where they should be, but the worst we've seen is at Tufi Harbor in Papua. There the German nautical charts are 18 miles off."

Nowadays all that sergeant and his platoon would need to check the maps is a GPS (Global Positioning System) hand held unit. I've seen them advertised for $600 and the accuracy is to about 50 feet or thereabouts. I understand some of my fisherman friends now use GPS gear to chart and locate their personal fishing holes in the Minnesota lake country. Another great gift from the space age of America.

If I still owned an airplane, I surely would have a GPS system for navigation, too. There's been a lot of advances in radio usage since those days of World War II, ain't there?

EAVESDROPPINGS

. . . HAM RADIO IS GOOD FOR THE SOLE, SOME SAY. . . WHO IS HIRAM PERCY MAXIM? IS HE SOME KIND OF POLITICIAN? . . . MY ANTENNA HAS ONE ELEMENT MISSING, SOMEONE MUST HAVE STOLEN IT. . . NICE TO HEAR YOU CLUTTERING UP THE BAND AGAIN, OLD MAN. . . MY HAM SHACK IS LOCATED BETWEEN THE GOLDEN GATE BRIDGE AND THE SAN ANDREAS FAULT. . . WHAT THIS KEYBOARD NEEDS IS MORE SPACE TO PUT MY FAT FINGERS IN. . . I AM AN APPLIANCE OPERATOR OF THE WORST KIND, I LOST MY INSTRUCTION BOOK. . . I GRADUATED IN JUNE SO NOW I AM ABOUT TO FACE THE WORLD OF COMMERCE AND INDUSTRY WITH A CLEAR CONSCIENCE AND A FLAT POCKETBOOK. . . MY WIFE IS MAD AT ME FOR THE DUST THAT HAS COLLECTED ON THE PILE OF CABLES IN BACK OF MY COMPUTER DESK. . . I'VE GOT TWO CD-ROMS WITH HAM CALLS IN THEM, THE BUCKMASTER AND THE QRZ!, BUT I CAN'T FIND HIM IN EITHER OF THEM. . . TIME TO SIGN OFF AND BREAK FAST WITH A FAST BREAK.

If you wish to communicate with me, my packet address is WØLHS @ WØLHS.#SEND.ND.USA.NA or by writing me, Bill Snyder, 1514 South 12th St., Fargo, ND 58103. 73 DIT DIT. WR

One a day

Joseph Falcone, AA8HV, would like to announce the formation of the "One-A-Day CW Radio Club." This club promotes the use of CW by its members making at least one CW contact per day. Awards will be given for making at least one CW contact per day for a year, working all States no more than one per day, and working DXCC no more than one country per day. Active participation in the club will raise the level of CW activity on the bands and will give incentive for operators to "pound brass" at least once a day. All awards can be earned starting March 1, 1994. For an application and a club number please send a SASE to Joseph Falcone, AA8HV, 3000 Town Center, Ste. 2370, Southfield, MI 48075. WR

ESTABLISH A HAM TESTING CENTER IN YOUR AREA

As of 1984, all ham radio license testing is handled by the amateur radio community itself. Teams of three Extra Class volunteer examiners (VE's) can now conduct all ham license upgrade examinations.

W5YI-VEC, the initial national VE Coordinator approved by the FCC, oversees the largest alternative (to the ARRL) testing program in the U.S. *You can be a part of it* by following the simple testing instructions provided.

Administering Technician through Extra Class examinations is no harder than administering Novice examinations – which VE's have done for decades. We offer. . . fastest VE accreditation, complete instructions, immediate testing. . . with testing fees (expense reimbursement) shared with the VE team.

Send an SASE today for a VE application if you are an Extra Class amateur and serious about conducting periodic amateur radio examination sessions in your area so that others may upgrade.

HAM IT UP!

W5YI-VEC
P.O. Box #10101
Dallas, TX 75207
(817) 461-6443

Let's get Amateur Radio growing again!

Search And Rescue Communications

Jerry Wellman, WB7ULH
P.O. Box 11445
Salt Lake City, UT 84147

"Can you put a price on training?" or so asked the advertisement. My first reaction to this pitch is a feeling that I can't afford what ever it is they're offering. Have you noticed the price of training lately? Wow, it's expensive to be qualified, certified and state-of-the-art.

Perhaps I'm biased against high training costs, but then I'm not in the business of providing training either. I recall being in an Emergency Medical Technician class years ago and it was a freebie, part of a Department of Transportation effort to upgrade rural medical service. In retrospect, I'm sure someone paid, it just wasn't me. But let's say your group (or perhaps a sponsoring government agency) is going to pay for some training. How do you get your money's worth?

Core competency

Let's explore training. Some emergency response groups have regular formal courses they require for yearly certification. Some of the Mountain Rescue groups are in this category and see it as a way to ensure team safety and keep skills sharp. Other groups feel that once you've done the deed and have the block checked off, you're done, never to see the classroom again. (Of course there are groups for which training is only a passing thought.)

This month I want to introduce the idea of core competency. Core competency is what you do best. Maybe you're a technical rescue group. Maybe you're good at providing field communications. Some groups such as the Civil Air Patrol specialize in aeronautical search while the Coast Guard Auxiliary is good at water search.

Those of you in MARS develop a core competency in net operations and message deliveries. Whatever it is that you or your group does best, is your core competency.

Training is most effective and productive if you establish a program to support what you do best. For example, if your communications group specializes in handling traffic for multiple agencies (comm linking), your training might be on net control, setting up at agencies headquarters, equipment readiness, troubleshooting, signal quality, voice techniques, etc.

Perhaps a group of real technical folk have established an emergency support team. Their training might be on how to use various items of test gear, or creative ways to make use of a spectrum analyzer. They would know advantages and characteristics of coax and antenna theory. Classes might be held on field repairs and roof-top troubleshooting.

Do it better

The idea is to develop what you do best and do it better — and training is the key to making it happen. I'm a firm believer in having a broad range of experiences and skills yet these don't give you a core competency that puts you in demand. Once you are focused and have competency, it is OK to explore secondary skills, just don't get side tracked.

Bringing this down to the individual level, I would suggest each of us should be competent with our own equipment. This implies we know quickly how to change frequencies, set transmit offsets, turn on or off various features and know what all the knobs do. We should know how to effect minor repairs on our own batteries, antennas, power sources and feed lines. We become valuable to an SAR team because we are good at our own core competency, that of a communicator.

Another word of advice along the lines of training is to find a good teacher. This almost sounds too simple, but think of effective teachers you've encountered. They're good not because of personal expertise in a skill, but because they can teach. Good teachers prepare and know their subject. But they teach! Just because someone is an expert in a technical skill does NOT mean they can teach it to someone else.

I've attended many classes taught by experts, even world-class experts. Some have also been good teachers and some have been pretty boring speakers. Teaching is a skill. You don't mysteriously acquire it as you develop an expertise in an area such as incident command. Teaching requires preparation, planning, delivery skills, motivation skills, ability to "read" the audience, ability to convey information at an audience level and having good "people" skills.

Find good teachers

The best advice I can give for finding good teachers among members of your group is to watch and ask. The best teachers/trainers are going to be the ones that people like, and learn from. If you observe you'll make the right choice.

Let's talk about the latest buzz concept: "train the trainer." I keep hearing this from government and private groups and the idea seems to be one of giving someone skills or insight in order that they might return to a

group and pass along the training, i.e. become the teacher. It breaks down when the classes become status symbols and not vehicles of group training.

Let's say, for example, the only people who attend are a select inner sanctum and none are particularly good teachers. It is great these people are being trained, but when the large-scale emergency hits, just how much can they do on their own? Isn't the idea to create a trained team? I always question the motives when one or two seem to collect all the training diplomas, but the group never quite gets around to the "pass along the training" phase.

Who do you send to seminars and "train the trainer" functions? Your group teacher. When does the process work? When your teacher returns and teaches your group. Other than that, you're just fooling yourselves into thinking you're prepared and trained.

Make your training program effective! Decide training is important for your group, have a planned schedule, determine some target dates for minimum competency and get going. Focus on your core competencies, identify the best teachers you have, and get them involved teaching the group. Training is what sets you apart from other groups and makes you the state-of-the-art professionals!

Hindsight notes

Sometimes I'm frustrated when I participate on a search mission or a training exercise because I forgot to bring something I needed. It's rewarding and always a learning experience, but after I get home my mind is busy thinking of things I should have done differently or items I should have brought.

An idea came following a recent air search exercise when I berated myself for leaving some things home that would have solved a couple of minor glitches. What about doing a personal skill and equipment inventory? Sort of a personal brag sheet.

Here's the thought. First list all your skills. Write down all the certifications you hold and the specific things you do well. For each skill or competency, list all the goodies needed to do an excellent job. This becomes your "learning" list. It's a personal brag sheet because you can see how many skills you have or are developing, but this is yours alone, don't share it with anyone.

Carry it with you and as you expand equipment needs for your skills, add to your list. Here's where I'm going with this idea. Let's say you're an expert in setting up field communications stations. To accomplish this you have a bunch of stuff you need such as radios, antennas, coax, repair kits, spare parts, message pads, clip boards, etc. Every time you are asked to set up a field station, you grab your skill sheet and ensure you're prepared.

Now let's say you've set up a field station and someone says it would be neat if you could set up a low-power, in-band local-coverage repeater. You say you could, but the linking module is back at home so you can't. You now add this to your list so you can do a better job next time you set up a field station. What you're building is an inventory list by skill function. The best part is that you're writing it down so you don't forget for the next time, and your list is built around your own expertise. When you show up at the mission headquarters, you've looked over your function list and know what you can do.

When the incident commander presents a problem, you are prepared to solve it and have the needed stuff to do it. One thing I've noticed on search missions is that "glitches" repeat themselves, we just forget in the heat of the "next" emergency. Once in a while the situation is unique, but almost everything you encounter is something you saw last time or the time before. With experience and some note taking, you can meet almost every challenge.

My point is that you cannot, in the excitement of hitting the road, remember everything you need for a particular function. You're thinking big picture and quick response and a lot of little things get overlooked. Take notes, critique your performance, plan for next time, and continue improving. You know, you could also share ideas (not your brag sheets!) with others during training meetings. Learn from what others experienced and see what equipment you have that might meet situations someone else encountered.

Have a great summer! Keep cool and be prepared. **WR**

Have a funny story about our favorite hobby?

Send it to: Amateur "Hi"
Worldradio
2120 28th St.
Sacramento CA 91518

FM & REPEATERS REPEATERS REPEATERS REPEATERS REPEATERS

BILL PASTERNAK, WA6ITF

20,000 systems and growing

Can you believe that there are now over twenty thousand coordinated FM repeaters, packet bulletin boards and propagation beacons on the air in the United States? Well those are the numbers contained in the new edition of the ARRL Repeater Directory that made its debut at the Dayton Hamvention in late April.

The League says that the 1994-95 edition of its repeater directory has been reorganized for easier use on the run. This should make it easier to find the listings of the coordinated and registered FM relay devices nationwide. The new directory does not contain an estimated 5,000 to 10,000 more uncoordinated repeaters, private repeaters, private remote-base systems and unlisted packet BBS that are also known to exist.

Fallout from an FCC letter

When this column premiered a few months ago, our feature story concerned a letter from FCC Private Radio Bureau Chief John B. Johnston, W3BE, to Southern California attorney Sidney Radus, N6OMS. In it, Johnston stated that, in effect, any repeater licensee has the legal right to ban any other amateur from using the licensee's station for the purpose of having his user communications repeated.

The letter was used by Radus who was representing the Claremont Amateur Radio Association in court in its successful attempt to ban Tim Seawolf, KJ5KE, from using the club's repeaters or in any way harassing any member of the organization. The club was successful in obtaining a restraining order against Seawolf and then decided to go after several other area hams that the club deemed as undesirables. And once again, CLARA has been successful. This is because another Orange County California Superior Court judge has ruled that his court does have jurisdiction over the on-air activities of ham radio operators and has banned two Southern California hams from using a local repeater.

What the judge said

Judge Robert Hutson quoted chapter and verse from the FCC Amateur Service rules in making his decision to grant the Claremont Amateur Repeater Association a permanent restraining order against Anthony Cardenas, WA6IGJ, and Drew Feldman, N3KSO. The two hams contended that the state court had no jurisdiction in the matter and in a pretrial motion attempted to get the matter transferred to the venue of a federal court. But Judge Hutson said no.

"The argument that the other side (Cardenas and Feldman) was making is that only a federal court had jurisdiction. They said that the federal government had preempted all of these areas. What Judge Hutson found was that while federal law applied, state and local law also applied, and hence then there is no preemption. States are free to act.

"He applied the decision in that he refused to dismiss the matter and force it into the federal court system. He said that he had the jurisdiction to hear the matter and to adjudicate it," said Radus.

A courtroom observer, Prof. Roy Tucker, N6TK, expressed his opinion that Judge Hutson had been extremely fair in his handling of the case. "In my estimation he was. . . quite fair. The two amateurs defended themselves without a lawyer (pro per)... The judge leaned over backward to help them (with the legal system) when it came to presenting testimony or filing objections. It seemed like every other question was objected to by somebody."

The restraining orders against Cardenas and Feldman follow the terms similar to the one issued to KJ5KE. They are barred from attending club functions, must keep at least 300 feet from any club member, may not operate over a CLARA repeater or on any repeater input or output frequency. The two were also ordered to pay both court costs and attorney fees as well.

An appeal was likely...but

But an appeal by Cardenas and Feldman seemed likely. At least this is the word passed on by a friend of the two Southern California hams.That person says the appeal will be based on the ground that no civil court has any jurisdiction over matters of federally licensed communications.

Cardenas has been heard on the air talking about a similar case. As reported in the *Westlink Report* ham radio newsletter, Cardenas is quoted as saying that a ham named Richard Boston, call sign K6AU, was litigated back in the early 1970s by a group known as the WestCARS Net.

Either by cross complaint or his own litigation — nobody is really certain — Boston eventually prevailed in court. Many hams with knowledge of legal precedents coming out of California believe that the Boston versus WestCARS decision may be the precedent that overturns the finding in the matter of Clara versus Cardenas and Feldman.

My *Newsline* organization and several other ham radio news agencies have attempted to contact K6AU to learn more about the court action he was involved in more than two decades ago but so far he has been unavailable for comment.

But the foregoing became a moot point in late May when the date passed for an appeal to be filed, and no action had been taken by either ham. As a result, the Orange County Superior Court decision to issue the restraining orders against WA6IGJ and N3KSO

not only stands, but it also becomes case precedent in California. And it's the last two words "in California" that are very important.

Will it work for you?

As this matter has unfolded, I have heard from repeater owners in various locations around the country. These are hams whose systems are suffering from various kinds "user abuses" that seem to have no solution other than banning those hams causing the problem from operating through a given repeater. The problem is that it is easy to say "stay off my repeater" but in practicality, those causing the problems consider them naught but empty words. So we asked attorney Radus if what he accomplished is applicable elsewhere.

N6OMS says that it is his view that this loophole in federal regulation applies only to the on-the-air operation of a radio amateur in cases where his or her operation may cause harm to other hams. He doubts that it could be construed as giving states and municipalities total control over Amateur Radio operations because this appears to be the only place in Part 97 where the FCC gives any authority to other jurisdictions.

Radus is licensed to practice law only in California. Because of this he says that the matter in question cannot be generalized since civil harassment laws vary from state to state. As such, he is not about to give specific recommendations to hams living under other jurisdictions on how to handle a problem like that suffered by his client. He does, however, feel that ham radio groups in other jurisdictions can at least look into civil action as an alternative to trying to get action from a seemingly hesitant FCC.

"There are several approaches other than civil harassment which is based on a specific California statute. There is also the concept of trespass to private property."

"In most states there may be laws applicable to theft of use which is generally a punishable action. If you steal the use of someone else's equipment you can be prosecuted ....It's the same type of laws that might apply to the theft of cellular telephone service," Radus said.

It should be noted that the CLARA 2 Meter repeater transferred from "open" to "Private" category as recognized under the auspices of the Two Meter Area Spectrum Management Association of Southern California prior to attorney Radus initiating the legal proceedings against Seawolf, Cardenas and Feldman.

New San Diego ATV repeater

Let's end this month on a visual note with word that San Diego, California, has a new ATV repeater. Sybil Albright, W6GIC, tells us that she along with WB9COY, KB6CMU and WA6SVT proposed the system to the Palomar Amateur Radio club for their site atop Palomar Mountain in late 1993. The club approved the project this past January and work was begun to bring the idea to reality.

The repeater was built from scratch by Bill Smith, KB6CMU. It went into service on May 14, and operates with an input center frequency of 919.25 MHz and outputs crossband to 1241.25 MHz.

Sybil says that this completes only phase 1 of the project. Phase 2 will be the installation of additional receivers at a site looking north. This may make it possible to link the new San Diego system into the Los Angeles area Amateur Television Network. Phase 3 will be an additional portable ATV station with at least two wireless microphone receivers and multiple camera inputs to allow televising of social events as well as emergency situations. Sybil notes that the addition of the remote receivers and mobile unit will permit emergency agencies such as San Diego County Air Evac to monitor emergency situations using off-air ATV signals. The repeater will also routinely rebroadcast NASA Select video and audio during SAREX space shuttle flights.

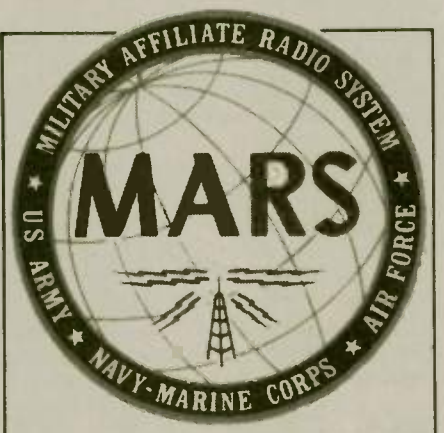
New Jersey repeater jammer pays reduced fine

Back east, a small but significant win for our side. It comes in a report in the *ARRL Letter* that says a New Jersey ham has paid a fine for interfering with a New York City repeater. John Lickun, N2MVZ, of Little Falls admitted that he was the source of interference to the W2SNM repeater, located in mid-town Manhattan, after being located by the New York City FCC Office last July. Lickun was originally issued a Notice of Apparent Liability to Monetary Forfeiture in the amount of $1000 but that was lowered to $250 after he apologized for his jamming of the system.

Coming next month

The big question of 1992 was: "Should Novices be permitted to hold the trustee license to repeaters?" The answer from the FCC was no! But was it the right decision? Many Novices are also saying "no!" The story on this still unresolved controversy next month.

FM and Repeater column author Bill Pasternak, WA6ITF, receives mail at 28197 Robin Avenue, Saugus, CA 91350. His 24-hour/day voice and fax line is 805/296-7180. He can also be reached by electronic mail on the following services to the mailboxes: (GEnie) B.Pasternak; (Internet) b.pasternak@genie.geis.com; (America Online) BILLWA6ITF; (MCI Electronic Mail) 324-1437. WR



Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

With the Dayton Hamvention over, and the dawn of May 2, 1994 about to break, the Hope Hotel on the grounds of Wright-Patterson AFB is very quiet. Everybody has gone home ... everybody, that is, except for forty-two (42) hardy MARS members with a penchant for three days of solid work. The worldwide Army MARS In-Progress-Review (I.P.R.) conference is about to begin. For Chief Sutton and the Directors, several preliminary meetings have already been held which are intended to keep the conference sessions on track. There is much to be done. In order to give the conferees opportunities to openly express their viewpoints, each session had to be very well organized.

This conference traditionally follows the Dayton Hamvention. It is during the I.P.R. that the shaping and honing of the future of Army MARS takes place.

Attendees included Chief Army MARS, CONUS (CONtinental United States) Army Mars Director, Two Overseas Command Directors, the three CONUS Directors, seven Chief's Special Staff members (each with a well-defined area of expertise), seven State Directors, representatives from the three Area Gateway stations, volunteer Army MARS member from Germany, and other volunteer Army MARS members from several states. We also had an active Army guest who is an Air Force MARS member. This list illustrates the skills and talents that were available to address the vital work at hand. This reporter found the experience of working with these people exhilarating. Army MARS is blessed with highly capable and highly dedicated people at all levels.

The tone, agenda and focus of the I.P.R. were set by the speakers who opened each session.

Introduction, Initial Presentation — R. Sutton, AAA9A
DOD Mars Review Panel Briefing — R. Sutton, AAA9A
Emergency Operations — D. Martin, AAA9ED
High Tech Planning — W. Morgan, AAA9HT
Frequency Management — B. Dixon, AAA9FM
Overseas Operations:
Korea and Pacific — A. Lamb, ABM4K
Germany — J. Robb, AEM1A
Public Relations — L. Matthew, AAA9PR
PAM Coordination — A. Wertz, AAA9AC

This year, especially, one of the changing characteristics of Army MARS became defined. Army MARS will be called upon to provide primary source information to our Federal users during the FIRST seventy-two hours of any disaster. The emergency missions of Army MARS are deeply established in Army Directives and the legal mandates upon which the existence of Army MARS is based. As has been reported in this column previously, the early information aspect of the Army MARS mission was never more dramatically demonstrated than in the California Earthquake earlier this year.

