

Worldradio

Year 23, Issue 1

July 1993 • \$1.25

FEATURES

Champaign, IL — 20M High-Q Loop

Dhaka, Bangladesh — Building global friendship

Ft. Knox, KY — Kentucky SAREX QSO

Los Angeles, CA — Silent Key, Lenore Jensen, W6NAZ

Visalia, CA — 1993 International DX Convention

Washington, DC — Novice Exams placed in VEC system



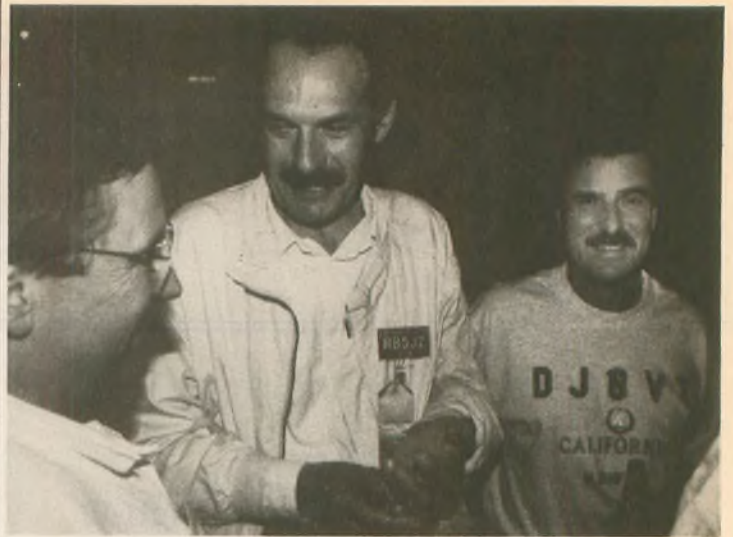
COLUMNS

- Aerials •Amateur Hi •AMSAT-Oscar schedule •Construction •County Hunter •Digital Bus •DX Prediction •DX World •FCC Highlights •Hamfests •MARS •Mobile •New Products •Off the Air •Old Time Radio •Product review •Propagation •Public Service •Publisher's Microphone •QCWA •QRP •Search & Rescue •Special Events •Station Appearance •Traffic •VE Exams •World of DX Contesting

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REGISTRATION
SUFFIX A-M SUFFIX N-Z



**A gathering
of DXers
in Visalia**



Worldradio

Year 23, Issue 1

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Building global friendship

LARRY VOGT, BV / N4VA / S21ZK / HS0ZAX

Building global friendship is the purpose of the Foundation for Amateur International Radio Service (FAIRS), and this is just what a team of eight members did during March 1993 in Bangladesh.

The group of FAIRS members from the US, Ukraine, and Russia met in Dhaka to provide training for prospective amateurs from 27 February through 17 March 1993. The team consisted of: David Larsen, KK4WW / UB5WUS / S21ZJ; Gaynell Larsen, KD4GMV / UB5WMV / S21ZH; Larry Vogt, BV / N4VA / S21ZK; Victor Goncharsky, UB5WE / KC1VF / S21ZM; Helen Goncharsky, RB5WA / KB0KNC / S21ZM (second op); Yuri Katyutin, UA4LCQ / KD4STR / S21ZL; Serge Tarasov, UA4LLQ / KD4QAU / S21ZL (second op); and Vyacheslav Sergeev.

The FAIRS representatives were able to obtain five amateur licenses from the Bangladesh government and three stations were installed at different locations around Dhaka. Two stations were used to provide QSOs during the period, while the third posi-

tion provided training (including "hands on" experience) for the

students. A few of the students were lucky enough to also get to learn about antenna installation in the 90-degree heat!

All five call signs were used during (please turn to page 10)



Helen Goncharsky, RB5WA/KB0KNC, made our first DXpedition contact using S21ZH which was issued to Gaynell Larsen, KD4GMV/UB5WMV/S21ZH. Helen is a well-known DXer with many DX and contest honors including DXCC Honor Roll #1 and Five-Band DXCC. Gaynell was the first YL issued a license and Helen made the first YL contact in the history of Bangladesh.

Novice exams placed in VEC system

In the interest of integrity, simplification and efficiency, the Commission has amended the Amateur Service rules by placing responsibility for the preparation and administration of Novice Class operator license examinations under the volunteer-examiner coordinator (VEC) system. The Commission will also allow recovery of out-of-pocket costs for coordinating and administering such examinations.

Currently, each examination for an amateur operator license, except the Novice license, is administered at a session coordinated by one of the 18 VECs. Under this system, the examination is administered by three

volunteer examiners accredited by the VEC. An examination for a Novice license, however, is administered at an ad hoc session by two licensees selected by the examinee.

The examination elements required for the Novice license are already being administered in the VEC system because they are also requirements for other classes of amateur operator licenses. With the advent of the codeless Technician Class, however, there has been a decline in the interest for new Novice licenses. To help standardize and simplify the license qualification process, the Commission has placed the Novice license examinations in the VEC system.

Administering all amateur operator license examinations under the superior and more efficient VEC system will avoid the confusion that now exists because two different systems are used. The oversight provided by the VECs will result in fewer administration discrepancies and application errors than the Novice system. The data kept by the VECs provide a timely overview of the examination process and a means to gauge the effectiveness of the examination system. Additionally, by eliminating the separate certifications by examiners administering Novice license examinations under the ad hoc system, the license application Form 610 can be streamlined. (Action by the Commission 3 May 1993 by Report and Order [FCC 93-218].)

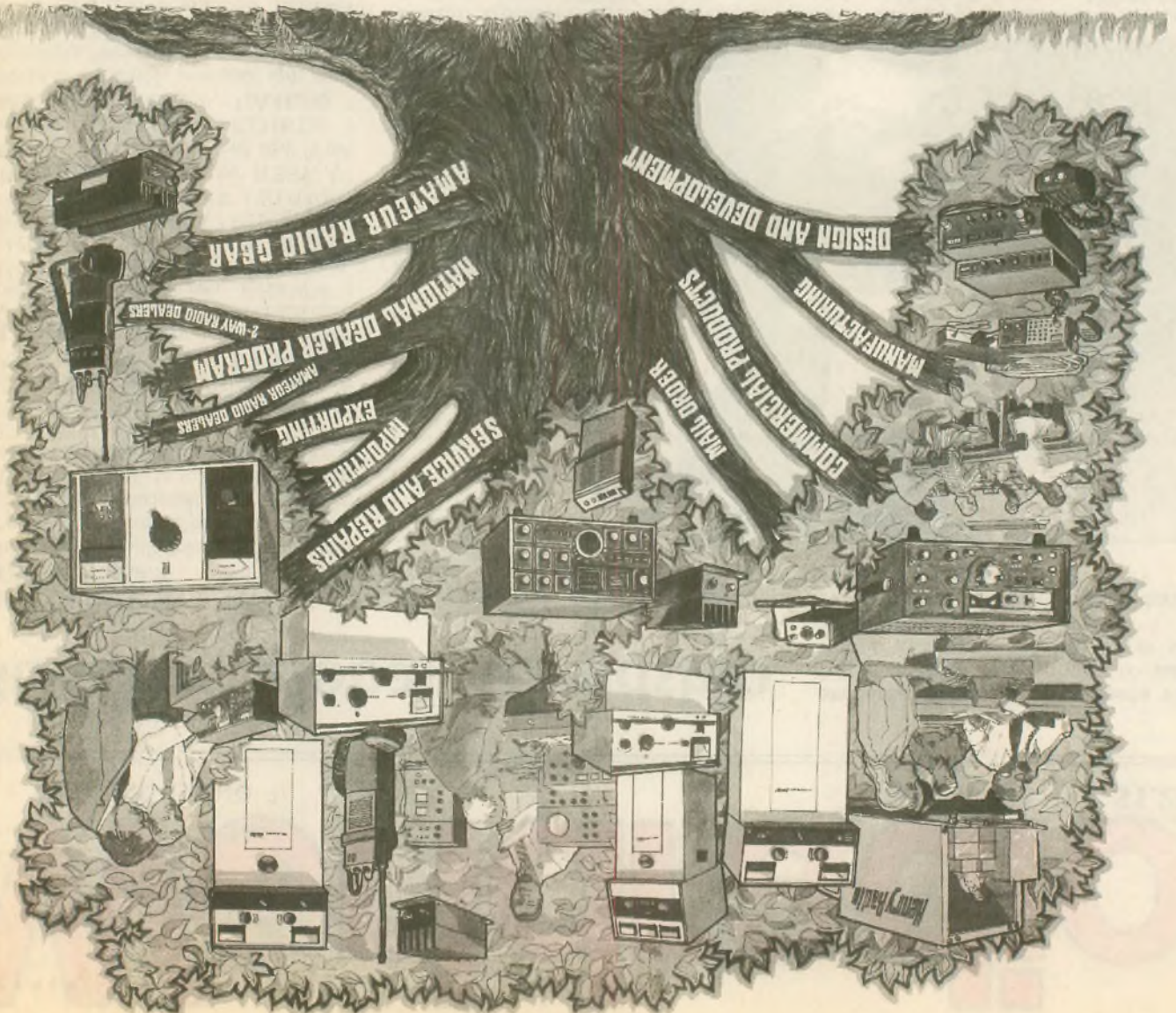
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What does all this mean to our most important customers, the amateur radio operators of the world. Simply this. As Henry Radio grows these sturdy new branches on our tree of electronic expertise, we continually strengthen our ability to help the amateurs of the world satisfy their communications requirements. As always, we offer expert, responsible assistance, the kind amateurs need and want. Wherever you live in the world, we invite you to turn to Henry Radio, the pioneer in service to the amateur radio fraternity.

Our tree has many branches



At Henry Radio, we are proud that amateurs not only in the United States but throughout the free world look to us as their pre-eminent supplier of fine communications equipment. For sixty years this has been our principal business and it still is.

Most amateurs don't fully understand, however, the manner in which we have grown and grown so that every year are better equipped to provide a genuine service to the world amateur fraternity and at the same time extend our unique blend of responsible, expert service to many electronic services in addition to the amateurs.

Our tree has indeed grown many new and sturdy branches. Yes, as always we distribute all the available high quality amateur equipment. In addition, we manufacture a full line of linear amplifiers that have become world famous for quality and reliability. These have provided the standard of reference in amateur radio for many years and are widely employed by commercial and government users. More recently our tube amplifiers have been supplemented by a broad line of solid state amplifiers for the HF, VHF and UHF bands. Many of these amplifiers are type accepted by the FCC for business, Public service, RCC, marine two-way service and FM broadcast.

casting.

New program for Elmers

There are an estimated 2,000 volunteer instructors throughout the country who teach evening and weekend licensing classes. These licensed Amateur Radio Elmers are not school teachers nor professional teachers, and their "pay" is the satisfaction of completing a successful licensing course and bringing newcomers into the Amateur Radio Service.

"These men and women volunteer instructors are ham ambassadors for our hobby," comments Gordon West, WB6NOA, president of Radio School. "Just like big companies using sales personnel and marketing specialists to introduce their product to potential buyers, our ham ambassador Elmers are our front line to Amateur Radio

recruitment," adds West.

Volunteer ham radio operators may now take advantage of a new free program developed by West and the W5YI Group. A single phone call gets you instantly registered for the new instructor program:

- Free instructor newsletter, similar to *W5YI Report*.
- Source sheet for manufacturer discount coupons for your students.
- Contact information for free color frequency band charts and world maps.
- Source for code keys and simple CW oscillators.
- Information about ham radio free video library.

Gordon West will also offer a national volunteer-instructor training

program in connection with Ham Shows conventions. Local instructors signing up for this free program may pick up valuable teaching tips and information during the review class (premier session, Friday, 20 August, Valley Forge, Pennsylvania).

Instructors will also receive up to 35 percent discount on all W5YI Gordon West Radio School training materials. This includes all books, videos, computer CW programs, and computer technical training courses. "We will even allow for stock adjustment if an instructor needs to swap Advanced books for computer code courses, code tapes for General books, or any way to get the books and training materials into the classroom prior to the first class session," adds Fred Maia, W5YI.

This program is absolutely free and requires only a single phone call to 800/669-9594 to be registered as an instructor. For more information on how this program can help you in the classroom, call Gordon West directly at 714/549-5000. "If you help out teaching a ham class, call now so we can help you with all of the free products and services that manufacturers and publishers want to extend to you and your upcoming class," adds West.

Pacific Crest QRP tour

At least five hams will ride together on a bicycle tour from Hood River to Crater Lake National Park, Oregon, during the week of 11 July to 17 July.

Guy Hamblen, AA7QZ, will be operating 20M QRP on approximately

14.06 MHz along with Bil Paul, KD6JUI. Paul will also operate 40M QRP on approximately 7.04 MHz. They will be operating from campgrounds along the way after approximately 4:30 p.m. each evening, 0020 UTC. The other hams will be using 2M HTs. Non-hams will join them for this trip along the Pacific Crest Bicycle Trail through the Cascade Mountains. WR

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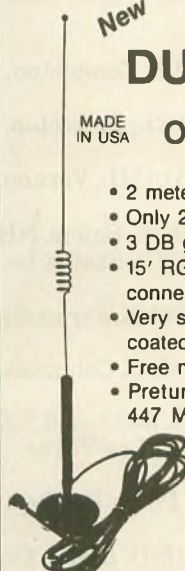
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There are those with the grace of
Fred Astaire, the voice of Sinatra in his
prime, the looks of Cary Grant and the
machoism of John Wayne.

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become *Worldradio* Super-Boosters
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tions do not, of course, apply to our YL
jonees. Having surpassed the serenity
of Grace Kelly, the dancing ability of
Cyd Charisse, the beauty of Sophia
Loren, they look for new worlds to con-
quer.

- Steven Kimball, WO1E, Templeton, MA
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- Steve McCully, WA7HSD, Rialto, CA
- John Barnum, KC6SNG, Riverside, CA (a gift from Tom Barnum.)
- John Brand, K6WC, Orangevale, CA
- And, protecting our country, SSG Hector Eide, who takes time from dis-bursing pushups to get on the air from his APO address as KH2FA.

An organization (a highly motivated one) which is doing many good works around the world is the Foundation for Amateur International Radio Service.

If you'd like to take part, their address is P.O. Box 341, Floyd, VA 24091.

One particular figure in Amateur Radio is on the soapbox again about the electronics industry in the US dying because another country has more technicians and engineers due to a no-code license.

No, what probably killed the electronics industry (and other industries, too—witness the empty factories in the so-called rust belt) in the US was government regulations and excessive taxation.

When every dividend in the US is taxed twice, when one is taxed on inflation (capital gains), what hope is there to be able to compete on a level playing field with countries that are more enlightened?

About half the licensed amateurs are employed in electronics, much of it contractor or subcontractor to the defense industry, which will soon be scaled down to a level approximately what it was on 1 September 1939.

The magazine *Aviation Week* recently ran an editorial attacking the red tape of government, particularly in the state of California.

For those long boring summer evenings when you're faced with rained-out baseball games and TV reruns, get yourself a copy of AERIALS II, by Kurt N. Sterba & Lil Paddle, and Don Johnson's 40+5 Years of HF Mobileleaving. Passes the time and improves your knowledge. Order info on inside back cover.

At the present time every person in the US is paying about \$1,000 a year in taxes just to pay the interest (and only the interest) on the national debt (which will never go down).

What will happen to what is left of our electronics industry if the proposed tax increase of \$264 billion goes through? That is about \$1,000 for every man, woman and child in the US.

That represents a whole lot of stuff that won't get bought.

We will solve all of mankind's problems and not have a dime left in our pockets to buy the towers and beams that are still being made here.

The only growth industry in the US will be social workers who will be employed at the unemployment office shuffling paperwork for those who formerly welded towers.

Some thought Ayn Rand's *Atlas Shrugged* was a novel. No, it was a prediction.

However, Americans are smarter than they have ever been.

Twenty years ago at Harvard, 22 percent of the grades were A's. Now it's 43 percent. At Stanford in 1987, 16 percent of the grades were C's. Now only 6 percent of the students are doing work at that mediocre level. Must be taking smart pills.

It is with great sadness that we report the death of Lenore Jensen, W6NAZ, of cancer in early May. First licensed in 1939, Lenore performed yeoman service throughout the years with Army MARS and volunteer public relations work with the ARRL. For many years she was a regular contributor to *Worldradio* with her "Who's Who in Amateur Radio" column. She was a delight to work with, and we consider it a privilege to have known such a truly great lady.

— Armond, N6WR

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SAREX success continues

The *Discovery* STS-56 was a great success! Although the launch was scrubbed at just 11 seconds prior to launch due to failure of a liquid hydrogen high pressure bleed valve, the problem was solved and the launch was a go within 48 hours. The shuttle lifted off at 0529 UTC on the morning of 8 April with ATLAS (Atmospheric Laboratory for Applications and Science) and SAREX, in the configuration of 2M voice, packet and ATV, on board.

Ken Cameron, KB5AWP, headed the all-ham crew: Steve Oswald, KB5YSR; Mike Foale, KB5UAC; Ken Cockrell, KB5UAH; and Ellen Ochoa, KB5TZZ. The first two-way contact between orbiting craft was achieved when Mike Foale, KB5UAC, made contact with cosmonaut Alexander Bolishuk, R2MIR, aboard the Russian MIR space station as the two spaceships passed within 135 km of each other.

SAREX contacts reached 18 schools worldwide with clear transmissions and receptions reported. Of these schools 13 were in the US, two were in Great Britain, one in Australia, one in Portugal and one in South Africa. Young students had the opportunity to ask the astronauts various questions, including what life is like in orbit.

Accomplishments were also made with fast-scan TV; the Amateur Radio club station W5RRR at the Johnson Space Center sent live video images from the mission control room at JSC to the STS-56 crew as they passed over Houston. Slow-scan TV, packet and a

few general contacts completed the SAREX schedule. SAREX is the only payload which has flown on all shuttle spacecrafts.

Those who copied SAREX transmissions from STS-56 or who were lucky enough to establish two-way contact with the space shuttle should direct their QSL requests to: STS-56 QSL c/o Vienna Wireless Society, P.O. Box 418, Vienna, VA 22183. Include an SASE; non-US stations should include IRCs or adequate US postage on the envelope. Reports should include call sign, whether worked or heard, date, UTC time, mode, frequency and QSO number for packet connects.

Note that new frequencies have been established for the 1993 SAREX schedule. The downlink frequency for listening only will be 145.55. *Do not transmit on the downlink frequency.* The uplink frequencies will be 144.91, .93, .95, .97 and .99 MHz. Keplerian elements to track the shuttle are available from the Johnson Space Center's free electronic bulletin board: 713/483-2500 (data format: 8 bits, no parity, 1 stop bit at 1200 baud). When you connect press ENTER and you'll be asked to type 62511.

We look forward to several other missions scheduled for this year. STS-51 is scheduled for 9 July (28-degree inclination orbit); this will be on the *Discovery* orbiter and will feature the payload of ACTS, ORFEUSSPAS. STS-58 is scheduled for launch on 25 August on *Columbia*, which is to be a spacelab mission. The STS-60 *Discovery* mis-

sion is scheduled for 10 November, with a 58-degree inclination, and will carry Spacelab-2, the German spacelab. STS-61, the Hubble Space Telescope refurbishment mission, is slated for 2 December. It is not yet determined which of the above missions will carry the SAREX payload.

Vikki Gigante-Hueber, KA3PVS, and Chuck Sommer, N4OSD, are members of the NASA speakers bureau and are available to speak about shuttle retransmission and SAREX. Interested organizations are invited to contact the Goddard Public Affairs Office at 301/286-2000.

Vikki and Chuck also note that if you're going to be in Florida during the time of a shuttle launch, you can view the shuttle launches right from the base. The KSC visitor center offers bus rides from the visitor's center to a site about six miles from the launch pad. The cost is \$6 for adults, \$3 for children. For information and reservations call 407/452-1212, ext. 260. For a launch pass, write to NASA Vehicle Pass, PA-Pass, Kennedy Space Center, FL, 32889.

WR

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A-Alpha	N-November
B-Bravo	O-Oscar
C-Charlie	P-Papa
D-Delta	Q-Quebec
E-Echo	R-Romeo
F-Foxtrot	S-Sierra
G-Golf	T-Tango
H-Hotel	U-Uniform
I-India	V-Victor
J-Juliett	W-Whiskey
K-Kilo	X-Xray
L-Lima	Y-Yankee
M-Mike	Z-Zulu

Pronounce K, L and P as *keylo*, *leema* and *papa*. Poway ARC, CA

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Visalia '93

JOHN MINKE, N6JM Mobile DXing

New to the programs at the DX Convention in Visalia, California, this year was the session on mobile DXing. The panel included experienced mobile DXers Walt Del Conte, WD6EKR; Rolph Stoddard, W6TWO; and Garry Shapiro, NI6T. Brad Wyatt, K6WR, moderated for Frank Glass, K6RQ, who was unable to attend.

Walt, WD6EKR, licensed since 1977, is an agricultural consultant and is on the road much of his time. Walt reported that he could be heard as the bands are less crowded. Another advantage of mobile operations is the lack of complaints from one's neighbors. Walt's station is installed in his van. Although only running about 6W, Walt has worked WAZ (Worked All Zones) with this rig.

Rolph, W6TWO, who is in the insurance business selling insurance to crop duster pilots, began his early days of mobile operation in 1932 as W6GKO with the Eagle Scouts by packing in his equipment to Yosemite National Park. Using a bicycle type generator at altitudes of 10,000 feet required a change of hands quite often. Rolph used a Zepp antenna for 40M.

In 1939 Rolph tried mobiling on 5M (this band was later changed to 6M with the coming of television-ed.). Rolph later lost interest but returned to Amateur Radio in 1978 after an absence of 32 years. He enjoys CW mobile, usually at 25 to 30 wpm. Rolph said that operating at that speed while driving is quite an experience—and at 65 miles per hour it's quite a thrill!

Rolph recalled an interesting DX contact: While he was driving across Nevada he answered a CQ from V85PO on SSB and had a very enjoyable contact.

Garry, NI6T, was first licensed in 1956 as KN2RQC as a teenager. Due to his discovery of women there was a lapse of 17 years before his interest in Amateur Radio was renewed. However, there was a problem in the fact that during this interim period he purchased his dream home that was in the bottom of a canyon on the San Andreas Fault. "My fault," said Garry. As a result he had no choice

but to operate mobile working DX.

During the 1989 Loma Prieta Earthquake, Garry's XYL was out of state visiting relatives. Garry immediately got on his mobile rig and called "CQ Twin Cities." His wife was advised that he was safe.

Garry's operating from various locations sometimes attracted suspicions from patrolling officers. Such was the case one time as Garry was on 10M working a DXer in New Zealand; he told the officer to listen and held the



Rolph Stoddard, W6TWO

mike button. After his explanations to the uninformed got nowhere he released the mike button, and his radio came back with, "It's alright officer, he is with me!"

Brad, K6WR, summarized the presentation mentioning the fact that no one has matched that of the late Don Wallace, W6AM, in mobile DXing. Brad mentioned that Frank, K6RQ, who was scheduled but couldn't attend, began his career as W6MVL in 1935. Most of his mobile DXing began in 1968 and now has over 280 DXCC countries worked. During the summer of 1984 Frank worked 156 DXCC countries while mobile.

There was another mobile DXer



Jim Maxwell, W6CF, led the DX Forum in Visalia, California.

present. AA6LB mentioned that he runs a kilowatt mobile and says to have the antenna as large as possible. He has 300 DXCC countries to his credit, with a 5X1 his 300th.

DX Forum

The DX Forum was moderated by Jim Maxwell, W6CF, which included panel members Chip Margelli, K7JA; Dave Leeson, W6QHS; Jay Holliday, W6EJJ; and Chuck Hutchinson, K8CH. Jim stated that the DXCC program (please turn to page 12)

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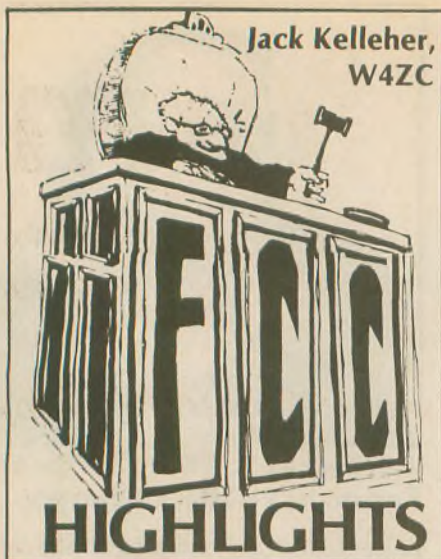
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Revision of Part 97.113

For years there have been inquiries about and requests for relaxing the rules concerning types of communications which should be permitted (and prohibited) on the ham bands. In mid-1992 the FCC issued a notice of proposed rulemaking (NPR) in this matter. The deadline for public comment was 1 October 1992 (and for reply comments, 1 December), and the final action is in the offing. There is some impatience that action has not already taken place, but considering the unprecedented nature of the changes, we should be content to wait a bit longer.

Ralph Haller, chief of the Private Radio Bureau, addressed the problem in his remarks at the 1991 ARRL National Convention, suggesting that the amateur community come up with some wording for proposed rulemaking. The ARRL responded in a letter to Haller dated 6 January 1992 containing a proposed restatement of Part 97.113. In February the FCC issued a public notice soliciting comments on this and other proposals for

rulemaking and, as noted above, issued an NPR last July. Indications are that final action will occur this summer. (For more information see FCC Highlights in *Worldradio* for April and September 1992 and April 1993).

Special call signs

In our November 1992 column we referred to Ralph Haller's comment on "personalized call signs," at the 1992 ARRL National Convention. Mr. Haller noted then that the Commission has this matter under active consideration. The *W5YI Report* for 1 May 1993 chronicles where things stand at the FCC, including distinctive call signs. Responses to *W5YI* from the FCC indicate that the solution not only involves the computer capability at Gettysburg, but also rulemaking; present rules (Part 97.17) prohibit (the FCC) from granting requests for specific call signs.

More on 219-220 MHz

Last month we reported on an FCC NPRM proposing to allocate 219-220 MHz for amateur point-to-point backbone packet networks on a secondary non-interference basis. This was in response to an ARRL petition seeking shared access to the 216-220 MHz band to compensate for loss of the 220-222 MHz subband in 1990. The Commission did not grant access to 216-219 MHz, to avoid interference to TV channel 13 and to the new Interactive Video and Data Service (IVDS).

ARRL says no to smut

The following material, quoted from the *ARRL Letter* for 14 April 1993 is too important and unprecedented an action to risk distorting its intent by editing, other than to say, "The time has come to place some bounds on First Amendment 'rights.'"

"The ARRL has filed a 'friend of the court' (amicus curiae) brief in support of the Federal Communications Commission in the Commission's defense against a lawsuit. The suit, brought by Action for Children's Television and 20 other broadcasting and public-interest organizations, challenges the FCC's monetary forfeiture procedures in indecency cases. The League's interest in the matter is to protect the interests of radio amateurs in effective FCC enforcement.

"The suit, brought in US district court in Washington, DC, alleges that the forfeiture proceedings in indecency cases violate Constitutional due-process and free-speech protections.

"The plaintiffs argue that prompt judicial review of FCC indecency forfeiture orders is not available, and that broadcasters are thus forced to engage in self censorship. Plaintiffs also claim that the FCC has used such forfeiture orders to punish or threaten broadcasters in other ways, in violation of the Communications Act.

"The plaintiffs—the broadcast interests—have asked that the Court, among other things:

1. Find that the review procedures now used by the FCC cannot constitute

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 1 May 1993.

For more information about the call sign 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	Group B	Group C	Group D
0	Am. Extra	Advanced	Tech./Gen.	Novice
1	AA0MR	KG0FH	N0WMS	KB0LFG
2	AA1GE	KD1ON	N1OZA	KB1AVV
3	AA2NM	KF2OJ	N2UQC	KB2QDW
4	AA3E1	KE3HV	N30XE	KB3ASK
5	AD4DH	KQ4TB		KE4AQU
6	AB5MO	KJ5KY		KC5ACP
7	AB6SY	KN6KS		KD6UUI
8	AA7VR	KI7MP		KB7UEE
9	AA8KV	KG8AR	N8YGD	KB8OXC
	AA9GY	KF9PA	N9TGL	KB9IOG
North Mariana Is.	AH0Q	AH0AM	KH0BG	WH0AAV
Guam	NH2P	AH2CS	KH2GR	WH2ANF
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAX
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii		AH6MO	WH6MC	WH6CQJ
Kure Is.			KH7AA	
American Samoa	AH8G	AH8AF	KH8AK	WH8ABB
Wake Wilkes Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska		AL7OV	WL7KE	WL7CGY
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tionally be used to adjudicate alleged indecency violations under federal law;

2. Enjoin the FCC from initiating or conducting forfeiture proceedings for alleged violations of federal law concerning indecency; and

3. Order the dismissal of all indecency forfeiture proceedings currently pending before the Commission.

"Because the relief sought by the plaintiffs is not limited to the broadcasting services, the case could affect FCC efforts to enforce its rules on the Amateur Service, efforts strongly supported by the ARRL and, according to surveys taken by the League, by an overwhelming majority of radio amateurs.

"The League in its brief said that, 'If anything, the Commission has not been aggressive enough in issuing monetary forfeitures for indecent transmissions in the Amateur Radio Service. Monetary forfeitures have been levied only for past transmissions, in egregious cases, during times when children are likely to have receivers tuned to amateur frequencies.

"Specific determination of times when children are likely to participate in Amateur Radio communications have been the subject of a study by the League, and the findings have been submitted to the Commission.

"The League said it supported the FCC's history of use of monetary forfeitures as a remedy for 'past, repeated, indecent transmissions' by amateurs, calling such forfeitures 'critical to the maintenance and utility of the character of the Amateur Radio Service.'

"It is a remedy applied sparingly in the Amateur Radio Service, and in the League's opinion, too sparingly," the League said. "If monetary forfeitures are not available to the Commission as a remedy for indecent speech, there

cannot be expected any future enforcement in the Amateur Radio Service at all.

"The Commission has, in the last 10 years, relied on the deterrence effect of a very few enforcement actions, and the self-regulatory character of the Amateur Radio Service. It cannot (and cannot under current circumstances be expected to) dedicate the limited resources available for enforcement to fully evidentiary hearings in the indecency cases in the Amateur Radio Service, nor should license revocation, or the ineffective cease and desist procedure, be the only remedies available to the Commission in such cases."

The following editorial response (*Westlink*, 14 April) commends the ARRL.

"By far, this is probably the most important position that the ARRL has taken in modern times, and by its action, it might well help to determine what does and does not constitute legally objectionable language over the airwaves—all of the airwaves. We applaud ARRL President Wilson and the board of directors for taking this position in favor of human decency. Leadership like this is very much needed. When it appears, it must be honored.

"For those who need it said in one paragraph, what the ARRL is doing

by entering into this case is simply saying that enough is enough. The League believes that the half-million members of the Amateur Radio community by and large support the FCC, that we see no conflict between the rules and regulations guiding our service and the legitimate exercise of freedom of speech, and that the FCC must be permitted to enforce its rules.

"In our view, the problem we have today is that there are some who feel that all their rights in this world are absolute, that they have the absolute right to do as they please at the expense of all others.

"This is defined as 'anarchy.'

"There are those who claim that indecency, obscenity and profanity are Constitutionally protected and that all of us who do not want to hear it should simply turn off our radios and TV sets. What they have failed to do is to study history. The purpose of the First Amendment to the Constitution was not to destroy civilization, but to guarantee free and open discussions between competing philosophies. It was for the sake of unrestricted political debate that speech, assembly and publication (press) are protected, not so that the social contract can be destroyed.

"*Westlink Report* is proud of the American Radio Relay League and its president, George Wilson . . ." (Ed: We can only add, "Amen.") **WR**

FRIENDSHIP

(continued from page 1)

11 "working" days to overcome the "seven-day-per-license" situation. Total score was more than 25,000 QSOs on all amateur bands except 160M (no space for a top-band antenna in the urban area, unfortunately).

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AEA PK232MBX
Inverted V 7/14 MHz

Station 3—S21ZK/S21ZL

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3L Yagi 18 MHz at 18m
Inverted V 3.5 MHz

There were 30 students present at the first day of five intensive afternoons of code practice and technical training. Of these, 17 successfully learned the Morse code at 5 wpm. It was an enthusiastic group; one of the students told of listening to hams on his shortwave receiver for 10 years with hopes of one day getting a license. It was impressive that some of the students had never heard Morse code and were copying it only five days later. To be sure, they were prac-

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ting for many hours, but we also believe that they had never been told that code might be difficult. This showed that code can be taught easily to open-minded students. David, Victor and Larry all possess VE credentials from the ARRL which allow them to administer US amateur examinations anywhere in the world.

Sixteen new Novices and one new Technician will soon be able to use their US licenses as a means of obtaining their Bangladesh call signs. This is a temporary procedure being used by the Bangladesh government until their own testing procedure is established. Dr. Dick Baldwin, W1RU, president of the IARU was also in Dhaka during the first week of the FAIRS training. His purpose, separate from the FAIRS effort (although the training was coordinated by FAIRS, ARRL and IARU) was to provide a workshop for BTTB government officials and administrations on the international regulations governing Amateur Radio. The simultaneous presence of both groups appears to have been a success, as high government officials gave assurance that Amateur Radio would be recognized in Bangladesh.

The trip was a lot of work but very enjoyable. The FAIRS volunteers made many new friends, saw an exciting mosque-filled city and learned much about cultural differences. FAIRS Bangladesh hosted a reception for the international team members, who joined in for the fast-breaking meal taken at sunset during the holy month of Ramadan. A complete station consisting of a Yaesu FT-757 Cushcraft A3 Beam IBM-XT computer and AEA PK232 was left in Dhaka to be used as a FAIRS club station and for additional training. Watch for them soon with their new S21 call sign!

We thank the many amateurs, Dhaka friends and sponsors for their support.

QSL info may be obtained from Hanna Osuch, SP5IUL, ul Lowiecka, 14, 05-400 Otwock, Poland.

For information about FAIRS and how you can help, please contact International FAIRS headquarters at P.O. BOX 341, Floyd, VA 24091; FAX 703/382-2935. WR

Morsum Magnificat

Interest in Morse code is growing worldwide, as evidenced by increased support for *Morsum Magnificat*, "the Morse magazine," in submitted articles, correspondence and readership. As a result, *Morsum Magnificat* is to be published bi-monthly as from its April 1993 issue.

Every issue of this unique magazine has 48 pages packed solid with Morse material from around the world. It has extended Morse news coverage which popular communications magazines rarely have space to include. There are pages of readers' letters on Morse matters and features covering every conceivable aspect of Morse telegraphy. Key collecting is becoming increasingly popular, and *MM* has become an authoritative source of reference on all aspects of this fascinating subject.

New subscription rates, for six issues a year, available only by post, are as follows:

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Morsum Magnificat was first published in Holland in 1983 by the late Rinus Hellemons, PA0BFN. Now published in Britain, *MM* (as it is known to its devotees) aims to provide international coverage of all aspects of Morse telegraphy. At a time when CW is declining rapidly in maritime use and is under great pressure in Amateur Radio, *MM* continues to "fly the flag" for Morse!

Its editor is Geoff Arnold, G3GSR, one-time seagoing radio officer, who has been a Morse enthusiast since learning the code over 40 years ago. Geoff also publishes *Radio Bygones*, the bi-monthly magazine for vintage radio enthusiasts. The consultant editor of *MM* is Tony Smith, G4FAI, who is a past-Chairman of the European CW Association which is devoted to promoting and protecting the use of CW on the amateur bands. WR

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DX Forum panelists included Chip Margelli, K7JA; Dave Leeson, W6QHS; Jim Maxwell, W6CF; Jay Holliday, W6EJJ; and Chuck Hutchinson, K8CH (not in photo frame).

VISALIA '93

(continued from page 7)

continues to be League supported mainly as it is supported by the division directors. He then went on to recognize most of the DX editors, including our publisher, but made the comment that he doesn't work DX anyway. This is not correct, however. Armond is a DXer!

Jim discussed the direction of DX as most DXers in the United States only represent one culture. We need to get

the message out and sell Amateur Radio to the population as a whole.

Chuck, K8CH, of the DXCC desk in Newington, reported on the status of the DXCC program. He reported that 1,000 DXers have now reached the number-one position on the Honor Roll. And, the Honor Roll continues to grow each week. The next Honor Roll listing in *QST* will require 14 pages.

The past ZA1A operation from Albania opened the door for rare inactive countries to come on the air. These

countries were rare either as they were hard to get to or due to politics within the country.

Chuck reported that there should be a new band in the future, somewhere between 4 and 7 MHz. However, there will be no awards program regarding this band. The 40M band may will be changed to 6.9-7.2 MHz, probably 25 years from now.

Soon you will see a one-to-five-week turnaround time in the processing of DXCC applications. Electronic applications are being accepted. There will soon be a user's fee. However, there will be an advanced notice. The average cost to process one application is \$32.

Chip, K7JA, who is familiar with the Japanese DXers, says he sees more leisure time in Japan with more DXpeditions by them.

Jay, W6EJJ, was concerned as to where DX is going. We have to look at Amateur Radio in general, (refer to the May issue of *QST* for "1992 in Review"). One-third of the Amateur Radio population holds a Technician Class license—or 50 percent if you also include those with Novice Class licenses—and have no commitment to Amateur Radio. We need to support Amateur Radio at our local level.

