Worldradio

Year 24, Issue 5 November 1994 • $1.25

FEATURED IN THIS ISSUE

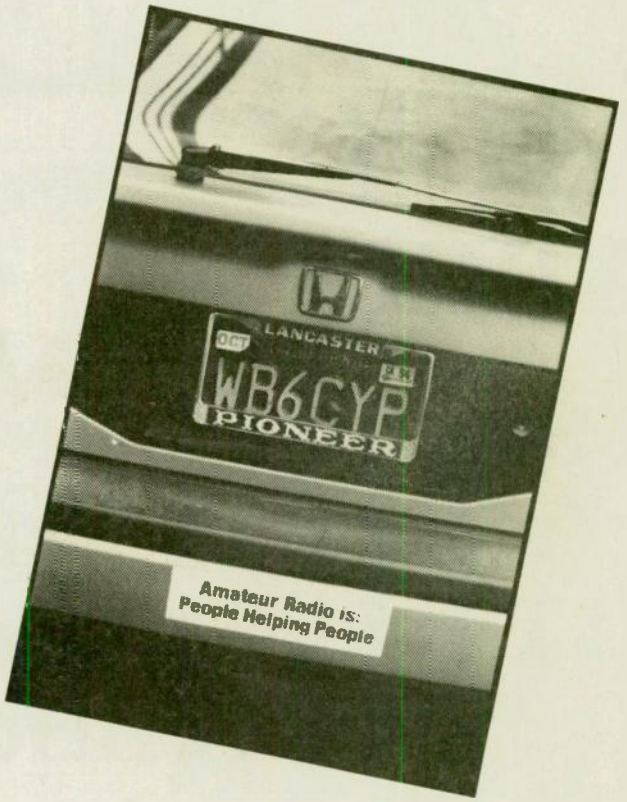
Crater Lake, OR — Pacific crest bike tour

Honolulu, HI — Wonderful Waikiki — what a Field Day site!

Mt. Pleasant, IA — Old Threshers' reunion

San Diego, CA — Cuba, the COØFRC story; Wilson pans, praises FCC

Tucson, AZ — Packet radio series, part 2



COLUMNS

•Aerials •Amateur Hi •Amateur Radio Callsigns •Awards •Digital Bus •DX Prediction •DX World •FCC Highlights •FM & Repeaters •Hamfests •MARS •Mobile •New Products •Off the Air •Old-time Radio •Propagation •Publisher's Microphone •QCWA •QRP •Search & Rescue •Special Events •Station Appearance •Traffic •VE Exams •Visit Your Local Radio Club •Visit Your Local Radio Store •Worldwide DX Contesting •Youth Forum

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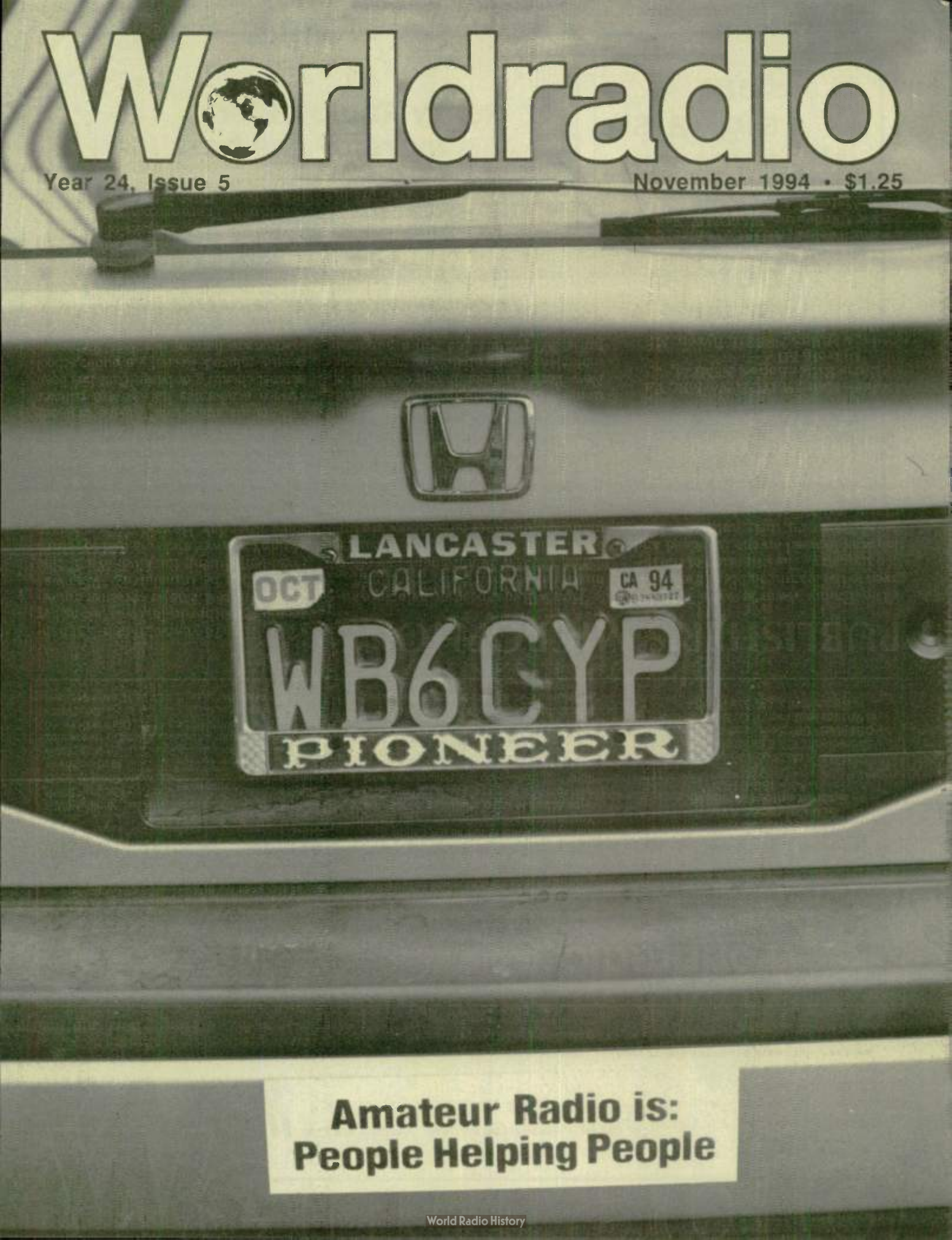

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County Hunter's addition

This month, fans of ***Worldradio's*** County Hunter will be deprived of their favorite column, but for good cause. On September 13, 1994, Carlie Ann Jansen, first harmonic of Stacey (Ace) Jansen, N3AHA, and XYL Ann, arrived on the scene.

Her manufacturer's specifications were listed as follows: Weight, eight pounds, five ounces (3,770.6 grms); length, 21 inches (53.34 cm); audio distortion, as yet unspecified.

Heartiest congratulations to the Jansen family! — *KB6HP*

Not quite clear on the concept. . .

BOB LIDDY, K8BL

I saw something at Dayton that just blew me away. It even tops the time I saw a CB vertical mounted on a tower with a rotator.

Parked in the fleamarket was a car that had a two meter magmount antenna on its roof. No problem, right? Well, then I noticed that the owner had drilled a hole next to the mount and used it for his coax line.

—*LCARA Patch*, Painesville, OH

CQ 50th Anniversary Award Series

(Hicksville, NY) — A new series of operating awards for ham radio operators and shortwave listeners has been announced by *CQ: the Radio Amateur's Journal*, to commemorate the magazine's 50th anniversary in 1995.

"Any active ham will be able to earn at least one of these awards," says *CQ* 50th Anniversary Coordinator Richard Moseson, NW2L. "Their main goal is to encourage hams to get on the air and try new things, while presenting enough of a challenge that even the most experienced operator will still have something to shoot for."

The basic "*CQ*/50" award can be earned by contacting 50 different hams during the course of 1995, and submitting a log with the required information. In addition, there will be endorsements for making contacts on a variety of different bands, different modes and via ham radio satellites; for contacting hams in 50 countries, 50 states, 50 U.S. counties, 50 "gridsquares" and with 50 different callsign prefixes.

Plus, hams who qualify for all five "activity award" endorsements, all five "challenge award" endorsements or all ten in both categories will receive special "ultimate endorsements" to reflect their achievements. All contacts must be made between January 1 and December 31, 1995. All award applications must be submitted by March 31, 1996. QSL cards will not be required.

Bruce Marshall, WA1G, of Roslindale, Massachusetts, is the *CQ*/50 Awards Manager.

"Don't be fooled," he says. "While the basic award is very easy to earn, those hams who seek the ultimate endorsements will need to be active on at least 5 bands and 5 modes — including digital, satellites and repeaters. They'll need to work stations on both HF and VHF. And while I'm sure some hams will succeed, I don't think many will be able to meet this 'ultimate challenge.'"

Complete rules will be printed in the October, 1994, *CQ* and will be available by mail directly from *CQ*. For a copy of the rules, along with official logs and entry forms, send a large SASE to *CQ*/50 Awards, 76 N. Broadway, Hicksville, NY 11801. There is no fee for the awards. However, DX stations are asked to include two (2) International Reply Coupons (IRCs) with any submission to help defray postage costs.

Cover photo: Fine sentiment about our hobby is expressed on a bumper sticker seen on WB6CYP, Tully Becker's car at the Southwest Division convention in San Diego, California. See more on the convention beginning on page 11. — *photo by N6WR*

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PUBLISHER'S MICROPHONE

The Emmy Awards were recently given to the leading lights of the television industry. The attention of the nation was focused on the tuxedoed and gowned receiving their statuettes. How utterly insignificant compared to becoming a ***Worldradio*** SuperBooster (Lifetime Subscriber), the latest of whom are:

- **Hector Gonzalez, KP4WO, Arecibo, PR**
- **Glenn Giordano, KD1CI, Mystic, CT**
- **Jack Main, W4YCZ, Norfolk, VA**
- **Chris Rittenhouse, N8MLM, Detroit, MI**
- **Jack Miller, N8BSH, Byron, MI**
- **Daniel High (awaiting call), Kenosha, WI**
- **Andrew Estes, KD5TR, Little Rock, AR**
- **W. Joseph Morris, KC5CBS, Bedford, TX**
- **Buz Tarlow, AC6AC, Venice, CA**
- **Vic Carpenter, WA6OMW, San Mateo, CA**

And special mention of a man of patience and calm nature, who for over a year kept looking for his listing before writing (in a most pleasant manner) to us about the omission:

- **Ken Noffsinger, AE8I, Tipp City, OH**

One reader wrote regarding my comments about CW, "Could it be that you are a supporter of the 'closed shop mentality' that uses the Morse code testing requirements as a filter to selectively limit participation in the hobby of amateur radio?

"Is your desire to rename this hobby a further attempt to cover up your true agenda of maintaining the exclusivity Morse code testing requirements provide? I suggest you look up the words amateur and hobby in the dictionary.

"How will your position help the community of amateur radio operators?"

Yes, the CW requirement has often been called a barrier which excludes many. On the other hand, there are the sightless and immobile who have not seen CW as a barrier, but as a challenge. That includes one confined to an iron lung who went on the air blowing into a straw, with a reed relay keying the transmitter, at 20 wpm.

What is exclusion? Is there a constitutional right to play first base for the New York Yankees if you can't hit a major league curve ball? You may bench press 300 pounds and run a hundred yards in 10 seconds, but if you can't swim well you won't become a SEAL. Those spiffy Corcoran boots the paratroopers wore would have been nice to have but those not wishing to jump out of perfectly good airplanes were excluded from wearing them.

But, one may say, this is only a hobby. So is being a private pilot. That group has devised some, what may seem to many, onerous entrance requirements. Good hand-eye-coordination being one of them. Participation in organized amateur athletics has its own set of stringent requirements.

But the bigger question is, should there be standards? The owner of a restaurant near our office told me a sad story. His 76-year-old non-English-speaking mother-in-law was taking her citizenship test. She was given one question (which he translated). "Who was President during the Civil War?" She couldn't answer and was told to return some other day. He said, "Who needs to know that?" Well, who needs to know anything? On the other hand he also feels that no one should be allowed American citizenship if they can't speak any English at all. (He escaped from China when it was at its worst.)

What are standards? At one time our service academies had severe policies against cheating or lying. That has been greatly relaxed. Recently a public school teacher was fighting dismissal for incompetence. The judge devised his own test. The teacher could not define the words "suffrage" and "agrarian" and others.

In the latest issue of *American Spectator* humorist P. J. O'Rourke has an article titled "I hear America Whining." Yes, if something smacks of difficulty, get rid of it. There are now graduates of institutions of higher learning who have earned the degree but have not taken a foreign language or a history course. What are we descending to? A few months ago I was in the car and had the news on the radio. ABC News led off their newscast (most important story) with the information that Roseanne and Tom Arnold were divorcing.

No, we really don't have a "closed shop" mentality. We don't want to limit participation, and the proof of that is all of our non-ham friends who by now are sick of us saying, "Hey, get a license, it's great fun." I don't think there is any other group with the missionary-like zeal trying to bring others into this great avocation! By the way, the holidays will be here soon, a great gift would be a ***Worldradio*** subscription.

–Armond, N6WR

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  NC-50 Dual Slot 1-Hour Desk Charger
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*FT-11 Only.
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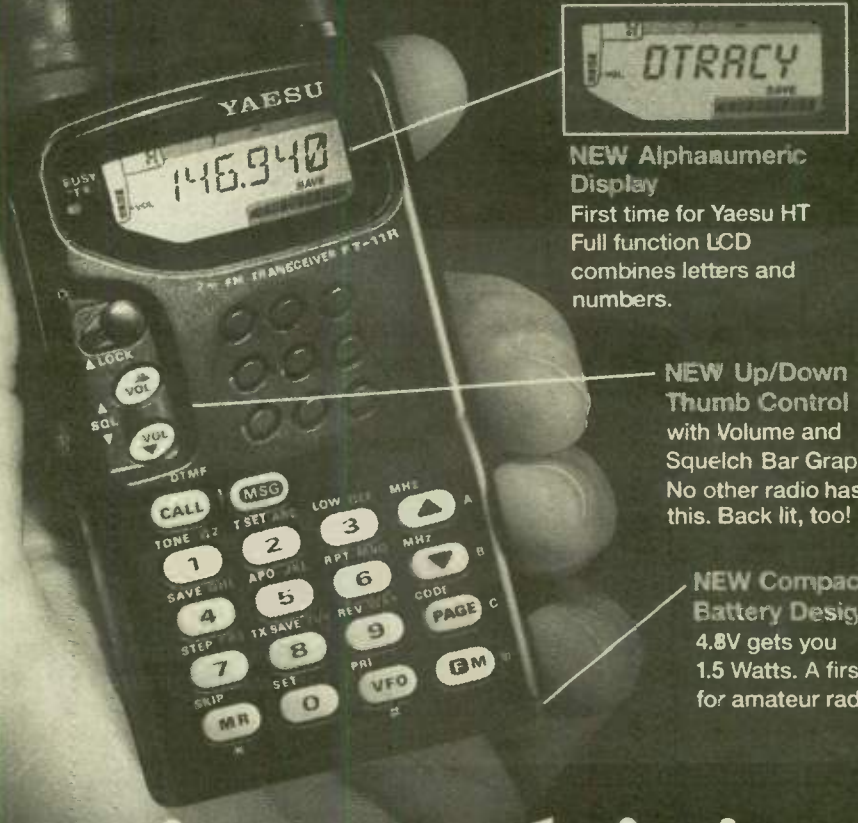

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NEW Compact Battery Design
4.8V gets you 1.5 Watts. A first for amateur radio.

Get a grip on this!

World's smallest size HT with a full sized keypad
Measures only: 4"H x 2¼"W x 1"D

"Small" is relative, isn't it? It could mean size – which in this case it does. And, it could mean "reduced", which it doesn't! Nothing missing from the hot new FT-11R HT from Yaesu except bulk! You're going to wonder just how all the features of this full-function radio fit in. Until you remember Yaesu pioneered 2-way radio micro technology.

To see what this really means to you, check out all the new features. Like the alphanumeric display. This Yaesu HT first, lets you tag your favorite frequency by name, call sign or number. Or, the new "voltage stingy" battery. It's an industry first for amateur radio. Smaller and compact, the 4.8V battery gives you 1.5 watts on TX. And, if that's not enough, there's an optional drop in, dash mount battery charger.

You see it's not a small time performer. Just small sized. The FT-11R. Another small example of Yaesu superiority. See your dealer today!

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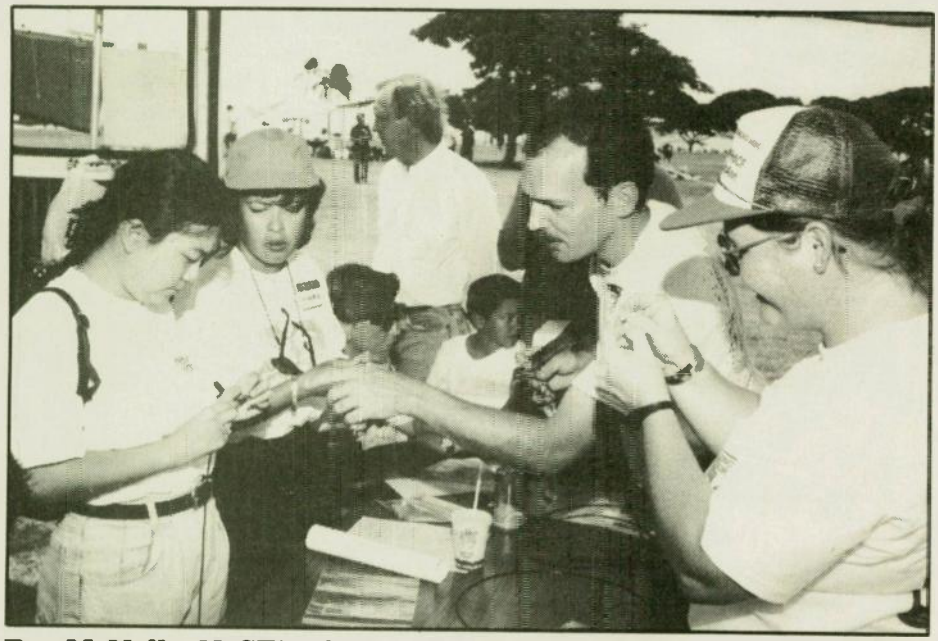


Ray McNally, N5SEZ, checks the soldering during his Field Day J-pole "class." ***—Photo by WH6ML***

Wonderful Waikiki – what a Field Day site!

ANN SHAVER, WH2E

Everyone knows Field Day is a structured simulation of emergency operations, but two Honolulu clubs recently took Field Day a step further. Staging a joint exercise, Honolulu Amateur Radio Club (HARC) and Emergency Amateur Radio Club (EARC) used the opportunity to advance their emergency preparedness as well as test their operating skills. And of course they tested their culinary skills as well.

"The propagation forecasts were lousy," Ray McNally, N5SEZ, HARC Secretary explained, "and frankly we needed something to do during the day while we waited for the low bands to open. I found plans for building a twin-lead J-pole antenna, the kind that would be very handy in an emergency.

"Teaching people to make this simple antenna seemed like a constructive use of time." What a pun! What a project! During the day, more than 20 people "home brewed" J-poles under the guidance of McNally and Harold Buckle, WH6MD.

At the other end of the Field Day site, Greg Amancio, NH6ZS, directed people in making copper-cactus style J-poles. In between steps, Amancio also served as Field Day chef, making sure everyone was well-fed. In addition to the usual Field Day menu items, the Honolulu gathering featured sushi, SPAM and ice cream!

Rave reviews for J-poles

Both types of antenna received rave reviews. "Living back in Kalihi Valley, Shortie (NH6UW) and I always had a lot of trouble hitting repeaters. With our copper J-pole, now we can participate fully in all the nets. And more importantly, we'll be able to be heard in an emergency," said Tony Cagalawan, NH6UX, a most satisfied user.

"This is fantastic," raved John Fornof, W9CWP, referring to the twin-lead J-pole. "It turns out to be a gain antenna. I know it's not supposed to, but I calculated about 3dB gain."

And while all these J-poles were being built and tested, other Field Day participants were sitting at operating stations, scoring points. "I guess I'm a little competitive about Field Day," John Elliott, AH6BJ, laughed. "Every year I worry about our score." Elliott brought his emergency communications van, a retired ambulance fitted out with an operating position and a hydraulic pop-up tribander. Thanks to fans and good cross-ventilation, the ambulance became a very comfortable place from which to operate.

Comfort was less important to Eran Agmon, WH6R, and Tom Boyles, KH6KX, two CW fanatics who found true happiness in a tent in a far corner of the Field Day site. "We just sat there and enjoyed the 20-Meter band," explained Boyles. "I'd work and he'd log. Then he'd work and I'd log. Every once in a while, one of us would venture out to get something to eat. Before I knew it, it was already dark."

Gasoline generators powered two operating positions. The third position, also in a tent, was powered by solar energy. Hawaii is justly famous for its sunshine, and the solar panels performed nicely and provided a welcome multiplier for the contest score.

Further points were amassed when Jim Yuen, WH6GS, put his portable packet station on the air. Running off a battery pack, Yuen introduced many Field Day hands to digital operations. Particularly impressive was the TCP/IP Internet link-which happened to be working well that day.

Logistics net

"Field Day is supposed to simulate emergency operations, so It seemed to me that we ought to run a logistics net during the event," remarked Bill Stookey, WH6EL, EARC's Emergency Preparedness Coordinator. "When people arrived at Magic Island (the Field Day site), they were asked to register with the logistics tent. We had a record of who was on site.

"There was someone at each operating position, at both J-pole classes, and at the chow line monitoring our simplex frequency. That way we could locate people, bring needed supplies and generally expedite things. The logistics net generally worked well." A major problem with the logistics net, however, was that this author blew off her assigned time slot because she was very, very slow building her J-Pole!

"This was a great Field Day," EARC vice president D.J. Donnarumma, NH6HC, observed. "Everyone who wanted to got a chance to operate. Ray and Greg showed how to build da kine (Hawaiian slang for, in this case, J-poles) and there was plenty of hot food and cold drinks."

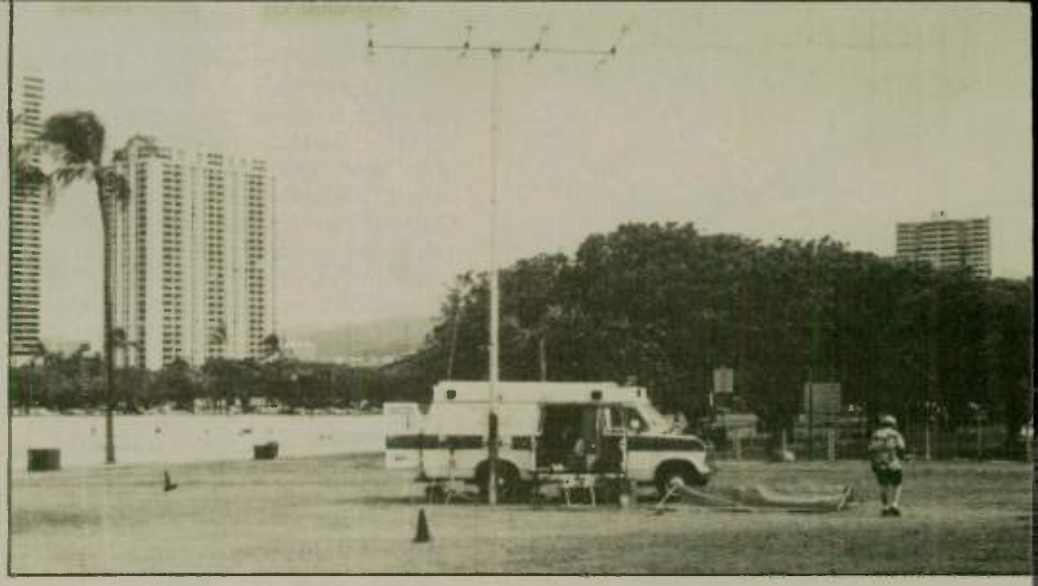
Praise for combined operation

"In an emergency, it wouldn't matter which club, if any, a volunteer belonged to. So it made sense for our two clubs to work together on Field Day," Field Day Chairman Eric Johnson, AH6MQ, explained. Actually, so many of the same people are active in both clubs that it probably would be difficult for either club to hold a separate event.

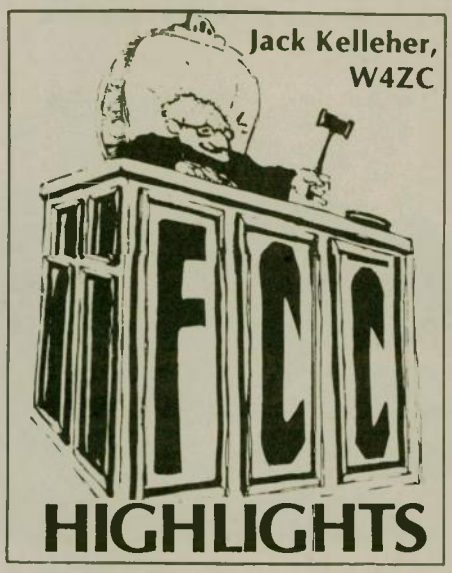
Almost everyone agrees that Magic Island, part of Waikiki's Ala Moana Park, was a fantastic Field Day site. Although its proximity to numerous high-rises makes it less than ideal from an operating standpoint, it is a "high-profile" location and excellent for demonstrating Amateur Radio to the public.

"People were really impressed when they saw what we could do," observed John Langman, WH6JC, HARC president. "We couldn't have been in a better place for public relations."

By any measure, this was a successful Field Day. The two clubs joined forces to structure an event, combining fun and practical education. And thanks to the J-pole instruction, many participants walked out with a tangible souvenir of their Saturday activity, not to mention a mild sunburn! WR



Although the site is near many high-rise buildings, Field Day participants operating from the ambulance had no trouble scoring points. *— Photo by WH6ML*



To be or not to be, Morse is the question

A lack of FCC news this month gives us the space to report on other items which might impact the Amateur Radio Service, and regulations pertaining thereto, particularly as to the ongoing dialogue for and against Morse code requirements.

International considerations

An article in the W5YI Report of August 15th under the title "The Future of Amateur and Commercial Radiotelegraphy" begins with the statement: "With the phasing out of radiotelegraphy on the high seas, can amateur radio be far behind?"

The impetus for such a statement is the development and implementation of the Global Maritime Distress and Safety System (GMDSS). All ships constructed after February 1, 1995 must comply with all GMDSS equipment and personnel requirements. Older vessels have until February 1, 1999 to conform. This and other related decisions by the International Maritime Organization (IMO) are interpreted to signal the end of the Morse code era at sea, and by inference diminish the importance of the ITU regulations requiring amateurs to be proficient in Morse code. (The current Radio Regulations of the International Telecommunication Union require that amateur radio operators be proficient in Morse code when their operations take place in the medium and high frequency bands (0.3 to 30.0 MHz).

Under the heading "The Impact of GMDSS on Amateur Radio," The W5YI article says in part: "Now that manual telegraphy is being phased out in the commercial radio sector the question is, should Morse code knowledge remain a requirement for amateur radio? Many amateurs (and professionals) do not think so." (We hasten to add that not all amateurs agree, including this writer. Despite technological advances, Morse code is still superior in terms of minimum bandwidth, simplicity of equipment, and minimum signal-to-noise ratio required for intelligible communication [We realize, of course, that schemes such as spread spectrum allow communications with negative signal-to-noise ratios]).

The W5YI article outlines the activities of a New Zealand amateur group which is already spearheading a major effort to amend the international Radio Regulations. The group is proposing modification of Radio Regulation #2735, part of Article 32 of the ITU Radio Regulations which addresses the Amateur and Amateur Satellite Service. (Incidentally, the proposal is not being made by New Zealand as a member of the ITU, but by a private corporation, ORACLE, The Organization Requesting Alternatives By Code-Less Examinations, Inc.).

Radio Regulation 2735 currently reads "Any person seeking a license to operate the apparatus of an amateur station shall prove that he is able to send correctly by hand and to receive correctly by ear texts in Morse code signals. The administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 30 MHz."

ORACLE wants the wording changed to read "Administrations may take such measures as they judge necessary to verify the proficiency in the use of Morse code of any person wishing to operate the apparatus of an amateur station". The key word is "may" rather than "shall".

ORACLE believes that amateur radio uses a wide range of communications modes, and that it is illogical to focus on just one of them. Their by-laws read in part:

"Choice of mode of transmission in the amateur service is basically interest driven. Individual operators are the deciding parties rather than any regulatory direction. Actual use of Morse code as a percentage of Amateur Radio contacts is generally decreasing with

Amateur Radio Call Signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of the first of September 1994.

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

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	AAØSS	KGØPI		KBØOTI
1	AA1KL	KD1WR	N1SZJ	KB1BKN
2	AA2TP	KF2XI		KB2RPC
3	AA3IO	KE3ON	N3TFQ	KB3BEO
4	AD4WN	KS4BI		KE4QGF
5	AB5WP	KK5BL		KC5JHZ
6	AC6EP	KO6HD		KE6LWT
7	AB7EI	KJ7CL		KC7FHZ
8	AA8QD	KG8LA		KB8UST
9	AA9LY	KF9XH	N9YKN	KB9JAW
N. Mariana Is.	KHØK		KHØDM	
Guam	WH2G	AH2CW	KH2KP	
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii		AH6NN	WH6XO	WH6CRI
Amer. Samoa	AH8K	AH8AG	KH8BH	WH8ABB
Alaska		AL7PT	WL7WV	
Virgin Is.	WP2O	KP2CD	NP2HQ	WP2AHU
Puerto Rico		KP4XJ		WP4MSJ

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time, as interests diversify. SSB voice operation, using English language, is now the most common mode for international amateur communication. These factors suggest that there is no need to have mode-specific qualification requirements when so many modes are available."

The next two World Radio communication Conferences (WRCs) are scheduled for 1995 and 1997. ORACLE's plan is to present arguments for abolishing the mandatory Amateur Service proficiency requirement to the VGE (Voluntary Group of Experts). (The VGE is not part of any delegation, but an ITU advisory committee with no power to make decisions.The ORACLE proposal could be offered a simplification of the RR's; which is a known key topic for both WRC-95 and WRC-97).

Morse and the IARU

The following is a summary of a statement, by Richard L. Baldwin, President of IARU, which appeared in *Morsum Magnificat* No. 34, June 1994. This Pro-Morse publication is edited by Geoff Arnold, G3GSR in England.

There are some groups of radio amateurs who from time to time query the necessity for the mandatory Morse code requirement in ITU RR #2735. On the other hand many radio amateurs, societies and even regions continue to support this provision. As part of an ongoing review of the Amateur Service, the Administrative Council of the International Amateur Radio Union (IARU AC) has established a "CW Ad Hoc Committee" to produce a report for consideration by the IARU AC at its meeting in Singapore in September 1994.

The Committee comprises Fred Johnson. ZL2AMJ, a Director of IARU Region 3 as Chairman, Dr. John Attaway, G3FKM, Secretary IARU Region 1, and David Sumner, K1ZZ, from the IARU International Secretariat and the American Radio Relay League as members. It is expected that after consideration by the IARU AC, the Report of the Committee may be made available to the IARU Regional organizations for further study and comment.