In terms of emergency capability and compatibility with other Federal agencies, Army MARS, as did Air Force and NavyMarineCorps MARS, participated in the FEMA National Emergency Communications Net on June 1, 1994. The participation on FEMA frequencies was outstanding and proved MARS capability for interaction with other agencies as needed. The fact that the FEMA operation began several hours ahead of the preannounced time created a real-time notification need on the part of all of Army MARS. This real-time notification was very quickly carried out, and Army MARS was on the air and operational within minutes of FEMA's early start. According to an Air Force MARS report, a FEMA analyst reported that 30 different Federal agencies participated in the test, including the three services MARS. A total of 1820 check-ins from all agencies were recorded during the 27 hours of net operation. Of this total, the combined MARS services accounted for an astounding 1476 or approximately 81.1% of all agency check-ins. "Army led the pack with 50% (735) of the total, the Navy-Marine Corps and Air Force MARS followed in respective order."

A FEMA official wrote, according to this same report, "Would have been a short net without MARS!" With this performance, Army MARS is well established as being capable of performing its role of early information relay to the Federal support agencies on the agency frequencies or on their own MARS frequencies.

Army MARS is determined to keep abreast of and participate in newer high-tech modes of operation. These modes are NOT intended to replace HF/VHF radio modes. They are intended to assume a value-added place in Army MARS communications. The blend of all modes of operation can mean dramatic increases in the effectiveness of Army MARS. This blend could well determine the future of Army MARS and its value to its customers. Army MARS must be able to meet its users on the users' communications terms. Army MARS must not be relegated to the sidelines because of lack of development in high tech areas and a willingness to utilize these areas fully.

Many other areas of Army MARS interests, as represented in the speaker list above, were fully discussed during the conference. Space, again, precludes full coverage here. These topics will be discussed as they develop in future columns.

The other major emphasis at this year's I.P.R. was the continuation of work on the new Army MARS PAM (the replacement operational document which will replace the Field Manual currently in use). Several lively discussions arose over recommended changes or, in some cases, lack of changes. If the discussions did not seem resolvable on the floor of the conference, Mr. Sutton, AAA9A, set up committees in order to resolve open issues and to report to the full conference on the next day. It was a system that he used well to keep the conference moving. With all the topics that needed to be addressed, his leadership enabled us to accomplish everything necessary to move Army MARS forward. This fine leadership will continue to make ...

Army MARS ... Proud ... Professional ... Ready **WR**

Turn a friend on to ham radio!

Visit Your Local RADIO CLUB

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

ALABAMA

Montgomery Amateur Radio Club, (W4AP). P.O. Box 3141, Montgomery, AL 36109. Meets 3rd Mon./monthly, 7 p.m., State Trooper Dist. Office, Coliseum Blvd. & Federal Dr. Nets Sun. 8:30 p.m. 146.84(-) & Thurs. 8:15 p.m. 147.18(+). Info: Fred, K8AJX, (205) 270-0909.

ALASKA

North Pole Hamsters ARC. Meets 1st Mon./monthly, 7 p.m., VFW Bldg., Old Rich Hwy. & VFW St., P.O. Box 56424, North Pole, AK 99705.

South Central Radio Club. 8023 E. 11th Ct., Anchorage, AK. Meets 2nd Fri./monthly, 7 p.m., UAA Business Ed. Bldg., Rm. 220. KL7CC, (907) 338-0662 for info. Club rptr: KL7CC/R 146.97(-) PL 103.5 Hz.

ARIZONA

Central Arizona DX Assoc., (CADXA). Meets 1st Thurs./monthly, 7 p.m., Salt River Project Pera Club, 1/2 mi. West of 68th & Continental Dr., Scottsdale, AZ. Rptr. K5VT 147.32(+). Packet Cluster nodes (S): 145.09, 144.93, 145.03. Info: (800) 283-4319 or (602) 876-2718.

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. WA7KYT/R 146.76(-) rptr.

Scottsdale Amateur Club. Meets 1st Wed./monthly, 7:00 p.m., Scottsdale Sr. Cntr., 7375 E. 2nd St., Scottsdale, AZ. Net Tues., 7 p.m., 147.18(+) rptr. Info: Barbara Myers, KB7UKD, (602) 837-6492.

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. Meets 2nd Sat./monthly, 7:15 p.m., Pima Co. Sheriff Bldg., 1750 E. Benson Hwy. Net Thurs. 7:30 p.m. 146.82(-), 146.88(-), 147.08(-), 448.550(-), & 145.15 Packet.

CALIFORNIA

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

Amateur Radio Club of El Cajon, WA6BGS. P.O. Box 50, El Cajon, CA 92022. Meets 2nd Thurs./monthly, 7 p.m., La Mesa Church of Christ, 5150 Jackson Dr., La Mesa, CA. 224.08(-). PL 107.2. Nets 147.570 Wed./Sat., 7 p.m. Info: (619) 697-2700.

Calveras Amateur Radio Society, (CARS), WA6YGA. P.O. Box 391, Angels Camp, CA 95222. Meets 3rd Thurs./monthly, 7:30 p.m., Fire Dept., 1404 Hwy 4, Angels Camp, CA. Net each Mon., 7:30 p.m., WB6MFV/R, 145.170(-), PL 100 Hz. Contact N6EL, Lloyd, (209) 754-3714.

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94803-0661. Meets 2nd Sun./monthly (except May & Dec.), 7 a.m., Baker's Square Restaurant in Richmond, CA. Info: Ed Caine, KA6OFR, (707) 996-0962.

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 8 p.m.-10 p.m., West Co Times Bldg., 4301 Lakeside Dr., Richmond, CA 94806. Info: Rachel Lewellen KB6LHR, (510) 233-5034.

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

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Rm. 110B, Chico.

Golden Triangle ARC, (GTARC). Meets 4th Mon./monthly, 7:30 p.m., Sharp Health Care Activities Rm., 25500 Med. Ctr. Dr., Murrieta, CA 92562.

Lake County Amateur Radio Society, (LCARS). Meets last Thurs./monthly at either Red Cross HQ, Clearlake, or the Nice Community Clubhouse, Nice, CA, 7 p.m. Net Mon., 7 p.m. 146.775(-) for info.

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (510) 447-3815.

Manteca Amateur Radio Club (MARC). P.O. Box 545, Manteca, CA 95336. Meets 1st Thurs./monthly, #1 Firehouse, 7 p.m. Talk-in on club rptr. 146.985(-) PL 100Hz. Info: (209) 823-3611.

Marin Amateur Radio Club (MARC). W6SG. Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA. (415) 883-9789 (Summer exceptions; contact Pete N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael.

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Denny's Restaurant, 2314 17th St., Santa Ana, CA, (100 yds. west of the 55 Fwy.) Info: Ray Davis, KD6FHN, (714) 551-2010 or (714) 551-1036.

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) 100Hz PL. Info: George, KI6YK, (510) 837-9316.

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Elks Lodge, on Cypress at Hackberry in Carmichael, CA. (PL 162.2) Net K61S Thurs., 8 p.m. 145.190. 220 Net, Tue. 8 p.m. 224.40(-).

Palos Verdes ARC. Meets 3rd Wed./monthly, 7:30 p.m., Community Rm., "Shops at Palos Verdes," 550 Deep Valley Dr., Rolling Hills Estates, CA. Info. Ms. Marti Brutcher, N6XDS, (310) 376-1861 or (310) 377-6342. Rptr. 145.38(-) PL 100.

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. For info contact Lyle, AA6DJ, (916) 483-3293.

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net every noon on rptr. W6AK/R 146.91(-). Jim L. White, N6UGO, (916) 773-5890.

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Restaurant, 1000 Howe Ave. For info contact Paul Wolf, W6RLP (916) 331-1830.

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

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

Shasta Cascade Amateur Radio Society, (SCARS). 2955 Shasta St., Redding, CA 96001. 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.

Sierra Foothills ARC. P.O. 3262, Auburn, CA 95604. Meets 2nd Fri./monthly, 7:30 p.m., Firehouse, 226 Sacramento St. Auburn. 10m, Wed. 7:30 p.m., 28.415, 2/220m, Thurs. 7:30 p.m., 145.430(-) (PL 94.8) & 223.86(-).

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

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150. FM Rpt. Net Thurs., 8 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300.

Stanislaus Amateur Radio Assoc., Inc. (SARA). Meets 3rd Tues./monthly, 7:30 p.m., Stanislaus County Admin. Bldg. (lower level conf. rm.), 11th & H St., Modesto, CA.

Stockton-Delta ARC. Meets 2nd Thurs./monthy, 7:30 p.m., Red Cross Bldg., 747 N. Pershing Ave., Stockton, CA Rptr. 147.165(+). Net Wed., 8 p.m. 146.655.

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

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

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7 p.m., Vaca Fire Dist. Stn. on Vine St. in Vacaville, CA. Rptr.: WD6BUS 145.47(-) PL 127.3. Dan Bissell (707) 446-7411.

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tues./monthly, 7:30 p.m., Victor Valley Museum, 11873 Apple Valley Rd., Apple Valley, CA. Talk-in 146.94(-), info net Sun. 7 p.m. 146.94(-).

W6TN, Kern River Valley Amateur Radio Club. P.O. Box 2611, Lake Isabella, CA 93240. Meets 4th Sat./monthly, 4 p.m. w/potluck supper following. Talk-in on 145.45(-) PL 156.7 low level, 146.185(-) high level.

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

West Valley Amateur Radio Assoc. P.O. Box 6544, San Jose, CA 95150-6544. Meets: 3rd Wed./monthly, 7:30 p.m. (except Dec.) Cambrian Sch. Dist. Office, 4115 Jacksol Dr., San Jose, CA. W6PIY/R. Net Tue., 8:30 p.m. 147.39(+), 223.96(-).

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. (northwest of Willits). Talk-in: 145.13(-), PL 103.5.

Yuba-Sutter Amateur Radio Club, (YSARC). P.O. Box 1169, Yuba City, CA 95991. Meets 2nd Tue./monthly, 7:30 p.m., Yuba City Police Bldg., 1545 Poole Blvd., Yuba City.

FLORIDA

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

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

Orlando Amateur Radio Club. P.O. Box 3262, Orlando, FL 32802. Meets 1st Wed./monthly, Beardall Center, Gore St. & Orange Ave., Orlando. 146.76(-), 145.11(-), 146.82(-), 147.015(+), 443.275. CTCSS 103.5 Hz on all except 146.76.

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

Suncoast Amateur Radio Club. P.O. Box 1992, New Port Richey, FL 34656-1992. Meets 2nd Mon./monthly, 7:30 p.m., First Lutheran Church, corner of Polk & Delaware, New Port Richey, FL. Sponsor of WC2G/rptr. on 145.35(-), serving west Pasco County.

GEORGIA

Dalton Amateur Radio Club, Inc., (DARC). Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Bill Jourdain, N4XOG, (404) 226-3793.

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. Meets: 2nd Tue./monthly, 7 p.m., HELCO Auditorium, 1200 Kilauea Ave., Hilo. Talk-in on 146.68(-), 146.76(-), 146.88(-), 147.02(+) & 147.04(+).

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elem. Sch., 615 Auwaiolimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88(-), 146.96(-) 146.94(-). Info: (808) 595-6245.

IDAHO

Idaho Society Radio Amateurs. Boise Chapter 146.94. Meets 3rd Tues./monthly, Borah H.S., 7 p.m. Rptr. at 8000. Membership welcome.

Kootenai Amateur Radio Society, (KARS). P.O. Box 5222, Coeur d' Alene, ID 83814. Meets 2nd Mon./monthly, 7:30 p.m., Sheprock Bldg., Coeur d'Alene Airport.

ILLINOIS

Chicago FM Club Inc., (CFMC). 146.76 (PL 107.2)/224.10/224.18/443.75 (PL 114.8). P.O. Box 1532, Evanston, IL 60204. Ham help line: (312) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m.

Chicago Suburban Radio Assn., (CSRA). P.O. Box 88, Lyons, IL 60534. Meets 3rd Tues./monthly, 7 p.m., Mid City Nat'l Bank, 7222 W. Cermak Rd., N. Riverside, IL.

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

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

Hamfesters Radio Club, W9AA. P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.41 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.07. Info: (312) 974-3291.

Peoria Area Amateur Radio Club, (PAARC). Meets 2nd Fri./monthly, 7 p.m., 1401 N. Knoxville Ave. Info: (309) 685-6698. Rptrs: 146.25(-) & 147.675(+).

Schaumburg ARC, (SARC). Meets: 3rd Thurs./monthly, 7:30 p.m., Schaumburg Park Dist. Community Rec. Ctr. at Bode & Springinsguth Rds. Schaumburg, IL. Net 145.23(-), 9 p.m. Thurs. Info: (708) 213-0910.

Six Meter Club of Chicago, Inc., K9ONA. Meets 2nd Fri./monthly, 7:30 p.m., St. John's Lutheran Church, 47th St. & Brainard Ave., La Grange Pk., IL. Info net every Tue., 9 p.m. K9ONA/R 146.970(-), 443.300(+), 107.2 Hz PL.

The Starved Rock Radio Club, W9MKS. P.O. Box 22, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+).

Wheaton Community Radio Amateurs, (WCRA). P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Glen Ellyn, IL. Nets Sun. & Tue. 8 p.m., 145.39(+) MHz. 440 MHz net on Tues., 8:30 p.m. on 444.475(+) MHz. RTTY Net Sun. 9:30 p.m. 145.31(-).

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. Rptr. 442.875(+).

MICHIGAN

Chelsea Amateur Radio Club, Inc. Meets 4th Tue./monthly, 7 p.m., Society Bank, 1478 Chelsea-Manchester Rd., Chelsea, MI 48118.

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

Utica Shelby Emergency Communications Assoc., (USECA). P.O. Box 1222, Sterling Hgts., MI 48311-1222. Meets 2nd Tue./monthly, (Sept.-June), Donald Bemis Jr. High Sch., 12500 Nineteen Mile Rd., Sterling Hgts, MI (between Schoennher & Clinton River Rds.) Talk-in on 147.18(+) 100Hz PL. 24-hr. hot line: (313) 268-6730.

MISSISSIPPI

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

MISSOURI

Central Missouri Radio Assoc. P.O. Box 283, Columbia, MO 65202. Meets 2nd Tues./monthly, 7 p.m., Boone Electric Coop, 1413 Rangeline Rd., Columbia, MO. Talk-in 146.76(-).

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

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 3rd Mon./monthly, 7 p.m., Denny's Restaurant across from Nevada Palace, 5318 Boulder Hwy, Las Vegas, NV. Net Mon. 7:30 p.m., 145.39(-) Rptr. on Black Mountain. Club info: Jim Frye, NW70, 456-5396.

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 9 a.m., Bailey's Cafe, 4124 Kietzke Ln., Reno. Info: (702) 356-8200. Call in on 147.30(+) MHz.

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG. P.O. Box 911, Dover, NH 03820. (603) 755-2600/335-6643. Meets 2nd Sun./monthly, 7 p.m., Rochester Fire Dept. Training Rm.. Talk-in: 147.57.

NEW JERSEY

10-70 Repeater Assn., Inc. 235 Van Emburgh Ave., Ridgewood, NJ 07450. Meets 1st Wed./monthly (except July & Aug.), 8 p.m., VFW, Valley Rd., Clifton, NJ. Rptrs.: 146.10(-), 224.84(-), 444.15(+).

Bergen Amateur Radio Assoc., (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 144.40 9 p.m. Wed.

South Jersey Radio Assoc., (SJRA). Pennsauken Sr. Hi Sch. at Hylton Rd. & Remmington Ave., Pennsauken, NJ 08109. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed.). Talk-in: 145.29(-) rptr. Club call K2AA.

NEW YORK

Amateur Radio Assoc. of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2PVL.

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Charlie, WA2JUJ, (518) 420-0046.

Orleans County Amateur Radio Club, (WA2DQL). Meets at Emergency Management Office, West County House Rd., Albion, NY 14411, 2nd Mon./monthly, 7:30 p.m. 145.27(-) — WA2DQL.

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

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

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

Westchester Amateur Radio Assoc., (WARA). Meets 1st Thurs./monthly, 7:30 p.m., Scarsdale Town Hall, Scarsdale, NY 10583. All invited. Info: Dan Grabel, N2FLR, Pres. (914) 723-8625.

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-8995. 146.865(-), 440.15(+).

NORTH CAROLINA

North Carolina Chapter TSRAC. Meets Mondays, 28.35 on the air, 8:30 p.m. local time, Sat. 10 a.m. on 7240 and Wed. 9 p.m. on 7259. "The Alligators" — all mouth, no ears.

Stanly County Amateur Radio Club. P.O. Box 188, Stanfield, N.C. 28163. Meets 4th Thurs./monthly, 7 p.m. at Stanly Community College, Albemarle, N.C.

OHIO

Ashtabula County ARC. Ken Stenback, AI8S (964-7316). County Justice Ctr, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m. County rptr., 146.715(-).

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS.

Firelands Area Rptr. Assn., (FARA). Meets 4th Tue./monthly, 7 p.m., Ohio Veterans Home, Sandusky, OH. WB8LLY rptr. 146.805(-). Net Sundays, 8 p.m. Info: Rob Harshbarger, N5XRB.

Greater Cincinnati Amateur Radio Assn., (GCARA). Meets 4th Wed./monthly, 7:45 p.m., Cincinnati Museum of Nat. History, 1720 Gilbert Ave. Amateur Radio Station W8DZ. Info: WA8STX or (513) 563-7373.

Lancaster & Fairfield County ARC. Meets 1st Thurs./monthly, 7:30 p.m., American Red Cross, 121 W. Mulberry St., Lancaster, OH 43130. Info net Mondays, 8 p.m., K8QIK/R 147.63(-) rptr.

Sandusky Valley Amateur Radio Club. Meets 1st Sat./monthly, 9 a.m., Sheriffs Bldg. in the D.S.A. office, 2323 Country Side Dr., Fremont, OH.

Toledo Mobile Radio Association. P.O. Box 273, Toledo, OH 43697. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. Contact: Brian, WD8MXR, 385-5624.

Triple States Radio Amateur Club. Meets Wed./weekly on 28.48 at 8:30 p.m., 7260 at 9 p.m. Rptrs. 146.91(-), 146.715(-). P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

Van Wert Amateur Radio Club, Inc. 1220 E. Ridge Rd., Van Wert, OH 45891. Call-in: 146.85(-). Meets 1st & 3rd Sat./monthly, 8 p.m.

OREGON

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. Net Sun. 7:30 p.m. 147.06(+) MHz. Info: (503) 385-1156.

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

Oregon Coast Emergency Rptr., Inc. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./monthly, 9 a.m. for brkfst. Net, Wed. 7 p.m., 146.80. Info: 997-2323 or 997-3081.

Salem Amateur Radio Club, (SARC). Meets 4th Tues./monthly, after school, McKay High School Auditorium, 2440 Lancaster Dr., NE, Salem, OR. Talk-in 146.86(-). Info: (503) 393-9604.

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 311, Douglas St., Roseburg, OR. Info: W5PIV R 146.90(-) or (503) 673-1310.

PENNSYLVANIA

Butler County Amateur Radio Assn. P.O. Box 1787, Butler, PA 16001-1787. Meets 1st Tues./monthly, 7:30 p.m., Boy Scout Cntr., 830 Morton Rd., Butler, PA. Call-in W3UDX/R 147.36(+). Net 10:10 p.m. nightly.

Mercer County Amateur Radio Club, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.01.

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 2nd Thurs./monthly, 7:30 p.m., Sugar Land Community Ctr., 226 Matlage Way., 3 blks SW of Imperial Sugar Co. at HWY US-90A & Brooks St. (HWY 58) in Sugar Land, TX. Talk-in: 145.47(-), 442.5(+) rptrs.

VIRGINIA

Southern Peninsula Amateur Radio Klub, (SPARK). Meets 1st & 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (804) 898-8031, W4RTZ

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

WASHINGTON

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

WEST VIRGINIA

Jackson County Amateur Radio Club. Clark Stewart, W8TN, Pres., 104 Henrietta St. Ravenswood, WV 26164. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R.

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7 p.m., Green Valley Fire Dept., 16th & Norwood Rd., Huntington, WV. Monthly breakfast 1st Sat., 9:15 a.m., Bonanza.

