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CCC supervisor Mary Springs (left) passes message to Vi Barrett, W6CBA. At right, Floyd Nicholson, W6HRD.



CCC worker (left) and city employee knock down damaged chimney.

Hams respond as quake strikes

Carl H. Nelson, NJ6K

The city of Whittier, California was founded in 1887. Thus, this year — 1987 — is Whittier's Centennial Year. During the past months there have been parades, an awe-inspiring extravaganza, cooking contests, a Centennial Ball, all sorts of special programs, and just about everything one might expect would be in order for a 100th year celebration . . . and then some. For suddenly, at 7:42 a.m. on Thursday, October 1, Whittier received a most unwelcome "birthday present" — a devastating earthquake which registered 6.1 on the Richter scale.

Whittier, which lies a few miles east of Los Angeles, was literally shaken to its foundations. Chimneys tumbled, walls crumbled, and rooms were laid bare as whole sides of buildings came down with thunderous noise, raising clouds of choking dust. Homes were destroyed. A good portion of the old business section, recently refurbished and renamed "The Village," lay in

ruins. In the northwest sector of the town, wherever one looked there was evidence of the monstrous power of the quake — broken masonry, shattered bricks, splintered structures, shards of glass.

About 15 minutes after the shock, a breathless Don Barrett, KA6DJK, entered the Emergency Operations Center at the Whittier City Hall, where an amateur rig is located. Don had no key to the cabinet which housed the transmitter, so he did the next best thing — he jimmied the lock, and then flipped the switch on the transceiver.

In another 30 minutes, stations were activated at the Presbyterian Intercommunity Hospital and the Whittier Hospital Medical Center. Genevieve Steffen, KB6HKT, of the Rehabilitation Department of Presbyterian Hospital, threw the switch on that unit, and Vi Barrett, W6CBA, operated from the physician's lounge of the Whittier Hospital. Within a short time the telephone lines were

overloaded and became inoperable, so the hospitals (particularly the Whittier Hospital) found it necessary to relay communications via Amateur Radio.

In addition to the damage done to the business buildings, dozens of homes were rendered uninhabitable. The Los Angeles County DCS (Disaster Communications Service), which is tied in with RACES, was activated. Arrangements were made by the Red Cross to house, in a community center building, those who needed shelter.

Then, at 3:59 a.m. on Sunday, October 4, a jolt with the magnitude of 5.5 struck. In many areas of Whittier, this "aftershock" added insult to injury by causing additional severe damage. A second shelter was opened at California High School, and soon about 750 Whittier residents were being cared for by the Red Cross.

In most instances of this nature, after a few hours or days following a quake, the services of the amateur
(please turn to page 24)



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World Radio History

Contact lens alert

Two recent incidents have uncovered an important safety hazard. The first was an electrical worker who threw an uncovered electrical switch into a closed position that produced a short spark. The second involved a welder who flipped open his protective face shield to better position a welding rod. The rod contacted the metal and also produced a spark. Nothing was unusual except that both men were wearing contact lenses.

On returning home, they each removed their contact lenses and the cornea of the eye was removed along with the lens! The result was instant and total blindness in each man's affected eye.

Later investigation showed that in both cases the electric arc generated microwaves that dried up the fluid between the eye tissue and the contact lens and bonded the cornea to the lens. Unfortunately, the trauma is painless, so the individual never knows that an injury has occurred until he tries to remove the contact lenses.

When these incidents were reported, the phenomenon was unknown to federal safety and health agencies. In the interim, don't wear contacts if you are subject to electrical sparking! Tnx West Coast ARC — *Intermod*
— *Westlink Report* □

Cable TVI tip

If you've tried everything and still get a trace of TVI on your TV that is hooked to cable, here is an idea to try:

ATTN: Slinky fans

Good news for Slinky (antenna) fans! Slinkies are back on the market! Brass-plated, \$10 plus change. Available via mail order from Eddie Bauer, P.O. Box 3700, Seattle, WA 98130. P/N/item #3856H. — *Mick McDaniel, W6FGE* □

McClaran open again

Robert D. McClaran announces the reopening of McClaran Sales, Inc., of Vero Beach, Florida for the distribution of Aluma Towers.

McClaran, who previously had sold these towers for 10 years, has mobile van, trailer and rooftop towers available as well as stack sections. The towers are constructed of rust-free aluminum and, according to McClaran, require little maintenance. All towers hinge at the base and, due to the minimal weight, can be easily installed or tilted.

McClaran, W4ZGG, says he probably is the only dealer who will accept amateur gear or computers on trade toward the purchase of a tower.

Brochures and price lists are available by writing to P.O. Box 2513, Vero Beach, FL, 32961 or calling (360) 567-8224. □

King visits JPL

When King Carlos of Spain visited the Jet Propulsion Laboratory in Pasadena, California on September 30, Amateur Radio was given some recognition. His Majesty, who holds the call EA0JC, was greeted there on behalf of U.S. radio amateurs by ARRL First Vice President Jay Holladay, W6EJJ, who presented him with a copy of the new *ARRL Operating Manual*.

— *ARRL Letter* □

New books in Chico

The new ARRL publications are now available at The Electronics Warehouse in Chico, California. Be prepared with the new edition of *Tune In the World*, new license manuals and the newly updated *FCC Rule Book*. The League's new Operating Manual is written by a "Who's Who" list of authors and covers everything from traffic handling on packet radio to how to organize a DXpedition. Other new books include *Transmission Line Transformers* and *Low-Band DXing*.

— *Jerry Short, WB6RXF* □

Take a large ferrite core and wrap 8 to 16 turns of the coax through the middle and reconnect. This should be done as close to the TV set as possible.

— *San Francisco Mainliner RC, CA* □

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PUBLISHER'S MICROPHONE

We received a letter from a reader who felt the Field Day cover on our September issue should have shown smiling expressions on the faces of the two guys in the picture. Well, friends, this magazine is journalism. We don't set up pictures in a studio somewhere, and when only three operators keep a station on the air throughout FD, that's the grim reality of what they look like. Possibly our reader who complained has never had the opportunity to keep a minimally manned station on the air for 24 hours.

It was nice to hear from one of our

overseas readers. Dick Rugg, G2BRR, said, "I enjoy reading **Worldradio** very much. It is in a class of its own and there is nothing quite like it."

Steve Klein, KB6MHT, told us that this magazine is "The best, most affordable Radio Amateur's magazine on the market today." He also gave a tip of the hat to those who write the "interesting articles" and said that those and the good pictures give an atmosphere to his ham shack.

Henry Baker, KK4CN, also had a bit of praise for the amateurs nationwide who send in their writing to **Worldradio**. "It is written in a style that is very informative, exceptionally interesting and has a personal touch. The articles and features coupled with the various photographs are second to none. I subscribe to most of the Amateur Radio publications and enjoy **Worldradio** best of all."