Reallocation

Proposed reallocation of 2.4 GHz subbands, or, things are (almost) never as bad as they seem.

Apropos of several previous items on this subject, a recent report from the FCC to the Commerce Department strongly supports continued amateur radio presence in the 13 cm band. The report disagrees with NTIA's preliminary recommendations that specific segments of the band, which the Amateur Service shares on a secondary basis, be reallocated from Government to non-Government use. While the FCC praised NTIA for its efforts, it also stated that the NTIA proposals require modification in order to not impede the growing operations by amateurs in that portion of the spectrum.

The FCC specifically cited concerns in the Amateur Radio public that reallocations would disrupt operations in the band, and that NTIA failed to meet the statutory requirement that it attempt to determine the extent to which the band could be shared with the Amateur Service. The report noted that "the largest factor affecting the future use of these bands is their existing availability for use by the Amateur Service."

Spectrum auctions - what can we amateurs expect?

A commentary in the August 3rd edition of the *Washington Post*, entitled "When there is no such thing as a Free License" discusses the recent first-ever auction of frequencies by the FCC, which netted the Government more than half a billion dollars. Is this a threat to frequencies now allocated to the Amateur Service and the Amateur Satellite Service? Maybe yes, maybe no, but the potential impact of this event should not be viewed lightly.

One statement in the *Post* article is "Ever since the late 1950s, economists have been arguing that it's insane for the FCC to hand out those licenses for free." "Those licenses" do not now include amateur licenses. Let's hope that it stays that way. But there are two sides to this coin. The other side is whether those now bidding large amounts of money for preferred frequencies will eventually look covetously at our bands.

The frequency range from about 500 to 2500 MHz is the range most sought after by those vying for licenses to exploit new "wireless" services which are on the horizon. At the same time, proposed changes in the allocation status of bands such as 420 - 450 MHz, 902 - 928 MHz, and 2300 - 2450 MHz (where the Amateur Service has secondary status) portend an increase in commercial operations in these bands. (note, in particular, the mandate from Congress to transfer frequencies from Government to non-Government use, the first result of which is a proposal involving parts of the 2300-2450 MHz band). A different and perhaps more difficult sharing scenario is anticipated between amateurs and non-Government occupants in the range 2300-2310 and 2390-2450 MHz. This may place an additional burden on amateur operations in terms of non-interference with the primary occupants. And if the primary occupants have to pay to use their frequencies, you

can be sure that interference from secondary users will "cause a fuss."

Given this new and intense monetary competition for frequencies, how do we amateurs minimize the possibility of loss? One line of defense is to adhere strictly to our non-commercial image, and scrupulously avoid providing services which can be construed, rightly or wrongly, as competition with "communications for hire." The Amateur Service is defined, in Part 97 of the FCC Rules and Regulations, as "A Radio communication Service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs. That is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest." We should go out of our way to maintain that posture.

Bullet-proof telephones

For those of you who still inquire about the makers of these 'phones (see previous coverage of the telephone RFI survey by the FCC Field Operations Bureau), they are the Western Electric/AT&T Desk Model, available from Pro Distributors, Lubbock TX (Bryan Edwards, W5KFT) 800-658-2027, and the TPXL-D Desk Model, available from TCE Laboratories, 2365 Waterfront Park Drive, Canyon Lake, TX 78133 (Tel. 210-899-4575; contact person Tom Bruce, WA5LIQ). WR

Smoke test

This discovery might be more profound than the recent work done on dark suckers (light bulbs).

As I was working on a solid state device the other day the realization of a basic truth came over me. It was so simple! So obvious! Why didn't I see it before? I discovered how ICs work, because every time you let the smoke out on an IC, it stops working. Of course! Smoke makes all things electrical work.

Remember the last time smoke escaped from your voltage regulator? Didn't it quit working? I sat and smiled like an idiot as more of the truth dawned. It's the wiring harness that carries the smoke from one device to another, and when the harness springs a leak, it lets the smoke out of everything at once, and then nothing works. The starter motor requires large quantities of smoke to operate properly and that's why the wire going to it is so large.

If improvements in wiring are to be achieved, we are going to have to find a way to keep smoke from leaking much the same as we do for air in tires.

–El Dorado County ARC

Wilson pans, praises FCC

ARRL forum, Southwestern Division convention, San Diego–August 26-28, 1994

NORM BROOKS, K6FO

"The Federal Communications Commission, in my humble opinion, is the most ungodly, ill conceived, poorly organized, badly run, bureaucratic organization it has ever been my privilege to meet." (laughter) "Let me quickly say it also has in it some of the best and most devoted public servants that I ever saw who feel exactly the same way. They are hard-working, and they want Amateur Radio to succeed and they want what is best for Amateur Radio."

These were the words of George Wil-

son, W4OYI, president of ARRL. He addressed the hundreds of ARRL members assembled at the Southwestern Division Convention at San Diego 27 August, 1994.

Wilson went on to tell us that the present administration has appointed three of the five Commissioners. "I have met them all," he said, "Those five people have 800 items on which staff work has been completed, waiting for their five signatures. Nothing is going to happen until they start signing, and they haven't signed very many lately. Where they are, I don't know. I hope they start pretty soon. We've got some stuff that's hanging fire. I think the band 219 to 220 MHz is ours, as soon as they sign that piece of paper. I think vanity call signs will be ours, as soon as some paper wends its way up to them and they sign it. There are not a whole lot of Amateur items among the other things, but there are some. They can't seem to get their act together. I hope they'll start acting in the near future.

"The administration seems to recognize this problem. What is the governmental answer to a problem? Reorganize! They are now reorganizing the Federal Communications Commission. Many of the people with whom we deal will be transferred to other duties. Some of the transferred people, frankly, we will not be sorry to see go. Not that they are enemies, not that they are not dedicated public servants, but we think that particular bureau might be run a little bit better. Some of the people who are slated to go into those slots are excellent people, devoted to doing what's right in government. No proposal that I have seen in the FCC reorganization do I see as bad for Amateur Radio, with one exception, but it is one we can work with.

"Ralph Haller, head of the Private Radio Bureau is not going to be a Bureau Chief. He will be a Deputy Bureau Chief. He is a terrific guy and really dedicated to ham radio doing well. He will still be in a position of extreme authority, so I don't feel too bad about it, except I feel for him that he was not tapped for Bureau Chief. They're bringing in a lady with a good technical background in telecommunications to head what they call the Wireless Bureau. She has been working on the congressional staff, where we know her; we know her well and think highly of her.

"The ARRL will continue to fight for every last hertz, and try to get more."

"What happens when a reorganization is announced? Until it takes place, absolutely nothing! The incumbents in the present jobs are not going to do anything because they want to leave clean slates for their successors. So don't expect a whole lot to happen at the staff level until the reorganization becomes effective.

"Our relations with the FCC people we deal with, who are dedicated public servants - every one of them - have been pretty good. I'm real proud of our relationship, but their hands are somewhat tied.

Enforcement

"One of my pet peeves, probably one of your pet peeves, [enforcement] comes under the Field Operations Bureau. The FOB is headed up by Dick Spence. Dick Spence is being transferred from the FOB to a new slot which is a good one, but don't expect to see a lot of action on amateur matters from Dick Spence. One of the reasons is he doesn't have a Chief of Enforcement right now. You need a Chief of Enforcement before you can get much enforcement. We have had three chiefs of enforcement in the past year, and there are none right now. They're waiting for the new Chief of the FOB to appoint a new Chief of Enforcement. When will everybody play musical chairs and actually move? I have no idea. The current rumor is that people are unhappy with the reorganization and there may have to be Congressional hearings. I won't predict when we'll see things start moving. I will predict that when things start to move they may move rapidly. When they start moving, I haven't seen anything yet that looks bad for Amateur Radio. My only complaint with the FCC at this time is that things - don't - move - fast - enough.

"With that as background, let's move to the 2.4 gigahertz thing. In connection with the federal budget, last year Congress said it would really be neat if the federal government would release 200 megahertz of frequencies below 5 gigahertz and make them available to the public and to auction off the 200 megahertz. Somebody has to decide what 200 MHz to release. That's the NTIA. That's the FCC for government frequencies.

"The NTIA, too are dedicated public servants. They came up with a recommendation of the 200 MHz to be released. Some to be released immediately and auctioned off."

Wilson then went on to remind us that in the last Congress, the League sponsored a bill that was passed to provide some protection to Amateur Radio frequencies. Wilson calls it the Perry Williams Bill, honoring the League's retired Washington representative who did so much work to make the bill come about. The bill requires that there be a finding by the FCC that the proposed frequencies to be released are not seriously disrup-

tive of Amateur Radio. Remember that everything we have above 225 MHz is a secondary allocation. The government is primary. So the release of frequencies means that everything above 225 MHz is up for grabs.

"The League felt somewhat pleased that the only thing they currently picked on is 2.4 GHz. But the League is fighting to retain enough of the band for those amateurs who now use it, and those who may use it in the future. We're still not out of the woods on this. We may succeed in getting a Congressional investigation whether the portions of the band proposed for auction are indeed disruptive of Amateur Radio.

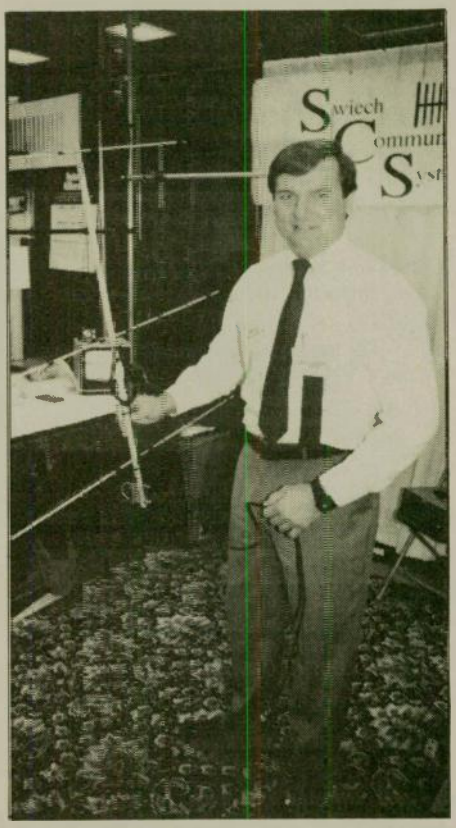
Wilson gives the military a lot of credit for protecting our frequencies in this UHF region, because those frequencies are theirs on a primary basis. They, too, will be fighting to keep frequencies from ending up on the auction block. Some day we and the military will be fighting to retain frequencies above 5 GHz, but they are not in the current action.

Wilson asked "Who knows what the National Calling Frequency is in the 5GHz band?" No one answered. "But we're going to fight for it." he promised. "The ARRL will continue to fight for every last hertz, and try to get more."

There are World Radio Conferences every two years now. We used to call it WARC, but it's WRC now. Wilson believes we may be able to get more high frequencies as early as the 1999 WRC. On the international front, amateurs should be interested in the fact that the countries in the European Common Market have banded together in an alliance called CEPT. CEPT is the telecommunications arm of the European Community. Amateurs from countries that are signatory to CEPT may operate freely from each other's country just as we do between US and Canada. In Europe, you can drive between a half dozen countries in a half day. They have solved the Amateur Radio licensing problem with CEPT. CEPT has invited any other country in the world to join it for that purpose only. Peru and New Zealand have joined.

"The League has asked the FCC to initiate action for the U.S. to join. The State Department has no objection and are ready to sign as soon as the FCC says OK. There doesn't seem to be any opposition to this anywhere, and we may become members of CEPT by next spring.

Wilson explained that the term 'Vanity calls' was not the League's term. "*We* didn't choose the term 'vanity calls'" he said, "Congress chose the term 'vanity calls,' and that's what we have to call them. It would take a lot of lobbying effort to get that changed. Over the years, every Amateur Radio item brought before Congress has had a line item that would cost the Amateur an annual fee to hold the license. We have been successful in keeping that from happening. We don't know whether we are unique in the world in not having an annual fee for hams. In Canada they are talking about having an annual fee of $40 per year to hold an Amateur Radio license. We are concerned that annual fees have a tendency to go up each time you renew. It would be better to have a one-time charge. The House of Representatives is going along with this. It now looks like we will have a one time charge of $150 for a ten-year license with a call of your choosing - a 'vanity call'. This may go into effect as early as the first quarter next year." WR



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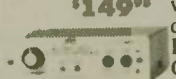

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CUBA – the COØFRC Story

NORM BROOKS, K6FO

CUBA! The very mention of the word conjures up a set of images in our minds. All we can think of is Castro... the Soviet Union...the missile crisis... Guantanamo Bay...boat people... Angola and Radio Martti. Most Americans know that the US has enforced an economic embargo against Cuba which prohibits almost every form of economic activity between our two countries. So how can we visit Cuba during an Amateur Radio contest weekend?

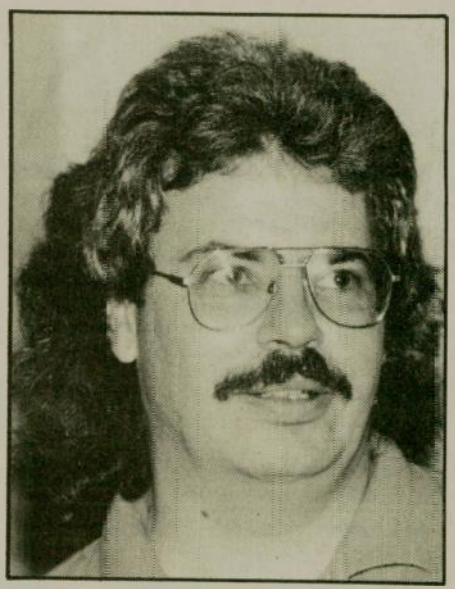
Chip Margelli, K7JA, was invited to be a member of an Amateur Radio journalistic team to visit Cuba and report on Cuban radiosporting activities. His story will be reported in the *QCWA Journal*, where Chip is the DX columnist. His wife, Janet, WA7WMB, received a similar commission from *QST*. Her story will appear in the December issue. So, along with Joe Lynch, N6CL, editor of the *QCWA Journal* and Loren Libbey, KXØO, they were invited to visit Cuba on the weekend of June 4,5, 1994.

They were to report on Cuban radiosporting activities during the ARRL June VHF QSO Party. The Cuban Federación de Radio affectionados de Cuba (FRC) had a multi-operator entry in that contest with the call sign COØFRC.

Chip conducted a forum at the ARRL Southwestern Division Convention at San Diego on August 27, 1944. Along with excellent slides, he told us how Cuban economy has suffered from the embargo, especially since Soviet support has been taken away.

Cuba's alliance with the USSR has effectively kept it out of the world market forces. Just as in Albania, when it was thrust on the world market, its currency was worthless because it had not kept up to the world market place in past decades via inflation. So, as in other third world countries, the de facto official hard currency of Cuba is the US dollar. Transportation depends on Russian made cars or worn out pre-1960 US made automobiles. The Fords, Chevys, Plymouths, or Cadillacs that are still running probably have 50% Russian made parts under the hood.

The Cuban VHF/UHF Radio Amateurs are very friendly and competent. They are enthusiastic in their craft. In setting up operations on a new band, the Americans were careful to let the Cubans be first. If any records were to be broken, the Cubans, who were the hosts in this visit, should receive the credit.



Chip Margelli, K7JA. See related picture on p. 41.

Local radio and TV reporters came to the Amateur Radio sites. Chip and the others explained how we amateurs provide a public service that cannot be duplicated. Cuban government officials are truly interested in our emergency operation. Their island is directly in the path of at least two hurricanes a year. A well established emergency network, especially on VHF/UHF is needed.

The slides showed Havana to be a beautiful city of 50 years ago, but which has fallen into a state of disrepair due to a shortage of building materials.

The American party got to Cuba via Mexico City. Mexicana Airline schedules a service to Havana several times a week. **WR**

You are a senior when: You are sitting at home on a Saturday night and the telephone rings – and you hope it's not for you.
– *MARC Communicator*, Teller County, Colorado

Packet equipment, What to buy? (part 2 of 5)

Antennas for Packet

JIM NEELY, WA5LHS

What follows may sound like heresy, but it makes sense to me and I thought I'd share it with others. Since the days of spark gap, we have been trying to improve our antennas to squeeze every bit of RF from our transmitters to the ether. For VHF packet, this might be counter-productive.

I have prided myself on the quality of VHF antennas I have used since I first ran two meter AM on MARS nets during the Viet-Nam war. It took some doing to be able to talk reliably on 150 mile paths. With some brute strength and a little luck, you could probably make yourself heard at that distance, but it doesn't do much good if you can't hear the station you are talking to. Lots of aluminum in the air and the absence of clouds with rocks in them makes the feat possible.

Given the AX.25 protocol, do we really want to be able to hear every packet signal for 150 miles? The TNC-2 and its derivatives conform to the AX.25 protocol and refrain from transmitting if another signal is heard. This feature is designed into the protocol to eliminate collisions. If your high performance antenna at 90 feet hears every packet signal for 150 miles, it will never transmit.

This brings me to the suggestion that since we are using networks to communicate with each other, we only need enough power and antenna to communicate with the closest network node. That means if you can talk to the network node you usually use with a ground plane and 10 watts, that in my opinion, is what you should use, not 100 watts and a beam at 90 feet. The rules and regulations we live by state that we should use only the amount of power necessary to communicate.

This brings up another point. If you can hit the closest digipeater or network node with your handi-talki, is that what you should use? I have suggested to newcomers to packet that they should get an old crystal controlled, inexpensive radio rather than try to use their handheld radios for packet. You may be able to hear the station and have enough power to talk to it, but you are creating a hidden transmitter and most likely causing collisions.

I think that the use of only enough antenna to make the necessary communication and enough power not to be a hidden transmitter are just common sense and it makes your life much simpler.

I hope the ideas presented here give rise to some thought and they might even explain some of our problems and the solution to them.

Radios for packet

GREG JONES, WD5IVD

As Jim mentions above, he recommends finding a crystal controlled radio. This is not a bad recommendation, since frequency agility is not typically a high priority when looking for a radio to use on Packet Radio. These radios provide decent transmit power (10-15 watts) and can be found for less than $100 at hamfests. Combine 10 watts with an outside antenna and you have a good packet radio station that can be heard generally by everyone in the local area.

Why is it important to be heard? Because of something called "hidden

terminal." A "hidden terminal" is a packet radio station that is not heard by all of the stations on a given radio channel. You may become the "hidden terminal" whenever other packeteers on the same radio channel cannot hear your frames. Whenever you send a packet, any station that "hears" your packet frames should have his/her TNCs DCD (Data Carrier Detect) respond to your packet. The DCD signal inside the normal packet controller prevents the TNC from keying the radio and sending packet frames until the channel is clear (avoiding transmitting on someone else). Without the benefit of your signal's resultant DCD holding the other station's packets off, the other station transmits directly into your packets. Whenever this occurs, the PBBS, network node, or other station hears both packets at the same time. The other station then cannot decode either station's packets. When this happens, both your station and the other stations send the same packets over again. Your TNC will retransmit the same packet frames over again until it exceeds its retry limit. Each time your TNC retransmits and the other stations on the channel can't hear you, they also retransmit! The result? Collision City! Stations time out or disconnect on retries and the channel turns to a colossal waste of time. So a radio with low power (handitalki) on an inside antenna is a good candidate to be a hidden terminal. The Commission's Rules (Part 97.313(a)) state: "An amateur station must use the minimum transmitter power necessary to carry out the desired communications." This means that the packet station must use enough power to establish and maintain communications, especially when working a packet BBS station. The key word here is "maintain," as in keeping a successful packet link or connection. Since packet radio is a shared channel resource, it is important that good radio and antenna configuration be maintained in order to allow everyone equal access to those limited resources. The real question is — do you have enough signal on the radio to ensure that all stations within range of the PBBS or network node can hear you? If not, then you're probably causing hidden terminal problems. The only solution is to either increase your power or add better antennas so that the most people in your local area can then hear you when you transmit.

There are many, many, many radios to choose and use for packet radio. The good news is that almost all amateur radios can be used with 1200 baud packet radio. The reason is that the 1200 baud signal fits within the same width as voice transmissions. The problem comes when you want to do something faster than 1200 baud. An important note is that bits per second (bps) and baud rate are not the same. The baud rate can be used to describe the width of the signal. An example of this is any 2400 bps or 9600 bps telephone modem. Both of these modems actually use 1200 baud over the telephone line, but due to data encoding can fit more bits in every baud. As a general rule, the faster the baud rate, the more bandwidth the signal occupies. The result is that anything faster than 1200 baud typically can't be simply plugged into the microphone jack. These faster baud rates require that you modify the radio in some fashion to get access to the discriminator and transmit element. This is not recommended for beginning packet operators.

As mentioned above, frequency agility is not a high priority. Most packet radio channels are set in an area, and you will eventually find one or two frequencies you use all the time. Why then purchase a $400+ radio that allows you to access every frequency if you are going to dedicate it to one or two frequencies? Something to keep in mind. If you are thinking about operating a network node or service, it is then important to remember that radios that work at your home station are sometimes not adequate for operations in remote or in commercial environments. Many amateur radios cannot handle the commercial RF environments or even handle amateur station environments when the station owner decides to operate several radios on the same band. How radios work and operate is an art and takes understanding to gain the knowledge of how to make it work for you the best way on packet radio. Packet radio requires some different things than normal voice channels, so that is important to keep in mind.

If you are having problems connecting to another station, the following might be a cause: frequency, deviation, volume, or squelch. Frequency and deviation are sometimes the hardest to check. Find someone with a frequency meter to check your transmit and receive frequencies. A not-so-accurate method is to get another radio and see what the voice sounds like over that channel. This works for many an FM radio as a check before someone comes over. Deviation is a little harder to check, but there are several inexpensive deviation meters on the commercial market and I have seen some network nodes that measure deviation and report it back in the "heard" list. More retries are caused by over deviation in our area than any other cause. Over deviation causes your signal to exceed the limit of what the other station is capable of decoding, thus some of the data is lost due to it being too wide, and the entire packet is never exchanged. Each TNC and radio has a slightly different volume setting required. Typically what you think is readable audio coming from your unit is almost always too loud for the TNC, but that depends on the TNC. I suggest plugging a speaker in parallel with the TNC so that you can monitor the signal along with the TNC. When you hear a packet, and it sounds pretty clear, then the TNC should decode it. If it does not — try changing your volume a little up or down. Change the volume setting only after several packets have been heard in this way. If you constantly change the volume, you will not be getting a good 'guesstimation' factor. If your TNC provides true DCD (Data Carrier Detect), then you should be able to operate with your squelch open (lots of background noise). Packet uses DCD to determine when to trans-

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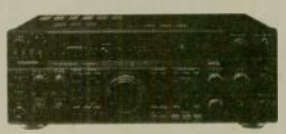
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mit. Many TNCs don't provide optimum DCD operation, and version 2.0 of the AX.25 Level 2 protocol compounds the problem. If your TNC does not have true DCD, then if you run with the squelch open, the TNC will think that someone is constantly transmitting. During band openings you might even have to adjust your squelch up, in order to eliminate distant signals and noise. You can either upgrade your TNC with a DCD kit or leave your squelch set to a high enough level as to not break until there is actual packet activity on the channel.

The most difficult part of packet radio, I think you will eventually discover, is not the packet (digital) aspect but the RF (radio) side of the equation. Radio technology can be magical at times concerning how it works and if you have someone in your local area who is knowledgeable about radios, be sure to ask their help.

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Lucas, Larry, Greg Jones, David Moore. (1992) *An Educator's Alternative to Costly Telecommunications*. Texas Center for Educational Technology, University of North Texas. Denton, Texas.

This article is provided by TAPR, the Tucson Amateur Packet Radio Corp., an international organization that started the packet revolution in the early '80s. TAPR continues today to work as a membership organization that focuses on new technology, standards, and publications. TAPR is the place to get connected on a national and regional basis. For more information contact TAPR, 8987-309 E. Tanque Verde Rd #337, Tucson, AZ 85749-9399; 817/383-0000. **WR**

Hamming tour along Pacific Crest Bicycle Trail a success

BIL PAUL, KD6JUI

Bicycling, hamming and camping in some of the most beautiful forests in the world came together for the second annual hamming bicycle tour along the Pacific Crest Bicycle Trail in late August. Four hams along with six other riders bicycled from Crescent Lake, Oregon to Weed/Mt. Shasta, California, in one week.

Most of the participants hadn't met before the trip and there were a number of firsts this year; the first women bicyclists (two), the first foreign participants (two from Germany) and the first recumbent bike. There were also two strong cyclists in their sixties.

The weather was perfect for the entire trip as the cyclists used paved and unpaved roads to cross Windigo Pass; see 7,000-foot-high Crater Lake, Oregon; and ride remote, high (7,000') portions of the Klamath National Forest along the Oregon-California border. Total mileage was about 330 miles and the overall vertical altitude gain was over 14,000 feet. Only one cyclist got lost during the trip — after having taken a solo wrong turn after Crater Lake, Jan Maurer rejoined the group in Ashland, Oregon.

The most consistent use of ham equipment was to stay in touch with one another. As might be expected, the tour separated into faster and slower groups, and on several occasions groups choose different routes for a day's ride, meeting at the same new campground at the end of the day. A ham with an HT was made part of each group. Communications were usually via simplex on 146.52 MHz. As a result, everyone knew what everyone else was doing, and there was no worry about someone having an accident or mechanical breakdown and being out of touch. There was one exception — when non-ham Jan Maurer got lost!

QRP operation along the way was not spectacular, due to being on the low end of the solar cycle. But enough contacts were made to please everyone.

Thirty-seven-year-old Dan Arbogast, NØDA, a student at the University of Oregon and father of two kids, used a home-made ground plane to make packet contacts back to his home area in Oregon, although several important nodes were down, forcing him to use alternative routings. He used a Kenwood HT, Kantronics PKS TNC and an HP calculator (for its display), which together with the antenna weighed about 7 pounds.

Thirty-three-year-old Russell Dwarshuis, KB8U, (an electrical engineer for the U. of Michigan) made eyes open along the way with his ham-fitted Tour-Easy recumbent bicycle, which was fitted with both a 2-meter ICOM HT and an HT-like Tokyo

Dan Arbogast, NØDA checks packet readout on HP calculator at Ashland, OR campground.

Hypower HT-750 running 2-3 watts on 7, 21 and 50 MHz, and powered by rechargeable NiCds. The HF antenna was a 40 meter Ham Stick mounted at the rear of the bike, with additional taps for other frequencies. Using a home-brew keyer installed on the Tour-Easy's handlebars, Russell could do CW while in motion. He had contacts on 40 meters in California and Washington State.

"I had never toured with this bike on unpaved roads before," said Dwarshuis, "but it worked out pretty well. With the recumbent, my shoulders and arms didn't get tired."

Gottfried Kloyer, DL2MFJ/AA1JQ, a 32-year-old from Germany was the most dedicated QRP-er in the group. He had heard about the trip through the English QRP magazine SPRAT, and since he had already planned to travel to Canada to visit some friends in Vancouver, it was easy for him to add the bike trip to his plans. Besides his HT, Kloyer used a handsome homebrew QRP rig running 5 watts (with a paddle keyer) into a half-wavelength 40 meter vertical antenna loaded at its base with a variable capacitance-inductance circuit. With one end high in a tree, he was able to work Japan, Alaska, Canada and Hawaii along with other stations. Because of relatively low power output from his solar panel and the relatively high

Pacific Crest Bike Tour, from upper left: Russell Dwarshuis, KB8U; Gottfried Kloyer, DL2MFJ/AA1JQ; Cory Mitcham, Liz Burke, Jan Maurer (from Germany), Rich Lesnik, Tom Hook, Dan Arbogast, NØDA. Bottom row – Dave Ogilvie; Bil Paul, KD6JUI.

current requirements of his rig, he had to limit his on-air time.

Kloyer, who has an electronics job and is studying physics in Germany, was amazed at the forests and open space in the American West. "In Europe, there are so many hams, there's never a lack of contacts — but here the hams are much more spread out and contacts are harder to get." Kloyer said he learned a lot about Americans and America on this first visit.

I brought along mostly new equipment for this trip. I was fortunate to borrow a prototype multi-band "Sierra" QRP rig soon being released in kit form for members of the Northern California QRP club. The 2-to 3-watt superhet transceiver weighs only 2 pounds, has very low current requirements, and uses plug-in frequency modules. The rig performed very well and withstood the heavy vibration of biking on gravel roads (I Q-doped most of the toroids in the rig to give them additional support).

My antennas for the trip included a roll-up J-pole antenna for my HT using 450-ohm ladder line (with which I was able to activate a repeater 130 miles away), a lightweight, fanned, inverted-V antenna for 20 and 40 Meters, and an end-fed dipole for 20 Meters. Due to the difficulties of putting up and taking down the inverted-V, I eventually removed the 20 Meter portion, leaving it in the 40 Meter mode. My QRP contacts were in California, Oregon, Washington, Canada and Hawaii, primarily on 40 Meters. My total ham equipment weighed 10 pounds.

Due to the low-current requirements of the Sierra rig I could've taken a smaller lead-acid battery with me — the 3-pound, 3.5 amp-hour one I used was overkill.

The major problem for the hams on the trip was getting antennas up in trees. Using slingshots, shooting a weight on a line up over a tree branch was easy. The problem was in getting the weight to come down from the branch. Trees in this part of the country are usually of the evergreen variety (pine, etc.), and often have sticky parts, thick foliage and/or moss. The best solution was to find a dead tree with nice dead branches. I vowed to use a helium balloon next year to avoid the cussing.

A slight problem was HF interference when two hams were transmitting at the same time. A schedule was worked out so that only one ham was operating at a time.

Beyond hamming, the trip was an invigorating experience. Meeting new people, sharing the beauty of wild forestlands, seeing deer and hawks, physically working out in cool weather, and eating tons of calories added up to an irresistible adventure. Many of the participants said they wanted to return for next year's trip, which will run from Hamburg, California to Lake Tahoe.

Russell Dwarshuis, KB8U and his recumbent bicycle. Note the 40 Meter antenna on the back of the bike.

The trip went pretty much as planned and the party of 10 people seemed perfect, so I plan to limit next year's party to the same number. Hams interested in the '95 trip should get on the mailing list ASAP by writing me at 337 Estrella Way, San Mateo, CA 94403-2940.

The 2500-mile road-based bicycle route from Vancouver, BC, Canada to Baja California, Mexico was designed to come as close as possible to the Pacific Crest Hiking Trail. A guidebook titled *The Pacific Crest Bicycle Trail* is available from Bittersweet Publishing Company, PO Box 1211, Livermore, CA 94551. WR

Silent Keys

Anna Marie Guerra, W6ZNZ

It is regret that I report the death of my sister, Anna Marie (Telvin) Guerra, W6ZNZ. She died June 30, 1994, following open heart surgery in Salinas, California.

Anna Marie and I operated our stations from St. Louis, Missouri before World War II. Her call at that time was W9ONW, and my call was W9ZVJ. Just before going off the air on December 7, 1941, we were handling CW messages from the St. Louis National Guard troops, who were at their training base at Camp Robertson, Arkansas.