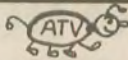
6M DXing Forum

The session on DXing on the 6M band immediately followed that of 160M DXing—sort of one extreme to the other. Russ Bentson, K6KLY, presented another side of 6M DXing that many of the deserving DXer hasn't yet discovered. It may be easy to complete DXCC from the East Coast, however, according to Russ, only two DXers on the West Coast have worked DXCC on this band. The two DXers are WA6BYA and Bob, K6QXY. Only Bob was listed in the convention pre-registration list.

Russ used graphs to illustrate the 6M activity during the present Cycle 22 and beginning in October 1988 through March 1993. The first peak was in November 1989 with the second peak in November 1991. The charts indicated DX worked per day throughout the cycle. As many of the deserving DXers were not familiar with 6M, the following band breakdown was given:
 50.000-50.100 MHz: CW and beacons
 50.110 MHz: DX calling frequency
 50.125 MHz: US calling frequency
 50.100-50.125 MHz: DX window

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Russ Bentson, K6KLY, led the 6M DXing Forum.

The liaison frequency for this band is 10M at 28.885 MHz. Take a listen there sometime and see what is going on. Russ also stated that we should be aware of our grid square for those who collect grid squares on VHF.

Contest Forum

The Contest Forum, moderated by Bob Wilson, N6TV, president of the Northern California Contest Club, was the final session of convention. The panel, named the Visalia Group, included active contesters Danny, K7SS; Dick Norton, N6AA; Fred Laun, K3ZO; and Jim Neiger, N6TJ.

Mark Beckwith, WA6OTU, the newly appointed Southwestern Division representative to the Contest Advisory Committee, was introduced and asked to say a few words.

Bob, N6TV, stated that during the last 30 years of the CQ Worldwide DX Contest, 25 of them were held on Thanksgiving weekend. The panel was asked their views on moving the contest, exchanging with other contest weekends, or moving Thanksgiving. The answers were interesting. Danny, K7SS, said you can eat turkey anytime, move Thanksgiving. However, the conclusion was that the last weekend in November was traditional and since it is an international contest it should remain as is.

The panel also addressed how often amateurs should announce their calls during a run. Danny said it depends on the flow, perhaps every third time; and Fred, K3ZO, would like to see it every time if at all possible. (About that time Jim, N6TJ, complained that Dick, N6AA, was the only member of the panel to wear a tie, where Dick responded by criticizing Jim's lack of socks.) We are not sure if there was collusion on this one.

The third question addressed an in-

roduction of a 24-hour category to the weekend contests. Dick said that a participant in the single-band category already meets this. He said contests are fun. Jim responded that contests are not fun and a lot of work. Danny was opposed to the idea and Fred prefers full time in the contests. There are several other contests that don't involve a full 48 hours. The conclusion was to have no 24-hour category. It was generally agreed that CQ supports contest activity far more than QST.

A member in the audience, Art, W6XD, asked the panel members how much time they spent in refining their

contest logs prior to submitting them. Jim said he spent about four hours, and Fred stated only about 15 minutes, with most of that in printing a hard copy from his computer program.

Other ideas and comments expressed the desire to avoid 10M operation in the 28.300 to 28.350 MHz segment, introduce more low-power categories and other awards. The last suggestion was from *Worldradio's* own Norm Brooks, K6FO, who suggested that stations operating out of their call area be requested to sign portable during contests. It is not clear whether this suggestion was heard or understood. WR



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Mike Norton, KE4NS, establishes contact while two of the students wait with their questions. (Photo by Dave Greer, WE4K)

Kentucky SAREX QSO

SHELBY ENNIS, W8WN

After several launch postponements, and in spite of the omnipresent Murphy and his well-known laws, Mrs. Bobbie Dille's third-grade Ft. Knox Mudge Elementary class was finally able to speak with Space Shuttle Columbia Commander Steve Nagel, N5RAW.

In the 1991-1992 school year, Bobbie Dille had used space as a springboard to attempt to interest her pupils in studying many different subjects. Bobbie's involvement with her kids was extensive, even bringing astronaut Mike Mullane to speak to the Fort Knox schools and community. As part of their study on related topics, Dave

Greer, WE4K, and Shelby Ennis, W8WN, were asked to show slides and present programs on Amateur Radio. When Dave saw the class's involvement in space studies, he introduced Bobbie to the idea of a SAREX QSO. W8WN volunteered the use of his 2M EME-capable equipment (with which several previous random SAREX QSOs had been made), and a request was sent to NASA.

Bobbie's "initial request" was actually a 1 lb. package of materials showing what her students had done during the year. Much to everyone's surprise, KA3HDO, SAREX/NASA, soon responded with a call in November 1992, saying that Mudge School was on the final list and had a very good chance of being one of the schools chosen for the STS-55 mission. We were told that all school QSOs on that flight would be via a telebridge circuit due to the low (28.5-degree) inclination of the orbit.

Bobbie arranged to have a telephone line run to her classroom. W8WN mod-

ified a telephone amplifier to take a push-to-talk mike. This was done to make it look and act more like a radio, and also to have manual control of when the unit was transmitting or receiving. However, we planned to link via 2M from Mudge School, Ft. Knox, to W8WN's QTH at Elizabethtown, then go into the telephone line to the telebridge circuit from there; this would give better quality, present a full amateur station for the media and kids to see, and leave the telephone amplifier as a backup.

As the scheduled launch date approached, Mike Norton, KE4NS, another operator with VHF and satellite experience, was asked to assist. Mike had just been hired by the Ft. Knox school system, and they gave him the task of assisting with the planned contact.

Everything became somewhat confused when a phone call from NASA referred to information that no one had received. The launch date was approaching and we had no idea when the contact would take place. Bobbie received a pack of PR material from another school, which also told when their attempt would be. And this was before Mudge School had even been notified that they were definitely on the list! A hurried message was sent to our NASA/SAREX representative, and K3CLG responded; he was able to dig out what he thought would be our contact time—a mission elapsed time of one day, six hours, 13 minutes. This would put our contact at about three hours after school dismissed for the day!

A few days prior to launch time, W8WN went to the school to give the kids a chance to practice asking their questions into a mike. Only then was it realized that Bobbie's classroom had been changed to the other side of the building, requiring the small beam to be mounted on the roof. The next day Mike's rig was set up in the room with a four-element Yagi on the roof, and signals were very good each way while running only low power.

Then the delays began. A failure to find the proper paperwork certifying the oxidizer turbopump seals caused a three-week delay. Weather caused a second delay; and then came the engine shut-down three seconds before liftoff

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on 22 March, caused by debris in a valve. By this time things had slipped so much that NASA decided that STS-56, also a SAREX mission but with a 57-degree inclination, would go first. We had been planning and setting up since mid-October. As much as we wanted to do this project, it was becoming like the proverbial albatross around our collective necks. STS-55 was rescheduled for 24 April.

This launch date caused a near panic. W8WN and WD8LPN would be out of town for medical reasons during the two weeks prior to the launch. And the school contact was presumed to be at an MET of one day, six+ hours—that is, at about 5 p.m. local time on a Sunday afternoon! And not just any Sunday afternoon—this was the Dayton Hamvention weekend! Both WE4K and KE4NS had reservations there, and both planned to spend the whole weekend in Dayton. Bobbie was told that W8WN and WD8LPN planned to be back in town by launch time; and if necessary, both WE4K and KE4NS would return from Dayton early Sunday. Also, if the unthinkable worst-case scenario came to pass, she could “simply plug in the modified telephone amplifier and do everything all by herself.” Bobbie was chewing her fingernails up to the elbows!

Early Saturday morning we heard the announcement that there was a possible intermittent in the power supply of an Inertial Measurement Unit and there would be a 48-hour delay! Everyone could be ready. And this time, on Monday, 26 April 1993, STS-55/Space Shuttle *Columbia* lifted off at 1450 UTC.

The next afternoon KE4NS lugged his Yaesu FT-767, beam, mount, coax, telephone amplifier, and all the accessories to Bobbie's classroom. But no matter how carefully the antenna was aimed, the signal to W8WN was not full quieting. Signals had been much better during the test in February, and mobile tests from the parking lot between W8WN and WD8LPN had been adequate. What could have changed? Conditions? A “mental survey” of the situation proposed the answer: All previous tests had been run during the winter, but within the past two weeks the leaves had come out, and both W8WN and KE4NS were pointing directly into



Teacher Bobbie Dille watches as her students ask their questions into the mike held by Mike, KE4NS. (Photo by Dave Greer, WE4K)

trees! (W8WN's quad KLM 16LBX array is located in a small valley and is designed primarily for higher-angle operation). His mast-mounted preamp made up the difference, though, and kids and reporters began arriving at the classroom.

At 30 minutes before AOS in Hawaii, the telephone call was placed by W8WN to the teleconferencing center in Chicago. Two voices were heard in the background, but they were too weak to be readable. The teleconferencing company had no means of adjusting the gain

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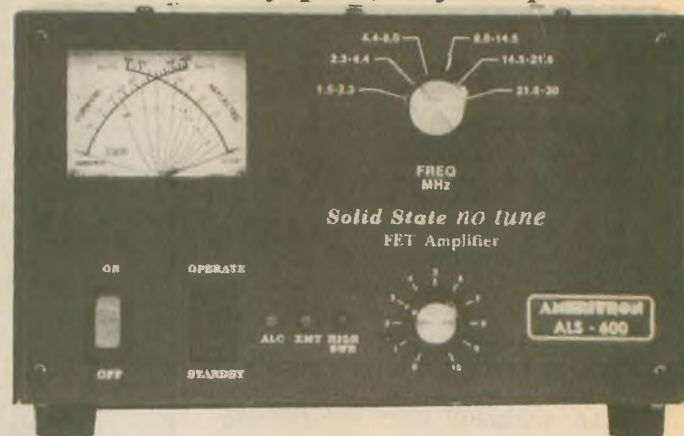
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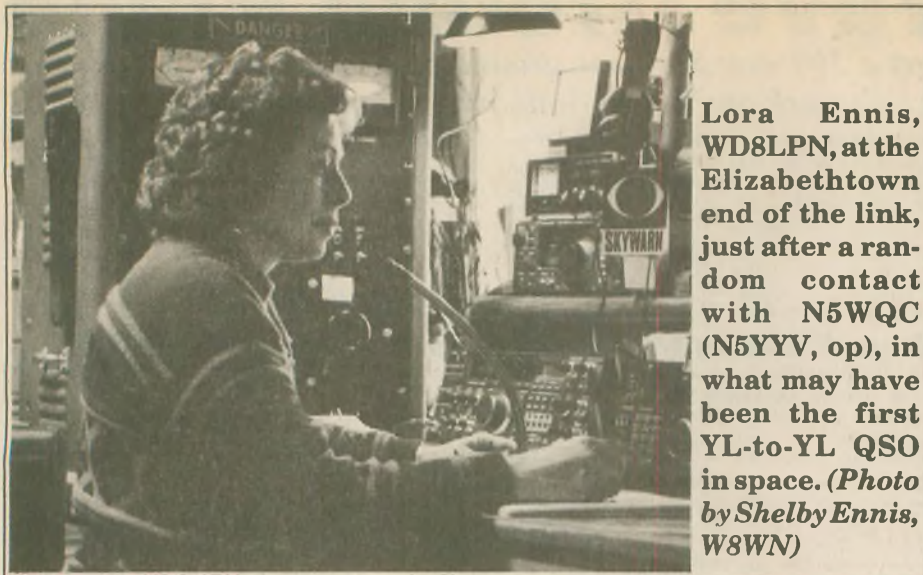
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Lora Ennis, WD8LPN, at the Elizabethtown end of the link, just after a random contact with N5WQC (N5YYV, op), in what may have been the first YL-to-YL QSO in space. (Photo by Shelby Ennis, W8WN)

on the various lines! The center made calls again to all parties hoping to get lines with less loss, but this did not help. The center seemed surprised at the problem, but they were unable to do anything. So W8WN was forced to turn the gain on the phone patch to maximum, as KE4NS did on his receiver. While this did not fill the room with sound, at least it was enough for the kids and the videographers to use. The

quality was good except for the level.

At AOS time, WH6CJU, the uplink station in Hawaii, placed several calls for Columbia. After about one minute N5RAW appeared on frequency. WH6CJU replied and turned it to KE4NS, who initiated his first transmission. But N5RAW was not copying WH6CJU. After another call the contact was established, and KE4NS held the mike out for the first question.

For the next six minutes nine pupils were able to ask eight questions (two had the same question, and each asked part of it). Questions included, "How much fuel do the solid rocket boosters hold?"; "Can you eat all you want in space, or do you get full quicker?"; and, "What would happen if someone snuck [sic] on the Space Shuttle and went into space?" Columbia Commander Steve Nagel fielded each one.

Then there was white noise and LOS—the pass was over! Bobbie's nearly two years of work, the six months of planning, waiting and frustration by the whole group, and the last 30 minutes of panic at the weak audio circuit were all past. And it had been a resounding success! The Louisville and Ft. Knox TV stations had good video (and audio), the school principal and public relations director were happy, the kids had asked a good number of questions, and everyone could finally relax and not worry about additional plan changes and launch delays.

What had it required? Teacher Bobbie Dille had spent nearly two years preparing two classes of pupils, made a trip to Space Camp in Alabama, rented or purchased many NASA audio-visual aids and other supplies, and made a number of long-distance calls. She had to adapt her teaching schedule to the constantly changing launch dates and her classroom had been in disarray on several occasions. The school system ran a special telephone line to Bobbie's room and put up with the occasional "controlled chaos" there. The school's public relations director learned about space and Amateur Radio and was responsible for contacting all of the local media, then over and over send emergency FAXs or telephone calls advising them of either a launch delay or a new launch date. WE4K rushed his Dayton Hamvention trip, made a number of long-distance calls and send a number of FAXs, explained Amateur Radio to the school system, and had his work schedule disrupted. KE4NS had to load his multi-band rig into his truck and carry it to school several times, send several FAXs and E-mail messages, call in to the NASA SpaceLink BBS many times to get updates, and run back and forth between his office and the classroom. W8WN and WD8LPN checked in to CompuServe to send and

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receive Internet E-mail and called the SpaceLink BBS at least every other night for four months, sent a number of FAXs, purchased a better (used) phone patch, and tore apart and rebuilt a telephone amplifier. The total cost of everyone's long-distance telephone and computer BBS calls, E-mail, FAXs and paperwork totaled well over \$100. The

time involved in all of this by everyone, not counting Bobbie Dille's two years of work, must have run over 200 person-hours. What had appeared to be a short, simple project turned out to be slightly bigger than we had expected, though it was no more difficult than anticipated.

This was a once-in-a-lifetime opera-

tion for us; but given the opportunity, would we do it again? YES! Would we change much? Probably not, but we would push harder for a direct rather than a telebridge contact, given the equipment and experienced operators available. We hope the kids will better see how all their education can be tied together in interesting ways. WR

Division conventions redefined

"We have started with a clean sheet of paper," says Marc Holzer, N6UNX, when asked to describe Hamventure '93, the ARRL Southwestern Division Convention that he chairs, set for 17-19 September in Ventura, California.

"We've challenged our speakers to take a new look at some hot topics coming to the forefront in Amateur Radio. This won't be the same old stuff warmed over." Holzer described some of the topics that are slated for the conference. "Bioeffects of electromagnetic radiation. It's been in the news, and while more information is being accumulated and more research is being done, there are still many questions about the unseen radiation, both natural and man-made. The abatement of stray RF in the radio room will also be discussed.

"We're going to have some experts from the field of disaster preparedness, some who are not hams, who will address our effectiveness in the field during times of extreme community need. We'll also approach radio techniques

for monitoring earthquakes."

Additional activities include outreach to those who have an interest in the hobby through CB clubs, computer clubs and professional groups (such as electronic designers). The convention will have hands-on programs designed to familiarize the uninitiated with the hobby, and there will be FCC license examination sessions as well.

Hamventure '93 will also serve up some of the best the area has to offer, with a cruise and tours of the region including historic Ventura and nearby Santa Barbara. "If you've never been to an ARRL division convention, this is the one to attend," Holzer said.

Tickets and reservation forms are available through most ARRL affiliated clubs in the division, or by writing Hamventure '93, P.O. Box 3000-267, Santa Barbara, CA 93130. WR

Signal Corps net

Members of the 2nd Signal Service Battalion of the US Army Signal Corps who served during World War II, have been meeting at 11 a.m. EST (1600 UTC) on 7.190 MHz SSB every Wednesday morning. We welcome any former members who would like to join us and renew old memories.

A reunion of the members is planned for October 1993 at Vint Hill Farms Station, Warrenton, Virginia. Contact Robert Zikowitz, 7605 Gaylord Drive, Annandale, VA 22003 for information.

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PUBLIC SERVICE

Verde River rampage

CAL TURNER, WI6S

A warm February storm released a torrent of water down the picturesque Oak Creek Canyon and the Verde Valley, and snow melt from the Mogollon Rim near Flagstaff, Arizona, combined with a record breaking rainfall, caused devastation to homes, business and RV parks along a 30-mile corridor on the Verde River. The corridor encompasses the cities and towns of Sedona, Clarkdale, Cottonwood, Camp Verde and Cornville. Red Cross figures disclosed 279 dwellings in Yavapai and Coconino counties suffered damage or total loss.

On Friday, 19 February at 8 a.m., ARES District Emergency Coordinator Walt Loesche, WF7J, notified Cal Turner, WI6S, emergency coordinator, that Yavapai County had activated their emergency plan at the county seat in Prescott and would be manning their 2M radio system. The county seat is approximately 60 miles west of the Verde Valley. Cal, WI6S, alerted the Verde Valley Amateur Radio Association AECs in the area to be on a stand-by basis.

At 4 p.m. Frank Funk, N7EBT, telephoned Cal that the Verde River was up four feet above normal at his home on the banks of the river. At 5 p.m. Cal notified Al Sabin, KB7QNX, Red Cross chapter government organization liaison agent, regarding the situation and the county alert.

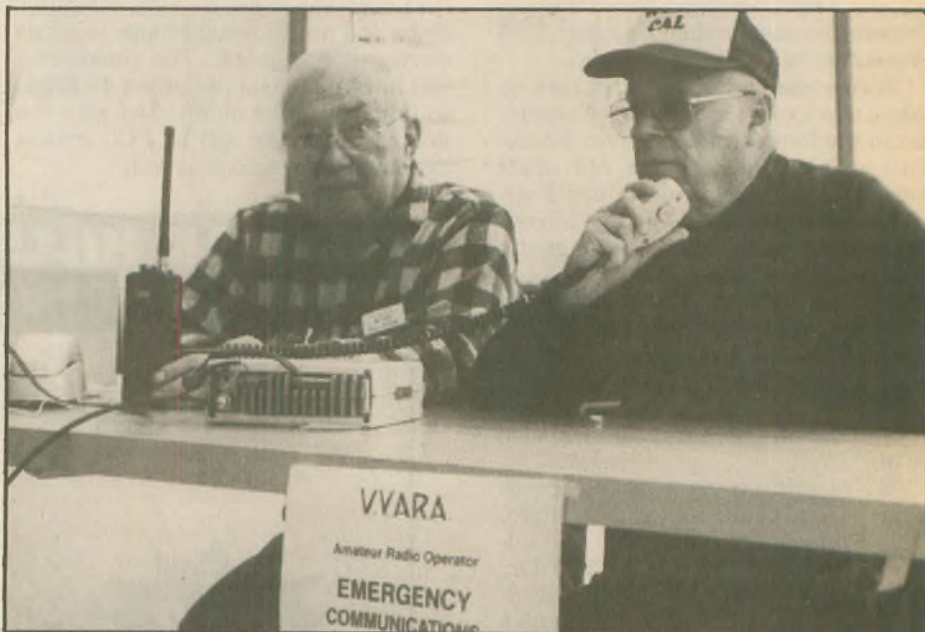
Homeowners along Beaver Creek, a tributary of the Verde River, called Cal, WI6S, for sandbags to protect their property. This request was relayed to DEC Walt, WF7J, who in

turn notified Al, KB7QNX, of the Red Cross. By 6 p.m. sand and bags had been placed at the local fire department for use by homeowners.

On Friday, 8:30 p.m., Frank, N7EBT, reported to Cal that the Verde River was up to 13 feet above

quested help for their communications as they were overloaded with calls. By 6:30 a.m., Frank, N7EBT, reported the Verde River had risen to 35 feet above normal and the water appeared to be rushing by at about 35 mph with a sound like a freight train. The water was carrying debris from washed-out houses, trees and farm equipment.

At 7 a.m., Walt, WF7J, reported via the VVARA repeater that the county had lost telephone communication for all long-distance calls. The only contact they had was through Amateur Radio. Also, the Prescott hospitals had lost contact with their counter-



Bill Byron, W7DHD, and Cal Turner, WI6S, man the repeater frequency and Red Cross base station in Cottonwood.

normal. By 3:30 a.m. on Saturday, Peggy Funk, N7DDR, reported that the river was now 30 feet above normal and that one of our VVARA ARES members, Paul Travis, W7EI, had been evacuated from his river-front home. Cal received another call at 4:45 a.m. from Fred Kessler, KA7TOT, who also lived on the river-front, that he could not respond to ARES calls as he had his own emergency with flooding in front of his home, but he would make himself available when the water receded.

At 5 a.m., Walt, WF7J, called Cal, stating that the Cottonwood Police re-

parts 100 miles south in Phoenix. The phone lines were out from 6 p.m. Friday to 9 p.m. Saturday, and during this period the Yavapai Regional Medical Center in Prescott had several emergency situations requiring aid and consultation from their Phoenix medical facilities.

Dr. William Thrift, KI7EB, contacted local hams Don Broadston, KA7NGK, emergency coordinator in Prescott, and Leonard Beers, KB7FRV, who had already activated their ARES group to help during the Verde Valley flood. Leonard established a phone patch system and within 15 minutes Dr. Katherine Ballard was in contact with the Children's Hospital in Phoenix through the network, and provided an AirEvac helicopter for a sick child. Additional emergencies were handled through the use of the phone patch system during the telephone outage.

In the absence of the Yavapai County emergency coordinator, the secretary, Debbi Welter, conducted all

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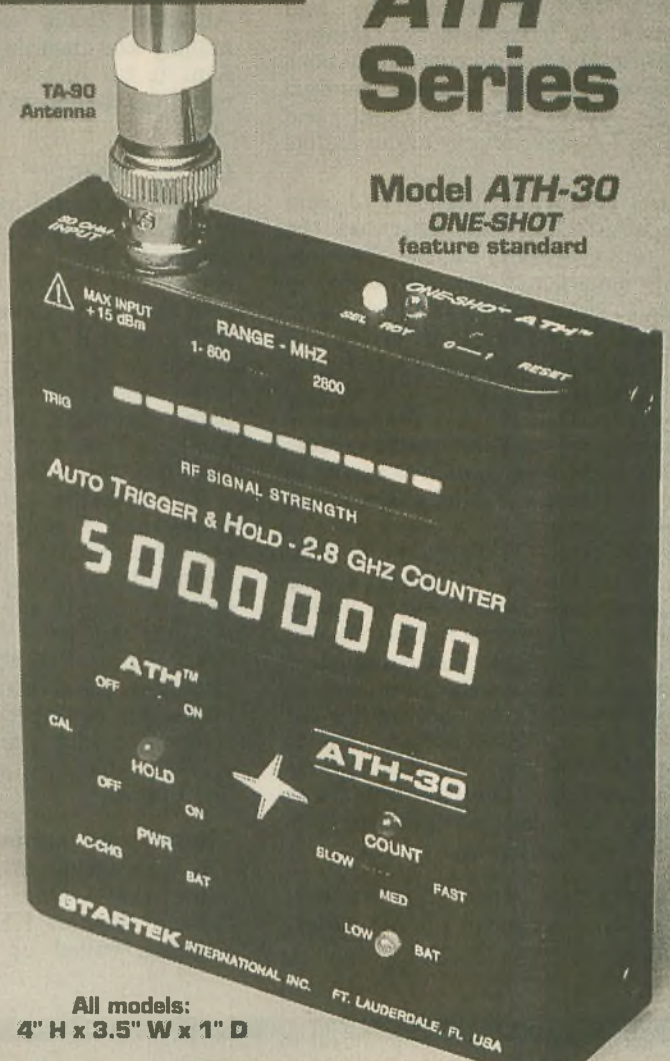
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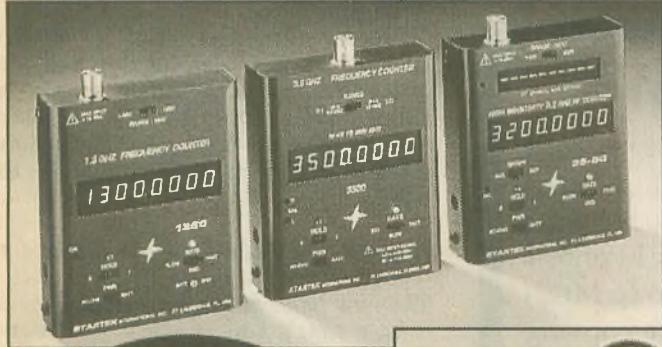
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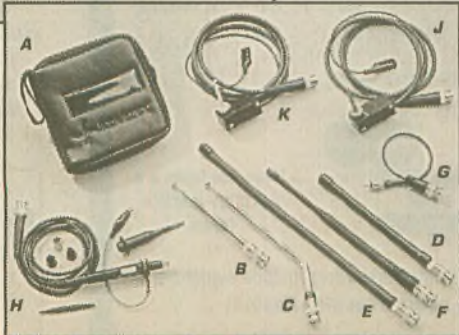
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emergency traffic into and out of their office. The pressures of coordinating rescue efforts and getting communications fell on her shoulders. The longest stretch began on Friday, 6:30 a.m. and continued through Saturday, 11 p.m., without rest or relief. She had disastasters on both sides of Mingus Mountain and had to coordinate both Red Cross teams, eastern Yavapai County under Bill Maxfield and western Yavapai County under Dallas Lane.

Debbi contacted Walt, WF7J, and Don, KA7NGK, who activated the ham radio system in the Yavapai County emergency services office in Prescott. Ham operators Mort Fults, WB7VIZ; Frank Hoerniff, WA6JBV; and Jerry Sager, KG7ZF, shared duty time at the radios. When the phones went down, Debbi's only communication out of Prescott was via ham radio and, she says, now that she knows the value of Amateur Radio, she is going to get her license.

On Saturday, 20 February at 8:50 a.m., Oliver Grieve, W7WGW, set up his 2M station at the Verde Valley Rural Fire Department in Cottonwood where the Red Cross had established its command center. By 9 a.m. Lowell Pickup, KB7SRG, had set up his 2M station at the Cottonwood Police Department. At the same time reports began filtering in that the water was receding, but the devastation left behind was staggering.

Worldradio's August issue will feature the conclusion of this public service story.

Who's the hammiest of them all?

CONNIE DUNN, KB5LES

If laughter is the good medicine that psychologists and physicians say it is, Amateur Radio people should be among the healthiest. Hams often ham it up on the air and at club meetings, hamfests and other gatherings.

On the blink

The first time I heard someone talk about an "eyelash" QSO, I pictured a couple of ladies blinking in code at each other. I never dreamed it meant that they were conversing face to face. But now that I'm a ham, I've taken humor to the pigs; I have a rather large collection of soft-sculptured pigs, figurines, and swine of all varieties that don't eat—mostly they have long eyelashes.

My favorite soft-sculptured pig-people pair, Hambone and Hamarilla, are fixtures in the ham shack. Hamarilla has extra-long eyelashes, and her ears are adorned with resistor earrings that sport turquoise and blue color coding. She and Hambone hold miniature hand-helds and have their own shack equipped with a cardboard rig fronted with a photo of a very fancy HF transceiver my OM, Si, would like to own.

The singing ham-a-gram

It gets rather funny in this hobby sometimes. One recent evening Howard Lester, KE7QJ, of Tucson, Arizona, called up and sang "The

Lady Is A Ham" to the tune of "The Lady Is A Tramp" over the telephone. Among his repertoire are "I'm Going to 20 Meters" (sung to the tune of "Kansas City") and "Cushcraft" (sung to the tune of "Witchcraft"). He says, "My mind has been on ham radio and with my natural tendency toward humor, the songs just come. "Sometimes it's just as simple as thinking of a song and coming up with the first line. I find humor in a lot of things. And just look at some of the things we (hams) do from an outsider's view. We're crazy! We put in a lot of money, time and pride to talk with someone from Timbuktu . . . and then we don't say anything.

"My impression is that YLs have a different view of what radio is than OMs do," Howard says. KE7QJ's picture of a YL is a '90s kind of gal.

She loves DXing, or chewin' the fat. Works the repeater, and others like that.

She won't be bothered with lids worth a slam.

That's why the lady . . . is a ham.

Then, later in the song:
She's an enforcer of the ARRL plan. Hates all those jammers, she tells 'em to scram.

Howard is working on a song book and has had a friend with whom he's talked about starting a musical band, called the "20-Meter Band." (For the record, there is already a group called the Single Side Band that entertained the crowds last year at Ham-Com in Arlington, Texas.)

Fredric Simowitz, K0FS, of St. Louis, Missouri, also has written the lyrics to a ham radio humor song. It's about a ham couple getting a divorce and splitting up their gear. They can't seem to resolve it, so the judge has to help.

He said, "She can have the dipole, the inverted V is his.

The new hand-held transceiver is hers, that's how it is.

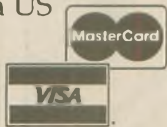
But when she tries to use it, she'll just be out of luck,

'Cause while she gets the hand-held, he gets the rubber duck."

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Miz Maudie entertains.

It ends with:

I think we have to reconcile our problems, now and here. It sounds a whole lot easier than splittin' up the gear.

KØFS belongs to the Medical Amateur Radio Council (MARCO). "When I was president," he says, "I wanted to add some humor, so I wrote the lyrics and challenged a couple of the other members who were musicians to write music for it." When MARCO met, the song was performed to the tunes that members wrote. Dr. Simowitz, a neurologist, is often kidded that he traces circuits in humans all day and comes home to trace circuits in ham radio at night.

He says, "If there wasn't a level of humor in ham radio, it would be a pretty dull hobby." To confirm that humor in the hobby has been around a long time, he points out, "Why else would we have 'HI' in Morse code?" Another explanation could be that "to have an outstanding sense of humor, you have to have a particular level of intelligence. I think hams are a mostly intelligent pool of people. They have to

be educated to some degree to pass the license tests."

Miz Maudie is seekin' you

If you ever meet the YL behind "Miz Maudie," a country-type little ol' lady, you will learn that she's really an ex-college professor. Kathryn Martin, N4USW, of Memphis, Tennessee, is a stand-up comic and storyteller rolled into one. She travels across the United States and Canada performing as Miz Maudie at retreats, conventions and banquets for civic, professional and religious functions. She is scheduled to entertain in Wichita, Kansas, at the Young Ladies Radio League's interna-

tional convention, 8-10 July. Kathryn also will deliver an inspirational-motivational speech entitled, "You Can Do It." This summer, Kathryn will also have a recording released entitled: "Seekin' You, Seekin' You: Miz Maudie and Ham Radio."

N4USW's discovery of Miz Maudie was almost by accident. She first masqueraded as the old lady character at a senior citizen event at her church. No one recognized her. When she performed near the end of the 1970s at Volunteer State College in Gallatin, Tennessee, she posed as the oldest lady on campus and brought the house (please turn to page 55)

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Silent Keys



Lenore Jensen, W6NAZ

BILL PASTERNAK, WA6ITF

The "Grand Lady of Amateur Radio" has become a Silent Key. On Wednesday, 5 May 1993, one of Amateur Radio's premier ambassadors of good will, Lenore Jensen, W6NAZ, passed from this world after a 10-year bout with cancer. She was 79.

The widow of Robert Jensen, W6VGQ, Lenore was first licensed as W9CHD in 1939 in Chicago, where she was a contract actress for NBC under the name of Lenore Kingston. She appeared on such programs as *Affairs of Anthony*, *Ma Perkins*, and *Arch Obler's Lights Out*. Many times she told the story of becoming one of the first female radio amateurs by "bothering the engineers until they taught me the code and theory well enough to pass my first amateur examination."

One of those engineers was Joe Conn, W2SMC. The two met while she was playing the part of Mercedes on the program *Don Winslow of the Navy*. After moving to New York City Joe and Lenore kept in touch via ham

radio. It developed into what showman Ralph Edwards eventually termed "a cross-country Morse code romance." During one of these CW QSOs Joe asked Lenore the size of her ring finger; she measured it and responded, and that is how she received her engagement ring.

Lenore became W2NAZ after moving to New York City in 1940. Like other hams, during World War II, Lenore was forced to go QRT. Because of her desire to help the war effort she volunteered through the American Women's Volunteer Services organization to teach women entering the military the Morse code. She was a superb CW operator and that ability, along with her skills as a trained communicator made her the obvious person for such a task. Her numerous graduates went on to become radio operators in both the Army and Navy.

After the war, she and Joe moved to Los Angeles where he took a position as a television broadcast engineer and technical director. In the early 1950s, Conn became chief engineer of Times-Mirror television station KTTV (now Fox). Lenore also went to KTTV where she hosted her own public service program called *Classified Column*. According to KTTV's current chief engineer, Chuck Ammann, the program originated live from the old station location in the Hollywood Beacons Building. It featured Lenore on a set with two windows. People having items for sale, looking to give away household pets, etc., would appear in these windows where Lenore would interview them.

In the same time period of the late 50s through early 60s Lenore was also a news producer and anchor for KFWB radio. There she produced and aired over 6,000 public service broadcasts titled *Purely Personal*. Both her television and radio programs typified her personal life of giving assistance to others.

Joe Conn left KTTV to go with the National Broadcasting Company where he became the technical director for Ralph Edwards' *This is Your life*

program. On 26 February 1961 Edwards, Conn and NBC News Producer Roy Neal, K6DUE, were part of an elaborate hoax to get Lenore to the NBC Burbank studio where she was honored on the program for her contributions to mankind through Amateur Radio. "I was 'the bait' on that show. Lenore came to NBC expecting to do an interview with me," Neal said.

"Amateur Radio has lost one of its finest. Lenore Jensen was a great lady, a true friend and a superb ham radio operator who used her skills on the air to help people who needed communication, and her skills with words to write about us in ways that made us understand ourselves a little better," said K6DUE.

A few years after the death of her first husband, Lenore married Robert Jensen, W6VGQ, an audio mixer and engineer employed by the National Broadcasting Company. Together, they embarked on a campaign to enlighten the world outside Amateur Radio that the hobby/service existed and had much to offer all of mankind. Her long and highly successful career in the entertainment industry permitted her access to many stars and celebrities who appeared in ARRL released public service announcements (PSAs) over the past two decades.

Lenore was a staunch supporter of the American Radio Relay League. In addition to producing PSAs and providing material for publication in *QST* magazine, it was W6NAZ who originated the concept of the public information assistant (PIA) and was one of the first to officially hold such a volunteer League position. She also appeared in several ARRL films and videos including the award winning *World of Amateur Radio* produced by Dave Bell, W6AQ, in 1978.

"She was a dear lady and a true friend of Amateur Radio," said ARRL President George S. Wilson, W4OYI, on learning of Lenore's passing.

Throughout her life, Lenore Jensen had two careers: a 50-year career in the entertainment industry and one equally as long as a radio amateur. Both were totally intertwined. In addition to radio drama, Lenore's television career ran the gamut from early live programs on Los Angeles television like *Classified Column* to some of the most successful programs in the history of the industry. This included roles on *The Donna Reed Show*, *Father Knows Best*, *The Beverly Hillsbillies*, *Love American Style* and *Inside*. In the early 1960s, she played the part of Mrs. Weeks on the daytime soap-opera *General Hospital*.

The vast majority of her ham radio

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career was spent in the area of message handling and phone patching. According to a profile in the December 1987 issue of *QST*, she ran over 68,000 Army MARS phone patches during the Vietnam War. It was a service that hams remember to this day.

"Though I didn't know her personally, she did touch our lives here in the midwest through those phone patches from 'Nam. My cousin's days over there would have been even more tedious without a friendly call to the states provided by Lenore (and many others). It may be cliché, but 'They don't make 'em like her anymore,'" said David Mangin, NØTXW, in a posting on the Prodigy services network.

Lenore was one of the 13 surviving founding members of the Young

Ladies Radio League. The story of the founding of YLRL appeared as a feature article 53 years ago this month in the May 1940 issue of *QST*.

She was also a regular contributing writer to *Worldradio*, devoting much of her free time to charitable organizations that included Recording for the Blind, was a part of the very first Ham Watch crime prevention operation and was a frequent guest on the Ray Brien, N6FFT, KABC radio program.

Much of Lenore Jensen's lifetime of work on behalf of the Amateur Radio Service and its members again came to national attention in April of 1983. The Dayton Amateur Radio Association chose that year to name her to receive the DARA Special Achievement Award for "her dedication in service to others through the medium of

Amateur Radio."