WYOMING

Sheridan Radio Amateur League, 146.82. 926 La Clede, Sheridan, WY 82801. Meets 4th Thurs./monthly, 7 p.m., location varies; Saturdays, 8 a.m. at J.B.'s. Info: (307) 674-6666, WA7B.

MEXICO

Lake Chipala Amateur Radio Group. Meets Fri./weekly, 10 a.m., St. Andrew's Episcopal Church, Chipala, Jalisco, Mexico (30 mi. so. of Guadalajara). Simplex 146.49. Info: W4AFW/XE1. Charles C. Leonard, APDO 381 Ajijic, Jalisco, Mexico.

The Youth Forum

Sammy Garrett, AAØCR
#8 Willow Ct., Florissant, MO 63031

When I first became involved in Amateur Radio almost five years ago at the age of twelve, I was bombarded with stories of how my new-found hobby might not hold my interest as I got older and entered high school. I was warned that school activities, cars, and then girls would one day take precedence over Amateur Radio.

None of this could ever happen to me though — or so I thought. School, friends, driving, sports, girls, and many other activities and responsibilities did become a greater and maybe even more important part of my life as I got older, though. In fact, until recently, the extent of my Amateur Radio activities had diminished to contesting, operating as a net control station for my local club, and writing this column.

Then, a few weeks ago, as I was packing for my summer as a camp counselor I began thinking about taking some of my HF equipment with me. I thought perhaps I could do a few demonstrations for the campers and enjoy myself at the same time. So, after some coaxing from my parents, I packed up a few pieces of essential equipment and my favorite microphone and key.

Once my 20 Meter dipole was strung nicely between two tall pine trees and my temporary station had been arranged, I decided to try making a contact or two to see how all the equipment was working. Nervously, I pressed the power button on my Yaesu FT-747 and watched the orange background of the LCD display come to life. I wasn't really sure what to expect. After all, I hadn't had a real QSO in a couple of months. What if my CW was rusty or if my operating style wasn't as smooth as I like to tell myself it is?

As I tuned across the CW portion of the 20 Meter band, I heard familiar tones and strong signals. And as I had a quick QSO with an Amateur in Wisconsin, I began to remember the excitement that a simple contact can bring.

As I headed to the camp flag retreat and dinner that evening, my head was filled with visions of working rare DX again and staying up 'till all hours of the morning ragchewing or chasing a station whose country name I could barely pronounce.

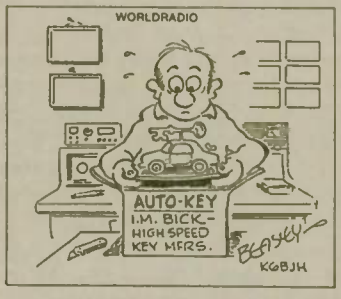
After work that evening, I trudged back up to the hill to the building which housed my station. Excitedly, I tuned the dial for exotic DX and friendly state-side ragchews. I decided to try my luck with phone and quickly discovered that there were a lot of domestic stations more than willing to chat.

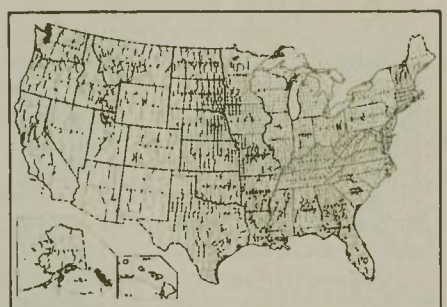
I was thrilled to learn that my equipment was performing extremely well. Band conditions were fairly good and I was able to copy each station without too much trouble. As I began ragchewing, I realized how much fun I'd been missing out on lately. For a few seconds I even had that same excited feeling that only a first contact can bring.

Each station I talked with reminded me of my first days as an Amateur. Compliments, words of kindness and encouragement were all components of every contact. One Amateur even took the time to ask me about my career interests and provided me with the names and call signs of Amateurs who might be able to answer some of my career questions.

Later that week I was once more reminded of how versatile Amateur Radio can be. An unlicensed friend and I sat huddled over the transceiver picking out broadcasts from the BBC, Radio France and other more exotic places from among the static and QRM. As I watched my friend I realized that he had the spark in his eye, as most future Amateurs do when they hear their first signal from halfway around the world.

The point of this article is not what a fantastic hobby and service Amateur Radio is. My point is that Amateur Radio is something which will always be there to provide hours of enjoyment and pleasure. In short, this hobby is a forgiving one and a reliable one. So if you've been wrapped up in other activities lately, don't forget about Amateur Radio. A spin of the dial might just bring more than you expected. **WR**





County Hunter

Ace Jansen, N3AHA
51 Kenbrook Circle, San Jose, CA 95111

MARAC national convention

Thank goodness for county hunter conventions. I was beginning to get bored during my daily commute. Everyday, I spend 45 minutes to and from work, hoping to make a county contact here and there. For the past several months I've had very few contacts. I'm not sure if I'm commuting at the wrong time, propagation is el stinko, or there just aren't any mobiles running around on the net. If it's the latter, I'm in trouble, because I'm trying to make contacts with all the counties a second time mobile to mobile — not only do I have to be driving but so does my prey. Then all of a sudden, one day I made 10 contacts on the way to work. WOW! I almost didn't want to report to work that day.

The annual MARAC National Convention was in Springfield, Missouri this year from June 21 - June 25 and if you look at my log, it's obvious. I had a few contacts for the past month, then BOOM, I had 10 on June 20th. Everyone and their Grandma was on their way to the convention. Of course, they all converged on Springfield, Missouri so the best bet was to make contacts in Missouri. It always seems that the county hunters traveling to the convention take their time getting there (i.e. they run lots of counties) and on their way home they're in a big hurry to get back to work (i.e. they're home before you hear them on the air).

The convention is win-win for everyone. The lucky hams who have the time to go will have a lot of fun meeting new friends and getting reacquainted with friends they haven't seen in awhile. If you haven't been to a convention, imagine this — you've talked to someone for years as you pursued a dream of contacting all the counties, then you go to a convention and meet the people you've talked to for years but don't have the foggiest idea what they look like. It's a very strange phenomenon. . . sometimes your mental vision of what you thought the person might look like is totally wrong! It's also a win situation for the stay-at-home county hunter who has plenty of convention travelers to contact for possible new counties.

The annual awards banquet on Saturday is when the Operators of the Year are announced for Best Mobile and Best Net Control for both the SSB and CW nets. At this convention, Ella, WØAYL; Clyde, W5TQE; Joe, WAØPJX; and Skip, WAØWOB, were enlisted as life time members of MARAC. Joe Parsons, W5UJO, gave MARAC President's Awards to Arnie, K9DCJ, and Bernard, VE2MS. Clay, KR4MN (ex WD4HRN), gave a special award to K9DCJ for contacting him in all Alabama counties. Tessy, PS8YL, visited from Brazil with her husband and was presented USA-CA #839. She traveled to the convention with Bill, N7OTR, and even gave out many counties. Imagine working PS8YL/M in U.S. counties. . . it must get confusing to non-county hunters! Bob, WØDFK, received USA-CA #837 at the convention also. The CW and SSB Mobile of the Year was the same person, Dennis, KK7X. Dennis is one of the county hunter truck drivers who runs counties as he works (see ***Worldradio***, July 93). As is typical, Dennis was "on the road" during the convention and wasn't able to pick up his award. The Best SSB Net Control for the Year was Jim, KZ2P and the Best CW Net Control for the Year was Ed Sanders, WA6VJP. The BIG award is the County Hunter of the Year award and this year's winners were Jim, KB4XK, for SSB and Andy, W3XE, for CW.

1994 Pacific mini convention

Well, if you didn't make the national convention, and you'd like to spend some time in Phoenix, this years' Pacific Mini convention will be hosted by Bill Nash, WØOWY, in Phoenix, Arizona September 29th through October 1st. Hotel rooms (at the Ramada Inn Metro Center; 602/866-7000) are very reasonable, $29 for the first 25 rooms and then $39 after that (still a very good rate). For those traveling by RV, RV hook ups are available at the Covered Wagon RV Park; 602/242-2500.

On Thursday, 29 September, the county hunters will meet pool side at WØOWY's home. A pool-side cookout is available for $5 and the water will be ready for anyone wishing to take a dip. Friday morning, Chuck Boyd, NØBHO, will host a golf outing for any hackers and for the non-golfers, a trip is arranged to the Desert Botanical Gardens. (I was there in April and it's very interesting. . . although, my sister-in-law thought it was a bunch of weeds!)

Friday afternoon, the group will go via caravan to Rawhide, a western frontier town, complete with round ups, shoot'em ups and a crooked sheriff. If you're not on your best behavior, strolling deputies may throw you in the town jail. The group will enjoy a western style dinner ($22 each) that evening and KI7CE and NØBHO will give two-step dance lessons.

Saturday will be the typical day with a MARAC meeting in the morning followed by seminars — specialty workshops conducted by Barry, W9UCW, and Howard, WA2GLU. MARAC will seek a host for the 1995 Pacific Mini at the Saturday meeting. (So, if you can't make this convention, offer to host the 1995 convention and then you'll know you can make it next year!) There's independent shopping for non-county hunters close by at Arizona's largest shopping center. On

Saturday night, there's a banquet at the hotel ($22 per meal) with room for all. There will be prizes and surprises, so be sure to attend. If you're interested in attending the Pacific mini convention, contact John Mees, KA7AKJ, 2103 W. Straford Dr., Chandler, AZ 85224; 602/838-6816. Although it sounds like I'm missing out, my wife and I are expecting our first harmonic on September 10th, so the chance of us making the convention is slim to nil (as they say on CW!), but we'll have our hands full for sure (as they say everywhere else!).

Fourth time around award

For those of you wondering if you'll ever finish making radio contacts with all counties or you're wondering if you should start (out of fear you'll have no life!), think about the possibility of making county contacts four times. See, making radio contact one time ain't that bad after all. But there are several county hunters who have done just that — made contacts with hams in all counties four times. The B&B Shop first offered this award November 1, 1988; all contacts must be made after this date and after the third time award is in hand. It may be difficult to understand the draw to continue county hunting past the first time until you actually start and get drawn into the fellowship. If you know some of the people listed below, congratulate them and maybe ask them isn't there anything else you could do with your time.

The last 8 recipients were:

24.	NV4Z	5/27/93	28.	KR4MN	3/14/94
25.	N7BKW	6/3/93	29.	N9CHU	4/30/94
26.	WØAYL	8/16/93	30.	KZ2P	5/5/94
27.	KA1NX	11/6/93	31.	G4KHG	6/6/94

Imagine how tough it must be for Eddie, G4XHG, to get propagation into the States to achieve this accomplishment.

Fifth time award holders

To date there are 14 holders of the fifth time award. These are county hunters who have finished the fourth time award and just weren't quite ready to give up county hunting yet. The B&B Shop first offered the award in 1991.

1.	W9ABM	6/3/92	8.	W9CRN	5/27/93
2.	VE3RN		9.	N9BDM	5/28/93
3.	WDX9DCJ		10.	K9DCJ	7/2/93
4.	NFØX		11.	W4RKV	11/15/93
5.	N7AKT		12.	VE2MS	11/29/93
6.	WDX4KEF	1/25/93	13.	K8IXU	12/6/9
7.	NT9V	3/17/93	14.	N7BKW	4/28/94

If you're wondering how many years it took some of these guys to finish contacting all counties five times, take a look at Ed, NT9V, above. He finished the first time 7/5/90. That means it took him 2 years and 8 months to work all counties four more times, or an average of all counties every 8 months. WOW!!!

Nth time award

I just got off the phone with Bill Nash, B&B Shop, who told me he's offering a new award called the Nth Award. I think he's tired of calling them "numbered" awards. This award will allow those that want to continue working counties to do so, until the Nth time, as defined by them. Basically, he'll send the plaque after they show log confirmation they've had contacts with all counties for the Nth time. Look for one of the above 14 calls to qualify for the 6th and 7th times soon. Hard to imagine!

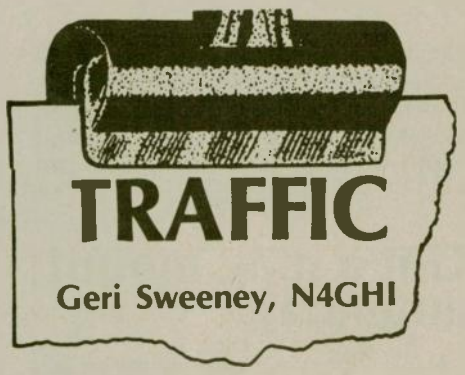
See you next time

That's enough for now. Bill Nash also reminded me that the *County Hunter Handbook* I talked about in the July column is now $8 (not the previous $5 I mentioned — I was off by a couple years). If you would like to get a 250 page handbook on everything you've always wanted to know about county hunting but was afraid to ask, send $8 (postage paid) to Bill at the B&B Shop, Inc., PO Box 83403, Phoenix, AZ 85071. Until November, see you on 14.336 or 14.056 MHz and happy hunting! **WR**

Got a mag mount antenna?

Don't leave your mag mount on forever without taking care of it, or you may, when you remove it, lift off part of your car's roof. Rust gets a head start when grit and dirt accumulate under a mag mount for a long time. Vibrations cause it to act like a sander on the paint surface! Moisture stays for days, even in dry weather. The best bet is to clean under it periodically and use a protective barrier such as a polyethylene plastic base cover, or cut a small piece of plastic trash bag size and place it under the mount. It is thin enough and will not affect the magnetic holding capacity. —*The Satellite Orbit*

Worldradio spreads the word about Amateur Radio!!



TRAFFIC

Geri Sweeney, N4GHI

Special event traffic

August — CNE (Canadian National Exposition), Toronto, ON

September — Norwalk Oyster Festival (CT)

Big E (Eastern States Expo - Springfield, MA)

Atlantic City pageant (NJ)

Carolina Fair (Asheville, NC)

Western Washington Fair (Puyallup)

Ontario Science Center (Don Mills, ON)

West Coast traffickers picnic:

September 10-11 at South Lake Tahoe. RN6 breakfast on the 11th and a challenge ballgame between PAS and NCN is planned. Contact AB6YR for more details.

Traffic training

Is anyone responsible for traffic training? And, if you hear, or copy, an obvious mistake (such as giving the date in the preamble as 1 September, rather than September 1), should you let the station know? If the receiving station says, 'QSL', doesn't that mean s/he copied the entire message, including the message number? Many bad habits (such as saying more than you need to say), which are sloppy on SSB are really time consuming on CW. And, when you send a message via packet, you encounter unique problems of which you may not even be aware. In Virginia, we've tried training through newsletters, on the air (SSB) sections, meetings at hamfests, and even reminding individual stations as they are being worked. And, yet, as one goes from net to net, local to Eastern Area, you can't help but notice that many procedures are either not understood, or ignored.

Few like to be reminded on the air of bad habits. The best training comes from listening to expert operators on the air. New traffic handlers have mentioned that having a local "elmer" to speak with as problems arise is extremely helpful. How could this approach be done universally?

ARRL has listed procedures for traffic handling. These are printed somewhere. Over the past 10 years that I've been a traffic handler, I've seen one revision; i.e., the additional of ARL Sixty Nine to the list of ARRL radiograms. As with any vocation, procedures should be continually tweaked towards improvement. It seems that this has happened, but the changes seem to ignored by the printers. This may be because no one has given official sanction to any change; and, in fact, can't agree on them.

Would we interest more people in traffic handling if they had an "elmer" to help them get started? How would we identify an "expert" traffic handler (like a master teacher) that others could copy?

What is the solution? Elmers are everywhere. Every traffic handler could be an elmer. And, I think, they would all be willing. Why not find your local radio club and have them list your name and phone number in their newsletters as a traffic handling elmer? At this stage all you need do is explain how to format a message and where to check in to send and receive messages. You could explain how to send, receive, and kill messages on a local PBBS. This could be in person, or by phone. Each Section Manager gets lists of all new licensees periodically. Why not send these new amateurs a welcome letter which includes a name and phone number of their nearest traffic elmer? If the SM is too busy, they could get a volunteer to be keeper of the list. It would be nice to welcome new amateurs into the section, even if they would not be interested in traffic handling

As to a master teacher, perhaps each section could have a couple. In our democratic society, even though personalities sometimes get confused with actions, we vote. The SM could request all ORS stations vote every year or two on who they think their master teachers should be. Suggestions (calls/names) could be part of every January ORS report. While everyone may get a vote or two, few would get a lot of votes. Those who did would be named master teachers. Since ORSs are found on local as well as section level nets, a master teacher should be available for everyone to copy. Perhaps we could give these folks a certificate. ARRL could then pick a small committee of these master teachers to look over their ARRL procedures and designate any needed changes. That is, they would reflect on what is actually happening out in the field. They could also create a video which would illustrate checking into SSB/CW nets and using packet for public use at club meetings, etc.

Traffic radio?

More letters have been received on what makes a good traffic handling radio. WBØRXF, says that he got his first Ten Tec Triton IV in 1976 on the advise of his traffic 'elmer'; and, he still has it. In 1981, he bought a Delta. His two sons, daughter and grandson all have Ten Tecs. The only problems were self inflicted and fixed inexpensively by Ten Tec. His QRP has been used to work 175 countries, as well as Field Day each year. 9Y4IBN, Irvine, in Trinidad, recommends his Icom 751. He has had it since 1985 and uses it for Amtor, CW, and phone. He is on the IATN (International Assistance and Traffic Net) every morning.

What's happening?

The STM, WB4FDT, for Louisiana reports that traffic handling is on the rise, but it's all happening on packet. He says there are dozens of local 2 Meter nets where amateurs learn about traffic handling, and then they go at it on packet. While section phone nets are handling about the same amount of traffic as always, increasingly, the CW nets are having problems. Pip says the LA CW net died in 1984 and was resurrected by him in 1989. It died again in 1993. Pip is also 5RN CW net manager and says the Oklahoma CW net died 2 years ago and the Texas and Mississippi CW nets face decreased check-ins. Arkansas and Florida are doing OK and Tennessee only checks in 5RN about 25% of the time. As CW ops are dying off no one replaces them. The 1993-4 Net Directory only shows three 2 Meter nets, and 2 HF nets listed for Louisiana and none have ARRL status (indicated with an asterisk). And one of the HF nets is on 10 Meters.

Digital affairs

I'm told by ARRL Field Services, that the new envisioned digital policy will now be sent to all leadership officials for comment before it is accepted. Who are leadership officials? Net managers, STMs, SMs, etc. Over a phone conversation, I suggested that input should also be sought from sysops of PBBSs who were known to acknowledge NTS traffic as important and who work with traffic handlers in their area to keep it moving. My own PBBS, WA3TAI, would certainly qualify. You might let Rick Palm, at ARRL, know of any boards in your area who do a great job with NTS traffic. Rick says he will read through all the comments before he decides on an ARRL digital policy.

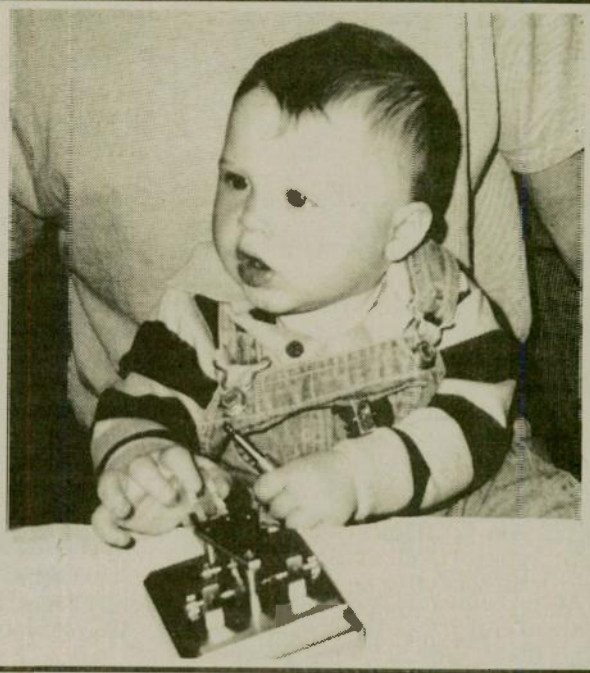
W7GHT, Bill, STM of Idaho, has an excellent write up about the NTS digital changes in his monthly Idaho Montana Net newsletter. Hopefully all STMs are keeping their sections informed and requesting input. Bill mentions that the three area digital coordinators were quick to assert that it was not their intention to displace any portion of the existing digital systems, but that the number of qualified traffic operators, using traditional methods, especially at the higher levels of NTS, is decreasing. We do need more traffic handlers at all levels and on all modes.