Speaking of photographs, we're always looking for more. There must be some budding Ansel Adams and Eugene Smiths out there who could lend their talents to Amateur Radio activities in their area.

A particular type of article we like to

run is Public Service actions. Your article about what your club did may well inspire a club across the country to make a similar effort. Be sure to tell what made things go right *AND* what you learned and would do differently another time.

Jasper Forehand, WB4JHI, thanked us for our "great coverage." What makes that possible is all our volunteer correspondents. Actually it's a lot of fun being a **Worldradio** reporter. You get to shout "Stop the presses." And you can get on the phone with your Humphrey Bogart impression, "Give me rewrite, sweetheart."

The Green Fox ARC (Green Lake, Wisconsin), Northern New Mexico ARC and the Anchorage (Alaska) ARC were nice enough to write letters thanking us for donating subscriptions as door prizes at their hamfests.

Speaking of clubs ... A goodly number of amateurs are missing out on the warmth of Amateur Radio by not belonging to clubs or not going to hamfests and conventions.

ARRL said that about 26,000 participated in Field Day ... about 10% of the active amateurs. Put another way, 90% missed out on what is truly the event of the year.

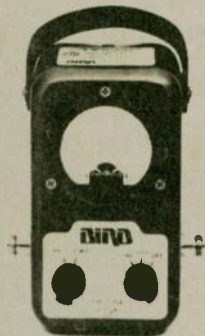
Sweepstakes is coming. Even if you're not a "contester," jump in for a couple of hours. Compare your couple of hours next year to how you did this year. Send in your score. So what if you're last in your section? Your friends won't laugh at you too long.

Many of the sharp operators you hear during emergencies are contest operators. They are the ones who are *NOT* saying "I'll write that down as soon as I find a pencil somewhere. They are also *NOT* the ones asking for repeats and fills. They've developed the skill to get it right the first time.

ATTN: Kurt Sterba fans — He has said he will do something special during Sweepstakes.

—ARMOND, N6WR

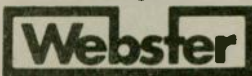
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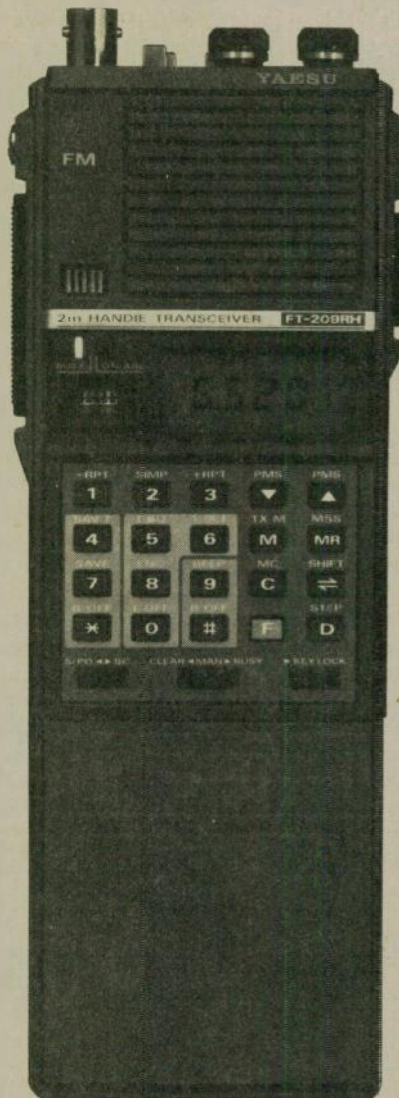
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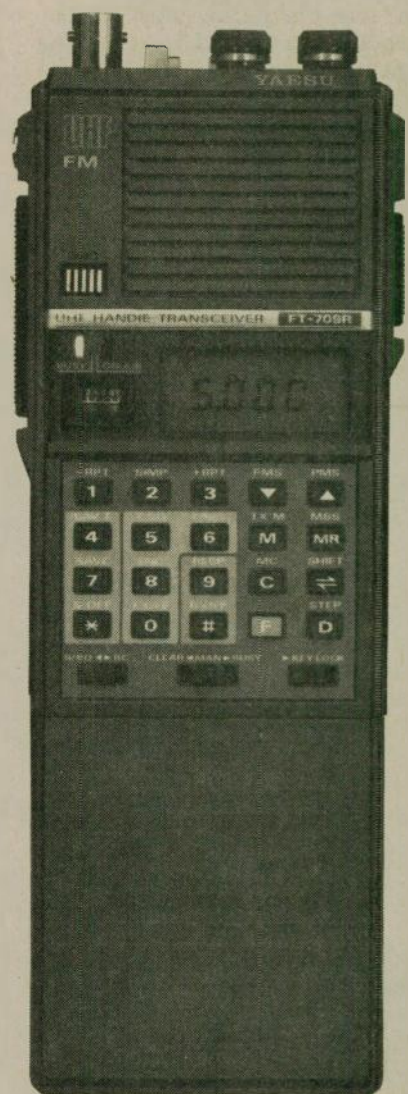
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35th Annual W9DXCC — Illinois

John Minke, N6JM
DX Editor, **WORLDRADIO**

Being the DX Editor, DX-type conventions have always been of interest to me. After attending the DX conventions at Visalia and the Pacific Northwest for several years we decided to check out the one in the Midwest. We were not disappointed!

Saturday, September 12, the Northern Illinois DX Association sponsored the 35th Annual W9DXCC meeting and banquet at the Holiday Inn in Glen Ellyn, Illinois. This is an event where the Midwestern deserving DXers get together with many of them members of the sponsoring club and the Greater Milwaukee DX Association.

A warm-up session of elbow bending was hosted Friday evening by the NIDXA with a surprise visit by Miss R. Bharathi, VU2RBI. This sweet YL was the main attraction of the recent VU4APR Andaman Island DXpedition.

Packet Radio DX Spotting Network

Steve Dubberstein, NA9D, presented his views on the advantage of using packet radio for DX spotting, such as getting a confirmation that the information transmitted was received. The receiving station isn't even required to be around as the information received will be automatically stored.

A typical packet station will consist of a 2M rig, a terminal node controller (TNC), a terminal (computer) and antenna. For such a system, software for DX spotting (such as "Packet-cluster") costs about \$70, but not all users of the system will have to have the software.