On 14 May Pacific Pioneer Broadcasters, an organization she helped to establish, held a special memorial service for Lenore. The morning of 29 May Lenore was remembered in a tribute that was part of the annual Ray Brien Ham Radio Special on KABC Radio beginning at 0005 PDT and running until 0500 PDT. "She was one of the great radio pioneers and I loved her," said Brien.

Lenore Jensen, W6NAZ, is survived by two stepchildren: author Cynthia Wall, KA7ITT; and Stephen Jensen, W6RHM. In lieu of flowers, memorial donations may be made to the ARRL Foundation, the Los Angeles Recordings for the Blind Assn., or the American Cancer Society.

James Weldon, AA5ST

James O. Weldon, AA5ST, 88 years old, passed away on 19 April 1993. When he was 86 years old, he passed his Extra exam.

Weldon founded Continental Electronics in Dallas, Texas, in 1946. He was known in the industry as "Mr. High Power." It was his designs that led to the development of the highest powered RF systems in the world. His knowledge and designs of high power led to the building of the first "super station" in North America. This station, XERA, was owned by Dr. Brinkley and operated out of Del Rio, Texas, with power of 500,000W.

It was Weldon's knowledge and abilities that led to the development of the Navy's two-million-watt VLF transmitter at Cutler, Maine (submarine communications). The station operates on 14.2 MHz.

In 1942 J.O. joined the Office of War Information, overseas branch, and became chief of that bureau. The broadcasting network which he helped plan and construct during WWII ultimately became the Voice of America, or VOA as it's called today. It was through his vision of the programming of the network which he conceived, and later through the high-power transmitters built for the VOA and Radio Free Europe by Continental, that the message of America and freedom was first broadcast behind the Iron Curtain.

After the war he organized a partnership firm of Weldon and Carr, consulting radio engineers, and in late 1946 he came to Dallas and established Continental Electronics.

His techniques opened the doors to a whole new field in super-high-power

radio transmissions. Continental, under his direction, built many of the million-watt stations for the Voice of America located all around the world. Thirteen transmitters of two million watts each were built for the government of Saudi Arabia. Super radars for the military were built, always under his masterful hands.

I worked for him in Continental's R and D lab for 38 years, and never have I met a man who won or deserved the respect of the community more than he.

Tom Middleton, WB4CKY

South Florida has lost an Amateur Radio devotee, educator and activist. Over the years he has been responsible for introducing many, many individuals to this "on the air" hobby. Tom Middleton, WB4CKY, passed away at his home on 8 April 1993. Interment was at Arlington National Cemetery in Washington, DC.

Middleton taught Amateur Radio Novice and General classes for the past 20 years under the sponsorship of the Hollywood Amateur Radio Club. His educational awards were multi-fold and multi-faceted; he has been nationally recognized by the Amateur

Radio Relay League. His work opened a whole new field in radio. He was a pioneer in the design and construction of super power transmitters, held several patents, authored many papers, and in 1954 was awarded a lifetime fellowship in the Institute of Radio Engineers, now the IEEE. We who worked under him will long miss his leadership. It is with the deepest regret that we say goodbye to the man known as "Mr. High Power," James O. Weldon, AA5ST.

—Submitted by Edward Boh,
W5AUY.

Radio Relay League.

His military career included service with the US Coast Guard, the US Navy and the US Air Force. He saw action in World War II, in Korea and in Vietnam. He was retired in 1966. For the past several years he has been employed in maintenance by the Atlantic Utilities Corporation in Miami.

He was one of the founders and charter members of the Hollywood Amateur Radio Club and has held just about every elective office over the years in that organization. In addition to Amateur Radio, Middleton was involved in amateur television, satellite communication and computer technology, among others. He was always available when needed as a communicator at the National Hurricane Center and with the Dade County Amateur Radio Public Service Corps.

Over 50 associates and friends gathered on 25 April at a memorial in honor of Tom Middleton. The current president of the Hollywood Amateur Radio Club, Bob Young, KC4KME, and past presidents Dan Welker, WB4SSP, and Pete Saglio, KB4NSA, delivered the eulogies. —Information submitted by Marie Snow, WA4KXQ.

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OFF THE AIR

"No" to General VEs

The following is a letter to the FCC commissioners dated 24 March 1993.

As a continuously active amateur of 26 years, a member of the ARRL, an official observer, and certified VE under both W5YI and ARRL VECs; I do favor placing the Novice testing program into the current VEC system.

However, I am firmly and completely opposed to allowing General Class amateurs to have any part in the examination process. This is due to the absolute lack of education concerning the VE process contained in the General Class written element as well as the Advanced Class written element.

I feel all potential VEs should at the very least have passed the Extra Class element 4B, where questions are included pertaining to VE test administration, or passed an exam as that given by the ARRL. It is an excellent program by which I have benefited greatly in carrying out correctly all the duties and responsibilities required of me in the testing procedure.

I don't feel that these people's egos should be stroked at the expense of jeopardizing the present hard-working Advanced and Extra Class VEs who have thus far made the VEC system the success it is today.

DAVID I. BRANDT, WA3GPM
Lebanon, PA

One at a time

I was very interested when I read the story by Bud Goreham, WA6NEB, in the April issue about donating sets of ARRL books to the Sacramento Library. I want to point out that this is not a new ARRL program. I believe it was actually started sometime in the 1970s.

We in Genesee County, New York, noticed the same problem in our local libraries in 1983. We decided that since we had a strong treasury due to our Batavia Hamfest, we would return some of it to the community. After surveying the county, we found there were 20 school districts and public libraries in a county of 60,000 people, located halfway between Buffalo and Rochester.

We decided to begin giving them all sets but realized that we couldn't do it

all at once. Since then we have given book sets to 14 libraries and have six to go for the first time around, and we intend to start again when we've done them all. In addition, I hope to begin giving the Tompkins fiction books separately to the elementary school libraries. This year we also gave copies of *Now You're Talking* to those who had received the old *Tune in the World*.

I agree with Bud that more clubs should take advantage of this program. It not only is good publicity for your club, but the club is saving \$131 over the retail price, and with shrinking budgets, librarians are very appreciative of donations. We also announce our Novice classes to the librarians, who are happy to feature the books during the signup period.

DON PARTIS, WA2AIV
Batavia, NY

Saturn policy

The following is a letter I wrote to Saturn auto corporation and their reply. I intend to write to other auto makers to see what they have to say.

30 January 1993

Dear sirs,

In the not-too-far future I will be replacing my present car. It is a 1988 four-door sedan with 50,000 miles on it.

I am shopping around several comparable makes and have one question that I have a hard time getting an answer for. The local sales and service mostly have no idea what I am talking about and usually think I am referring to Citizen Band radio which is only 5 watts of RF.

Can I operate an Amateur Radio transmitter without fear of causing the on-board computers to fail or malfunction? The transmitter would be 150-watt radio frequency output. I realize that the DC power must come directly from the battery. The placing of the antenna and routing of the coaxial feedline is the critical concern. The owner's manual in my present car explains how and what to do.

What is the Saturn policy and warranty on this matter, and is it in the owner's manual? There is one well-known make of car that the amateurs are passing the word around to stay away from because of warranty voiding if the computer is damaged by RF.

5 February 1993

Dear Mr. Laurel:

Thank you for contacting Saturn and giving us an opportunity to be of assistance.

In regards to installing an after-market Amateur Radio transmitter, please be advised that Saturn Corporation does not endorse, warrant, or recommend any type of after-market modification to Saturn vehicles. Installing this type of modification may partially or completely void the Saturn New Vehicle Limited Warranty, if the components or installation of the modification are found to damage the vehicle. Should you choose to have a non-Saturn approved modification made to the vehicle, we recommend that you investigate carefully the type of warranty provided on the equipment and installation.

Again, thank you for contacting Saturn. If you have any more questions, feel free to contact Mike Maisonneuve of the Saturn Assistance Center at 800-553-6000.

Sincerely,
Terry Maxwell
Saturn Assistance Center


I encourage other amateurs to write and make similar inquiries; the sharing of this information might save the amateur fraternity a lot of money and grief.

LEONARD LAUREL, WA6FBL
Fort Bragg, CA

"Final final" sign-off

Thank you for sending me a clipping of the item, "Understanding the History," which I had submitted (November '92 Off the Air).

Unfortunately, however, there was a garble in it. Where I had said the signal we sent to test the frequency was "ditdit dit" (commonly written "didit dit"), your composer changed it to dididit." The form I gave is like the



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letters I E, whereas the version printed is like the letter S.

Another thing I've noticed is the clumsy, long drawn out way CW QSOs are terminated nowadays. The operators go back and forth, each time sounding like it's their final, most final final, yet they keep coming back to each other, in the end sounding like they are crying on each other's shoulder at the sadness of the parting, and I soon learned that it wasn't over till one guy finally at last says "dah, didit dah, dit, dit," because my calls

before that would go unheeded, not even a ditdahdidit (pause).

By the way, that "dit, dit" is a hangover, I'm sure, from the old days when on our final (a real one, following the other guy's first final) we would send "dit, dit dit dit, dit (the first half of the nowadays much maligned "shave-and-a-hair-cut" rhythm), whereupon the other guy, who had already signed, would come back with the finishing "dit, dit," indicating that he had heard our final, and that was that, no coming back again with

another final final!

Once in a while, when I'm having a QSO with somebody whom I think is a real old-timer, I will try that "shave-and-a-hair-cut" bit on my final following his first final, and I often do get back only the "dit, dit," no "final final," so I'll know my judgement was correct. But I guess that old practice will never come back. Many of our procedures were frowned upon by ARRL's official operating procedures!

TED CHERNIN, KH6GI
Honolulu, HI



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IC-751A Gen. Cvg. Xcvr	1699 00	Call \$
IC-728 New, All-Band HF	1099 00	Call \$
IC-729 All-Band HF Plus 6 Meters	1419 00	Call \$
IC-2KL 500w, Amp	2079 00	Call \$
IC-4KL 1 kW Amp	7275 00	Call \$
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IC-R7100 25 MHz - 2 GHz	1479 00	Call \$
IC-R71A 100 kHz - 30 MHz Rcvr	999 00	Call \$
IC-R11 100 kHz - 1300 MHz	624 00	Call \$
IC-R72 30 kHz - 30 MHz Rcvr	972 00	Call \$
IC-R100 100 kHz - 1856 MHz Rcvr	707 00	Call \$
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IC-P2AT New 2 Meter HT	424 00	Call \$
IC-2GAT, New 7w HT	429 95	Call \$
IC-2SAT Micro Sized HT	439 00	Call \$
IC-2SRA, 2m, HT/Scanner	599 00	Call \$
IC-229A/H, 25/50w, 2 Meter Mobile	449 /479	Call \$
IC-901 New Remote Mount Mobile	1199 00	Call \$
UHF		
IC-4IA, 440 MHz HT	520 00	Call \$
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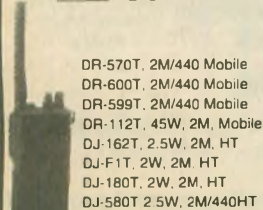
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TH-315A Full Featured 2.5w HT	419 95	Call \$
TM-331A Compact Mobile	469 95	Call \$

YAESU



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FT-747GX Economical Performer	889 00	Call \$
FT-890 HF Base w/ 1-30 MHz Rec	1339 00	Call \$
FT-767 4 Band New	2299 00	Call \$
FT-7000 15m-160m Solid State Amp	2279 00	Call \$
Receivers		
FRG-100B New, Mini Receiver	599 95	Call \$
FRG-8800 150 kHz - 30 MHz	784 00	Call \$
VHF		
FT-416/25B New, 2 Meter HT	419 00	Call \$
FT-411 New 2m "Loaded" HT	406 00	Call \$
FT-26 Mini, 2 Meter HT	329 00	Call \$
FT-415, 2m, HT	409 00	Call \$
FT-23 R/17 Mini HT	351 00	Call \$
FT-2400 50 Watt, Mobile	419 00	Call \$
FT-290R/690R-6M, All Mode Portable	610 00	Call \$
UHF		
FT-816/25 New, 440 MHz HT	459 00	Call \$
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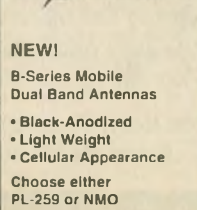
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DR-600T, 2M/440 Mobile
DR-599T, 2M/440 Mobile
DR-112T, 45W, 2M, Mobile
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Steven H.
Richman,
KS2C

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.

A welcome addition to any family room, Steven's, KS2C, station runs away with this month's "neat and tidy" award.

Shown is my Kenwood TS-440S and power supply, AEA PK-232MBX and beam controller in the little enclosure. I run an AT&T 386 20 MHz computer



with the station. The Apple II-C is a seldom-used relic now.

Above the rig are several switches to link the computer, rig and serial and

parallel port printers which are behind the doors of the desk between the two operating positions. A 2M Icom-25 sits below the small clock.

The electronic keyer is at the right operating position and the shack has a beautiful blue glow from the Geochron mounted on the wall above the equipment. All countries and their local time and degree of daylight are easily found on the Geochron when contacts are made.

The station has been "certified free of wires" by my XYL, a strict condition for sharing space in the family room.



Amateur "Hi"



This month's *Amateur Hi* is in the form of a letter from a dear friend, Arnold Klein, N6GAP, of Mission Hills, CA.

Dear Friends,

While reading the January 1993 issue of *Worldradio*, it struck me that most of the articles were written by one person. No less than 28 times the author's initials, "WR" are at the end of the various columns.

I have concluded that the regular contributors, whose bylines appear at the top of the columns, could not make the deadline so "WR" wrote the pieces for the authors. (It seemed odd that 28 writers all missed their deadline, but these things happen.)

Who is the mysterious "WR" who could write such interesting articles on so many facets of Amateur Radio? I found the answer in the masthead of *Worldradio*. Managing Editor Robin Wortley, KC6RUD, wrote the col-

umns and then reversed the initials to conceal his identity.

I want to say what a great job and congratulate "RW" or "WR" and *Worldradio* . . . Hey, wait a minute!

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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- and Thurs. 8:15 p.m. 147.18+. Info: Fred, KBAXJ, (205) 270-0909.

ALASKA

Anchorage Amateur Radio Club, Inc. Meets 1st Fri./monthly, 7 p.m., Alaska Pacific Univ. Carr-Grosvold Cntr., 4101 University Ave., Anchorage, AK. Fred S. Wegmer, KL7HFM, Pres.

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.

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 147.32/92. Packet Cluster nodes (S): 145.09, 144.93, 145.03. Info: Warren Hill, KF7AY, (602) 396-2218.

Cochise Amateur Radio Assn. (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. WA7KYT/R 146.16/76 rptr.

Scottsdale Amateur Club. Meets 1st Wed./monthly, 7:30 p.m., Scottsdale Sr. Cntr., 7375 E. 2nd St., Scottsdale, AZ. Net Tues., 7 p.m., 147.18 rptr. Info: Barney Fagan, KB7KOE, (602) 861-2817.

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. 2nd Sat./monthly, 7:15 p.m., Pima Co. Sheriff Bldg., 1750 E. Benson Hwy. Net Thurs. 7:30 p.m. 146.22/82 (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. W6BGS. 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. Rptrs. 147.675(-), 224.080(-). PL 107.2. Nets 147.570 Wed./Sat., 7 p.m. Info (619) 697-2700.

Associated Radio Amateurs of Long Beach, W6RO. P.O. Box 7493, Long Beach, CA 90807. Meets: 1st Fri./monthly, 7:00 p.m. Signal Hill Recreation Hall, 1708 E. Hill St., Signal Hill, CA.

Conejo Valley Amateur Radio Club (CVARC). Meets 2nd Thurs./monthly, 7:30 p.m. Thousand Oaks Elks Lodge, 158 Conejo School Rd., Thousand Oaks, CA 91360.

Contra Costa Communications Club, Inc., W6EJC/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.

Downey Amateur Radio Club. Meets 1st Thur./monthly, 7:30 p.m., So. Middle Sch., 12500 S. Birchdale, Downey, CA. Wkly nets—Thur., 7:30 p.m. 146.175 (+). For info: P.O. Box 207, Downey, CA 90241-0207.

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 8 p.m.-10 p.m., Northbrae Community Church, 941 The Alameda, Berkeley, CA. 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 Center, 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975 (-600). Info, Bob Hastings, K6PHE (714) 990-9203.

Gabilan Amateur Radio Club (GARC). P.O. Box 2178, Gilroy, CA 95021-2178. Meets odd months, 2nd Thurs., 7:30 p.m., First Interstate Bank, First St., Gilroy and even months for brkfst., 2nd Sat., 8:30 a.m.

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

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

Lee DeForest Amateur Radio Club. Meets 3rd Thurs./monthly, 7:30 p.m., San Jacinto Civic Center, 625 S. Pico Ave., San Jacinto, CA.

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.

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(+). Info: George K16YK, (510) 837-9316.

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Elks Lodge, on Cypress at Hackberry in Carmichael, CA (P.L. 162.2) Net K6IS Thurs., 8:00 p.m. 145.190. 220 Net, Tue. 8:00 p.m. 224.40(-).

North Shores ARC. Meets 1st Tues./monthly, 7:30 p.m., So. Clairemont Rec. Cntr., 3605 Clairemont Dr., San Diego, CA. Info: (619) 224-1294.

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m. at 907 E. Vermont, Anaheim, CA. (Between Anaheim Blvd. & State College) Call in on 146.550 simplex. Contact Ken Koehech W6HHC at (714) 541-6249.

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 "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 CQWA (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.

San Fernando Valley ARC. Meets 3rd Fri./monthly, 7:30 p.m., Red Cross, 14717 Sherman Wy., Van Nuys, CA. Net every Thur., 8:00 p.m. KB6C/R 147.735(-).

Santa Clara County Amateur Radio Assoc. (SCCARA) W6UW & W6UU. P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets 2nd Monday/monthly, 7:30 p.m. at United Way, 1922 The Alameda, San Jose. Net all other Mon., 7:30 p.m. W6UU/R 146.385 + 1442.425 + PL 107.2

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

Santa Cruz County Amateur Radio Club, Inc. Meets last Friday/monthly at Dominican Hosp. Ed. Bldg., Soquel Dr., Santa Cruz, 7:30 p.m. Net K6BJ 146.79 Mondays at 7:30 p.m.

Santa Monica—Westside Amateur Radio Club. Meets 3rd Thurs./monthly, 7:30 p.m., Santa Monica Red Cross, 1450 11th St., Santa Monica, CA. Info Net every Tues., 8 p.m., 146.670, 600.

Shasta Cascade Amateur Radio Society (SCARS) P.O. Box 664, Anderson, CA 96007. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm., Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m.

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 -

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150. FM Rpt. Net Thur., 8 p.m., 51.80/51.30 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.

Tehama County ARC. Meets 1st Fri./monthly, 7 p.m., Sept. June, CA Div. Forestry Training Rm., Antelope Blvd., Red Bluff, CA. For info: 144.850/145.450 W6SYY/R.

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., 7:30 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. Repeater: WD6BUS 145.470 - PL 127.3. Alan McCarthy (707) 446-0200.

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 146-940/340, info net Sun. 7 p.m. 146.940/340.

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 School 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 145.130, P.L. 103.5.

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

COLORADO

Denver Radio Club. Meets 3rd Wed./monthly, 7:30 p.m., St. Joseph Episcopal Church, 11202 W. Jewell Ave., Lakewood, CO. Club net: Sundays, 8:30 p.m. 147.33 MHz.

CONNECTICUT

Shoreline ARC (SARC). P.O. Box 256, Westbrook, CT 06498. Meets 3rd Thurs./monthly, 7:30 p.m., Westbrook Ingraham Sch., (203) 245-1969/call-in: 145.29.

DELAWARE/PENNSYLVANIA

Penn-Del Amateur Radio Club. P.O. Box 1964, Boothwyn, PA 19061. Sponsor of KA3TWG/Rptr. on 224.220 covering Delaware & Tri-state area. Info/net Thurs/wkly, 20:00 hrs. or call Hal Frantz, (302) 798-7270.

FLORIDA

Gulf Coast ARC, Inc. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly 7:30 p.m., 3852 Primrose Place, New Port Richey. WA4GDN Rptr. 146.67/07.

Indian River ARC, Inc. (IRARC). 597 Capri Rd., Cocoa Beach, FL 32931-3011. Meets 1st Thurs./monthly, 7:30 p.m., Martin Andersen Senior Center, 1025 S. Florida Ave., Rockledge, FL.

Sarasota Amateur Radio Assn. (SARA). P.O. Box 3182, Sarasota, FL 34230. Meets 3rd Tues./monthly, 7:30 p.m., Sarasota Memorial Hosp. Auditorium.

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

Suncoast Amateur Radio Club. P.O. Box 7373, Hudson, FL 34676. 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. and 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, 7:00 p.m., HELCO Auditorium, 1200 Kilauea Ave., Hilo. Talk-in on 146.760(+), 146.880(-), 147.020(+) and 147.040(+).

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. at 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 Wed./monthly, 7 p.m., Mid City Nat'l Bank, 7222 W. Cermak Rd., N. Riverside, IL.

Fox River Radio League. Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. Nets: Sun. 2nd Tue./monthly, 7:30 p.m. VEC Xams 3rd Tue./monthly, 7:30 p.m.

Hamfesters Radio Club, W9AA. P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m. Crestwood Civ. Ctr., 139th & Kosner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.140 MHz; Mon. 9 p.m. 146.43 S.; Packet Mailbox 145.07. Info: (708) 535-3496.

Peoria Area Amateur Radio Club, (PAARC). Meets 2nd Fri./monthly, 7 p.m., 1401 N. Knoxville Ave. For info: (309) 685-6698. Rprts: 146.25/85 & 147.675/075.

Schaumburg ARC (SARC). Meets: 3rd Thurs./monthly, 7:30 p.m., Schaumburg Park Dist. Community Rec. Cntr. at Bode & Springinsguth Rds., Schaumburg, IL. Net 145.23, 8 p.m. Thurs. Info (708) 213-0910.

The Starved Rock Radio Club, W9MKS. P.O. Box 22, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rprtr. net 7 p.m. Wed./wkly., 147.72/12.

Tri-Town Radio Amateur Club. P.O. Box 302, Hazel Crest, IL 60429. Meets 1st & 3rd Fri. (Sept.-June), Hazel Crest Village Hall, 3000 W. 170th Pl. Net Wed. 146.49, 8 p.m. Info: (708) 335-9572.

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. 8:00 p.m., 145.39 MHz. 440 MHz net on Tues., 8:30 p.m. on 444.475 MHz.

MICHIGAN

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

Hazel Park Amateur Radio Club. Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 146.64 (-) Call-In. W8JXU Club Call. Net Sun., 9 p.m., 146.64 (-).

Michigan Amateur Radio Alliance, (MARA). O-11555 8th Ave. NW, Grand Rapids, MI 49504. Meets 1st Thurs./monthly, 7 p.m., TJ Mfg., 1739 Elizabeth, Grand Rapids, MI. STBY 145.780 + 145.410.

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

Utica Shelby Emergency Communications Assoc. (USECA). P.O. Box 1222, Sterling Hgts., MI 48311-1222. Meets 2nd Tues./monthly, Sept. through June, Donald Bemis Jr. High Sch., 12500 Nineteen Mile Rd., Sterling Hgts, MI (between Schoenher & Clinton River Rds.) Talk-in on 147.180 + 100Hz PL. 24-hr hot line: (313) 268-6730.

MINNESOTA

Minneapolis Radio Club. P.O. Box 583281, Minneapolis, MN 55458-3281. Meets 3rd Fri. (exc. June, July, Aug.), Mpls. Red Cross, 11 Dell Place, Mpls, 7:30 p.m. Making waves since 1916. Net 147.03(+), 7 p.m. Mon.

MISSISSIPPI

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

MISSOURI

Gateway To Ham Radio Club, N0DN. Young hams of all ages. Meets 1st Sun./monthly, 2-4 p.m., Sacred Heart Sch., 10 Ann Ave., Valley Park, MO 63088 (St. Louis) Net Sun., 8:30 p.m. 146.94 rptr. Beginner's classes, VE exams, Club station & mtgs. Info: Rev. Dave Novak—(314) 225-1952 (voice or Fax).

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.

NEBRASKA

The Ak-Sar-Ben ARC of Omaha, NE. Meets 2nd Fri., 7:30 p.m. at Omaha Red Cross near 38th and Dewey Streets. Main 2M Net Sunday night 0200Z on 146.94R.

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.

Sierra Intermountain Emergency Radio Assoc. (SIERA). P.O. Box 2348, Minden, NV 89423. (702) 265-4278. Meets: 2nd Tue./monthly, 7:30 p.m., Douglas County Lib., Minden, NV. Talk-in: 147.330.

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG. P.O. Box 911, Dover NH 03820. (603) 332-9137/332-7343. Meets 2nd Sun./monthly, 7 p.m., Rochester Court House/City Hall. 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. Rprts.: 146.10/70, 223.24/224.84, 449.15/444.15.

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., 144.400 9 p.m. Wed.

Delaware Valley Radio Assoc. (DVRA). Meets monthly, alternating 2nd Tues./Wed., 8 p.m., Our Lady of Good Counsel Church, West Upper Ferry Rd. at Wilburtha Rd. in W. Trenton, NJ. W2ZQR/146.07/67. DVRA Ham Hotline (609) 882-2240.

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

NEW YORK

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 146.955/355 rptr. W2PVL.

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

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park at 7:30 p.m. For info call Charlie, WA2JUJ, (516) 420-0046.

New York City Rpt. Assn., P.O. Box 140819, Staten Island, NY 10314-0019. Meets 2nd Thurs./monthly 8 p.m., Eger Nursing Home. Talk-in Rprts. 146.880/447.375. Info: (718) 998-1088.

Orleans County Amateur Radio Club (WA2DQL). Meets: Emergency Management Office, West County House Rd., Albion, NY 14411, 2nd Mon./monthly, 7:30 p.m. 145.270 - WA2DQL.

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

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ, P.O. Box 1052, New York, NY 10002. 24-hr. hotline, (516) 674-4072, 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 Wy, 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. For info call 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. 146.265/865, 445.150/440.150.

NORTH CAROLINA

North Carolina Chapter TSRA. Meets: Mondays, 28.350 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.

Rowan Amateur Radio Society (RARS). Meets 2nd Mon./monthly, 7:30 p.m., Ruffy-Holmes Sr. Cntr., 1120 Walnut St., Salisbury, N.C. Info: Ralph, WB4AQK, (704) 636-5902.

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

OHIO

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

Clyde Amateur Radio Society (C.A.R.S.) Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 44811. NF8E Rptr. 447.625/442.625. 444.60 (+5 MHz). Net Sun. 9 p.m.

Firelands Area Rptr. Assn. (FARA). Meets 4th Tue./monthly, 7 p.m., Ohio Veterans Home, Sandusky, OH. WB8LLY Rptr. 146.805/205. Net every Sun. at 8 p.m. Info: Rob Harshbarger, N5XRB.

Lancaster & Fairfield County A.R.C. Meets 1st Thur./monthly, 7:30 p.m., American Red Cross, 121 W. Mulberry St., Lancaster, OH 43130. Info Net every Mon., 8 p.m. K8QIK/R 147.63/03 Rptr.

North Coast A.R.C. P.O. Box 30529, Cleveland, OH 44130. Meets 2nd Thurs./monthly, 7:30 p.m. at North Olmsted Middle Sch. cafeteria, 27351 Butternut Ridge Rd., North Olmsted, OH.

Northern Ohio Amateur Radio Society (NOARS). Meets 3rd Mon./monthly, 7:30 p.m., Gargus Hall, Rt. 254, Lorain, OH. Info: Rptr. K8KRG 146.70, DX Alert Rptr. 145.15. "Ohio's Largest General Interest Club"

Springfield Independent Radio Assoc., (SIRA). Call-in 145.45-224.26. Meets 2nd Tues./monthly, 7:30 p.m., Mercy Hosp. and 4th Tues./monthly, 7:30 p.m., Am. Red Cross. Info: Rodney Myers, KB8WV, (513) 399-1022.

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. W8HHF 147.87/27 Rptr. Rptr. info/swap & shop, Sundays, wkly - 8:30 p.m.

Triple States Radio Amateur Club. Meets Wed./weekly on 28.480 at 8:30 p.m.; 7260 at 9 p.m. Rprts. 146.31/91 and 146.115/715. 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 25/85. Meets 1st & 3rd Sat./monthly, 8 p.m.

OKLAHOMA

Enid Amateur Radio Club, Inc. W5HTK, WA5QYE, WA5OUB. P.O. Box 261, Enid, OK 73702. Meets 4th Thurs./monthly, OK Hwy. Patrol Stn.

OREGON

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets 3rd Thur./monthly, 7 p.m., Bend Senior Cntr., 1036 NE 5th, Bend, OR. Net Sun. 7:30 p.m. 147.06 + MHz. Info call: (503) 382-1739.

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

Oregon Coast Emergency Repr., Inc. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./monthly, 9 a.m. for brkfst. Net, Wed. night, 7 p.m., 146.800. Info: 997-2323 or 997-3081.

Umpqua Valley Amateur Radio Club, Inc. 450 S.E. Leland St., Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 311, Douglas St., Roseburg, OR. Info: W5PII/R 146.90/30 or (503) 673-1310.

PENNSYLVANIA

Mercer County Amateur Radio Club W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly at 7:30 p.m., Shenango Valley Med. Center, Farrell, PA. Net, Thur. 9 p.m. on 145.350 W3LIF, Digi. 145.010.

Warminster Amateur Radio Club, WA3DFU. P.O. Box 113, Warminster, PA 18974. (215) 672-9985. Meets 1st Thurs./monthly, 7:30 p.m., Neshaminy-Warwick Presbyterian Church, Warminster, PA. Net on 147.690/147.090 Wed. 8:30 p.m. and 28.450 Sun. 9 p.m.

TEXAS

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

VIRGINIA

Southern Peninsula Amateur Radio Klub (SPARK). Meets: 1st and 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Rprts: 146.13/73 & 449.55(-5) T. VE Exam Info: (804) 898-8031, W4RTZ.

Virginia Beach ARC. Meets first 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 Thur./monthly, 7:30 p.m., United National Bank of Ripley. Net Mon. 9 p.m. on 146.67/07 WD8JNU/R.

Tri-State Amateur Radio Assn. Club mtgs. 3rd Thurs./monthly, 7 p.m., monthly brkfst 1st Sat., 9:15 a.m., Green Valley Vol. F.D., 16th St. & Norwood Rd., Huntington, WV.

WYOMING

Sheridan Radio Amateur League, 146.82, 926 La Clede, Sheridan, WY 82801. Meets 4th Thur./monthly, 7 p.m., Sheridan College Tech. Cntr., Saturdays, 8 a.m. at J.B.'s info: (307) 674-6666, WA7B.

SPECIAL EVENTS

Int'l Peace Garden Hamfest

Special event station VE4IHF/Ø will operate 9-10 July from the International Peace Garden during the International Hamfest.

Operation will be on 3.937, 7.255, 14.255, 21.355 and 28.355 MHz.

For QSL, send QSL and SASE with an IRC or green stamp to John Swanke, KAØSLI, Box 304, Lakota, ND 58344.

Nazarene General Assembly

The Nazarene ARF will operate WAØHPW 21-27 July from the Nazarene General Assembly at the Hoosier Dome in Indianapolis.

Operation will be on 28.382, 21.385, 14.305 and 7.275 from 1500Z 21 July to 2300Z 27 July.

For QSL, send SASE to N5ASD, 108 Northside Dr., Vivian, LA 71082.

Football Hall of Fame

The Canton ARC will operate special event station W8AL 26 July to 1 August to celebrate the Pro Football Hall of Fame Greatest Weekend.

Operation will be on SSB 28.350, 24.950, 21.350, 18.150, 14.270, 7.270 and 3.870; CW 28.125, 24.910, 21.125, 18.080, 14.050, 10.120, 7.125 and 3.700 +/- QRM from 1000 to 0200 UTC. There will also be RTTY, packet, AMTOR, satellite and 2M FM/SSB.

For an unfolded certificate, send QSL with contact number and 9X12 SASE with two units of first-class postage. For a QSL or folded certifi-

cate, send QSL with contact number and a #10 SASE to Randy Phelps, KD8JN, 1226 Delverne Ave. SW, Canton, OH 44710-1306.

NAS Whiting Field

The Milton Florida ARC will operate NT4Z 10-11 July during the Blue Angels air show celebrating the 50th anniversary of NAS Whiting Field.

Operation will be on 7.250, 14.250, 21.350, 145.9 from 1500Z to 2400Z both days.

For QSL, send QSL and SASE with name of operator worked to Box 958, Milton, FL 32572.

Dr. Mahlon Loomis honored

The Fulton County Historical Society will operate W2ZZJ 17-18 July to celebrate the 167th anniversary of the birth of Dr. Mahlon Loomis at Oppenheim, New York.

Operation will be in the General phone portion of 40, 20 and 15M and on the Novice 10M phone band.

For certificate and literature on Dr. Loomis, send QSL, contact number and a #10 SASE to W2ZZJ, HC Box 80, Stratford, NY 13470.

Balloon Championships

The Dial ARC will operate W8BLV 30 July to 8 August from the National Hot Air Balloon Championships in Middletown.

Operation will be on SSB 3.965, 7.265, 14.265, 21.365, 28.365 and 2M evenings and weekends.

CW operation 10 kHz from the bottom of Novice band.

For special balloon QSL, send QSL and SASE to Ernest Howard, AG8Y, 4003 Lewis St., Middletown, OH 45044.

Yacht Race commemorated

The Eastern Michigan ARC will operate K8EPV 24-26 July to commemorate the 68th Port Huron to Macinac Island Yacht Race.

Operation will be on CW 3.710, 7.110, 21.110; SSB 3.910, 7.262, 14.262, 21.312, 28.393 from 1400Z 24 July to 0200Z 25 July and 1400Z 25 July to 0200Z 26 July.

For a unique certificate, send QSL and 9X12 SASE to K8EPV, 1640 Henry St., Port Huron, MI 48060.

International Air Show

The Oswego County ARES will operate KY2F 10-11 July from the Central New York International Air Show at the Oswego County Airport.

Operation will be in the middle of the General 80, 40, 20, 15 and 10M phone bands, the Novice portion of 10M, 147.75/.15 and packet on 144.91 from 1200Z to 2100Z.

For certificate, send QSL and large SASE to Fred Swiatlowski, KY2F, P.O. Box 5227, Oswego, NY 13126.

Tatamy centennial

Special event station KA3OEG will be operated on 11 July from Tatamy to celebrate the town's 100th anniversary.

Operation will be on 3.965, 7.2675, 14.265, 21.365, 28.365 MHz from 1400Z to 2000Z.

For certificate, send QSL and SASE to KA3OEG, Box 193, Tatamy, PA 18085.

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DX WORLD

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W100N

The following DXers were recently issued *Worldradio's* Worked 100 Nations Award:

453) Al Girard, VE6OA; 27 April 1993
454) Juan Estape Font, EA6AAK (all CW); 6 May 1993

Al, VE6OA, completed his requirements at his leisure. Many of the contacts date back some 15 years, the starting date for this award. Juan remained on the CW portion of the bands to complete his requirements.

Macedonia (4N5)

The deserving DXer is after this one due to the latest of the former-Yugoslav republics to be added to the DXCC countries list. No new prefix has been decided as yet and the 4N5 types have been busy.

One of the more active calls from Macedonia is that of 4N5PK. Look for this one on 20M CW between 14.022 and 14.027 MHz almost any time of the day, or catch him on SSB near 14.193 MHz. He has also been reported on 17M CW near 18.074 MHz around 1630 UTC. Other calls reported include the following:

4N5BU 24.940 MHz 1615 UTC

4N5CEF	21.019 MHz	1515 UTC
4N5CM	21.302 MHz	1715 UTC
4N5CZ	7.004 MHz	0315 UTC
4N5FK	21.015 MHz	1500 UTC
4N5GB	10.102 MHz	0000 UTC
4N5KAW	21.017 MHz	1400 UTC
4N5KV	14.015 MHz	1900 UTC
4N5RB	21.277 MHz	1415 UTC
4N5VV	14.018 MHz	1415 UTC

Guyana (8R)

The most active station from Guyana has been 8R1J. This one has been found often on 15M CW between 21.001 and 21.021 MHz after 2100 UTC. He has also been reported on 10M on 28.016 MHz around 2000 UTC. Note that you do not need an Amateur Extra Class ticket to work the low end of 10M CW!

Also reported on the bands from Guyana was 8R1RBF, who was found near 3.793 MHz at 0400 UTC, 18.127 MHz at 2130 UTC and 24.975 MHz at 2100 UTC. Only a diehard DXer would put up with those summer static crashes on 75M. The only other reports we have for this one included the following:

8R1EJ	7.008 MHz	0615 UTC
8R1RPN	24.906 MHz	1400 UTC
8R1KB2LVN		
	28.415 MHz	2130 UTC

Taiwan (BV)

There is a possibility of a new DXCC country according to *QRZ DX*. This includes Pratas Island, which is claimed by Taiwan. *QRZ DX* states the following: "Pratas Island, or Tungsha Tao as it is called by the Chinese, even though claimed by Taiwan, is located closer to mainland China and Hong Kong than to Taiwan. It is located in the south China Sea approximately 250 miles southwest of Taiwan and approximately 200 miles off the coast of mainland China, adjacent to Hong Kong.