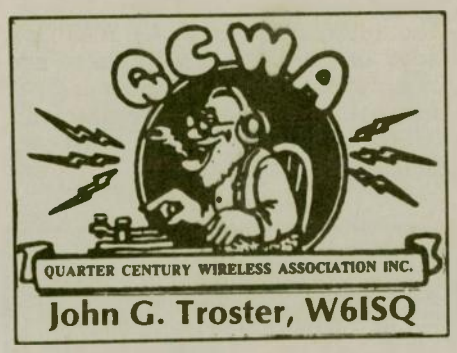
Band conditions

Have been poor. They generally are, during the summer months. The IATN meets each morning on 20 Meters and it's been frustrating. While it's a hardship moving between bands, getting relays, and figuring out what's happening on any net, it is a good learning experience, and traffic is generally fairly light during the summer months. As WA1TBY says in *The Networks*, "There are many camps around where messages home would certainly be welcomed." 'Nothing much happens until you help make it happen.' **WR**

Second harmonic

Here's my grandson Conor McCann carrying on a high speed CW QSO. I always knew he was going to be a CW prodigy, since his first utterance was "Dah Dah." Guess he was trying to spell "mama" and could only get the first letter out. — *Fred Doob, AA8FQ*





John G. Troster, W6ISQ

Local Chapter 11 meeting

At the May meeting of Northern California's Chapter 11, I had the honor of presenting the QCWA 75-year certificate to Irv Wolfe, W6HHN, of Palo Alto. Irv is a native New Yorker, and his interest in radio began when a friend told him that if knew about radio he could get a job on a ship and see the world. Not one to have to be told twice, Irv did it. The fall edition of the *QCWA Journal*, under the editorship of Joe Lynch, N6CL, will publish Irv's story for all of you to enjoy.

At the same meeting, I also had the pleasure of presenting a plaque to Walt Read, W6ASH, First Place winner of the 1992 QCWA CW Contest. Walt is a long time CW contester and communicator whom some of you will remember as the director of world-wide communications for the first four OSCAR launches. OSCAR was born at Foothill College in Los Altos, California, later to be transferred to the present organization in Washington, D.C.

Thanks for asking

Genial General Manager Jim Walsh, W7LVN, forwarded more letters he received from folks who read the QCWA ad in ***Worldradio*** and wanted QCWA membership information. Some of those correspondents were: Leslie Zweibel, WB6ORZ; Jerry Kimble, WB9BSH; William Emmons, K7NNJ; Richard Arland, K7YHA. Then there was John Obst, WB9IXZ who asked GM Jim to find his first call listing in an old *Callbook*©. But, it turned out that John is about 2 years short of QCWA eligibility, so he's on anxious hold.

Everybody wants to join the Elite QCWA Corps Honorary Society, the Proud, the Many, the real Whiz Bangs! Maybe you too. For information about joining, write Big Jim (it's "BJ" now, folks) Walsh, W7LVN, 159 East 16th Ave, Eugene, OR 97401-4017.

Also, congratulations to the folks in Reno, Nevada, who have just formed QCWA Silver State Chapter number 160.

Found in Yonkers

A few months ago I successfully negotiated a commitment from Board member Arch Doty, K8CFU, to write a letter of welcome to the next person from Yonkers, New York who joined QCWA. Yonkers is Arch's and my old home town. Behold and lo, I received a flash from Jan and BJ at QCWA HQ that our appointed quest appeared in the person of Mike Michaels, K3GPI, from the designated locale. He had signed up at the QCWA booth at Dayton and accordingly Arch wrote a fitting letter of congratulations and appreciation to Mike for joining QCWA. Hooray for Yonkers.

Headquarters station W2MM

QCWA Headquarters station, W2MM, is on the air in Eugene, Oregon. Big Jim Walsh, W7LVN, reports the GAP Challenger DX VIII vertical is up and the ICOM 751-A rig donated by Bill Stevens, W6ZM, is playing well When Jim is in the office, he'll be monitoring 7.233 plus or minus QRM. Later he will probably also monitor the Sunday QCWA net frequency of 14.347.

Who is this GM Jim Walsh?

Our General Manager, Jim, W7LVN, is the kind of guy you're happy to know. He was born in Portland, raised in Roseburg, and in 1939, moved to Eugene to enter the University of Oregon for pre-med studies. Along the way he picked up a pilot's license and became a hospital lab technician. Busy even then.

In the summer of 1942, Jim quit college to join the Navy. Since he had a pilot's license, he thought he'd go straight to the Navy Air Corps. But who ever heard of anything as simple as that in the military? Because he also had hospital lab technician qualifications, off he went to a fast boot camp and on to the San Diego Naval Hospital as a technician. He spent a year there before shipping to Samari, an island off the eastern tip of New Guinea, as a corpsman with VP-33, a PBY Squadron. One of his shipmates was radioman Don Johnson, W6AAQ, who incidentally, is author of "40 Years of Mobileering" and its sequel, "45+5 Years of HF Mobileering," a book published by WR.

After almost 24 months, Jim got orders to board a ship. But first he had to find it. He flew to Manus and a few other islands before finally locating the ship in the Philippines, enroute Hawaii. But not for long. The war was just over, so the ship was ordered to Saipan to pick up troops and thence to Honshu, Japan, where they unloaded the first occupation forces.

Having more points than anybody on the ship, Jim was returned to San Francisco in October, 1945. (Ed note: I beat him back by a month. I was on an island named Emirau. Any of you readers ever heard of it? Vas you dere?).

Then Jim went back to the university to work toward a degree in Biology. In his senior year, he decided he had to get an amateur ticket. Jim had always been interested in radios but he had never known anyone to talk to about getting into Amateur Radio. Eventually he met Bob Houglum, W7JKM, who told him something about amateurs and that he had to

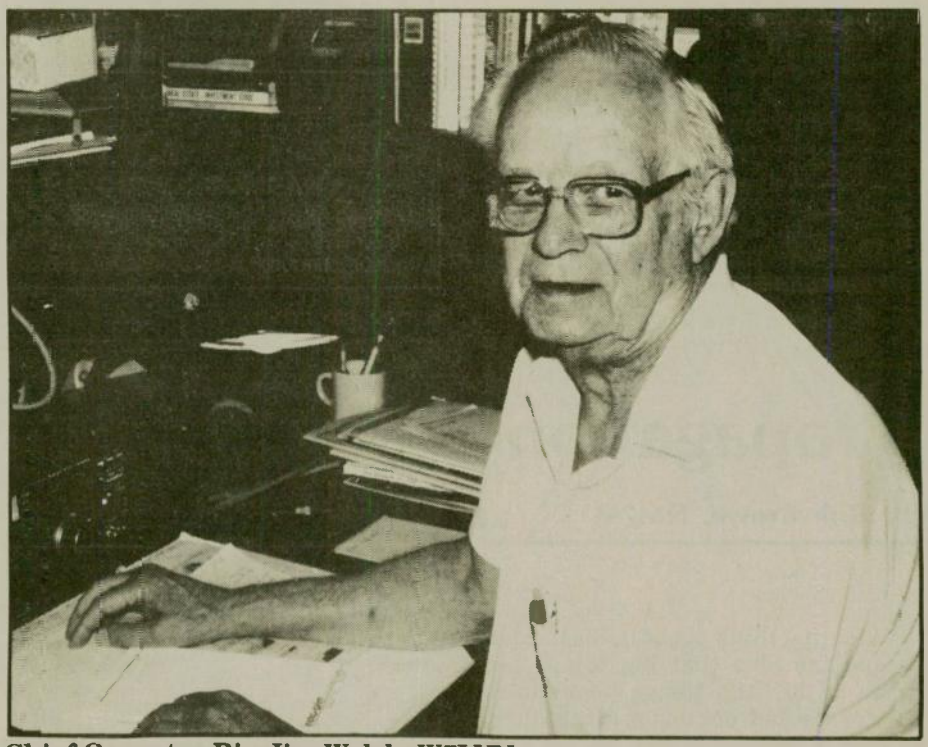
learn the code and pass a written theory exam. Jim located an old tape code machine, bought a handbook and license manual, and started from scratch. One month later he went to Portland and passed the 13 words per minute code test and Class B exam! While he was waiting for his ticket, he built a transmitter from the book. When the license arrived, he bought a receiver and listened to Amateur Radio on the air for the very first time!

What did he do with a degree in Biology? Well, naturally, he went to work for a wholesale radio company! And from there he went to Gates Radio and sold broadcast stations. Starting in Oregon, he transferred to Qunicy, Illinois, and finally to New York. Then Gates told him he was assigned to South Africa, but Jim had lost his traveling wanderlust so he resigned and headed back to Eugene.

When Jim got back on the air, he found that his only crystal was right on top of a net run by "Winkie" Wintler, W7KL. Jim contacted him asking what to do, and for a reply Winkie gave him a handful of other crystals. They became friends and in 1953, Winkie, recognizing Jim's acuity in math, offered him a job in an independent fire and casualty insurance agency.

W7KL,was a CW whiz and Jim tells of his boss' daily noon sked with Jo Jennings, W6EI (Jennings vacuum variable capacitors) and Bill Eitel, W6UF, (Eimac) on 40 Meters at an absolute minimum speed of 45 wpm. Question: "Jim, were you in there copying that fast stuff too?" Answer: "You kidding?" Incidentally, when Jim first heard about QCWA's Leland Smith, W5KL, he was most anxious to meet his boss's suffix read-alike.

Something clicked with Jim in this new insurance company job because he stayed, becoming a partner in what eventually was Wintler and Walsh. He sold the business in '91 and was about to sell his office building when he was asked to become General Manager of QCWA. He kept the building and now works harder and longer than he ever did when he was the man with endurance in the insurance business. Jan Hayter, working with him all during his insurance career, nimbly moved on with him into the QCWA present, as his associate and know-everything assistant. Jan writes letters, keeps all the QCWA records, and does the mailings for accessories when you order them from HQ. If you are in the QCWA file, it's because Jan made sure you are in there. She also keeps Jim on the straight and narrow, maybe her toughest assignment.



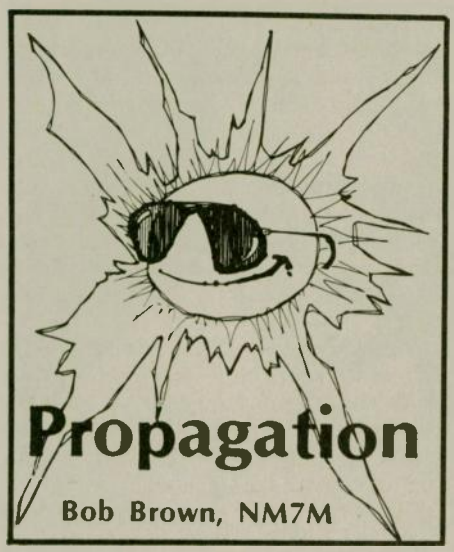
Chief Operator Big Jim Walsh, W7LVN.

Jim has three grown children. Son James is an attorney, Daughter Ann is in nearby Laine College and will go on for a law degree. Son Warren is beginning his internship in radiology in Walla Walla, Washington.

Jim gets so busy in his work for QCWA he occasionally may not have time to answer calls, but he encourages you to try anyway. I can tell you from personal experience that if you want to get Jim's attention, ask him about the great old days in the Western Pacific! He's hooked.

Latest bulletin from QCWA HQ. BJ called to say he had just subscribed to a Life Membership in ***Worldradio***. Hey, when a WWII fella takes out a Life Membership in anything he's surely going strong. And Jim surely is.

73 + 25,
Jack, W6ISQ **WR**



When you think about it, it's hard to escape the idea that big things are made up of little things. Sometimes they're stacked, one on top of the other, or they're laid end to end. So it is with our topic, HF propagation, just a bunch of hops laid end to end. But they're not all that little. Be that as it may, working with single hops should go a long way toward understanding what's involved with DXing.

Earlier, I got into this game quite innocently, just showing the results from some calculations done a half-century earlier. So you'll remember that I showed how a skip zone results, the distance an antenna reaches going through a minimum at a certain radiation angle. There was also signal focusing involved and even how low- and high-angle rays are related to the idea of an MUF. For those who thrive on detail, it was done by taking 14 MHz signals through a nighttime F-region with 7 MHz for FoF2 and an electron density profile shaped like a parabola.

I'm not going to change that approach now, just show some of the other aspects which result from it. And there's nothing esoteric about what I'm going to talk about — reflections, heights, real or virtual — as you've already seen them mentioned in all the handbooks and antenna manuals. So it's "No Big Deal" and as one interested in propagation, I'm sure you'll find these ideas informative. Like any technical matter, this business has its own jargon but I'm going to make a special effort to keep the discussion close to your experience and intuition, expressing the results in terms with which you are familiar.

So to start, let's take the term "reflection height." You see diagrams using that idea in all the books, something like the one shown here in Figure 1. That's a "flat earth" representation and shows a ray going from a transmitter (T) to a receiver (R). That's the real path which results from refraction; also shown is the "virtual path" or straight-line representation which allows the connection between T and R to be treated as a mirror-like reflection.

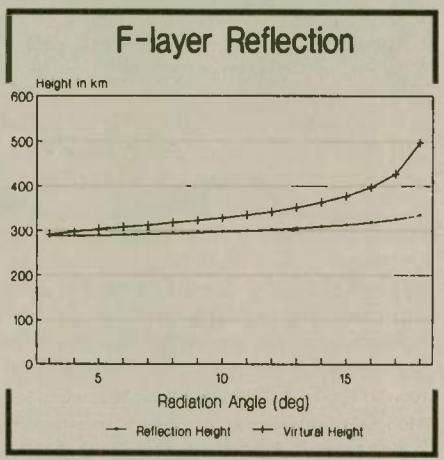


Figure 1.

With those paths, one notes the reflection at A is at a "virtual height" which is greater than the "real height." Those two heights can be obtained by using the model calculations mentioned earlier, the real height (Hr) resulting from refraction within the region. The virtual height (Hv) is simpler to obtain, only requiring the distance between T and R as well as the height of the bottom of the layer. Thus, the calculation of Hv is more geometrical while that for Hr is more analytical in nature.

Anybody who's ever had a high school physics course knows that reflection of light by mirrors is simpler than refraction by lenses. So it is in working out hops on HF by reflection calculations instead of those involving refraction. But one has to see how the two are related before taking the plunge. In that regard, the two curves in Figure 2 show their variation of Hr and Hv with radiation angle from the model calculations done earlier.

Now that model used a curved ionosphere so the 10 km difference between the real and virtual heights for a 10 degree radiation angle has to be considered in relation to the curved geometry (about 6670 km from the center of the earth) instead of a "flat earth" approach with just the distance from the earth's surface (about 300 km). That's less than 0.2% in the first instance as compared to about 3.3% in the second and there are some important consequences; let me explain.

That small percentage difference suggests that one might be able to use the radiation angle and a simple reflection calculation to work out the distance on a DX path. Indeed, that proves to be the case; path lengths for radiation angles between 3 and 15 degrees worked out by reflection at the virtual heights agreeing to within 1% with results from the more detailed method. Amazing!

I think you know those radiation angles are in the range that DXer's thrive on. Given that, it really doesn't take much imagination to conclude that there's a real future working with the reflection method, at least for low radiation angles where the true and virtual heights differ so little in a curved geometry. If one could master one-hop paths and then lay them end to end, as suggested at the outset, a propagation prediction program would follow!

So how do we proceed? First, it must be recognized that there's still the ionosphere to be considered and the generic model we've been working with has a critical frequency associated with its maximum electron density. And it peaks at a certain height above ground. Beyond that, we all know that properties of the ionosphere at a given location are influenced by the solar cycle - sunspot numbers, time of day, season of the year.

So it's not surprising that a database has been developed from ionospheric sounding over the decades, giving the data needed to work out the reflection heights. True, these will be statistical quantities, complete with fluctuations about averages, but they will prove helpful. So let me tell you what is known about this approach. In doing this, I will be drawing on the method used by Raymond Fricker, formerly a Propagation Engineer of the BBC's External Services Division.

At the outset, the average height of the maximum electron density is taken as h = 275 + R/2 where h is in kilometers and R is the smoothed sunspot number. If one assumed the ionosphere to be spherically concentric with the center of the earth, that uniform height would result in DX paths with multiple hops of equal length.

Fricker's method goes on to develop a more accurate value of h, one that takes into account differences in solar illumination with seasons and the time

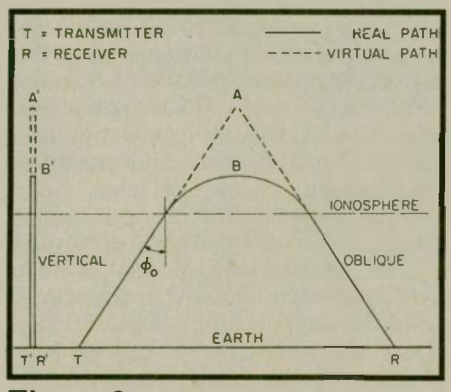


Figure 2.

of day. Such variations are what one would expect from changes in solar declination and are largely based on averages taken from vertical incidence soundings.

Thus, as seasons progress in the temperate zones, the daytime height hm during summer can be as much as 50 km greater than h, while the daytime height hm during winter can be 25 km less than h. In addition, hm can be as much as 50 km greater than h at nightime during winter. Finally, the height hm may be as much as 50 km greater than h above the geomagnetic equator except for a few hours before dawn.

With those ideas, it is then possible to work out the radiation angle for a given path length by using an appropriate value for the height of reflection. For typical heights, the greatest distance that can be reached at zero angle elevation is about 4,000 km. Thus, any ground distance longer than that has to be broken up into two or more individual hops. Then, for the solar conditions (R), date and time, the question becomes whether the ionosphere supports propagation over the hop distance when operating at a given frequency. We could put the question another way: is the frequency f below the highest value which will be returned by the ionosphere for radiation incident at the angle given by the path length and height hm? The calculation is fairly straightforward but I'll spare you all the mathematics. The basic idea is the important thing, however: we have to do a bit of geometry to relate the radiation angle at ground level to the angle of incidence (PHIo) at the bottom of the ionosphere, as in Figure 1.

The next step is to use Snell's Law of Refraction. While the charged ionosphere is a bit more complicated than a neutral dielectric, the ideas are the same. So when all is said and done, if the product, f*cos(PHIo), is less than the critical frequency, FoF2, refraction will return the ray path back to earth.

The product, f*cos(PHIo), is sometimes called the "equivalent vertical frequency" so that bit of jargon brings the complex problem of oblique incidence down to the same simple terms used for vertical incidence. While that will never qualify as a mnemonic in the usual sense, it fits well with one's intuition.

In all of this discussion, the main parameters are the sunspot number, the date and the time. So let me take as an example the critical frequencies over Boulder, CO in summer and winter for a SSN of 100. For mid-day, FoF2 is about 6.3 MHz in summer and about 10.9 MHz in winter while FoFE is 4.0 and 3.0, respectively. Now I need a one-hop path. Let's use one from Salt Lake City, UT to Wichita, KS; that covers 1,291 km and Boulder is about in the middle so we can see how the summer/winter MUFs and heights differ on the path.

Between summer and winter, the reflection height changes from 373 km to 301 km while the MUF changes from 12.7 MHz to 21.6 MHz. For the operating frequency (14 MHz) used in the model calculations, it's seen that propagation would be supported in the winter but with the MUF less than 14 MHz, propagation would be supported less than 50% of the time in the summer. On that basis, more than 50% of the time, 14 MHz RF would penetrate the ionosphere in the summer if sent off at the radiation angle (23 degs) connecting the two sites. In the winter, the skip distance would be less than the distance between the sites and propagation would be supported.

But this calculation only considered the effects of the F2-region and clearly daytime hours in the summer or winter would bring forth ionization in both the E- and F1-regions. For the summer, where the path would not be open just by F2-region considerations, ray-tracing shows that the effect of underlying ionization in the E- and F1-regions is additional refraction of the 14 MHz waves and opens the path. Under those circumstances, ray-tracing shows both low- and high-angle rays.

What about the other bands? Limiting discussion to just summer, one finds that the path is open on 10 MHz but only by a 2F-mode on 7 MHz and closed on 3.5 MHz. The last two results are due to the E- region, closing 3.5 MHz entirely and giving only a short F-hop of 7 MHz before penetration of the F-region at high angles.

With this discussion, you can see the outlines of a MUF program emerging - breaking a path up into hops and seeing if propagation is supported across the entire path. After that, the next thing is what signal strength results. We'll get to both in due course. Trust me! **WR**

TP tip

FRANK EGGERT, KB9GI

If your MC50 microphone makes your voice sound to "boomy," try this simple fix.

Slip a piece of cardboard toilet paper core over the top of the microphone, covering all the slots down to a quarter inch from the bottom.

Your MC50 will sound more "crisp" and assist your signal to get through —an amazing improvement! **WR**

DX Contest Calendar for September

September 3 and 4 — LZ DX Contest (CW only) 1200 UTC Sat. – 1200 UTC Sun.