Anna Marie, who was a member of the St. Louis YLRL, was also a pioneer. When war broke out, she became an instructor, teaching CW to Army Cadets at Scott Field, Illinois. The Cadets were with the Army Communication System (AACS). She married one of her students, Mark Guerra, after he received his commission. They settled in California after the war.

We were able to stay close, over the post-war years, thanks to Amateur Radio. She is missed by her seven children and ten grandchildren.

How she loved CW! "Silent Key" is a very appropriate phrase. Her fist is missed very much.--*submitted by Leo J. Tevlin, WØTV*

Howard A. Guill, K4EEJ

How do you thank someone for being your friend when he is gone? Amateur Radio made it possible for me to enjoy the company of a great person.

Howard A. Guill, K4EEJ became a silent key August 4, 1994, at the age of 91. I first contacted Howard in 1983, when I moved to Morgan County, Georgia. From that first contact came a long and cherished friendship with a fine man. I learned about his boyhood in Atlanta at the beginning of the century; about his service in the Philippines with the Army during WWI; how it was to lay railroad track in the swamps of Florida, and what it was like to fly with the Civil Air Patrol along the coast of Georgia during WWII. Howard became K4EEJ, in 1954, and was interested in 2 Meter mobile operation from its inception.He also served as AFA4EEJ, for Air Force MARS from 1959 until 1978. During his later years, Howard would continuously monitor two of our local repeaters. His assistance, advice or company was always available. If a new (or old or in between) Amateur mentioned being in need of some piece of equipment, Howard would usually show up the next day and present the needed item.

Howard leaves his daughter Jean, son-in-law Joe, three grandchildren and nine great-grandchildren.

It was my privilege to know Howard for eleven short years. In that time he was mentor, confidant, friend and inspiration. All this was possible because of Amateur Radio. Our times together, our interesting discussions and our 2 Meter communications will be missed. God speed, K4EEJ. —*submitted by Jack Olsen, K7ELG*

Old Thresher's reunion

DAVE SCHNEIDER, WØENR

The Mt. Pleasant, Amateur Radio Club was active at the 45th annual Midwest Old Threshers Reunion 1-5 September. This is an event that showcases over 100 operating steam engines, 300 antique tractors, 800 gasoline engines, antique cars and trucks, electric trolleys and steam trains, agricultural and theatre museums and Iowa's largest working craft show.

A small building owned by the local ham radio club, is located on the Old Thresher grounds in this southeast Iowa community of Mt. Pleasant. There, the club members and some visiting operators ran station WØMME on HF, V/UHF, and an amateur television demonstration, plus answering visitor's questions.

A guest book was kept at the ham shack and 189 Amateur Radio operators from 18 states signed in. There were 64 messages originated from the club station from visitors to points across North America. Fred Haberer, NØVXY, designed a pamphlet about the hobby and the club, which was made available to those interested.

When time permitted, WØMME was run as a special event station with 222 contacts logged. Local repeaters on 147.39 and 444.95 MHz were monitored for attending operators to get information.

A parade held in Mt. Pleasant's business district was televised live by Gary McMeins, NØFIB, and sent back to the ham shack a mile away for those there to watch.

One session each of the Midwest Country Cousins Net, on 3972.5 kHz, and the Iowa Net, on 3970 kHz was called from WØMME by club members who normally handle that duty from their home stations.

Local hams also watched over the handicap parking and assisted the group providing security. Plans for next year include more use of amateur TV, plus powering the radio equipment with a steam engine.

Those who helped operate WØMME during Old Threshers this year were Neil Johnson, NØSFH, Gary LaForce, NØPBM, Paul Collinson, WB9ATU, Jeff Nichols, NØIJM, Gary McMeins, N9FIB, Ruth Ann McMeins, NØVXZ, Dave Ruby, KAØFBL, Bill Barber, NOØJ, Russ Ralphs, WA6GUF, Seth Ralphs NØWCZ, Kent Lee, NØVIR, Gene Boese, NØWDB, Roy Lewis, WAØKLD, Julie Schneider, KAØUCN, Dave Schneider, WDØENR, Don Schneider, WDØAMA, and Spence Gray, NØXJU. **WR**

Bob Simmons, K6YBB

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, W&JBU.

After hamming for 36 years, and upon retiring from employment with the city of Anaheim, I packed up and moved to the "Land of Enchantment." I finally had a chance to build my dream house, one with a separate radio room where I could have all my equipment in one location. I built an eight foot desk with five drawers for logs, soldering equipment and miscellaneous parts. The shelves were built to the size of the equipment. Behind the speaker grill are five speakers, one to each receiver or transceiver. A patch bay below the speakers can patch audio to the garage, house, or rear yard. The bay also accommodates all antenna coax for the scanners and VHF gear.

The equipment consists of an ICOM 735, Yaesu FT-101 (stand-by rig), Palomar Tuner-Tuner, MFJ-941D tuner, PK 232 and C64 for Packet and WEFAX, Robot black and white slow scan television, scanners are a Yaesu FRG-9600 receiver and Regency K-100. 144 MHz gear consists of a Kenwood TR-7730, Henry 130W amplifier, and Yaesu FT-209 hand held. 440 MHz gear consists of a hand held Kenwood TH-41AT and 40 watt ampflifier. Most of the stationary equipment is powered by an Astron 35 amp power supply. I placed my computer on the left end and my VCRs on the right. The lower shelf adjacent to the C64 houses a home brew phone patch, a Vibroplex and a manual J34 CW key.

To those of you reading this and considering ham radio, believe me, it can't be beat for a fulfilling hobby after retirement. **WR**

Amateur "Hi"

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

This month's winner is John McFadzean, W6TRP, who combines his hobbies for the best of two worlds.

Amateur radio and motorcycling have been two of my favorite hobbies for a long time. Some years ago I decided to combine the activities and install a two meter radio on one of my bikes. The idea may not have been a "first;" however, it could have been one of the first motorcycle mobiles to hit the streets.

After a few hours of installing the radio, mounting a mike and earphone in the helmet, and mounting a convenient push-to-talk button on the handlebars, I was ready to make a test run. I asked my wife, Shirley, who is a licensed ham, but never did like the dangers of motorcycling, to listen to my test transmissions as I cruised around a few blocks from home.

Returning a few minutes later I asked, "Well, how does it sound?" "Just great!", she replied. Now you can make your own call for an ambulance." **WR**

SPECIAL EVENTS

Veteran's Day

The Lebanon Valley Society of Radio Amateurs will operate WT3H from 1300Z to 2200Z 11 and 12 November from the grounds of the VA Medical Center to celebrate Veterans Day. Operation will be in the 80, 40 and 20 General phone subbands, and in the Novice subbands. For certificate, send QSL and a 9 X 12 SASE to Veterans Day Station, VA Medical Center, Lebanon, PA 17042.

Plimoth Plantation

The Whitman ARC, Inc. will once again be operating a special event station at the historic Plimoth Plantation, Plymouth, MA, on Saturday, November 26 and Sunday November 27, from 1400Z to 2100Z each day. The club call WA1NPO will be used and the suggested frequencies are: 3.970, 7.270, 14.270, 18.140, 21.370, 24.970, and 28.370.

The stations will be set up on the beautiful, historical recreation of our forefathers' first successful settlement in the new world, overlooking Cape Cod Bay. A special QSL card will be sent to those hams and SWLs sending an SASE. Also, an attractive 7-1/2 x 10 special certificate with the Mayflower II in the background is available for the event. All replies must be sent to Whitman ARC, P.O. Box 48, Whitman, MA 02382.

Guglielmo Marconi, VA1S

To honor Marconi's contributions to wireless communications, the Marconi Amateur Wireless Society of Sydney, Nova Scotia, will operate special event station VA1S for the 4th year from 1-31 December using all HF bands from 10 to 160M, both CW and SSB. Marconi's memorable transmission was made on 15 December, 1902, and was heard at the receiving station at Poldhu, Cornwall, England. Certificates are available for those who wish them. The cost for the certificate is $4 (in U.S. funds) for postage and handling. Please include QSO details with certificate requests. Certificates cannot be sent if a QSO did not take place. QSL and Certificate requests will go via Alan Leith, VE1AL, 846 Geroge St., Sydney, Nova Scotia, B1P 1L9 Canada. WR

Awards

Award honors KH6IJ

ANN SHAVER, WH2E

The family of the late Katashi Nose, KH6IJ, has generously contributed $2,500 to Honolulu's Emergency Amateur Radio Club (EARC) to fund an award in his memory. The award will be given annually to a Science Fair entrant whose project pertains to communications. With this seed money, augmented with contributions from hams wishing to honor KH6IJ, the award will be a permanent tribute to an outstanding ham and educator. Licensed in 1932, Nose was a world-famous DXer and contester. For instance, he was the top scorer from Hawaii in several ARRL CW sweepstakes and won the fist *CQ* Worldwide CW contest (in 1939). He was the first amateur in Hawaii to earn such prestigious awards as Worked All Zones, Worked All States, and DXCC. Nose provided the first KH6 contact for thousands of hams the world over and was the second individual named to *CQ's* Hall of Fame. As a high-school science teacher on Kauai and later a University of Hawaii physics professor, Nose interested hundreds of young people in Amateur Radio and electronics.

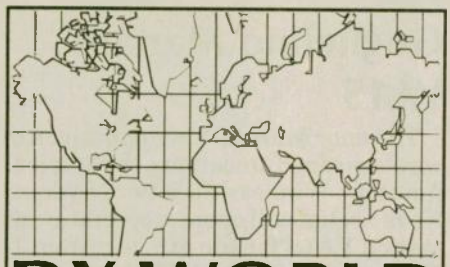
EARC began giving an award to an outstanding Science Fair project in the 1980s. Three years ago, the club obtained permission from KH6IJ to name the award after him. Recently, the award has consisted of $75, a ham-related book, a year's subscription to ***Worldradio***, and a certificate. Contributions to this fund are gratefully appreciated. To join others in honoring the memory of KH6IJ and encourage interest in amateur radio among youth, please mail a check to the Katashi Nose Memorial Award, c/o EARC, P.O. Box 30315, Honolulu, Hawaii 96820-0315. WR

Dig-dug

Two archaeologists were telling each other of their experiences in digging. One said, "I excavated a city ten thousand years old found and pieces of wire, which proves that they know about communication by wires."

The other one, not to be outdone said, "I also excavated a city ten thousand years old and did not find any wires, which proves that they knew about communicating by wireless!"

—*The Squelch Tale,* Chicago FM Club



DX WORLD

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

W-100-N

We received no valid applications for ***Worldradio's*** Worked 100 Nations Award this month.

We did receive a note from one DXer stating that he had all his cards arranged by contents in attractive albums and didn't wish to remove them for inspection. The requirement for submitting the QSL cards with applications was deleted some time ago. All that is required now is a list of confirmed contacts certified by two licensed Amateurs, preferably General class or above.

Application forms are available by sending a business-sized SASE with two units of postage.

Principality of Seborga (ØS)

Reports have it that Paul, I1RBJ, and his father operated from a small autonomous area between Italy and France signing with ØS1A and ØS1B, respectively. It is the belief that this area falls in the same category as 1AØKM Sovereign Military Order of Malta, (S.M.O.M.).

DX News Sheet reports that Claude, 3A2LF, has been issued the temporary license of ØSOC.

Inside DX, edited by Art Hubert, N2AU, reports from Mario, I2MQP, the following information: "Seborga is not an autonomous region of Italy. It had that distinction prior to the year 1750 and was sold to the Duke of Savoia, who later combined the area with the rest of the Italian provinces. Today it is a tourist attraction."

Art further called a professor of Italian history at Cornell University for confirmation that Seborga is not autonomous. Whatever the prefixes used for this one, such as ØS or 1P, are not assigned to any nation at the present time. We will have to see what else Paul comes up with.

North Korea (P5RS7)

In response to the continued questions concerning the P5RS7 operation from North Korea during the period of December 1992, through January 1993, the DXCC Desk has provided the following: While reviewing the original documentation and photographs, the DXCC staff noted some apparent discrepancies. The DXCC staff then requested some additional information. After more than one year, additional information was received. During that year, the ongoing investigation into the paperwork and photographs suggested that the operation may have taken place from another location.

Documentation in support of P5RS7 accreditation did not establish that operating permission had been granted by appropriate authorities, nor did it establish that the operation took place from the territory of North Korea. After reviewing all available information, the DXCC Desk has decided to disallow any DXCC credit for the P5RS7 operation, closing the file on this subject.

The determination is based upon Section I, 7 and 12) of the DXCC rules. Obviously, there will be several DXers rather annoyed by this decision. Some will blame the DXCC Desk and some will blame the DXpedition operators. However, no DXer has North Korea credit and the position among the elite in DXCC circles will not change. Unfortunately several DXers have contributed funds to this operation only to have had advantage taken of them. Shades of Don Miller of the 1960s?

South Georgia (VP8)

There will be a group of DXers heading to the South Georgia group for three weeks of operation this coming January. They plan on three stations, operating all bands and modes. The expected cost of this venture is somewhere between $50,000 to $60,000, and donations are solicited. If you care to help, send your donations to SGI DXpedition, P.O. Box 2235, Melbourne, FL 32902.

DXAC Matters

The DX Advisory Committee voted 8 to 7 to reject a proposed revision to Section I. 10) of the DXCC Rules to reinforce rules against the unethical action of making a contact for DXCC purposes with a call sign other than that issued to the operator. The majority felt that this could adversely affect club and other multi-operator stations, including DXpeditions. The minority felt that this rule change was necessary to prevent observed abuses.

The DXAC also rejected a petition for new DXCC country status for the Turkish Republic of Northern Cyprus (TRNC). The DXAC members stated that the TRNC did not meet DXCC Criteria Point 1, Government. The vote was 14 to 1 in favor of rejection.

In a third matter, the DXAC voted 11 to 4 to set a minimum size for the new DXCC countries. The DXAC recommendation says: "A DXCC country shall be a natural land mass of a size adequate to support a reasonable Amateur Radio operation. In the case of islands, the surface shall be dry at all times during high tide, and the physical characteristics may not be changed or modified. This includes the use of man-made operating structures. Each case will be judged on its own merits."

Implicit in the recommendation is that operation from an island must take place from the surface of that island. The minimum size recommendations now goes to the Awards Committee for action.

DXCC Desk

Bill Kennamer, K5FUV, of the world famous ARRL DXCC Desk, announces that documentation has been received and approved for the following operations for the beginning dates as follows:

GAP: THE PERFECT ANTENNA

We at GAP realize there isn't a perfect antenna. No singular antenna will scream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.

Eagle DX

Challenger DX

Voyager DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the **ENTIRE BAND**.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

A GAP antenna has no traps, coils or transformers. This is important. The greatest sources of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

CQ– "The GAP consistently outperformed base-fed antennas... and was quieter."

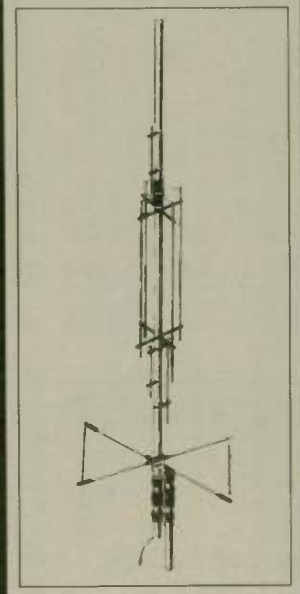
73– "This is a real DX antenna, much quieter than other verticals."

RF– "To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP, there was no comparison. Signals were always stronger on the GAP, sometimes by S units, not just DBs."

Worldradio – "These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if is fed in the center."

IEEE– "Near field and power density analyses show another advantage of this antenna (asymmetric vertical dipole): it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."

New Release: **TITAN DX**



This all purpose antenna is designed to operate 10m-80m, WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

MODEL	BANDS OF OPERATION											HT	WT	MOUNT	COUNTER-POISE	COST
	2m	6m	10m	12m	15m	17m	20m	30m	40m	80m	160m					
Challenger DX	■	■	■	■	■		■		■	■		31.5'	21 lbs	Drop In Ground Mount	3 Wires @ 25'	$259
Eagle DX			■	■	■	■	■		■			21.5'	19 lbs	1-1/4" pipe	80" Rigid	$269
Titan DX (Just Released)			■	■	■	■	■	■	■	■		25'	25 lbs	1-1/4" pipe	80" Rigid	$289
Voyager DX							■		■	■	■	45'	39 lbs	Hinged Base	3 Wires @ 57'	$399

GAP ANTENNA PRODUCTS INC.
6010 N. Old Dixie Hwy.
Vero Beach, FL 32967

TO ORDER, CALL
(407) 778-3728

DISCOVER VISA MasterCard COD

A/I1YRL	09 Oct 1993	CO2/KXØO	01 Jun 1994	T5/KA2VFF	26 Dec 1992
3A/IK4CIE	29 Dec 1993	CO2/N6CL	01 Jun 1994	T5/OZ1FJB	28 Apr 1993
3A/IK4IDW	24 Apr 1993	CO2/WA7WMB	01 Jun 1994	T5/PA3CWM	28 Dec 1993
3D2CK	08 Sep 1993	CY9/AA9GZ	11 Jun 1994	T5/PA3DFT	28 Dec 1993
3D2IJ	30 Oct 1992	CY9/KØSN	11 Jun 1994	T9/PA3DZN	18 Jan 1994
3DAØSD	24 Mar 1994	CY9/N9JCL	11 Jun 1994	T9/SP2EXN	30 Mar 1994
4K1/XE1L	24 Feb 1994	CY9/WC9E	11 Jun 1994	TA/UA3CAH	30 Apr 1991
4L1HX	01 Jan 1994	D2EYE	06 Jul 1993	TG9/JH1ROJ	30 Apr 1991
4S7/JA4FM	29 Nov 1993	D2TT	21 Jun 1994	TL8NG	12 Dec 1991
5B4/DL8KWS	29 Sep 1993	D3C	25 Mar 1994	TNØCW	07 Jul 1994
5H3BMY	16 Dec 1992	ET3VZ	11 Apr 1994	UE9WML	31 May 1994
5H3NU	01 Aug 1992	FK/JA8VE	02 Dec 1992	UE9WTL	31 May 1994
5JØJ	16 Oct 1992	FK/JAØBYS	08 Sep 1993	V59PI	01 Mar 1994
5NØ/DL9GMM	01 Feb 1994	FOØRYD	18 Apr 1994	V5SI	01 Mar 1994
5R8DK	09 Nov 1992	H44/7M1QAP	01 Nov1993	V63KW	03 Mar 1994
5R8DY	09 Nov 1993	H44/JA1JQY	01 Nov 1993	V63SS	02 Feb 1992
5TØREF	15 Feb 1994	H44/JA1KJW	01 Nov 1993	V73Q	02 Feb 1993
5X1C	01 Jan 1994	H44/JA6SJN	01 Nov 1993	VK9LD	12 Nov 1992
5X1F	20 Dec 1993	H44/JA8VE	01 Nov 1993	VK9NJ	23 Nov 1993
5X1XT	01 Jan 1994	H44/JE1XXG	01 Nov 1993	VP2V/KR4DL	16 Jun 1994
6Y5/DL2OBO	01 Apr 1993	H44/JF1UGA	01 Nov 1993	VP2V/W7YS	25 Feb 1993
7Q7XT	13 Jul 1994	H44/JR1LVB	01 Nov 1993	VP5/JM1GYQ	01 Jan 1993
8Q7AD	26 Sep 1994	HR3PWF	13 Jan 1994	VQ9LV	22 Mar 1994
38R1/N4VA	05 Mar 1994	HR3/KD5M	13 May 1994	XUØHW	05 May 1994
9A/SP2EXN	30 Mar 1994	J55UAB	31 Mar 1994	XU2UN	01 Aug 1993
9G1PW	17 Feb 1994	J73JT	30 Sep 1993	XU2ZP	01 Jan 1993
9N1EM	24 Mar 1994	J79W	03 May 1994	XU3UN	01 Aug 1992
9N1HP	30 Nov 1993	J87BZ	23 Feb 1994	XU7VK	01 May 1994
9N1UZ	17 Dec 1993	P4ØXJ	16 Jun 1994	ZB2/N5OKR	23 Oct 1992
9Q5EXV	20 Apr 1994	RØ/G3MHV	07 Jun 1994	ZF2GT	04 May 1994
9Q5TR	04 Mar 1991	RØ/KA6ZYF	07 Jun 1994	ZF2MC	23 Jan 1994
9X5DX	05 Dec 1993	R1A/K7FL	18 Jun 1993	ZK1AVY	18 Feb 1994
9Y4/I5JHW	29 Dec 1993	R3/G3MHV	15 May 1994	ZK1AW	18 Feb 1994
A35RK	04 May 1994	R3/KA6ZYF	15 May 1994	ZK1MTF	18 Feb 1994
BY4/DJØLC	28 Oct 1992	R3D/K7FL	18 Jun 1993	ZK1OFM	03 May 1994
C91BV	03 Mar 1994	R9/G3MHV	25 May 1994	ZK1QMU-	03 May 1994
C9RDR	09 Dec 1992	R9/KA6ZYF	25 May 1994	ZK1WTU	18 Feb 1994
C9RLA	18 Jan 1993	S21ZX	18 Nov 1993	ZK1XYR	18 Feb 1994
CN2JM	27 Dec 1992	T30NA	17 Sep 1993	ZK1ZRD	18 Feb 1994
CO2/K7JA	01 Jun 1994	30P	15 Feb 1993	ZSØX	31 Jan 1994

In addition, documentation has been received and approved for 5L2PP for operations on holidays only.

IOTA

Our little DXpedition to Fox Island (grid square BO59) in Resurrection Bay came off as scheduled. Propagation from that part of Alaska was not at its best, but we did manage to work the required contacts to qualify. Unfortunately, we worked no Europeans. Those who worked me may add to their list.

We were running our IC735 off of battery power to a dipole strung between two dead trees. The dead trees were a result of the 1964 earthquake that resulted in vast land shifts in the areas allowing salt water intrusion to the roots of many trees. We were almost surrounded by steep mountains, typical of the area. Our operation was from the dining room table at the Kenai Fjords Wilderness Lodge. Anyway here is a selection of what has been on recently:

AF-057	Nosy Be Island	5R8DN
AS-065	Mogador Island	CN2VA
AS-114	Baidukov Island	RW9OWM/Ø
EU-040	Berlenga Island	CQ5MEG
EU-048	Houat Island	TM2H
EU-049	Aegean Islands	SV8/DJ8OB
EU-052	Zante Island	SV1CDZ/8
EU-109	Farne Islands	GØOWE/P
EU-123	Isle of Aran	GM/DK4AP
EU-145	Culatra Island	CS7AHU/P
NA-036	Vancouver Island	CG7V
NA-069	Long Keys	K2OLG/M
NA-111	Absecon Island	K2BR
NA-159	King George Island	NU2L/VE8
NA-195	Sheep Island	WT2O/VE8
NA-196	Belcher Islands	NU2L/VE8
NA-197	Fox Island (Resurrection Bay)	N6JM/KL7
OC-029	Majuro Island	V73
EX	North Island	VK8ISL
OC-199	Dampier Archipelago	VK6ISL
SA-052	San Lorenzo Island	4TØ

SL Slovakian call system

The following arrangement of Slovakian callsign prefixes was from a German publication. I hope we have it correct as N6JM can't read or speak German.

OM1 Bratislava OM2 Bratislava-Land, Trnava, Senica OM3 Club stations OM4 Trencin, Povazska, Prievidza, Bystrica OM5 Nove Zamky, Nitra, Komarno, Topolcany, Levice OM6 Cadca, Dolny Kubin, Liptovsky Mikulas, Zilina OM7 Banska Bystrica, Lucenec, Velky Krtis, Zvolen, Ziarnad Hronom OM8 Boznava, Kosice, Poprad, Stara Lubnova, Spisska Nova Vestë.

Icelandic radio amateurs award (IRAA)

In addition to the IRA Zone 40 Award discussed in our July column, the IRA offers another award for working Icelandic stations. Also, all contacts must be with Icelandic citizens. There are no time restrictions and all contacts must be made from the same call area. Mixed mode contacts, such as CW to SSB, and cross band contacts are not valid. Each Icelandic contact will have a point value, which depends upon which band and mode you made your contact.

The number of points required for this award depends where in the world you live. If you reside with ITU zones 5, 9, 18-20 and 27-29, you must collect 98 points; in ITU zones 1-4, 6- 8, 21-26, 30, 31, 36 and 37, you need 48 points; in ITU zones 10-13, 32-35, 38-40, and 46-48, you need 28 points, and in ITU zones 14-16, 41-45, and 49-75, you need 18 points. Stateside and Canadian DXers must collect a total of 48 points to apply for this award.

To apply, prepare a list of confirmed contacts including all the contact information, which includes call, date, time, band, report and mode. Have your application certified by two licensed radio amateurs and submit with a fee of 14 IRCs to the IRA Awards Manager: Brynjólfurn Jónsson, P.O. Box 121,IS-602 Akureyri, ICELAND.

CHC

Vance, W5IJU, reports he has assumed the duties of publishing an awards directory after obtaining the copyright of the old CHC directory in 1983 (see our remarks on CHC in our

August column). Vance said he made an attempt to restart the old CHC net on 14.327 MHz but most of the old members remained with the county hunters net. Vance still tries with the net. If interested, listen near 14.327 MHz daily at 2100 UTC.

Operating do's and don'ts

The following collection of operating tips was prepared in 1991 by Paul Evans, G4BKI, and was published in *HF Happenings* by Don Field, G3XTT, in the August, 1994, issue of *Ham Radio Today:*

"Before calling always listen to the general pattern of the pile-up and the style of the controlling operator. Make sure you know which signal is the cause of the pile-up and you know that station's complete call sign. If the majority of other stations are calling away from the DX station's frequency, assume that he/she is operating split frequency. If the DX station is announcing "QSX" or "UP" or "DOWN" never call on the DX station's frequency. Make sure that your transceiver is operating in the correct frequency split mode before calling. If you are operating split frequency correctly, ignore all of the DX station frequency 'policemen,' no matter how stupid their behavior might appear. If ignored, they will go away. Don't be a frequency policeman yourself. Those calling on the wrong frequency will. . . . eventually work it out for themselves.

"Take the time to listen to which frequencies stations have just been worked on (if they were audible). Use this to establish how the DX operator is tuning his receiver. Send your entire call sign not just the suffix. This wastes everybody's time, yours and the DX station's (Exception: when operating break-in on CW and your hear the DX station come back to someone, you may have to stop 'dead in your tracks').

"Do not tune up your exciter or amplifier within 5 kHz either side of the pile-up (better still, tune up into a dummy load). On CW, try to match the speed of your sending to that of the DX station. If he/she appears to be able to copy faster than he is sending, speed up. Make sure you can manage to send at the speed you have set, but don't practice 'on the air. 'Make all the calls crisp and concise. After each sending of a single call sign, listen before giving the next single call sign. If more calls are needed, give single calls only, listening each time. Don't necessarily call right away. The DX operator has spread you in frequency, but might need calls spread in time to copy a complete call (which is his or her object)."

These are good tips. However, we feel there is an exception. If the DX station asks for partial calls, then do so. He or she is an inexperienced operator and eventually will learn. We don't like it, but the DX station is running the show.

A secret revealed

In his "DX & Band Report" column in *Amateur Radio Action*, Jim Smith, VK9NS, included an interesting tale in the January issue. Jim writes as follows: "I have now decided to reveal one of my secrets which enables me to be almost always on the lower bands at sunrise: I do not believe in alarm clocks for wake up calls. The secret is that I have a trained cat. . . .

"It seems that this cat of mine, in return for the bit of affection I squander on her from time to time, wants me to repay me. She has long realized that I am a DXer, as there have been many times that she has sat on my knees for long periods of time as I chased this or that DX station. However what I don't understand is when she knows that I am in 'low band mode.' What is the clue I give her, that indicates she should wake me up every morning at the crack of dawn?

"Oh yes, that is another secret I must share (while we're in this confidential frame of mind): I have been unable to train her to wake me up 'just before

DX Prediction — November 1994

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

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

CENTRAL USA

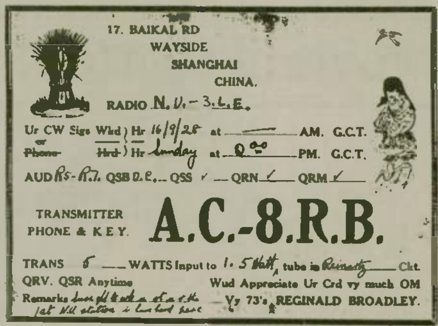
UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(12)*	8	**12	*(8)*	**12
10	*(12)*	8	12	*(8)*	*(12)*
12	*(21)*	8	12	*(14)*	23
14	26	10	**20	15	**26
16	27	*(10)*	*(17)*	*(14)*	**28
18	27	*(10)*	*(15)*	*(10)*	**29
20	22	*(12)*	*(21)*	*(9)*	**28
22	**19	*(17)*	*24*	8	**24
24	**15	*(14)*	24	8	**17
2	**14	*(10)*	16	8	**15
4	**13	*(9)*	*(14)*	8	**14
6	*(12)*	*(9)*	*(13)*	8	**13

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(9)*	10	13	*(8)*	*(12)*
12	*(9)*	10	12	*(8)*	*(12)*
14	*(16)*	10	12	*(13)*	23
16	*(20)*	10	**17	*(13)*	27
18	21	*(10)*	*(15)*	*(9)*	29
20	21	*(13)*	*(20)*	*(9)*	29
22	*(18)*	20	24	*(8)*	28
24	16	22	27	8	**24
2	12	18	24	8	**16
4	11	13	17	8	**15
6	*(10)*	*(12)*	*(15)*	8	**13
8	*(10)*	**11	**14	*(8)*	**13

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(12)*	8	*(12)*	**8	**12
9	*(12)*	8	12	*(8)*	**12
11	22	8	12	14	21
13	26	9	**22	16	**24
15	28	*(8)*	*(18)*	15	**27
17	**28	*(8)*	*(14)*	13	**28
19	**25	*(8)*	*(18)*	*(10)*	**29
21	**21	*(14)*	*(23)*	9	**25
23	**15	*(14)*	*(23)*	8	**18
1	**14	*(10)*	*(16)*	8	**16
3	**13	*(9)*	*(14)*	8	**14
5	**12	*(8)*	*(13)*	8	**13



sunrise.' It has to be at this point of time when the first glimmer of light is in the sky. Many of you will know that this is not that same thing as sunrise. So these days she realizes that I am in low-band mode again. I can almost bet you one of those lovely new Australian ten dollar notes that I will get my usual wake up call tomorrow morning. She is infallible."

Antique QSL Department

The following QSL card dates back to 1928 and was provided by Lou Bremer, W3LE, for the benefit of ***Worldradio*** readers. The date of the contact with AC8RB of Shanghai was 16 September 1928. The card indicated that he was running 5 watts input to 1.5 watt tube in a Reinartz circuit. According to the card, Lou was the first North American station which Reginald Broadley, the operator of AC8RB, had heard. Lou has remained active since that date with some 367 DXCC countries to his credit. He has retained the same call all these years, with modification of the prefix, of course.

Miscellaneous

We received a note from Leonard Robinson, W6WO, who says he lives on a busy street with all kinds of noise. He runs 100 watts to a low dipole on 14.0 MHz. His beam and amplifier are in storage. Leonard stresses that you don't need a kilowatt and a beam to work DX.