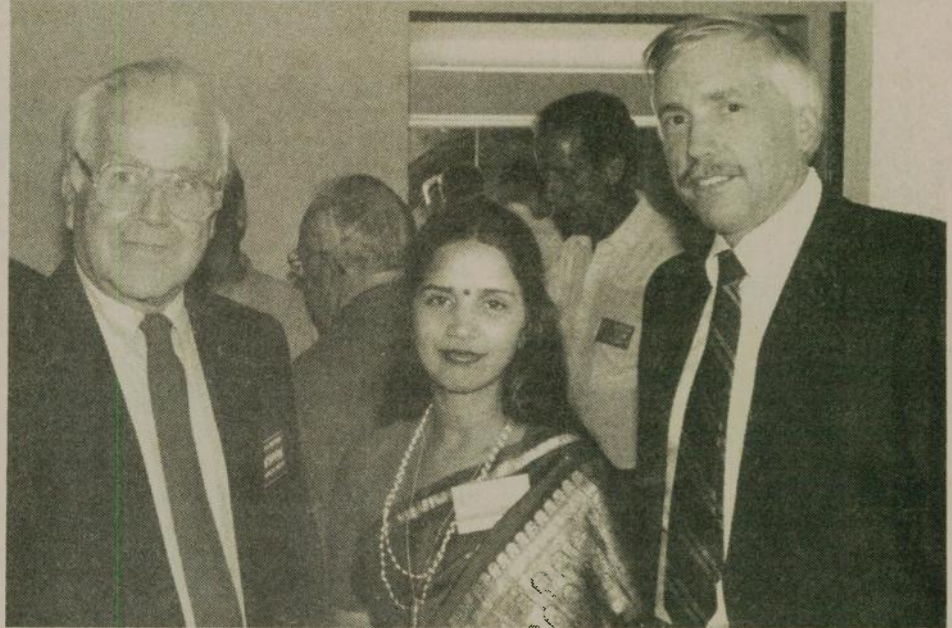
We suggest that if you have further questions regarding such a use for packet radio to contact Steve. Be sure to include an SASE.

Publishing a DX bulletin

We were not the only DXers from the west coast. Chod Harris, VP2ML, Editor and Publisher of *The DX Bulletin*, of Santa Rosa, California, was invited to be on this year's program. Chod discussed his life as a

75M Yagi antennas

Frank Kashinski, W9DUB, and Paul Hellenberg, KS9K, came down from the neighboring state of Wisconsin to show installation methods of their antennas for 75M. Due to the size of these antennas these gentlemen



Among those attending the 35th Annual W9DXCC meeting were: (left to right): Ed Metzger, W9PRN, ARRL Central Division Director; R. Bharathi, VU2RBI; and Howard Huntington, K9KM, Vice Director.

bulletin editor and said that he receives between 250 and 300 pieces of mail per week, which includes 31 different DX publications from around the world.

Chod appeared later in the program that afternoon with a slide presentation of trips to Christmas and Easter Islands.

used cranes. The presentation was supported with a video showing such cranes with extensions to 140' and more.

DXing from LZ1KDP

Rumen Gechev, LZ1MS, who is an economics professor on scholarship from Bulgaria at Illinois State Univer-

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sity, was invited to be a speaker at W9DXCC.

Rumen was only 11 years old when he got started and was one of the operators at club station LZ1KML and discussed the three classes of Amateur Radio licenses in Bulgaria.

Class C allows for 40 and 80M only with an input power of 50W. This license requires a code speed of 60 letters and numbers per minute. The next class, B, allows for operation on all bands with an input power of 250W and a code speed of 80 letters and numbers per minute. The top license, Class A, allows for a maximum input of 1kW and 100 letters and numbers per minute. Incidentally, 100 letters and numbers is the same as 20 wpm.

Tests in Bulgaria are given twice a year and the knowledge of other languages is required. Another requirement for the Class A license is the confirmation of at least 130 countries (based on the DXCC list).

Propagation from Bulgaria is very good, including Rumen, due to its location in respect to the rest of the world.

Past DXpeditions

Jim O'Connell, W9WU, Master of Ceremonies, narrated slide presentations of former DXpeditions that included that of the recent Peter I Island DXpedition and the Heard Island DXpedition of several years ago. These were used to fill in the gaps between speakers.

ARRL Forum

Ed Metzger, W9PRN, Director of the Central ARRL Division, read some of the latest happenings of the ARRL board decisions which should be available in QST.

As for the ARRL taking over the responsibility of assigning calls, Ed said that the board was reluctant to do so, but if any group should do it, it should be the League.

Following Ed, Mike Flosi, KU9Z, introduced his volunteers who helped him sort out and mail the incoming cards at the 9th Call Area QSL Bureau.

VU4APR Andaman Island DXpedition

The final attraction of Saturday's events was Andaman Island DXpedition presentation by Miss R. Bharathi, VU2RBI.

Along with Miss Bharathi was S. Suri, VU2MY, her brother-in-law, who is the president of the national Institute of Amateur Radio in India.

The DXpedition team to Andaman and Nicobar Islands last spring included 14 operators at VU4APR (Andaman) and six operators at VU4NRO (Nicobar).

The operation at Andaman Island was from a six-story hotel on the island and included Amateur Radio operators from all over India. Such calls included VU2NUD, VU2RBI, VU2VSM and U2SRX to name a few. Since most of the team members were working people they only stayed for 10 days while Miss Bharathi remained for 45 days. The hotel manager even gave a special rate for the 45-day stay as the hotel costs were more than they had planned.

Miss Bharathi said that the manager was impressed and has shown an interest in obtaining an Amateur Radio license. This was another objective in the DXpedition, which was to interest the islanders in Amateur Radio.

For the 1987 Andaman and Nicobar Island DXpedition the team made 15,253 contacts during the 45-day period, February 20 through March 31. The team included two other YL

operators besides Miss Bharathi: VU2BL and VU2MYL. This group of islands includes about 500 in a chain about 2000 miles in length. Only 30 of those islands are inhabited.

Another DXpedition to Nicobar Island is expected this December.

Saturday evening banquet

One hundred and fifty-eight persons sat down for the Saturday evening banquet. Old-timers and new-timers alike chatted about DX and many about the old days of DX.

Prior to the main speaker the famous W9DXCC "DX Hog of the Year Award" was made. This year's "honor" went to W9DWQ, Eddy Goodbout.

The speaker for the evening was Mike McGirr, K9AJ, who spoke of their recent XF4DX DXpedition to Revilla Gigedo Islands. Mike was part of the team of operators who chartered a plane last spring. The team included Mike, K9AJ, along with Burt, W0RLX, Fred, K9VV, W8MAX, and Bob K4UEE.

The station was set up along the runway with guy wires stretched across the approaches. They had hoped that no planes would land during the time and didn't expect any. This was supported by the fact that the condition of the runway was unknown prior to their arrival. If the landing strip was in poor condition the plane would have returned to the mainland with the team being out the money paid for the charter and no DXpedition. Fortunately, the landing strip was in perfect shape. Mike's presentation was supported by slides.