September 3 and 4 — 35th All Asian DX Contest (SSB Weekend) 0000 UTC Sat. – 2400 UTC Sun.

September 10 and 11 — 40th European DX Contest (SSB Weekend) 0000 UTC Sat. – 2400 UTC Sun.

September 17 and 18 — 36th Scandinavian Activity Contest (CW Weekend) 1500 UTC Sat. – 2400 UTC Sun.

September 24 and 25 — 36th Scandinavian Activity Contest (SSB Weekend 1500 UTC Sat. – 2400 UTC Sun.

1993 Contest results and Mini-rules for 1994 LZ DX Contest

More and more contesters are discovering that this event, managed by the B.F.R.A. (Bulgarian Federation of Radio Amateurs), is a class act. They make it easier for weary contest editors by sending their results and rules by Registered Mail to arrive prior to the next years event. We are pleased that participation from the U.S. increased in 1993. The top scoring stations from each continent in the S.O.M.B. category were:

N. America	KA1DWX, K3ZØ - 2nd
Europe	YU1HA
Africa	7Q7XX
Asia	RWØAB, World High
S. America	PP1RR

In the M.O.S.T. category, 4Z4SZ was world high while N3BNA was high for North America. (Tks LZ1BJ and LZ1WN)

Mini-rules for 1994 indicate that the 80, 40, 20, 15, and 10 Meter bands will be used, CW only. The exchange is RST plus ITU zone of the transmitting station. Logs may be accompanied by applications for the following B.F.R.A. awards: W-100-LZ, 5 Band LZ, Black Sea, Sofia, Republic of Bulgaria and W28ZITU to P.O. Box 830, 1000 Sofia, Bulgaria.

All Asian contest, SSB

The All Asian contest is well-established as one of the top events of the year, and our gratitude to J.A.R.L. for making life easier by regularly Faxing the following results, beginning with the continental leaders in the S.O.M.B. category:

N. America	W7RM
Europe	S57DX
Oceania	VK3EW
(World high with 533,169 pts.)	
Africa	Z28JD
Asia	JH4UHW
S. America	No entry

The highest scoring North American stations in the S.O.S.B. category were KD6WI on 40 Meters and W7ZR on 20 Meters, with no entries on the other bands. In the M.O.M.B. category, P39C easily outdistanced the field with 575,667 pts.

The highest scoring Japanese stations in each category were:

80 Meters	JH1HGC
40 Meters	JA8NFV
20 Meters	JR5JAQ
15 Meters	JN3DRB
10 Meters	JF2MBF
S.S.S.B.	JH4UHW
M.O.M.B.	JA1YXP

European DX Contest Results, CW and SSB

Special *Worldradio* accolades to the following North American participants who were the highest scoring stations on the continent:

K2TW, Single Op CW with 931,380 points, AK1A, Single Op SSB with 1,278,706 points and KC1XX who was continental high in both modes in the multitransmitter class with 1,808,352 points on CW and 1,582,420 points on SSB. The KC1XX score was not only high for North America, it topped the entire world!

Other continental leaders in the Single Op CW category were: Europe - LY5R, Africa - EA9LZ, Asia - C43A, South America - PY2ØU and Oceania - ZL3GQ. In the Single Op SSB category the winners were: Europe - S52AA, Africa - EA1AK/EA8, Asia - RHØ3, South America - PRØR and Oceania - YB6AVE.

The top 10 U.S. stations, Single Op, CW were: K2TW, K1VR, N6AR, K2LE, AA3B, KC1F, W2AX/1, AB2E, K3WW and KA1DWX, and the top 10, Single Op SSB were AK1A, K2TW, AA1AA, K3WW, N4UH, KE2VB, K2PS, N6AR, NG9J and KA1DWX.

W9NGA scored 219,461 points as a M.O.S.T. entry in the RTTY 'test.

European DX contest rules, SSB

The contest returns to a 48 hour format this year, with the usual 5-digit exchange (RS + serial number) e.g. 59001. Non-Europeans work only Europeans using the WAE country list which is available by sending an S.A.S.E. to K4IIF or to the WAEDC Contest Committee, P.O. Box 1126, D-74370 Sersheim. Germany. The 5 bands 3.5, 7, 14, 21 and 28 MHz are used, except that contest operation is not allowed on the following contest free sections: 3.650-3.700 and 14.300-14.350 kHz. The European contest features a unique feature providing additional point credit for QTC traffic, see contest rule 7. It also features multiplier bonuses for contacts on the lower frequency bands. Multipliers on 3.5 MHz are multiplied by four, on 7 MHz by three and on 14, 21 and 28 MHz the multipliers are multiplied by two.

The deadline for log entries for the SSB weekend is October 15, 1994.

Scandinavian activity contest

We expect the results of the 1993 Scandinavian Activity Contest from LA4YW at any time, but will hold them until next month due to space restrictions. The 1994 rules are unchanged with non-Scandinavian stations trying to work as many Scandinavians as possible on the 3.5, 21 and 28 MHz bands, according to the IARU band plan. The following frequencies are to be kept free of contest traffic: 3.560-3.600, 3.650-3.700, 14.060-14.125, and 14.300-14.350. For those of you interested in casual participa-

tion, the exchange is RS(T) plus serial number, e.g. 59001 or 599001. There is one point For each contact with a Scandinavian station on 14, 21 or 28 MHz and 3 points for each contact on 3.5 or 7 MHz. Logs for the 1994 'test should be submitted to E.D.R. in Denmark.

Rules and logsheets for the All Asian, European, Scandinavian and Bulgarian contests may be obtained by sending a S.A.S.E. to K4IIF.

Contesting from the other end

VP8 Falkland Islands — It's not likely that anyone will drop down to VP8 for a contest weekend. It's just a bit further than VP2. However, out of curiosity we asked Ralph, KØIR, for information, and despite much work remaining from the Peter Island DXpedition he was kind enough to respond.

Ralph indicates that there are no suitable hotels for contest operation in the Falklands. There are 2 places where one can rent a room, but there is really no way to get a suitable antenna erected at either QTH. In addition, the town of Port Stanley has a telephone system which is incredibly sensitive to RFI, and both of these possible rental locations are situated in areas sure to be an RFI problem.

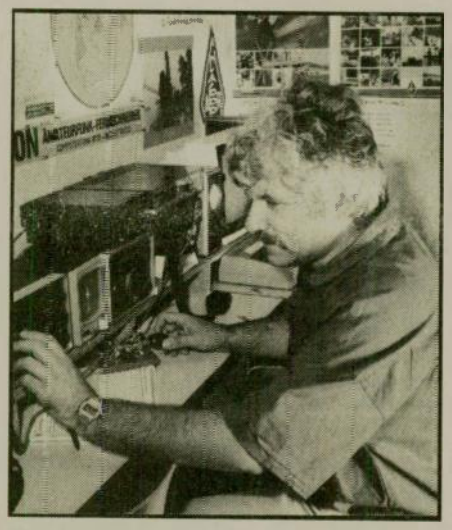
To operate a contest from the Falklands would require setting up at the QTH of a resident amateur, and even then if you ran much power you would likely get into the telephone system. You could obtain a license by showing your home license and paying about 10 pounds at the local post office.

Ralph hopes that all you readers had the opportunity to work 3YØPI. The DXpedition netted 60,000 QSOs from Peter Island, 6,000 QSOs from the Falklands, 1,000 QSOs from the South Shetlands and about 1,000 maritime mobile QSOs. The team was away from home for 6 ½ weeks and traveled about 25,000 miles to complete the operation.

6Y5 Jamaica — This one is much more practical than a trip all the way to VP8.

Ron, K6JAH, writes that operating from Jamaica for the last 3 years, on the other end of the pileup, has been a wonderful experience. He recommends 2 different hotels, the Club Caribbean at Runaway Bay, phone 809/973-3507, FAX 809/973-3509; and the Couples Hotel in Ocho Rios, phone 809/975-4271. Both are all inclusive hotels with food, drinks and water sports included in the price.

At the Club Caribbean the rooms are all individual huts, either beach front or garden setting. They stick an R7 vertical in the sand just steps from the room, or there is plenty of help from the hotel maintenance staff if you want to install additional antennas. Security at the hotel is good.



Herb, DL2DN, is Chairman of the German Amateur Radio Club's WAEDC Committee which managers the European DX Contest. Herb is a school teacher by profession and trains students for the amateur radio license exam. The address for Herb and the WAEDC Committee is P.O. Box 1126, D-74370 Sersheim, Germany.

At the Couples Hotel a room on the 3rd or 4th floor is recommended, and the maintenance staff will help put your antenna on the roof.

The power in Jamaica is 115 V AC and somewhere around 50-60 Hz. Take everything you will need like duct tape, coax, rope, etc. as it will not be available locally.

To operate you will need to apply for an Alien Amateur Radio Station Permit at least 60 days before you leave home. The good news is that it is free. Send a copy of your license, the dates you want to operate (30 days maximum), the address where you will be staying and a list of equipment you plan to bring, to the Post Office and Communications Department in Kingston, phone 809/926-7246, FAX 809/922-9447. Mr. L. G. Matheson in that office is very helpful. Include model and serial number of equipment.

Going through customs in Jamaica has not been a problem for Ron. He indicates that if you encounter a new agent he may ask for a deposit, but if you ask for the supervisor there probably won't be a charge. The more used the equipment appears, the less likely you will be charged. He has not had to leave a deposit. **WR**

Land of coincidence

BILL BOYD, WA7TWB

Amateur Radio has, over the years, been a fertile field for many interesting encounters. See if you can top this one! Leonard Lansdowne, W6FKF, was first licensed in late 1931 and active in the San Francisco Bay Area for many years. In the winter of 1990 he moved north to Washington State becoming W6FKF/7, on the air from Deer Harbor, Orcas Island.

Longtime EC, Bill, WA7TWB soon paid Lawrence Lansdowne a visit to welcome him to the local ham community. Not far into the visit Bill spotted some old QSLs tacked on the wall, and the following conversation ensued:

"Leonard, you've been a ham for a long time!"

"Oh sure. I've had this call since late '31 but I didn't get into print until 1932."

"Here, I'll show you," he said, handing me a very battered 1932 *Callbook*©. "Look me up!"

Now most hams seem to have a competitive streak in them and I am no exception. I should have kept my mouth shut and let Len bask. But no, I handed back the *Callbook*© and suggested that HE look up W3DFC.

"Hey wow! There you are. W3DFC."

"Yeah, but read on."

"Oh my, I can't believe this, 'W3DFC, William Boyd, 186 N. **Lansdowne** Ave., **Landsdowne**, PA.'"

Coincidence? Two new friends, each in their seventh decade, came together on an island in the far Northwest -- linked by a common proper name and the spirit of Amateur Radio! **WR**

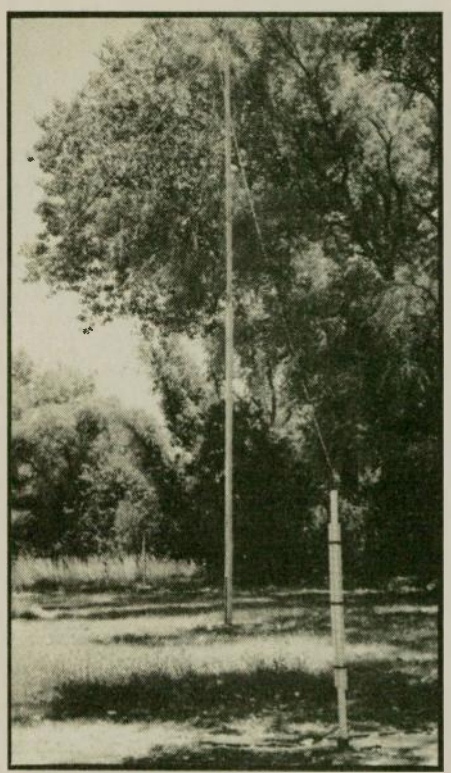
The delta-modified loop: A high-efficiency vertical antenna without radials

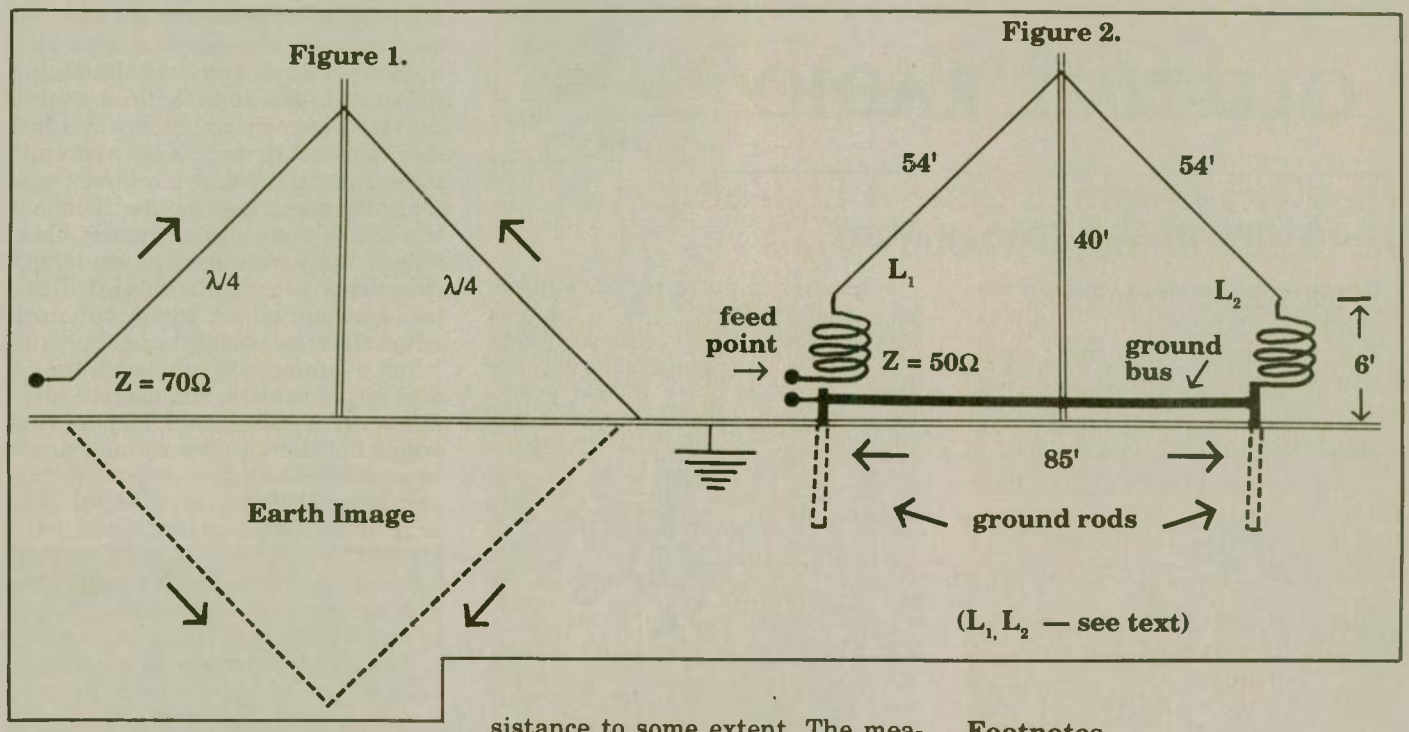
BY DONALD F. MEADOWS, N6DM

This antenna evolved from an 80 Meter inverted vee with an apex support at about 40 feet on a wooden mast. I needed a better antenna for 80Meter DX work, something with a lower radiation angle which utilized the same support. Vertical polarization was of course the answer, but I didn't relish the idea of laying down lots of ground radials. The earth-mounted wire antenna to be described is vertically polarized, but does not require a radial system. It shows good efficiency, provides a direct match to 50 ohm coax, and is at DC ground. Since these claims may sound far-fetched for such a simple structure, I will develop each of these points in detail. This antenna, a delta-modified (or DM) loop, has been in service here for over 15 years. I've used it to work much 80 Meter DX, including numerous Europeans, both Peter I Island DXpeditions, and Bouvet.

The DM loop is derived from a vertical full-wave diamond quad loop with earth replacing the bottom half wave. A diamond quad loop fed on one side is vertically polarized (see Figure 1). One will notice that the horizontally-polarized radiation components cancel, while the vertical components are in phase. A ground rod is placed at each end of the structure and these rods are connected together by a heavy ground bus. This bus consists of a length of Romex-type house wire: two number 12 copper conductors with ground. It lies on the ground and need not be buried. All three wires are tied together in parallel at both ends where they attach to the ground rods. I recently discovered the valuable article by Bob Alexander, W5AH.[1] His findings demonstrate the importance of the ground bus in synchronizing resonance with minimum SWR. His findings also suggest that the radials he originally laid down weren't really necessary.

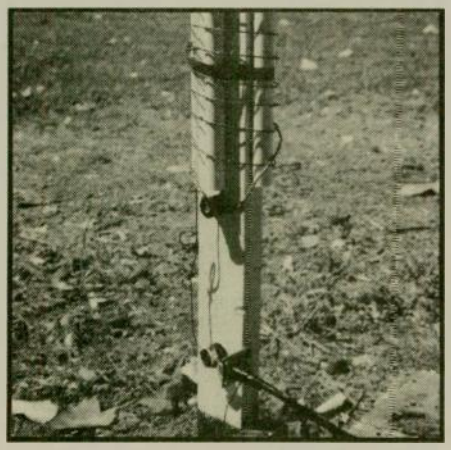
The DM loop for 80M uses a wooden apex support at approximately 40 feet guyed with electric fence wire broken up with electric fence insulators (they are cheap) to suppress any parasitic resonances. The original design was improved by adding the two helically-wound end supports, which provide three desirable features. They raise the wire clear of physical contact. They simplify adjusting antenna resonance, and they conserve space by reducing the overall span of the antenna. Fourteen turns of the antenna's wire are wrapped around each end support with a winding length of four feet. These numbers are not at all critical, but should be the same on each support. The idea is to adjust the number of turns and/or their spacing to resonate the system. These vertical end supports are made of 8-foot "two-by-four" timbers (which actually measure about 1 and a half by 3 and a half inches). Each is planted about two feet in the earth. On the remaining six feet, secure one six-foot length of one-inch plastic pipe to each of the four surfaces by wrapping with ordinary vinyl electrical tape. The finished winding base will resemble an oval, not a circle, with an average diameter of five inches. This may look crude, but don't worry. As long as the wound wire doesn't touch wood, it is only tangent to plastic pipe and losses will be low. These helically-wound end sections might be considered either as loading coils or as a high-current portion of the antenna radiating in the normal (i.e. perpendicular) helical mode.[2] The loop is resonated in the most-used portion of the 80M band. Since the antenna tunes broadly, dip-meter accuracy is sufficient. A 2:1 SWR plot showed a 210 kHz spread. One point deserves emphasis: no numbers used in the stated physical design are critical. A variation up to 20 percent should not affect performance. However, one should strive to maintain symmetry, and one should try to maintain a 90-degree angle at the wire's apex. Adjusting the turns in the helical end





sections easily compensates for variations in mast height and overall wire length while maintaining the system's resonance (see Figure 2).

Measurements with an antenna bridge at the feedpoint showed that the impedance at resonance was very close to 50 ohms resistive. This fact strongly indicates that the DM loop shows reasonable efficiency. The radiation resistance of a single full-wave quad loop in free space is approximately 140 ohms.[3] Over a perfect-earth ground plane, therefore,



the DM loop should show half this value, or 70 ohms. If the loop showed significant ground losses, these resistive losses should be reflected in the total feedpoint impedance at resonance which should then exceed 70 ohms. However, the two helical end sections reduce the loop's radiation resistance to some extent. The measured 50 ohm resistive feedpoint impedance of the DM loop, therefore, suggests that earth losses are small.

The DM loop's apparent high efficiency without a radial system can be explained theoretically. In contrast to a quarter-wave vertical monopole, where current return to the feedpoint is via displacement currents that travel through lossy earth (whose conductivity is usually enhanced by radials), the current return in the DM closed loop is via a single low-loss copper conductor (actually three copper wires connected in parallel). Characteristics of a magnetic (as opposed to electric) radiator may play a role here.[4] The absence of a radial system cannot affect far-field radiation efficiency, since this is determined by earth constants more than one wavelength from the antenna.

With a maximum height of only 40 feet and without a radial system, the vertically-polarized DM loop's simple construction, direct 50 ohm feed, high efficiency and good 80 Meter DX performance may be of interest to others. As a bonus feature, the 80 Meter DM loop also accepts power at a low SWR on higher harmonics, although part of the radiation is horizontally polarized.