That is true and it may take more time to work one in the pileup. However, we think there is more satisfaction of working one under these conditions. There is no challenge running full power with a super duper beam up 100 feet.

QSL Routes

The following QSL routes are correct to best of our knowledge and cannot be guaranteed. We suggest that in the complete addresses given in this listing that the call signs be omitted when addressing the envelope.

I1RBJ2	–EØACQ
GØGPV	–3A/I1ZB I1YRL3
A2LF/ØSØC	–F6FNU
3D2AS	–JA2AUP
3D2CA	–I4ALU
3D2DR	–JA2BDR
3D2GS	–JA2SWH
3D2PC	–JA2DPC
3D2YH	–JA2PW
3ZØAK	–SP8BJH
4J4GDW/R6	–UA6HPR
4KØIM	–KB9XN
4L5O	–CT1CJJ
4N7ØAL	–YU7AL
4S7/JA4FM	–JA1FHK
4TØSL	–OA4ED
4U/F6FNL	–F6ITD
4U/F5LMG	–F5LMG
	4U1ITU (See Note 1)
5B4ADA	–9A2AJ
5H3JA	–AAØOB
5NØGC	– F2YT
5N3ALE	–
DJ2VZ/5T5JC	–F6FNU
5W1GC	–KE5GC
5X4A/P	–DL8AAM
6W1AE	–F5THR
7Q7CE	–IN3VZE
7Q7LA	–GØIAS
8Q7AE	–GØPBV
8Q7AF	–DL1YEQ
9A/IK2NCJ	–IK2NCJ
9A/IK2MRZ	–IK2MRZ
9A2PM	–KA9W
9G1BJ	–G4XTA
9G1SD	–NØNLP
9G1WJ	–K1SE
9G1XA	–KØEU
9I3ØZIN	–9J Bureau
9J2SZ	–SP8DIP
9K2YAZ	–N2YAZ
9K2ZZ	–W8CNL
9L2SH	–K4ZLE
9Q5TE	–SMØBFJ
9U/F5OWB	–F6ITB
9V1XQ	–G4PKP
A35SS	–AA6BB
A43OS	–A47RS
AP6YA	–W6YA
BVØO	–BV8BC
BZ4DHI	–I1YRL
BZ5DX	–BY5HZ
C53HG	–W3HCW
CG7V	–VE7RCN
CN2VA	–IK4JQO
CP4XR	–IK2UVU
CQ7P	–CT4NH
CS3MW	–DJØMW
CS7AHU/P	–CT1AHU
CS7MW	–DJØMW
CS8EGW	–CT1EGW
CYØSAB	–VE1CBK
DL2RSI/TF	–DL2RSI
DL3LAB/TF	–DL3LAB
ED1OCW	–EA1DD
ED1ONS	–EA1MC
EI2QE2	–EI4HW
EJ1D	–EI5HD
EJ4GK	–EI4GK
ER3ED	–I8YGZ
ER5KAA	–LY1DS
ES5WE/Ø	–ES5RY
EW1AAC	–F6AML
EW2CR	–NF2K
EX8DX	–F5OJO
EX8F	–DL8FCU
EY3BA	–F2CA
EY8MM	–DL8WN
EZ5AA	–DF7RX
FG/N2HNQ	–JH4IFF
FG5GZ	–F6CLK
FT5ZF	–F5NLL
GB2BF	–GM4XKG
GB2CF	–GM4FDT
GB2FC	–GM4SUC
GB2FL	–GMØLKG
GB2FM	–GM4WKO
GB2FT	–GMØMFE
GB2FW	–GMØHTH
GB2PF	–GMØHLV
GB2QE	–G1XYP
GB2SF	–GMØNBG
GB3ØIOTA	–GEPMR
GJ3OZF	–G3OZF
GMØFQV/9G1	–G4XTA
GM3USL/P	–GMØKVI
GWØHGN/P	–GWØMOI
H23W	–5B4WN
HG8SDS	–HA8PH
HG94HQ	–HA5NK
HH2LQ	–KM6ON
HK7UL	–N7RO
HL9DC	–N7RO
HL9TG	–WA7NTF
HSØZAR	–K3ZO
I1RBJ/1P1A	–I1RBJ
IG9/IT9KWF	–IT9JOF
IG9/IT9HLR	–IT9HLR
IM0/IKØQDB	–ISØJMA
IR3T	–IK3TPP
IS1A/ØS1A	–I1RBJ
IZ9G	–AA7BB
J28JJ	–F6HGO
J48QG	–SV8QG
JT1FAE	–JR3WXA
JT1M	–JT1BG
JU1HC	–JA2DDN
JWØH	–LA5NM
JWØI	–SP3ASN
KG4JO	–WI2T
KG9N/C6A	–KG9N
LY1DF	–LY3BP
N6JM/KL7	–N6JM
OHØ/OZ5IPA	–OZ5IPA
OMØSX	–OM3COK
OM5XX	–OK3CQR
OM9AAW	–DL2VAA
OM9SIAD	–OM3CTA
OM9SNP	–OM3LA
ON4JAM	–ON6SI
OQ5ØUSA	–ON4RAT
OR4LI	–ON7RT
OR5ØUSA	–ON5PL
OR5USA	–ON5PL
OS6TT	–ON6TT
P39P	–5B4ES
P4ØMX	–JR4PMX
P4ØS	–JH4RHF
P4ØYL	–JH4RHF
PYØZFB	–JH2M
RAR1FJV	–RW3GW
RG1G	–UA1DJ
RG1H	–RWI1AN
RG1I	–RW1AN
RK1OWZ	–WA7OBH
RK4WWQ	–AA4NU
RN1NJ	–UA1NDY
S21ZG	–W4FRU
S61YC	–AA5BT
S79KMB	–KN2N
SKØHS/5	–SMØMPV
SPØPKQ	–SP6FER
SVØHV/SV9	–KA5EJX
SVØHW/SV9	–WA1ECA
SV5/PBALN	–PBØALN
SV8/IØIJ	–IØIJ
T2ØLC	–KL7H/6
T31BA	–DL2ZAD
T31BB	–DF6FK
T91AAW	–9A2OT
T91DNO	–DL1DAZ
T91ELS	–9A2AA
T91ENS	–DJØJV
T91FNO	–G4JKQ
VK9IG	–JA3IG
VO9TX	–VO1TX
VP2E/DL8WAA	–DL8WAA
VP2EP	–DL8WAA
VP2ERM	–WA4BXQ
VP2MET	–N3LKB
VP8BKT	–GØKUC
VQ9XX	–WY8Q
VU2XP	–W2XP
X5EDL	–YU1FW
X5FRS	–DARC Bureau
XK3FH	–VE3JNC
XL9HF	–VE1NH
XR5IQ	–CE5BPE
XX2AS	–KU9C
YI1MH	–DF3NZ
YN1MN	–IØWDX
YZ1AU	–YU1QAU
Z37GBC	–YU5GBC
ZA1J	–I2MQP
ZD8EB	–N4WQB
ZD8OK	–N8ABW
ZF2GT	–NØTG
ZX7USA	–PR7SM
ZZ8RO	–PP5SZ
ZZ8SA	–PP5SZ

3DA0CA– P.O. Box 329, Mbabane, SWAZILAND

9G1XA– Randall Martin, KØEU, 8985 West Jefferson Ave, Denver, CO 80235

9X/F5PGP– Laurent Borde, F5PYI, l'Orme, F-42520 Maclas, FRANCE

A35CT– P.O. Box 2290, Nuku Alofa, TONGA

A61AF– Roger, P.O. Box 15825, Dubai, UNITED ARAB EMIRATES

A71AN– Rashid, P.O. Box 22199, Doha, QATAR

AP2AMM– P.O. Box 1450 Islamabad, PAKISTAN

D68CG– P.O. Box 792, Moroni, COMOROS

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So. from Hwy. 101

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(800) 444-9476
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GWØCHG– Donald Roberts, 16 MinyMor, Aberffraw, Anglesey, WALES LL63 5PQ
H44BC– Carol Bradfield, WPAS, P.O. Box 411, Honiara, SOLOMON ISLANDS
HH2MED– David, P.O. Box 1095, Port au Prince, HAITI
J28FD– 38 Chemin du Plateau, F-7500 Haguenau, FRANCE
J28GR– P.O. Box 183, F-83615 Frejus CEDEX, FRANCE
JD1AMA– Akihiko Myazaki, P.O. Box 602, Chichijima, Tokyo 10021, JAPAN
OD5ZZ– Walild Karami, P.O. Box 782, Tripoli, LEBANON
OM9SIAD– Just Jaraslov, Romanova 11, 851 02 Bratislava, SLOVAKIA
RG1B– P.O. Box 433, 195220 St Petersburg, RUSSIA
SVØHG/SV9– Henry Kenealy, 10101 Burnt Store Rd #2, Punta Gorda, FL 33950
TY1PS– Peter Schulze, B.P. 06-2535, Cotonou, BENIN
UE1QDX– P.O.Box 35, 152901, Rybinsk, RUSSIA
UE1QQQ– P.O.Box 35, 152901, Rybinsk, RUSSIA
UJ8JI– Peter, US5MKO, P.O. Box 4, ZC349670 Novopskov, UKRAINE
UN5PR– P.O. Box 73, 472300 Temirtau, KAZAKHSTAN
UR8LV– P.O. Box 32, 663241 Dickson Island, RUSSIA
VO1JEB– Fred Shaw, Bell Island, P.O. Box 726, St John, NF AØA 4HØ, CANADA
VP5VRY– Roy Young, P.O. Box 11, Providenciales, TURKS & CAICOS ISLANDS
YI1IY– P.O. Box 7483, Baghdad, IRAQ
YQ8A– P.O. Box 66, 5500 Bacau 1, ROMANIA
ZA1MH– P.O. Box 19, Tirana, ALBANIA
ZK3UC– P.O. Box 615, Apia, WESTERN SAMOA

NOTE:
1. The QSL routes for 4U1ITU should be routed via the operators.

Many thanks to the following contributors: K4LRX, KD4YOT, KC5ALW, W5IJU, N5SEP, W6WO, KUØJ, Northern Arizona DX Association (W7YS), Western New York DX Association (KB2NMV), Western Washington DX Club (WAØRJY), International DX Association (W4WMQ), The American Radio Relay League (K5FUV), The Ohio/Penn DX Packet Cluster (KB8NW), *Ham Radio Today* (G3XTT), *Amateur Radio Action*—(VK9NS), *The Low Band Monitor*—(KØCS), *Inside DX*—(N2AU), *DX News Sheet* (G4DYO), *QRZ DX* (W5KNE), and The *DX Bulletin* (VP2ML).

The problem of an extended vacation is that it can lead to frustration when returning home. There were bills to be paid, return to work, and turn out this column. During our trip we often wore our hat with our call on it. As a result we had a eyeball QSOs with VE8GA in Tuktoyaktuk, WL7AU in the Salty Dawg Saloon in Homer, KL7JA on the ferry running between Whittier and Valdez and KCØIK on another ferry running south through Petersburg. We also ran into a few who wanted to know if we flew airplanes and another chap who wanted to know how I pronounced my last name (N6JM). Of course, he was kidding me as he had several Amateur Radio friends. I eventually left my hat someplace in Petersburg and will have to get another. Hope your month of DXing was a good one and you didn't lose your hat! 73 de John N6JM. WR

Top ten reasons a ham would make a great president

PAUL R. VALCO WB8ZJL

10. The base of the thousand-foot tower in the Rose Garden becomes an important background for all presidential photos.

9. Gets to give four of his friends the really short and cool call signs, "W," "K," "N," and "A."

8. Invites high-scoring Field Day team to lunch at the White House.

7 Has the National Park Service mount a stacked pair of 80- through ten Meter, Log Periodics on the peak of the Washington Monument.

6. Uses foreign summit meetings as an excuse to have really incredible DXpeditions.

5. Says that Detroit truly is a third-world nation, permits new country status.

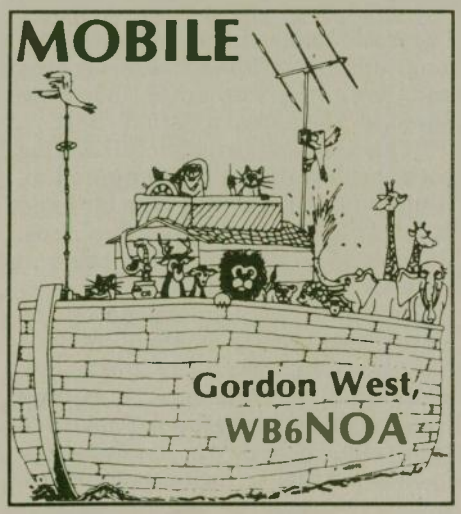
4. Declares "Dayton Weekend" a national holiday.

3. Packs the Supreme Court with hams, overturning all previous tower-variance denials.

2. Signs a bill making the use of the word "destinated a capital offense.

1. Revokes United Parcel Service's use of 220 MHz and reassigns them to 27.195.

—*Tuned Circuit*, L'Anse Creuse ARC, Utica, MI



Phantoms under the dash

Many Amateur Radio operators are asking new car dealers what may happen if they install two-way radio equipment and press the mike button. Will it blow up the car's central computer? Will the brakes lock up? Will a CQ call cause the engine to sputter and die?

Chances are, the sales department may not have a definitive answer. Hopefully they can research the new vehicle's warranty to double-check that a two-way radio on board won't invalidate the warranty on your new car's brains.

General Motors' personnel indicate that a properly mounted transceiver and grounded antenna system should not pose any problems to the vehicle when you hit the push-to-talk button. Other hams with the same new vehicle might also offer testimonies on whether or not transmitting from your two meter or HF equipment causes adverse effects to your particular type of vehicle.

I have never seen a properly installed single or dual-band, 50-watt mobile blow an onboard computer, or cause the vehicle to malfunction. Now I have seen a high-frequency, 100-watt transceiver do some of the following in new vehicles: 1)Modulate the door-ajar reminder; 2)Elevate the readouts on some electronic-dash displays; 3)Flash the headlights on high beam; 4)Cycle the door lock mechanisms.

But I haven't seen an HF transceiver with a lightweight whip antenna do any serious damage to a vehicle's central computer, or cause the vehicle to simply go bonkers. Bells and whistles yes, but bonkers, no.

But what about the vehicle doing stuff to your VHF or HF set-up? For every one case of RF interference to the vehicle, I have found as many as 50 cases of vehicles interfering with ham reception.

Ignition noise—especially in Fords—is always a problem on high frequency. You can go with factory-recommended, high-tension-resistant wiring, and special spark plugs to help minimize the spark plug racket. Trying to minimize the noise at its source is always the best way to go. However, on new vehicles, you are sometimes stuck with the wiring that is part of the new vehicle that cannot be altered or changed. In this case on high frequency, try out different HF transceivers on a temporary basis, and go with the transceiver that has the best noise-blanker timing to coincide with the repetition rate of your spark plug noise. Some radios will do the trick nicely, and others might not touch your particular type of spark plug racket.

On dual-band and single-band VHF/UHF operation, engine noise is not the big headache. Your major problem on brand new and relatively new vehicles is phantom AØ signals popping up on frequencies exactly where you don't need them.

Case in point, Chevy Blazers which can often be heard AØ from 146.500 to 147.400 MHz. "The signal is there whenever I turn on the key. It's relatively solid, and can't be budged." Comments Nancy Alkire KJ7AT, a Blazer owner frustrated by the noise problem. You may have mistaken this signal for some idiot ham down the street sitting on his microphone, but in reality, it's coming from your *own* vehicle.

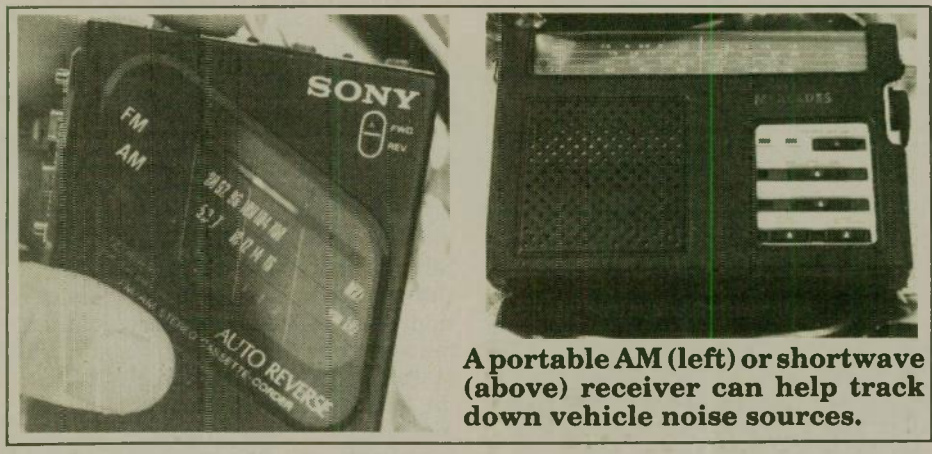
How can you tell? Run your mobile rig from 144 to 148, or 440 to 450 MHz, or on each of the worldwide ham bands, and find an elusive unmodulated signal that just doesn't seem to change in signal strength. Now attach a base-loaded whip antenna with a long length of coax to your installed radio, and begin to move the antenna away from the vehicle. The signal will probably disappear when you're more than five feet away with the mobile antenna. Now put that antenna next to the speedometer, and listen to the racket. The signal strength should climb to above S9. Three guesses where the signal is coming from—straight from the insides of your vehicle's computer.

On a handheld for two meters or 440, tune around until you hear the steady signal, and then hold your transceiver right next to the instrument cluster. The signal should be rock-solid. It's coming from your computer.

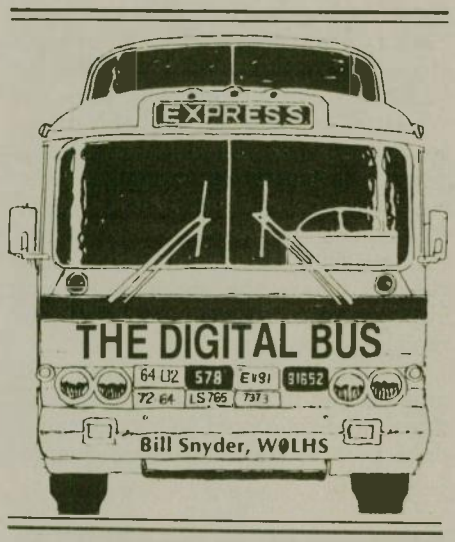
There is no easy cure—short of selling the vehicle, and hoping that another similar vehicle will have the annoying tone somewhere else where you don't do a lot of two meter/440 or HF operating. Taking the vehicle back to the dealer will only lead to frustration. They will have no idea what you're talking about.

These spurious emissions travel onto your vehicle wiring, and are next to impossible to filter, bypass, or shield. I have found that relocating the antenna on the trunk lid will sometimes help minimize an offending carrier. If you can find a spot that tends to null out the carrier, let's hope it's a good one for that antenna system.

If you are planning on purchasing a new car, take your favorite band and equipment into that vehicle, and sweep the vehicle with the key turned on to make sure it doesn't have any emissions on your favorite operating frequency. When you're spending thousands for a new mode of transportation, there is absolutely no reason why you can't get a vehicle that is RF clean. So check this out before you plunk down the dollars. WR



A portable AM (left) or shortwave (above) receiver can help track down vehicle noise sources.



One of the perks of doing this column is the enjoyment I get from the mail I receive. Some of it comes via packet — when the system is working (*as I write this, it ain't)* — and some comes by the U.S. Snail (*as one of my friends calls our postal service).* I've had mail from Robert "Mac" McAtee, AG5F, in Abilene, Texas before, but his recent letter in response to my September column was a joy. Not only the content was interesting, but the fact that his typing was easy to scan into my computer was a plus! Here is an extract from it (*with my comments parenthetically in italics*):

"Ho Bill,

"I've written you before on something or other. Anyway, to bolster your ego, your column is the first I turn to when I get my ***Worldradio.*** (*Yes, Mac, flattery will get you somewhere!*) I was surprised in the September issue when you mentioned the GPS (*Global Positioning System is how I read the acronym*) unit. I've been knee deep "trying" to use my recently purchased unit. I find information on the beasties darn hard to come by; about like packet radio when it first hit the scene.

"You noted that you've seen the GPS receivers selling for $600. Probably true when you wrote the column. I have been mouth-watering for one for about a year and the $1400+ price tag was a little too much for my Social Security budget.

"A recent camp out for 11 days in Pennsylvania, and getting lost in the deep forest, (only temporarily, of course), made me want a GPS unit more than ever. Understand, it's a gadget I could easily live without, but gee, it's a state-of-the-art gadget!

"Lo and behold, when I got my Gander Mountain outdoor catalog upon returning to the great state of Texas, I saw one on the back page for $399. I called the folks at Gander and the support guy patched me through to a gal at the Magellan outfit that put their name on the unit. She answered all my questions, so I whipped out my plastic.

"Thus I got the gadget and been playing with it daily. You hear many tales from the unknowledgeable about the accuracy of the position indications. From the lack of available information this is understandable. You state 50 feet 'or thereabouts.' Close 'nuff for government work. This Magellan 'Trailblazer' discloses in their specifications an accuracy of 12 meters, RMS in 3D operation without SA. I have no idea what RMS is; the 3D is an option of elevation setting and the SA is some unknown abbreviation for an error that the Department of Defense cranks into the satellite for security.

"The reference guide and field guide they include with the gadget is very skimpy in my opinion. However by some coincidence they do include as a source a book called *A Comprehensive Guide to Land Navigation With GPS* using this very receiver! Yep, I forked over the $29.95 and got a little more information on operation. Of course, I'm dense. Understand?

"I have a single engine commercial pilot rating but still get lost in a phone book. Anyway this book doesn't really give me the ABC stuff I need. I do have a video of operation on back order; maybe that will help. Ennnny way, I've made many checks of location by longitude and latitude around my area and they are very accurate when compared to a sectional aviation chart.

"It also provides a magnetic heading with the deviation already figured in. It picks up the time from the bird and is accurate within 300 nano seconds. Close 'nuff to get me to the table in time for lunch.

"I wouldn't want to depend on the elevation it reports for the location. I took a reading just today and the elevation jumped back and forth from 69 feet to 1900 and something. That could ruin your whole day if you depended upon it for flight. Such erratic operation is most likely due to operator error.

"The way I read things, it would be possible to get a fix on your location just before entering an unknown jungle, taking about 2 minutes to achieve. Then walk just any way you want and every 10 minutes take another fix (*up to 100*) and store it. I figure you'd be mighty tired of walking afore you got all them 100 fixes! Actually, you can only use 15 of them for waypoints. Anyway, when you're ready to return for a cool one, you can use the backtrack function to struggle back to your Land Rover. Sounds great, doesn't it? Unfortunately, there had better be a lot of clearings in that jungle because the receiver has be able to see 3 to 5 satellites to do any good.

"The initial plans were to have 24 orbiting birds, but I read a bulletin where they put number 25 in orbit this August. Something I read said they wanted two spares. This GPS receiver also gives many other goodies on the display like your SOG, Speed Over Ground when your walking or driving, and estimated time of hitting your target. It gives you a visual indication of your movement to the target and shows how far off course you are in case you've had too many cool ones.

"All in all, the 'Trailblazer' is a whole lot of fun to play with. Who knows, someday I may even use mine for real. Oh, there's a BBS in Virginia that has all sorts of navigation information on it, including info on the GPS. It's called 'The Civil GPS Information Center'. It is operated by the US Coast Guard.

Phone 703-313-5910.

"I run a phone line BBS, without any files on it, and the number is 915-672-5225. I shut down my packet BBS due to all the junk mail on it. In fact, I almost totally quit packet because of the junk."

73 de Mac

PACKET STUFF

I agree with Mac, there is too much junk mail on the system. I have the local club station BBS forward only messages with AMSAT heading or those personal messages addressed to me. It makes it really nice to have only the stuff you want and not all the junk cluttering up the files.

While I'm on the subject of packet, I should probably comment on the latest glitch to hit our local system. Lately, I have been getting messages from out of our area with the body of the message missing. All I get is the header and the phrase, "File not found" when I go to read it. That is apparently happening in the station about 100 miles from me that forwards to our local BBS. When I first had it happen I sent the SYSOP of the offending station a message to look for the problem. Back came his reply message and when I read it, the screen came up with the same old "File not found" business. Strange things happen as the packet system gets older and perhaps wiser, we hope.

Just before sitting down to write this paragraph, I checked my BBS and found two messages from the down-the-road station. They both had the same originating number. The first one said "File not found" when I read it on the screen. The second one contained text and said the SYSOP had found the problem! Hooray!

NOSTALGIA STUFF

I have been slowly going through the thousands of Kodachrome slides I took during my working years and culling shots to donate to the North Dakota State Historical Society archives. I came across a page of shots I took of our ARRL Field Day efforts in 1985. We had our station located in a wooden pioneer block house at Fort Abercrombie, North Dakota. The fort is a reconstructed model of the army post that opened up the Dakota Territory in the last century. It is quite picturesque.

I planned the photos for a magazine cover and Dame Nature cooperated. She sent me a thunderstorm, a rainbow and everything else for a beautiful background. The club had a 3 element beam with an Armstrong rotator (that's a long rope with a strong-armed ham pulling on it). The beam elements really stood out brightly against the retreating thunderstorm sky. To me, I had the perfect picture for the cover of the *QST* issue listing the results of the 1985 field day event, so, I mailed it to the ARRL.

Back came the editor's verdict; it was scheduled for the November '85 issue. But when that issue came out the cover had a montage of space stuff on it — my great field day shot had been bumped. Boo hoo! I'm still wounded!

EAVESDROPPINGS

I'VE STARTED WORKING ON MY NEW ANTENNA LASH-UP FOR FIELD DAY, BUT IT IS SO COMPLICATED THAT IT WILL TAKE A WEEK TO PUT UP EVEN WITH A PLATOON OF NATIVES FOR HELPERS. . . I FOUND A 1933 QSL CARD FROM W9RPD THAT TOLD OF THE RIG BEING A 6A6 OSC, A 6A6 AMP AND TWO 6L6S IN THE FINAL— WHAT'S A 6A6? . . . MY WIFE HOPES THAT THE NFL FOOTBALL PLAYERS WILL GO ON A REALLY LONG STRIKE SO SHE CAN GET HER TV SET BACK. . . I RARELY SEE THE END OF A TV SHOW BECAUSE MY EASY CHAIR IS TOO EASY. . .THE THING I REMEMBER MOST ABOUT BUILDING HAM GEAR IS GETTING THE SOLDER OUT OF MY TROUSERS THAT STUCK THERE WHEN I FLIPPED THE IRON TO GET RID OF THE SURPLUS HOT SOLDER ON THE TIP. . .WE SURELY GET A GAGGLE OF LAUGHS OUT OF A GIGGLEHERTZ OF GAMES ON OUR NEW GIGA SIZED COMPUTER...I'M PREPARING FOR THE TRANSITIONAL PERIOD WHICH COMES BETWEEN RAKING LEAVES AND SHOVELING SNOW . . . . I LOANED MY CAMERA TO SOMEONE I DON'T REMEMBER . . .THERE'S SO MUCH STUFF ON THAT CD-ROM I'M NOT GOING TO BOTHER TRYING TO READ IT ALL — I'LL LET MY KIDS START ON IT. . . I WENT TO MY 50TH HIGH SCHOOL REUNION THIS SUMMER AND DIDN'T RECOGNIZE ANYONE UNTIL I READ THEIR NAME TAGS. . .AS MY NORWEGIAN UNCLE WOULD SAY SEMPTY TREE TO YOU AND YOURS.

Write me: Bill Snyder, WØLHS, 1514 South 12th St., Fargo ND 58103. My packet address is WØLHS @ WØLHS.#SEND.ND.USA.NA 73 DIT DIT. **WR**

Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

Army MARS again showed its capability and its commitment to serving all Federal agencies with communications support when needed. During a 30 hour period on 2 - 3 August 94, 1033 Army MARS stations participated in the SHARES/Army MARS OPLAN 94-2 emergency communications exercise. This participation figure is based upon those reports which were submitted and received during the exercise parameters. Florida, Louisiana, and Texas led the nation in total members participating. The parameters of the exercise called for states to maintain only their normal state net structure during the exercise. Had the full force of the Army MARS Emergency Net OPLAN been invoked, the numbers of operators participating would have been much higher. SHARES was very happy with the outstanding response and the professionalism of Army MARS. This reflects the same opinion expressed by FEMA after Army MARS participated in the exercises with them. Army MARS has proved its capability of serving different agencies with different communications structures with equal effectiveness.

It is significant that, simultaneously with the exercise in progress, Western Area Army MARS sent a stream of EEI (Elements of Essential Information) reports to DOMS relative to the fires raging in the western states. Thus Army MARS is most capable of maintaining the flexibility necessary to adapt to any situation which might arise. The vitally important exercise progressed at the same time that vitally important real-time real-action reports were being forwarded to the Pentagon. It all states, all other traffic was also handled. A triple play, if you will, was very effectively handled by Army MARS during this period.

What is SHARES and why is Army MARS participating with the SHARES system?

The National Communications System (NCS) has been set up to plan for contingency telecommunications to support national security and emergency preparedness (NS/EP) requirements of the Federal Government. It was discovered that many of the Federal Departments and agencies had established HF radio systems to support their NS/EP communications requirements. Like Army MARS, they found that HF radio is an ideal medium for supporting NS/EP. One major problem still needed to be addressed, however. It was found that while each Federal Department and agency had set up a highly workable HF system, there was little or no interoperability between the agencies. In short, each had been assigned its own frequency, and the individual entities could not talk to each other. In order to solve this problem, the NCS established and developed the SHARES HF Radio Program which was "fielded" in 1991. Since that time the SHARES program has been expanded to include resources from Federal, State, and others interested in participating in national security and emergency preparedness.

SHARES is the acronym for SHAred RESources — the sharing of common frequencies and protocols for operation. There are now 43 entities participating in the SHARES program, one of which is Army MARS and another being DOMS (Director of Military Support).

DOMS HF radio station, located in the Pentagon, became the 1000th HF radio station to join the SHARES program. LTC "Dutch" Thomas commented that HF is an important tool used by DOMS as it goes about its business of providing military support to civil authorities, and that participation in SHARES provides DOMS with a most valuable tool for maintaining communications with Federal agencies and other agencies as they join the program.

With DOMS maintaining such communications, essential information must flow to DOMS continuously. That is the new responsibility of Army MARS. That flow of information via the new EEI reporting system will make the entire Army MARS-DOMS-SHARES system even more valuable than before the inclusion of DOMS in the SHARES system. The value-added feature of the EEI Reports of Army MARS cannot be overlooked. Army MARS is the only communications systemwhich can provide the information so vital to the SHARES agencies via DOMS. No other communications network has the capability of Army MARS and its 5000+ members.

Chief, Army MARS Robert Sutton expressed the sentiments of all Army MARS members when he said, "Army MARS remains. . . a valuable Army and national asset."

Army MARS...here to serve...
proud...professional...ready. WR

Visit Your Local RADIO CLUB

ALABAMA

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

ALASKA

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

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

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 15 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., 1515 E. Osborne, Phoenix. Info: (602) 631-4879.