"According to what we have heard, the DXAC has raised questions about the distance separating Taiwan and the island and which country actually controls the island. Evidently the distance has been judged to be greater than the 225 miles specified by DXCC countries list criteria point 2(a). Which country actually controls Pratas is another story, but an American, who often travels to Taiwan, says that a German

firm is building a military base on the island for the Taiwan government. The two greatest hurdles--distance and control--seem to fit the criteria.

"And, a group of DXers are reported to be ready to go if Pratas Island is accepted as a separate DXCC country."

We may have a new one, or just another IOTA island. We will just have to sit still and wait to see what develops. As for the rest of Taiwan, several calls were reported recently and include the following:

BV2A	14.022 MHz	0030 UTC
BV2DJ	7.011 MHz	1300 UTC
BV2TA	7.009 MHz	1200 UTC
BV3AR	7.006 MHz	1330 UTC
BV4CT	14.026 MHz	1630 UTC
BV4DD	7.007 MHz	1300 UTC
BV4JB	14.032 MHz	1315 UTC
BV4WB	14.032 MHz	1245 UTC
BV7BB	7.006 MHz	1400 UTC
BV7EJ	14.001 MHz	1430 UTC
BV7FC	21.033 MHz	0315 UTC
BV7FP	14.038 MHz	1245 UTC

Long time DXers will remember that Tim, BV2A/BV2B, was their only source for working Taiwan. Things sure have changed. Now Tim can enjoy an old-fashioned ragchew.

Slovenia (S5)

Slovenia is one of the recent additions to the DXCC countries list and almost everyone is looking for this one. As the QSL cards arrive the demand will decrease. Several calls have been reported so far this spring and include the following that were worked by the deserving DXer:

S51DX	14.215 MHz	0500 UTC
S51GW	14.022 MHz	0445 UTC
S51KD	14.010 MHz	1830 UTC
S52HO	14.006 MHz	1445 UTC
S53AX	18.072 MHz	1230 UTC
S57ZP	3.504 MHz	0430 UTC
S59CM	14.222 MHz	2230 UTC
S59CW	14.017 MHz	1645 UTC
S59KAB	14.002 MHz	0445 UTC

Some of these new calls are something to send on CW. How about such a call as S55HH? Enough to drive a CW man to phone!

Bosnia-Herzegovina (T9)

By the time you read this, stations in this former Yugoslav republic will now



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be using the new T9 prefix. **QRZ DX** reports the following prefix assignments:

- T90 National society and visitors
- T91 Clubs
- T94 Former 4N4 call signs
- T95 C-class, Novices on all bands
- T96 C-class, Novices on 80M
- T97 Future
- T98 Future
- T99 Future

The T92 and T93 prefixes are reserved for use on VHF and UHF.

Several reports were collected during the month of April, all with the 4N4 arrangement. Most likely these calls will convert to the T94 prefix with the same suffix.

Here are a few of the old-style calls that were reported prior to the conversion period:

- 4N4CQ 1.829 MHz 0330 UTC
- 4N4CX 7.003 MHz 0130 UTC
- 4N4ENS 14.008 MHz 1445 UTC
- 4N4RX 7.009 MHz 2315 UTC
- 4N4XX 14.003 MHz 0330 UTC
- 4N4XX 14.200 MHz 2345 UTC

On RTTY 4N4ENS was reported working into California on 14.087 MHz at 0415 UTC on 27 April.

Turkey (TA)

Very popular on the WARC band has been TA2BK. On 30M look for this one between 10.100 and 10.106 MHz; he has been reported at 0130, 0400, 2100 and 2200 UTC. Then on 17M listen near 18.075 MHz around 1300 or 2030 UTC, and on 12M check 24.950 MHz around 1500 UTC. Other calls active from Turkey include the following:

- TA1AJ 21.010 MHz 1500 UTC
- TA1AR 21.240 MHz 1415 UTC
- TA1ZA 14.205 MHz 1345 UTC
- TA2ZA 24.953 MHz 1500 UTC
- TA3D 7.004 MHz 0330 UTC
- TA5C 14.210 MHz 0015 UTC
- TA6ZA 21.084 MHz 1845 UTC
- TA8ZA 21.083 MHz 1945 UTC

The last two reports were for RTTY contacts and may be the same call with one of them written incorrectly.

Mellish Reef DXpedition (VK9)

We received an update on the September 1993 DXpedition to Mellish Reef. The team will now be transported on the much larger and faster *Nina Q I*, a 63 ft. twin-masted schooner capable of carrying 6,000 pounds of DXpedition gear.

Eight operators will participate for 10 days on the reef the latter part of the month. Five HF and one 6M stations will be active around the clock. All bands, 6 through 160M, including the WARC bands, will be utilized. The modes of operation will include SSB, CW and RTTY.

The call signs of the operators include: VK4CRR, VK2BJL, VK2BEX, P29DX, V73C, WA4DAN and K5VT. One more operator position will be finalized soon. As a matter of interest the collective total of DXCC countries activated by the operators is in excess of 70.

The projected cost of the DXpedition is \$30,000 (US dollars) with the yacht charter alone amounting to \$19,500. Any donations, questions, or additional information requests should be directed to: Murray D. Adams, WA4DAN, 403 East 14th Street, Greenville, NC 27858; or Bill Horner, VK4CRR, 26 Iron Street, Gympie, QLD 4570, Australia. For Europe, G4DYO is a collection point for donations. Please include an SASE with your donations so that they can mail you an update prior to the departure for Mellish Reef.

North Cook Islands (ZK1)

Hugh Thomforde, ZK1DT, is presently active from Penryhn Island, which is part of the northern group of the Cook Islands. He is expected to be there through 1996. He has been reported on 40M SSB on 7.183 MHz at 0700 UTC.

South Cook Islands (ZK1)

From the more populated South Cook Islands at least four calls were reported recently. These calls include the following:

- ZK1AYR 21.282 MHz 0130 UTC
- ZK1NB 10.102 MHz 0500 UTC
- ZK1TB 14.022 MHz 1445 UTC
- ZK1XO 21.286 MHz 0145 UTC

Chatham Island (ZL7)

The DXpedition to Chatham Island should be active from about 1 August. Operation is to be on all bands, CW and SSB.

IOTA

Hal, N7BZI, reports that YC8YR visited Tanimbor Island and was busy working Europeans for a brand new IOTA island (no reference number yet). Hal also reports that 8A2ISL was to be active in mid-June from Karimunjawa Island for another new IOTA island. The prefix 8A is allocated to Indonesia.

Don't forget the IOTA Contest in July. There should be some interesting is-

lands or island groups to be found during the big test. Mike Streeter, KB5KYO, informs us he will be operating from the Georgia State group (NA-058). P. Wollenberg, VE8PW, hopes to operate from either King William Island (NA-131) or Southampton Island (NA-156).

Here is a listing of some of the IOTA activity on the bands during this last reporting period:

- EU-015 Gavdos Island J49G
- EU-040 Berlenga Island CQ1B
14.262 MHz 2130 UTC
- EU-055 Karmoy Island LA6ZP
14.260 MHz 2345 UTC
- EU-064 Yeu Island TM6YEU
- EU-082 Kildin Island 4K3RRC
- AF-019 Lampedusa Is. IG9/N7YXY
- AF-045 Goree Island 6V1A
7.003 MHz 0615 UTC
- AF-066 Innancha Island C9LCK/P
14.260 MHz 0430 UTC
- AN-001 Adalaide Island VP8CMR
- AS-025 Iturup Island 4K5RRC
21.260 MHz 0030 UTC
- NA-061 Kaien Island VE7GKH
14.260 MHz 1700 UTC
- NA-081 Tancook Is. KA2PHQ/VE1
14.260 MHz 0130 UTC
- NA-139 Assateague Is. WA3NAN/3
21.261 MHz 1800 UTC
- NA-179 Guadalupe Island XF1G
- OC-008 Bismark Island P29VMS

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OC-151 Flores Island YB0AWR
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 OC-182 Ducie Island VR6BX/P
 21.259 MHz 0200 UTC
 SA-048 Piritu Island 4M6I

Jim White, VK4BX, secretary of the Hervey Bay Amateur Radio Club, informs us that the club still has several cards left from their November 1991 IOTA DXpedition to Fraser Island (OC-142). They made some 4,500 contacts during their eight-day operation from the island. If you worked them and desire a card, please send them an SAE with sufficient funds for return postage as soon as possible, as they wish to close out the logs by the end of the year. Refer to the QSL routes in this column for the address.

The RSGB will hold their International HF Convention on Friday, Saturday and Sunday, 8 to 10 October at the Beaumont Conference Centre (same place as last year), which is near London. The convention will include sessions involving the IOTA program. For further information write to: RSGB HF Committee, P.O. Box 599, Hemel Hempstead, Herts HP3 0SR, England. Include postage funds and an SAE.

We received a copy of the latest IOTA Directory which has been completely revised. If you have an interest in island chasing then we recommend the purchase of a copy. North Americans can purchase their copy from Dewitt Jones, W4BAA, P.O. Box 379, Glen Arbor, MI 49636. The cost is \$8 post-paid.

European DX Contest

During the latter part of the summer DARC (Deutscher Amateur Radio Club) sponsors their annual European DX Contest. The contest is a bit different than the normal contests where you get a chance to gain additional points by sending the list of contacts made to another European station. The CW portion is on the second weekend in August, followed by the SSB portion the second weekend in September. The contest is always a good source for working some of the needed European countries. For further information on the contest in August refer to the DX Contesting column by John Attaway, K4IIF, in next month's *Worldradio*.

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DXCC news

Last month we reported the DXAC recommendation on the addition of Czech Republic (OK) and the Slovak Republic (OM) to the DXCC countries list. The ARRL awards committee immediately approved and accepted the recommendation. The start dates are effective 1 January 1993. Contacts made with Czechoslovakia will count as such provided the contact was made 31 December 1992 or before.

The awards committee also announced the addition of Macedonia (former Yugoslav republic) to the DXCC countries list. All valid contacts must have been made 8 September 1991 or later. The prefix for this one is YU5 and 4N5, and will no doubt change in the near future.

The DXCC desk has approved the following operations for DXCC credit beginning the following dates:

5R8DJ	24 Nov. 1992
9F2CW	15 Dec. 1992
D2/KC6HUE	26 Jan. 1993
D2/AA4HU	26 Jan. 1993
D2/N6QHO	26 Jan. 1993
D2BG	17 Feb. 1993
ET3DX	11 April 1993
ET3JR	15 Oct. 1992
ET3RA	22 Nov. 1992
ET3YU	26 Feb. 1993
S21ZG	06 Dec. 1992
S21ZH	06 March 1993
S21ZJ	06 March 1993
S21ZM	07 March 1993

The DXCC Desk would prefer that cards for the 9F2CW/A operation of 26 January to 4 February 1993 be held pending the DX advisory committee's disposition of the petition for new country status for Eritrea. Their action may affect the way this operation is credited.

The backlog of unprocessed DXCC applications at the end of April was down to 1,140 (114,490 QSL cards). This backlog is slowly but surely decreasing from a total of 3,803 last October. Applications being sent out at the end of April were received 6.7 to 9 weeks (1.6 to 2.1 months) earlier. Twenty applications were received prior to that time.

CIS prefixes

QRZDX reports that with the breakup of the Soviet Union the following prefix allocations have been proposed:

Armenia	EK
Azerbaijan	4J
Belarus	EU-EW
Georgia	4L
Kazakh	UN-UQ
Kyrgyz	EX
Moldova	ER
Russia	RA-RI, UA-UI
Tadzhik	EY
Turkman	EZ
Ukraine	UR-UZ, EM-EO
Uzbek	UJ-UM

Many of the new assignments have already appeared on the bands.

Pacific Northwest DX Convention

The 41st annual Pacific Northwest DX Convention, this year, will be sponsored by the Willamette Valley DX Club the weekend of 30 July - 1 August at the Greenwood Inn, Beaverton, Oregon.

The tentative program will include Joe Rudi, NK7U (who used to chase baseballs around the Oakland Coliseum); QSL mangers Joanie and Jerry Branson, KA6V and AA6BB; Lew Sayre, N7AVK; Roy Lewallen, W7EL; and Bill Sattler, N0XX of DX Engineering. Also included in the program will be the usual DX and contest forums.

Complete registration, which includes the Saturday evening banquet and Sunday breakfast, costs \$45. Make your checks payable to Willamette Valley DX Club and send along with one QSL card to: Jim Fenstermaker, K9JF, 10312 NE 161st Avenue, Vancouver, WA 98682. If attending the banquet please indicate your choice of halibut or prime rib.

Miscellaneous

Information regarding the Ukrainian Contest Club Award is available from Sergei L. Kripko, RB5QRQ, for one IRC (or green stamp). Send to Sergei at P.O. Box 6636, Zaporozhye 330123, Ukraine. We recommend the IRC, as a green stamp is more tempting to mail handlers.

Evgeny Tsargorodsky, UA4CD, writes that he is "at your service as QSLs operation manager at reduced rates." We are not sure exactly what he means. He could be operating as a QSL bureau at a fee or handling cards for a fee. Should you be interested contact him at P.O. Box 83, Atkarsk 412400, Russia.

Antique QSLs

The term antique is really relative regarding QSL cards. Such as the case with these two that date back more than 30 years. QCWA members will say that's not old, while youngsters in

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MS-064-832	160-80-40-30-15-12M DOUBLE SLOPER	60' LONG	\$67.00

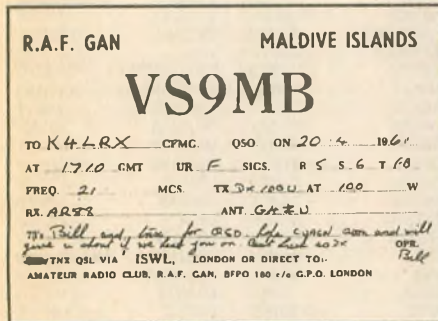
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their teens will associate it with ancient history. Thanks to William Hilyard, K4LRX, for providing the following two cards.



Back on 23 February 1962 Bill worked 5A3BC in Benghazi, Libya, on 15M CW. The operator was listed as P.J. Crosbie (Bing), who held additional calls of ZC4BC, G3NMQ and GW3NMQ. Stations in Libya were not necessarily rare in those days. In fact, we worked one. As I could barely copy the station I never bothered to send a card, and thus never received one. I haven't worked one since.



The other card was for a contact with VS9MB in the Maldive Islands. Bill worked this one also on 15M, but on phone. The date was 20 April 1961 and we assume the mode was SSB and not AM. The VS9 prefix has since been replaced with 8Q7.

GOLIST

No! No! This does not mean go get on the list. Rather, this is the famous W6GO/K6HHD QSL manager list in disk form. The program, *GOLIST*, is for your computer and is a brand new product and requires no installation and will run without being copied to your hard disk (there is an exception which we will discuss later). We have mentioned this QSL manager list from time to time in the past. Now you can get this information on diskette, which contains in excess of 18,900 QSL routes.

No longer must you torture you eye-

balls trying to read the fine print to find a QSL manager. With this system all you have to do is type the call of the station you are interested in and out comes the QSL route, in most cases complete with address and any other pertinent information.

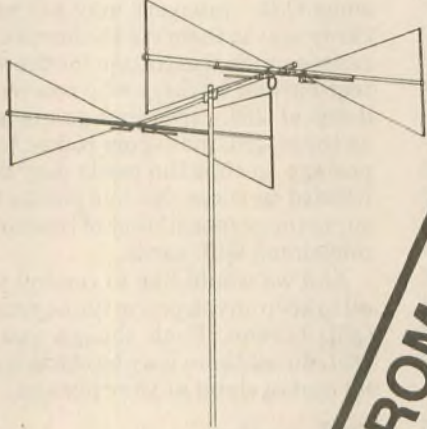
At the big one in Visalia, where there were 687 DXers present this year, Jay O'Brien, W6GO, handed me one of these disks to add to our hard disk in our computer. That we did and we copied the data into a directory we naturally called "GOLIST." The information on our diskette was compacted as it was on a 360k 5.25 in. floppy. We then typed GOLIST and the system unpacked 10 files and was ready to go.

Our next command was GO157 which we typed and hit "enter." The usual proprietary messages appear with instructions to type "?" for information about the program, "JAN" for the K6HHD words of wisdom, or "JAY" for comments by W6GO.

Anyway, we were ready to go. There is a simple message which reads, "DX Station (press enter to quit)?" If you hit "enter" the program quits. But if you need a route just type in the call of the station you need. We typed in the call TN1AT. F6FNU was given as the route, along with the address. It also stated not to use the 1993 *Callbook* address, and that Russian stations may QSL via UA4CX.

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Operates as a dipole
on 17 meters.**



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- 26 ft. tall

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We tried another, 5X1A, a most recent operation. This one was included also. Then what about a call such as HC8A, which has been active by different contest groups. This one advised to QSL via WV7Y for 1992 and 1993 SSB contests only and the 1990 Worldwide contests. Other operations in 1990 were to be sent to another address and, for contacts made in 1986, to KQ1F.

Older routes are also included. We looked up 4U8ITU (a very recent operation) and got the following message: "Do not use this route for current operations without verification. Last printed in Issue 97, 08-Mar-88, the route for 4U8ITU was shown via F6EYS for May 3, 4, & 5, 1983 ONLY." Obviously, this message will change when the next *GOLIST* is prepared.

If a DX station has no QSL manager there will be no route given.

Normally you operate from DOS for this program. As we have *WordPerfect* menu with our system we go the program straight from the menu. We label the program as "GO157" with the default directory as C:\GOLIST.

Interested? A single copy is available for \$12 (\$13 outside the US). It is available on a 3.5 in. floppy diskette. It is also available on 5.25 in. floppy at no additional cost, and you must specify 1.2M or 360k. However, you must have a hard drive to run the program if you are like N6JM with old-fashioned 360k floppy drives. Order your copy from: Electronic Enterprises, P.O. Box 700, Rio Linda, CA 95673. Phone orders are also acceptable if you call after 9 a.m. PST at 916/991-7263, or you may wish to send a FAX to 916/991-1000 (24 hrs.). The printed version of this QSL list is also available at much lower rates.

The information will become obsolete after a pre-determined date and will let you know it is so. Our copy will be obsolete on 17 July 1993. Subscriptions are also available at \$62 (\$74 outside the US) for 12 consecutive mailed disks.

QSL information


Evidently, QSL cards to the former USSR republics do get through. We recently received a card from UA0QFC/A in Siberia. Of course, it took 11 months turnaround time. That's better than nothing!

Jan O'Brien, K6HHD, says that mail to Bosnia and Herzegovina is apparently routed through Zagreb in Croatia. Several reports were received that mail via that route is being returned as undeliverable by the post office in Zagreb. The reason is not clear, with the message being poorly stamped and in another language. Even registered mail is being returned. Jan suggests you save your money and hold your cards until this situation settles down.

Jan would also like to remind us that some QSL managers may not answer cards sent to them via the bureau. This causes much frustration for the volunteer bureau workers who receive hundreds of QSL cards that go unclaimed as these QSL managers refuse to send postage so that the cards may be forwarded to them. No one wants to assume the responsibility of trashing the unclaimed QSL cards.

And we would like to remind you to all to keep envelopes on file at your area QSL bureau. Even though you may QSL direct there may be cards waiting for you to claim at your bureau.

5R8AL	-F6ACT	LX/FD1SHQ	-FD1HSQ
5W0CW	-DL7UO	N90QS/T5	-WN2R
5W0UO	-Y23UO	OD5/SP7LSE	-SP7EJS
5W1CW	-ZL1AMO	OD5WS	-YO9FVU
5X1DX	-N3JCL	OH0W	-OH2BH
5X1XB	-WF5T (CW/RTTY)	OM3CBU	-OK3CBU
5X1XB	-N3JCL (SSB)	ON6USA	-ON6CL
5X1XT	-WF5T	OT3D	-ON4DST
5X1XX	-K7UP	OY/G4XRV	-G4XRV
5Z4JD	-F6AJA	OY/DK9FE	-DK9FE
6Y5/DL4ZBI	-DL4ZBI	OZ/DL1AAZ	-DL1AAZ
6Y5/DL2OBO	-DL1HG	P20X	-P29DX
6Y5/DF5UL	-DF5UL	P29AJ	-VE3ELA
6Y5/DL2FAI	-DL2FAI	P29VMS	-DL2GAC
7Q7AF	-DJ5IO	P29VR	-W7LFA
7Z2AB	-AA0BC	P40NA	-DL6NA
8A2ISL	-YB2FRR	P43A	-P43ARC
8P8DL	-G3TTC	P49V	-A16V
8Q7AB	-JJ1XDL	PT4A	-PY4BHB
8Q7DA	-DL1ZBE	PY0FM	-PY5CC
8Q7PJ	-PAB0CRA	R3ARES	-WB4ZKL
8Q7PJ	-PAB0CRA	RJ8JM	-DL8WN
9A2DW	-YU2DW	RM8MA	-ES1RA
9D2CW	-PY2CCW	RU1A	-KC1WJ
9G1AA	-PA2FAS	S0RASD	-EA2JG
9J2FR	-I2ZZU	S21ZG	-W4FRU
A22BW	-DK3KD	S21ZM	-SP5IUL
A61AD	-WB2DND	S57EK	-YU3RO
A92WH	-DL1WH	S79MX	-HB9MX
AA4HU/D2	-W3CHW	ST0/PA3CXC	-PA3CXC
BV4CY	-N00C	SV9/W9GHY	-WB9MFC
BY1BJ	-F1LBM	T5K6GQO	-KC6GQ
BY1QH	-DJ7BU	T5A	-KH6HBZ
	(see note 3)	T5SM	-SK0FA
BY3SG	-JA1AN	T5YR	-DL8FY
C21/VK2BEX	-VK2BEX	T71CE	-F6FQK
C6AGN	-KA1DIG		(see note 7)
C91A	-I4LCK	T93M	-DL80BC
C91J	-W8GIO	T94CR	-SM5AQD
C9LCK/P	-I4LCK	TA1ZA	-WA6JCD
CG7DGL	-KM6ON	TA2BK	-DJ8UJ
CI2QK	-VE2QK	TM5GEX	-F1LAP
CN8RS	-KD5ZM	TM6EMU	-F6AUS
	(see note 4)	TM6YEU	-F6AUS
CQ1B	-DJ0MW	TN1AT	-F6FNU
CR7M	-CT1AHU	TR8GR	-F6AXX
CS9FF	-CT3FF	TR8LC	-FD1PYJ
CT1TGM/IMD	-CT1AVR	TR8MD	-F6FNU
CU0MB	-CU3AN	TU22R	-SM3DMP
DA0IMD	-DL5EBE	TU5DX	-F6ELE
DL2OBO/6Y5	-DL1HG	TY2CE	-WB2HAC
DL8YR/T5	-DL8YR	U50	-DL1GWS
DP0RIM	-DC8TS	U9A/K4EWG	-K4EWG
E20AT	-HS1HSJ	UA0KAP/4K4	-KL7HBC
EA6ABN	-W3HCW	UA3XCZY/S	-ZS5FT
ED6ZXB	-EA6ZX	UA87AA	-AA7AN
ED8DIE	-EA8BGY	UC2AKP	-DL10Y
ED8IDH	-EA8BGY	UD6DFF	-WB2REM
EE6ZXB	-EA6ZX	UI0A	-G3LZK
EF6ZXA	-EA6ZX	UI82AA	-K9FD
EF6ZXB	-EA6ZX	UI9A	-F6FNU
EH8DSR	-EA8ZX	UJ8JCM	-DL8WN
EL2YD	-F6FYD	UJ8JM	-DL8WN
EV8A	-F6AML	UJ8JMM	-DL8WN
FR5GN	-F6IIS	UM8DX	-FD10JO
FR5ZU	-VE2NW	UN7LZ	-UL8LWF
FT5YE	-F1AAS	UN8LA	-UL8LWZ
GB2TI	-GM3ITN	UN8LW	-RL7LW
GB4MDI	-GW0ANA	UN9LM	-UL7LAH
GB8WA	-Bureau	UN9LT	-RL7LCT
GS0ST	-GM3YOR	US7I	-NA3O
GU0SWA	-W1WA	US8I	-UY5EG
GX10RA	-GW7BGA	UZ2FWA	-DK4VW
HB0/DL2GWL	-DL2WGL	V47WC	-KB8WC
HB0/DL8GCL	-DL8GCL	V47XS	-N8LXS
HB0/DA1WA	-KN6G	V63CS	-G4WFFZ
	(see note 5)	V63CW	-JH710S
HC8J	-WV7Y	V63DX	-JA7MHZ
HH2Z	-KA9RLJ	V85MQ	-DF5UG
HK0/KB5GL	-KA6V	VB3AT	-VE3AT
HS0F	-HS1HSJ	VB3GSX	-VE2GSX
HV4NAC	-IK0FVC	VB6QST	-VE6VK
I1A	-I1RBJ (see note 6)		(see note 7)
ID1X	-I1RBJ (see note 6)	VE1IMD	-VE1CR
IE1ITU	-I1RBJ (see note 6)	VK2QD	-VK2WR
IF9/K1TZO	-IK1TZO	VP2MFA	-K8IS
IG8/K7RWE	-IK7SUE	VP5/WD5B	-WD5B
I1IA	-I1RBJ (see note 6)	VQ9CT	-KA6V
IM0/IS0RUH	-IS0JMA	VQ9GB	-K7GB
IQ5LDV	-I5FNN	VQ9SS	-N6SS
IU2MM	-IK2GZU	VQ9TV	-W4TV
IY0TCI	-I0KHP	W51JU/KP1	-W51JU
J49GI	-SV1AFN	WB4FNH/OE3	-WB4FNH
J5UAI	-NW8F	WV2B/CY9	-WV2B
JW6RHA	-LA6RHA	XE2XA	-KD5GY
JY9ZK	-KA5ZMK	XF1G	-XE2BCS
K2VUI/VP9	-K2VUI	XF4JC	-XE1ECR
KH0AC	-K7ZA	XK1BPM	-VE1PBM
KH5/N0AFW	-WA2FIJ	XK2GSX	-VE2GSX
KH8/JA1WPX	-JA1WPX	XL7U	-VE7UBC
KH8/DL2RUM	-Y23UO	XU2VK	-HA0HW
L3DSR	-LU1DVT	XU2ZP	-LA2ZP
LH9NP	-JW5NM	XU7VK	-HA0HW



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1B1NCC	-G0ITX	4N4/OH6XY	-OH1LHS
3C1TH	-K8JP	4N4/OH5LK	-OH5LK
3C1TR	-K8JP	4N4ENS	-DJ0JV
3D2AR	-VE7TG	4N5CN	-YU5CN
3D2CC	-VE6AKV	4N5EP	-YU5XVP
3D2IL	-JA30IN	4N5JA	-WA4JTK
3V8AS	-IK5GQM	4N5PK	-YU5XVD
3X0HLU	-OK2OPZ	4N5VP	-YU5VP
3Z0MTP	-SP3KWX	4N5VV	-YU5XCS
4F3AAL	-AA7AN	4N7DW	-YU7GMN
4J4GAT	-DL1VJ	4N7M	-YU7KMN
4K1D	-UZ1PWA	4N7ZZ	-YU4FIJ
4K2KBZ	-DD2LV	4O4GNO	-YU1XA
4K3/RW3GW	-I1HYW	4S7GF	-YH6JTE
4K3RRC	-I1HYW	4U1VIC	-WB4FNN
4K4/RA3DFP	-DL8AAM		(see note 1)
4L1BR	-UF6FFF	4U8ITU	(see note 2)
4L9A	-UF6FFF	4X45ID	-4X6KZ
4M3X	-YV5LH	5H30H	-OH0RJ
4M6I	-I2CBM	5H3XX	-JH3RRA

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DX Prediction — July 1993

Maximum useable 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 useable 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.

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(19)	16	*18	15	*15
10	(22)	*13	*16	(14)	*16
12	27	*16	*15	18	20
14	31	19	(14)	20	25
16	33	18	(14)	22	*29
18	*33	(16)	(13)	22	*31
20	27	21	26	20	*33
22	23	23	31	16	*30
24	19	23	33	15	*25
2	*17	22	33	*11	*21
4	*18	21	31	*16	*18
6	24	20	27	18	*16

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(18)	*20	*17	(13)	*19
12	(17)	*16	*16	(14)	(17)
14	(21)	*18	*15	18	23
16	(24)	18	(14)	20	27
18	26	(15)	(14)	21	30
20	27	20	(20)	19	*32
22	23	24	29	16	30
24	(19)	*26	33	14	*27
2	(17)	*28	34	(12)	*22
4	*18	*28	33	16	*19
6	24	*26	*30	20	*17
8	21	*24	*22	18	*15

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	(18)	16	*21	13	*16
9	21	(13)	17	16	*16
11	26	(17)	16	19	20
13	30	19	(15)	*21	*25
15	32	16	(14)	*22	*28
17	33	(13)	(14)	*22	*31
19	*30	(15)	(19)	*21	*33
21	25	(19)	29	*19	*31
23	21	21	32	*18	*28
1	*18	22	33	*15	*23
3	*15	21	32	*14	*20
5	22	20	28	*16	*18

XX9TRJ	—JP1TRJ	ZD9CQ	—ZS6SA
YB8ARF	—N2MM	ZF2UA/ZF8	—N9ALC
YC8YR	—YB8BYS	ZF2UF	—WA2BOT
YS1X	—YS1RRD	ZF2UM	—W1MJ
YZ9Z	—DL8OCB	ZF2UN/ZF8	—SM3AVQ
ZA1BM	—IT9ZGY	ZK2XO	—DL8NBE
ZA1Z	—HB9BGN	ZK3RW	—ZL1AMO
ZB2JL	—N5OKR	ZP9XB	—PY6BI
ZD7GT	—WF5T	ZS/UA3XCX	—ZS5TF
ZD8DEZ	—G0DEZ	ZY3TD	—PY3TD
ZD8DX	—WF5T	ZY3TV	—I0WDX
ZD8VJ	—G4ZVJ	ZZ1CZ	—PP1CZ

- 5R8DS —P.O. Box 404, Antananarivo, MADAGASCAR
- 6V1A —P.O. Box 971, Dakar, SENEGAL
- A71CW —P.O. Box 22101, Doha, QATAR
- DU9ECX —P.O. Box 204, General Santos City 9500, PHILIPPINES
- EL2PP —Monica Maconi, P.O. Box 2274, Monrovia, LIBERIA
- HR1RMG/HR6 —Rene Mendoza Garay, P.O. Box 3245, Tegucigalpa, DC, HONDURAS
- V420KAI —P.O. Box 827, ST KITTS
- V42KJI —P.O. Box 827, ST KITTS
- VI4FOW —HBARC, P.O. Box 829, Hervey Bay, QLD 4655, AUSTRALIA
- VI4HBW —HBARC, P.O. Box 829, Hervey Bay, QLD 4655, AUSTRALIA
- VP8COD —VP8COD, Box 260 MPA, FALKLAND ISLANDS
- VR6BX/P —Brian, Ducie Island DXpedition, P.O. Box 21, PITCAIRN ISLAND
- ZK1DT —Hugh Thomforde, Penrhyn Island, COOK ISLANDS via New Zealand

- 7, I-10126 Torino, ITALY. This station was also operated on 8-9 May by others; QSL via I1YRL.
3. This route applies for contacts made by DJ7BU only.
4. We received a note from Earl Smith, KD5ZM, in March regarding another DX call (FK8EJ), stating he had no knowledge of the station and that he was "manager for no station."
5. This route applies for North America only; all others QSL via DJ0LC.
6. Refer to Note 2 for address for I1RBJ.
7. This manager prefers cards via the bureau.

Many thanks to the following contributors: RB5QRQ, UA4CD, VK4BX, W1WA, WA4DAN, WB4FNH, KB5KYO, W6TUR, AA7AN, N7BZI, American Radio Relay League (K8CH), Deutscher Amateur Radio Club (DL2DN), Western Washington DX Club (WA0RJY), Northern Arizona DX Association (W7YS), Western New York DX Association (KB2GM), The DX Magazine (VP2ML), Long Skip (VE3IPR), The W6GO/K6HHD List, The Long Island DX Bulletin (W2IYX), QRZ DX (W5KNE), and The DX Bulletin (VP2ML).

The annual Miss California Pageant will be held in San Diego the latter part of June, and possibly televised 19 June. Those DXers who reside in California might wish to watch the pageant if it is on TV. Look for Miss Gold Country—she is a daughter of a DXer. The best of DX to you, de John N6JM.

Notes

1. This applies for contacts made RB, WB4FNH, only.
2. On 1-2 May this station was operated by I1RB and I1RBJ; QSL to Paul Bavassano, Via Monti

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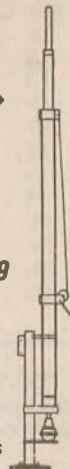
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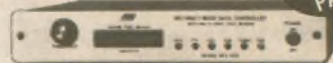
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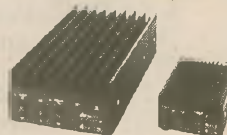
SIZE: 7 x 3 x 1.75" 36 oz.
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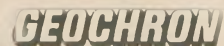


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Easy mode operation
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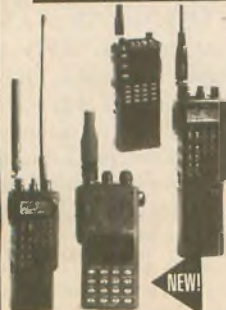
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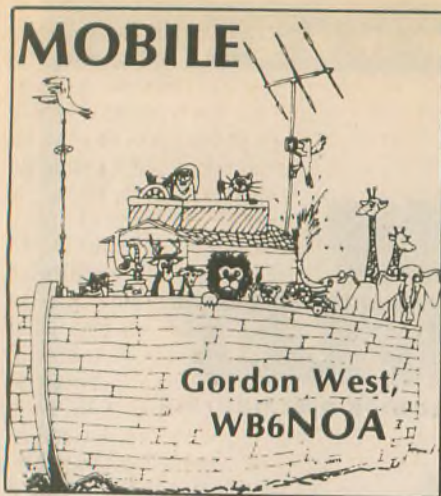
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Calibrating your HF rig

There is a simple way to check whether or not your mobile high frequency SSB rig is right on frequency. If it is smack dab on the nose, I would be surprised. Most HF rigs are usually a couple hundred hertz off frequency. And if you are off frequency, some manufacturers make it easy to re-calibrate your equipment.

For casual ham communications, a fraction of a kilohertz off frequency may not even be noticed. I have never found a new rig more than 250 Hz high or low, and one-quarter kilohertz off can be barely discerned by your ear.

But if use your high frequency SSB transceiver for digital modes, a few hundred hertz here or there could make a big difference on the ability to synchronize yourself with other digital stations. This applies to HF packet; PACKETOR; AMTOR; ASCII reception; RTTY; slow-scan television; marine NAVTEX reception; marine weather facsimile reception; emergency marine transmissions to Coast Guard and public coast stations.

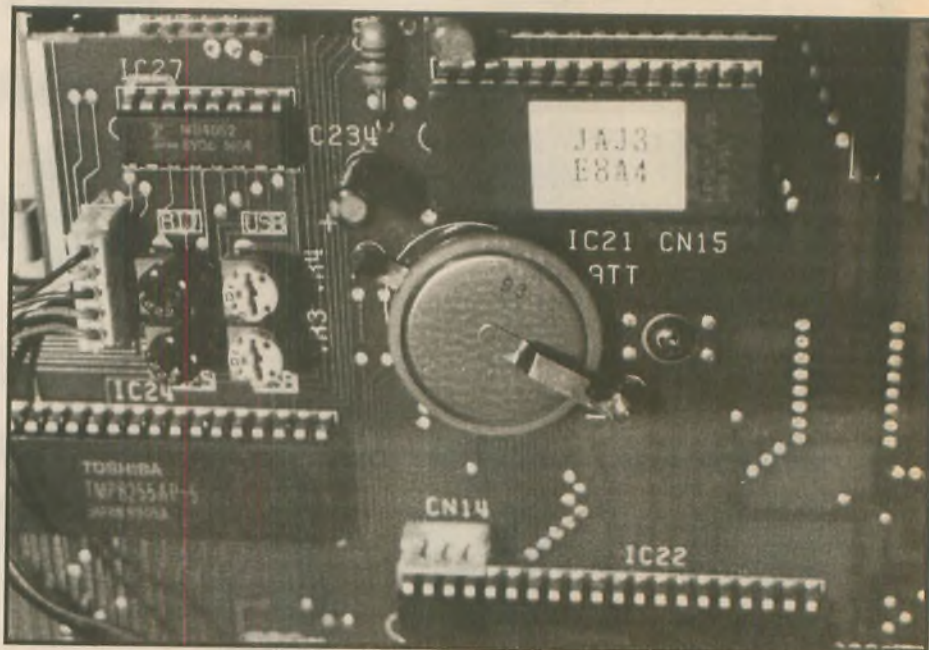
"Weather facsimile reception is dramatically improved if the high frequency ham SSB is calibrated for exact frequency operation," comments Lala Hoot, XYL of John Hoot, N6NHP, of Software Systems Consulting, the weather facsimile specialists. "If the high frequency transceiver is not properly frequency calibrated, the weather facsimile pictures will either turn out too light or too dark," adds Lala.