Footnotes

1. Bob Alexander, W5AH, "Half-Loop Antennas," *The ARRL Antenna Compendium,* Volume 2, 1989, page 88.

2. Kraus, *Antennas*, 1950, Chapter 7.

3. William I. Orr, *All About Cubical Quad Antennas,* 1970, page 15.

4. Russell E. Prack, K5RP, "Magnetic Radiators — Low Profile Paired Verticals for HF," *The ARRL Antenna Compendium,* Volume 2, 1989, page 39.

WR

OLD-TIME RADIO

The story of the "Story Man"

There is one amateur operator who has developed a unique way of making an RTTY QSO a bit more interesting. Old timer Russ Rennaker, W9CRC, was first licensed in 1922. Disillusioned with the "hello/goodbye" contacts so frequently encountered on the air, Russ decided to do something about it.

While running the old mechanical machines for RTTY many years ago, he made some tapes about some of his early radio experiences; and when a QSO would run out of things to talk about, he would just run one of the stories. The fad became quite popular and he kept adding tapes, from time to time, as he thought of incidents that might be interesting. Stations answering his CQs, having read the mail on some of his previous QSOs, would ask if he was the "story man" and the title stuck.

When he computerized the station, he transferred the tapes to his disk drive and added more stories. He says one of the most popular is the description of his 1920 spark station, everything homebrew except the 1 kW high-voltage transformer. Everyone seems fascinated that such a crude device could have been an effective method of communication. Many of the younger operators have no idea what a spark transmitter was like, or for that matter, the "cat whisker" crystal receivers of that day. How he became an amateur in the first place is an interesting story in itself, and is in his buffer.

When the list grew to twenty-five stories he made a numbered directory file so that he could run that and let the station request their favorite story by number.

So now when you see "W9CRC Russ the story man" on your screen, you know you are in for an interesting QSO. WR

Beautiful to see

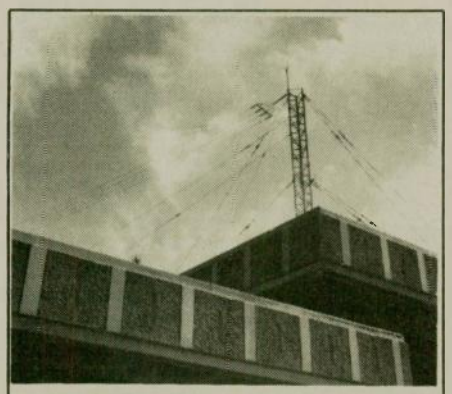
NORMAN M. WEED, W6CE

It had to be about 1935. I had graduated from the self-excited oscillators, I was grinding my own crystals - - found "Y" cut blanks were easier to make oscillate, but they did drift more. My final was a type 10, rated at 15 watts plate dissipation, quite common in home made rigs at the time.

But it was my power supply that was unusual. Somehow, I came by a mercury arc rectifier, two actually, of different types. It sticks in my mind that they were rated in kilowatts, one five, the other ten. Two arms extended out the sides of a larger center bulb, which was maybe 15 inches tall. They were joined at the base, where there was a large puddle of mercury which was divided into three pools, two of which would be joined when the tube was tilted, either way. I had mounted the tube such that it was vertical at rest, but could be tilted by energizing a solenoid. The mercury would float across the gap, and would vaporize as the gap was opened when the tube returned to vertical. The high voltage AC was connected to the tips of the side arms, and DC voltage was obtained from the HV center-tap and the center pool of mercury. It was beautiful to watch when keying CW!

One day I experienced a malfunction of the tilting mechanism, and was deep inside this power supply. My little sister was sort of a shadow in those days, and had acquired a little toy called a "cricket." It was a strip of spring steel, with sort of a dimple in the middle. When squeezed against the upper half which looked like a cricket, it would make a loud snap. Little sister approached, the cricket did its thing, and I came flying out of there, hitting my head on the rack above on the way.

I would like very much to have one of those mercury arc rectifiers added to my collection of a spark coil, and vacuum tubes dating from my first rig, a type 45, through my post-war monster, push-pull 304s high-level modulated with a pair of 805s. I can't imagine anyone who had one, would give it up, but nothing ventured, nothing gained. WR



AERIALS

LIL PADDLE

Mentioned here recently was "The Kansas Dipole" an antenna which is half of the size normally required. Comment was made that it seemed that a 16 foot version (vertically-mounted and center-fed) for 20M would outperform the usual ground mounted vertical.

A very nice letter came in from the originator of that antenna, Robert Syler, KI6AT. He spoke of his competitive testing of the antenna and that the assumptions voiced here were quite correct. He also said that many have accused him of being the real voice of "Kurt." Ahhh, that does tell me that Robert must be the very paragon of erudition and urbanity and is a gifted raconteur. By the way, "The Kansas Dipole" is available in duo-band: 160/75, 80/40, 75/40, 40/20, 30/15, 20/10 versions (the wire length always being that of the shorter wavelength) from Antennas West, of Provo, UT, (801) 373-8425 and FAX (801) 375-8425.

The publisher of this esteemed journal received a letter from Robert Graham, KFØQJ, St. Charles, MO, who stated that Kurt had "a serious psychological or behavioral disorder."

I can assure you that such is not the case. I met Kurt at an elegant dinner party. Oh, how fortunate I was to be seated next to him. I was quickly captured by his rugged, manly, good looks and wit. As the evening wore on, I pulled my chair a little closer to his and whispered, "Put your hand on my knee." But, on to other matters.

Reading through one of the finest antenna books on the market today, I found something of great interest.

Perusing the pages of *AERIALS II*, it was noted that a challenge had gone unanswered.

Let's call them "Granite Antenna Corp." and the gauntlet will be thrown down again. We ask, regarding their 4-element Yagi, with a claimed gain of 10.2 dBd gain:

(1) Over a dipole, how much gain does adding your reflector produce?

(2) Over what is now a two-element Yagi, how much more gain is obtained by adding your director?

(3) Over what is now a three-element Yagi, how much gain improvement is there from adding the second director?

(4) How does your 4-element Yagi have 2 dBd more gain than every other manufactured Yagi on the market? Should you care not to answer, all will enjoy a good laugh at your expense.

New subject. I've been told that at Dayton one of the forum speakers mentioned Kurt in a derisive tone, looking down his nose and in a sneering manner commented that Kurt always says he's right and everybody else is wrong.

I shall allow our fair readers to decide the issue. Recently, Kurt wanted to bring something to the attention of the column readers. To add credibility he felt that he would therefore quote some authorities. His research assistant, Jose, was instructed to call (to spare them humiliating embarrassment) "Tick Tock" and "Adano" or "Ding Dong," companies engaged in the manufacture of the types of coaxial cable used on the high frequency bands.

The simple question posed was "Does SWR have any effect on the power handling capability of coaxial cable?" The calls went to the technical support lines of the manufacturers. The first one answered that there was no effect at all. The second said there wasn't any difference. But, he then said he would check with the engineers and call back. Some time later the caller related that the engineers kicked it around for some time and decided that there wasn't any change.

Alas, they are wrong and once again the light of my life brings the truth to those willing to accept it. Contrary to the engineer's mistaken beliefs, coaxial cable is "de-rated" (as Kurt puts it) at the same exact ratio as the SWR goes up. For example, a cable that would safely handle 2,000W while perfectly matched would be only capable of handling 1,000W at 2:1; 666W at 3:1; 500W at 4:1 and so on. It is "inversely proportional" for those who prefer proper terminology. No argument possible, truly a tragedy that engineers in a particular field of study are so lacking in knowledge. One can only assume that they were ill the day after a fraternity party and missed the lectures the day such was the subject of Socratic discourse. However, a thorough reading of "The ARRL Antenna Book" would have been self-revealing regarding their lack of a thorough grounding in their chosen profession.

A bit of information regarding the top-fed "Bobtail Curtain" has been floating about. Visualize a horizontal span of 67 feet, 5-1/2 inches (for 14.200 MHz). At each end of the wire there hangs down a vertical wire of 16' 6". Different from the usual bottom-feed of the "Bobtail," in this version the coaxial cable feedline comes in at the top. At the very center of the horizontal span the shield side of the cable is attached.

From the centre conductor hangs down another 16' 6" wire for a total of three vertical elements. Never mentioned is why it works. Note that from the feedpoint (going in either direction from center) there is a half-wavelength of wire and then a quarter-wavelength for a total of three quarter-wavelengths. Thus the matching is simplified.

KURT N. STERBA

Recently mentioned here was the Autek RF Analyst. I've now had some

time to work with this truly magnificent machine. What did I measure? The rain gutter, which Lil prefers to call the eaves trough. Using my favorite, the Budwig connector, I laid out two radials for 20, 15 and 10 which were attached to one side of the Budwig. On the other side, finding a place where the gutter tin overlapped, I pushed in the hard copper line of the Budwig. The Autek unit was connected to the Budwig with a barrel connector. What did I find?

Band	SWR	Impedance
14.200	8.3	202
21.300	9.1	226
28.400	6.8	153

So just for fun I decided to look further.

7.200	2.7	020
3.800	H	203
1.900	H	472

("H" on the meter means 15:1 or more.)

I replaced the RF Analyst with an MFJ 945D tuner feeding the gutter. Now, the Analyst is connected to the transmitter side of the tuner with a barrel connector. Adjusting the tuner I could get, on the Analyst: The first capital letter is the labeled click stop of the Inductor, then Transmitter adjust and panel number, then Antenna adjust and panel number.

	SWR	Imp.			
14.200	1.0	54	I	T/1	A/2
21.300	1.0	55	H	T/1	A/5
28.400	1.0	49	G	T/1	A/5

So, I decided to check further.

7.200	1.0	48	K	T/6	A/10
3.800	1.0	48	B	T/4	A/5
1.900	1.1	45	E	T/5	A/6

Then I replaced the Analyst with coax and back in the shack the SWR reading gear would indicate 1.0.

I could now, with the tuner at the base of the gutter downspout, use it as a transmitting antenna.

I do find one catalog particularly puzzling. Call them the "Airline" antenna company. Look closely at the specs for the monobander. Look closely at the specs for the tribander. It would be puzzling why anyone would buy the monobander. The tribander is, (according to the specs), for all intents and purposes, just as good on each of the individual bands as each of the monbanders. The cost difference between one monobander (20) and the tribander (20,15,10) is a trifle. Hopefully, someone will explain it to me.

It's truly amazing what is written about antennas. And, the advertisements are no prize either. If such horseradish were written about other fields in electronics I well imagine that a lot of audio amplifiers would do nothing except go "squawk, squawk." The RF amplifiers would have those big bottles going off into orbit.

My associate, Jose Ing, has a warning regarding all these antenna computer programs. Some of them are just plain WRONG! As a check, work out, down to the very last nubbin, on one program, a particular antenna. Then, take those dimensions and type them into another program (or if you prefer, an Al Gore rhythm). WOW! Look at the differences in the results!! Big-time differences.

That's why I still stick with a slide rule and a stubby pencil.

Let us examine the claims made by the "Elke" antenna. In one hammymag their ad runs a quote from a review in another hammymag. So, let's together start out on this journey and see just where it leads.

Suppose (for a moment, please) that an amateur (running 100 watts) said a particular antenna gave him the same signal (at the other end) as stations running amplifiers and Yagis. Assuming, (to make it easy) that the mentioned "linears" of his competitors were running one kilowatt, what amount of gain would his antenna need to overcome the power advantage of his "conventional antenna" armed foes? The answer is 10 dB. Now, note that we are now at 10 dB over, let's say, a 6 dB gain 3L Yagi. That means this beam is a 16 dBd antenna. A really good trick at HF.

But wait, there's even more. The ad speaks of "my signal was one. . . . S-units better. . . .(etc.).

So, we now add the six dB of an "S" unit to 16 dB for a total of 22 dB.

Twenty-two dB is about tops for those huge and high monstrous systems used by Voice of America and the like. These are antennas that start in one county and finish in another.

I KEEP WATERING DOWN MY GROUND ROD, BUT IT DOESN'T SEEM TO HELP MUCH

But wait! There's more! The advertisement goes even farther! "My signal was. . . three S-Units better."

That means you add 12 more dB to the above mentioned 22 dB for a total of 34 dB over a dipole.

Let's do it in reverse. First, the three "S" units (18) dB. Then, the power difference of 10 dB, and then the 6dB that he is beating of the other antennas to be even.

Now, obviously the reviewer believed all this or he wouldn't have written it. The manufacturer must believe it or he certainly would not have put his name on it. The magazine knows all this is true (and they have a big contester on their staff).

Why do I doubt it? As I have said, many times here, space will be granted to any manufacturer who wishes to say his piece.

And I'm sure a few old timers were sent laughing to the fridge to get a cold one when they read in the NEJoEMR about the amateur who was concerned about an 80 Meter flat top antenna being one foot short, while being fed with ladder line.

There wouldn't be a centiBel of difference. A milliBel? A microBel? A picoBel?

And, should you be feeding an all band antenna with open wire and it acts a little spooky on one band, just add about three feet of feedline and everything should drop right into place.

("Kurt" goes by his disguise because, being a mild-mannered soul he wants to avoid the cheering crowds at Dayton when he is awarded the Technical Achievement Award. He knows that such should be his in return for his being the only individual debunking the grandiose and fraudulent claims by manufacturers and writers. He is too much "a man of the people" to enjoy the genuflecting that would be his should he appear in public.) **WR**

hamfests September

Arizona

The FAMILY AMATEUR RADIO EVENT (FARE) will hold its 2nd annual event on 17 September, from 9 a.m. at the Rawhide Western Town, 23023 N. Scottsdale Rd., Scottsdale. Features include Ronald McDonald and other kids' activities, RC airplane demonstrations, satellite forums, hands-on exhibits, plus 13 local clubs and organizations exhibiting. Breakfast and a full lunch available, door prizes, etc. Swap meet area opens at 6 a.m. Contact Len Winkler, KB7LPW, P.O. Box 9219, Phoenix, AZ 85068; 602/861-0303, for information or to be an exhibitor.

California

The SONOMA COUNTY RADIO AMATEURS, INC. will hold their 12th annual ham radio flea market 17 September, 7:30 a.m.-2 p.m. at the Holy Ghost Hall, 7960 Mill Station Rd., off Hwy. 116 north of Sebastopol. Admission and parking are free. Indoor or outdoor flea market spaces are $10. Vendor setup starts at 6:30 a.m. Talk-in on 146.73(-). Radio clinic, refreshments, door prizes. Auction at 11:30. Contact: SCRA, Box 116, Santa Rosa, CA 95402.

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THE LIVERMORE ARK is sponsoring an Amateur Radio/Electronic/Computer Swap Meet on **first Sunday** from 7 a.m. to 12 noon at Las Positas College. Features include refreshments, free parking and covered spaces in the event of rain. Admission is free. Sellers pay $10 space fee. Talk-in on 147.045(+) from the west and 145.350(-) PL 100Hz from the east. Contact Noel Anklam, KC6QAK, at 510/447-3857 eves. or leave message days at 510/783-2803.

Colorado

The BOULDER ARC will sponsor a hamfest 25 September, from 8 a.m. at the Boulder County Fairgrounds Exhibition Bldg., Nelson & Hover Rds. Parking is free. VE exams will be held. Admission is $3, Tables $7. Set up is at 7 a.m. Talk-in 146.70(-) and 147.27(+). Contact BARC, P.O. Box 2033, Boulder, CO 80306; 303/441-3883.

Connecticut

The CANDLEWOOD ARA is sponsoring the Western CT Hamfest on 18 September, 8 a.m.-1 p.m. at the Edmond Town Hall in Newtown. Features include commercial vendors, flea market, displays and refreshments. Admission is $4, kids under 12 admitted free, tables $10 (includes one admission), tailgating $6. Talk-in on 147.12(+). Contact Ken Weith, KD1DD, Box 3441, Danbury, CT 06813; 203/743-9181.

Georgia

The DALTON ARC hosts their annual free Hamfest Swap and Trade on 10 September, at Praters Mill Country Fair. Come early and pick your favorite shade tree by the creek. Bring your own table and chairs and stay late. Refreshments by the Dalton ARC gang. Contact Harold Jones, N4OTC, P.O. Box 211, Rocky Face, GA 30740; 706/673-2291.

Illinois

The 42nd Annual W9DXCC CONVENTION and banquet will be held 9-11 September at the Rolling Meadows Holiday Inn Holidome. Early check-in starts at noon on Friday, Saturday check-in starts at 8 a.m. Features include Motorola Museum tours, DX limerick and cartoon contest (prizes!), DX trivia contest, "Hollerin' and Screamin' Out Loud Phone Pile-Up Contest," CW DX Pile-up Contest, and much more. Convention/banquet, and guest registrations through Gordon Bazsali, WB9EEE, 255 Hillcrest Ave., Hampshire, IL 60140-9429. For more information, contact Bill McConnell, N9US, at 708/397-9593.

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The SHAWNEE ARA will hold a Hamfest and Computer Swap Meet 11 September, 8 a.m.-2 p.m. at the DuQuoin State Fairground in DuQuoin. Features include refreshments, free bingo, RC model exhibits, camping, flea market and VE exams. Vendor space is only $5, with drive-in unloading and loading. Talk-in, 147.09(+). Contact Joey Helleny, KB9HNO, 600 S. 16th St., Herrin, IL 62948, 618/457-8114.

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The BOLINGBROOK ARS will hold its 10th annual Hamfest and Computer Fair on 11 September, 8 a.m.-3 p.m. at the Inwood Recreation Center, 3000 W. Jefferson St. (Rt. 52), Joliet. Features include outdoor flea market, indoor dealers, door prizes, and refreshments. VE license testing from 9 a.m. to noon. Tickets are $5 at the door. Talk-in: 147.33(+), 224.54(-). For information, call 708/759-7005.

Indiana

The FORT WAYNE RADIO CLUB will sponsor the Summit City Computer Show and Hamfest 10 September, 8 a.m.-2 p.m. at the Allen County 4-H Fairgrounds, 5 miles north of Fort Wayne off Hwy. 3. Camping available at fairgrounds. Many hotels and motels are available. Admission is $5, $4 in advance. Vendor tickets are $4. Indoor vendor tables are $15, pavillion tables are $10, tailgate spaces $7 each. Talk-in 146.76(-). Contact John Goller, K9UWA, 4836 Ranch Rd., Leo, IN 46765; 219/637-6426.

Iowa

The GREAT RIVER ARC, IOWA ANTIQUE RC and HISTORICAL SOCIETY, and 2 Computer users' groups are sponsoring a hamfest/radiofest/computer expo on 11 September, 8 a.m.-3 p.m. at the Tri-State Blind Society, 3333 Asbury Rd., in Dubuque. Features include free parking, refreshments, dealers, flea market, tailgating and VE exams at 1 p.m. Admission is $2 in advance and $3 at the door. Tables (8') are $8. Talk-in on 147.24(+). Contact Loren Heber, NØYHZ, 9479 Laudeville Rd., Dubuque, IA 52003; or Jerry Ehlers, NØNLU, 3115 Brunswick St., Dubuque, IA 52001; 319/583-1016.

Kansas

The NORTH EAST KANSAS ARC is sponsoring the 5th annual 'FEST 1994 on 10 September, 9 a.m.-3 p.m. at the Knights of Columbus Grand Hall off the Burlingame Rd./Washburn Rd. exit of the I-470 South Topeka Bypass. Features include ARRL forum, Silent Key equipment auction, ATV, VE test sessions. Admission is $3, or four for $10 in advance, $5 or four for $15 at the door. Vendor tables will be sold in advance only for $10 each (each table includes one admission ticket). Electricity is $15 for your group of tables only. Setup is at 7 a.m. Talk-in 146.955(-). Contact Rob Nall, WVØS, 5707 SW 28th Terr., Topeka, KS 66614-2420; 913/271-8899.

Louisiana

The ASCENSION ARC will hold its annual Gonzales Hamfest '94, 17 September, 8 a.m.-3 p.m. at the Gonzales Recreation Center, Gonzales. Admission

is $3. Vendor setup begins at 7 a.m. Talk-in 147.255(+), CTCSS 107.2. Contact George Turner, KB5EOC, 16179 Galvez Ave., Prairieville, LA 70769; 504/622-3598.

Massachusetts

The SOUTH EASTERN MASSACHUSETTS ARA announces its 7th annual Hamfest and flea market 11 September, 8 a.m.-3 p.m. at the club grounds, 54 Donald St., South Dartmouth. Admission is $2. Table space is $8 in advance or $10 at the door. Talk-in on 147.000(+). Contact Michael Enos, P.O. Box 79064, N. Dartmouth, MA 02747.

Michigan

The 22nd annual L'ANSE CREUSE ARC Swap and Shop will be held on 18 September, 8 a.m.-2 p.m. at L'Anse Creuse High School, Mt. Clemens. Features include refreshments, snacks, free parking, major and hourly prizes. VE exams held at 11 a.m. Admission is $4 in advance, by 10 September, $5 at the door. Eight-foot tables (inside) are $10 in advance. Tailgate spaces will be $4, first-come, first-served. Vendor setup is at 6 a.m. Contact Dave Herrington, N8NLK, 165 Crocker Blvd., Mt. Clemens, MI 48043-2546; 810/465-2797. VE exams, contact Don Olszewski, WA8IZV, 810/294-1567; Prodigy ID# SSTG41a.