Those of you who are DXers within the territory and did not attend, missed a good DX gathering. Mark your calendar for next year for W9DXCC, to be held Saturday, September 17. Good show and well done, Northern Illinois DX Association! □

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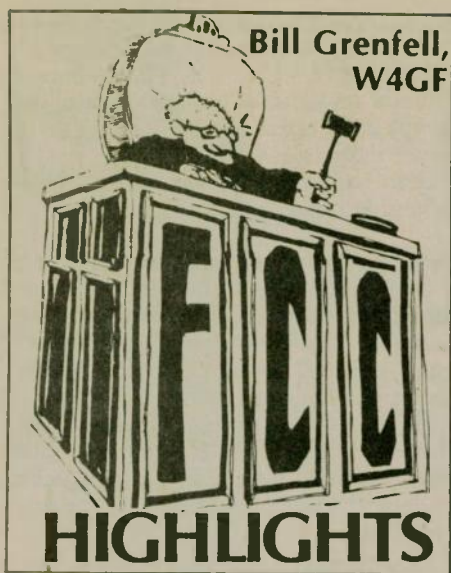
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**Bill Grenfell,
W4GF**

HIGHLIGHTS

Loss of the 430-440 portion of the 420-450 MHz amateur band is possible due to a Mexican government proposal at the 1987 Mobile Radio World Administrative Radio Conference, September 14 through October 16, at Geneva, Switzerland. "Mexico indicated that it had strong support from other Central and South American nations for the reallocation, and noted that even if it were turned down by the WARC body as a whole, Mexico might unilaterally make this reallocation."

Michael Fitch, Chief of the FCC's Private Radio Bureau which oversees the Amateur Radio Service was Vice Chairman of the U.S. delegation to the Mobile WARC. (*Westlink Report*, 10/02/87; *ARRL Letter*, 09/24/87)

The FCC has received several petitions for reconsideration of its 1987 Order, expanding the privileges available to Novice amateur operators (Docket No. 86-161, effective March 21, 1987). Both expansion and reduction of the frequencies available to Novices was requested.

A computer networking conference in 1988 will include discussion of possible new FCC rules for packet. At an August 19th conference meeting at Redondo Beach, California, "... the main outcome was the formulation of a draft packet radio band plans for amateur frequencies above 420 MHz." (*ARRL Letter*, 09/24/87)



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FCC's rules (Part 15 and Part 76) should require that the more strict Part 76 should apply to internally generated cable leakage, whereas the externally generated signals that ingress into the cable system through cable terminal devices would be subject to Part 15 standards is advocated by the National Cable Television Association (NTCA).

In support of NTCA's petition to the FCC, the ARRL advised FCC that: "This counterproposal (by NTCA) is sound from an engineering point of view and promises to minimize instances of interaction between cable systems and amateur stations. It is a far better alternative than that adopted by the Commission thus far." (*ARRL Letter*, 09/14/87)

Alex Felker, N4LF, is the new Chief of FCC's Mass Media Bureau, where his main responsibilities will involve broadcast rulemaking. A BSEE from VPI and a Master's in Engineering from GWU, Felker has worked for the FCC for nearly 15 years. Most recently, he served as one of FCC Chairman Patrick's assistants. (*ARRL Letter*, 09/24/87)

The ARRL has petitioned the FCC to forbid volunteer examiners (VE's) whose accreditation has been suspended or revoked by a VEC from becoming a VE under a different VEC. "The petition states that in a few instances, some VEC's have noted irregularities

in certain examination sessions, and it became necessary for the VEC's to discontinue the accreditation of the VE's involved. However, there is no provision in the current rules to prevent these discredited VE's from applying for accreditation with another VEC, never mentioning the previous discreditation." (*ARRL Letter*, 09/24/87)

The ARRL's Publications Manager, Paul Rinaldo, W4RI, has authored a paper concerning the emission designators in the amateur rules being unsuitable for authorizing emissions in the Amateur Service. He believes a more flexible method is needed to encourage amateurs to experiment with new emissions, without the delay and burden of petitioning FCC for rule making. He suggests methods such as emissions being specified by selected words and abbreviations. The "... designations should specify permissible types of information rather than particular modulation techniques..." (*ARRL Letter*, 09/24/87)

Finding a method by which bona fide repeater frequency coordinators can be certified to the FCC was the thrust of a recent meeting in Connecticut. It was attended by a number of coordinator groups. Invited to the meeting was the Chief of FCC's Special Services Division, Ray Kowalski. Included in the meeting was discussion of the growing problems

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 October 1, 1987.

For more information about the call sign assignment in the Amateur Radio Service, see Section 97.51 of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17325.

Radio District	Group A	Group B	Group C	Group D
	Am. Extra	Advanced	Tech./Gen.	Novice
0	WB0P	KE0RA	N0IOE	KB0BFX
1	NN1G	KC1GK	N1FFS	KA1RBI
2	NZ2U	KE2CR	N2HPF	KB2ELB
3	NK3P	KD3ER	N3FUB	KA3SFP
4	AB4DU	KK4RT	N4RGZ	KC4BWE
5	AA5CU	KG5DZ	N5LMX	KB5EKO
6	AA6EY	KI6ZI	N6QLO	KB6UGY
7	WF7Z	KF7DZ	N7JYC	KB7CYQ
8	NY8Q	KE8OA	N8IVJ	KB8DGH
9	NU9W	KE9GR	N9GXS	KA9ZMJ
N. Mariana Is.	AH0E	AH0AC	KH0AI	WH0AAH
Guam	KH2G	AH2BR	KH2CZ	WH2ALF
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra, Jarvis Is.	AH5A			
Hawaii		AH6IM	NH6LY	WH6BUU
Kure Is.			KH7AA	
American Samoa	AH8C	AH8AD	KH8AE	WH8AAW
Wake Wilkes Peale		AH9AC	KH9AD	WH9AAH
Alaska		AL7JG	NL7LH	WL7BPN
Virgin Is.	KP2T	KP2BK	NP2CF	WP2AFS
Puerto Rico	**	KP4OK	WP4MA	WP4HOW

** All of the Group A call signs for Puerto Rico have been assigned. Any request for a Group A call sign will now be assigned a Group B format.

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resulting from rivalries between long established coordination councils and the recent rash of self-serving "instant" coordinators who are demanding the same status as the long-established councils. (*Westlink Report*, 09/18/87)

(A report on the outcome of the meeting was not available at the time this **HIGHLIGHTS** was written.)

Regarding the Docket 87-14 proposal to allocate the 220-222 MHz amateur band segment to land mobile service use, a comment filed by a California mobile communications firm official says their research on a better form of ACSSB (ENB) enables spectrum past 900 MHz to be used. He also says that present ACSSB (Amplitude Companded Single Sideband) systems do not work well beyond 220 MHz and there is no room for future VHF expansion. "ENB" is Enhanced Narrowband.