The Federal Communications Commission can easily spot a ham rig on

marine SSB channels by its noticeably off-frequency operation. "Marine SSB transceivers are typically no more than 10 or 15 Hz off their assigned frequency," comments Jerry Freeman, director of the FCC's Norfolk office. "Ham rigs on marine SSB are not legal, and our engineers can easily detect their presence on the marine band by their notably 200 Hz to 300 Hz excursion from the center of the marine channel," adds Freeman.

Here is how to tell whether or not your HF transceiver is properly cali-

or WWVH at 5, 10, or 15 MHz. With just a little piece of wire in the back of your antenna jack, you should be able to pick up these strong broadcasts easily on these frequencies. WWV is located at Fort Collins, Colorado, and WWVH is located on Kauai, Hawaii. These stations are operated on a 24-hour basis by the National Institute of Standards and Technology, and their frequency accuracy is +/- 2 parts in 10¹¹. Except for a Loran-C reference station, WWV and WWVH signals are as close as you can get over the airwaves. They are cer-



Consult the instruction manual to be sure you're making the correct adjustment when calibrating your HF rig.

brated. Keep in mind that calibration affects both transmit and receive, and on almost all ham rigs, transmit and receive are referenced to the same master crystal oscillator. Tune in WWV

tainly more accurate than trying to calibrate your rig to any other type of frequency generator that may be found in the lab.

Tune your rig in upper sideband so that you read all zeroes after 5, 10 or 15. If your rig has two zeroes after the second decimal point, you are resolving the frequency in 10 Hz steps. If you have only one zero after the second decimal point showing, you are resolving down to 100 Hz. Many times you can use the up/down mike button to put yourself in the middle of that first zero to average your frequency setting.

When your dial shows right on, alternate between USB to LSB to AM, and see whether or not the WWV modulated tone sounds the same. I'll be real surprised if it does. If your rig was exactly calibrated on frequency, you would hear the same modulated tone on USB and LSB as you would hear on AM. It's that natural AM tone of either 500 Hz or 600 Hz that you want recovered on LSB and USB. If it sounds different when you switch between these three modes (avoiding CW mode), your

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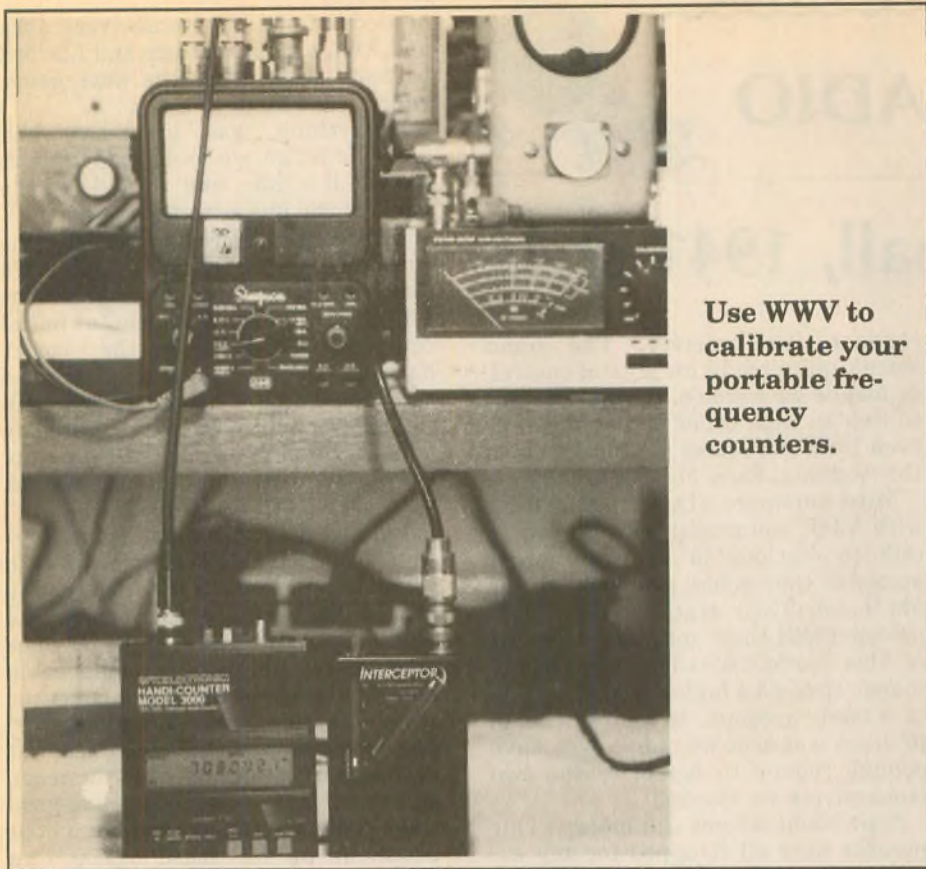
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Use WWV to calibrate your portable frequency counters.

rig needs to be calibrated.

How much? Play with the big tuning dial until USB/LSB/AM all produce the same tone. Now look at the dial. This is how many tens or hundreds of hertz you are off. If it's less than 100 Hz, I wouldn't worry about it. As the crystal in the phase-locked loop circuit ages, it will probably walk itself right on frequency. This is what I suspect when I see brand new rigs all a couple hundred hertz low when they come in from Japan. But this aging process takes time, and you may wish to "net" the circuit yourself.

Dig out your owner's manual and see if it has a frequency calibration process. On the new Kenwood TS-50, the trimmer capacitor TC-1 is adjusted for on-frequency operation. On the Kenwood TS-450, the service manual illustrates the trimmer capacitor buried beneath the top-mounted speaker. You will require the yellow metal-tipped "twiddle tool" to lightly turn the trimmer cap. Don't exert any downward pressure on these trimmer capacitors, or else they could fracture. Then you're in deep trouble. Just a slight adjustment will pull the frequency up or down, and you calibrate the receive to WWV. The transmitter follows what you do with the receiver.

On the Icom 728 and the Yaesu 890, the user's manual gives a description about the high stability TCXO option and where it goes to replace the standard crystal oscillator. If you are tech-

nic, this lets you home in to the existing crystal oscillator circuit, and you can eyeball easily the trimmer capacitor that needs to be ever-so-slightly adjusted *with the proper tool* to put you smack-dab on frequency with your dial reading out all zeroes after 5, 10, or 15. *Don't adjust any trimmer capacitor with a jeweler's screwdriver.* All that metal loads down the circuit and could also fracture this delicate variable cap. Also make darn sure you are on the right trimmer. You can usually hear the WWV signal on USB slightly "wiggle" when your metal-tipped tool touches the magic spot. You don't even need to turn the cap to hear this tell-tale warble.

And if you're not technical, find a ham who regularly works on HF mobile and base rigs, and they can do this frequency adjustment for you.

But hey, don't even worry about this if all you do is use your radio for ham SSB and CW work. A few hertz here or there isn't all that critical. But if you really demand on-frequency operation, do consider calibrating your own equipment. And if you need cold-start frequency stability, you may wish to even purchase the optional high-stability oscillator circuit that will most definitely require the services of a very technical ham to get it installed. While I haven't done many optional TCXO circuits myself, I have adjusted many HF transceivers on frequency, and for selected digital modes, it really makes a difference.

WR



The Icom IC-728 indicates 10 Hz readout; the Kenwood TS-50 shows 100 Hz readout.



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OLD-TIME RADIO



High-tech football, 1941 style

PAUL E.T. JENSEN, AA6PB

What would a 1941 football coach have given for the high-tech gadgets of the '90s? He could have read his opponent's plays, noticed shifts of their players, and solved in "real time" the changes needed in his own tactics to win games. But a coach couldn't buy a video camcorder or an instant replay system, or a two-way radio headset even if he had all the gold in Fort Knox. In 1941, the equipment didn't exist.

He could string a telephone line to the end zone where his assistant coach could tell him about the opponent's plays, but that wasn't permitted in New Orleans' City Park Stadium.

Our W5FDN Amateur Radio club at Fortier High School had a plan. We were building two VHF 2½M band transceivers as described in Vern Chambers' June 1939 *QST* article, "A 112 MAC Pack Set." It looked like Coach Jack Pizzano's dream might come true.

Our football team had a good chance of winning the city championship, but our key opponent always had a lot of trick plays. We needed some tricks of our own to use against them and some way of finding out what they were going to do.

Two of our Amateur Radio club members, Alva, W5GTB, and Jake, W5IKP, had started to build a pair of battery-operated 2½M transceivers, similar to Chambers' design. Each had a modulated oscillator and a super-

regenerative receiver. The band wasn't quite ready for crystal control, or maybe we weren't. It would be fun to talk to each other across town, or even from the school's radio shack to the Audubon Park, about a mile away.

Most amateurs who were operating with VHF equipment were trying to talk to stations in as many other states as they could, primarily on the 5M band. Their stations were high-powered and their antennas were out of this world. We didn't have any money to build a high-powered station or a fancy antenna. In fact, our main problem was that we didn't even have enough money to complete the two transceivers we started.

How could we get the money? Our parents were all strapped for any extra gear for our amateur stations. They had already gone beyond reasonable limits. In those days we weren't nerds, just nuts. Nerds hadn't been invented yet.

Then Jake had an idea. He was always helping out in the locker room and was friendly with the assistant coach, Cy "Red" Hickey. Jake said, "Maybe Red would know where the school might have some money that could help our club project."

To our surprise, Red asked, "Can these radios let me talk to the coach from the end zone?"

Jake replied, "Sure, just like on the telephone."

Red was sold instantly. He talked the coach into giving us the \$25 we

needed to finish the transceivers. Jake and Alva completed them and I helped to test them before the next game, which was two days away.

Everything was great—we had spare batteries, we could easily talk at least half a mile, and we rode to the game in the bus with the team.

Before kickoff I was in the end zone with Assistant Coach Red, and Alva and Jake were with Coach Jack Pizzano at the bench. We made our initial contact and then we let the coaches have the mike and the earphones so they could talk. The coach told Red, "Read every formation and shift they make and tell me which guys to stop. On our offense, show me their weak spots so we can run through."

True to predictions, the Blue Jays from Jesuit High School came up with some trick plays. They also had a broken field runner, O.J. Key, who didn't need any plays. Once he came through the line no one could catch him. At the end of the first quarter the score was Blue Jays, 14, and our Tarpons were scoreless. Coach Jack was getting a little furious — at the team, at Red for not giving him some good clues about the enemy, and not a little blame at us for these radios that hadn't solved his problem.

In the second quarter things got better. Red showed the coach where the holes were and where to get at their ball carrier before he could cross the scrimmage line. We threw them for four straight losses, including a blocked punt that we recovered. Our speedy halfback, Bobby Joe Fletcher, made two fantastic runs to tie the score 14-14 at halftime. The coach was becoming a believer.

At halftime we got to join the team in the locker room, which was way beyond our dreams. We felt like part of the team. We even felt proud as the coach was chewing us all out for not having a winning margin by halftime. He tore us to pieces, then he cheered us up so we knew we could win the game.

The second half wasn't like the first. The Blue Jays had noticed what we were doing and how our linemen were finding their weak spots. During their halftime, they patched up the holes in their line and Red couldn't find any to report to the coach. But he did find weak spots in their defensive backfield. He called the coach and told him what pass plays to use and where to direct the ends. It worked. We pushed ahead and at the beginning of the fourth quarter the score was Tarpons 21, Blue Jays 14.

Then our technical difficulties started: the batteries were running down. We quickly replaced them, but we lost four valuable minutes and the



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Blue Jays scored to make it 21-21. In the last five minutes of play we had the 6G6-G vacuum tube burn out and it almost cost us the game. We finally found out which tube to replace and got back on the air.

In the meantime, Coach Jack had sent in his secret play, a modified "Hail Mary" short screen pass that let our speed merchant, Bobby Joe, streak in for the final score to win the game 28-21, and the city championship.

We learned a lot that season. First, we taught the coaches how to use a microphone; single-button carbon mikes were not for screamers. They screamed at each other so much they couldn't understand a word until we told them to back off.

We had just spare tubes and batteries at first but eventually learned we needed spare transceivers and spare antennas. At one game an excited fan, or maybe it was a member of the opponent's team, broke off our whip antenna during an exciting play. Finally, we learned that raincoats for us and ponchos for the radios were needed for the thunderstorms in the Bayou Country.

Being on the cutting edge of "high-tech" sports was exciting. And that season was the best one in 10 years, thanks to our efforts. WR

Tune in Weekly

Amateur Radio Weekly is a weekly satellite program heard Saturdays at 2100 to 2300 (DST) UTC on Spacenet 3, transponder 21, 6.2 wideband audio.

The two-hour program features the *Rain Dialup Service* (Radio Amateur Information Network, 708/299-INFO), *Newsline* and live call-in interview sessions with in-studio guests.

Amateurs with access to a satellite dish are encouraged to carry the program on their local repeaters or persuade their local cable companies to carry it. These listener-supported programs provide a unique service to the amateur community. They are carried on the commercially sponsored Let's Talk Radio Network, now fully owned by amateur Blair Alper, KA9SEQ.

For further information on how you can be supportive of these programs, contact Blair at P.O. Box 1555, Oak Park, IL 60304-0555; 708/383-7448, or contact *Amateur Radio Weekly* Program Director Frank Collins, N6TAF, at P.O. Box 84054, Los Angeles, Ca 90073; 310/824-6991. WR

Product Review

Field strength meter

The police have the polygraph machine. Detectives detect the lies. Amateur Radio operators have the field strength meter. Antenna experimenters learn the truth.

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Different HF mobile antennas could be compared. There will be some real surprises when that is done!

Then, to your own satisfaction, will be the answer to the question: Does the tuner tune the antenna? Try off-resonance antennas without the tuner, read the RF level on the FSM. Put the properly adjusted tuner into the circuit and see what difference it makes.

What difference does grounding or whatever else make? The answer is right here—just the facts.

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The uses are limited only by one's imagination. In checking anything to do with radiated RF, you will find this a useful instrument. Measure the differences using various feedlines, connecting cables, switches, filters, whatever.

For information call IC Engineering at 818/345-1692. To order call 1-800/343-5358. The price is \$119.95 and \$4.50 for shipping and handling. California, add the appropriate taxation.

To obtain XYL approval you should mention that this device will also read the level of radiation possibly leaking from her microwave oven, and this is being purchased to protect her.

While we may have various meters in the transmitters, tuners, in the lines, the field strength meter is the only way to truly know what is happening "out there," where it counts. After months of actual usage, our report is: highly pleased. —"Kurt"

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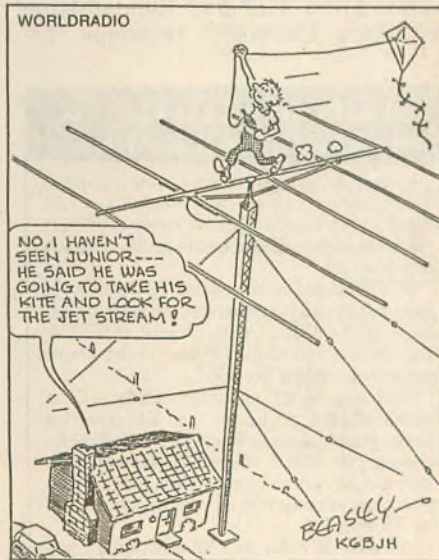
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Paul A. Scipione, AA2AV
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Lenore Jensen, W6NAZ/A6NAZ Extraordinary MARS operator, extraordinary lady

MARS, Amateur Radio and citizens everywhere lost a very fine lady when Mrs. Lenore Jensen, W6NAZ/A6NAZ, passed away on 5 May. A person of tremendous energy right up to the end, Lenore bravely fought off cancer for many years. Her epitaph should read, "One motivated person who cares can make all the difference in the world."

I regret that Lenore did not live to see her extraordinary life story told in my upcoming book on the history of MARS operations during the Vietnam War (*MARS: Calling Back To 'The World' From Vietnam*, Kendall/Hunt Publishing Company, Dubuque, IA,

September 1993, forthcoming). Here are a few excerpts about this wonderful lady:

"Lenore Jensen may be 78 years old, but she exhibits the energy and curiosity of a 20-year-old, also energizing all of those lucky enough to know her. She has a beautiful smile and way of looking at life that comes through, even over the telephone and airwaves. An actress whose life spans the development of both radio and television, Lenore would be an extraordinary lady even without having been one of the top MARS phone patchers during the Vietnam War. I admire her immensely.

"Lenore was born in 1914 and first became licensed in 1939 when she was working as an actress in NBC radio dramas in Chicago. Lenore recalls having to draw schematics by hand as part of the written test. She took an immediate liking to CW, learning the dots and dashes on an old machine called the Instructograph which wound up like a Victrola and played a paper code tape. She upgraded to Extra Class long ago and still enjoys ragchewing on CW.

"Lenore met her first husband, Joe Conn, W2SMC, at NBC where he was an audio engineer. They moved to California where Lenore continued as a television as well as radio actress, also

doing commercials and voice-overs. She and Joe were both active on the ham bands. During the Cold War years of the late 1950s, American GIs, sailors, airmen and Marines were sent to the far corners of the world, to sites so remote that phone patches were the only way they could enjoy voice contact with loved ones back home. Lenore learned about this when she had a CW QSO one day with an airman who was assigned to a radar site up on Baffin Island, hundreds of miles above the Arctic Circle. When she found out that his wife lived nearby, they switched to SSB and Lenore ran the phone patch for him. Lenore and Joe had fallen into the phone patch business years before they became part of MARS.

"In 1961 Lenore's tireless phone patch work came to the attention of Ralph Edwards of NBC, who decided to feature her on his weekly *This Is Your Life* television show. Lenore was tricked into going down to the studio and suddenly found herself being honored on nationwide television. Many of her friends were flown in from around the country, who helped tell the story of Lenore. At the end of the show, host Ralph Edwards had Lenore's special gift wheeled out on a big cart—a complete Collins S-line ham station, worth thousands of dollars, even then.

"It did not take long for Lenore and Joe to put her new Collins gear to good use. In August, 1964, North Vietnamese boats attacked several American destroyers in the Tonkin Gulf and President Lyndon Johnson had no trouble getting Congress to pass the Gulf of Tonkin Resolution that gave LBJ emergency war powers. Between the beginning and end of 1965, the number of American service men (and women) in RVN (the Republic of Vietnam or South Vietnam) increased from 23,310 to more than 184,000. These troops, mostly young, were more than 8,000 miles away from home, so far and so isolated that they referred to 'Nam' vs. 'The World.' There was no easy way for communicating with loved ones back home via voice contact.

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Let's get Amateur Radio growing again!

band, Robert Jensen, W6VGQ (now a Silent Key as well). 'We signed up as Army MARS operators, got our MARS call signs and net and frequency information, and then really gave the Collins gear a work-out running phone patches on HF,' Lenore smiled. 'We became real regulars on the Vietnam nets, so much so that Bob and I became almost like surrogate parents to many of the young MARS operators over there. We even sent them cookies.'

"Between early 1966 and late 1972, Lenore and her husband completed nearly 40,000 phone patches for our troops in Vietnam. Maybe even some of my patches home were handled by Lenore. She and Bob worked tirelessly, seven days a week, for nearly seven

years running phone patches with their own equipment, never asking for or making a dime from this service. Oftentimes Bob would arrive home from work at NBC where he was an audio engineer and relieve Lenore who had already spent hours running Nam phone patches (it was afternoon in California but early in the AM in Vietnam). Bob would then run patches while Lenore made supper. When it was time to eat supper together, they would call '1-2' over the air and that was a cue to Bob Burns, N6ZH, another nearby MARS operator, to take the net over for a while. Later on, the dynamic duo would take over again, running patches until after midnight California time. When propagation was good (Lenore and Bob

benefitted from their location just a few miles from the West Coast), they could run nearly 100 phone patches in just a single day. Another 'secret weapon' they had was an experienced Bell Telephone operator who helped them by dialing out the next few parents, wives and girlfriends and by providing instructions to loved ones on how to say 'over' after each portion of the conversation (phone patches are really a series of one-way communications). 'We were a real team,' Lenore told me proudly. 'We really knew how to run patches from Nam. We did all that we could.' "

Lenore Jensen, W6NAZ/A6NAZ, *did* do all that she could. How many of us can say that? WR

True north

BART PAINE, K7CC

You say that you can find the direction north—no problem? Just use a compass. Well, of course, you know that the magnetic north pole is not at the true North Pole.

No difference, you say? Well, the difference is anywhere from a couple of degrees to around 30 degrees. What is 20 or 30 degrees at a distance, say, from Tucson to England? Whoops—you can miss the whole country! Of course, a three-element beam is quite broad, but let us try for accuracy. A beam is not pointed in the direction shown on a flag map, to a particular country. Most times it's over the pole, but in any event you must know where north is. Oh, east, west and south are easy when you find north.

Round a stick straight into the ground, height not important, let us say a couple of feet or so. Note the exact time of day, perhaps 1:00 p.m., 1300 hours, if you please. Note exactly where the end of the shadow of the sun from the stick meets the ground. Make an "X" on the ground. Come back in exactly one hour, that is 2:00 p.m. or 1400 hours. Note where the shadow of the stick hits the ground and, again make another "X." You will find that the shadow has moved clockwise a bit and is a little bit longer than the first shadow that the stick made at 1300 hours.

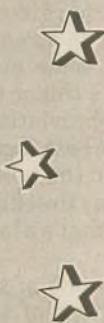
Now for the solution. Measure the distance between the two "X" points, and at the half-way point place a "T" square or a carpenter's square. The long arm will point to true north.

In case you get confused, north is usually in the opposite direction from the sun. —*Border Amateur Radio Team*



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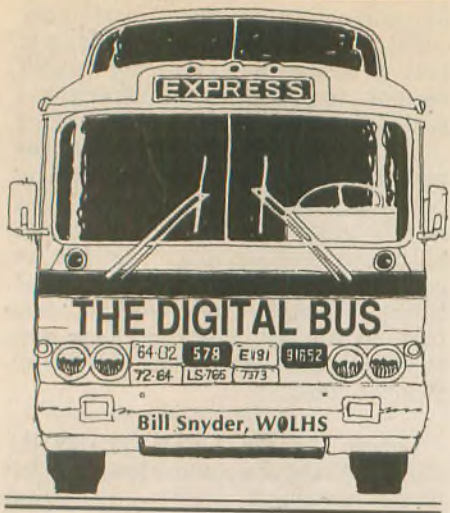
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Packet reliability

Recently I have been getting word, via both the packet and land line, that a lot of packet messages never reach me. Jim Romelfanger, K9ZZ, from Baraboo, Wisconsin (the great Circus World Museum city), called the other night and said, "I've sent you four packet messages recently and haven't heard a word from you." Jim and I have been packeting back and forth for a couple years and this information came to me as a shock. I thought we had a good and highly reliable path between us, but I guess I was wrong.

The same thing happened when I got a packet from K0BJ, Bruce Frahm, the DXpeditioner who lives in Colby, Kansas. Bruce told me he had sent me four messages with no answer. I make it a point to answer every message using the SR command which puts a "Re:" followed by the same message title that it is answering. Another case of lost packet messages.

Another friend, Bob Lawrence, W7VFR, of Pasco, Washington, and I have been trading packets for years, thus my daily message from Bob is a good indicator of system efficiency. I used to get his message in hours, but now it takes days and most of the time his packet mail to me arrives in out-of-sequence batches. The US postal service does better.

I also get duplicate and triplicate message deliveries to me in my BBS. I have received as many as four copies of the same message and it is always

interesting to examine the routings. Here's the travels of a message I received from Pete Hoover, W6ZH, in Pasadena, California. The basic message went from N6YN to W0XK in Kansas City. There one copy went bouncing through stations in the states of CO, CO, CO, WY, WY, WY, WY, SD, ND, ND and then to me. The duplicate copy went from W0XK to IL, and then to IL, IA, IA, IA, MD, LA, MN, MN and finally to me. The copy that went through Maryland and Louisiana won the race by one day.

I can't account for cause of the duplication of the above mentioned message, but I have thought many times that there should be some leadership by the ARRL in traffic routing. The forwarding system is way too random for its own good. Back in 1948 I spent considerable time in the Region 10 CW National Traffic System. In that system we had route managers to help steer messages from region to region. I felt the NTS had some system to it all, but packet forwarding just seems too random in nature.

When I look at my BBS forwarding tables, they resemble a bowl of alphabet soup. They are a mess. Part of it is caused by my lazy nature; I don't like to even think of starting over to streamline those files. I'm afraid some message won't get passed on if I tinker too much, so I just move the abbreviations to where they seem to work best. I still have individual call signs in the tables that have been there since my first days on packet, and, believe me, that's a long time ago.

Mike Baugh, W8AKF, is one of the industrial strength members of the packet forwarding system. Mike runs a multi-channel BBS station in the Santa Barbara, California area. It's a real datahub with both HF and VHF gateways. When Mike sends a message to me it goes through four stations and it flies! In our discussions by packet, Mike has offered to feed me information of what is happening in the forwarding system. Here is Mike's first effort:

"1. FCC has issued a Notice of Proposed Rule Making (NPRM) for our 'rule' making for automatic forwarding. This will also enact some other provisions which will make traffic flow

a lot easier, and it will put the USA in the 20th century with the rest of the world!

"2. We need to educate users to keep the text of their messages to six lines maximum for guaranteed delivery—this is due to retry problems at 300 baud.

"3. We need to solicit ideas on how to cut down on the very burdensome work load placed on HF forwarding by the length of header lines on personal messages.

"4. The LU satellite is now up and operating very well. It is now augmenting domestic and NTS traffic flow, and it is fully integrated into HF forwarding. It is no longer necessary to request satellite forwarding."

I guess I'm probably guilty of more long messages than most users. I like to see messages spaced out in paragraphs and not all jammed together with the old-fashioned X taking the place of a period. (Yes, I got a message with Xs in it this week!) I like to use both upper and lower case letters, too. I realize there are a number of computers on packet use that only deal in upper case letters, and I am not faulting them, but I think we should be using the state of the art and not the old-fashioned Western Union 10-word telegram style for our traffic.

Another reason for my long messages is I've been putting the header from the incoming message in my return when requested. Some of those incoming headers are quite lengthy; a 10-word message can have a 250-word header.

Early day stuff

Pete Hoover, W6ZH (formerly W6APW, W2OBR, and W1ZDG), sent me photocopied articles taken from early RTTY Journal magazines dated 1953. The subject was the early days of HF RTTY. Pete now holds his father's call, W6ZH (Herbert Hoover, Jr.), and both Pete (then W2OBR) and Herb were on RTTY when the FCC allowed first



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FSK transmissions on the HF bands.

One of the Journal clips had copy taken from an RTTY QSO exchange between the late Merrill Swan, W6AEE, and Pete's dad, W6ZH. Here's the conversation:

"... OK MERRILL AND MANY TNX. SORRI THAT THE POWER HERE WAS NOT

VERY GOOD BUT WAS ONLY USING THE BUFFER TUBE, A 6AC7 IN THE OUTPUT,

AND DON'T EXPECT THAT I WAS RADIATING MORE THAN A WATT OR TWO. WHAT

DID IT LOOK LIKE WHEN THE QRM WAS OFF? W6AEE DE W6ZH."

"... SOLID HERB AND THE SIGNAL WAS OK. RIGHT SIDE UP!!! AND THE

SHIFT LOOKED FINE HERE. I AM SURE THAT WILL BE FINE BUSINESS WHEN

THERE IS AN AMPLIFIER ON IT AS IT WAS QUITE STABLE. W6ZH DE W6AEE."

The modern RTTY operator today doesn't have the problems we had in "those good old days." In 1953 stability was a big problem; both the receivers and transmitting equipment would drift. The 850-cycle shift was used in those days for FSK. When you were receiving RTTY signals, you had to have your hand on the tuning dial and an eye on the scope all the time, or the copy would garble. If you left the RX power on all the time it helped, but it still could be somewhat shaky.

Today I can turn on my equipment, tune in a signal and it stays put. We do live in great times. No tuning on the basic rig, just spin the dial to the frequency you want and forget it.

Another thing we had to do in those early days was identify our stations by CW. This was in addition to the call

sign idents typed in the from the keyboard. I guess the CW bit was required by the FCC so the monitoring stations could police the bands without having to be able to decode the FSK signals with machines. CW identification did help when a station was running upside-down or on the wrong baud rate. It was, however, a long time before the FCC abandoned the requirement.

Ralph Krause, W7IFK, of Stanfield, Oregon, furnished me with copies of his correspondence with W2BFD, the supplier of old Teletype machines in the early days of ham radio RTTY. It is fascinating reading and I'll try to share some of it with the readers of this column in the future. If any of you other old-timers have any comments or historical information on W2BFD and his efforts in supplying TTY machines to the ham population, I would like to have copies. I bought my first machine, a well-used Model 12, from John in 1952. It came from Associated Press at the Chilicothe, Missouri *Constitution Tribune* paper. What great memories I have of my days with that old clonker!

Eavesdroppings

GOT A FIST FULL OF COPY ON YOU, BUT DIDN'T GET YOUR CALL SIGN AS I DON'T WORK TEN METERS MUCH . . . THEY DON'T MAKE MOVIES ANYMORE LIKE HAROLD LLOYD DID IN 1923 . . . GOT A NEW LASER PRIINTER AND SCANNER BUT THINK MY KEYBOARD NEEDS A SPELL CHECKIING THING WORSE THAN ANYTHIING . . . HE SENDS CW LIKE HE WAS A JAZZ MUSICIAN, IT'S HARD TO RECOGNIZE THE TUNE . . . I WISH I COULD GET THE HF BOYS IN A SACK LIKE A BUNCH OF LITTLE PIGS AND NOT LET THEM OUT UNTIL THEY WORK OUT A GOOD SYSTEM FOR FOR-


WARDING PACKET MESSAGES . . . I SAW HER IN A LOCAL MUSEUM AND SHE LOOKED LIKE SHE BELONGED THERE PERMANENTLY . . . I WISH IT WOULD QUIT RAINING AS MY LAWN GROWS LIKE JACK-AND-THE-BEANSTALK . . . LAST WEEK WE HAD TWO DAYS OF NICE ANTENNA ERECTING WEATHER, BUT I WAS TOO LAZY TO DO IT . . . I BOUGHT A SCANNER FOR MY COMPUTER AND COMPLETELY FILLED MY HARD DRIVE BEFORE I LEARNED HOW TO DO IT RIGHT . . . I DON'T WATCH BASEBALL ON TV, BASEBALL IS FOR KIDS, NOT GROWN-UPS . . . MY NEW COMPUTER HAS A 340 MEG HARD DISK AND RIGHT NOW I ONLY HAVE 9 MEGS FREE, SO I THINK I BETTER QUIT ACCESSING BULLETIN BOARDS JUST FOR THE FUN OF IT.

Thanks to WB6CRM, W0HAH, W7VFR and a batch of others for help with this column. If you wish to communicate with me, my mail address is: Bill Snyder, W0LHS, 1514 South 12th Street, Fargo, ND 58103. My packet address is W0LHS@W0LHS.#SEND. ND.USA.NA. 73 and DIT DIT. WR

Teacher: "Name some of Thomas Edison's contributions to science."


Student: "If it weren't for Edison, we'd all be watching television by candlelight."

—*Contra Costa Communications*
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County Hunter

Ace Jansen, N3AHA

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During my senior year of high school, I daydreamed about not joining my peers in college the following year but rather becoming a truck driver and seeing the country ... or ... I had a fantasy that *National Geographic* would sponsor me to visit every county in the US, take pictures and write a book on the history and beauty of America's counties. Part of the daydream involved being able to make radio contact from all 3,076 counties in one year and getting paid to do it. Well, I never became a truck driver, I never talked to *National Geographic*, and to date, I haven't been paid to play radio. But wouldn't that be nice? Wouldn't it be nice if work didn't have to interfere with our hobby?

Truckers who hunt counties

There are four truck drivers we hear often making radio contacts on 14.336 MHz, the County Hunter's Net: Tim McLaughlin, N9DEH; Dennis Hall,

KK7X; Ralph Wiley, WB4FFV; and Randy Davis, N8ELQ. Tim, 52, has been a trucker and ham for 10 years and before that he was a quality control supervisor. Dennis, 46, started driving a truck in 1970 and began cross-country driving in 1989. He's been a ham since 1977 and was the ARRL section manager for Idaho. Prior to starting to drive cross-country he owned a quick printing business. Ralph, 55, has been an "over the road" trucker for 10 years and a ham for 17 years. Prior to driving a truck, Ralph spent three years as a school bus foreman and 20 years with the US Air Force. His last seven years of the military were spent supporting *Air Force One*, the president's plane. Randy, 39, started to drive over the road in 1978 and became a ham in 1982. He also had a short stint in the Marine Corps. Randy stopped driving in January 1991, after flipping his truck in a snowstorm in Iowa.

On the road again

The law states that you may not "drive" more than 10 hours in a 24-hour period and no more than 70 hours in eight days. Randy said most drivers driving long distances will drive for 15 to 20 hours a day because the law doesn't factor traffic, weather, construction detours, etc. Despite all that, each of these guys spend a lot of time on the road: Tim, 12 hours; Dennis, 10 hours and 420 miles per day, seven days a week; Ralph, 10 hours and 600 miles per day; and Randy, 12-16 hours per day. They spend many days away from home and many miles on the road in a year: Tim, 310 days and 150,000 miles; Dennis, 325 days

and 130,000 miles; Ralph, 330 days and 140,000 miles; and Randy, 341 days and over 100,000 miles prior to his accident.

One might expect that this amount of time would take its toll on a trucker's family life. Tim has had one divorce. Dennis' wife gets pretty lonely at times, but she has a full-time job, rides her horses, and raises dogs. Ralph says it makes his wife more independent, which he feels is good. He says they have to plan quite a bit in advance. Although Randy is on his third marriage, he doesn't blame it all on driving. He admits it takes a special person to stay at home and trust the person who's gone. Ralph said it's been tough on him and his wife since his accident, and they had to get to know each other again. He's had to get to know his kids, who grew up while he was gone.

But what about the truckers themselves? Driving a truck for long distances can be very lonely. How does ham radio help them cope? Tim says ham radio and giving county contacts helps make the time go faster. Dennis says ham radio does a great job of fighting the boredom of driving a truck all day. It helps fill in those times when he gets lonely, in between phone calls home. Ham radio has permitted him to report accidents and exchange messages with home. Ralph says ham radio helps him concentrate and he looks forward to meeting people he talks to on the radio. He said the County Hunter Net has been very instrumental in getting help to accident scenes on many occasions and without a doubt saved the life of a young mother and her daughter in Montana several years ago. Randy enjoyed meeting friends on the County Hunters Net and talking about things not related to ham radio or trucking. It also offered his wife the opportunity to listen at home and find where Randy was.

Does CB help ham radio truckers? Each trucker admitted to using CB but said the language is not suitable for sensitive ears and they usually have it turned off until they need it. They use Citizens Band mostly for local directions, road and weather conditions. Randy said driving a truck without CB is like not having a telephone in your house just because you have a ham radio. He said it's difficult getting local directions on 2M, hardly anyone answers a call for help, but 95 percent of the time he gets a response on CB.

After so many hours on the road, there must be some interesting incidents. Randy shared this one. While driving in the left lane, he saw traffic slowing and signaled to the flatbed

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driver he had just passed. The flatbed driver gave the "okay" for him to pull over. As soon as he got in the right lane, the truck in front of him slammed on his brakes. Randy avoided hitting the truck in front of him by swerving partially out to the left lane. The truck driver behind him had reached down to pick something off his floor and didn't notice traffic had stopped. Traveling at 20 mph, the impact caused a 10-ton coil of steel to roll forward off the flatbed, onto the cab (crushing it to the seat back), and onto the ground. The impact threw Randy into the window and against the steering wheel. Although Randy wasn't hurt, he was stunned and it took him a few minutes to regather his bearings. The other truck's cab was on fire and no one was helping the driver. Randy ran to the cab, broke out what was left of the window and helped the driver through the window, minutes before there was nothing left of the cab. The driver thanked Randy and shook his hand, then walked over and talked to other truck drivers who had stopped. The truckdriver returned to Randy and asked if he was the driver of the truck he hit. Randy said yes and not to worry about it, that there wasn't much damage. With that the truckdriver clenched his fist and popped Randy in the face. Being a hero has its rewards!

Are the roads safe? Tim says roads are safe but he always has to be alert. Dennis says the "four-wheelers" have no understanding of what it takes to maneuver a big rig. The large gaps between the truck and the vehicle in front is for a reason—it takes 1½ football fields to bring an 80,000 lb. truck to a stop. Ralph says some roads are not engineered for the amount of traffic on them. He thinks we need better driver education, respect for traffic laws, and traffic law enforcement. Randy says the roads are more safe than the trucks. He warns a would-be trucker to get an undercarriage system to soften most bumps.

County hunter awards

These truckers are also county hunters and county givers, and have amassed a bunch of county hunter awards.

Tim has achieved USA-CA #498, second-time award #66, third-time

award #31, fourth-time award #19, and the Master County Hunter ("Bingo") award. He was selected as the SSB mobiler of the year for 1988, 1989, and 1990 and County Hunter of the Year in 1988. He has operated from 48 states and 1,900 counties and estimates he makes 20,000 radio contacts a year. He has given seven last counties for #3076 and over 400 last counties for the last in a state. He sponsors his own awards, "Big Rig" and "Big T."