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

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

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

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

CALIFORNIA

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

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

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

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

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

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

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., 3rd Sat., 8:30 a.m. (408) 623-2462.

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

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

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

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (510) 447-5414.

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

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

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

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

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

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.

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

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

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net every noon on rptr. W6AK/R 146.91(-). Steve Cates, KC6TEV, (916) 391-7341 or Gary E. Bryant KB6KZZ, (916) 646-1171.

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

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

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

Shasta Cascade Amateur Radio Society, (SCARS). 2955 Shasta St., Redding, CA 96001. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m.

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

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

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

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

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.

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

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

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

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

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. office, 17210 Oak St., Fountain Valley. 145.440(-) PL 136.5. For info: Joe, KA6LPZ, (714) 963-4426.

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

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

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Training Rm. of the Davis PD, 226 F St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375. Talk-in 144.430.

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

FLORIDA

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

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

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

Port St. Lucie ARA. Meets 1st Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Wes Sammis, W2YRW, (407) 878-4739. Call in 146.955(-).

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

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

GEORGIA

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

HAWAII

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

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

IDAHO

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

ILLINOIS

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

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

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

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

Hamfesters Radio Club, W9AA. P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.07. Info: (312) 974-3291.

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

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

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

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

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

York Radio Club. Meets 3rd Fri./monthly, 8 p.m., Elmhurst College (Science Bldg.) Elmhurst, IL. Net Mon., 8 p.m. W9PCS/147.42 simplex. Rptr. 442.875(+).

MASSACHUSETTS

Wellesley Amateur Radio Soc. & Babson Wireless Club. Meets 1st & 3rd Thurs./monthly, 7:30 p.m., Gerber Hall, Babson College, Forest St., Wellesley, MA (Sept-June). Talk-in 147.03(+). Info: J. Driscoll, NV1T, (617) 444-2686.

MICHIGAN

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

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

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

MISSISSIPPI

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

MISSOURI

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

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

NEVADA

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

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 9 a.m., Penny's Kountry Kitchen, 337 E. Plumb Ln., Reno. Info: (702) 356-8200. Call in on 147.30(+) MHz.

NEW HAMPSHIRE

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

NEW JERSEY

10-70 Repeater Assn., Inc. 235 Van Emburgh Ave., Ridgewood, NJ 07450. Meets 1st Wed./monthly (except July & Aug.), 8 p.m., VFW, Valley Rd., Clifton, NJ. Rptrs.: 146.70(-), 224.84(-), 444.15(+).

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

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

NEW YORK

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

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

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

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

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

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

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WB2VUK (914) 631-7424 or call WECA INFOLINE (914) 962-9666 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A.

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

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

NORTH CAROLINA

North Carolina Alligator Group, (NAGs). Meets Mondays, 28.35 on the air, 8:30 p.m. local time, Sat. 10 a.m. on 7240. "The Alligators" — all mouth, no ears.

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

OHIO

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

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

Firelands Area Rptr. Assn., (FARA). Meets 4th Tue./monthly, 7 p.m., Ohio Veterans Home, Sandusky, OH. WB8LLY rptr. 146.805(-). Net Sundays, 8 p.m. Info: FARA, P.O. Box 442, Huron, OH 44839.

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

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

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

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

Triple States Radio Amateur Club. Meets Wed./weekly on 28.48 at 8:30 p.m., 7260 at 9 p.m. and Sat. 6 p.m. on 7240. Rptrs. 146.91(-), 146.715(-). P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

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

OREGON

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

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

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

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 311, Douglas St., Roseburg, OR. Info: W5PII/R 146.90(-) or (503) 673-1310.

PENNSYLVANIA

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

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

TEXAS

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

VIRGINIA

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

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

WASHINGTON

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

WEST VIRGINIA

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

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

WYOMING

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

MEXICO

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

The Youth Forum

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

Who needs baseball, anyway?

So you say you're a sports fan. If that's the case, your world has probably been somewhat empty lately. Sure, there is football, but look what happened to the baseball season.

But who needs baseball, anyway? If you like action, excitement, skill and strategy, then the sport of Amateur Radio contesting is probably right up your alley.

Exactly what is contesting though? How does the sport work and what are its objectives?

First of all, Amateur Radio contests are generally weekend events which usually last about forty-eight hours. And while no two contests are exactly alike, they all share the same basic objective—to make as many contacts in as many different places as possible in a limited time period.

Many Amateurs have preconceived notions regarding contesting and contesters. Perhaps you're one of those people who is interested in the sport, but is intimidated by all those "big guns" and super-human operators you hear making three hundred contacts in an hour. Or maybe you've heard that the only way to really compete and enjoy these events is to have a separate amplifier for each band with five stacked yagi arrays in the back yard. This simply isn't true. While there is a handful of gifted operators who can make thousands of contacts in every zone in a weekend and who compete to win, the majority of Amateurs simply work at their own pace and make a few contacts purely to have fun. And, while we all may wish we lived on a hill overlooking the ocean and our backyard included five towers, the most modest of stations still allows you have fun and compete. After all, if it weren't for all those casual operators, the die-hard contesters wouldn't make very many contacts.

Hopefully by now you're ready to fire up the rig and give this new sport a try. Before you get ahead of yourself, though, there are a few more items which might be helpful.

Scoring:

Depending on the event, each contact receives a certain number of points. (These points are often referred to as QSO points.) The final score is then multiplied by the number of different states, countries, zones, etc...contacted. (These designators are referred to as multipliers.) In reality, scoring isn't quite that simple, but hopefully now you have a basic understanding of how the system works.

Contacts:

Making contacts (QSOs) is the most important factor in a contest. It is important to realize that contest QSOs are not like ragchew QSOs. In a contest situation, the other station is probably only going to be interested in one thing-the exchange. The "exchange" is the information which the contest rules require you give to each station contacted (signal report, country, zone, etc...) and vice versa. Even if you are operating casually, the station you're working (contacting) may not be. So, as a courtesy, keep contest QSOs as brief and to the point as possible.

There are two basic methods of making contest contacts. The first technique is referred to as "running." Running stations involves one station operating on one frequency by calling CQ and waiting for a response. Running is the quickest way to make contacts and can be exciting if you have several stations calling. However, in order to be really successful at running, a great deal of practice and a fairly powerful signal is needed (especially early in the event). The second method of making contest QSOs is known as "Searching and Pouncing," or S and P (also referred to as "hunting and pouncing"). S and P is just what it sounds like. This technique involves tuning for needed stations and attempting to work them. This method of operating is a good option for low power stations and is also essential, even for the largest of stations, when looking for multipliers.

If you think you've found your supplement for football and baseball, the coming months offer plenty of opportunities to practice your contesting skills. In fact, during the autumn and winter months, some sort of event is held nearly every weekend. The *CQ* World-wide, ARRL Sweepstakes, 10 Meter, Novice Roundup, and International DX contests, along with the *CQ* WPX event are all only a few weeks or months ahead. Incidently, the ARRL International DX contest offers a plaque for the highest phone, CW, and mixed modes categories for Amateurs under age eighteen. Details about the various contests are available in the "Contests" column of ***Worldradio*** and in several other Amateur publications.

Remember, the most important aspect of any facet of Amateur Radio is to have fun. Nobody wins a contest on the first try. Becoming a great contester takes a lot of practice, patience and dedication. But even if winning contests isn't a priority, anyone can enjoy themselves and pick up a few new contries or states at the same time. Good luck and see you in the pile-ups—AAØCR. WR

QUARTER CENTURY WIRELESS ASSOCIATION INC.

John G. Troster, W6ISQ

Marathon Rumor

Auto-Call, newsletter of The Foundation for Amateur Radio, which handles the selection of QCWA's student loan program, regularly features a couple of fine columns written by two QCWA officers. Veep Jack Kelleher, W4ZC, writes about the FCC, and Secretary John Swafford, W4HU, writes up ARRL activities. Incidentally, past editor of *Auto-Call* was QCWA Director Ethel Smith, K4LMB, now retired.

My reason for mentioning this, in addition to the fact that *Auto-Call* is always good reading and worth a mention, is that the September issue, following W4HU's article, featured a you-couldn't-miss-it announcement, neatly boxed with lots of white space, of the Marine Corps Marathon in the DC area. Seems this did not go un-noted by certain influential (names withheld) parties, and it is now rumored, and only a rumor at this time, you understand, that Leland (tench-hut) Smith, W5KL, was requested to organize a QCWA tag team to compete!

Both the above-mentioned columnists on the strength of their nimble, athletic prowess at the keyboard got the tap, as well as QCWA Director Walt Brink, W3WPY, who lives conveniently nearby, to participate and uphold the honor of the QCWA Corps in this event. Through special dispensation from USMC, our trio, pleading QCWA privilege, will be allowed to run the race as a relay team, each running one third of the 26 mile 385 yard course. In addition, Coach W5KL recruited Ethel Smith as Training and Conditioning coach and also to run alongside the runners with smelling salts as needed. Past President Harry Dannals, W2HD, was enlisted as Pace Setting coach and cheer leader. The team is reported to be now in secret training somewhere in the Washington Area.

Introducing.....

Most of you know your own ARRL Section Communications Manager. You probably know an amateur publication columnist too. And some of you know radio magazine editors. But how many of you know one fella who is all three!! That's our boy this month, Joe Lynch, N6CL.

Joe is SCM of Oklahoma, VHF columnist for *CQ* magazine and editor of the *QCWA* Journal. On Wednesday nights he goes to choir practice. On top of all that he travels the Southwest VHF contesting and putting grid squares on the air, and just this year even went to Cuba for the VHF Contest.

Joe became interested in radio in San Diego under difficult circumstances. His mother had passed on when he was in fourth grade and his father, finding he could not adequately care for Joe and his younger brother and sister, reluctantly put them into an orphanage. It was there in the day room, that Joe happened on a college textbook about radio. How and why it got there no one knows. He hardly understood the words, but he read it and was fascinated by the whole idea of radio. Happily, in another year, after fifth grade, Joe and siblings went home to father and a new stepmother.

Walking around his new neighborhood one day, Joe spotted an antenna, and with a youngster's charm and enthusiasm, knocked on the door. "Is this a place where an amateur lives?" "Come on in and sit down in front of the radio," said the man. Joe began twiddling the knobs on the 75A4 and listening and twiddling some more. Finally, the man told Joe, "time to go son, and come back when you grow up and stop twiddling knobs." The Elmer-to-be was Cliff Evans, K6BX, whom many of you will remember about 30 years ago as one of the first-ever publishers of a voluminous loose-leaf book about international awards and certificates. After he became licensed, Joe spent much time with Cliff learning about publishing and helping Cliff with his many endeavors.

Joe 's radio interest got a push when he spotted the amateur license plates on the car next door. It belonged to Earl Wiederhold, K6SMT. So, Joe went over and said that he wanted to become a Radio Amateur. Earl, a good neighbor indeed, brought over to Joe, a Navy code recorder and a license manual, coached him and when he was ready, gave him the Novice exam. So at age 13, Joe became WV6PDE, (Pretty Dumb Engineer).

He built his first rig, a 6L6 transmitter feeding a borrowed 80 Meter dipole. His receiver was a Navy MARS loaner with the promise from another Elmer, W6BIG, that as soon as he got his General, he would get a Navy TCS-6 transceiver. That didn't take him long and he soon had wheeled and dealed himself up to a 15 Meter beam.

In 1966, Joe was invited by Uncle Sam to serve in the U.S. Army. Because he was an Amateur, he was assigned to the Signal Corps after basic training, and whisked off to Viet Nam. There, he moved out into the boonies where he spent a year in Cu Chi, 25 miles north of Saigon in a VHF telephone team relay station. He spent another year there as NCO in charge of MARS station AB8AJ.

Returning in 1969, Joe entered Civil Service as an Electronic Tech in a Navy fire control radar lab. Amateur radio languished until 1973 when he resigned from Civil Service and turned his talents to real estate. Meanwhile he went

to a local Junior College and got a degree in electronics, then into San Diego State College as a business major.

In 1983, he moved to Oklahoma City and began MBA studies. Just to keep busy he ran for SCM in Oklahoma and was elected. In the business world, he worked for an electronic contractor for the FAA, then for Control Data. When this phased out, Joe went to work as a salesman for a computer store, even though at that point, he knew absolutely nothing about computers.

Back in his San Diego days, Joe had become interested in VHF. He went into 6 and 2M DXing and on up into 432 and 1296. He brought this interest along when he later moved to Oklahoma, so when he read that *CQ* Magazine had cancelled their VHF contest, a disappointed Joe wrote the magazine to ask why. A phone call followed, and first thing you know Joe was asked if he would like to write a VHF column every other month. Joe submitted a sample column which was immediately published, and put on a monthly schedule.

When Joe was in High School in San Diego, he was operating one day on 40M CW at a friend's house. He worked a YL named Carol in Oklahoma City who was signing K5CPZ. They met many times on the air after that over the years, and when Joe moved to Oklahoma City, they finally met in person. She was, and still is, a High School teacher working with sight impaired children, being totally blind herself. She is also President of QCWA Chapter 63!

Joe Lynch, N6CL, pictured here in his "at home" attire, operated the VHF contest from Cuba with Chip Margelli, K7JA. The icebag on Chip's head and on the radios kept things cool.

About this time, Joe had a phone call from another *CQ* columnist and Technical Editor of the magazine by the name of Lew McCoy, W1ICP, known to readers here as Chef Lewigi McCoy, president elect of QCWA. Would Joe be interested in being editor of the *QCWA Journal*? Well, Joe only had two or three jobs going at the time, so why not?

QCWA members are well pleased with the *Journal's* new format and monthly columnists, including Carol, who writes "Silver Bells" a column from the YL perspective. Joe's Journal carries regular features by QCWA Marathon runner Jack Kelleher, W4ZC; Ham's Health by Dr. Dub George, WA5BFF; CQ DX by QNB Chip Margelli; W7JA, as well as the newest columnist, Gordon West, WB6NOA, who also writes for ***Worldradio***. Joe lines up a half dozen or more interesting guest columnists of national repute every month, both technical and story tellers. You'll find QCWA officer's reports and Chapter reports there too.

All this leads up to a special note about Joe. He came under the scrutiny of QNB Chief Chip Margelli, K7JA, when they went off together to work the VHF Contest in Cuba. While there Chip gave Joe some basic instruction, then all the qualifying exams to see if he could handle the rigors of the QNB activities. Joe passed in the 99th percentile and also aced the motivational quiz. Upon returning, Chip took Joe's candidacy to the QNB Board, and, sure enough, Joe was elected to be an independent, functioning QNB. This means he is now qualified to solicit members and distribute membership applications for QCWA. You may now freely approach him at conventions and meetings, on the street, or even write him and say, "Hey, Joe, I wanna be one a you fellas, the Proud, the Elite, the QCWA. Gimme an application." Congratulations Joe on your new job. Know you can handle it.

Marathon update

As we go to press, we learn (from still undisclosed sources, of course) that the QCWA Marathon team had a training problem. Seems our three runners had trouble on the Washington Mall. Not the 3 miles down the length, it was the 100 yards across the Mall that done 'em in. Head Coach (tench hut) Smith with a Semper QCWA attitude, made timely substitutions. The coaching staff will become the racers and the former runners will revert to being coaches. Ethel will be lead-off sprint runner, then jog along the rest of the way with the smelling salts, just in case. Head Coach (tench hut) Smith will crunch out the grunt-and-grind middle leg and Ex-Prez Dannals will streak to the ball-of-fire finish. Wish our QCWA team full speed ahead. Woooof. We'll try to get an interview after the race and let you know. WR

Search And Rescue Communications

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

Several disturbing lawsuits have been filed that are of interest to public service volunteers. Note that these have been FILED, not yet ruled upon in court. The actions seek monetary awards because of injury and death caused by an agency (or business) failing to inform someone of risks.

Let me explain. Let's say you're going on a hike with your Cub Scout group. You pick a location and then call a public agency charged with supervising the area you've picked. The agency tells you all is well, there are no significant hazards and to have a nice hike.

Your hike goes well until a dead tree falls and injures one of your Cubs. You now promptly hire an attorney and file a lawsuit charging that the agency failed to warn you of the falling tree danger. Does this sound absurd? It's happening!

Several things are being discussed in agency back rooms including a policy of NOT telling callers anything. Another proposal is to send a liability release form and then put advice in writing after you agree to release all liability for the information.

Can it happen here?

How does this apply to you, your SAR team, your radio group or a public agency asking for Amateur Radio support? Let's consider this ***Worldradio*** column. In past years I've encouraged you to get involved and join a SAR/communications group. Based only on my advice, you join, get hurt and file a lawsuit against me. Your claim is that I didn't warn you that this type of activity is dangerous (actually I have, but maybe not in the single column you read).

Would a court (or jury) decide that common sense might tell you that SAR is inherently dangerous? One would hope so, but depending on the attorneys involved, sometimes hopes and reality are poles apart.

Let's consider your ARES group. You've signed on to support an activity and assign someone to hike up a hill to give you a bird's eye view of the scene. One the way up, the member falls, has a heart attack or gets bitten by a snake. Next thing you know you're looking at paying because you didn't mention these possibilities.

Before you disband your group, let's think clearly for a minute. So far these types of lawsuits have not resulted in awards. So far "common sense" has applied. My point is that we need to be aware of these possibilities and that there are a lot of strange people out there. As soon as you feel you're surrounded by "common sense" people, one surprises you with some pretty dumb actions and gets hurt.

Safety briefings

If you make it important to share information and conduct safety briefings, you can lessen the chances someone wants to retire off your life savings. It makes "common sense" to tell volunteers exactly what is happening. It makes "common sense" to remind them of safety, even if you think it's dumb to remind radio people that electricity kills.

With an awareness toward enforcing "common sense" and giving people the whole picture, you're doing all you can. Volunteers continue to make the difference between life and death and many would be in jeopardy if we all went away out of fear. Be careful, operate within your group's published guidelines, don't take chances, and communicate!

Some basics

One reader wrote to say he enjoyed each column, but wasn't in a leadership position to effect change. He said he had trouble personally applying some columns' content.

His dilemma is also my dilemma. Finding something new is a difficult challenge, yet perhaps I'm amiss for not reviewing some basics from time to time. Let me explore some "personal" things you can do to further your value to the SAR/communications community.

1. Prepare yourself and your family. Your equipment must be ready to go. You don't need a lot, but what you have must be able to support you for at least a 12-hour shift. This includes food, water, clothing, batteries and anything you need to be self-sufficient on assignment. Your family must be able to function without you there. It takes a couple of evenings to prepare 72-hour kits and you can get excellent instructional materials on this from your local American Red Cross office.

2. Prepare yourself mentally. Having "things" is only one (perhaps small) aspect of being prepared. Knowing your capabilities, knowing your abilities, having a positive, helping attitude and being willing to respond affect your mental status. Education is a great part of this process. I encourage you to read all you can about preparedness or search/rescue or communications or what ever your volunteer specialty is.

The "unknown"

It has been said the greatest experts are those who realize that what they DON'T know is huge compared to what

they do know. Don't stop learning!

3. Be part of a group. Alone we can explore and progress, but with within a group you're exposed to many ideas and situations where more than one is needed to accomplish a task. Group people help others progress. Group people don't spend time crushing their peers underfoot in power struggles. Take the time to learn that we're all different and together we can make a difference — but only if we work at it.

4. Do logical things and if you're not sure, ask someone. Standard microphone and power connectors make logical sense. Spare "critical" parts make sense. Regular maintenance and cleaning make sense. Some endeavors I've seen push the logic envelope and waste time. Run your ideas past others and listen to what they say.

I visited a friend's "shack" last week and was impressed with the amount of gear available for an emergency response. The only trouble? It was piled four or five feet deep in the shack. There is NO WAY this operator is going to be able to handle an efficient net — it would take too long to find paper and pencil, let alone the microphone. Take a few minutes/hours/days for yourself! It's OK (and logical) to render public service on your own shack once in a while.

5. Become a leader. There is no reason to fret over not being able to influence your group. Ask to chair a committee. Volunteer to head up a picnic. Throw your name in the hat next election. No matter what your education level, your experience, your age, your gender — your ideas and enthusiasm are just as valuable as other members of your group. Leadership isn't dependent on age or number of toys — it usually boils down to who can treat people with respect and encouragement.

Changing Times

In some of the current emergency response magazines you can read about what's in store for the future. There are satellite communications systems, satellite location systems, personal rescue beacons, software to track search teams and aircraft — you name it, someone has it in the works. On the surface this might be discouraging — you might say why get involved, I cannot afford to go high tech.

Take a deep breath. The future isn't all that grim. Remember that equipment costs money, equipment cannot rescue people, equipment breaks down, things go wrong. People still save people. People still operate equipment. The need continues for people who are willing to simply get involved and give of their time. Many search efforts are still driven by "gut feeling."

Technology is great, wonderful and needed — but look at how many people still get lost and have no map, compass, LORAN or GPS. And consider the search team leader who didn't need a radio, a cell phone would work fine, thank you. Only it didn't quite reach into the mountain canyon. Take heart, fellow volunteers. We're not going to be replaced by high tech just yet! Until next month — get involved, stay prepared and be careful! WR

Fish stories. . .

•I'm from the FCC and I'm here to help you.

•Me? I've never run excessive power.

•My NTS messages always arrive within 24 hours.

•Your RST is 5 by 9. Please repeat my report.

•We shipped your part yesterday.

•All you have to do is follow the book.

•It's a quick job; we'll be home by lunch.

•I NEVER work DX on a net.

•I have a 100% QSL rate.

•Sure I can tune it! It has transistors doesn't it?

•No need to look that up, I've got it all memorized. –Cherry Land ARC, *Cherry Juice* .

FM & REPEATERS REPEATERS REPEATERS

BILL PASTERNAK, WA6ITF

TASMA to reevaluate 2 Meters

Are the nation's other Amateur Radio frequency coordinators watching as Two Meter Area Spectrum Management Association (TASMA) of Southern California as it embarks on a pair of new policies that could impact on FM and repeater operations nationwide? Hopefully yes.

I ask this rhetorical question because it is a hopeful sign to see a frequency coordination body finally coming to grips with the reality of the 1990s.

How many of the 400+ plus repeaters it has coordinated are really on the air? Are they all for real? Are some nothing more than a piece of paper sitting in some ham's desk drawer? To find out, the organization has decided to carry out the first ever in-depth regional survey of both repeater sub-bands on 2M. This will be the way determine the exact amount of activity on each frequency open to repeater operation.

For those of you who are not aware, the work of today's TASMA of Southern California can be traced back to the late 1950s when the nation's very first volunteer Amateur Radio coordination body was formed. It was known as the California Amateur Relay Council (C.A.R.C.) and it existed in an era when the rest of the nation still considered 6M (50 MHz) as top-end for VHF communications.

Out west experimenters in California were already building a state-wide "non-network" of repeaters and remote bases operating in the FM mode. They coordinated their efforts and from this need the C.A.R.C.was born.

Now, more than three decades later, TASMA wants to determine if there are any channel pairs that are playing host to non-existent paper repeaters. TASMA's current leadership feels that it has an obligation to the area's ham community to make way for new systems willing to pick up the ever increasing load of users coming onto the band every week. The exact way in which this spectrum survey is being handled has not been announced, but for owners of some paper repeaters it may already be too late to put them on the air.

A fee for services rendered

Another new TASMA policy will add several dollars a year to the cost of maintaining a 2M repeater in Southern California. The council has voted to impose an annual ten dollar "database maintenance fee" on every repeater currently coordinated by the group. Note that this is not being billed as a coordination fee, but if a system fails to pay, its coordination could be canceled and its owner asked to remove his repeater from the air.

The idea here is not so much to collect the fee as it is to insure that every available kilohertz of 2M relay spectrum is used to maximum efficiency. The word is that TASMA feels the owners of paper repeaters will not bother to spend even ten bucks to keep a channel pair in reserve and the monies collected will permit TASMA to purchase equipment with which to accurately monitor activity and the spectral quality of signals on the 2M band.

A fly in the ointment?

While all of this may sound good (or bad if you are a repeater owner who does not want to pay the database fee) there is one major flaw. An FCC regulatory interpretation (or lack of one) was applied to Amateur Radio frequency coordinators by the FCC in 1986.

A bit of history here. When asked to determine which of two feuding California coordination councils was the legitimate one, then FCC Special Services Division Chief Raymond A. Kowalski ruled that any number of frequency coordinators could serve the same geographic and demographic area. In other words, anyone could set up shop, call himself a ham radio frequency coordinator and his decisions were as binding as a coordinator who had been servicing the same area for a decade or more.

Kowalski also complicated matters further by stating that multiple coordinators need not even communicate their decisions with one another and it would be up to the repeater owners and not the coordinators to solve any interference problems that might result. A few days later Kowalski resigned from his FCC position and the interpretation has held ever since. The legacy of his final action at the FCC has been numerous law suits filed against coordinators and coordination councils by repeater owners and what the Amateur Radio community calls "instant coordinators." In most cases the suits were frivolous but some have continued through the courts for years. Eventually a modified version of a part of the Kowalski decision was codified.

Section 97.205 (c) states: "Where the transmissions of a repeater cause harmful interference to another repeater, the two station licensees are equally and fully responsible for resolving the interference unless the operation of one sta-

tion is recommended by a frequency coordinator and the operation of the other station is not. In that case, the licensee of the non-coordinated repeater has primary responsibility to resolve the interference."

Note, that while the frequency coordinator can recommend a given channel pair be used, he is not obligated to solve interference problems that arise from someone else's failure to heed his advice.

Is the country really watching?

Is the nation watching the activities of Southern California's 2M frequency coordination body as it searches for a more efficient way to utilize the band? Rhetorical maybe, but its a pretty good bet that coordinators in other high traffic RF environments have their eyes and ears on the Southland. If TASMA is successful, it will definitely change the way in which the coordination of Amateur Radio relay entities are handled, and set the standard for years to come.

The bottom line is that TASMA, and more importantly those who lead it have their ham radio political careers hanging on the success or failure of these two programs and they already have some highly vocal opposition.

Another view of open vs. private repeaters

I have to admit that I am not the world's biggest fan of packet radio. Once in a while there is a very special light that stands out and which deserves widespread attention. The following piece written and posted to packet radio as an "ALLUS" bulletin by Steve Overacker, WA6HAM, of Pittsburgh, CA. I feel it is a very objective overview of repeaters in general and the situation of open vs. private operation in particular. In many ways, it is probably one of the most important pieces ever written on the subject. It definitely is "must reading" for everyone who operates voice on FM:

"You key up your VHF or UHF radio and nothing happens. NOTHING!!! Is it your radio? Is it a blown fuse or perhaps your antenna? You dial up another repeater frequency and key up again. NOTHING AGAIN!!! Everything appears all right with your equipment. The lights are on and the radio receiver goes whooosh but there is no friendly KERCHUNK. So you dial another repeater and try again and again, and again. No luck, no kerchunk, no repeater, no nothing. What's going on here! Where are the repeaters! SO YOU WANT TO KNOW? THEN READ ON.

"Many years ago there was a new area of ham radio that used surplus tube radios and tube analog logic systems. A few enterprising hams would put an AM receiver and transmitter back to back with the logic of the day and call this a repeater. A group of people would get together and pool their financial resources to make "this repeater thing" possible. As with all of mankind's ventures, organizations became necessary and took form as repeater clubs, associations and for the determined few, privately owned repeaters.

"The users of this period used crystal controlled radios and for all practical purposes were "rock bound" on their local repeater. The majority of these repeaters were "open" and required no special equipment to access the repeater. The repeater required a control operator to monitor every facet of the repeater's operation. If the control operator wasn't present then the repeater was not on the air. Since there was not an overabundance of repeaters the users would support their local "machine" with time and money. New hams would find out what the local repeater was and joined the group.

"The atmosphere and attitude of this era was one of belonging to and supporting a worthwhile endeavor called a repeater. The 1960s and 70s brought FM repeaters and better equipment to the band. Repeater groups became larger and more numerous.

During the late 70s, frequency synthesizers came on the scene and hams found a new freedom of not being rock bound to just a couple of channels. Companies began selling repeater packages in the early 80s that used noncommercial radios so that every ham could now have his own repeater.

"The spectrum became congested and loyalty to a local repeater by its users began to wane.

"The congestion of the band lead to interference between repeaters on the same frequency and between hams. The saturation of the band with inexperienced repeater operators and the dilu-

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Power and range..did you know?

At VHF, a one-watt radio talks approximately one mile on flat terrain. Doubling the power increases your range by only 33%, but doubling your antenna height increases range by 50%.

The 1-10-100 Rule: One watt will talk ten miles to a hundred foot antenna (hills, buildings or any other obstructions can reduce range by 20% to 66%.)

–ExpressRadio Notes

tion of the technical base further accelerated the chaos of the band.

"During the later 80s repeater groups began using PL to protect their receivers from manmade and adjacent channel interference. This practice masked the problem of hearing the interference and lead to users not knowing why they "weren't making the repeater. . . ." The inexperienced repeater operator's motto must be, 'What you can't hear can't hurt you.' There is another group that uses PL as a cloaking device to keep (the other hams) off their repeater. While the repeater operators think that they have excluded these (other hams) from (their channel) the technology does exist for Joe Ham to buy a PL encoder and show up on (their channel) after a little work.

"There are endless variations of both these tactics to reduce the interference or user traffic on repeaters. The end result of these tactics are that Joe Ham has fewer and fewer repeaters available to him now than before. For example, in 1985 the area in which I live had 8 VHF repeaters. Of these eight, six repeaters were high level systems and only one of these repeaters had PL. Seven years later only one high level repeaters remained without full time PL along with two low level repeaters.

"The repeater operators who attempt to operate an open non-PL repeater find themselves dealing with a disproportionate number of displaced users. What these repeater operators of the non-PL repeaters also find is that their nonmembership usage is increasing while the membership size of their group remains somewhat constant. It would appear to the casual observer that many of these users feel little if any loyalty towards any particular repeater yet they have little concern about monopolizing someone else's repeater.

"The repeaters are free, right? Wrong! The most inexpensive repeater is worth $2,000 while the more complicated repeater systems are worth tens of thousands of dollars. They require maintenance and upgrading of equipment and these costs quite often will outpace the membership contributions. The atmosphere and attitude of this era is not one of openness but of how to protect what one has while not belonging to and supporting a worthwhile endeavor called a repeater.

"I have not taken this journey down memory lane to gripe about the current state of repeaters but rather to give a brief view of repeater history so that others may gain a better appreciation the problems facing those operating and using repeaters. I have but these suggestions:

1. The repeater operators should strive to provide a state of the art repeater system, without the use of PL, that is open to all.

2. Users of repeaters have a duty to financially support the repeater that they call their own. Remember, there is no such thing as a free lunch.

3. If you use someone else's repeater and are not financially supporting its existence remember, you are a guest and use it sparingly. No one likes daily schedules occurring by nonsupporting freeloaders!