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The GRAND RAPIDS ARA announces Super Swap III, 17 September from 8 a.m. at the Unity Christian High School, 3487 Oak St., Hudsonville. Admission is $3 in advance, $4 at the door. Tables are $5. Vendor setup is 7 a.m. Contact Jeff Belknap, N8RWS, P.O. Box 1248, Grand Rapids, MI 49501; 616/531-7899.

Missouri

The ST. PETERS ARC Swapfest will be held 25 September, 7 a.m.-1 p.m. at the St. Charles County Community College Campus, 4601 Mid Rivers Mall Dr. in St. Peters. Food and drinks will be available. Admission is $2, flea market space is $3 and includes one admission. VE exams will be held. Talk-in on 145.41(-) and 444.275(+). Contact Jay Underdown, WØOGS, 58 Judy Dr., St. Charles, MO 63301; 314/723-4200.

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The OZARKS ARS Hamfest and picnic will be held 11 September at the Monett City Park in Monett, at the intersection of Hwys. 60 & 37. Potluck dinner is at 12:30 p.m. Admission is free. Tailgaters welcome. Talk-in on 146.97(-). Contact Stan, KFØKS, at 417/452-3801.

New Jersey

The 46th annual SOUTH JERSEY RADIO ASSOCIATION HAMfest will be held 18 September, 8 a.m. at the Pennsauken High School in Pennsauken. Food will be available. VE exams on a walk-in basis will begin at 9:30 a.m. Admission is $4 in advance, or $5 at the door. Vendor and tailgate spaces will be available. Talk-in on 145.29(-) on the day of the event starting at 7 a.m. Contact Diane Nafis, N2LCQ, 17 Roosevelt Dr., Laurel Spgs., NJ 08021; 609/227-6281.

New Mexico

The NORTHERN NEW MEXICO ARC will sponsor the 1994 Northern New Mexico Hamfest 17 September, 8:30 a.m.-4 p.m. at the Glorieta Baptist Conference Center, 16 miles southeast of Santa Fe on I-25, Exit 299 (Glorieta exit). Features include free parking, arts & crafts displays for non-hams, a Saturday night potluck, camping and hook-ups. VE exams will be held. Talk-in on 146.52 simplex, 145.19(-) or 147.30(+). Contact Bonnie Griffiths, KDØJQ, 190 Manhattan Loop, Los Alamos, NM 87544; 505/662-9155 for VE exams. Contact Helenrose Burke, W5IXS, P.O. Box 73, Ojo Sarco, NM 87550; 505/689-2367.

New York

The ELMIRA ARA will hold the 19th annual Elmira International Hamfest-Computerfest on 24 September, 6 a.m.-4 p.m. at the Chemung County Fairgrounds in Horseheads. Features include pancake breakfast, lunch, free flea market, free parking, bunny hunt, camping fee (county requirement). VE exams held at 9 a.m. Advance tickets are $3, $4 at the door. Kids 10 and under admitted free. Talk-in 147.36(+), 444.20(+). Contacts: VE testing, Bill, 607/962-1134; dealer inquiries, Jay, 607/733-0761; and for ticket inquiries, Dave, 607/589-4523.

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The HUDSON AMATEUR RADIO COUNCIL and the CRYSTAL RADIO CLUB of ROCKLAND COUNTY are sponsoring the ARRL Hudson division Convention on 11 September from 9 a.m. at the Rockland Community College Field House in Suffern. Features include a wide variety of forums as well as a huge indoor flea market. The vendors-only information line is 914/426-1488. Talk-in on 147.165(+). Contact Tom Rafaelli, WB2NHC, 914/769-1486, evenings.

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The METRO 70CM NETWORK presents another Giant Electronic Flea Market on 25 September, 9 a.m.-3 p.m. at Lincoln High School, on Kneeland Ave. in Yonkers. Features include unlimited free coffee, door prizes, food, and VE exams. No tailgating as this is an indoor event. Admission donation is $5, kids under 12 admitted free. Pre-registration sale: Tables $18/1st 5'x30" table, add'l. tables $13 each. Prices significantly higher at the door. Vendor set-up time is 7 a.m. Talk-in on 440.425(+) (PL 156.7), 223.760(-) (PL 67.0), 146.91(-), 443.350(+) (PL156.7). Contact Otto Supliski, WB2SLQ, 914/969-1053.

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The SARATOGA R.A.C.E.S. ASSOCIATION, INC. will hold a hamfest on 10 September, 7 a.m.-3 p.m. at the County Fairgrounds, Ballston Spa. Limited camping with hook-up for Friday night is available for $15+tax. Admission is $4, includes one tailgate spot. Inside tables are $5 each on a first-come, first-served basis. Reservations and pre-pay are welcomed and encouraged. Vendor "early bird" set up is Friday from 7 to 8:30 p.m. Talk-in 147.00(-) and 147.24(+). Contact N2FEP, P.O. Box 41, Rock City Falls, NY 12863.

Pennsylvania

The RADIO ASSOCIATION OF ERIE, INC. will hold their hamfest on 10 September, 8 a.m.-2 p.m. at the Franklin Township Firehall, west of Erie. VE Exams will be held at 9 a.m. at the Franklin Center Methodist Church, Rt. 98, one mile north of the hamfest. Admission is $4, children under 12 admitted free. Tailgating is $4 per space plus admission ticket. Vendor cost is $8 per 8' table, $2 per table for electricity. Setup starts at 5:30 a.m. Mobile check-in on 146.61(-). Contact Tom McClain, N3HPR, 3954 Solar Dr., Erie, PA 16506; 814/833-1640.

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The UNIONTOWN ARC, INC. will hold its 45th annual Gabfest 10 September

from 8 a.m. at the club grounds located on Old Pittsburgh Rd. just north of the intersection of Rts. 51 and 119. Free parking, and free tailgate space with registration. Free swap and shop set-up with registration. Talk-in on 147.045(+) and 147.255(+). Contact Carl, WA3HQK, or Joyce, KA3CUT Chuprinko, Rt. 6, Box 231-CC, Morgantown, WV 26505; 304/594-3779.

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The BUTLER COUNTY ARA will hold its annual hamfest 11 September, 9 a.m.-4 p.m. at the Farmshow Grounds, Butler. Admission is $5. Inside vendor space is $10 per 8' table. Vendors contact Joe Stahlman, WA3BVQ, 499 Keister Rd., Slippery Rock, PA 16057; 412/794-8383.

Texas

The EL PASO CHAPTER of the QCWA will hold its annual convention on 30 September - 1 October in El Paso. Contact Robert J. Carroll, Sr., K5IE, 10025 Suez Dr., El Paso, TX 79925-4636.

Vermont

The CENTRAL VERMONT ARC will hold the 6th annual Fall Foliage Hamfest and Computer Fair 17 September, 9 a.m.-3 p.m. at the Judd Gymnasium, Vermont Technical College in Randolph. Features include forums, refreshments, and door prizes. VE exams at 12:30 p.m. Admission is $3. Vendor tables are $6 in advance, $8 at the door. One free admission per table reservation. Tailgating is $4. Talk-in 147.09(+), 146.625(-) repeaters, or 146.52 simplex. Contact Tom Girardi, WA1YNU, P.O. Box 261, Waterbury, VT 05676; 802/244-7836; or Steve Allen, KD1UP, RR1 Box 2409, Moretown, VT 05660; 802/496-7696.

Virginia

The PEIDMONT AMATEUR RADIO KLUB presents a show with a new name and a new location. "Fallfest '94" (Danville, South Boston Hamfest) will be held 24 September, 9 a.m.-3 p.m. at Halifax Senior High School, South Boston, Virginia. Features include indoor/outdoor flea market, dealers, ladies' programs, VE testing, food, and unlimited free parking. Admission: $4.00 in advance; $5.00 at the door. 6' tables, $10.00; outside tailgating, $3.00 per space. Motels and restaurants close by. Talk-in 147.060(-). Contact Kathy Hendricks, 910/597-2959, Rte. 2, Box 144, Hurdle Mills, NC 27541.

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TIDEWATER RADIO CONVENTIONS, INC. presents the Virginia Beach Hamfest and Computer Fair 17 September, 9 a.m.-5 p.m. and 18 September, 9 a.m.-3 p.m. at the Virginia Beach Pavilion near the oceanfront, Virginia Veach Expressway. Features include dealers, outdoor flea market, seminars, free parking. VE exams will be held Sunday morning. Admission $5 in advance, $6 at the door—good for both days. Talk-in 146.97(-). Contact Manny Steiner, K4DOR, 3512 Olympia Lane, Virginia Beach, VA 23452 (SASE, please); or call 804/HAMFEST. Commercial exhibitors contact Lewis Steingold, W4BLO, 1008 Crabbers Cove Lane, Virginia Beach, VA 23452. WR

Omen's law

KEN JOHNSON, W6NKE

Next month we will, again, celebrate the birthday of the famous scientist, Professor Eswald Omen. It was Professor Omen who developed Omen's Law as applied to electronics. His law is as follows:

1) Upon completion of an electronic assembly project, apply power.

2) If there is no smoke or flames, that is a good Omen.

3) If smoke or flames appear, that is a bad Omen. Disconnect power immediately and go back to the schematic. Obviously, you goofed!

YLRL Howdy Days

1400 UTC Wednesday 7 September 1994 to 0200 UTC Friday, 9 September, 1994 operating breaks must be indicated in your log eligibility: All licensed women operators worldwide are invited to participate.

Procedure: Call "CQ YL"

Operation: All amateur bands may be used. — Any type of emission (SSB, CW, etc.) may be used. A station may be worked only once on each band for contact points. — No crossband, net or repeater contacts. — Maximum output power: 750 watts on CW; 1500 watts PEP on SSB.

Exchange: YLRL member or NON-YLRL member.

Logs: Contest logs must show for each QSO: date; time; band; call sign of contacted station; QSO number sent and received; RS(T) sent and received; YLRL status (member or nonmember); and your claimed, score for the QSO.

Please print or type submitted logs. No carbon copies, but photo copies are acceptable. List your name; call; address; YLRL status (member or nonmember); and your claimed score. No logs will be returned. Sign your log.

Scoring: Score two points for each YLRL member contacted. Score one point for each non-YLRL member contacted. NO MULTIPLIERS.

Duplicates: For each duplicate contact the penalty will be the loss of that contact plus three equal contacts.

Send logs to: Carla Watson, WO6X, 473 Palo Verde Dr., Sunnyvale, CA 94086.

Logs must be post marked no later than: 10 October, 1994.

Awards: Top scoring YLRL member will receive her choice of YLRL pin, charm or stationery.

Top scoring non-YLRL member will receive a one-year YLRL membership certificate.

Suggested frequencies: CW — 80 Meters: 3.540-3.725 MHz; 40 Meters: 7.040-7.070 MHz; 20 Meters 14.040-14.070 MHz; 15Meters: 21.120-21.150 MHz; 10 Meters: 28.150-28.200 MHz.

SSB — 80 Meters: 3.940-3.970 MHz; 40 Meters: 7.240-7.270 MHz; 20 Meters: 14.250-14.280 MHz; 15 Meters: 21.380-21.410 MHz; 10 Meters: 28.300-28.610 MHz.

Note:Band allocations in other countries are often different than the USA. NA-YLs should look for DX-YLs in other parts of the bands, especially on 80 and 40 Meters.

1994 Washington State Salmon Run

Contest period: 1600 UTC Saturday, Sept. 24, 1994 until 2400 UTC Sunday, Sept. 25, 1994 Single Operator entries are limited to 24 hours operation.

Classes: CW or SSB or Mixed Mode, QRP (5 watts), Low Power (200 watts), and Open Single Operator or Multi Operator Single Transmitter. There will be a special competition among Washington State Clubs in the Multi Operator Single Transmitter category.

Exchange: RS(T) and County for Washington stations, RS(T) and State, Province, or DXCC Country for outside Washington.

QSO points: 2 for SSB, 3 for CW, and 6 for Novice/Technician CW (there is no bonus for N/T on SSB) — Novice/Techs will sign /N or /T. The same station may be worked for QSO Points on each band, SSB and CW (CW QSOs in CW sub-bands only). Portables and Mobiles may be worked for QSO credit in different counties.

Multipliers: For Washington stations: States, Provinces, DX Countries, and WA Counties For stations outside Washington: Washington Counties (39) Each multiplier may be counted only once per mode (SSB and CW) regardless of bands.

Scoring: QSO Points from all bands X total multipliers, QRP (5 watts) Bonus: Multiply total score X 3, Low Power (200 watts) Bonus: Multiply total score X 2.

Awards: Package of Portlock Smoked Salmon supplied by Port Chatham Packing of Seattle to highest score in each DX country, and each U.S. call district. First Place Certificate to highest score in each WA County, Highest score in each State and Province of Canada, Highest score in each DX country. Special Award to Highest Washington club score. Participation Certificate for all logs received, Mobile Working from the Most WA Counties, and other awards at the discretion of the Contest Committee.

To qualify for awards and prizes the minimum number of QSOs is: U.S.A.: 50 QSOs, DX: 25 QSOs, Washington: 100 QSOs.

Bands: All HF bands, except WARC, with the following suggested frequencies: CW: 1805, 3560, 7045, 14060, 21060 and 28060. SSB: 1815, 3925, 7260, 14280, 21380 and 28380. Novice/Tech CW: 3700, 7125, 21150 and 28160.

Send logs to: W7FR, Western Washington DX Club, P.O. Box 224, Mercer Island, WA 98040. Logs must be postmarked no later than October 31, 1994. Logs must show date and time in UTC, stations worked, exchanges sent and received, bands and modes used and score claimed. Dupe sheets (alphabetized list of stations contacted) are required for logs of 200 QSOs or more.

Log sheets, summary sheets and a list of Washington Counties are available from the Western Washington DX Club — a #10 SASE is requested.

1994 Fall Classic Radio Exchange: 25-26 September

1900 UTC to 0400 UTC. The Classic Radio Exchange, "CX," is a celebration of the older commercial and homebrew equipment that was the pride of our ham shacks a few decades ago. Object is to restore, operate, and enjoy older equipment with like-minded hams. A Classic Radio is at least ten years old, an advantage but not required to operate CX. You can use anything, although new gear is a distinct scoring liability and not as much fun!

Exchange: your name, RST, QTH, receiver and transmitter type (homebrew send final amp tube or transistor) and other interesting conversation. The same station may be worked with different equipment combinations on each band and each mode. CW call "CQ CX," phone call "CQ Classic Exchange." Nonparticipants may be worked for credit.

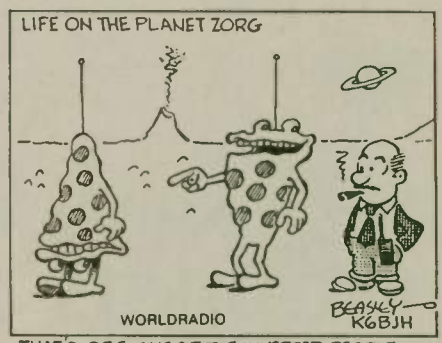
Suggested frequencies: CW up 60 kHz from low band edges; phone 3.880, 7.290, 14.280, 21.380, 28.320 and/or AM frequencies; Novice/Tech 20 kHz up low band edges. 7.060 and 3.560 CW tend to be the most popular CX frequencies.

Scoring: multiply total QSOs (all bands and modes) by the following sum: (total number of different receiv-

ers and transmitters worked on each band and mode plus the total numbers of states/provinces/countries worked on each band and mode). Multiply that total by your Classic Multiplier: the total years old of all receivers and transmitters used, three QSOs minimum per unit to qualify. If equipment is a transceiver, multiply age by two. If homebrew, count as 25 years old unless actual construction date or design is older.

Certificates: are awarded every now and then for the highest score, exotic equipment the best excuse and other unusual achievements.

Send logs: comments, anecdotes, pictures to: Jim Hanlon, W8KGI/5, P.O. Box 581, Sandia Park, NM 87047. Include a SASE for next CX Newsletter.



THAT'S OOG, ONE OF THE INVERTED PEOPLE--- THEY'RE FOREVER CONDEMNED TO USE THE LOWER SIDEBAND, WHILE WE GET TO USE THE UPPER !

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

Ham radio software

Milestone Technologies has announced the availability of a specially priced package deal combining its popular DOS software for ham radio enthusiasts, the CODEMASTER Morse Code training program, and the Milestone LOGMASTER radio log-keeping system.

Marshall Emm, Operations Manager for the Denver based publisher of ham radio and small business software, said the package combines the company's two most popular programs at a price of just $40, representing a savings of $9.90 over the individual prices.

According to Marshall, local promotion of the combined package was so successful that Milestone Technologies has decided to make the offer more widely available.

CODEMASTER, individually priced at $19.95, has an international reputation and is endorsed for military Morse training. It features a programmed learning environment and flexible practice to 40+ wpm, with no plateau effects. "To the best of our knowledge, we are the only Morse software publisher prepared to guarantee results," Marshall said.

Milestone LOGMASTER, separately $29.95, is a general purpose log keeping system which is designed to be powerful, flexible, and easy to use. Features include production of reports in varying formats, QSL card labels, and an extremely fast real-time contest mode. Multiple logs can be maintained for different purposes, limited only by available disk storage space.

Marshall added that prospective purchasers should "rest assured that they are dealing with a company that is reputable and 100% serious about its satisfaction guarantee."

Credit card and COD orders can be placed by calling Milestone Technologies toll free at 800/238-8205. For further information about the combined CODEMASTER/LOGMASTER offer or Milestone's other products, contact Marshall at Milestone Technologies, 3140 S. Peoria St., Unit K-156, Aurora CO 80014-3155; 303/752-3382.

Commercial radio book and classes from Gordon West

The new general radiotelephone operator license book is now available for hams who wish to continue their upgrade beyond amateur Extra. The new 332-page book covers commercial general radiotelephone Elements 1 and 3 for passing the MROP (marine radio operator permit) and GROL (general radiotelephone operator license) examinations.

"Similar to my amateur training books, this commercial radio license preparation guide lists each FCC question, four possible answers, the correct answer, and unique explanations on how to solve for the correct answer," comments Gordon West, WB6NOA. "This book is the very first in the country to cover all of the new examination questions," adds West.

Gordon West Radio School uses the book as part of a three-day weekend licensing seminar. "My new book, plus additional home study training materials, makes our weekend licensing seminars for the commercial ticket an easy pass," adds West. "And since the book covers every FCC commercial radio question from Element 1 and Element 3, nothing is missed for the commercial test," says West.

The book is published by Master Publishing, Inc., Richardson, Texas, and is available through all Radio Shack stores, all Ham Radio Outlet stores, from W5YI-VEC Group, and National Radio Examiners, as well as autographed copies direct from Gordon West Radio School, 2414 College Drive, Costa Mesa, CA 92626; $19.95 plus $3.00 P & H.

BURY-FLEX

Davis RF Co. is pleased to announce the introduction of a hybrid innovations in commercial grade, low loss, flexible/buriable cable, known as BURY-FLEX™ registration pending.

Designed for low loss, flexibility and direct burial, Davis RF's BURY-FLEX™ is a cost effective solution to stiffer, nonburiable cables such as Belden 9913 or Davis RF's 9913 equivalent. BURY-FLEX™, unlike its competitors, is constructed of a larger (9.5 AWG) stranded center conductor. The dielectric is a highly moisture resistant compound of foamed polyethylene. The jacket is a tough, abrasion and water resistant flexible polyethylene. Dimensions are the same as RG 213 and 9913 thus PL 259s and N-connectors can be readily applied. Attenuation is excellent as 2.9 dB per 100 feet vs. 2.6 for 9913 at 400 MHz.

Average retail price, depending on length, is 65¢ per foot. Consumers contact RadioWare at 800/950-9273. Businesses contact Davis RF Co. at 800/328-4773. Davis RF Co. is a custom designer of specialized wire and cable serving numerous industries and the government. Davis RF Co. is also a distributor of standard wires and cables.

PakTERM for the PacComm PTC

Intelligent Software Solutions (ISS) is proud to announce PakTERM, a professional, PC-based terminal program developed in the U.S. specifically for the PacComm PACTOR Controller (PTC). PakTERM is supplied with a 31 page, printed and bound user manual. The manual includes a complete description of PakTERM as well as information on the PTC itself, sample computer to PTC wiring diagrams, and a helpful guide to getting started with the digital modes.