Dennis has worked all 3,076 counties but has not yet applied for USA-CA. He needs a few more contacts to achieve the Master County Hunter award. He's given out over 160 last counties for the state and two last counties for all counties. He has run over 650 different counties and made over 100,000 contacts. He said one time he came home and found a stack of envelopes over three feet tall, each envelope containing an average of five Mobile Reply Cards (MRCs) plus a 2 in. stack of MRCs from the Mobile QSL Bureau each month.

Ralph has not yet achieved working all counties but has given out over 200 last-county confirmations, three for #3076. He has run counties in 40 states and averages about 700 counties a year. He guesses he makes about 20,000 radio contacts and signs 1,800-2,400 MRCs a year.

Randy has achieved USA-CA #762 and N9DEH's Big Rig award #66. He has given out over 30 last-county awards. His favorite award was issued by KI6YX, 3865 Outstanding Mobile Award #4 for 1990-1991. He has operated from 43 states and 1,500

counties. He says it would take a week to sign MRCs for all the contacts he made in a month. One time he received a stack over eight inches high.

What about you truckers out there? What does it take to motivate you to become a county hunter and give some county contacts on the County Hunter's Net? All of these truckers thoroughly enjoy county hunting because to each new county they drive into, they're rare DX and someone wants to talk to them. These guys use a small mobile radio and usually Hustler antennas, although Ralph prefers to wind his own coil traps. Both Dennis and Ralph operate CW while in motion, quite a feat in an 18-wheeler.

So, now you know a little about our famous county hunters who drive trucks over the road. Driving an 18-wheeler isn't all fun and games and definitely is lonely and hard on families. But these guys have enriched their job by adding radio and county hunting to their trips and enriched our logs by adding many county contacts for which we're grateful. It's truly a win-win arrangement.

Next time you get a chance, check out the County Hunter's Net on 14.336 or 14.0566 MHz. Until September, happy hunting. WR

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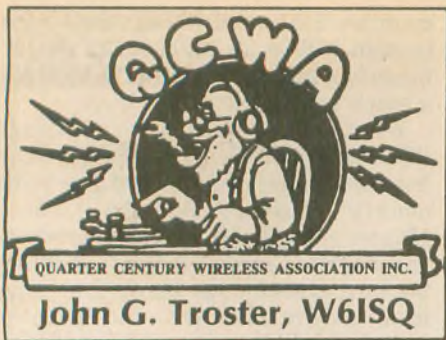
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Did you ever wonder what went on in a QCWA board of directors meeting? Well, shhhhhh, if you won't tell anyone I'll leak a secret to ya. Remember now. This is just between us and you won't tell anyone!

The board meeting

The meeting started like this: President Dannals, W2HD, opened his briefcase, took out his pistol belt with the pearl handled pistols and strapped it on. He is auditioning for a cowboy role in a western movie and needs the proper props to psych himself up for the part.

Harry Dannals, W2HD: "Howdy podners. The QCWA board of podners, ahhh, directors meetin' will come unto order . . . now! Take over, Lew."

Lew McCoy, W1ICP: "All right, let's break into our "think tank" teams . . . the new stationery design group over there . . . the QCWA cookbook folks in the hall . . . bumper sticker group stick here. I'll be over there designin' dipoles, but if anybody don't have nothin' to do, I'll challenge 'em to 'cribbage. Let me have your reports after the third coffee break before lunch . . . Move out."

W2HD: "Podners, we expect you to make the most profound changes in QCWA history. Who's goin' to work on the 90-year pin?"

"Big John," K8LBZ: "I been itchin' to challenge 'Li'l Bill,' W6ZM, for the

leg wrestlin', championship of the entire QCW Gosh Darn A. Winner goes to the world event."

"Li'l Bill" Stevens, W6ZM: "You're on, 'Big John.' I'm as slippery as a buttered banana, an' I got my diamond spurs strapped on ma knees."

book and constitution and bylaws. Big John, please don't hurt Li'l Bill too bad."

And in the midst of all this physical exertion, Walt Brink, W3WPY, and I calmly sipped our Chinese green tea, munched our crumpets and pondered



Leland Smith, W5KL, and Jan Haytor examine copies of membership certificates at QCWA HQ.

"Big John": "And your knees is up to my ankles; so I don't take that as no threat. On your back Li'l Bill and prepare to defend yourself. It's eight out of 15 falls."

Leland Smith, W5KL: "All right, you all spread out now and gimme room. I'm gonna break the QCWA push-up record. I'm gonna need lotsa air."

Ethel Smith, K4LMB: "What's the old push-up record, Leland?"

Leland: "Eight."

Ethel: "Okay, Leland, and while you're doing that I think I'll just rewrite the QCWA director's hand-

Renaissance literature, music, art, history and philosophy and how we might incorporate the lost treasures and emotions of that exciting age into present day QCWA activities.

Gee, I'd better stop. I've already leaked too much but I wanted you readers to understand that these board meetings are not all that easy. Lotsa sweat and strain go into our deliberations.

Well, you understand, of course, folks, that all the above is pure fabrication. I just made it up. QCWA board meetings are nothing like that at all. Please, Harry, put them shootin' irons down.

Headquarters

One nice thing about our board meetings in Eugene, Oregon (got that state correcto this time!), was that we had a chance to get over to the QCWA headquarters presided over by General Manager Jim Walsh, W7LVN, and his number-one top flight assistant, Jan Haytor.

"Howdy podners. Which way did them li'l doogies gallop?"

"Sheath them shootin' irons, Harry."

The QCWA file drawers contain copies of all the membership certificates before the advent of computers. I asked Leland, W5KL, and

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Jan to look up my certificate while I took a picture. Guess what? It wasn't there! "I'm not a member," I thought. "Here under false pretenses." Not to worry. Jan found my original payment in another file.

Everything that goes on with the QCWA happens at the Eugene office. When you call headquarters you are answered by Jim or Jan. They operate from behind banks of computers. And rest assured that if you are a QCWA member, you are in those computers! T-shirts and pins are stored in racks. It is a very smooth operation and I really don't see how they do so much for so many with such calm.

Hello Yonkers

Arch Doty, K8CFU, and I were sitting there in the headquarters office playing "where-did-you live?" and we were amazed to discover that we were born the same year, in the same hospital, St. John's on North Broad-



Jim Walsh, W7LVN, QCWA general manager.

way in Yonkers, New York. I might add, it was a very good year. Arch made it on 28 March and I on 10 November (the US Marine Corps birthday, you surely know). You can see he is a whole lot older than I!

Well, Arch is so excited about this coincidence that he has offered to write a "welcome to QCWA" letter to all Yonkers residents who join QCWA between his birthday and mine in 1993. This may be the biggest thing to happen in Yonkers since local boy Major Armstrong invented FM or Dolly Levy arranged things. Let's don't get "lost in Yonkers." Rather, let's hear it for QCWA from Yonkers! (Ask Arch,

"What are Yonkers?") We'll report results here.

"Howdy podners. Which one o' you scalliwags dealt them five aces?"

Letters

A while back I had a letter from old friend Art Monsees, W4BK, now of Clearwater, Florida, who reminded me that we had breakfast in Honolulu at an ARRL convention in the mid-1960s! What a memory! I expect to see Art in October at the QCWA St. Petersburg National Convention.

"Adios, podner. Gotta ride off into the sunset."

We've been a little silly this month folks, but we need to have some fun now and then. So, I told you the untrue, adulterated, fictional story of the board of directors. Actually I take my QCWA cap off to the board. They are a dedicated, hard-working group. I am proud to be one of them. I told them I was going to tease them a bit, but I didn't say how.

However, just for your information let me tell you Harry runs a very tight meeting. We speak only when spoken to, say what we have to say and then be quiet. Thanks, Harry. Next month we'll be serious again.

Winners

Oh, confidentially, you might be interested to know that Harry won an "extra" part as an assistant villain in the western film. He'll wear a black hat. It will be filmed in Italy and shown in Asia. Li'l Bill defeated Big John in eight straight falls in the leg wrestling event. The committees will continue deliberation.

Leland Smith set a new QCWA push-up record. The old record, you recall, was eight. Leland did 253. Well, what did ya expect from a Marine, nine? Walt, W3WPY, insisted I read James Michener's *Chesapeake* as being good history of the area where Walt lives. I must like it because I've read the first page four times. It gets better every time, so maybe I'll turn the page next time.

Happy Glorious Fourth!

"Anybody seen Harry?"

"He's over yonder in the Sunset Saloon. Horse and all."

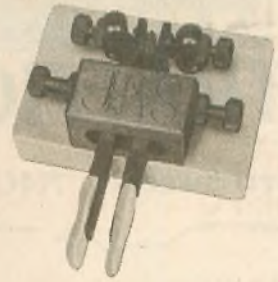
Until then, don't just ponder. Do something new. 73 and 25! Jack, W6ISQ. WR

Fact: "fasten" and "loosen" have opposite meanings.

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QSK

If you begin transmitting traffic to the receive station by stating that you have QSK (QSK BT NR 5 R N4GHI...), you have announced that you have full break-in. What does that mean to the receive station? Rather than waiting until the end of the message to ask, "WA, WB, or BN," you can send a couple (two or three) dits anytime and the other operator should stop sending. You then give a couple of letters indicating where you want him to start again. Don't use it to break in midway in the message to ask, "WA" somewhere in the beginning; that's a fill and should wait until the end of the message. If you are unsure whether the transmit station has QSK, try a couple of dits. If he continues to send, figure he does not. Don't keep trying to break the transmit station—you will only need more information at the end of the message.

SSB

Do you read the text word by word, or in phrases? Word-by-word can get distorted. Short phrases followed by a pause gives some context and makes copying easier.

Packet

Since most PBBSs in Virginia do not send a monthly NTS traffic activity report, my opinions are from my own packet activity. By looking at the routing accompanying traffic arriving here (north Virginia), it would appear that some locations enjoy almost a straight path to each other and the traffic moves very quickly (one day). On the other hand, some traffic seems

to wander and takes six or seven days. It does not seem to matter as much how many stations are in the middle as who the stations are. For instance, traffic trying to pass through Richmond, VA, can sit for days until a traffic handler happens to see it and removes it for a net. I received one message (sent from Idaho to me), which arrived in one day after passing through nine middle stations. It would be helpful if PBBSs had a policy on NTS traffic which included sending a monthly traffic report to the STM and not taking NTS traffic unless they have an outlet (local or through). I would enjoy getting correspondence from any PBBS SYSOPs who handle NTS traffic. We should all be better informed on our packet mode.

Thanks to WA2SPL (on the Vermont/Canada border), for his recent comments about his PBBS: "My records for the last eight years show that NTS has held steady at 8-10 percent of the total mail handled by the PBBS monthly. This is probably a fair percentage for most systems (regardless of what digital modes they use). The exception might be the TCC reps who use AMTOR mailboxes to move their traffic. That type of traffic has increased but not to the point where I think it is draining traffic off the more traditional SSB/CW nets."

Books

Yes, I'm still harping on listing books on nets. All of the responses which I have received have agreed that the 'old' way is more effective and efficient. Thus, I was surprised to receive a letter saying that while the writer agreed with me on listing books on a net, he also feels that "it's a done deal."

Do we in the field then have no input into traffic handling? If most of us in the field don't like a change made at headquarters, are we stuck with it? I sure hope not. I think the major problem is complacency. Rather than try and change things, we often just grumble. What's the answer?

Your first line of action should be to speak with your STM. Let him know about any problems. Give him your ideas. If you think some procedure would be of use to all traffic handlers,

let Richard Palm know. He's the manager of Field Services at ARRL in Newington. He may refer you elsewhere (a committee which meets once a year), but at least you will have the satisfaction that you tried to improve something that was important to you.

Correction

Harold Gilbertson, W5RB, wrote to say that while he enjoyed reading about himself in the May issue, two things needed clarification. He was NCS on RN5 on Saturday instead of Wednesday and, he says, "My age is 10 years too old. I'll be 83 years old in August 1993. No harm done, but 83 is old enough!"

Several years ago, arthritis put him out of traffic handling and he gave his equipment away. He occasionally checks in to a 2M net. Recently, he ordered an MTR 5W transceiver for 40M and m. back on CW in the future. He's now in a nursing home. Perhaps that's why he's going QRP. Why not drop him a message: 1201 S. Caldwell Dr., Midwest City, OK 73110. Everyone likes to get mail.

ARES/NTS

Our SKYWARN net manager, KC4OCG, here in Virginia, recently ran a test drill. The goals of this drill were to give people practice handling traffic and to see if the warning area had repeater coverage. The area covered includes: WV (eastern panhandle), VA (northern and central), MD (a large portion), and Washington DC. Five repeaters were used and of 57 possible Amateur Radio locations requested to participate, 48 checked in with 48 messages passed (100 percent). Packet was used for information that didn't have time value (30 minutes to one hour). The test showed that Amateur Radio could transmit an extremely complex message to all the EOCs in the warning area. NTS formal traffic format was used for practice, giving each county and city a separate message number. The value of this test is twofold: A database with a list of every county and major city in the warning area (addresses, phone numbers, emergency managers, emergency coordinators, and NTS operators) was established and distributed. Confidence in the system was gained by seeing how well the test went. This is the kind of preplanning that each ARES EC needs to establish.

Section traffic managers

Section traffic managers have been responding to my letter for information about traffic activity in their area. I decided to gather my database of

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STMs from the section managers' reports in *QST*. We have 50 states but almost 70 sections. For instance, aside from the Virgin Islands and Puerto Rico each having a section, California has nine sections, Texas has three, and several states have two. One state listed a packet STM. One state listed an assistant STM. Eighteen section managers didn't list their STMs. In these cases, I sent the letter to the SM requesting them to forward it on if they have an STM. Using my 1990 *Callbook*, I found all but two addresses. Six letters have been returned indicating the addressees moved. Since Canada is part of the NTS, I will endeavor to send the same letter of inquiry to their STMs. The replies so far have been as good as expected. I know you will enjoy reading about what's happening in the following traffic columns.

Traffic news

Tom Cody, WE2G, STM of eastern New York reports that, "CW, SSB and digital modes are all used. We have three very successful VHF nets and our CW and SSB nets are all multi-section nets. There are three CW and two SSB nets. I have seen much traffic on my local BBS which does forwarding via HF. I do not receive reports from SYSOPs so I do not know exactly how much traffic is passed on packet.

"We have seen a very nice influx of younger operators who have become active traffic handlers. I feel that they will be the future of the NTS and we have to keep them interested. We need more stations who are willing to act as NCS and liaison to the HF nets. We have to stress accuracy when handling traffic. There seems to be an upswing in activity in VHF nets. This is true of all three. We are split on HF nets. Some have more activity and some less.

"We have a traffic handlers picnic which is a statewide event. It is held in the WNY section. We have no events in ENY.

"The current system, while not perfect, is really not bad. We have a very dedicated group of people who do a good job of moving traffic. Although some say that the system is antiquated, I have seen more problems with digital traffic (duplicates, late messages) than on CW, and SSB. For example, I received a group of 10 messages forwarded by APLINK, and two nights later, another operator brought the same messages into a VHF net. As the original messages were 'killed,' I do not know where they were duplicated, but I know it wasn't on phone or CW. The local and section nets also provide fellowship for many

people, as they have frequent 'meetings' with friends on our daily nets."

Tom submits his monthly reports to ARRL via the mail. He currently uses a C64 *WordWriter 6* and internal software on his Smith Corona word processor to prepare them but is close to changing to IBM compatible hard/software. From Tom's letter, it appears he is sure on top of things in his section and is enjoying his assignment.

Dan, W7GB, STM of eastern Washington writes, "When Washington was split into two ARRL sections, Phil, KD7ME (WWA), felt it was best for him to continue keeping the net totals for both sections and I agreed. I can comment on the CW nets because I'm active on the Washington Section Net (WSN), Oregon Section Net (OSN), and the Idaho-Montana Net (IMN). Over the past few years I've seen the exact opposite of what you've seen (in Virginia). These three CW nets are very healthy indeed. Check-ins are up as is traffic. When I was net recorder for WSN during '91-'92, I saw a 25 percent increase in traffic and a similar increase in QNI. Right now we're holding steady. The CW nets are all very well run and in excellent shape.

"I'm the manager of the main state phone traffic net, The Washington Amateur Radio Traffic System (WARTS) and there too I see increased QNI, around 3,000—roughly 100 per night. (WOW!) Our traffic

total is usually 150-250 per month, even at Christmas. In regards to Christmas traffic, I saw a 46 percent jump in December versus November traffic on WARTS but only a 15 percent increase on WSN. Figure that one out!

"I check two packet BBSs every morning and the amount of formal traffic I see can be best described as minuscule. There is a lot of new 'ALLUSA' every day but I don't count that as traffic. I noticed the big APLINK traffic total in *QST* earlier this year. I decided to see for myself and checked the AA7HS APLINK board. Over a two-week period I checked every morning and saw lots of ALLUSA but only four pieces of real traffic. From my perspective it doesn't look like packet is wired into the traffic scene in any big way."

Dan's letter was sure filled with information. I feel like I could visit EWA and jump right into traffic handling.

Richard Regent, K9GDF, SM of Wisconsin, writes that he is forwarding my letter on to the STM of WI. I wonder how many of you remember all the birthday traffic Richard used to send? I queried him as to why he stopped. He said that he hasn't been sending birthday messages for a few years because of other activities. He used to send 1,500 each year which were gathered over the years on slips of paper. No computer lists. He mentioned that I was the first to inquire as to why he stopped sending them. My only regret is that I didn't think to ask sooner. His birthday is around 8 June. Happy belated birthday, Rich.

What's in a name?

An ARL Sixty Seven recently passed across my key. It said that there was no active ham in the town of Unalaska. It made me wonder if the town folk there were trying to make a point. An ARL Sixty Easter went to Trumansburg, NY. I know there is a Clinton, AK. Does anyone know if there is a Nixonville, Carter Junction, Ford Town, Johnson City, or Reaganburg anywhere? WR

Pacific Division nominations

Nominations are now being accepted for the Pacific Division Amateur of the Year for 1992.

For a copy of the nomination guidelines, please send an SASE to Pacific Division Director Charles Mc Connell, W6DPD, 1658 W. Mesa Ave., Fresno, CA 93711-1944. Nominations are due by 1 September 1993. WR



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A prediction

The time is fast approaching when the untrained or non-certified emergency services volunteer will simply not be used. These volunteers may show up with a wide array of equipment and be eager to help, yet they will not be used.

You may first express outrage or upset. Later you may have the opportunity to share your opinion with a public agency official or with an experienced volunteer coordinator. Some of what you'll hear is a growing concern over liability.

Various state agencies are often tasked by law with being responsible for search and rescue or other emergency events. Because we live in a political environment and an arena with increased accountability for public money, these agencies are demanding quality. Rather than have a couple hundred untrained volunteers, the agency will be looking toward an organized group that can accomplish the task efficiently and with no political backlash.

Political backlash is when an untrained volunteer does something fool-

ish and gets seriously injured. Backlash is when public funds are misused. The result is that the agency honchos get into hot water or look foolish. They don't like it.

The last thing an agency leader wants is to answer media questions when a simple SAR mission goes wrong. The politically correct agency chief wants to display the SAR people and their training credentials—showing they are experienced and trained and did the best they could.

What they don't want to defend is why a bunch of untrained people got hurt, trampled clues, caused damage and did the wrong thing. A worst case would be having a victim die after living two days while inept volunteers did the wrong things.

Good intentions

You may curse these darn politicians. "Don't they know I have good intentions and just want to help?" Where do they get off telling me they don't want my help—just because I never bothered to get trained? After all, I have the latest, greatest infrared, microwave, LED-guided people finder!

Standards, folks, is where it is headed. And I'm not talking about some glitzy "get your certificates for a price" outfit operating out of some guy's living room in the mid-west. We're talking standards established by *known* groups such as the National Association for Search and Rescue, Mountain Rescue Association, Explorer SAR, Civil Air Patrol, ARRL or the National Ski Patrol (to name a few).

In some cases these standards will be incorporated into state laws or outlined in agency policy letters. As these various agencies begin to fine-tune their emergency response plans, you're going to see a coordinated emergency effort. Known and experienced volunteer groups will be requested for specific tasks. The "off-the-shelf" volunteer will politely be sent home.

A black eye

Many volunteer groups have faced the problem of having untrained, unprepared people muck up a response and give the group a black eye. Let's face it, if you allow someone to participate that does not know your procedures, does not know the agency procedures and is not trained, you open the exit door for the whole group. It only takes one significant mess to make your group politically incorrect!

These standards are, by the way, not coming from some elected official's think-tank. They're coming from emergency responders themselves who want a quality response. They're coming from experienced SAR coordinators who are tired of seeing people too lazy to get involved in training and then detract from the emergency effort because they don't know what to do. They're also being held to a standard of care that isn't tolerating a haphazard response.

There are several suggestions for your communications or search team as standards become accepted. First, affiliate with a known and respected national group and complete their training and certification program. The alternative is to work with your local agency or agencies and develop acceptable standards and some method of certification.

For example, the CAP introduced some pretty exacting requirements for SAR qualifications in 1992. If these requirements are uniformly followed, a communications director of one state could function on a mission for another state. Because each state's CAP conforms to the same standards, the certification ID cards represent the same level of competence.

Within parameters

Your concern may be for a state agency or only for county agencies. In either case, a set of standards allows you to function within an agency's parameters of care and not cause embarrassment as long as these standards are followed.

Standards work to your advantage. They give you something to train toward and they offer you protection when you operate within your capabilities. (Communications groups already function under the FCC rules which established basic operating standards.) The idea here is to urge you to establish or use reasonable standards—things you can adequately do and contribute to a mission without hindering the effort.

You never know who is going to find fault with what you do, and you may wind up in court defending your actions. It's safe to have an operating agreement in place and stay within it. It is simply foolish for you and usually for the victim to have a bunch of "loose

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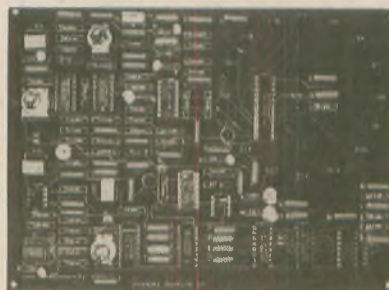
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volunteers" on a search. Clues are lost, messages are misrouted, people get hurt and victims die. When your group and the agency agree in advance as to what you will do on the next callout there's less chance of a problem.

It's important to hold your members to your set standard of operation. As you work to set a good example and be of service, you don't want some untrained "good ol' boy" messing things up.

Net control

Has anyone out there got a real good training plan for net control operators? This is a pretty important specialty with lots of responsibility. If you've got training outlines or ideas, let me know. A lot of you have shared ideas with me as to where the NCS should be located. Here's my thoughts.

It's got to be comfortable and the operator must be familiar with what's there. If a fuse pops or an antenna connector works loose, it's critical to get it fixed fast. If the operator needs supplies or a potty break, he/she needs to know where things are located.

If I am to be NCS and have to go to a location (like a fire station) I would rather take my own gear. If antennas are in place that's okay, but I prefer my own radios, power sources and administrative materials. Knowing that I need everything gives me a good starting point and I can prepare accordingly.

Should the site be a club station or an agency EOC, I want to be in on the "building" of the operating position. If I help install the coax and run the wires, I'll know where things are when they break. Because new radios almost require a Ph.D. to operate, I can't just pop in and expect to know how everything functions.

At a minimum, an EOC instruction manual must be available including diagrams of cable/wire runs, building layout and equipment instructions (the manufacturer's manual, not someone's best guess as to what you need to know).

But let me offer you a personal suggestion on NCS. Pre-plan your response and pre-plan your NCS. Does the NCS need to be at the event site? In most cases having NCS at the event isn't necessary.

If you're working a foot race, a bicycle race or doing support for a fire, you can pre-plan your key stations. I would suggest you get four or five of your best NCS operators and designate them to operate from their own stations. They can focus on their own equipment and station readiness and will do a better job operating from their own station with their own gear.

Write and tell me if I'm thinking clearly here. My opinion is that you use

a home station with a good NCS operator *except* when you have to head to a remote area where no one has a home station available.

I hope you got your station *summerized* so you can get involved and be of

service. Summerizing? It's a quick coax check, an SWR check, an audio check, a battery/power supply check—and an inventory of your emergency gear.

73 from Salt Lake City. Have a great summer! WR

HAMMIEST

(continued from page 23)

down. Then Minnie Pearl, the country humorist of Grand Ole Opry fame, encouraged her to continue. Shortly afterward, Kathryn began speaking and performing as Miz Maudie on a full-time basis.

She recalls first wanting to be a ham radio operator as a small child. She made a pretend-radio out of a cardboard box and spools that served as knobs. Later, she began listening to an AM radio and developing good logging skills. "I kept a notebook beside the radio, and I wrote down the call sign, QTH and where on the dial each of the AM broadcast stations I had listened to were located. In Louisiana, where I grew up, we heard Mexico really well. That was my DX," Kathryn recalls.

"I started out as a timid child. I would go home from school for lunch, because I was afraid I might drop the tray or have no place to sit. I'm still quiet. But when I put on my costume and have a microphone in my hand, I become Miz Maudie," she says.

This is how Miz Maudie starts one tale about coax: "You buy coax and bring it home in a bag. It lies so quiet and still. But it comes alive when you come toward it with a knife and a soldering iron . . ."

Kathryn Martin is also writing a book entitled *Momma and the Nursing Home* which, she says, is about



Kathryn Martin, N4USW

gaining the freedom to live. And she writes a monthly YL column for the Nazarene Amateur Radio Foundation's *Transmitter*.

Kathryn says, "A merry heart doeth good like a medicine." Remember that the next time you tune into a pileup or see smoke coming from your linear.

Connie Dunn, KB5LES, is a freelance writer and the managing editor of *YL World*, a magazine devoted to female Amateur Radio enthusiasts. WR

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"What's in a name?" Remember that one? I didn't; I had to ask a friend if it was from Shakespeare. Sure enough; it was something said by Shylock in "The Merchant of Venice." The phrase was stuck in the back of my mind, and it just popped up recently when I was reading an article about 10M propagation in the "New Ham Companion" section of *QST*. But what triggered my mind wasn't a name; instead, it was a word, "cook." Let me explain.

The article said, "Ten-meter activity is greatest during the winter months when the sun has less time each day to cook the ionosphere . . ." In all honesty, I'm not sure what a "new ham" could take as the meaning of that sentence, much less learn from it. But never mind; I just take umbrage at the idea that the sun "cooks" the ionosphere. Culinary terms don't belong in a discussion of HF radio propagation, so let's get this idea out on the table where it belongs and see what's really going on.

If you've been reading this column for any length of time, you know that the state of the ionosphere can be

displayed by a global map of critical frequencies, foF2. Of course, the maps vary according to hour, month, and the level of solar activity. They simply show the highest frequency that can be sent vertically upward and still return to earth and are directly related to the peak electron densities overhead. And you've seen them in several of my articles, from August 1991 onward.

suitable collection of maps, you could talk about critical frequencies or MUFs on paths, even how they change between summer and winter.

Leaving out the polar regions where sunlight or darkness can prevail for months on end, experience shows that critical frequencies at mid-latitudes are higher in winter than in summer. Just to show you what I mean, look at Figure 1. Displayed are daily varia-

foF2 and foFE at 40N 105W Summer and Winter

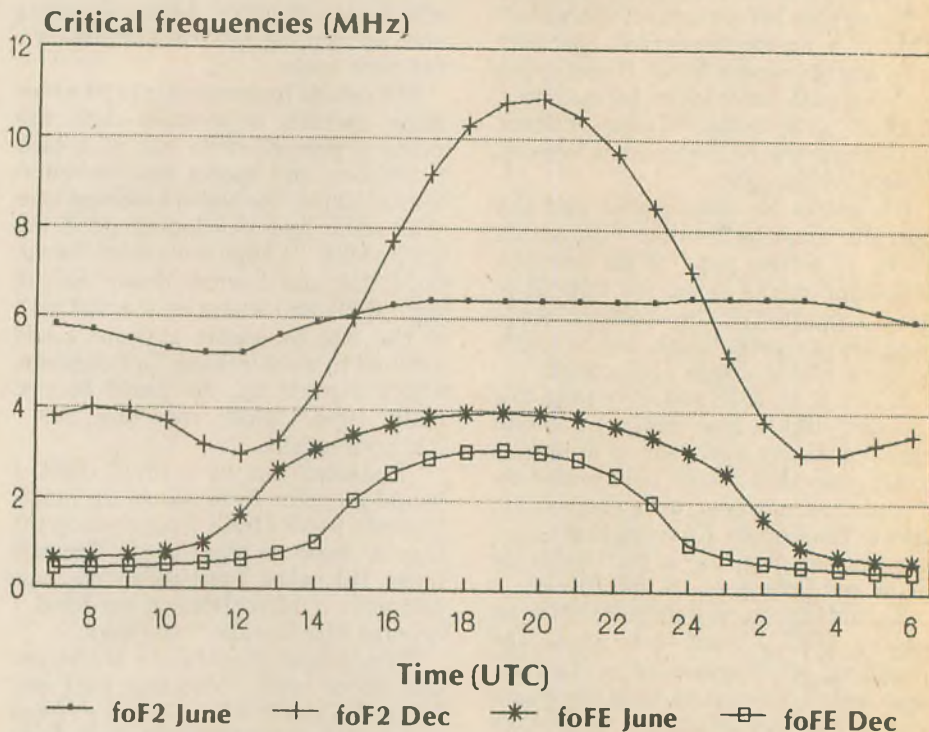


Figure 1

You also know that if you pick a one-hop path from point A to point B, you can apply the "rule of three" to find the MUF on it, roughly three times the value of the critical frequency foF2 at the midpoint of the hop. So with a

tions of foF2 over Boulder, Colorado, as well as the critical frequency variations for the E-region, foFE, summer and winter.

Local noon at that longitude is around 1900 UTC and you can see how the critical frequencies for the F-region peak during daylight hours. But more importantly, the values for foF2 are higher in winter than in summer. Doesn't that seem strange? Absolutely, downright anomalous when you compare them with how foFE changes with seasons!

But let's go back to the word, "cook." The higher values for foF2 in the winter may have been the point of that sentence in "The New Ham Companion," but "cook" hardly applies, no matter how you look at it. One can "cook" a soup, but one hardly "cooks" the spices added to a soup in small amounts; they're interspersed for the potent flavor they add to the dish.

So it is with the ionosphere, the

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neutral constituents at a given altitude outnumbering the charged particles, ions and electrons by 100 to one or more, but the charged particles give the mixture that special character that we thrive on. If you're going to "cook" anything, it would be the gases in the atmosphere. So what do we know about heating the atmosphere, say summer as compared to winter?

First, we all know that the atmosphere is a mixture of gases held firmly to the earth by gravitational attraction. Beyond that, it extends upward because of the disordered motions of the atoms and molecules and the higher the temperature, the farther out the gas particles go. That's simple enough but when it comes to details, we have to go to a study on which scientists have been hard at work for almost two decades, analyzing satellite and radio data to refine a model for the density and composition of the upper atmosphere.

At this point in time, they've developed an elegant model which depends on all the relevant variables: date, time, location, solar activity parameters and geomagnetic activity. So one can use their model (MSIS) to see "what cooks" with the atmosphere.

But the atmosphere is the target for all the UV radiation that's coming from the sun so one must not just think about heating or expansion, come summer, and cooling or contraction, come winter. We must also think about some chemistry: photochemistry, when oxygen molecules are broken up into atoms, and ion-chemistry, when oxygen atoms are ionized by sunlight. Oxygen, whether as atoms or molecules, actually provides a "big target" for solar photons, the molecular oxygen being efficiently converted to the atomic form and the oxygen atoms being readily ionized.

That's not the case for nitrogen; it's a major constituent in our atmosphere but relatively unaffected by solar UV. So the model we have for the high atmosphere is one where atomic oxygen dominates in numbers and nitrogen is the main molecular species. As for the ionosphere, our real concern here, it's populated mainly by atomic ions (O^+) and electrons, with some molecular ions (N_2^+) as well.

Now if we're going to talk about HF propagation, we have to think of the actual production of ionization up there, electrons and positive ions. But more to the point, we need to look at the competition that goes on—reproduction vs. loss—and is responsible for the electron densities which result. True, the neutral atmosphere and the solar UV flux get the process started

and give us the production of ionization; but after that, it's a different game when it comes to loss mechanisms.

How do the upper atmospheric conditions differ, say winter as compared to summer? Going to the analytical model, we find that the major molecular species, nitrogen, settles down as winter sets in or rises up as summer begins. At a given altitude, that means that there are more nitrogen molecules per unit volume in summer than in winter because the atmosphere extends out farther when heated.

But what about oxygen, atomic and molecular? Since the atomic form of oxygen is derived from the molecules by the action of solar UV, that's a more complicated situation and is best shown graphically in Figure 2 where the summer/winter variations of the major constituents are given. Also included there is the makeup of the atmosphere, the molecules-to-atoms ratio, and its summer/winter variation.

By this time you must be getting impatient, asking, "What does all this have to do with 10M propagation?" My reply is quite simple, "Everything!" But we have to look at production and loss mechanisms for the ionization to get the answers. So bear with me a bit longer, deep insights are just a few paragraphs away.

As you might expect, the production of positive ions and electrons by solar UV depends directly on the concentration of atomic oxygen, the principal species in our F-region. Okay, with that taken care of, let's talk about loss mechanisms now.

If the O^+ ions and electrons just recombined after rattling around for some time, everything would be simple. But that type of charge neutralization is extremely inefficient, proceeding at something akin to glacial speed. Believe it or not, a more rapid way of neutralizing the charge of the O^+ ions and electrons is by a two-step process, the O^+ ions first interacting with the N_2 and O_2 molecules up there, forming NO^+ and O_2^+ , and then having them recombine with the electrons. All that's faster than the direct recombination but it doesn't happen instantly so the electrons are free for some time before recombining, giving us the ionosphere we depend on.

Now we come to the crux of the matter, the competition between production and loss of ionization and how it varies with seasons. So let's look at it. First, since ionization loss depends on molecular reactions with N_2 and O_2 while production depends mainly on the presence of atomic oxygen, variations in the molecular-to-atomic con-

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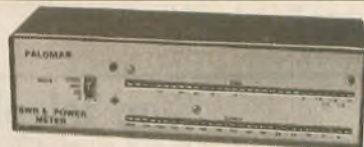
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Summer/winter ratios

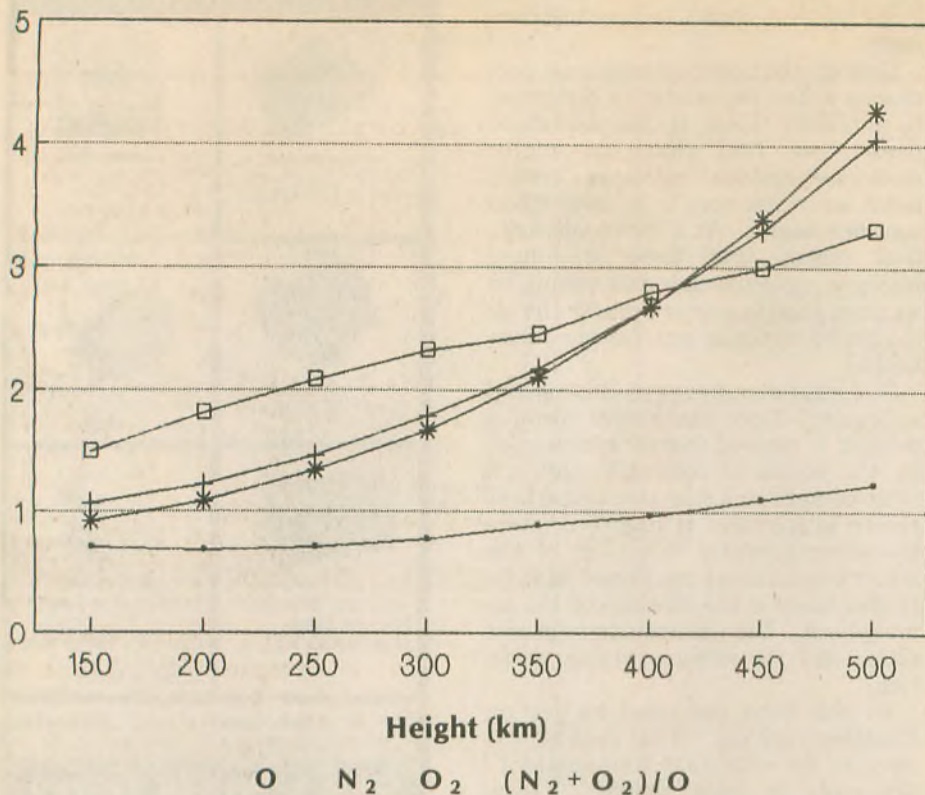


Figure 2

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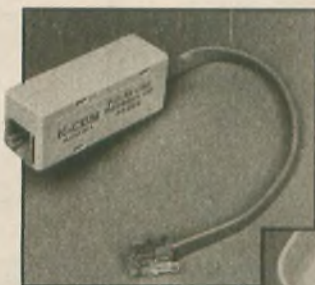
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centration ratio tell us how the scales are tipped.