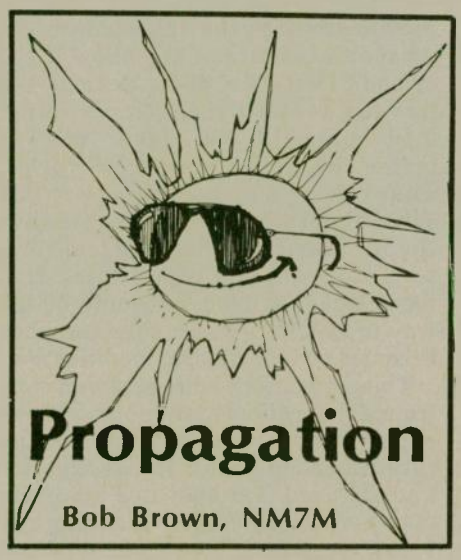
4. There are some open repeaters that operate under PL. If you find a repeater in PL, be courteous and inquire if the repeater is open or closed.

5. If you find a closed repeater, respect the wishes of those who operate it.

"If after reading the above you find yourself flaming mad just remember, there is. . . of underutilized spectrum out there just waiting for you! Do something constructive and put up your own repeater. You might find it fun and in the process become what you and your friends detest most, your own version of a repeater god."(downloaded from the WB6YMH PBBS, SoCal USA)"

And as my astronaut friends have often been heard to say: '...that's pushing the envelope.' And when it comes to "column-inch space per byte," we have pushed as hard as we can this month. See you in 30 days.

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



Propagation

Bob Brown, NM7M

Back in the April '94 issue of ***Worldradio***, I made an effort to change your vocabulary a bit, speaking of modifications of the ionosphere rather than disturbances. A number of the modifications I talked about were mechanical in nature, say in connection with a total eclipse of the sun by the moon or a Saturn rocket going through the ionosphere. Other mechanical modifications that take place are associated with powerful effects of Nature, say weather disturbances like hurricanes, thunderstorms, earthquakes and volcanic eruptions. But what about electromagnetic modifications? Can radio waves going through the ionosphere affect the medium too? The answer to that question is simple, "Yes!"

In fact, it's been known for more than 50 years. Let me tell you about it and where it has taken us to date.

It all started with the classic "Luxembourg Effect," discovered in 1933, and resulted from the idea "more is better." That notion seems rampant at times, especially when it comes to transmitter power. As a matter of fact, as an old QRPer I wince when I see commercials to the effect that life is too short for QRP. But back in the 30s "more is better" prevailed in AM radio too, the extreme being an AM station, WLW in Ohio, which ran 500 kW of power.

The high-power rage wasn't just in the USA, however, and an interesting effect was found in Europe due to the presence of a 200 kW station on 252 kHz in Luxembourg. That was in 1933 when signals received in Holland from a station on 650 kHz in Switzerland showed modulation due to signals from the 252 kHz station in Luxembourg!

On the theoretical side, that amounts to cross-modulation, now known as the "Luxembourg Effect" and is understood in terms of interactions in the D-region. There, free electrons present during daytime hours undergo collisions with atoms and molecules in that altitude range. When a signal goes through the D-region, those electrons are responsible for taking energy from the wave and then transferring it by collisions to heat the atmosphere.

Now absorption of signals is directly proportional to the electron collision frequency and the presence of another, much stronger signal in the ionosphere gives rise to modulation of the electron collision frequency and the original signal shows absorption at the modulation frequency of the disturbing signal. Get all that? In a nutshell, that's how it works and when refined in more controlled circumstances, it has been a method of exploring the D-region of the ionosphere.

At the power levels used by amateur operators, we don't normally think of heating the ionosphere or affecting someone else's signal unless through QRM, key clicks or splatter. Around April Fool's Day, there are some jokers who write articles about all the RF that's abroad during contests and they have some clever spoofs about what it can do but that's about the limit for Amateur Radio.

Not too long ago, however, there was something more professional in the way of a "bad joke," the Russian "Woodpecker," chewing up the bands. Remember that? I've had more than one headache from trying to carry on a CW sked through all the bang and clatter. That was across the HF bands and the peak power involved was reputed to be something like a megawatt. With all the real estate that the Russians had, they could put up a fancy antenna system, maybe a broadside curtain with 20 dB gain. Add that to the transmitter power (logarithmically, of course) and you're talking about 80 dBW of effective radiated power (ERP). That's a bunch and makes our typical 20-30 dBW amateur stations seem puny by comparison.

Leaving "over the horizon" radars aside for the moment, once the "Luxembourg Effect" was known, it wasn't long before radio scientists went to work on it, both experimentally and theoretically. With the earlier tradition of vertical ionospheric sounding, it's not surprising that subsequent experiments involved sending RF pulses vertically upward and looking for effects. But you know as well as I

do that there were limits to the frequency that could be used in those vertical experiments.

Indeed, it doesn't take much thought to see that effects couldn't be explored at vertical incidence around 250 kHz; the wavelength down there is 1,200 meters! Can you imagine making a Yagi or whatever to efficiently direct 250 kHz signals vertically upward? By ordinary standards, the driven element would have to be at 180 meters altitude if the reflector were at ground level. No way!

So a higher frequency would be required but is there a physical limit there too? Again, the answer is "Yes." In the Luxembourg Effect, the 252 kHz signal was the one that disturbed the "wanted signal" by its effect on the ionosphere through D-region absorption. Clearly, one doesn't want to raise the frequency so high that a disturbing signal would not be absorbed appreciably by the ionosphere. And the "wanted signal" that's examined for the effects must be one that will be returned or reflected by the ionosphere, going from where the transmitter is located to the receiving station.

If one goes to the literature, it's found that the scientific use of the "Luxembourg Effect" was done around 2 MHz and used powers like 50 kW for the disturbing signal. During daytime hours, the use of 2 MHz signals assures reflection of the "wanted signal" from the E-region. By using pulsed signals on both the wanted and disturbing frequencies, it's possible to adjust the relative timing of the two pulses and determine the altitude where a "wanted pulse" going downward from a reflection in the E-region meets a delayed "disturbing pulse" going upward from the other transmitter, as shown in Figure 1.

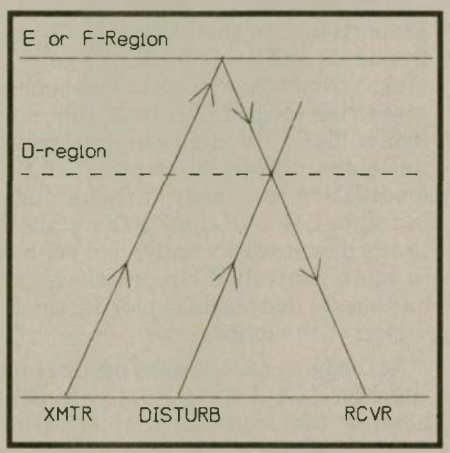


Figure 1.

In that way, by listening to the "wanted signal," it should be possible to examine the effect of heating on the electron collision frequency throughout the D-region; all you'd have to do is change the delay of the disturbing pulse. But with a low power disturbing signal, at least by commercial standards, theory suggests that the electron heating is not so great as to change the electron density, i.e., not enough heating to affect recombination processes through their temperature dependence. At higher powers, however, perhaps the electron heating could be so great as to change the electron density.

Now that would represent a real modification of the ionosphere; but what other effects would follow? Good or bad? That's the $64 question. And how to increase the electron heating? Just apply the old adage, "more is better" when it comes to RF power? That raises your monthly power bill. What about concentrating or focusing the RF from the disturbing transmitter? After all, one would think that more localized heating would be the way to look for greater changes when it comes to ionospheric modification.

Those questions were explored more from a theoretical standpoint than an experimental one. But geopolitics raced ahead of scientific investigation and the Cold War spawned a number of powerful backscatter sounding systems, so-called "over the horizon" (OTH) radars, aimed at detecting planes and missiles from back-scattered, Doppler shifted signals. Here, the "wanted signal," the backscattered echo, would have to return along the same path perturbed by the "disturbing signal," the megawatt radar pulse. So if a 80 dBW OTH radar modified the ionosphere to any extent, its echo pulses might suffer something like a selfinflicted wound.

That idea comes from the mere magnitude of power radiated in radar pulses. But being sent out obliquely, the idea of "skip focusing," discussed in a recent issue, comes to mind. For our purposes as Amateur Radio operators, skip focusing means that RF from an antenna is more concentrated at *ground level* just beyond the skip distance from a transmitter. That being the case, since all the focused RF follows essentially the same ray paths, there'd be some concentration or focusing of RF at ionospheric heights too.

Now I must confess that I only had a passing interest in these matters until recently. After all, the "Woodpecker" was a painful experience for me and something that I wanted to put out of my mind. But thanks to Ron Bloom, WA6MQC, sending me some articles on the work he's been involved in, I've seen the error of my ways and actually get excited about the work that has been going on in this field.

Part of my excitement is due to the fact that I've labored in the D-region in earlier days. That work dealt with D-region disturbances by ionizing particles, more about increasing the electron density rather than modifying the region by heating the electrons already there. The ideas that follow from the OTH problem are new and quite interesting so let me give you a brief run-down on them, first showing in Figure 2 the ray-tracing of paths which result in skip focusing.

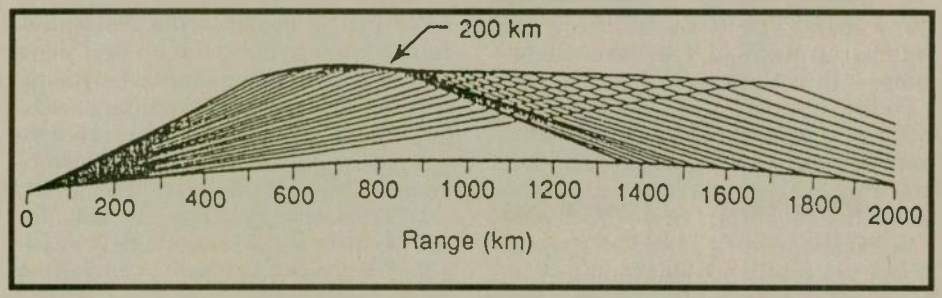


Figure 2.

Before going too far along, it should be noted that Figure 2 was obtained by a bit of detective work, trial-and-error calculations that were compared with some results in a Russian paper published back in '82. In essence, that paper contained the results for a perturbing signal on 15 MHz from an antenna with 25 dB gain and a launch angle of 18 degrees. In addition, there was a "wanted" or test signal on the same path but a few kilohertz above or below the perturbing signal.

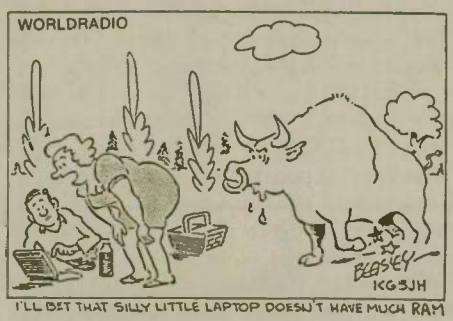
Now looking at Figure 2, you can see the skip focusing at about 1,400 km range and also intense ionospheric focusing at about 800 km range and 200 km altitude. Okay, 200 km altitude is not exactly in the D-region but this is oblique propagation at a frequency that's 60 times greater than in the Luxembourg Effect, HF instead of LF, and the RF penetrates to higher altitudes.

When Ron Bloom and friends worked through the problem using electromagnetic theory, they concluded that the focusing at 200 km altitude and 800 km range was enough to heat the ionospheric electrons there. In fact, it was sufficient to raise the electron density by as much almost 1% because of slower recombination at a higher temperature. That was for 85 dBW of effective radiated power on an east-west path at 41 degrees magnetic latitude. When the strength to the "wanted signal," sent along the same path, was worked out at 1,400 km ground range, it was found that it would be reduced by as much as 3 dB.

Now you know things don't "heat up" instantly; that applies to the ionosphere as well as on the kitchen stove. So the absorption effect would take some time to reach a steady state when the disturbing signal is turned on and the same would apply when the disturbing signal is turned off. In that regard, it's interesting to note the paper on the Russian experiment reported a signal strength increase of about 3 dB for the wanted signal when the disturbing transmitter was turned off. Moreover, the time for the ionosphere to "cool down" was about 40 seconds.

All of that was at 85 dBW ERP. Apparently, the absorption effect becomes non-linear at about 90 dBW and the adverse "self-effect" for an OTH radar starts to become quite significant, serving to defeat the intended purpose of an increasing effective radiated power to obtain stronger echo signals. So "enough is enough!"

We've all had thoughts about the Woodpecker "burning a hole in the sky" and now you know that idea wasn't too far-fetched. So it's good to know that there are natural limits in this world, even when it comes to RF. I suspect there are other limits like that, even in Amateur Radio. For one thing, I think the size of the human hand may limit the number of controls that can be put on the front panel of future transceivers. But then there's computer control just coming over the horizon. Maybe that will be limited to persons with typing skills or by the time required to read thousand-page manuals. There has to be some limits somewhere. Yes, somewhere! Somewhere. . . . WR



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Why do clocks run "clockwise"?

Before the advent of clocks, we used sundials to help us tell time. In the northern hemisphere, the shadows cast by the sundial rotated in the direction we now call "clockwise." The hands on the clock were made to mimic the natural movements of the sun. If clocks had been invented in the southern hemisphere, "clockwise" would be in the opposite direction of what we know now. –*PHD News,* Liberty, MO

Richard Fisher, KI6SN

1940 Wetherly St.
Riverside, CA 92506

The Armstrong T/R switch

For many QRP transmitter builders, there are few things more discouraging than finding your newly-completed rig needs a T/R (transmit/receive) switch to be properly mated with your station antenna and receiver.

The T/R switch, for the uninitiated, does just what its name implies: it switches the station antenna back and forth from your transmitter (T) to your receiver (R). Without one, you'd need separate antennas for receiving and transmitting. Given the price of real estate today, T/R switching one antenna is much more sensible, indeed.

Some fancy T/Rs change the antenna automatically — electronically. Other switches operate manually. But all work to the same end — making your skywire, vertical, beam or quad a transmitting antenna when you want to transmit, and a receiving antenna when you want to receive.

Oldtimers will tell you, however, that T/R switches need not be fancy devices. And if you're willing to do a little manual labor while engaged in a QSO, your T/R won't be more complicated than a widely-available knife switch.

Manually changing from transmit to receive and back has been affectionately — and quite accurately — known as "The Armstrong Method" for many, many years. The more you throw the switch, the stronger your arm will become — thus the name.

Today, at the low power levels we enjoy, it is possible to T/R switch electronically using only diodes and simple inductors integrated into the transmitter's output circuitry.

But there are still lots of QRP transmitter projects in popular "notebooks," handbooks and periodicals today that ignore this technology, leaving it to builders to add T/R functions themselves.

"Armstrong," simple-yet-effective, can save the day.

In a QRP forum at the 1994 Dayton Hamvention, the Rev. George Dobbs, G3RJV, of the QRP Club of Great Britain, endorsed the simple "Oner" solid state transmitter as an excellent first-time QRP project for new homebrewers. It's also a wonderful candidate for employing the "Armstrong" T/R switch.

In kit form, the "Oner" is available in the United States very inexpensively from 624 Kits in Spartanburg, S.C. The crystal controlled rig runs a little less than one watt output, and is a wonderful way to get started in QRP home building.

The 624 Kits "Oner" is designed, by the way, to leave the oscillator running all the time. So a double-pole, double-throw (DPDT) knife switch has been used in the rig at KI6SN to switch both the antenna and the 12 volt B+.

In the "transmit" position, one half — or "pole" — of the switch connects the station antenna to the transmitter while the other half connects the rig to the battery.

Flipping the switch to "receive" connects the antenna to the receiver and shuts off the B+ — and therefore the oscillator is without +12 volts and can no longer be heard in the station receiver. Since there is virtually no "warm-up time" necessary when using such simple transistor circuits, switching the B+ off and on between receive and transmit presents no stability problems in this crystal controlled circuit.

DPDT knife switches suitable for the "Armstrong T/R" are widely available from parts houses — including Radio Shack.

If you're interested in learning more about the specifics of employing the "Armstrong T/R" with 624 Kits' "Oner" kit, send an SASE to the address at the head of this column. I'll be glad to send you complete details about obtaining the "Oner," adding an "Armstrong T/R" and mating the whole set-up to your present station antenna and receiver or transceiver.

It's easy, and a large graphic will show you how.

For oldtimers, the "Armstrong T/R" might spark memories of bygone days when rigs were simpler and arms were more muscular. For newcomers, "Armstrong" may offer a cheap but efficient way of getting that new homebrew transmitter on the air.

New TEN-TEC Argo 556

The TEN-TEC Corp., a longtime manufacturer of QRP gear for the radio amateur, recently added a new QRP transceiver to its product line.

Called the Argo 556, this full-function SSB/CW rig with front panel plug-in modules for bandswitching may sound a whole lot like TEN-TEC's Scout 555 — with good reason.

According to TEN-TEC's Paul Clinton, WD4EBR, the Argo 556 is a powered-down version of the 555. For the 556 QRP version, the company removed the Scout's final amplifier and heat sink, allowing the drivers to serve as the finals.

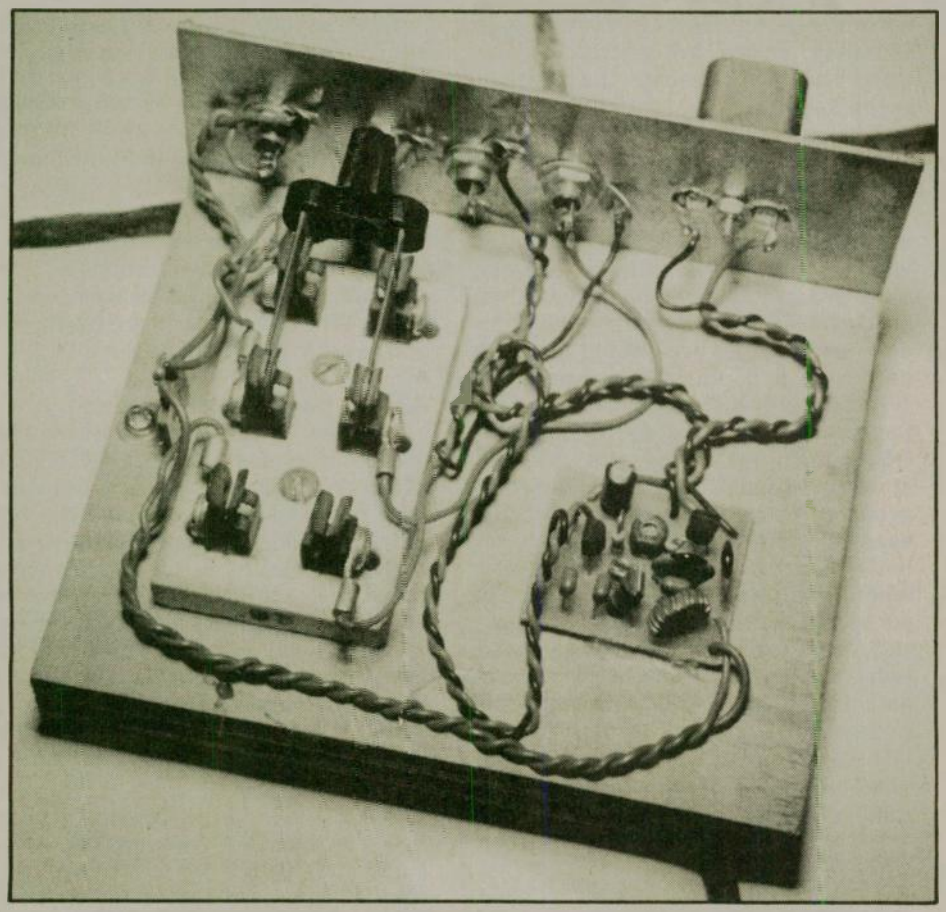
The Scout 555 runs 50 watts, with power adjustable to five watts.

The Argo 556 is designed for the "QRP purist," Clinton said, with power adjustable from five watts to the milliwatt range.

TEN-TEC "made a commitment to support the QRP market" more than 20 years ago, Clinton said, and the new Argo shows the company's continuing spirit.

The Argo 556 is $489, and comes with one band module. Additional band modules are $29 each — 160 through 10 meters, including WARC.

TEN-TEC can be contacted by telephone at 1-800-833-7373. The mailing address is: 1185 Dolly Parton Parkway, Sevierville, TN 37862.



The "Oner" transmitter, complete with the "Armstrong T/R" knife switch, left.

Wanted: A QRPer's mobile home antenna

Tom Curtis, W8BMJ, writes from Hampton Bays, NY that he "will quite possibly be moving into a mobile home and any operating will have to be 'stealth operating,' I'm sure — and definitely QRP."

He's going to pick up a commercial rig, but Tom says he's a bit stumped on selecting an antenna for a mobile home, "or manufactured home, as it's now called," he says.

"Would a loop such as the AEA or MFJ loops be practical?" Tom wonders. "It would definitely have to be an inside antenna, as I'm sure the parks have rules against amateur operating."

Tom says he'll be moving within the next year. "I realize the loops would limit me to 10 MHz and above."

Certainly Tom's quest for a good indoor mobile home antenna is not singular.

If you've had success operating QRP using an indoor antenna, please write to me at the address at the head of this column. We'll share your configurations with other *Worldradio* QRP column readers, and perhaps help get Tom on the air from his new (mobile) digs.

Catalog of the month

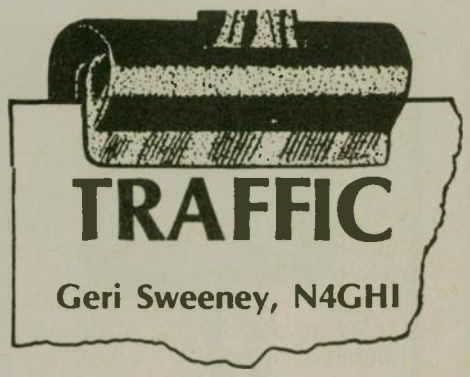
Since April 1993, the *Worldradio* QRP column has been listing sources for parts and kits of interest to QRPers.

To date more than 15 parts houses and kit manufacturers have been listed and are compiled in the *Worldradio* QRP Column Catalog Compendium, which can be yours by sending an SASE to the address listed at the head of this column.

This month's catalog is from RF Parts Co., of San Marcos, CA. The company specializes in RF power transistors, tubes, GASFETs, RF power modules, capacitors and a variety of books and manuals.

Product manufacturers listed include Penta Labs, RCA, Burle, RFP, Philips, EIMAC, AMPEREX, GE, Motorola, Mitsubishi, Toshiba, Pride, NEC, Johnson and Svetlana. Hundreds of items are carried in the catalog's 16 pages.

To obtain RF Parts' latest catalog, call 1-800-737-2787. The company's FAX number is: 619-744-1943. The mailing address is: RF Parts, 435 South Pacific St., San Marcos, CA 92069.



TRAFFIC

Geri Sweeney, N4GHI

Upcoming traffic events

Some special event stations that we can expect to hear soon:

October - Foliage tours (Skowhegan ME); Haywood County Fair (Waynesville, NC); Georgia National Fair (Perry); SET traffic throughout the USA

December - Holiday (VA Beach mall, VA) over 1500 messages in 1993; First Night, (Annapolis, MD); First Night, (Boston, MA)

January - South Florida Fair

SETS - don't forget a phone number on your simulated emergency traffic.

One Speed

Can you shift up and down when you speak and/or send CW? Do you? So you can send CW at 30 wpm without making every "h" an "s." Great! When might you need to slow down? Send at the speed which the receive station initiates the contact. When checking into a net, use the speed (or slower) which the NCS is using. Propagation often requires sending slower. If the receive station is asking for lots of fills, slow down a bit on the next message. The bottom line on message handling is accuracy. If you are trying to copy faster than you can write, the message is the loser.

Fills

Fills are requested when you can't write as fast as the other station is sending (you can fix that); or, because you can't hear the other station very well. When you can't hear the other station very well is exactly the time you need to keep everything as short as possible. Sending, 'pse need text WA John' allows for an enormous error factor. Through the fading-, QRM, QRN, and weak signal, the transmit station has had to try to copy five letter groups. The station straining his/her ears through the distortions has a much better chance of getting your request when only the essential information is sent, 'WA John.' As you copy a message, underline whatever you will need to have filled in. You are now ready to go through the message from beginning to end asking for fills. If the transmit station can just hear the (WA/WB) word needed, s/he should be able to find it. Honest! Elimination of all the extra words really helps to focus on what is needed.

Quiz?

1) Why do we use the procedures we have? Why not just use sentences and make it all plain English?

2) Why should the NCS call the receive station first when sending two stations off frequency?

3) Who announces they have QSK? (Receive or transmit station)

4) When you QSL, do you need to add additional information, such as the message number?

5) Anyone remember what QNQ, QNV, and QNK meant when CW Net Control Stations used to know how to use them?

6) You have sent the preamble of a message on CW, and you are now sending the addressee. When you send the amateur radio call, the receive station sends a break. What does that mean? (supposing you have QSK and can hear it).

ARRL personnel change

The new Senior Assistant Manager of Field Services is Jay Mabey, NUØX. My first inquiry to Jay was to ask what nets he checked into. That's the bad news. He does have a radio station at home and claims a working acquaintance with HF and VHF. Perhaps he will give traffic nets a try. He says he will rely on us folks out in the field to assist him. So, let Jay know what you think. The good news is that all the folks I have spoken with feel that Jay has the BBS working well, at last.

Letters

Thanks to all of you who have sent such thoughtful letters. They are often used to generate topics for the next column. It was KS5V, Ed's letter which launched the 'One Speed' thoughts in this column. Ed is an experienced traffic handler (Manager of the Texas CW net, ASTM for South Texas, and selected as the West Gulf Division Volunteer Amateur of the year). He pointed out that often he receives messages

with obvious errors even though he copied them correctly. My thoughts translated this to–some of us are trying to send and/or receive faster than we are capable. By capable, I intend that we need to do more than just copy letters/numbers on a paper. As we copy a message, we should be able to think about its meaning. What do you do with a message with obvious errors? There is no clear cut answer. It may depend on how serious the error is and the distance it has come. Would it be faster to go ahead and forward it in hopes that some local station can figure it out, or service it back for clarification? There are some stations who could send me any combination of letters and I would believe them. It's best to ask for lots of fills.

Packet

Don, W7GB, feels that a lot of traffic sitting on PBBSs is ignored for a simple reason. "People type 'L' and get inundated with literally hundreds of 'ALLUSA' glut every day.' He reminds us to use 'LT' for list traffic. And, don't forget to RT (message number) when you know you have it. My splendid PBBS (WA3TAI) now has the *Call Book* on line and it's very handy (large type) to check the calls on messages.

VHF nets

We have three in Virginia. One consistently encourages new members to try traffic handling and to send the STM a traffic activity report. She keeps on top of activities and questions (calls) her STM whenever in doubt. The enthusiasm generated by this net manager, KD4JMA, uplifts the entire net area and Section. One person can make an enormous difference. Are you such a person?

What's happening in Maryland/DC

The Section Traffic Manager of Maryland/Washington DC, N3EGF, Bruce, reports that they rely on both HF (SSB/CW) nets and digital (packet/APLINK) modes. All incoming packet traffic goes to WB3V PBBS where it is taken off and listed on a MD net. Bruce feels that the traditional NTS system is working pretty well but that VHF packet has little credibility for long-haul due to the lack of accountability. He feels that APLINK shows much greater promise. Almost every STM interviewed for these Section reports has identified-a major problem as being lack of traffic. Bruce says, "One area that really needs emphasis is message origination. The old truck gets awfully sluggish when the fuel tank is empty. As long as I have records for the section, the ratio of origination to total traffic has been about 5%. That just doesn't hack it."

ARRL came up with a certificate for originating 4 messages. 46 Virginia traffic handlers already have received this award. I wonder if it has made any difference? Perhaps ARRL could stage some publicity to help. How about some famous people sending a message to someone else as a brief spot on TV? Perhaps we should encourage ARRL to come up with a paper which traffic handlers could review in seeking methods (contacting newspapers, senior citizen homes, etc.) to get originations. Everyone who delivers a message has a great chance to originate a message. To be a traffic originator, you must be willing to be a very public person, scattering your phone number throughout the community.

Happy holidays

November and December are a traffic handler's favorite time. There is traffic everywhere for everyone. Get involved and enjoy the fun. To find a net in your area, check Section News in *QST*, or peruse the ARRL Net Directory. WR

By the time you read this, the 1994 *CQ* Worldwide DX Phone Contest will be history (or almost), and you will be totaling your score, counting the new countries confirmed, swearing at Murphy's Law, or maybe all of the above. Meanwhile, its time to check out the rig(s), retune the antennas, and get ready for the *CQ* Worldwide DX CW contest which will be less than a month away. However, if you prefer a bit more phone operation instead of CW the Japan International DX phone contest and the OK/OM DX contest are less than two weeks away (see DX contest calendar), or if your taste runs to RTTY, the European RTTY DX contest is the same weekend.

November DX contest calendar

11-13 November: Japan International DX Phone Contest, 2300 UTC Friday - 2300 UTC Sunday (48 hours)

November 12-13: OK/OM DX Contest, 1200 UTC Saturday - 1200 UTC Sunday (24 hours)

26-27 November: *CQ* Worldwide CW DX Contest, 0000 UTC Saturday - 2400 UTC Sunday (48 hours)

November contest exchanges

Japan International DX Phone Contest: JA stations send RS + prefecture number. Others send RS + progressive 3-digit contact number beginning with 001.

OK/OM DX Contest: OK/OL/OM stations send RS(T) + 3-letter county abbreviation. Others send RS(T) plus 3-digit contact number.

European DX Contest, RTTY: All stations send signal report plus 3-digit contact number.

CQ Worldwide CW DX Contest: All stations send RST plus *CQ* zone, i.e., 599 03.

Stations wishing to receive a complete copy of the rules for the above contests as printed by the sponsoring organizations may send an SASE to K4IIF.

1993 Scandinavian Activity Contest (SAC) results

Thanks to Liv, LA4YW, we have received a 31-page booklet showing all the results. Space does not allow us to print all the scores so we will summarize those of greatest interest to our readers. First, congratulations to VO1SA who was high for North American on both CW and phone in the single operator, multiband category with 69,043 points on CW and 50,140 points on SSB. Congratuations are also in order to N2DL who was high for the U.S. on CW Tops in each U.S. call area on CW were K1BV, N2DL, KQ3F, K4RZ, W5ASP, N6ND, K7ABV, K8ED, NG9J and AIØY. Leading on SSB. by call area were K1CLN, N4MM, W6OM, NG9J and KBØC. The top ten scores by mode for non-Scandinavian stations in the single operator, multiband category were:

CW		SSB	
UH8EA	131,800	UN8PYL	77,165
EA9LZ	106,260	YU1AO	65,940
RV9WB	88,992	VO1SA	50,140
LZ5Z	69,750	GIØKOW	41,847
VO1SA	69,043	UB5FAN	40,002
UB7VA	59,040	RB5QRW	35,496
9A2AJ	55,341	UT5DK	35,192
UB5ZAL	54,636	G3TTJ	30,495
UB5QN	54,057	RV9WB	30,316
4O1V	50,386	9A3UF	29,997

The top ten scores by mode for Scandinavian stations, also in the single operator, multiband category were:

CW		SSB	
OHØDX	1,147,290	OHØDX	1,228,288
SM2EKM	828,288	SM5GMG	745,800
OH1AF	825,432	SM5AQD	686,880
OH5NQ	764,457	OH8LQ	670,626
OZ1LO	754,768	OH2BC	647,020
SM3EVR	746,240	OH6LNI	589,680
OH2PM	719,138	OH2PM	557,634
SM5IMO	691,667	OH6YF	472,017
OH6YF	673,604	SM5IMO	445,984
SM3PZG	563,776	OZ4MD	444,600

SRAL, Finland, was again the winner of the Scandinavian Cup, submitting 126 logs and a total score of 29,162,157 points. Second place again went to SSA, Sweden with 148 logs and 19,155,347 points. Third place went to NRRL, Norway with 45 logs and 4,278,994 score; fourth to EDR, Denmark with 45 logs totalling 4,211,106 points followed by IRA, Iceland with 1 log at 40,320 points and FRA, Faroe Islands with 1 log and 30,828 points.