Forest Industries Telecommunications not only supported the proposed 2 MHz reallocation but said while welcome, it would not be sufficient and recommended that it should be 220-223 MHz for the land mobile services. (*W5YI Report*, 10/01/87 and 09/15/87)

The comments of the ARRL on FCC's PRB-3 Notice of Inquiry as to private grant of specific amateur call signs emphasize that "amateurs are certainly willing to pay the cost of services received, but not to the extent that a private-sector entity appointed by the Commission should profit from it."

Twelve individuals, groups and companies (including the ARRL) petitioned FCC to be a Special Call Sign Coordinator, in response to the Notice. FCC's Ray Kowalski, Chief of its Special Services Division, advised that the first decision to be made by FCC is "... should we proceed with the program ... to issue specific

amateur call signs at all?" (*ARRL Letter*, 09/11/87; *W5YI Report*, 09/15/87)

At its September meeting, the ARRL Executive Committee "... reaffirmed the ARRL's interest in obtaining early access to the 18.068-18.168 MHz band, particularly since at least 60 other countries, including Canada, now permit amateur operation on this band." (*ARRL Letter*, 09/24/87)

Hemisphere-wide amateur reciprocal operating arrangement has been adopted by the Intramerican Telecommunications Conference (CITEL) at its Lima, Peru meeting. The treaty was immediately signed by Argentina, Bolivia, Brazil, Colombia, Chile, Haiti, Peru, Surinam, United States and Uruguay.

The treaty facilitates reciprocal amateur operation in our hemisphere and will take effect once a certain number of countries sign the treaty. "There are procedures in place for taking the agreement home, circulating it and then signing. Nothing should be concluded by who signed and who did not. Even countries that have signed may need further ratification (in their own countries)." — FCC Special Ser-

vices Division Chief, Ray Kowalski (*W5YI Report*, 09/15/87)

The FCC has denied the Association of Radio Reading Services (ARRS) Petition for Reconsideration concerning reallocating 500 kHz of 220-225 MHz to the radio reading services. The FCC had originally denied the proposal, Docket 87-41, last February. The Commission concluded that the ARRS had brought no new information that would warrant any modification of the original denial and therefore dismissed the petition for reconsideration. (*ARRL Letter*, 09/11/87)

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Receivers		
IC-R7000 25-1300 + MHz Rcvr	1099.00	Call \$
IC-R71A 100 kHz-30 MHz Rcvr	949.00	Call \$
VHF		
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IC-275H All Mode Base 100w	TBA	Call \$
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TM-2550A FM Mobile 45w	469.95	Call \$
TM-2570A FM Mobile 70w	559.95	Call \$
TH21-BT FM, HT	259.95	Call \$
TH-205 AT, NEW 2m HT	259.95	Call \$
TH-215A, 2m HT Has It All	349.95	Call \$
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TR-851A 25w SSB/FM	699.95	Call \$
TR-9500 10w All Mode	649.95	Call \$
TM-421A Compact FM 35w	419.95	Call \$
TH-415A 2.5w 440 HT	359.95	Call \$
TH-41BT FM, HT	269.95	Call \$
TW-4100A, 2m/70cm FM	649.00	Call \$
TR-50 1w 1.2GHz FM	549.95	Call \$
220 MHz		
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TH-31BT FM, 220 MHz HT	269.95	Call \$



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FT-980 9 Band Xcvr	1795.00	Call \$
FT-757 GX II Gen. Cvg. Xcvr	1079.95	Call \$
FT-767 4 Band New	1895.00	Call \$
Receivers		
FRG-8800 150 kHz - 30 MHz	699.95	Call \$
FRG-9600 60-905 MHz	679.95	Call \$
VHF		
FT-211RH FM Mobile 45w	459.95	Call \$
FT-270RH FM Mobile 45w	439.95	Call \$
FT-290R All Mode Portable	579.95	Call \$
FT-23 R/TT Mini HT	299.95	Call \$
FT-209RH FM Handheld 5w	359.95	Call \$
UHF		
FT-711RH FM Mobile 35w	TBA	Call \$
FT-770RH FM Mobile 25w	479.95	Call \$
FT-73 R/TT Mini HT	314.95	Call \$
FT-703R/TTP 440 HT	299.95	Call \$
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VE exam schedules

As a service to our readers, Worldradio presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is two months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid July.

Our address is Worldradio, 2120 28th St., Sacramento,

CA 95818. Please mark the envelope "VE Exams".

List the location, and information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