For example, an increase in the molecular-to-atomic ratio goes in favor of ionization loss or neutralization processes while a decrease goes in favor of the production of ionization, O⁺ ions and electrons. Going to Figure 2 tells us the story; the molecular-to-atomic ratio is greatest in the summer and that means losses are more important then or, equivalently, the electron densities and critical frequencies foF2 are lower in the summer. Just the opposite is true for winter and, going to the original point of the whole inquiry, that means electron densities and MUFs are higher in winter than in summer. As for 10M propagation being better in the winter, all I can say is "QED," just like we used to say at a moment of triumph in high school geometry.

But I just can't leave this discussion without making a few personal remarks. For example, don't you think that "cook" really demeans or diminishes the matter? After all, the ionosphere is important to us and we should treat it with respect.

Let me give you something practical to think about: Can you imagine a world-class musician or opera star not being concerned about the acoustics of the hall in which a performance will take place? I think you can appreciate the parallel; you should be concerned about the state of the ionosphere and just how well it works, year in and year out.

Finally, in the "New Ham Companion," a few pages before the short note on 10M propagation, you'll come across another part, now titled "Radio Tips: The Ionosphere." In that section you'll find a paragraph that says, "Ultraviolet rays from the sun act on atmospheric ozone to create the ionosphere." Atmospheric ozone? That's what the man said but don't you believe it! That statement is just flat-out wrong!

In all honesty, I was flabbergasted that such an outlandish statement would be made, and as one who writes about the ionosphere, I'm personally embarrassed that such an egregious error actually got into print. I'd like to think it never happened. Oh, the mortification!

WR

Even the slightest error, especially in a call sign, can change one's destiny! Please be sure, when submitting material, to type or print clearly, especially names, call signs and facts involving numbers. TNX, *Worldradio* staff.

CONSTRUCTION

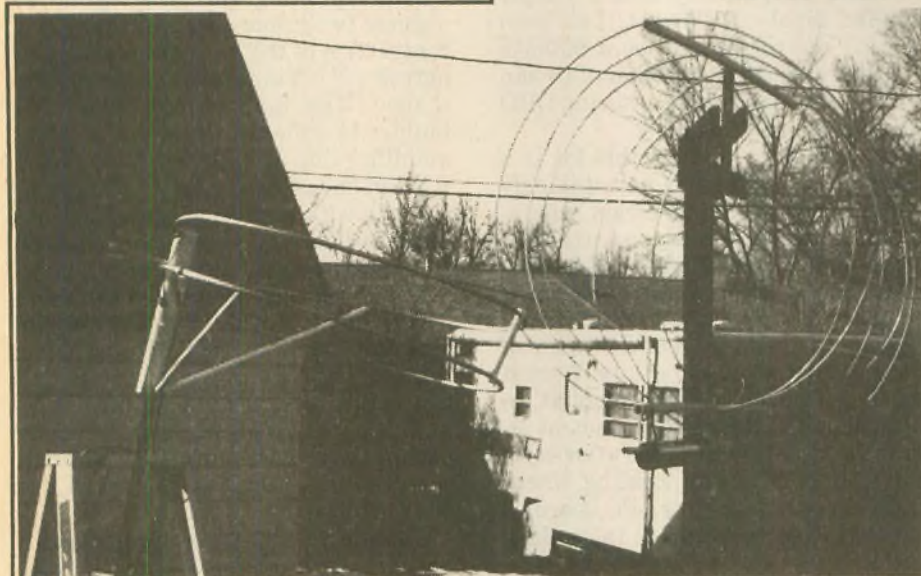
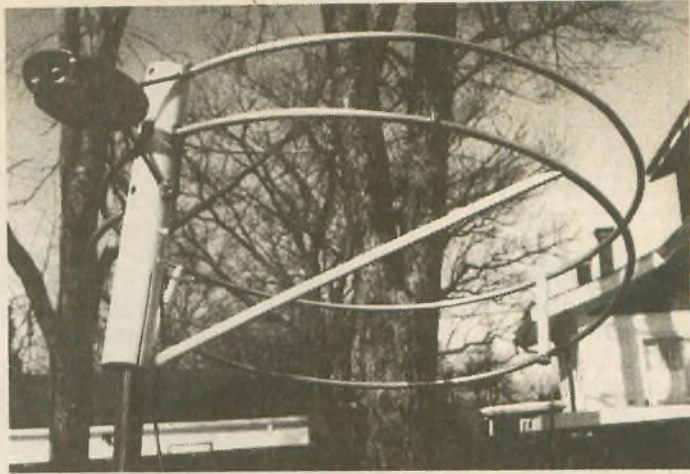
High-Q 20M loop

GENE GARDNER, W9RWZ

Here is the 20M loop to follow last month's 160-80-40M high-Q vertical loop. As noted in last month's construction project, these are experimental antennas and caution is required to prevent arcing as well as haphazard physical contact with the antennas.

With a 40 ft. vertical aluminum pipe available, it was convenient to also evaluate a small loop on 20M. From 18

Two parallel discs were first used as capacitance on the 20M horizontal, but the high Q once again demanded the use of concentric cylinders.



Both loop arrays were easily mounted in a small back yard.

feet of the same 1/2 in. aluminum tubing, a two-turn loop of 35 in. diameter was easily constructed using a 1 1/2 ft. length of 2 in. ID PVC (left over from the above 8 1/2 ft. booms). Three 1/2 in. holes were drilled 3 1/2 inches apart so that the center and the ends all appear at the PVC pipe. A 7 in. length of 3/4 in. ID PVC pipe with 1/2 in. holes maintained separation at the outer side. Two struts of still smaller PVC sloping down to the bottom of the 1 1/2 ft. pipe provided good support. About 15pF of capacitance is required for 20M.

If you prefer 17M it would work still better and might even reach 15M. However, once again extra effort is required to accommodate high power. A 1 in. separator of acrylic plastic was softened with 700W at the higher frequency and 1 in. teflon supports had

to be used. Two parallel discs were first used as capacitance, but the high Q made them too temperamental to tune, so that once again concentric cylinders were used (3 in. portion of a 2 lb. coffee can, with another smaller vegetable can inside for a gap of 15/16 inch. The 20M 2:1 SWR bandwidth is about 40 kHz.

This time it is preferable to mount the loop parallel to the ground for horizontal polarization, and the 40 ft. support provides a very respectable height of 5/8 wavelength. Again, the coax shield goes to the electrical center, and the center conductor was extended with about 12 to 13 inches of #14 wire running parallel about 3/4 inch from the tubing and then attached with a hose clamp. This needs to be adjusted experimentally while observing the SWR meter.

Once again, the performance can only be described as outstanding when using high power and, of course, it is near average at 100W. WR

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The itsy, bitsy Spider in review

There is more than a little ongoing interest in simple, affordable, lightweight low-power transceivers that are suitable for throwing in a backpack and hitting the dusty trail.

The January 1993 edition of *73 Amateur Radio Today* magazine features "the spider," a homebrew project that meets the QRP criteria quite nicely.

The brainchild of Mike Agsten, WA8TXT, the SP-1 1W transceiver is available in kit form from Lectrokit of Sandusky, Ohio. Just \$29 buys the printed circuit board and board-mounted parts. For another \$10, the kit also includes the enclosure, off-board hardware and a homebrew chassis-mounted telegraph key. Shipping and handling is \$4, and these prices are guaranteed through September.

Agsten nicknamed the transceiver "the spider" because it is crystal controlled, and if the operating frequency is devoid of activity he sits back and waits for his prey to enter "the spider's" "web." Having built and operated the SP-1 for a couple of weeks, there has been no shortage of contacts, though, and the "wait" for a QSO has been minimal. In fact, a CQ almost always brings a response.

Basically, the SP-1 consists of a direct-conversion receiver, employing a mixer and a stage of audio. It is joined at the hip to a crystal controlled transmitter, featuring an oscillator driving a final amplifier.

One of "the spider's" most innovative functions is what Agsten calls the "smart tone," wherein the audio pitch of the sidetone indicates when the transmitter is putting power to the antenna. As long as the pitch is relatively low, RF output is good. If it rises or is high to begin with, there's trouble afoot, or the battery might be getting low.

While the receiver is crystal controlled, an RIT (receiver incremental tuning) control is part of the circuit, giving the operator the ability to tune around a bit. Anyone who has ever used direct-conversion receivers knows, however, they are broad by nature. So hear-

ing signals on and around your transmitting frequency is no problem with this little rig.

The design includes QSK, so antenna changeover is done electronically. When the key is up, you're listening. When it's down, you're transmitting. Can't get much simpler than that!

Two common complaints about D-C receivers is that they are susceptible to foreign shortwave broadcast interference, and that they lack enough audio punch for comfortable listening. Neither of these is a deficiency in the SP-1 assembled here for 40M.

Some broadcast interference was noted when the rig was first fired up, but fine tuning an inductor on the receiver side of the house—as noted in the instructions' tune up procedure—took care of the problem. There is plenty of audio for headphones, and I've used a speaker several times with satisfaction.

With a 12V battery and a simple coax-fed dipole at 20 feet, I've been running my version at about 900mW and having a ball. As much as 14V can be applied to the circuit, assuring QRO output of greater than 1W.

For first-time builders, this kit is a good starter. Agsten has painstakingly drafted a 16-page construction "manual," with special emphasis on parts identification. In spite of its care and feeding of the builder, this kit still qualifies as "homebrew." You won't get the "install Resistor 12 into holes A and D"-style of guidance found in some kits. Agsten has, though, included in the "manual" an enlargement of the parts placement diagram, complete with a road atlas-style grid system for easily locating where any given part goes on the PC board.

Some kit manufacturers these days

are touting that their toroidal coils are pre-wound. Not so with "the spider" kit. And that's good. Serious homebrewers need to know how to wind a bit of wire on a toroid. The three toroids in this rig call for single windings—no complicated bifilar or trifilar windings, or secondaries to fiddle with.

Agsten's enclosure is a Radio Shack variety plastic box. The version in 73 features an FT-243 crystal, and the rig's top panel is fitted with the homebrew telegraph key. I opted to use my own enclosure, and HC6/U crystals I have on hand. So the basic kit—PC board and parts, without enclosure and hardware—is what I worked with.

I chose to keep the front panel simple and tidy, housing just the audio gain and RIT controls. Across the back panel is the crystal socket and phono plugs for the antenna, battery, key and headphones.

After speaking with Mike Agsten, I'd suggest two minor physical changes in construction of the kit, both of which he agrees will not diminish the rig's performance. The instructions direct the builder to solder an eight-pin IC audio amplifier chip directly to the PC board. ICs can be easily damaged by lingering too long with a soldering iron. For neophyte builders, I'd recommend using an IC socket available from Radio Shack.

The second change involves the rig's final transistor. The "manual" says to mount it "flush" to the PC board. Being flush to the board, however, means that the metal heat sink that must ultimately be fitted to the transistor will be perilously close to shorting out other components around it. I learned this the hard way.

There is no reason the final transistor cannot be mounted slightly above the board—say, an eighth of an inch. That will allow the necessary clearance to prevent unwanted fireworks.

If your building experience ranks as "little" or "none," rest assured that even if you botch the assembly, for a flat fee of \$12 you can send the rig to Lectrokit for repair. One way or another, you're going to come out of this with a functioning QRP rig.

Start off by keeping a positive attitude. Work slowly, carefully and follow the instructions and you'll most likely come out a winner.

Once completed, here's what can happen: I had finished the rig and tuned it up to a mighty 900mW. But how did "the spider's" keying and tone sound "on the air?" The QRP frequency 7.040 MHz was clear. I seized the opportunity to punch up a CQ on the memory keyer and dashed to a nearby door where I could listen to how the rig sounded on a TS-140 in another part of the house. It sounded great. As the CQ wrapped up, I dashed

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back to the rig to disable the keyer. From out of the noise I heard my call. It was WE9G in Columbia City, Indiana, responding to my CQ, and a nice QSO ensued. Nice way to get started with a newly-completed rig, don't you think?

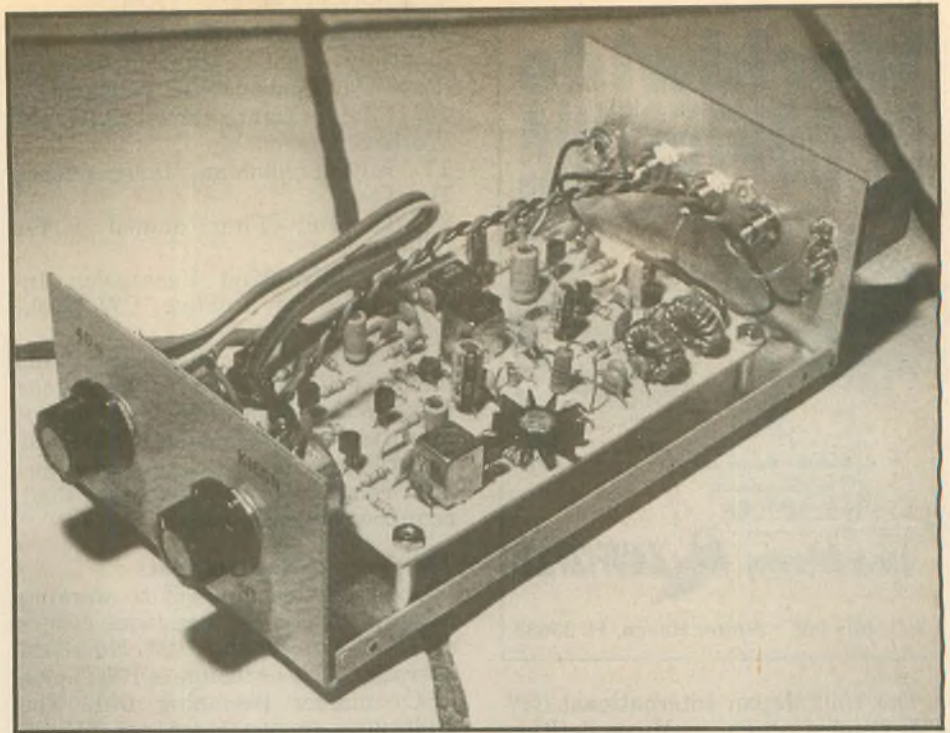
"The spider" is currently available for 80, 40 and 30M, with a 160M version in the works, Agsten says. Lectrokit's mailing address is 401 West Bogart Road, Sandusky, OH 44870. There's no phone.

If you're looking for a good camping and backpacking rig, the SP-1 might be just the transceiver for you. There are few more satisfying words than: "Rig here is homebrew." Give "the spider" a try, and find out for yourself.

Catalog of the month

In our neverending quest for good parts sources, add the Ocean State Electronics catalog to your collection. Its 112 pages set out a smorgasbord of goodies from air-wound inductors to ZIF sockets.

It's available from the Rhode Island-based parts house by calling 800/866-6626. The mailing address is P.O. Box 1458, 6 Industrial Dr., Westerly, RI 02891. **WR**



The completed 40M SP-1 Spider transceiver kit in a KI6SN-customized cabinet.



Preparing for departure: Ellen Tessitore, N6XJM; Janet Munday, AB6MP; Gayle Olson, KM6WF; and Nancee Graff, N6ZRB.

YL DXpedition

Four adventuresome YLs will embark on a DXpedition to the Isle of Montserrat in the Caribbean on 25 July through 30 July 1993.

Ellen Tessitore, N6XJM; Janet Munday, AB6MP; Gayle Olson, KM6WF; and Nancee Graff, N6ZRB will depart Los Angeles, California, for San Juan, Puerto Rico, then Antigua, and on to their DX destination on the Isle of Montserrat, known as the Emerald Isle of the Caribbean.

Located 27 miles southwest of Antigua and 1,200 miles from Miami,

Montserrat is 32 miles square with a population of 12,500, in the Atlantic time zone.

Many suggestions were made such as working splits, taking lists, etc. A firm decision was made to set up shop, try it, and if all else fails, fly by the seat of their pants.

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The YLs appreciate all the warm support that they have received from their respective clubs. (please turn to page 63)

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John Attaway K4IIF/ZF2JI

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The 1992 Japan International CW DX Contest was a very competitive event with wide participation. VS6BG led all comers in the multiband category with 1,796 QSOs and 206 multipliers for a world high point score of 369,976. Other outstanding participants, also receiving plaques, included the following continental winners in the multiband class: Africa, 5U7M; Europe, YL2KL; Oceania, AH6JF; North America, N6AW; and South America, YV1OB. High scoring stations in the single-band categories included: 80M, OK3NA; 40M, K7JYE; 20M, LU5EW; 15M, SM0AJV; and 10M, BY8AC. In addition, plaques were awarded to special zone winners based on the CQ magazine zone map. These included Zone 3, VE7UF; Zone 3 USA, N6ZB; Zone 4, WM4Z/5; Zone 5, K3ZO; and Zone 8, HI8A. *Worldradio* congratulates these outstanding stations for their contesting ability and contributions to international good will.

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DX contest calendar July

3, 4 July—32nd Venezuelan Independence Day Contest, SSB Weekend
10, 11 July—Eighth annual IARU HF World Championship
17 July—Colombian Independence Day Contest
24, 25 July—First annual IOTA Contest
24, 25 July—32nd Venezuelan Independence Day Contest, CW Weekend

For much of the contest activity this month you will need to turn your beam to the south where both the Colombian and Venezuelan national societies will be sponsoring their annual contests to commemorate their countries' independence.

The Venezuelan contests

Don't confine yourself to working only YVs; these are worldwide events on 10, 15, 20, 40 and 80M. No 160M operation. The exchange is RS(T) plus QSO number beginning 001. The multipliers are one (1) for each YV call area contacted on each band, and one for each country contacted on each band, including your own country. Both phone and CW contests begin at 0000 UTC Saturday and end at 2400 UTC Sunday. For complete rules send SASE to K4IIF or to the Radio Club Venezolano, Box 2285, Caracas 1010-A, Venezuela.

IARU Contest

The IARU HF Championship, formerly known as the Radiosport Contest, has emerged as one of the major international events comparable to the DX contests sponsored by QST and CQ. It is a 24-hour event from 1200 UTC on Saturday, 10 July to 1200 UTC Sunday using CW and phone on the six bands, 10 through 160M (no WARC bands). The exchange is RS(T) and ITU zone, except that headquarters stations of IARU societies will send RS(T) and society abbreviation, i.e., 59(9) ARRL. For complete rules see p. 105 of the April 1993 issue of QST. Note that the ITU zones are entirely different from the

CQ zones. Most Caribbean islands are Zone 11 rather than Zone 8, and US zones are 6, 7 and 8 instead of 3, 4 and 5. An ITU zone map may be obtained from the ARRL or by sending an SASE to K4IIF. ZF2JI will be activated during this contest by K4IIF and KJ4WH, Gary Powell.

Colombian Contest

The Colombian Independence Day Contest is also a worldwide event on phone or CW, 80 through 10M, so do not restrict yourself to calling only HK stations. The exchange is the usual RS(T) and serial number. Multipliers are one (1) point for your own country or continent, three (3) points for other continents and five (5) points for contacts with HK stations. This is a 24-hour event from 0000-2400 UTC. For complete rules and application blank send SASE to K4IIF or to Liga Colombiana de Radioaficionados, Box 584, Bogota, Colombia.

Islands On the Air Contest

The IOTA Contest is a brand-new event designed to promote contacts between stations interested in the IOTA Award. It kicks off at 1200 UTC, Saturday, 24 July and ends at 1200 UTC, Sunday, 26 July. The five bands, 80 through 10M are used, SSB only. Send RS and serial number beginning 001. The multiplier is the total number of different IOTA references. For complete rules and official application blank send SASE to K4IIF or to G3UFY, 77 Bensham Manor Road, Thornton Heath, Surrey CR7 7AF, England. G3UFY can also supply information on the IOTA Award.

Contesting from overseas

Europe. Liechtenstein, HB0, is a favorite contestpedition QTH for many Europeans and occasionally an American traveling or living in the area. Unfortunately, the AFVL, Amateur-Funk-Verein-Liechtenstein, the national Amateur Radio society, does not have a club station, so if you are interested in operating during a contest you should plan to carry your own rig and antennas with you. However, we understand that equipment can be brought into the country without any problems.

To obtain an HB0 call sign through the mail, you must fill out an application form and mail it to Mr. Theobald Wille, Dienststelle fuer Post und Fernmeldewesen, FL-9490 Vaduz, Liechtenstein. A copy of the form can be obtained by sending an SASE to K4IIF. According to CEPT regulations, US operators can no longer be issued HB0 call signs. In 1972, K4IIF

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was issued the call sign HB0XTT, but today it would be necessary to use HB0/K4IIF.

Alois Büchel, HB0MUO, president of AFVL, writes that visiting amateurs have stayed at the Hotel Saroja, Gangbrunnen 59, FL-9494 Planken, Liechtenstein. The telephone number of the hotel is 075/3-15-84. The address of AFVL is P.O. Box 629, FL-9495 Triesen, Fürstentum Liechtenstein. The club meets the first Thursday of each month in a restaurant. If you would like to meet the local gang, the HB0OM call-in frequency on 2M FM is 144.725.

Geographically, Liechtenstein is divided into two regions, a core of lowlands in the center circled by high mountains. All towns and villages with hotels are in the lowlands where propagation is not the best. To find a better spot it might be well to scout around for a hunting lodge or restaurant with rooms to rent in the mountains and ask if you can put up antennas. Let us know if you find a good place.

Worldradio thanks Alois, HB0MUO; Etienne, HB9DX; and Szabó, HA0HW, for supplying information for this column.

The Caribbean. Montserrat is a very popular destination for US contesters. Stu, K8SJ/VP2MFA, writes that the island has a number of accommodations ranging from \$150 per month to \$200 per day. The Montserrat Tourism Department, Box 7, Plymouth, Montserrat will provide a list upon request. Licensing can be accomplished through the mail using reciprocal licensing forms from the ARRL or through the licensing officer on the island whose phone number is 809/491-8024. The cost in US funds is only a little over \$5. Stu advises that Victor James, VP2MQ, president of the Montserrat Amateur Radio Society (MARS) is a valuable contact. His phone numbers are: home 809/491-2402; work, 809/491-2077; and FAX 809/491-6602. Any of these numbers can be dialed direct from the US. The address for MARS is Box 448, Plymouth, Montserrat. When applying for a license by mail, allow three months to complete the process.

Stu warns that if you are carrying beams in anything over 5½ feet long, they will have to go on the mid-morning flight from Antigua. The other LIAT flights use smaller planes. Also, though the island advertises "120VAC available," you should come prepared to operate 220V with appropriate European-style plug adapters. As a precaution you should bring two lists of all the equipment with you, but Stu found that Customs were no problem.



Stu, K8SJ/VP2MFA, made 3,073 QSOs from Montserrat in February — 3,071 on CW and two on SSB. Yes, that is a DX-20 on the right, the standby rig.

The MARS maintains a club station, VP2M, just outside Plymouth, with an IC735 and a tri-band beam. VP2M also has a 2M repeater on 146.970. The club meets the first and third Mondays of each month at 4:30 p.m. They offer an associate membership for non-residents but do *not* maintain a QSL bureau.

From the mailbag

de KE6UP/DU1. "Sure enjoying your contest articles in *Worldradio*. I entered the '92 CQ WW and '92 ARRL contests from Manila. Some of the US 'big guns' couldn't get my call and would just dust me off with a 'try again later, UR too weak'; the better operators, like K1AR, would thank me

for the DU multiplier. The lesson is that a weak station may be a new one for you on that band."

De G/OZ7SM. "I was delighted to read the new 'Worldwide DX Contesting' column in *Worldradio*. This is a very good addition to the other stuff and makes interesting reading for me. I look forward to your profiles of other contesters, both big and not-so-big guns.

"I used to be an avid contester in my younger years as OZ7SM in the late 40s and early 50s and later in the 60s as VS6AJ and VS6AD.

"Looking forward to your future contributions which no doubt will be as interesting as Kurt N. Serba is good fun reading." WR

YL DXPEDITION

(continued from page 61)

Gayle, KM6WF, belongs to the Downey Amateur Radio Club, Catalina Amateur Repeater Association, West Coast Amateur Radio Club and Palomar Amateur Radio Club as well as

sponsoring a high school radio club at Edison High School.

Janet, AB6MP, belongs to the South Orange Amateur Radio Association and West Coast Amateur Radio Club.

Ellen, N6XJM, belongs to the TRW Radio club, Catalina Amateur Repeater Association, Claremont Amateur Radio Association and West Coast Amateur Radio Club.

Nancee, N6ZRB, belongs to Orange County RACES, Catalina Amateur Repeater Association and West Coast Amateur Radio Club.

They also appreciate the support of all the OMs who have volunteered to go along to be gofers, antenna setter-uppers, pedicurists, masseuses, evening escorts, body guards, etc. Although the trip is definitely YLs only, of all the offers made they have accepted the mascot of N6OPR, which is Old Peter Rabbit, his moniker and mascot. They are sure it will bring good luck. WR

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KURT N. STERBA

Oh Boy. Are those English people STUPID! I was looking through one of Lil's Brit hammags, *Royal Radio*, or something like that.

There was an advertisement for a three-element Yagi on a .4-WL boom and they claimed 6.1dBd gain. Whew, they must not have any colleges over there or anything. Why, as you know, Americans can get about half again as much gain out of the same dimensions.

It's a good thing we got our independence. Could you ever imagine having to live in a culture of such technical expertise that with a 5L Yagi on a .65-WL boom you could only get 7.5dBd gain?

Talk about primitive! Whew, those guys are really living in the dark ages. Try this: a seven element Yagi on a 1.3-WL boom and they can only get 10.3dB?

Has mail service stopped between the USofA and England? Don't they get to see the ads in our hammags or see the brochures? Yes, Yankee ingenuity sure has left those tea drinkers in the dust.

It has been relayed to me that my mention of the AXM mobile antenna (11791 Loara St. #B, Garden Grove, CA 92640; 800/755-7169; FAX 714/638-9556) and the great results I had with it brought many inquiries to the company. Most had to do with using it on condo balconies and other less-than-ideal situations. The quandaries were voiced regarding getting adequate grounding for the vertical.

Well, in my opinion, all this talk about grounding is overblown. Some articles almost make it sound like you have to dig a hole that would reach to China. Bunk.

Condo balcony: ground to the railing itself. Or, get some copper or aluminum sheets, lay them on the deck of the balcony and cover with a rubber mat. Do not buy the sheets from your nearby hardware stores — too expensive. Go to those industrial outlets at the edge of town.

If you study the charts you'll see that, dB wise, the difference between the ideal and whatever you can do is not all that great.

Don't forget the old quarter-wave radial out the back of the rig or the tuner trick. Yeah, you can wad it up some. Many are using that MFJ unit that's like an antenna tuner but for ground leads instead. You do the matching just like with an antenna tuner.

A few are doing some interesting tricks with these mobile antennas. For example, get two of them. With one you do the usual center conductor to the main element jobbie. Then what would be the usual ground side lead goes instead to the main element of the other vertical. Sort of like a dipole now.

Another solution is to again get two verticals, set up in the usual manner, but bring the two feedlines to a "T" connector and one feedline goes to the tuner.

"Mismatch, mismatch," some will cry. Inconsequential, my dear Watson. What short run there will be of the coax will result in a loss that you should not pile up beans to make a hill out of.

Remember, when you see the loss figures in the charts of a decent coax at, let's say 2:1, that loss is for 100 feet. At 50 feet the loss would be half of that. And at 25 feet the loss would be halved again.

What many people can't get into their noggin is that with a lossless line, no matter what the SWR, there would be no loss at all. So, with next-to-lossless line, the losses would be minuscule.

There is a recently printed book in which the author carries on about an antenna he had many years ago. His claim was that there was not even a flicker of SWR and he worked more DX with it then ever again. He related trying to duplicate it later but with never the same success of reaching that 1:1.

Friends, 1:1 is no Holy Grail, Fountain of Youth or Lost Dutchman mine.

What I suspect is that the youthful

exuberance was due to being at the top of the sunspot cycle. And, the 1:1 came about because the line was so lossy that the real SWR got eaten up on the return path.

In reality, you could lose fully one-fourth (25%) of your power before the station on the other end might possibly discern the very slightest difference.

I saw an article in which the writer made an absolute hash of trying to explain a resistance bridge. Unfortunately, reactance, impedance and resistance got all mixed up like they were all the same thing.

For some assistance I'll point to page 24-9 of the *ARRL Antenna Book*, 16th edition.

Lil just came into the room here and read the first five paragraphs I had written. She said, "You dumbbell, the English are not stupid, they are honest!" Oh.

Well, like the girl on Saturday Night Live, "Never mind."

(KNS goes by his disguise name so [being a good 'ol boy] he can poke fun at Yankees and they won't burn down his cotton fields.)

Dear OM "Kurt,"

Now that I'm in a house with a big lot and no CC&Rs or other antenna restriction, I can play around more with aerials. You may remember that I wrote a letter, "Invisible Antennas," which you printed in the March issue — that was back when I lived in a townhouse with antenna restrictions. Luckily, I no longer have to obey rules written by someone else, and simply abiding by the Ten Commandments seems to suffice here.

After moving in several weeks ago, the first HF antenna I planted was a

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GAP Challenger DX-VI. You had written some glowing reports on this antenna, and I must confirm how well it works. Incredible? Revolutionary? Maybe not. But a good DX-worker? Definitely. Mine is mounted in 100 lbs. or so of concrete to keep it up straight, and I'd surely recommend this to anyone contemplating a permanent GAP installation. It's really tall (32 feet) and catches a lot of wind, and the mid-section is heaviest; so installing without some concrete, and probably a set of non-conductive guys just above the center, is asking for trouble.

But with the three recommended 25 ft. long radials, the GAP is a killer antenna. I've broken through more than my fair share of pileups with it and get reports that are often as good as the guys with the beams and towers. Of course, being omnidirectional, it picks up a lot of QRM from everywhere, so a good, directional beam would help, especially on receive. Being the good little soldier that I am, I'm currently digging the hole for a 51 ft. crank-up on which a KT-34A will be installed. But I'll keep the GAP up anyway, as it will still be a real useful antenna and it covers 80-40-12M, which the tribander won't.

Ironically, GAP doesn't rate the Challenger to work on 30 or 17M, as it has no tuned elements for these bands; however, it DOES work on these bands, and I've enjoyed dozens of great CW contacts on 10 MHz with it, where the GAP's SWR is about 2.5:1 or so. On 18 MHz, where its SWR is above 3:1, it still makes contacts, and although non-resonant and maybe lacking in efficiency, I've gotten some very good reports on this band, running barefoot.

You mentioned in the May column that the East Coast antenna manufacturers always seem to develop more gain for antennas of similar design to those made here on the West Coast. Yep, it's true. My theory is that all the Ivy-League universities are on the East Coast (even Cal Tech and Stanford are not Ivy-League, as they're not old enough), so the aluminum is better educated there. You may recall that Telrex (now defunct) used to say their antennas had "educated aluminum." My theory explains why.

Another possible explanation is related to the theory of superconductivity, which we all know requires extremely low operating temperatures. With those cold winters they have in the Northeast (New England is a killer from December through March), it is possible their material conductivity is improved, which of course would reduce the DC component of radiation resistance to nearly zero and result in overall improved antenna efficiency. Haven't you ever noticed that the big

DX contests are always during the wintertime, and all those big scores coming from back east that time of year? Wonder no more!

Also, I once read in a journal published back east that the formula for calculating power difference in dB was $12 \log P1/P2$, rather than the usual $10 \log$ of the ratio, and this would of course tend to make all dB readings higher there. Although the publisher later claimed this was a misprint and should have been a x10 multiplier of the log, I always wondered if they hadn't hit on something and maybe they really meant x12.

I overheard on a local FM repeater (here in the L.A. area) that a guy stacked a second 2M beam alongside his first one, so now instead of having 13dB antenna gain, he has 26! Now, that's really cooking. The bright, hot sunshine here in southern California has been melting more than coax, apparently. But maybe this fellow stumbled on to something: If he stacked two more beams, maybe he'd have 52dB gain and could start hearing his FM signal reflected off the moon or maybe something even farther away, like Venus.

Keep on pluggin', Kurt. Maybe the good guys will win someday.

STEVE KATZ, WB2WIK
Chatsworth, CA

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California

THE LIVERMORE ARK is holding an Amateur Radio/Electronics/Computer Swap Meet on 4 July from 7 a.m. to 12 p.m. 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-(100Hz) from the east. Contact Noel Anklam, KC6QZK at 510/447-3857 eves or leave message days at 510/783-2803.

Colorado

THE MOUNTAIN ARC will hold its 12th annual Swapfest/Campout in the Colorado Rockies at Red Rocks Campground in the Pike National Forest. Gates will open for overnight campers Friday evening. Fee for camping and/or selling is \$7.50 per day. Advance reservations a must for camping. Bring own tables or tailgate. Talk-in on 146.82. Contact MARC, Box 1012, Woodland Park, CO 80866-1012; phone Bob at 719/687-9025, or Fred or Patty at 719/687-9727.

Florida

THE GREATER JACKSONVILLE AMATEUR RADIO & COMPUTER SHOW/ARRL FLORIDA STATE CONVENTION is being held 31 July through 1 August from 9 a.m. to 5 p.m. Saturday and 9 a.m. to 3 p.m. Sunday at the Osborn Convention Center. Features include air-conditioned display area, field checking for ARRL DXCC and CQ magazine awards and VE exams at 9 a.m. Sunday. Admission is \$6. Swap tables are \$18 for the weekend. Vendor set-up times are 2-7 p.m. Friday and 7-9 a.m. Saturday. For more info, send SASE to P.O. Box 10623, Jacksonville, FL 32207.

Illinois

THE DuPAGE ARC is holding their 11th annual hamfest on 11 July from 8 a.m. at the Amer-

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ican Legion Post 80 in Downers Grove. Features include an indoor *hass* for dealers, outside paved area for flea market and tailgate sellers, door prizes, food and refreshments, free parking and VE exams. Admission is \$3 in advance and \$4 at the gate. Talk-in on 146.52 simplex and 145.25-600. Contact Edwin Weinstein, WD9AYR, 7511 Walnut Ave., Woodridge, IL 60517; 708/985-9256.

THE FOX RIVER RADIO LEAGUE will hold a hamfest on 1 August from 8 a.m. at Waubensee Community College in Sugar Grove. Features include commercial dealers, indoor flea market, paved free tailgate spaces, computer vendors, refreshments, nearby campgrounds and VE exams at 10 a.m. Admission is \$4 in advance and \$5 at the gate. Indoor table are \$10. Vendor set-up times are 7 p.m. Saturday and 6-8 a.m. Sunday. Contact Bill Schaben, WA9AUW at 708/208-4870, or Don Rasmussen, N9III at 800/472-7826.

Michigan

THE STRAITS AREA ARC is holding a Swap & Shop on 10 July from 8 a.m. to 1 p.m. at the Emmet County Fairgrounds. Features include prizes, commercial displays, refreshments and VE exams at 10 a.m. Admission is \$3. Tables are \$5 (splits allowed). Talk-in on 148.68. Contact Harry Leiber, N8OIV at 616/347-6610.

THE EASTERN MICHIGAN ARC is sponsoring Swap '93 on 1 August from 8 a.m. to 2 p.m. at the St. Clair County Community College Student Center. Features include forums and VE exams. Admission is \$3 in advance and \$4 at the door. Tables are \$12. Vendor set-up time is

6 a.m. Talk-in on 147.30 and 146.52. Contact Hank Kohl, K8DD, 1640 Henry St., Port Huron, MI 48060; 313/982-7088.

THE MANISTIQUE ARA is sponsoring the '93 U.P. Hamfest 30-31 July from 6 a.m. to 5 p.m. at the Schoolcraft County Fair building. There is a Friday night fish fry and get-together. Admission is \$5. Table space is \$5 per four feet. Vendor set-up is Friday afternoon. Contact Debra K. Barton, WD8IBT, MARA, P.O. Box 144, Manistique, MI 49854; 906/341-5694.

Missouri

THE ZERO BEATERS ARC will hold its 31st annual hamfest on 18 July from 6 a.m. to 3 p.m. at the Bernie H. Hillerman Park on the Washington Fairgrounds in Washington. Features include food and refreshments, flea market, seminars, dealer displays, free parking and VE exams at 10 a.m. Admission is free. Flea market parking is \$4 per space. Contact Ed Southall, WDØELL, Zero-Beaters ARC, P.O. Box 24, Dut-zow, MO 63342; 314/459-6581 or 314/239-0060.

Montana

THE GLACIER-WATERTON INTERNATIONAL HAMFEST will be held 16-18 July at Three Forks Campgrounds located 16 miles west of East Glacier Park. Features include seminars, Saturday night barbecue, Sunday breakfast, tailgating, junk auction, vendors and VE exams for both US and Canada. Admission is \$12.50. Contact George Smith, KC7OD, 1822 14th Ave. South, Great Falls, MT 59405; 406/452-5958.

New Hampshire

THE NEW HAMPSHIRE ARA will sponsor the ARRL New England Division Convention on 24 and 25 July in Derry. Saturday's hours are 8 a.m. to 5 p.m.; Sunday, 9 a.m. to 2 p.m. Features include 70 exhibitor spaces and 300 flea market spaces, over 25 forums, walk-in license exams, fox hunts and wide-screen projection theater. Admission is \$5 at the door, \$4 in advance. For further information write to P.O. Box 573, Derry, NH 03038.