From the mailbag

De Don, KA1DWX: "My congratulations to you on being the only magazine providing worldwide contest results. It is a shame that our domestic publications have reverted to radio isolationism by not publishing the highlight results of local and regional contests. So much for "talk to the world."

Contesting from the Pacific

If you are looking for a rare spot from the South Pacific, the following excellent letter from Chuck, WIØS contains much useful information:

"First, I should mention that we do this for fun, so the following information might not be useful to a 20-person contest station running high power and operating day and night.

ZK2 Niue Island: "We stayed at the Coral Gardens Motel operated by Stafford and Salome Guest. When we left Stafford was talking about installing a tower and triband beam antenna for Amateur Radio use, next to Unit #4. Stafford was a very accommodating and a gracious host. His address is:

Makapu Resorts Ltd., P.O. Box 91, Niue Island; Tel. (683)-4235, Fax (683)-4222. The license fee was $10.00 NZ or about $6.00 U.S., contact Mr. Richard S. Hipa, Director Post & Telecoms, P.O. Box 37, Alofi, Niue Island. Customs is no problem. The main concern is that equipment brought into the country is taken out. The people of Niue are very friendly and unspoiled by tourists. Tipping is not the custom, however, a gift after becoming acquainted with an individual is fine. Also, the Niue Hotel, P.O. Box 80, Alofi, Niue Island, Tel. (683)-4092, Fax (683)-4310, accepts Amateur Radio operation. Reg and Annette Newcombe operate it. Prices are in the $100.00NZ range per night.

The ops of LZ1BFR, – Ognyan, LZ2PO, left, and Zorovka, LZ1ZQ.

ZKI Cook Island: "We stayed at the Lagoon Lodges, Tel. (682)-22-020, Fax (682)-22-021. Management was very accommodating with our operations. The license fee was $20.00NZ. For licensing contact Mr. Teariki Kamana, Telecom Cook Islands, P.O. Box 106, Rarotonga, Cook Islands, Tel. (682)-29-680, Fax (682)-20-990. Customs was the same as Niue Island, just make sure to take it home. There have been some problems in the past so this policy could change with abuse of their hospitality. Also, the Edgewater Resort has had Amateur Radio operations, P.O. Box 121, Rarotonga, Cook Islands. Tel. (682)-25-435, Fax (682)-25-475.

5W Western Samoa: "We stayed at Aggie Grey's Hotel, Alan Grey, General Manager, c/o Aggie Greys Hotel, Apia, Upolu, Western Samoa. Tel. 22-880, Fax 23-626. Amateurs have operated from an enclosed observation hut located on the roof of the old hotel building. We prefer to use a fale (replica of a Samoan house) for privacy and comfort. Alan was very accommodating to our needs. License fee is $15.00 Tala or about $7.00 U.S., contact: Director, Post and Telecommunications Dept., Apia, Western Samoa, Tel. 23-456.

VK9L Lord Howe Island: "We stayed at Trader Nicks, operated by Bill and Janne Shead. Contact Trader Nick's Old Settlement Beach, Lord Howe Island, New South Wales 2898, Australia. Tel. (065)-632-002, Fax (065)-632-022. License fee is $30.00As. roughly $20.00 U.S. Contact: Communications Manager, P.O. Box 970, North Sydney NSW 2060, Australia, Tel. (02)-922-9111, Fax (02)-922-7351. Janne was a most accommodating hostess.

A35 Tonga: "We prefer the Northern Island Group of Vava'u, and stayed at the Paradise International Hotel, P.O. Box 11, Neiafu, Vava'u, Tonga. Tel. 70-211, Fax 70-184. Mr. C.E. Johnson, builder/owner/manager has sold his interests and the hotel is under new management. They still allow Amateur Radio operation as of March'94. License fee is $20.00 Pa'anga, about $8.00 U.S. Contact General Manager, Tonga Telecommunications Commission, P.O. Box 46, Nuku'alofa, Tonga. Tel. 21-225.

"I feel I must stress to anyone wishing to travel to the Islands that you are a guest of their country and should act accordingly. Customs do change in other areas of the world. Airline schedules are not always reliable, so a flexible schedule and attitude are necessary. The people there understand the problems of travel, however, not wishing to hurt your feelings, they will agree to do something for you, having no intent to comply. This is usually not applicable to businesses, but individuals (taxi drivers). All travel should be looked on as an adventure. Sometimes the thrill is getting there.

"I always write the licensing agency well in advance (more than 6 months) before leaving stateside, asking their preference of prepayment or apply and pay in person. In most instances, due to monetary conversion rates, exact foreign money orders cost more than double the license fee. Their preference is to issue the license once you get into the country, except Tonga, where the Prime Minister, (related to the King), stamps and signs the license. This was not the case on Vava'u.

"Again, personal planning and contact before leaving home more than pays for the time it takes. Not all of the countries allow our full legal power of 1500 watts, and band plans change with ITU zones. Also, having photocopies of your license and passport (one set for each country) speeds the process and is appreciated by the persons filling out the application. Local currency is a must. It causes a real mess to spring U.S. dollars on them after they have finished the application. Something I have found helpful is to bring a few of your QSL cards along and give one to the Telecommunications department. Small things such as this help break the ice." WR

OLD-TIME RADIO

True confessions

DICK McKLVEEN, W4YWA

Some folks learn the hard way and the author is evidently a member of this unfortunate group. This is indeed a true story. For this reason, one might want to include it in selected culturally expansive works such as "The Evolution of the English Language." Then too, the content might be used to illustrate a point in a pamphlet espousing the pitfalls awaiting traffic handlers who are endowed with a limited vocabulary.

An impressive assignment

It happened in early 1942, shortly after Pearl Harbor. As a fledgling member of a Signal Aviation unit, I landed a job as CW operator at what was then Langleyfield, Virginia. Being new at the radio operator's game, it was my first experience in the lofty, highly sophisticated atmosphere of a genuine fixed military radio station. I was more than favorably impressed with the hardware, not to mention the mass of blinking lights which tended to give the place a festive look. Imagine an operating desk with not one, not two, but five receivers! To top that, my co-workers reminded me that the transmitter was such a power house that it was located several miles away. By virtue of my exalted position, I was the absolute master of a probably underpaid, but nevertheless trustworthy transmitter attendant who would readily jump to my beck and call for QSY and other adjustments What a beautiful set-up! Not much money, but a whole lot of authority! I was dutifully impressed.

Stressful beginnings

It was no surprise to old timers at the station when they discovered my code speed was not any near the norm. Could it be that other operators involved were sending just a bit above my speed? I rationalized that it wasn't the speed, it was the fact that these undistinguished clods were carelessly running their characters and words together, getting their dahs and dits mixed up, and otherwise goofing off. In any event, I initially got along by continually asking the distant op to slow down a little (or a lot).

As part of our training as traffic handlers, we were continually reminded to place accuracy first and foremost. We were warned that this was absolutely essential when handling traffic of great consequence — such as matters of life or death.

The plot thickens

It was about nine in the evening and I was alone in the station copying a message from our net control in Baltimore. I didn't pay a bit of attention to the actual content of messages; just did my best to get the proper words on paper in a readable format. While copying one of the first messages from Baltimore, the word "dearth" floated in over the airways. If my recollection is precise, I sputtered, "There is no such word!" "Wow," I thought, "Some VIP must have croaked." I immediately sent BK to my professional associate in Baltimore and requested a repeat of the provocativè word. He dutifully sent what again appeared to be the word "dearth," When I interrupted him still another time, I swear he sent the word "dearth" again. As I demanded still another repeat from my beleaguered friend, I began to wonder about the two beers I had consumed earlier in the evening. Were they really only 3.2? Anyway, I read "dearth" again and let the stream of CW continue while I copied "dearth of water," Wondering if some individual by the name of Waters died, I sent "ditty dum dum ditty" for the umpteenth time. For some reason or other, the distant operator was now becoming a bit temperamental.

At this state of the game, he proceeded to send the word "lid" several times. Now I was really confused! Of course I knew a lid was a cover for a bottle, can, box, etc. However, I had no idea how "lid" tied in with the death of Waters! By this time, my erstwhile friend in Baltimore was sending all of 5 words per minute. I asked him to send "death" again and again. I tried to enlighten him as to the correct spelling of "death," but he reacted as though he didn't get the message. Without any encouragement at all, he endlessly repeated that strange and seemingly inappropriate three letter word. He began to sound as though he was about to go over the proverbial deep end!

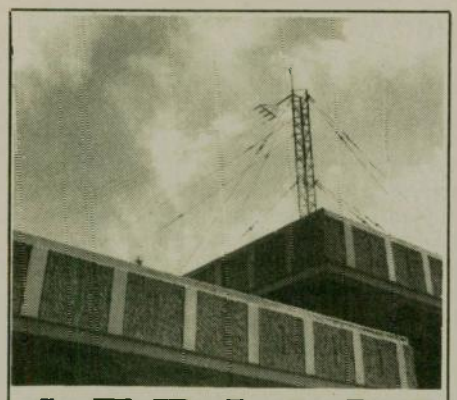
The light dawns

Well to make a short story long, it finally dawned on me that there just might be such a word as "dearth" in the dictionary. I finally copied the entire message (less the mysterious word "lid") at about 10 words per minute — the distant operator, bless his soul, refused to send any faster. To this day, I am not at all sure it was the same fellow. I later heard a rumor that a certain Baltimore brass pounder was carried off to the funny farm while blabbering incoherently about some "lid" at Langley.

After consulting a dictionary, I finally deciphered the message. It had to do with the dearth (or shortage) of water due to a recent drought. Since no dictionary definition of the word "lid" seemed to fit the context of the message, I forced myself to use elementary deduction to determine its significance as it applied to yours truly. Another op at Langley joyfully and enthusiastically verified my suspicions. People have been known to use four letter words to describe the author, but this was the first time I attained the lofty three letter plateau. I assure you my new and unique moniker was not at all complimentary!

Self-improvement

Anyone for code practice? If that doesn't suit your fancy, how abut an in-depth analysis of Webster's New Collegiate dictionary or, better yet, the unabridged edition? Sounds like fun! **WR**



AERIALS

KURT N. STERBA AND LIL PADDLE

I've heard of an amateur who replaced his decade-old RG-8 coax feed line (originally from Radio Hut) with some Belden 9913 and was mystified when his SWR went UP (in this instance from 1.5 to 2.0). He tried another length of the same 9913 and the results were the same. Much head scratching and pondering about velocity factor and all that was to no avail. The solution which satisfied the amateur was to add 50 feet of Radio Hut RG-58 at which the SWR again declined to 1.5 to 1.

While analyzing at a distance can be fraught with problems here is an examination of this woeful situation. First of all, obtain your feedlines from the type of entrepreneurs who are qualified to give proper counseling. Such a category would include such people as Pres Jones at the Wireman and Fred Snell at Antennas West. Secondly, don't wait ten years to exchange new for old.

Now the SWR always was "2" (or a little higher). It was the lossiness (attenuation) in the coax which gave a false reading. Actually, the worse a piece of coax is, the better it will appear. What has happened is that all the reverse power that would have tickled your SWR bridge has been absorbed in the line in the form of heat.

The magic occasioned by the adding the 50 feet of RG-58 was the result of the rather lossy RG-58 (at 28 MHz as was the situation here) even brand new.

The advice from here is use the best quality feedline you can, from the reputable manufacturers, and draw your guidance from those with call signs after their names. In feedlines, as in other avenues of life, you receive what you compensate for and you pay for what you get.

Art Buchwald once said something like, "I don't have to make anything, up, I just rip it off the wire." I feel the same way. In hand is a catalog issued by the, oh, let's call them the "Pool Room Shark" Antenna Company.

And as we always say, equal space will be furnished for rebuttal should there be even the slightest disagreements with my observations and interpretations. As Voltaire said. . . .

Their two meter antenna promises a gain of 6 dBd. Which is, of course, referenced over the dipole. The antenna is 102 inches long (8.50 feet).

A ½-wave dipole (146 MHz) is 3.20 feet long. And, a dipole has no gain over a dipole. So, we have but 5.3 ft. remaining with which to accomplish the equivalent of quadrupling (4x) the transmitter power.

Assume that we use up another 3.20 ft of the length to obtain 3 dB gain. Remaining is 2.1 ft. Somehow that length will give us that other 3 dB gain so we may have the full 6 dB promoted. The antenna, two ⅝ wave elements promises 6 dBd.

Any explanations from Texas on how two ⅝ wave elements realize 6 dB over a dipole will be welcomed here and will certainly find an interested audience.

On the next page is another 2M vertical, almost twice as tall (15'4") promising "7 dB maximum effective gain." Alas, the figure quoted is minus the qualifying dBi or dBd. Thus, we cannot really appraise this antenna at all. Should it be dBd, we have doubled the length of an antenna for 1 (one) dB gain? Should it be dBi, we are in a negative situation versus a much smaller antenna.

Are prospective customers puzzled over this seemingly strange set of circumstances?

Then we're told, "People everywhere are demanding" these particular antennas. Then to give greater emphasis to that "everywhere" we're informed, "From North to South to Central America." I can only surmise that the truck driver was in such a hurry to get to South America that he didn't even stop in Central America on the way down. He satisfied the "demand" on his way back up. And then to really lock in that "everywhere" we're told, "from Indonesia to the Philippines." Well, that is a rather small slice of "everywhere" as any good DXer with a knowledge of geography would be instantly aware. For the FM crowd we'll explain that the two countries mentioned are close neighbors separated by only a couple of hundred miles of ocean. Hmmm, could it be that they meant via long path?

At one time, for but a rather small honorarium, Kurt offered to go over manufacturer's brochures (prior to printing) to weed out potentially embarrassing and offending portions. No one chose to accept his well-meaning offer.

Turning the page, our sensibilities are assaulted by a 10M vertical promising "4.2 db Gain" (somewhere they lost the capital "B"). Would we be intrusive to ask, "4.2 dB gain" over WHAT???? The company does tell us that this antenna which is "0.64-wavelength," (WL) has more gain than ⅝ wave designs. Hmmm, ⅝ is equal to 0.625, and this antenna is 0.64—that's a difference of 0.015 WL. A recounting of how the comparative gain measurements were made would be exciting reading indeed. And, pray tell, just HOW MUCH more gain?"

Also fascinating was that the SWR curves plotted on many antennas (with the resonant points mid-band) were always perfect parabolas with the SWR figures at the band edges always the same on the high end and the low end.

Those charts brought to mind the story about the policeman who stopped the drunk-driving suspect. The officer said, "Recite the alphabet." The reply was: "A-B-G-J-R-L-P..." To which the officer said, "That isn't the way it goes."

But on to other matters.

In the appendix of "The ARRL Antenna Book" is given "Metric Equivalents" for example: km = mile x 1.609. Hmmm, well, that's something we certainly use in radio every day. Of possibly more use would be that a meter is the equivalent of 39.37 inches.

Is there coming in Amateur Radio an "I'm angry and I'm not going to take it any longer" (regarding certain nefarious practices) attitude? For example, writing in *ATVQ*, the esteemed Dave Clingerman, W6OAL, wrote, in part, while discussing the differences between isotropic and dipole references, "Manufacturers simply add 2.15 dB to their actual measured gain of their products and hope that the inflated gain figure catches the eye of the unwary and entices them to buy their antenna rather than the one offered by the manufacturer who has advertised his product (more honestly).

Are YOU among the "unwary?"

It has been said, by Sibelius for one, "No one has ever erected a statue in honor of a critic." However in Kurt's case, he will be the exception to the rule. We checked with him and he said that he felt the Hara Arena in Dayton, Ohio (near the hot dog stand) would be a fitting memorial location. **WR**

Alabama

The MONTGOMERY ARC will host the 17th annual Montgomery Hamfest and Computer Show on the 12th from 8 a.m. to 3 p.m. in Garrett Coliseum at the South Alabama State Fairgrounds on Federal Drive in Montgomery. Flea market and hamfest will be held indoors, and parking is free. VE testing will begin at 8 a.m. Admission is $3. Vendor set-up is from 3 p.m. to 8 p.m. Friday, and 6 a.m. to 8 a.m. Saturday. Talk-in on 146.84(-). Contact Hamfest Committee, c/o 111 Diane Dr., Prattville, AL 36066; 205/365-0380, or FAX 205/264-1150.

California

THE LIVERMORE ARK is sponsoring an Amateur Radio/Electronic/Computer Swap Meet on 6 November from 7 a.m. to 12 noon at Las Positas College. Features include refreshments, free parking and covered spaces in the event of rain. Admission is free. Sellers pay $10 space fee. Talk-in on 147.045(+) from the west, 145.350(-) PL 100Hz from the east. Contact Noel Anklam, KC6QAK, at 510/447-3857 eves. or leave message days at 510/783-2803.

Colorado

The ROCKY MOUNTAIN RADIO LEAGUE, Inc. is sponsoring the 1994 RMRL Hamfest on 30 October from 8 a.m. to 2 p.m. at the Jefferson County Fairgrounds, 15200 W. 6th Ave., in Golden. Features include ARRL Forum, refreshments and door prizes. VE testing will be held, call for details. Admission is $3. Vendor cost is $10 per table, in advance or at the door. Talk-in on 145.22(-). Contact Joe Dickinson, WTØC, 303/771-9577.

Connecticut

The SOUTH CENTRAL CONNECTICUT ARA will hold its 15th annual flea market 13 November from 9 a.m. at the Branford Intermediate School in Branford. The site is handicapped-accessible. VE testing will be held, call for details. Admission is $5. Vendor cost is $15/table in advance, $20 at the door. Reservations required no later than November 1. Vendor setup time,7 a.m. Talk-in, 146.61(-). Contact SCARA, P.O. Box 705, Branford, CT 06405-0705; or call Brad, 203/265-9983, 24 hrs.

Florida

PELICAN CHAPTER #128, QCWA, will host its annual Catered Fried Chicken Picnic on the 16th from 10:30 a.m. in Shelter #13 at Lake Seminole Park in St. Petersburg. The menu will include chicken, scalloped potatoes, fresh garden salad, corn on the cob, rolls, butter, drink, and dessert. The price will be $7.50, same as last year. QCWA members and guests are all invited. Check-in and directions will be given on the QCWA repeater, 145.29(-).

Indiana

The ALLEN COUNTY ARTS is sponsoring the Fort Wayne Hamfest and Computer Expo on the 19th and 20th from 9 a.m. both days at the Allen County Memorial Coliseum on U.S. 30 in Fort Wayne. Activities will include forums, VE testing and ladies' events. Shopping center shuttle will be available. Admission is $5, children 11 and under admitted free. Parking is $2. Vendor cost is $15 flea market, $30 premium, and $25 electricity. Setup is Friday evening and Saturday morning. Talk-in on 146.88(-). Contact ACARTS, P.O. Box 10342, Ft. Wayne, IN 46851; or call John for table info at 219/483-6305, or Don for general info at 219/484-3317.

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The EVANSVILLE ARS is sponsoring the Evansville Winter Hamfest on the 26th from 8 a.m. to 2 p.m. at the Vanderburgh County Fairgrounds. Features include free parking, flea market, food provided by the Old Post ARS, and all indoors, so rain or shine. Admission is only $4. Vendor cost is $10/table; reserve early, last year sold out. Talk-in on 145.15(-) Evansville, 146.925(-) Vincennes. Contact EARS, 1506 S. Parker Dr., Evansville, IN 47714; Bev, KA9PDG, 812/479-5741.

Louisiana

The GREATER NEW ORLEANS HAMFEST 1994 will be held on the 26th from 8 a.m. to 2:30 p.m. at the St. Bernard Cultural Center in Chalmette. Features will include VE testing and forums. Further information can be obtained by contacting Greater New Orleans Hamfest, P.O. Box 51822, New Orleans, LA 70152-1822; Charlie, N5UXV, 504/347-3359 (after 6 p.m.), or Duncan, N5NBI, 504/392-6517 (after 4:30 p.m.).

Massachusetts

The MAYFLOWER ARC will host its fourth annual flea market on the 12th from 9 a.m. to 3 p.m. at the Plymouth Memorial Hall Building in Plymouth. Refreshments will be available. Admission is $2, children under 12 admitted free. Tables are $12 in advance and $14 at the door. Vendor setup is at 8 a.m. Talk-in is on 146.685(-), and 446.625. Contact MARC, P.O. Box 766, Dept. FM, Plymouth, MA 02362-0766; Jon, WS1K, 508/746-0162, or Jim, MN1F, 508/747-2224.

New York

The RADIO CENTRAL ARC presents Ham Expo Weekend '94 on the 19th and 20th from 9 a.m. to 4 p.m. both days at the State University of New York at Stony Brook on Long Island. Features include an all-indoor flea market, dealers, cafeteria service, VE sessions, guest speakers,

seminars, and much more. Admission is $6/one day, or $10/both days. Vendor tables are $20/one day, or $30/both days. Vendor setup time is at 7 a.m. Talk-in on 145.15(-) or 449.525(-). Contact Radio Central ARC, P.O. Box 680, Miller Place, NY 11764; reservations call John Mark, KB2QQ, 516/689-6343, or Emil Tillona, KD1F, 516/696-0610.

North Carolina

The CABARRUS ARS will hold their 15th annual Hamfest/swapmeet on the 6th from 8 a.m. to 4 p.m. at the Cabarrus County Fairgrounds in Concord. Plenty of free parking, and free tailgating in the fairgrounds courtyard with admission ticket. VE testing will be held, walk-ins will be accepted. Admission is $5 in advance, $6 at the door, children under 12 admitted free. Reserved tables are $10. Vendor setup is 3 to 10 p.m. on Saturday, and 6 a.m. Sunday. Talk-in on 146.655(-). Contact CARS Hamfest, P.O. Box 1290, Concord, NC, 28026 (reservations please include SASE); Jeff, WA1WXL, 704/933-7238 for general info, Bill, WD8SAS, 704/788-2873 for dealer info.

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The JOHNSTON ARS is sponsoring the 6th Annual JARSFEST on the 20th from 8 a.m. to 4 p.m. at the American Legion Complex in Benson. Admission is $4 in advance, $5 at the door, and children accompanied by an adult enter free. Vendor tables are $8, and tailgating spaces are $4. Vendor setup time is 6:30 a.m. Talk-in on 147.27(+). Contact Bill Lambert, AK4H, 8917 NC 50 N., Benson, NC 27504; 919/894-3352 eves between 7 and 10 p.m.

Oklahoma

The ENID HAMFEST GROUP is sponsoring the Enid Hamfest on the 5th from 8 a.m. to 5 p.m. in the Hoover Building at the Garfield County Fairgrounds. Features include free coffee and doughnuts in the morning, free hot dogs and soda in the afternoon, and a covered dish banquet at 7 p.m.. VE testing is at 1 p.m. Admission is $2. Vendor tables are $1 each. Talk-in on 147.375(+), or 444.825(+). Contact Fred, N5QJX, 405/242-3551, Tom, N5LWT, 405/233-8473, or Dick, N5HEL, 405/233-8969.

Pennsylvania

The CENTRAL PENNSYLVANIA RAC will sponsor their Hershey Hamfest on the 12th from 8 a.m. to 2 p.m. at the Hershey Armory, 28th Div. Infantry on Baum St. in Hershey. Features include heated inside delalers' stands, outdoor tailgating, free parking. VE testing sign-up by 8:30 a.m. Admission is $2.50. Advance tables are $15, tailgate spaces are $5 each. Vendor/tailgate set-up is at 7 a.m.Talk-in on 145.47(-). Contact Harold Baer, N3LZH, 619 W. 2nd St., Hummelstown, PA 17036; 717/566-8895.

South Carolina

The GRAND STRAND ARC is sponsoring Beachfest '94, Hamfest and Computer Show on the 12th from 9 a.m. to 4 p.m. at Myrtle Beach High School. VE testing is at 9 a.m. sharp. Admission is $5 in advance, $6 at the door. Talk-in on 147.12(+). For ticket/table info, contact Robert Battle, 803/236-2887, or Gordon Mooneyhan, 803/293-3839; or write GSARC, P.O. Box 2135, Myrtle Beach, SC 29578-2315.

Wisconsin

The MILWAUKEE REPEATER CLUB is sponsoring 6.91 Friendly Fest on the 5th from 8 a.m. to 1 p.m.at the Waukesha County Expo Center Arena "Round Building." Features include swapfest, indoor ground access and exams. Admission is $3 in advance, $4 at the door. Vendor tables are $4/four-foot table, $8/eight-foot table, reserved. Vendor setup is at 6:30 a.m. Talk-in on 146.91(-), and 146.52(S). Send SASE to The Milwaukee Repeater Club, P.O. Box 2123, Milwaukee, WI 53201. **WR**

You may already have one!

In an emergency situation you may need to operate your station for an extended period of time with no help from the "electric company." Then you'll wish you had a battery which could keep you on the air until power is restored. You may already have such a battery. It's your camcorder battery. It is probably somewhere between 7.2 and 12 volts and rated a couple of AH. All you need to do is figure out (you're a ham, remember?) how to connect it to the rig. It works. I've done it. But, it'll be of no value if it isn't charged. So, better keep it charged up. My camcorder has a little display in the finder which reminds one of a fuel gauge on a car. It shows a range from E to F, empty to full. Keep it over on the "F" side and you'll be ready for anything. –The *Bandspread*, WVARA, Terre Haute, IN

OFF THE AIR

CEPT Impact

Recently, I had the opportunity to see the September, 1994 ***Worldradio*** magazine. I read with great interest "Highlights" by W4ZC. In his discussion of the CEPT licenses, reciprocal licenses, and CW he missed some important points. He isn't alone though. Most U.S. amateurs don't realize the international impact of American regulatory changes.

First, current reciprocal licenses already discriminate against American citizens. For instance, while a German with a German license may operate in the U.S. with a reciprocal license, an American possessing a license from another country (Germany, Monaco, etc.) cannot operate in the U.S. without a U.S. license. The American has fewer privileges than a foreigner.

Second, if the U.S. would sign the CEPT agreement it would go a long way toward correcting this problem. The licensing requirements of the nations who have already signed the CEPT agreement are at least as rigorous as the U.S. licensing requirements, sometimes more rigorous.

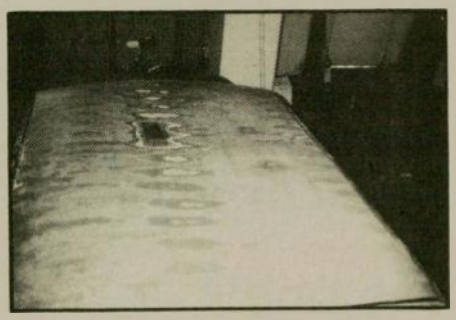
Third, the slow-code proposal on the other hand might well endanger most of the current reciprocal licensing arrangements. Currently, a U.S. amateur with a general class license can operate most anywhere in the world. By international agreement there is a CW requirement for operating privileges below 20 MHz. For CEPT purposes the CW requirement is 12 wpm. While the CEPT might allow a 10 wpm requirement, they might well not allow operating privileges to the proposed general class licensee who has only passed 5 wpm.

I was first licensed as WD9LJU in 1977, have been licensed as PJ4/WD9JLU and 3A2LZ, and now hold Extra class license NH2W. This is an issue that affects me directly. We need to be careful to think internationally, not "America-only" when it comes to our licensing agreements.

DANIEL PLETT, 3A2LZ
Monaco

Paint saved by mag mount!

I really laughed when I read the item on page 51 of your September, 1994 issue regarding the importance of protecting a car's paint from a mag mount antenna. Look at the accompanying photograph of my old car. The only place



with any "paint" left is where the mag mount provided protection!

I really enjoy your publication and read it from cover to cover, ads and all. It has long been the best value in ham radio. Thank you for your efforts.

LAWRENCE M. HARMON, N7NX
Salt Lake City, UT

What's in a name...

I was very interested in the paragraph in Publisher's Microphone, October, 1994 issue of ***Worldradio*** (of which I am a life subscriber) concerning the use of the words "ham," and "amateur" and our public image.

I have been licensed since July 1962, and I can tell you that in my own 32 years of experience, the use of these names has brought some very unusual expressions from people in government positions whom ham radio has assisted with public service events. *Surprise* when told "amateur" radio operators were going to assist with major events in the city of Philadelphia, e.g. the pope's visit, the Olympic Torch run, parades and similar events.

Key government people wanted to know how "amateurs" would know what to do! Those unfamiliar with ham radio have no idea what the Amateur Radio operators of this nation do. It is definitely an image problem based on the use of both words. Other than vague ideas concerning TVI, the general public has little knowledge about our hobby. A survey of the public's opinion and knowledge would be very interesting.

A name like "Emergency Radio Services" tells the world what we do instantly. For me, a name change would be welcomed.

TONY MUSERO, K3UKW
Philadelphia, PA

Don't leave your heirs in the lurch

With thanks to The MARAC County Line Road Runner and the Badger State Smoke Signals.

Married or single, the wise ham of any age could help his/her family or heirs in the event of an unexpected demise by having a current inventory of the ham shack and instructions for its disposal. This is especially true where there is not another ham in the family. The death of a ham radio operator can leave the survivor or heirs in a fog of grief about what to do with all that gear. So, don't put it off any longer.

Make up your inventory showing what you paid for your gear, and leave your family some clear instructions. Ask an Amateur friend to sell your gear. You may wish to make a donation to a local radio club or an organization like the Courage Handi-Hams.

Whatever you decide, make your death mean something. To be certain that your wishes are respected and followed, those instructions should be written into your last will and testament. The Letter of Instruction Form should be filled out and attached to your will. Remember, too, to be of any value, the inventory must be updated on a regular basis.

Letter of Instruction (Attach to your will):

To:_____
(The personal representative named in your will)
I hereby designate_____,
a friend and colleague in Amateur Radio to help you in the disposal of my Amateur Radio station and all equipment related to it, other than mementos the family may wish to receive. You may wish to obtain his/her assistance in disposing of my station and equipment.
Signed: _____

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

ARRL ham insurance

HRIA is pleased to announce that in conjunction with the Great American Insurance group, they are now offering U.S. Amateurs an alternative to the ARRL ham insurance program. Bill Hill, W3IBT, says, "The ARRL program is fine, as far as it goes. The HRIA plan however, is available to all licensed Amateurs without any requirement to belong to any organization and there are no administrative fees." In addition to these money-saving features, HRIA can provide coverage for towers, antennas, and rotors, which, until now has not been available. Also, you can add mechanical breakdown/electrical injury coverage. Naturally, the tower and mechanical breakdown programs require some additional premium and higher deductibles than HRIA's basic plan. The basic plan with a $50 deductible is available for as little as $25.00 per year. HRIA's "EZ" application takes only one minute to complete and you can even pay the premium with your credit card.