p/r = pre-register

w/i = walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
California				New Jersey			
Dec 3	Modesto	KI6YQ (209) 537-2785	w/i OK	Dec 17	Bellmawr	WA2VQG (609) 546-7710	w/i OK
Dec 5	Burbank	W6JEP (818) 848-9340	w/i OK	New York			
Dec 5	Cupertino	(408) 243-8349	w/i only	Dec 12	Long Island	W2NL (516) 541-2450	
Dec 19	Eagle Rock	WB6PSY (818) 710-1705	w/i	Ohio			
Dec 5	Riverside	N6JFG (213) 258-9127		Dec 5	Columbus	K8KJ (614) 866-5531	
Dec 5	San Luis Obispo	KN6U (714) 780-2680	7 day p/r	Dec 5	Dayton	KA8ZWD (513) 426-1355	
Dec 5	Visalia	W6ECY (805) 528-2934	w/i OK	Dec 5	Portsmouth	KC8YW (614) 778-2870	
Dec 6	Pleasant Hill	W6MUV (209) 627-5346		Dec 12	Maumee	KU8B (419) 729-5245	
Dec 12	Camarillo	WX6A (415) 932-0491		Dec 12	Mentor	KO8O (216) 951-7905	
		N6SR (805) 484-4461	30-day p/r;	Dec 12	N. Olmstead	K8SCI (216) 779-0999	
			some w/i	Dec 12	Zanesville	WA8BOV (614) 454-0003	
Dec 12	Los Altos Hills	KG6XF (408) 255-9000	w/i only	Dec 13	Elyria	A18M (216) 324-4547	
Dec 12	Novato	N6AQY (415) 897-8950	w/i	Dec 19	Cincinnati	WA6EZV (513) 742-2417	p/r pref
Dec 16	Eureka	KB6FIW (707) 442-9245	w/i OK	Dec 26	Ravenna	KJ3O/8 (216) 274-8240	
Dec 17	Long Beach	KA6HOQ (714) 897-6331	w/i OK	Oregon			
		NF6X (213) 434-8278		Dec 12	Eugene	KZ7S (503) 345-8218	p/r pref
Dec 20	Sunnyvale	W6NLG (408) 255-9000	w/i only	Pennsylvania			
Colorado				Dec 5	Erie	W3NR (814) 825-2539	w/i OK
Dec 12	Denver	W0IJR (303) 366-9689	p/r pref	Dec 9	Scranton	Bob Chimel (717) 586-2569	w/i
Delaware				Dec 10	Levittown	K3TX (215) 946-1040	p/r pref
Dec 12	Wilmington	WB3DPJ (302) 478-2757	w/i OK	Dec 12	McKeesport	KQ3W (412) 466-5204	p/r; w/i
Florida				South Carolina			
Dec 5	Sunrise	AK4Y (305) 476-8761	w/i only	Dec 5	Charleston	AA4IX (803) 873-9465	w/i
Dec 17	Melbourne	WB9IVR (305) 724-6183	w/i OK	Texas			
Dec 19	Chicago	W9WBY (312) 929-6550		Dec 12	San Antonio	NS5I (512) 681-0702	w/i
Illinois				Utah			
Dec 4	Springfield	WD9EBK (217) 629-8190	w/i OK	Dec 19	Salt Lake City	K7HFV (801) 582-2438	
Dec 15	Aurora	N9AKE (312) 892-1252	w/i	Vermont			
Dec 19	Loves Park	(815) 874-6867	p/r pref	Dec 12	Windsor	WB1GXM (603) 543-1389	p/r by 11/12; some w/i
Dec 24	Chicago	W9WBY (312) 929-6550		Virginia			
Indiana				Dec 12	Woodbridge	Don Ross (703) 944-7013	w/i
Dec 5	Speedway	KA9H (317) 241-1272	p/r	Washington			
Dec 7	Plymouth	KB8V (219) 784-8540		Dec 10	Seattle (North)	W7WHT (206) 282-1438	w/i only; call
Dec 12	Hammond	AJ9C (219) 962-5512		Dec 17	Seattle (South)	N7IL (206) 242-6501	10-day p/r;
Dec 19	Mishawaka	K9WSX (219) 255-3889		Dec 18	Bellingham	K7IWX (206) 734-0577	some w/i
Iowa				Wisconsin			
Dec 4	Sioux City	NF0N (402) 494-6070	30-day p/r;	Dec 5	Stevens Point	W9BCC (715) 344-2566	30-day p/r
		K0TFT (712) 239-3053	some w/i	Dec 12	Appleton	KD9IA (414) 788-3823	pref
Dec 5	Mount Pleasant	WD0ENR (319) 385-2794	p/r pref	Dec 12	Wauwatosa	W9SNK (414) 781-8616	w/i OK
Jan 17	Des Moines	NA0R (515) 967-3890	p/r by 12/15	Dec 19	Fox Point	WB9G (414) 351-5311	10-day p/r;
Maryland				Dec 19	Rhineland	K9RMN (715) 369-3296	some w/i
Dec 12	Salisbury	K3NOQ (301) 749-7444	3-day p/r	Washington			
Massachusetts				Dec 10	Seattle (North)	W7WHT (206) 282-1438	w/i only; call
Dec 1	Acton	W1QLT (617) 263-8742	p/r by 11/24	Dec 17	Seattle (South)	N7IL (206) 242-6501	10-day p/r;
Dec 12	Wilbraham	K1BXE (413) 566-3010	w/i OK	Dec 18	Bellingham	K7IWX (206) 734-0577	some w/i
Dec 18	Holyoke	KO1R (203) 623-4850	w/i OK	Wisconsin			
Dec 23	MIT-Cambridge	WA2EYC (617) 646-1641	2-day p/r;	Dec 5	Stevens Point	W9BCC (715) 344-2566	30-day p/r
			some w/i	Dec 12	Appleton	KD9IA (414) 788-3823	pref
Minnesota				Dec 12	Wauwatosa	W9SNK (414) 781-8616	w/i OK
Dec 19	St. Paul	K0QBE (612) 222-7253		Dec 19	Fox Point	WB9G (414) 351-5311	10-day p/r;
Missouri				Dec 19	Rhineland	K9RMN (715) 369-3296	some w/i
Dec 4	Oakgrove	W0AU (816) 625-3328	p/r pref	Washington			
Dec 19	Liberty	(816) 781-7313	p/r pref	Dec 10	Seattle (North)	W7WHT (206) 282-1438	w/i only; call
New Hampshire				Dec 17	Seattle (South)	N7IL (206) 242-6501	10-day p/r;
Dec 12	Nashua	KA1GOW (603) 882-9065	p/r by 11/12; some w/i	Dec 18	Bellingham	K7IWX (206) 734-0577	some w/i

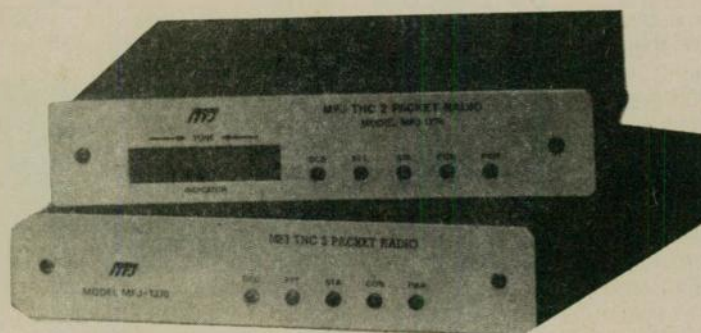


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Northwest suffers from fires

Jack Morse, WB7SZM
Jackson County EC

'Twas the night before September and all was *not* quiet through the state. And many creatures were stirring!

On the evening of August 30, a series of "dry" lightning storms passed through northern California and southern Oregon. The result of this weather phenomenon was over 1,600 recorded lightning strikes, starting more than 600 known fires.

We of Jackson County ARES were alerted to a possible callout, which of course occurred the next morning as the Fire Control/Command Center was set up at The Valley of the Rogue State Park, conveniently located on I-5 between the two major fires in our county. We established two basenet/control stations to keep in contact with the fire command station and the people in the field at roadblocks, and in the brush reporting on the condition, direction and intensity of the fires.

It took about 10 days to bring our two major fires to containment, at which time we sent 10 people to Josephine County to assist in their

fires. They had been very busy with several fires in their county and were beginning to run short of hams due to the large area and distance between the fires.

Here in Jackson County, we are very proud of the fact that out of the 60,000+ acres lost and the 500-600 homes in the fire zone, *only one* structure was lost and *no* deaths!

At the height of the fire, the Sykes-Savage Creek fire camp had about

4,000 - 5,000 people on hand; one night they fed about 2,200 people. Here it is 30 days later, and we still have two major fires in Josephine County covering in excess of 170,000 acres. In northern California, over 250,000 acres have been lost and are still burning.