New York

THE PUTNAM EMERGENCY AND AMATEUR REPEATER LEAGUE is sponsoring PEARLFEST '93 on 11 July from 8 a.m. to 2 p.m. at Brewster High School in Brewster. Features include demonstrations, foxhunts, food, free parking and VE exams. Admission is \$5. Tables are \$10 in advance or \$12 at the door. Tailgaters \$7. Talk-in on KG1O 145.130 (-600). Contact Shirley Dahlgren, N2SKP, PEARL, P.O. Box 501, Carmel, NY 10512; 914/736-0717.

THE GENESEE RADIO AMATEURS are sponsoring the 1993 Batavia Hamfest on 11 July from 6 a.m. to 4 p.m. at the Firemen's Grounds south of Alexander. Refreshments will be available. Admission is \$3 in advance and \$5 at the door with children under 12 admitted free. Flea market table \$1, \$2 under cover and \$5 for electricity. Talk-in on 146.52 simplex and 144.71/5.31 repeater. For info or tickets, send #10 SASE to Knute Carlson, N2DRX, 26 Burke Dr., Batavia, NY 14020; 716/343-5580.

THE TRI-COUNTY ARS is holding its 4th annual Swap 'N Shop on 24 July from 7 a.m. at the Gowanda Fireman's Grounds in Gowanda. Admission is \$5 and includes one 8 ft. flea market space. Talk-in on 146.745. Contact Andy, K2ISN, at

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North Carolina

THE NORTH CAROLINA CHAPTER OF THE TRIPLE STATES RAC is holding their Firecracker Hamfest on 10 July from 9 a.m. to 4 p.m. at the Salisbury Civic Center in Salisbury. Features include prizes, flea market and VE exams. Admission is \$3 in advance with SASE, and \$4 at the door. Tables are \$5. Vendor set-up times are 3-9 p.m. Friday and 7 a.m. Saturday. Talk-in on 146.985 and 146.625. Contact Walter Bastow, N4KVF, 3045 High Rock Rd., Gold Hill, NC 28071.

THE CARY ARC is holding its 21st annual Cary Mid-Sumer Swapfest on 17 July from 8 a.m. at the Cary Community Center in Cary. Features include prizes, air-conditioned indoor flea market, forums and VE exams at 11 a.m. Admission is \$4 in advance, \$5 at the door. Tables are \$10. Talk-in on 147.75/15. For info, send SASE to Herb Lacey, N4UE, 1022 Medlin Dr., Cary, NC 27511.

North Dakota

North Dakota and Manitoba's INTERNATIONAL HAMFEST will be held 9-11 July from the Peace Garden on the US and Canadian border. Features include transmitter hunts, mobile judging, outdoor flea market, dance, bingo and games for the kids. There are ample camping spots at the Peace Garden. Talk-in on 146.52/52. Contact Dave Snyder, 25 Queens Crescent, Brandon, Manitoba, Canada R7B-1G1; 204/728-2463.

Ohio

THE WOOD COUNTY ARC is holding its 28th annual hamfest on 11 July from 8 a.m. to 1 p.m. at the Wood County Fairgrounds in Bowling Green. Features include free parking and VE exams. Admission is free. Space for trunk sales is \$5 and inside tables are \$10. Talk-in on 147.18/78. Contact WCARC, P.O. Box 534, Bowling Green, OH 43402; 419/352-0856.

THE VAN WERT ARC will hold Hamfest '93 on 18 July from 8 a.m. to 4 p.m. at the Van Wert County Fairgrounds in Ven Wert. Features include a fox hunt, door prizes, refreshments and VE exams. Admission is \$4. Indoor space is \$6, with table \$8. Trunk sales \$4. Talk-in on 146.85 (-). Contact Jack, WD8MLV, at 419/495-2209 before 5 p.m. After 5 p.m. contact Bob. WD8LPY, at 419/238-1877.

THE ASHTABULA COUNTY ARC is sponsoring the Ashtabula County Hamfest and Computer Show on 25 July from 8 a.m. to 2 p.m. at Nappi's Party Center in Ashtabula. Features include large paved flea market area, prizes, food services and overnight parking. Admission is \$3.50 in advance or \$4 at the door with children under 12 admitted free. Flea market spaces are \$4 and indoor 8 ft. tables are \$8 for the first one and \$6 each additional. Electricity is available. Vendor set-up time is 7 a.m. Talk-in on 146.715. Contact Ken Stenback, AI8S, 722 Lyndon Ave., Ashtabula, OH 44004; 216/964-7316 evenings and weekends.

Oklahoma

THE CENTRAL OKLAHOMA RADIO AMATEURS are holding a hamfest 24-25 July from 8 a.m. to 5 p.m. Saturday and 8 a.m. to 2 p.m. Sunday at the Hobbies, Arts & Crafts/Modern Living buildings at the Oklahoma State Fair Park in Oklahoma City. Features include fo-

rum, a fox hunt, non-technical programs, commercial and manufacturers displays and VE exams at 1 p.m. Saturday. There will be a banquet Saturday evening for \$8.50 per person. Admission is \$6 in advance or \$8 at the door. Flea market tables are \$5 in advance or \$7 at the door. Talk-in on 147.03/63. Contact CORA-Ham Holidays, P.O. Box 95942, Oklahoma City, OK 73143-5942; 405/677-5291.

Oregon

THE COOS COUNTY RADIO CLUB is holding its annual hamfest on 24 July from 9 a.m. to 5 p.m. Features include a balloon launching meeting, traffic handlers meeting, AMTOR seminar and VE exams. Admission is \$4 in advance. Tables are \$10 in advance. Talk-in on 146.01/61. Contact Zane Albertson, WA7OXM, CCRC, P.O. Box 3494, Coos Bay, OR 97420.

THE WILLAMETTE VALLEY DX CLUB is sponsoring the 41st annual Northwest DX Convention 30 July through 1 August at the Greenwood Inn in Beaverton. Features include DXCC forum, contest forum, field checking of new applications and prizes. Reservations for programs only are \$15 each. Reservations for the weekend, including banquet and breakfast are \$45 each. Contact Jim Fenstermaker, K9JF, 10312 NE 161st Ave., Vancouver, WA 98682.

Pennsylvania

THE MURGAS ARC is holding its annual Ham and Computerfest on 3 July from 5 a.m. at the Luzerne County fairgrounds. Features include indoor space, electronic show, special drawings, refreshments and VE exams at 10 a.m.

Admission is \$3 in advance and \$4 at the gate. Outside tables \$5, inside tables \$10. Vendor set-up time is 2-9 p.m. Friday. Talk-in on 53.61, 53.81, 146.52, 146.61, 449.825, PL82.5. Contact KA3A at 717/824-5724 days or 717/825-3940 evenings.

THE HARRISBURG RAC is holding a hamfest on 4 July from 8 a.m. to 2 p.m. at the Bressler Picnic Grounds in Harrisburg. Admission is \$4. Tailgating is \$5 per space, tables are \$10 in advance and \$15 at the door. Vendor set-up time is 6 a.m. Talk-in on 146.76R or 52/52. Contact Steve Gobat, KA3PDQ at 717/938-6943.

THE NORTH HILLS ARC is holding its 8th annual hamfest on 11 July from 8 a.m. to 3 p.m. at the Northland Public Library in Pittsburgh. Features include refreshments and free parking. Admission is free. Limited indoor tables are \$10. One free space per tailgater, each additional space \$5. Talk-in on 147.09. Contact Don Jackson, N3LAZ, 8 Dale Ave., Bradford Woods, PA 15015; 412/935-3343.

South Carolina

THE TRIDENT ARC will sponsor Charleston II Summer Hamfest and Computer Expo on 10 July from 8:30 a.m. to 2:30 p.m. at the Charleston Exchange Club fairgrounds. Features include handicap access, free parking, onsite camping, radio, computer and software dealers and VE exams at 12 p.m. Admission is \$7 in advance for the family, \$5 each at the gate. Vendor set-up time is from 6 p.m. Friday. Talk-in on 147.27+, 146.52. Contact Gordon, N4JNU, Charleston II, c/o TARC, P.O. Box 73, Summerville, SC 29484; 803/851-2165.

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

3-D signal display

Brian Beezley, K6STI, announces a new feature for the soon-to-be-released *AO 5.0 Antenna Optimizer* program. *AO* will include a spectacular 3-D, radiation-pattern display.

The display shows an antenna's entire radiation pattern at once. The pattern may be rotated, translated, scaled and sliced by the user. The display uses a dual-illumination technique (not reproducible on printed patterns). 3-D objects float against a black background and appear to be illuminated from the front by a bright white light and from the rear by a soft blue glow. Colors are user-selectable, as are optional 3-D axes and labels. Elevation-plane resolution may be set from 2-6 degrees. Azimuth-plane resolution varies automatically with elevation angle.

The new 3-D display lets an antenna designer easily evaluate results of *AO*'s three-dimensional radiation-pattern optimization. The display can reveal radiation-pattern problems not otherwise apparent, like unexpected high-angle backlobes away from the principle axes.

AO-Professional 5.0, which includes *AO 5.0*, the *MN-Professional 4.5* antenna analysis package, and a commercial-use license, costs \$500. *AO 5.0* is discounted to \$100 for amateur use. *AO 5.0* requires an IBM PC compatible computer with math coprocessor.

For further information contact Brian Beezley, K6STI, 507½ Taylor, Vista, CA 92084; 619/945-9824, 7 a.m. - 6 p.m. PT.

Hazer antenna tram

Until 1980, Amateur Radio operators had just three options for maintaining the antennas atop their towers. The simplest (and by far the most hazardous) was to climb the tower. Some amateurs began using either hinged

base or crank-up towers. When the tower was folded over, the center point of the boom on the antenna was still 10 to 20 feet above the ground. The third, and most expensive, was a bucket truck or "cherry picker."

With the dawn of the '80s, however, came Glen Martin Engineering's Hazer from Boonville, Missouri. This ingenious tram actually wraps around a tower with the beam mounted to the Hazer rather than the tower. As the operator cranks a hand winch at the base of the tower, the entire antenna assembly can be lowered to ground level for safe and easy maintenance. For a cost of less than \$325, the Hazer provides safe antenna maintenance for tower owners and peace of mind for the XYL concerning tower climbing.

The real beauty of the Hazer is its simplicity. Designer Gary Martin, WB0WMQ, grew



up watching his ham father climb towers to take care of his HF beams. He designed the Hazer to help out his dad, not to mention ensuring a few more years on his life! Today, the Hazer is manufactured in eight different styles. Three are for the Rohn 20 and 25g towers, one is for the Rohn 45g tower, one for the Rohn 55g tower, and three for Glen Martin Engineering's own all-aluminum towers. To keep the price down, Martin ships the Hazer unassembled with simple instructions. Hazer models 2 through 6 wrap around the tower they are designed for. Hazer models 7 through 9 ride up the face of the tower on tracks.

Tower support with the Hazer can be accomplished two ways. The Hazer comes equipped with three lugs which can be bolted at the bottom corners to connect guy wires directly to the Hazer rather than the tower. Many Hazer owners, however, have bolted their guy

wire clamps to the inside of their tower at the top just below the elevated Hazer. With this method, the guy wires can be disconnected at the earth screw anchors or turnbuckles and allowed to hang limp against the tower so the Hazer can be lowered over the guy wires. This way, you could reconnect the guy wires to secure the tower without the wind load at the top.

To learn more about the Hazer, call or write for a free Glen Martin Engineering catalog at Route 3, Box 322, Boonville, MO 65233; 816/882-2734; FAX 816/882-7200.

Milestone Logmaster II

Milestone Technologies announces the release of *Milestone Logmaster II*, an update of the popular ham radio and SWL log keeping program for DOS computers.

Milestone Logmaster and the *Codemaster Morse* training application have been continuously upgraded since their initial release in 1985. User control of the program has been significantly enhanced, and there is a completely new user interface which supports (but still does not require) the use of a mouse. A completely re-worked database design allows for the maintenance of multiple logs for special purposes such as DXCC and contesting, and the number and size of logs is limited only by available disk storage space.

A key feature of *Logmaster II*, as with all software from Milestone Technologies, is ease of use. Anyone who can keep a paper log can use *Logmaster II* straight out of the box, and a context-sensitive help system explains any options which are not readily apparent from the screen prompts.

And the price hasn't gone up. The program is still offered at \$29.95. Current users of *Milestone Logmaster* can upgrade for a nominal handling charge of \$10 including postage.

For further information about *Milestone Logmaster II* or Milestone's other products, call 303/752-3382 or write to Milestone Technologies, 3140 South Peoria St., Unit K-156, Aurora, CO 80014-3155.

Electron VHF/UHF antennas

Electron Processing, Inc. has announced a new line of antennas designed to combine excellent performance, top or side of mast mounting, lasting durability and low cost in one antenna. Dubbed the "H-Tenna," these antennas are ideal for those with more than one antenna on their tower or mast who need an antenna that will mount on the side rather than only at the top.

Available in models for the 6M, 2M, 70cm and dualband 2M/70cm bands, the H-Tenna provides near omnidirectional coverage when

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The 10 meter test had started, and I expected the band to open about the time I arrived at the motel. Rig and gel cell were in the trunk. Maxi-J was right beside, rolled up inside the launcher pail. Room with a view. Maxi takes off from the balcony sloping down to a tree. His tail slips under the door. And I'm 59 in Japan.

J-10	J-15	J-17	J-20	J-30	J-40	Info
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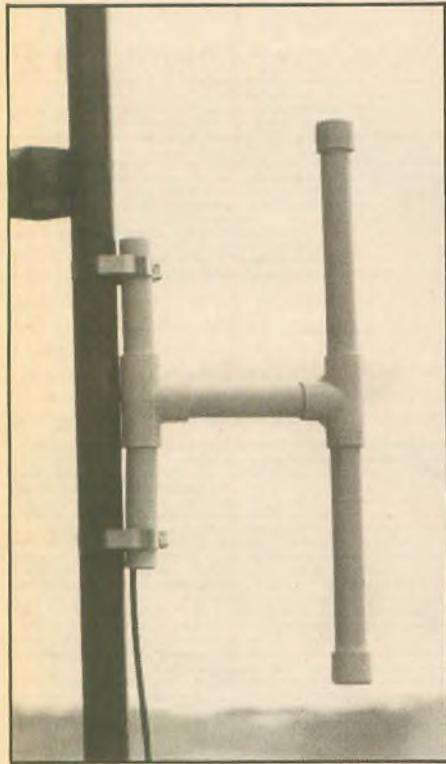
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mounted aside most towers. A dipole radiator is fully encapsulated in its CPVC radome which can be configured for either vertical or horizontal polarization. These antennas may be stacked for additional gain or for customized radiation patterns. Overall size varies per band and is slightly more than a half-wavelength. VSWR of 1.5:1 or better across the band for the 2M and 70cm (440-450 MHz) versions. All H-Tennas connect to your feedline via a choice of BNC, N or PL259 connectors on a 2 ft. "pigtail."



Additional models for scanners or use on the VHF/UHF commercial bands are also available. Both the H-Tenna-2M and H-Tenna-70cm are priced at only \$25 while the H-Tenna-6M and the dualband H-Tenna-2M/70cm is \$45. There is a \$5 shipping and handling (Canada, AK, HI \$8) charge. To order or for additional information, contact Electron Processing, Inc. at 616/228-7020 or write P.O. Box 68, Cedar, MI 49621.

Low receivers

Low receivers are now available in the US and Canada. High quality design, construction and performance are the trademarks of these British radios.

HF150 is the latest hi-tech receiver, covering 30 kHz to 30 MHz, AM, SSB, and Synchro detection. It is equipped with 2.5 and 7 kHz filters, 60 memories, and a large LCD readout.



It accepts three antennas, balanced wire, whip and 50-ohm coax. Optional keypad entry, 10-15VDC power 150-250mA, optional eight NiCd or alkaline AA batteries, and optional AC adapter. All metal alloy case, only 7.3 x 3.2 x 6.3 inches and less than three pounds.

This dynamic package performs with the big boys yet has a small price tag—under \$700. HF225 and HF235 are also available. For more details, call, FAX or write EEB, 800/368-3270; FAX 703/938-6911; 323 Mill Street NE, Vienna, VA 22180.

Svetlana tetrode tubes

The Svetlana 4CX800A is a high-performance ceramic metal tetrode with a plate dissipation rating of 800W with forced air cooling.

The performance characteristics of the 4CX800A allow its use as a high gain grid-driven RF amplifier or in grounded grid service. A recommended mode of operation is in grid-driven service with a passive (resistive) 50-ohm untuned input circuit. This eliminates the need for multiple input tuned circuits and neutralization. In this mode, an exceptionally simple, stable, low-cost amplifier with good intermodulation performance can be designed.

As a linear power amplifier, the 4CX800A will conservatively produce 750W PEP SSB, and 750W key-down CW in any of the three modes: grid-driven, grid-driven passive input, and cathode-driven. Because of the high performance characteristics of the 4CX800A, the tube will operate efficiently at low plate voltage.

The Svetlana 4CX800A is manufactured in the Svetlana factory in St. Petersburg, Russia. The 4CX800A is widely used in Russia and other independent commonwealth states where it carries the type number GY74b. Svetlana offers a line of well-engineered, carefully-constructed power grid tubes for both OEM and end-user applications. As Russia's leading designer and manufacturer of power grid tubes, Svetlana's product line features power tubes at all levels up to and exceeding one megawatt, and includes high-performance triodes, tetrodes and pentodes.

Svetlana power tubes are designed for single sideband transmission, UHF and VHF televi-

sion, FM broadcast, industrial heating, medical and scientific applications including high voltage pulse modulator service. And, the Svetlana line features a broad range of tubes designed specifically for very high power broad-band distributed amplifiers.

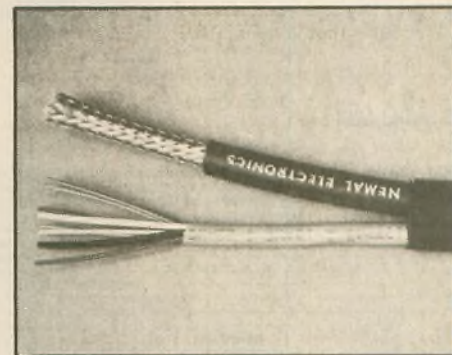
Svetlana Electronic Devices, Inc., manages the worldwide marketing, sales and support for the recently-privatized Svetlana in St. Petersburg, Russia. Svetlana Electron Devices has its corporate headquarters in Huntsville, Alabama, with sales and support offices in cities throughout the world.

For further information on these and other products offered, contact Svetlana Electron Devices, 8200 South Memorial Parkway, Huntsville, Alabama 35802; 205/882-1344; 800/239-6900; 205/880-6077; or Svetlana Electron Devices, 3000 Alpine Road, Portola Valley, California 94028; 415/233-0429; FAX 415/233-0439.

Nemal RF cables

Nemal Electronics International of North Miami, Florida, has introduced a new line of composite RF control cables for use in two-way communications and Amateur Radio applications.

The Hamcable constructions consist of a coaxial cable and eight-conductor rotor cable with an overall weather resistant jacket.



Available versions include RG8, RG8X or RG213 for coaxial members with either standard 8C1822 or heavy duty 8C1620 for rotor control. Part number HC100 consists of RG8 low-loss foam together with 8C1822 and a black jacket. Other constructions and other colors are available by special order.

For additional information, please contact Nemal Electronics International, Inc., 305/899-0900 or FAX 305/895-8178.

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SSD 4'	180-80-40-20-15-10M space-saver dipole 71' long \$125
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When will AMSAT-OSCAR-13 be in range?

ROSS FORBES, WB6GFJ

Those just starting out in the world of OSCAR communications would like to know when they can hear a satellite. The following charts are produced to give you a rough idea as to when OSCAR-13 will be within range of your location. The three charts as printed are centered on the following geographic locations: East = New York City; Mid = St. Louis, MO; West = Reno, NV.

As you read the chart nearest your location,

keep in mind the following details — all dates and times are given in UTC. The date is printed on the left hand column and the UTC hour along the top.

A dash mark indicates the satellite is out of range and therefore not able to be heard. The letter "B" indicates OSCAR-13 is audible at that location and signals should be heard between 145.810 and 145.880 MHz (SSB and CW). A letter "O" indicates the satellite is audible, but the only signal you will hear is the

telemetry beacon on 145.810 MHz. The letter "L" indicates the satellite is audible but you will hear signals between 435.650 and 436.000 MHz (SSB and CW).

Remember, if a letter is printed on the chart, you should be able to hear OSCAR-13.

For more information about OSCAR, please send a SASE to either of the following: Project OSCAR, P.O. Box 1136, Los Altos, CA 94023-1136; AMSAT-NA, P.O. Box 27, Washington, D.C. 20044. □

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VE exam schedules

As a service to our readers, Worldradio presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is 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.

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

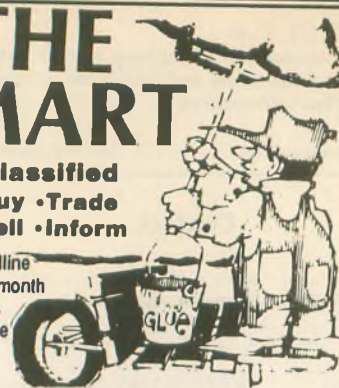
w/i=walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
Alabama				Iowa			
Aug. 8	Dothan	George, WA4MZL 205/793-4580	p/r pref.	Aug. 28	Council Bluffs	Lorraine, AA0BS 712/322-1454	w/i OK
Arizona				Kansas			
Aug. 7	Tucson	Joe, K7OPX 602/886-7217	w/i	Aug. 5	Great Bend	WA0PSF 316/792-5363 days, 316/792-4249 eves	w/i OK
Arkansas				Maryland			
Aug. 21	Mountain Home	Gerald, WM5W 501/430-5123	p/r	Aug. 31	Annapolis	Ed, W3DEQ 410/647-0370	p/r pref.;
Aug. 14	West Memphis	Gene, AB5BL 501/739-4029	w/i OK	Aug. 19	Baltimore	410/426-8255 ID #3937	w/i ltd.
California				Aug. 1	Landover	Freddie, NG3G 202/546-9348 or 301/773-2898	w/i OK
Aug. 14	Anderson	916/347-0373	w/i OK	Aug. 21	Laurel	WB3GXW 301/572-5124 after 6 p.m.	p/r pref.
Aug. 1	Apple Valley	N6ZCA 619/244-4012	p/r pref.;	Minnesota			
Aug. 1	Chico	W6YKU 916/342-1180	w/i OK	Aug. 14	North Branch	Brad, N0MIN 612/629-6962 or 612/444-9814	
Aug. 1	Concord	Gene, WW6H 510/254-5090	w/i OK	Missouri			
Aug. 14	Cottonwood	Christopher, N6WMF 916/347-0373	w/i OK	Aug. 7	Antonia	Jim, WA0FQK 314/942-2268	no w/i
Aug. 7	Cupertino	408/243-8349	w/i OK	Aug. 9	Des Peres	Gregg, KA0VWC 314/567-8777 24 hrs.	p/r only
Aug. 15	Eureka	707/826-0767	w/i OK	Aug. 12	Granite City	Larry, NZ0P 314/524-3254	p/r pref.
Aug. 28	Fairfield	Jerry, AA6NO 916/662-0801	w/i only	Aug. 26	Seneca	Les, AA0GY 417/781-4331	w/i OK
Aug. 3	Fremont	KJ6EP 510/791-6818	w/i only	Aug. 22	St. Charles	Larry, NZ0P 314/524-3254	p/r pref.;
Aug. 26	Long Beach	W6LRF 714/847-6370; N6LUH 310/592-1713	w/i OK	Aug. 21	Valley Park	Dave, N0DN 314/225-1952	w/i OK
Aug. 7	Ontario	Harry, KM6LO 818/810-0442	w/i OK	Nevada			
Aug. 21	Porterville	Pat, KG6WG 209/539-2429	w/i	Aug. 7	Elko	N7JEH	
Aug. 21	Redwood City	408/255-9000	w/i OK	Aug. 14	Reno	WS2Z 702/851-1176	w/i
Aug. 14	San Jose	AA6IY and KG6XF 408/255-9000	p/r pref.;	New Jersey			
Aug. 14	San Pedro	N6DYJ 310/325-2965	w/i ltd.	Aug. 19	Bellmawr	WA2VQG 609/546-7710	w/i
Aug. 14	Santa Maria	KI6XG 805/922-8509	w/i OK	Aug. 14	Cranford	24-hr. hotline: 201/377-4790	
Aug. 21	Stockton	Ed, N6XMA 209/952-5996	w/i only	Aug. 11	Fort Monmouth	MARS 908/532-5354	w/i
Aug. 14	Sunnyvale	408/255-9000 24-hr.	w/i only	New York			
Aug. 28	Vacaville	Irene, KK6XB 707/446-8376	w/i only	Aug. 11	Albany	Bud, WF2B 518/283-2337	w/i OK
Colorado				Aug. 21	Albion	Bob, WA2QDV 716/798-0976	w/i
Aug. 14	Denver	Glenn, W01JR 303/360-7293, 24-hr. message	w/i OK	Aug. 10	Hicksville	Bob, W2ILP 516/953-7895	w/i only
Aug. 21	Westminster	AA0BZ 303/421-2795; N0HNR 303/278-4280	p/r or w/i	Aug. 1	Yonkers	AC2V 914/237-5589	w/i OK
Connecticut				North Carolina			
Aug. 21	Gales Ferry	Linda, WM1Q 203/449-0722	w/i only	Aug. 15	Asheville	Hary, AA2AB 704/891-5481	w/i OK
Aug. 29	Milford	NB1M 203/933-5125; WA1YQE 203/874-1014	w/i	Aug. 14	Marion	Cecil, WB4UCF 704/724-4007	w/i OK
Aug. 25	Shelton	WJ1T 203/283-1044	w/i pref.	Aug. 21	Spruce Pine	David, KK4PW 704/675-9044	w/i OK
Florida				Ohio			
Aug. 2	Dunedin	Marv, WC2G 813/938-7810	p/r or w/i	Aug. 7	Cincinnati	Herb, WA8PBW 513/891-7556	w/i OK
Aug. 21	Melbourne	WB9IVR 407/724-6183	w/i OK	Aug. 7	Mentor	Scott, KO8O 216/256-0320	
Aug. 24	New Port Richey	Marv, WC2G 813/938-7810	p/r or w/i	Aug. 14	Van Wert	KA8IAF 419/795-5763	p/r only
Aug. 14	South Miami	Ross, AC4KZ 305/233-7462	w/i OK	Oklahoma			
Georgia				Aug. 20	Pawhuska	KY5J 918/337-4335, or WT5Z 918/287-3665	w/i OK
Aug. 28	Dalton	Bert, N4BZJ 404/673-2214	p/r only	Oregon			
Aug. 22	Sandy Springs	John, AB4GK 404/381-5291	w/i OK	Aug. 11	Medford	503/488-2691	
Idaho				Aug. 11	Medford	Dale, N7IXS 503/772-6865	p/r
Aug. 14	Boise	W7JMH 208/343-9153	w/i	Aug. 11	Portland	KA7MIF 503/642-5803	w/i OK
Illinois				Aug. 11	Roseburg	KB7CMB 503/672-5997	w/i OK
Aug. 28	Alsip	Ron, K9FYG 708/597-2491	p/r; w/i	Pennsylvania			
Aug. 17	Aurora	N9AKE 708/892-1252	w/i pref.	Aug. 14	Butler	W3DMB 412/282-6777	p/r
Aug. 14	Fairview Heights	John, WA0LIS 618/397-7235		Aug. 7	Erie	W3CG 814/665-9124	w/i
Aug. 21	Loves Park	Paul, WB9HGZ 815/987-6754	p/r; w/i	Aug. 21	Hermitage	WM3H 412/347-5960	w/i
Aug. 14	Oak Forest	David, NF9N 708/448-9432	w/i	Aug. 19	Lancaster	Carl, WQ3P 717/898-0611	w/i OK
Indiana				Aug. 5	Levittown	K3TX 215/946-1040 or 736-3333	p/r pref.;
Aug. 14	Hammond	Gerard, KE9I 219/845-8513	w/i	Aug. 6	Nazareth	Robin, WA3T 215/820-9110	w/i
Aug. 18	Indianapolis	Jack, AA9BO 317/251-6000	p/r only	Aug. 5	Philadelphia	ND3Q 215/482-0386 or 215/879-0505	p/r pref.;
Aug. 13	Logansport	Bill, WA8HSU 219/722-1338	w/i OK			w/i OK	
Aug. 21	New Albany	Dick, K8GVU 812/246-6377	w/i OK				
Aug. 10	New Carlisle	219/654-3007; or KK9T 219/654-8084	p/r				
Aug. 1	Terre Haute	K9EBK 812/466-2122	w/i OK				

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Date	City	Contact	Notes
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Rhode Island			
Aug. 12	Providence	NN1U 401/231-9156 or 401/454-6848	w/i OK
South Carolina			
Aug. 21	Columbia	Ray, N4WR 803/345-3373	w/i OK
Tennessee			
Aug. 9	Blount County	Carroll, W4PCA 615/982-5839	w/i OK
Aug. 6	Chattanooga	Art, WB4BGX 615/886-4714	p/r pref.,
Aug. 8	Jasper	Charles, KD4XX 615/942-5116	p/r pref.
Aug. 14	Johnson City	Charles, AC4QF 615/743-5144	w/i OK
Aug. 21	Knoxville	Ray, N4BAQ 615/688-7771	p/r pref.
Aug. 21	Memphis	Win Guin, W2GLJ 901/754-4552	w/i OK
Aug. 14	Roane County	Richard, AA4KS 615/354-4281	w/i OK

Date	City	Contact	Notes
Texas			
Aug. 10	Houston	ND5F 713/464-9044	p/r pref.; w/i OK
Aug. 14	Midland	KT5G 915/694-9450	w/i OK
Aug. 28	San Antonio	K5JWK 512/657-1549	w/i
Aug. 21	Tomball	Paul 713/351-8930	
Virginia			
Aug. 21	Hampton	N4BDH 804/487-8611	
Washington			
Aug. 28	Bremerton	Dave, AA7IA 206/698-9205	w/i
Aug. 24	Stanwood	Don, KO7I 206/652-0248	w/i
Wisconsin			
Aug. 7	Appleton	W9MDP 414/832-6279	w/i
Aug. 14	Oak Creek	Norman, KB9QL 414/764-5998	w/i OK

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10 - 15 two-for-one mobile whip

AL MILLER, VE7KC

It's fortunate that CB frequencies are lower than the 10M band, otherwise this idea would have never materialized. Some time ago I in-

herited a 104 in. CB whip and, like most hams, I accept offerings not knowing if or when they would ever be useful.

With a high interest in HF mobile I

eventually considered that a quarter-wave on 10M might be better than a loaded whip. With this my thoughts turned to the old CB antenna. Cutting the CB inheritance down to 98 inches worked beautifully.

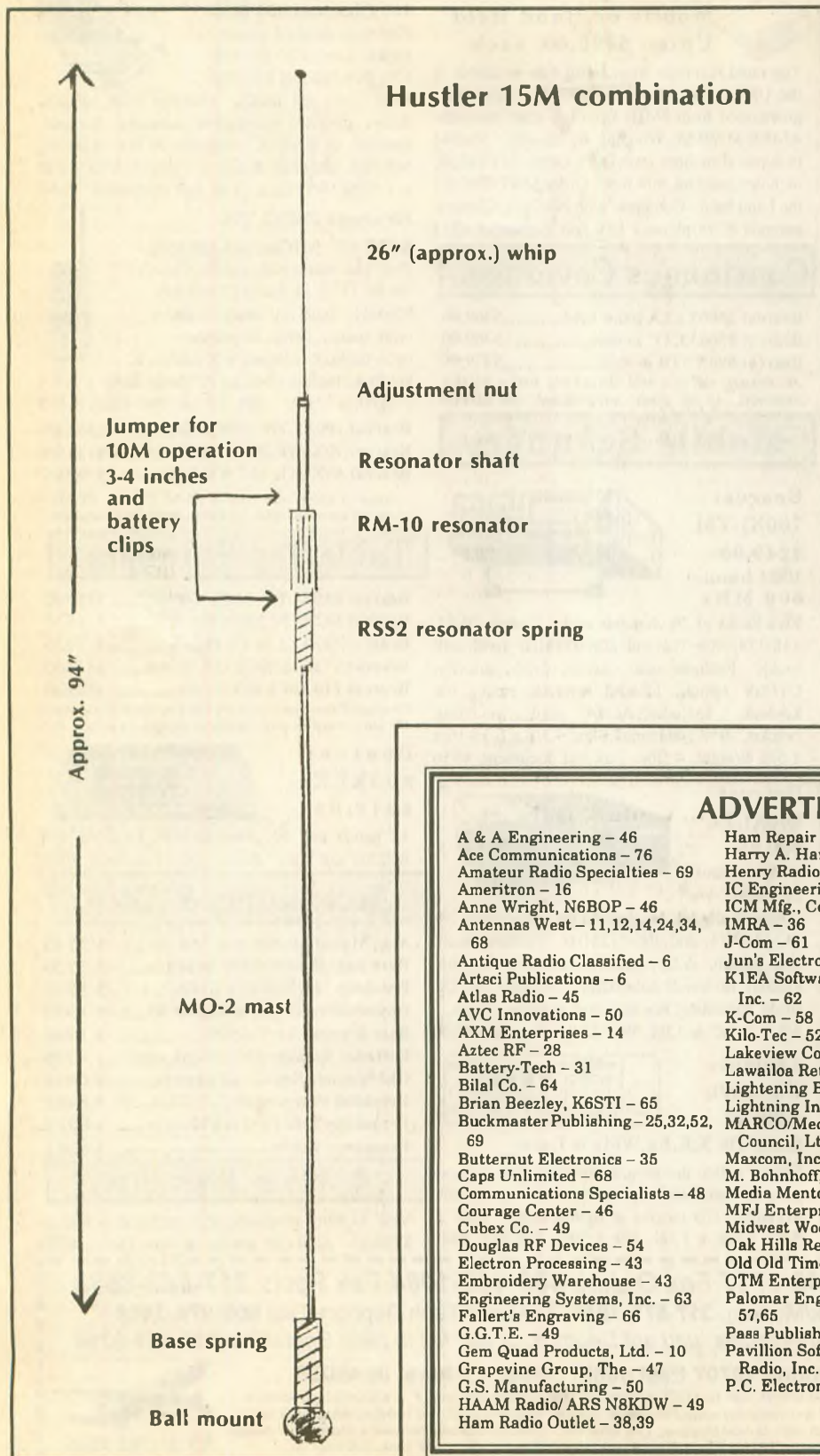
Quite recently, while checking my mobile whips for SWR on the various bands, I happened to place my 15M combination in the driveway beside the 10M quarter-wave. It was immediately obvious that both antennas were about the same length.

At this point I should explain, my 15M combination uses the standard Hustler MO-2, 54 in. mast, base spring and RSS2 resonator spring. The non-standard feature is the RM-10 10M resonator with a 26 in. adjustable section, measured above the adjusting nut.

The overall length difference between the 10M quarter-wave and the modified 15M Hustler was its being shorter by about four inches.

My thinking then was, why not put a jumper across the resonator and make up the length difference to be equivalent to a quarter-wave? This was accomplished by using a couple of mid-sized battery clips joined by approximately three inches of fairly heavy flexible wire. A check-out indicated the SWR just as low as the regular quarter-wave and on-the-air results were also very satisfactory.

Why carry two antennas when you can do just as well with one? WR



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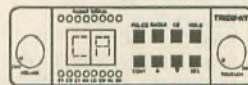
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SCDX Club honors Jim Rafferty, N6RJ

CHIP MARGELLI, K7JA

At the 1993 International DX Convention in Visalia, California, the April 17th banquet was the scene of a special presentation made to Jim Rafferty, N6RJ—the “Spirit of DXing Award,” issued by the Southern California DX Club.

This new award seeks to recognize those amateurs who, through their lifetime careers in the DX fraternity, stand above all others in demonstrating outstanding operating techniques, ethics beyond reproach and a leadership role which shapes future generations of DXers. Candidates for the award likely will have served on advisory committees, be widely published and be much in demand as moderators at DX forums and the like. Experience on DXpeditions is a plus so that the candidate has a first-hand knowledge of the issues which exist on both sides of a pileup. Contributions to the DX community through one's professional life are also important.

Jim Rafferty, N6RJ, has an unparalleled passion for the art of DXing. His participation in the KP6KR Kingman

Reef DXpedition plus contest expeditions to Cayman and other Caribbean spots have provided many thousands of DXers with a new country or multiplier. He has served on the ARRL DX Advisory Committee, has moderated countless DX forums and spoken at dozens of local clubs and has overseen the popular N6RJ 2nd OP, a DX database, for a number of years. In his capacity as Vice President of Ham Radio Outlet, Inc., Jim has always facilitated prize procurement for the Visalia Conventions and has consistently encouraged customers to procure the equipment which best suits their operating requirements, not necessarily the one with the biggest price tag.

The presentation of the Spirit of DXing Award was made by Chip Margelli, K7JA, and it was accompanied by a number of photographs of Jim from his junior high school days in which Jim crafted science fair projects on such subjects as ionospheric propagation of radio waves.

Arousing, standing ovation was showered upon N6RJ at the conclusion of the presentation. WR



Jim Rafferty, N6RJ, (left) accepts the “Spirit of DXing Award” presented by Chip Margelli, K7JA, on behalf of the Southern California DX Club.



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