Protect your investment — insure your equipment. For more information or to arrange coverage over the phone, contact HRIA at P.O. Box 201, Canonsburg. PA 15317-0201; 800/545-8881.

KR01, Curtis Keyer Kit

The Jade Products, Inc. Keyer Kit uses the Curtis 8044ABM chip. The kit includes a double-sided, silk-screened circuit board, audio amp., and parts. Most resistors used are RN55-D mil spec. which means that the value is printed on the part, rather than small, hard to read color bands.

The easy-to-follow 54-page manual details assembly and operation of the keyer and includes troubleshooting, X-ray views of the PC board and complete schematics.

The keyer supports iambic keying and adjustable speed, 5 - 50 wpm. The slow power-up, turn-on transient circuit prevents keying transmitter during power-up. Etch is provided on the board for an optional speed meter, positive or negative keying, and weight control. This module can be installed in a stand-alone enclosure with a power supply or battery. It is small enough to be "built-in" to most commercial transmitters and transceivers.

Typical transceivers that can use this module are the Heathkit HW-series, TENTEC, and most early vacuum tube equipment. This kit makes an excellent club project; typical assembly time for an inexperienced builder is approximately 1.5 hours. On-board potentiometers are included for speed and volume control.

Power requirement is 4-18V DC, 30 mA, suggested price is $39.95; KR02 options kit Pos/Neg Keying, Tone-Weight Control, $10.00; KR03 meter option (0-50 WPM), $14.95; 10-keyer-bd Curtis Keyer board (no parts included), $14.95.

RF-tight box

Keep the RF from getting into or out of your project with an RF-tight, hot tin-plated steel box from SESCOM. The new SB series of RF Shielded Steel Boxes allow the designer to eliminate the typical spillover of unwanted signals.

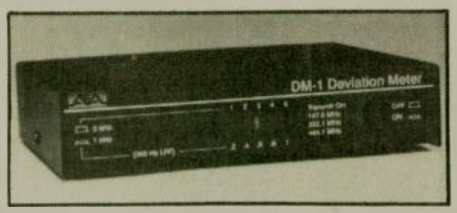
The boxes come with individual dividers and the lids can be soldered to the case. Eleven sizes are stocked ranging from 2.1 x 1.9 x 1.0 inches (53.3 x 48.3 x 25.4 mm) to 6.4 x 2.7 x 1.1 inches (162.6 x 68.7 x 27.9 mm) and are priced from $4.50 to $13.20.

1000pF/50VDC feed-through capacitors are also available as solder or screw-in types costing from $0.85 to $3.50 each. Detailed information is available in the new 48-page 1995 Constructor's Hardware Catalog. Call (800) 634-3457.

Deviation meter

Advanced Electronic Applications, Inc., (AEA),introduces the DM-1 Deviation Meter, designed for measuring the deviation of FM transmitters operating in the 144. 22, or 440 MHz amateur bands.

People using 9600 baud TNCs will benefit most from the DM-1. Correctly setting deviation for 9600 baud Packet operation is nearly impossible to do by ear. Packet users who are used to the sound of the 1200 bps packet burst will only hear 'white' noise when using 9600 bps. The DM-1 allows users to correctly set deviation, thus eliminating excessive retries,



increasing data throughput, and increasing channel efficiency."

A feature of the DM-1 is that the tuning is crystal-controlled, which provides stable measurement. Two deviation ranges allow sufficient resolution for accurate measurement of voice, data, DTMF, and subaudible deviation. Handhelds, mobiles, and base stations can be checked for correct audio deviation.

The DM-1 comes with a ten segment LED bar display and includes an output for external digital or analog meters which provide increased resolution. Also included is a low-level de-emphasized audio output for monitoring audio quality through an external amplifier.

Power is supplied by one standard 9 volt alkaline battery. When voltage drops below 5.5 volts, the DM-1 is automatically disabled to prevent erroneous readings.

The DM-1 is small, (6.125" W x 4.75" D x 1.377" H), and weighs less than a pound. It can be stored almost anywhere until you need it or it can be left in-line.

The DM-1 suggested retail price is $169. Best prices are offered from authorized AEA Amateur Radio Dealers. Contact: Advanced Electronic Applications, Inc., P.O. Box C2160, Lynnwood, WA 98036; 206/774-5554, Fax 206/775-2340.

S-COM upgrade

S-COM Industries is now shipping a powerful software upgrade with all 6K repeater controllers, which includes these features:

• A 100-setpoint scheduler to execute tasks at programmed times and dates. Uses include changing the repeater's access mode based on day and night; generating special identifier messages for holidays or special events; announcing nets; charging batteries; weekly pager tests; and so on. Setpoints include specific times and dates, such as midnight, December 31st, or recurring events, such as 9:00 a.m. on the first Saturday of each month.

• An antikerchunk feature with programmable delay and re-arm timers to reduce nuisance key-ups.

• DTMF decoder improvements, including long tone detection for all digits. This is compatible with the ARRL Long Tone Zero (LiTZ) program. DTMF Priority and DTMF scanning are programmable.

• Repeater monitoring and talkout from the phone line was added.

• Macro expansion was accomplished to allow 280 macros of 100 characters each.

• Run-time variables allow CW time and date stamping to be added to any programmable message.

The 6K repeater controller with autopatch is priced at $395. Older 6R controllers may be upgraded with a 6K V2.0 kit for $49.95 plus $3.00 for shipping and handling.

Contact S-COM Industries, P.O. Box 1718, Loveland, CO 80539-1718; phone 303/663-6000.

Quick-View directory

Technology Research Communications introduces the new Quick-View repeater directory. Quick-View features the following:

1.) It is very easy to read

2.) Each directory features a full-color state map showing repeater locations and surrounding areas.

3.) Conveniently sized for visor storage in your car or on your desk at home.

4.) Tremendously fast lookup to find repeater locations because each directory has two separate listings. One...listing repeaters by CITY TWO...listing repeaters by FREQUENCY

5.) Each directory is laminated to protect each page from spills and wear 'n tear.

6.) Each directory is spiral bound so that each page can be flipped for easy handling and reading.

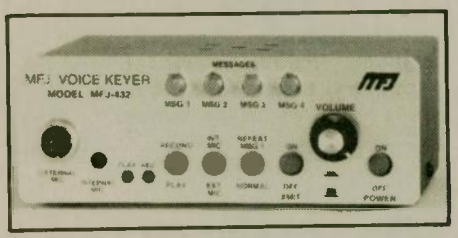
Our directory in no way is to take the place of any other directory on the market. Our intentions for this directory was to have a flip-style booklet that would be easy to use in the car when traveling and sized for easy storage. There is a Quick-View directory for every state and is priced according to the size of the directory. Prices range from $5.00 to $25.00 Contact Technology Research Communications, 16 Red Bush Lane, Milford, CT 06460; 203/878-0551.

MFJ-432 Voice Keyer

Ever wondered what kind of tricks you could pull if you had a clone? Let your clone do the work for you with the new MFJ-432 Voice Keyer. Let the new MFJ Voice Memory Keyer call CQ, send your call and do contest exchanges for you in your own natural voice!

You can store four natural sounding messages for a total of 20 seconds. EEPROM technology will keep messages stored for up to ten years without any back-up battery needed. You can also repeat a message. The keyer is easy to use. Internal jumpers let you customize it to your rig (Kenwood, Yaesu or ICOM).

The MFJ-432 has a built-in speaker that lets you monitor stored messages. It also has a jack for remote control operation. The Voice Keyer uses a 9 volt battery (not included) or 110 VAC with MFJ-1312B, ($12.95) and measures 6 ½ x 2 ½ x 6 ½ inches.



The MFJ-432 Voice Keyer comes with MFJ's famous full one-year unconditional guarantee, suggested price is $99.95.

For more information or to order, contact any MFJ dealer or MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762; 601/323-5869; Fax 601/323-6551, or order toll-free at 800/647-1800.

Marine Technology 250 amp alternator noise filter

With the introduction of 200 Ampere alternators on public safety and emergency vehicles to satisfy an ever increasing demand for electric power, an old problem rears its ugly head: radio interference from the more powerful alternators. This interference raises havoc with all radio transmission, reception and channel identification, and it greatly reduces communication range.

Marine Technology, Inc., with over 25 years' experience in the control of electrical interference in vehicular and marine installations, has developed the huskiest alternator noise filter yet — the mighty "MAR-250A Filter." This powerful filter will handle 250 amps continuously (350 amps intermittent duty) and is designed for all 6 to 32 volt dc negative-grounded systems.

The MAR-250A will eliminate alternator whine and signal interference to communications and navigation equipment.

The MAR-250A is only 4¼ inches wide, 9½ inches long and 3½ inches high and weighs only 6½ pounds. The suggested retail price $219.95. Marine Technology also manufactures the MAR-AK250 complete alternator filter kit and smaller companion alternator filters rated at 70 amps and 120 amps.

For additional information about alternator filters and electrical interference problems, contact Marine Technology, Inc., 2667 E. 28th St. #505, Signal Hill, CA 90806; phone 800/772-0796.

Field strength meter

The Digi-Field digital field strength meter from I.C. Engineering has a frequency response of DC to 12 GHz, making it useful for preliminary susceptibility compliance measurements. Our two existing models are model A with a sensitivity of 150 nanowatts at 100 MHz and model B with a sensitivity of 2 nanowatts.

Our new model C combines the sensitivity of models A and B. Digi-Field 3 1/2 digit display comes as an economical compact lightweight battery powered (9V) unit. It is priced at $185 + S&H $6.50.

Digi-Field can be used with its own movable telescoping antenna or an external one of users choice. It also includes a low battery indicator and detector output jack. Typical calibration curves in dBm and volts/power conversion charts available.

I.C. Engineering, 16350 Ventura Blvd., Ste. 125, Encino, CA 91436; phone 818/345-1692 or fax 818/345-0517.

Tucker TF-144 2M intermodulation filter

For years, Amateur Radio operators have had to put up interference on 2 Meters caused by the increasing numbers of high-powered commercial paging systems and other VHF/UHF transmitters in close proximity to the amateur 2M band. Tucker Electronics and Computers has just announced the solution to intermod-the new Tucker TF-144 2M intermod. filter.

The TF-144 utilizes a 3-pole filter that provides 40dB or more of attenuation to frequencies outside of the 2M amateur band. It TF-144 installs between the antenna and the transceiver with two female S0-239 connectors. The filter automatically switches on during receive and off during transmit. It can also be manually switched in and out of the circuit and can be used on both handheld and mobile transceivers.

The TF-144 measures only 2.5" x 1.75" x 1.75" and is powered by 12VDC at less than 100mA (power cord included.) List price of the Tucker TF-144 is $79.95. Information on this product and a FREE catalog is available by calling Tucker Electronics and Computers TOLL-FREE at 800/527-4642, or by FAX at (214)348-0367.

Pocket-size Morse code tutor

Here comes an excellent opportunity for you to perfect or to learn your Morse code skills! This pocket size tutor will take you from zero code speed to expert speed, from beginner to extra class, with this outstanding customized code practice.

A "random QSO mode" lets you start by practicing plain English QSOs to get you ready for the FCC code exam; a "word recognition mode" lets you start practice copying entire words — just like the pros on 40 Meters!

This MFJ-411 Personal Morse Code Tutor is a powerful learning tool that teaches you letters and numbers by association and relation. You will be copying code in no time!

With the Personal Morse Code Tutor, you can customize your practice sessions, you can vary your speed from 5 to 60 words per minute, and you can even set the volume and sidetone from 300 to 3300 Hz. It can be customized to whatever is right for you!

The Personal Morse Code Tutor will give you hundreds of commonly used words in amateur radio, so that you can start recognizing entire words instead of fooling around with individual letters.

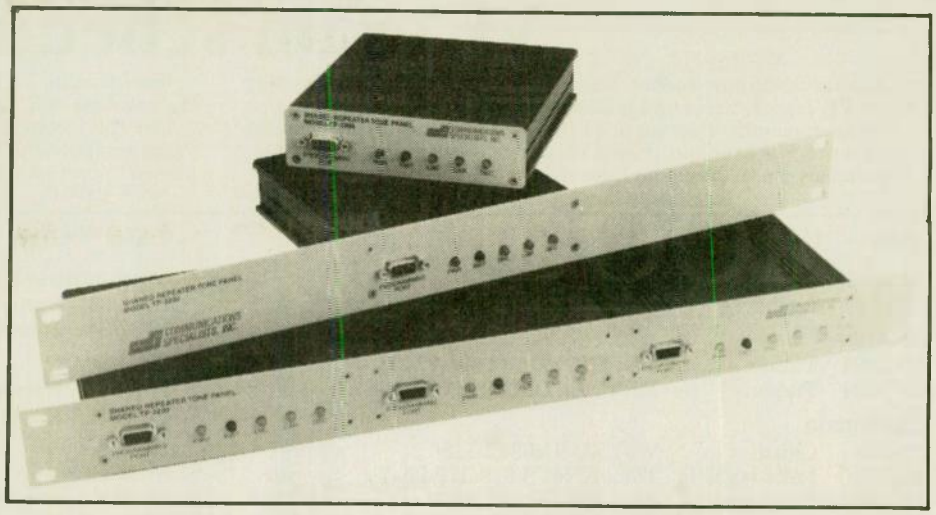
With practice, and the Personal Morse Code Tutor, you will learn to copy words in your head without writing them down and carry on an entire CW conversation without the use of paper!

You're stepping into the future with style when you purchase the MFJ Personal Morse Code Tutor, and you can take it anywhere. The Tutor is only 3 x 1⅛ x 5½ inches; it will fit into your briefcase, travel bag or even your pocket. It uses a 9 volt battery (not included) or 110 VAC with the optional MFJ-1312B.

You can use earphones for private practice or you can use its built-in speaker for group sessions.

The MFJ-411 Personal Morse Code Tutor comes with MFJ's full one year unconditional guarantee.

For more information or to order, contact any MFJ dealer or MFJ Enterprises, Inc., PO Box 494, Mississippi State, MS 39762; phone 601/323-5869, fax 601/323-6551, or order toll-free at 800/647-1800... only $79.95.



Shared Repeater Tone Panel

Communications Specialists, Inc. of Orange, CA announces the availability of their new Shared Repeater Tone Panel, model TP-3200. The unit is the complete tone and control interface between the repeater receiver and transmitter. It supports 157 repeater subscribers in CTCSS and DCS signaling formats.

Full-featured, simple, menu-driven RS-232 programming is accomplished locally by computer or remotely with a modem over landline. DTMF programming on the repeater channel is also included. The TP-3200 is available in Desk Top or Rack Mount versions and is priced at $279.95. The TP-3200 is available for immediate delivery from stock. Catalog is available upon request. Communications Specialists, Inc., 426 West Taft Ave., Orange, CA 92665-4296; 800/854-0547 or FAX 800/850-0547 (USA/Canada).

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.

p/r = pre-register

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.

w/i = walk-in

Date	City	Contact	Notes
Alaska			
12/10/94	Anchorage	Jim, KL7CC 907/338-0662	p/r; w/i
Arizona			
12/10/94	Tucson	Joe, K7OPX 602/886-7217	w/i
12/17/94	Tucson	Micki, AA7RR 602/883-8305	p/r
California			
12/4/94	Chico	W6YKU 916/342-1180	p/r pref.
12/7/94	Lake Isabella	Tom, KN6TS 619/379-2947	w/i
12/7/94	Sacramento	Jim, AB6OP 393-8839 or Earl, AB6CN 331-1115	p/r pref.; w/i OK
12/10/94	Modesto	W6XK 209/883-2968	w/i
12/10/94	Torrance	Joe, WB6MYD 310/328-0817	w/i
12/10/94	Willits	Don, WA6ACX 707/459-3980	w/i OK
12/15/94	Long Beach	W6LRF 714/847-6370; N6LUH 310/596-1023	w/i OK
12/17/94	Downey	KA3DSE 213/923-5598	p/r pref.
12/17/94	Fairfield	Jerry, AA6NO 916/662-0801	w/i OK
12/17/94	Long Beach	Ken, KN6EC 310/431-8998	p/r pref
12/17/94	Petaluma	Dale, 707/762-9414	w/i OK
12/17/94	Sacramento	Lyle, AA6DJ 916/483-3293	
12/17/94	Stockton	Mark, W6DKI 209/465-7496	w/i
12/3/94	Camarillo	George, KN6LA 805/388-2488	p/r pref; w/i OK
12/3/94	Novato	415/883-9789	w/i OK
12/31/94	Culver City	Scott, K6PYP 310/459-0337 or Dave, N3BKV 818/559-2572	w/i
Colorado			
12/1/94	All	Exam hotline, 24-hour recording gives info on all VE exams in Colorado, 303/360-7293	
12/10/94	Denver	Glenn,WØIJR 303/360-7293, 24-hr. message	w/i OK
12/17/94	Westminster	Phil, NP2X 303/421-2795	p/r or w/i
Connecticut			
12/4/94	Milford	NB1M 203/933-5125; WA1YQE 203/874-1014	w/i
12/13/94	Thomaston	WJ1T 203/283-1044	w/i pref.
Florida			
12/3/94	Orlando	Lou, AC4GB 407/898-0429	p/r pref
12/17/94	Melbourne	WB9IVR 407/724-6183	w/i OK
Georgia			
12/23/94	Lilburn	Howie, W4NVF 404/921-8363	w/i OK
Idaho			
12/10/94	Boise	W7JMH 208/343-9153	w/i
Illinois			
12/3/94	Belleville	John, KN9G 618/235-2475	p/r only
12/8/94	Granite City	Larry, NZØP 314/524-3254	p/r pref.; w/i OK
12/10/94	Oak Forest	David, NF9N 708/448-0580	w/i
12/17/94	Loves Park	Dennis, W9SS 815/877-6768	p/r; w/i
Indiana			
12/4/94	Terre Haute	K9EBK 812/466-2122	w/i OK
Iowa			
12/9/94	Sioux City	WYØV 712/258-7262	w/i OK
12/17/94	Council Bluffs	Lorraine, AAØBS 712/322-1454	w/i OK
Maine			
12/28/94	Brunswick	Steve, WZ1J 207/725-5155	w/i OK
Massachusetts			
12/10/94	Braintree	Phil, K1UPY 617/329-6446	
12/21/94	Cambridge	Bob, N1KDA 617/593-1955	
Michigan			
12/3/94	Harvey	Richard, N8GBA 906/249-3837	
12/3/94	Mt. Clemens	Bill, N8CVC 810/468-8345, 4-9p.m.	w/i OK
Missouri			
12/3/94	Kimberling City	NQØG 417/739-2888	w/i OK
12/10/94	Dutzow	Ed, WDØELL 314/459-6581	w/i ltd.
12/17/94	Creve Coeur	Ron, KBØDIY 314/647-3223	p/r
12/31/94	HighRidge	James, WAØFQK 314/942-2268	p/r
Montana			
12/6/94	Great Falls	George, AA7GS; 406/453-2360	
New Jersey			
12/5/94	Sayreville	Larry, N2ELW 908/754-5800 day; 908/613-8967	w/i OK
12/10/94	Cranford	24-hr. hotline: 201/377-4790	
12/10/94	Ramsey	Andy, WB2RQX 201/445-5172	w/i OK
12/14/94	Ft. Monmouth	MARS 908/532-5354	w/i
12/15/94	Bellmawr	WA2VQG 609/933-1500	w/i
New York			
12/4/94	Yonkers	AC2V 914/237-5589	w/i OK
12/13/94	Hicksville	Bob, W2ILP 516/499-2214	w/i
12/17/94	Long Island	Les, AA2FJ 516/364-0030	w/i OK
North Carolina			
12/4/94	Hendersonville	W2YTO 704/891-4359	p/r pref; w/i OK
12/27/94	Jacksonville	Dick, KD4YOT 910/455-8834	w/i
Oklahoma			
12/3/94	Vinita	Jimmie, KA5DVT 918/256-2716	w/i OK
Oregon			
12/13/94	Pendleton	Mike, AA7SL 503/566-3597	w/i OK
12/14/94	Roseburg	KB7CMB 503/672-5997 or AA7GD 503/672-7564	w/i OK
Pennsylvania			
12/2/94	Nazareth	John, WX3C 215/767-4778	w/i
12/3/94	Erie	W3CG 814/665-9124	w/i OK
12/17/94	Hermitage	WM3H 412/347-5960	w/i
Rhode Island			
12/8/94	Providence	Judy, KC1RI 401/231-9156 or Al, NN1U 401/454-6848	w/i OK
South Carolina			
12/17/94	N. Charleston	Ed, KC4OOZ 803/871-4368	
South Dakota			
12/10/94	Rapid City	NUØF 605/348-6564	p/r 30 days; w/i OK
Texas			
12/10/94	Houston	Jim, KB5AWM 713/488-4426	w/i only
12/10/94	McGregor	AB5BA 817/859-5374	w/i OK
12/13/94	Houston	Harold, ND5F 713/464-9044	p/r pref.; w/i OK
12/17/94	Austin	Jim, AB5EK, 512/327-6184	w/i
Virginia			
12/3/94	Virginia Beach	Judy, KD4JMA 804/468-9166	w/i OK

Don't forget to send in the dates for your 1995 VE exams. If we don't have them, we can't print them!

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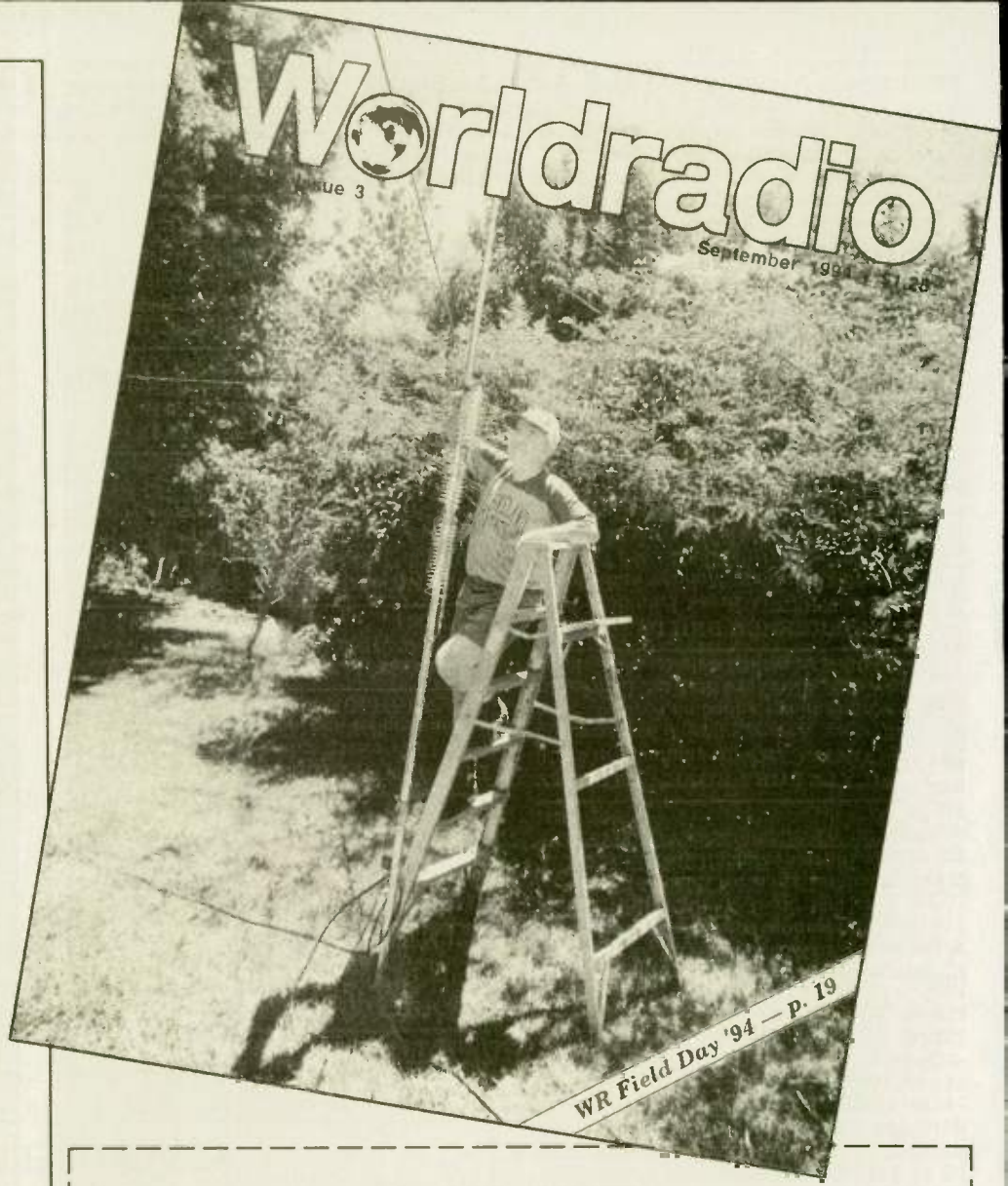

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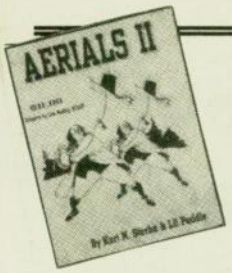


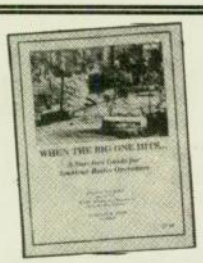

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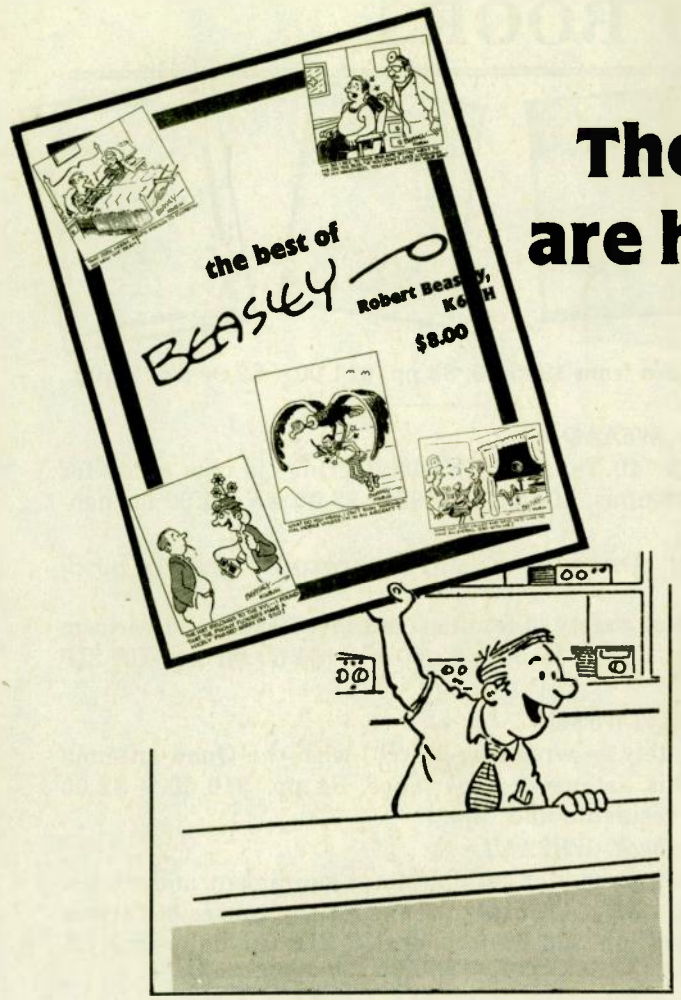

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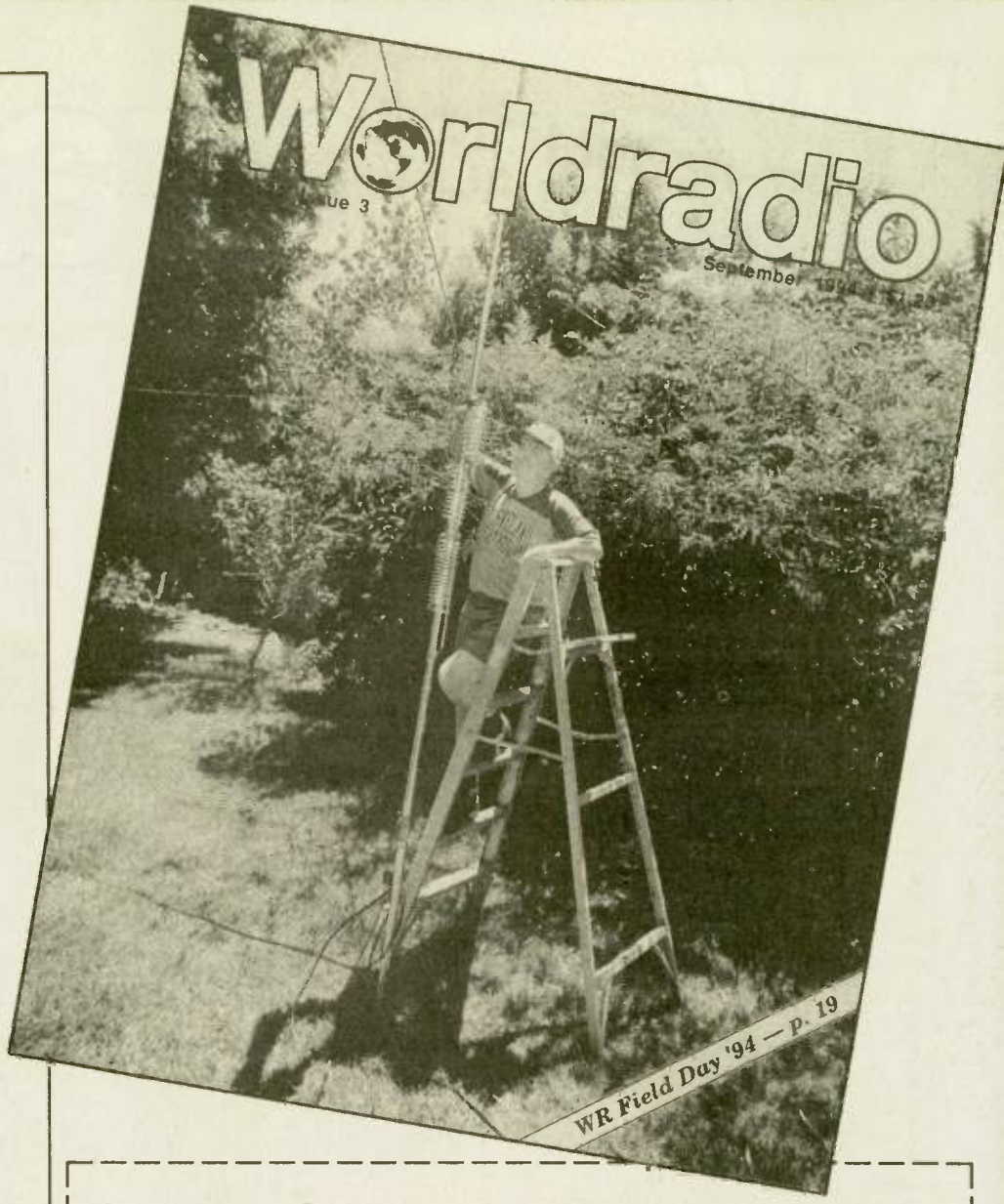

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