I want to personally thank and commend all the ARES members participating for the effort and time put in on these very trying and difficult



Some of those who assisted with Jackson County ARES, left to right: (*back row*) Bill Townes, K7MNR; Carl Robbins, WA7IHS; and Roland Henderson, WA7UFJ; (*center row*) NTS Manager Vic Seeburger, W7VSE, who outdid himself with traffic handling; Bill Lorton, KC7WO; Hugh Dodge, KA7IYG; Mary Lekey, KA7JOC; Bill Shrader, W7QMU; Cecile Morse, N7ITS (special thanks to my wife for her hard work while I was at the fire camps); WB7SZM; (*front row*) XYL of Roger Hedgepeth, N7EUQ; N7EUQ; Judy Shrader, KA7OFM; Allen Hill, K7HWX; Bob Peck, KA7DEF; and Forest White, K7YQM.

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conditions, including Irv Astmann, W6OMR, of Mt. Shasta and the many in Siskiyou County, California; Bob Peck, KA7DEF, and his people in Grants Pass, Oregon; and of course "my people" in Jackson County: (not pictured) Gary Stockton, WA7TAE; Jack Hendrickson, KA7QYY; Mike Arant, KD7DE; Mike Stephens, KA7TRL; Wayne Clymer, W7TAH; Ken Kugler, WA7TEG; Don McKay, WB7BPI; and Walt Stewart, KB7MP. Thanks also to those who were on standby, along with the members of Jackson County Search and Rescue. □

When submitting photos, please DO NOT write on the backs of them - they often stain the fronts of other photos, making them unusable.

CDF VIP's set record

Vada Gipson, W6CEE

"You've set a record. This is the longest time served by any VIP (Volunteers In Prevention) group since the VIP program was organized. We're really proud of you," stated Capt. Walt Watton, California Department of Forestry's VIP representative, to the members of Siskiyou Repeater Association (SRA) on October 3.

Almost a month earlier, on Saturday, September 5 (Labor Day weekend), CDF activated their VIP program that was to last until 8 a.m.,

September 27. Three weeks plus a day!

When 26 major fires in the Klamath National Forest were started on August 29 by the dry lightning storm that hit California and Oregon, the members of SRA, as a group, were unprepared. A RACES base station consisting of equipment for 2M (146.19/79 main repeater) and the low bands had been set up at the California Department of Forestry (CDF) in Yreka, Siskiyou County seat.

Several members had become CDF VIP's. An initial emergency prepared-

ness meeting of the local Red Cross had been held about six weeks before the fire, and a few members of SRA had been in attendance. That was the extent of preparedness.

Emergencies never wait until one is prepared, do they?

The first call for help came from the Red Cross on September 2 for a communications assistant to accompany Glen Lockwood, Red Cross Director from Klamath Falls, Oregon to Seiad and Happy Camp on the Klamath River in California to help prepare evacuation centers. Ted Graves, W6FKI, from Mt. Shasta made that trip.

The next day five more amateurs were involved in the delivery of food for the Red Cross to the citizens of Forks of Salmon, in west Siskiyou County: Carl Schwarzenberg, W6NPS; Russ Nibecker, W6WCA; Harold Spencer, N6CVU; Bob Smith, N6OAB; and Ed Westbrook, WA6IUM, RACES coordinator for Siskiyou County.

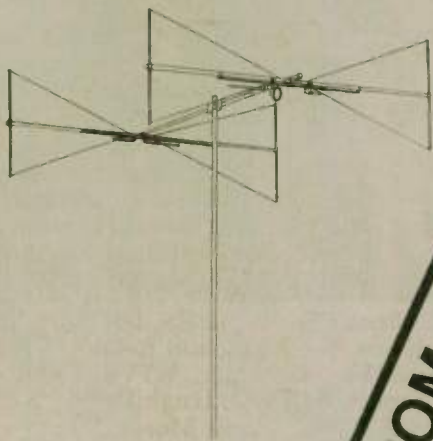
A shortage of members enrolled in the VIP program, a walk-a-thon in Mt. Shasta to which three were committed, a holiday weekend that some had used for a get-away, and other travel plans that couldn't be changed, made the man and womanpower very short. The RACES coordinator, Ed Westbrook, WA6IUM, kept schedules on 3952 several times a day from Bandon, Oregon.

The VIP volunteers were rotated 48 hours in and 48 hours out. The exhaustion of the volunteers caused the CDF to request VIP Amateur Radio operators from Trinity County. "Buck" Buckley, W6HOR, and Howard Linnenkohl, K6SDD, went up and each served five days at the Elk and Salmon Complexes respectively.

Communications on 2M out of the Salmon Complex was impossible without a repeater. There are three hams that live in the Cecilville/Forks of Salmon area who use a simplex frequency on 2 and CB to maintain communications with their own canyon communities: Otto Eichenhofer, WG6EJR, Robert ("Bobbo") and Kathleen Schultze, KG6MM and KB6MPI, Forks of Salmon. When conditions permitted, Kathleen handled the fire traffic on 3952 with the base station in Yreka.

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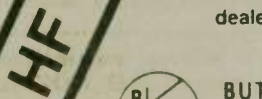
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It was decided to move the SRA 146.22/82 repeater and generator from Soda Ridge above Dunsmuir to Eddy Gulch, a 6000+' peak midway between Callahan and Cecilville. Thus began a two-day saga of Murphy's Law — "If anything can go wrong, it will," which is another story in itself.

Al Kiep, WA6IHK, and Lee Gipson, K6IVD, moved it and lived with it for five days and four nights before it was left alone.

In mid-October, the fires were still burning although reports were good. As of October 8, the fires had consumed 253,000 acres.

Other Amateur Radio operators who helped by manning the base station in Yreka are: Vada Gipson, W6CEE, Harold Spencer, N6CVU (who, along with Doug Caley, W6SDP, took over the scheduling of personnel during the absence of Wayne Humbert, W7KEH); Ed Feio, K6CZI; Fred Fox, AA6EL; Lauren Clark, W6GEF; Andrea "Andy" Nibecker, N6GXJ; Dave Winslett, KF6HG; Josephine Caley, N6KMS; Ruth Hinkle, W6LXL; and Bob Smith, N6OAB.

As of October 12, 22 operators had worked a total of 7,183.2 hours. So, prepared or not, the radio amateurs have come through again. □

PRB-1 challenged in Colorado

Boulder County (Colorado) amateurs urgently need funds to defend PRB-1 and our right to erect effective antennas! Our situation has reached crisis proportions in recent weeks.