Many terminal programs are not much more than "dumb" terminals with a split screen, sending text and commands to the PTC from one window and displaying its responses in another. PakTERM constantly analyzes PTC status and command responses in order to take control of the PTC so one is free to concentrate on the job of communicating. PakTERM's core I/O routines are written in assembly language and "fine tuned" to operate at the high speed necessary for smooth operating displays.

PakTERM was developed from the ground up with a high priority given to its "human" interface. ISS believes that the operator should never have to do

anything that the computer could have taken care of on its own. As a result, the operator doesn't have to be a computer expert to run PakTERM. From the initial installation, through the setup, to daily operation, everything is completely menu driven and intuitive. There are no text files to be edited with callsign and other system information. Even the PTC configuration is taken care of by PakTERM. As an example of the thought that went into the interface, consider the setting of the UTC offset. Many programs require you to call a configuration text file into an editor, locate the line containing the offset value, figure out the number of hours between your local time and UTC, enter the value (hoping that you get the + or — value correct), save the file, and then restart the program. With PakTERM you simply select "date/time/zone" from the menu and enter your local date, time, and zone (such as EST for Eastern Standard Time). PakTERM does the rest. The computer clock chip is reset to local time, the UTC offset is calculated and saved in the PakTERM configuration, and the PTC clock is reset to UTC; all automatically.

Items which do not change often (colors, ports, mouse sensitivity, etc.) are set via a separate configuration program. This program, like PakTERM itself, is fully menu driven and intuitive. The colors are even displayed on a small replica of the PakTERM screen so you can see how they look as you make changes. When everything is set as you want it, simply select "save" from the menu and your changes are written into the PakTERM program.

While everything can be done from menu selections, a number of the most often needed functions can also be selected with "hot keys," bypassing the menu and speeding operation. The "hot keys" are always displayed right next to the menu selections so that as you become familiar with the program you begin to learn the key that you use the most. Hot keys are consistent from mode to mode. For example, TAB is always used to return to receive. You no longer have to remember +? for AMTOR, Ctrl-Z for PACTOR, and Ctrl-D for RTTY.

PakTERM's unique, character based receive buffer makes life easy! Unlike the line based buffer in most terminal programs, PakTERM retains the last 65,000 received characters regardless of how they may be configured into text lines. This results in more efficient use of computer memory and the retention of the maximum amount of received text. The buffer is circular in configuration so that when it becomes full, only the oldest data is overwritten. Because it is fully interrupt-driven you can even shell to DOS or a text editor while continuing to store incoming data. The new data will scroll onto the receive window when you return to PakTERM. You don't have to remember to open a capture buffer or file in order to permanently save received data, because you can scroll back through the buffer at any time, highlighting and saving blocks of text to the printer or disk file as desired. The buffer continues to store incoming data during this operation, too.

PakTERM is loaded with handy features like the call sign capture function that extracts the other station's call from incoming text, the automatic SELCAL function that generates AMTOR SELCALs from call signs, and the automatic CQ function that repeats CQs until you get an answer. PakTERM can even selectively send data to the printer or a disk file based upon user defined character strings in the received text. Buffers can be preprogrammed with short messages that are inserted into transmitted text with a single key press. They can even contain imbedded commands like changeover and disconnect. Text and graphics files, which can also contain imbedded commands, are easily transmitted by simply selecting one from a directory window.

A log function operates in all modes, keeping a record of your QSOs and the operator's names. View the log in a special window, search for a previous contact with a station, and transfer his name to the status line and name buffer. A single key press enters his/her name into transmit text; a nice feature to make your QSOs more personal.

The PacComm PTC is the best PACTOR Controller on the market. PakTERM takes its performance to the limit!

PakTERM is available from Intelligent Software Solutions, P.O. Box 522, Garrisonville, VA 22463-0522 for $30 plus $5 shipping and handling. Be sure to include your call sign and disk size with order. WR

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 three months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid-June.
Send to ***Worldradio***, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams."
List the location, any 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
Alaska			
10/8/94	Anchorage	Jim, KL7CC 907/338-0662	p/r; w/i
Arizona			
10/8/94	Tucson	Joe, K7OPX 602/886-7217	w/i
10/15/94	Tucson	Micki, AA7RR 602/883-8305	p/r
California			
10/2/94	Chico	W6YKU 916/342-1180	p/r pref.
10/5/94	Sacramento	Jim, AB6OP 393-8839 or Earl, AB6CN 331-1115	p/r pref.; w/i OK
10/8/94	Camarillo	George, KN6LA 805/388-2488	p/r pref; w/i OK
10/8/94	Merced	KI6PR 209/383-2166	w/i OK
10/8/94	Petaluma	Dale, 707/762-9414	w/i OK
10/8/94	San Pedro	N6DYZ 310/325-2965	p/r pref.; w/i ltd.
10/8/94	Torrance	Joe, WB6MYD 310/328-0817	w/i
10/15/94	Downey	KA3DSE 213/923-5598	p/r pref.
10/15/94	Long Beach	Ken Newkirk, KN6EC 310/431-8998	p/r pref.
10/15/94	Sacramento	Lyle, AA6DJ 916/483-3293	
10/15/94	Stockton	Mark, W6DKI 209/465-7496	w/i
10/20/94	Fountain Valley	Tom, N6XKY 714/778-1542	p/r
10/27/94	Long Beach	W6LRF 714/847-6370; N6LUH 310/596-1023	w/i OK
10/29/94	Culver City	Scott, K6PYP 310/459-0337 or Dave, N3BKV 818/559-2572	w/i
10/29/94	Fairfield	Jerry, AA6NO 916/662-0801	w/i OK
10/29/94	Stockton	Mark, W6DKI 109/465-7496	w/i
10/29/94	Vacaville/Elmira	Barbara, KM6AC 707/429-4878	w/i only
Colorado			
10/1/94	All	Exam hotline, 24-hour recording gives info on all VE exams in Colorado, 303/360-7293	
10/8/94	Denver	Glenn,WØIJR 303/360-7293, 24-hr. message	w/i OK
10/15/94	Westminster	Phil, NP2X 303/421-2795	p/r or w/i
Connecticut			
10/2/94	Milford	NB1M 203/933-5125; WA1YQE 203/874-1014	w/i
10/11/94	Thomaston	WJ1T 203/283-1044	w/i pref.
Florida			
10/1/94	Orlando	Lou, AC4GB 407/898-0429	p/r pref
10/15/94	Melbourne	WB9IVR 407/724-6183	w/i OK
Georgia			
10/21/94	Lilburn	Howie, W4NVF 404/921-8363	w/i OK
Idaho			
10/8/94	Boise	W7JMH 208/343-9153	w/i
Illinois			
10/1/94	Belleville	John, KN9G 618/235-2475	p/r only
10/8/94	Oak Forest	David, NF9N 708/448-0580	w/i
10/15/94	Loves Park	Dennis, W9SS 815/877-6768	p/r; w/i
Indiana			
10/2/94	Terre Haute	K9EBK 812/466-2122	w/i OK
Iowa			
10/22/94	Mt. Pleasant	Dave, KAØFBL 319/986-6677	w/i OK
10/28/94	Sioux City	WYØV 712/258-7262	w/i OK
10/29/94	Council Bluffs	Lorraine, AAØBS 712/322-1454	w/i OK
Maryland			
10/15/94	Laurel	WB3GXW 301/572-5124 after 6 p.m.	p/r pref.; w/i OK
10/25/94	Annapolis	Lois, KA3VVQ 410/647-4178	p/r pref.; w/i ltd.
Massachusetts			
10/8/94	Braintree	Phil, K1UPY 617/326-6446	
10/19/94	Cambridge	Bob, N1KDA 617/593-1955	
Michigan			
10/1/94	Mt. Clemens	Bill, N8CVC 810/468-8345, 4-9p.m.	w/i OK
10/8/94	Houghton	George, W8FWG 906/337-2542	
Missouri			
10/1/94	Kimberling City	NQØG 417/739-2888	w/i OK
10/8/94	Dutzow	Ed, WDØELL 314/459-6581	w/i ltd.
10/13/94	Granite City	Larry, NZØP 314/524-3254	p/r pref.
10/22/94	Creve Coeur	Ron Lemons, KBØDIY 314/647-3223	p/r
10/22/94	St. Louis	NØIS 314/892-4434	w/i OK
10/29/94	HighRidge	James, WAØFQK 314/942-2268	p/r
New Jersey			
10/8/94	Cranford	24-hr. hotline: 201/377-4790	
10/12/94	Fort Monmouth	MARS 908/532-5354	w/i
10/14/94	Manahawkin	Dave, WA2TVS 609/698-2872	w/i OK
10/15/94	Bayonne	Bob, N2IYY 201/435-5953	w/i OK
10/20/94	Bellmawr	WA2VQG 609/933-1500	w/i
New York			
10/2/94	Yonkers	AC2V 914/237-5589	w/i OK
10/11/94	Hicksville	Bob, W2ILP 516/499-2214	w/i
10/15/94	Long Island	Les, AA2FJ 516/364-0030	w/i OK
North Carolina			
10/27/94	Jacksonville	Dick, KD4YOT 910/455-8834	w/i
Ohio			
10/1/94	Cincinnati	Herb, WA8PBW 513/ 891-7556	w/i OK
Oregon			
10/11/94	Pendleton	Mike, AA7SL 503/566-3597	w/i OK
10/12/94	Roseburg	KB7CMB 503/672-5997 or AA7GD 503/672-7564	w/i OK
10/29/94	Eugene	Steve, AA7CF 503/689-5534	p/r pref.
Pennsylvania			
10/1/94	Erie	W3CG 814/665-9124	w/i OK
10/7/94	Nazareth	John, WX3C 215/767-4778	w/i
10/15/94	Hermitage	WM3H 412/347-5960	w/i
Rhode Island			
10/13/94	Providence	Judy, KC1RI 401/231-9156 or Al, NN1U 401/454-6848	w/i OK
10/29/94	Slatersville	Bob, W1YRC 401/333-2129	w/i OK
South Carolina			
10/15/94	N. Charleston	Ed, KC4OOZ 803/871-4368	
Texas			
10/8/94	Houston	Jim, KB5AWM 713/488-4426	w/i only
10/11/94	Houston	Harold, ND5F 713/464-9044	p/r pref.; w/i OK
10/29/94	Austin	Jim, AB5EK, 512/327-6184	w/i
Virginia			
10/1/94	Williamsburg	WJ4X 253-2811	w/i only

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WANTED: TUBES. I pay cash or trade for all types of transmitting or special purpose tubes. MIKE FORMAN, 1472 MacArthur Blvd., Oakland, CA 94602. 510/530-8840 or fax 510/530-0858. 10-1094

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AUTO-CALL MAGAZINE, official journal of the Foundation For Amateur Radio, a federation of over 50 clubs in the greater Washington D. C. area. Great coverage of FCC, ARRL, VEC, Public Service and club activities in the area. A must for those even passing through the area. For a sample copy write FOUNDATION FOR AMATEUR RADIO, P.O. Box 7612, Falls Church, VA 22046-7612. F195

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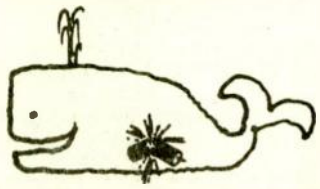
Whale of a story



As relayed by:
JEAN A. DELANCY, K1ZAT

The Farside comes to life in Oregon

I am absolutely not making this incident up; in fact I have it all on videotape. The tape is from a local TV news show in Oregon, which sent a reporter out to cover the removal of a 45-foot, eight-ton, dead whale that washed up on the beach. The responsibility for getting rid of the carcass was placed on the Oregon State Highway Division, apparently on the theory that highways and whales are very similar in the sense of being large objects.

So anyway, the highway engineers hit upon the plan — remember, I am not making this up — of blowing up the whale with dynamite. The thinking is that the whale would be blown into small pieces, which would be eaten by seagulls, and that would be that. A textbook whale removal.

So they moved the spectators back up the beach, put a half-ton of dynamite next to the whale and set it off. I am probably not guilty of understatement when I say that what follows, on the videotape, is the most wonderful event in the history of the universe. First you see the whale carcass disappear in a huge blast of smoke and flame. Then you hear the happy spectators shouting "Yay!" and "Whee!" Then, suddenly, the crowd's tone changes. You hear a new sound like "splud." You hear a woman's voice shouting "Here come pieces of. . . MY GOD!" Something smears the camera lens.

Later, the reporter explains: "The humor of the entire situation suddenly gave way to a run for survival as huge chunks of whale blubber fell everywhere." One piece caved in the roof of a car parked more than a quarter of a mile away. Remaining on the beach were several rotting whale sectors the size of condominium units. There was no sign of the seagulls who had, no doubt, permanently relocated to Brazil.

This is a very sobering videotape. Here at the institute we watch it often, especially at parties. But this is no time for gaiety. This is a time to get hold of the folks at the Oregon State Highway Division and ask them, when they get finished cleaning up the beaches, to give us an estimate on the US Capitol.

— *The Chattering Relay*, Cuyahoga Falls ARC

How to fix a boat anchor

JIM EVERSON, N6MBY

Oh boy! What a deal I got at the swap meet this weekend! This was the best receiver (or fill in the blank yourself) ever made and I always wanted one but couldn't afford one. Now I have one, but does it still work? Once I work up some courage I'll plug it in and see what happens (or doesn't).

Well, no smoke came out but it isn't working either - now what? There sure are a lot of tubes in here. Are they all lit up? Yup, all of them light up. I don't hear anything from the speaker at any volume level but there is a "pop" when I first turn it on. I guess the speaker itself is trying to work.

Now how about the power supply voltages? Some of these can be quite high so I'd best use only one hand for this testing to reduce the chance of shock. But what voltage should be where? I know! I'll follow the wires from the power transformer and hope to find a rectifier tube or maybe a diode bridge. First I'll turn it all off and get my bearings in the circuit. Well look here! It's a real diode bridge (pretty modern for this unit). Now I'll turn it on and read the voltage at the plus and minus outputs of the bridge. Oh oh! Twenty volts seems a bit low for a vacuum tube plate circuit in a receiver. Perhaps I need to use the age old divide and conquer approach (or binary division for you digital fans) to narrow down the problem.

I know! I'll turn it off again, discharge the plus side of the bridge through a 1,000 ohm at 1 watt resistor to chassis ground and then I'll disconnect the + side of the bridge from the wires hooked up to it. Now to turn it back on and measure the voltage again at the + side of the bridge. Wow! There's almost 150 volts now! Is something in the circuit drawing the 150 down to 20? What could do that? A tube acting up? Maybe, but I saw no arcing or strange glows or flickers before, and there are none now. Maybe it's a leakage in one of the filter capacitors. OK, turn it off, discharge the capacitor as before, disconnect it's + lead and clip-lead in another of similar value and voltage. Now that's more like it!

I have 135 volts now on the plate circuit, but there is still no speaker noise. Oops! I left the volume control turned down before! There is really noise after all. So, after changing the leaky filter capacitor, I connected my prize to an antenna: to my disappointment there isn't a signal to be heard anywhere on the band. Oops again! I'm on 10 meters. Let's try 20 meters instead! Wow! Now they are coming in from all over the planet.

I knew I always wanted one of these for a reason. Perhaps when I'm done wallowing in this success, I'll take on one of those "magic" devices next time that somehow seem to work without any tubes at all. — *Key-Klix*, Santa Barbara ARC.

Time marches on. . .

MARK NELSON, AA6DX

Everything is farther away than it used to be.

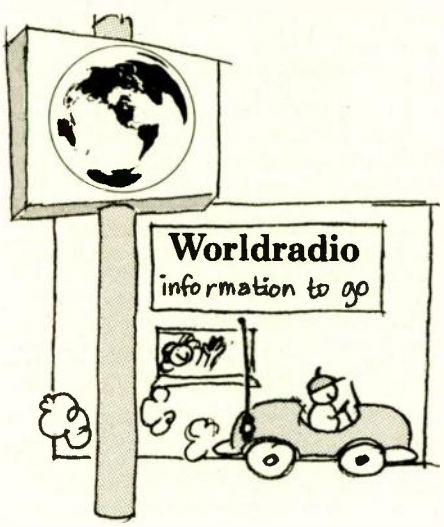
It's twice as far to the corner, and they've added a hill.

I've given up running for the bus, it leaves faster than it used to.

It seems to me they're making the stairs steeper than in the old days.

And have you noticed the small print they now use in the newspapers?

There is no sense in asking anyone to read aloud anymore. Everyone speaks in such a low voice, I can't hear!



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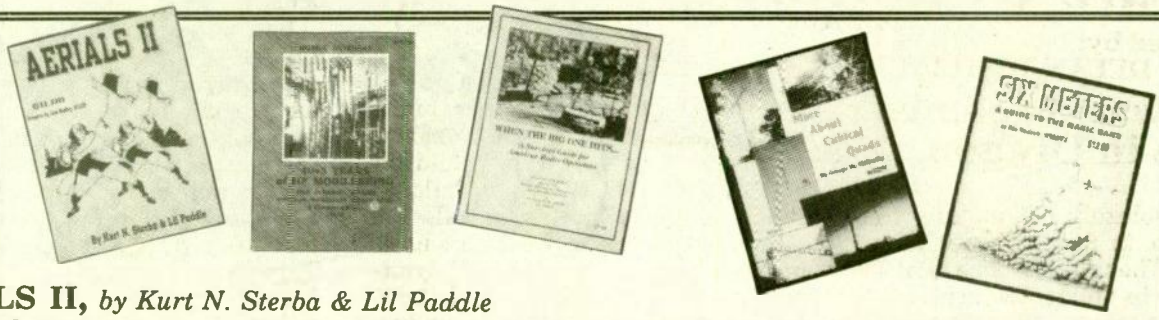

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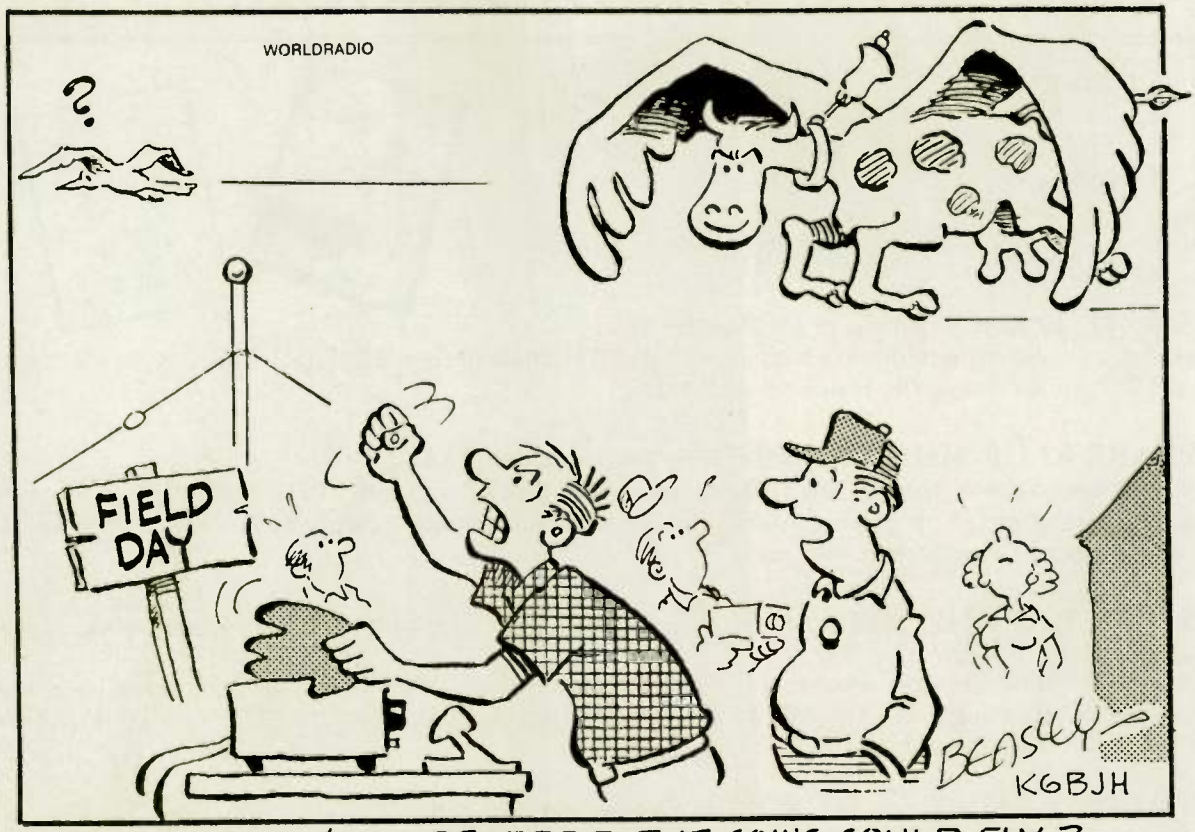

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