Early in 1987, two Boulder County hams — Doc Evans, NQØI, and Tim Holzheimer, N6DIY — applied for building permits to erect 125' antenna towers in a rural residential subdivision of Boulder County. Both are avid 160M DXers and both were erecting base-fed ¼-wavelength, top-loaded verticals for 160M work. Lot sizes in the subdivisions average one acre.

In 1985, Boulder County amateurs believed they had won a major victory in the battle for effective antennas when the county specifically exempted amateur installations from the definition of a "telecommunications element" under the Boulder County Comprehensive Plan. In fact, the plan states that "Amateur antenna installations shall be exempt from height limitations."

The County Zoning Resolution, the ordinances derived from the policies laid down by the Comprehensive Plan, limits all structures in unincorporated Boulder County to 35 feet, except in agricultural and light industrial zoned areas where structures are limited to 50 feet. The County Zoning Administrator, Robert Hemlick, decided that what the hams wanted to erect were structures, not antennas, as contemplated by the plan. This was despite the fact that the towers would be base-fed verticals using special insulating base sections.

Believing they were exempt from height limitations, the hams did not request nor desire a variance to the County Zoning Resolution. Yet, instead of an administrative hearing before the Boulder County Board of Adjustments to dispute the administrator's interpretation that an antenna was a structure, Helmick

treated their appeals as variance requests and required a public hearing along with notification of all neighbors within a 500' radius of each ham's property.

Over the span of the two sessions of the continued hearing, the ham community was admirably represented by Robert Neece, KØKR, with Marshall Quiat, AGØX, ARRL Rocky Mountain Division Director consulting. Both are capable lawyers who donated their time and expertise. PRB-1 was cited, as was the Comprehensive Plan itself and the fact that each entire installation was an active antenna.

In addition, we cited public services performed by hams in and around Boulder County and the purposes served by Amateur Radio as outlined in Part 97 of the Communications Act. We made it quite clear that effective antennas are absolutely essential for carrying out our federally mandated activities.

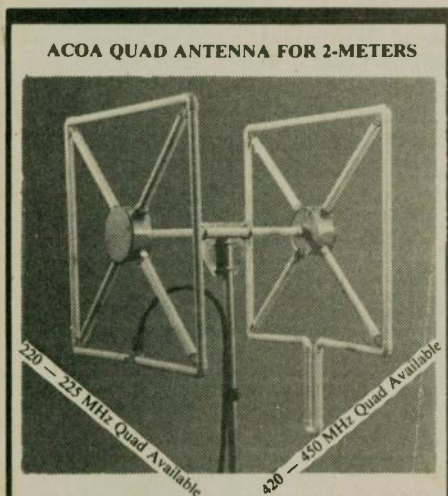
Opposition was primarily based on esthetic grounds. The hams retained a structural engineer to allay the fears of "toppling towers" and "whipping guy lines" which were voiced.

Most of our arguments fell on deaf ears. The Board of Adjustment found that: 1) the "antennas" were "structures" and so limited to 35 feet; 2) PRB-1 did not apply to this case.

The Board interpreted PRB-1 as meaning that local governments cannot prohibit amateur activity, but that they are "free to impede amateur activities." In addition, the Board declared that this ruling now applies to all unincorporated Boulder County, which is overwhelmingly rural and mountainous. This effectively limits amateur antennas to 35 feet. The Board believes this is all hams really require.

We must now take the case to Federal District Court to preserve our right to effective antennas. If a single case such as this is allowed to stand it sets a dangerous precedent for all other local governments in the country. Impossibly restrictive height limitations will spread like a malignant tumor all over the United States. Laws can — and will — be changed to severely restrict our activities as local governments receive word of our demise. It has already happened in Boulder County! And it was done by a single, individual administrator!

The Boulder Antenna Fund desperately needs money to take this clear-cut case to court and defeat this collective threat. There is presently a little (please turn to page 18)



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(Included): 6-AA Dry Cells (1.5 volt/cell) = 9.0 VDC
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Transmitting - Approx. 620 mA
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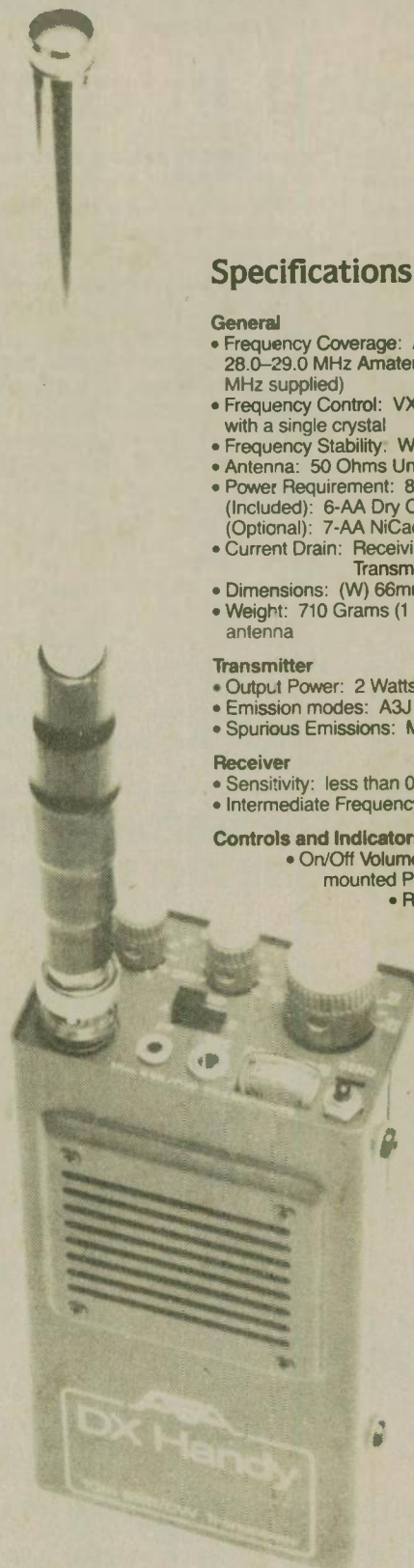
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- External key input: Bottom mounted $\frac{1}{8}$ " phone jack
- Mode Selector Switch: Bottom mounted 2-position switch
- Charge/External Power: Bottom mounted 2-position switch selecting 12 VDC external power function



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PRB-1 *(continued from page 16)*

over \$7,000 in the fund. To retain the required legal services requires about \$15,000. We have 30 days from the Board of Adjustment ruling to file in

Federal District Court; we must file by October 22.

Our chances of winning are exceptional, especially in light of the recent victorious Bedony case in New York and the well-known Thernes case in Kentucky. Please send donations to:

Boulder Antenna Fund, c/o Barbara McClune, NØBWS, 5338 Spotted Horse Trail, Boulder, CO 80301. Questions or comments? Call (303) 530-1872. □

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Hams included in cable TV agreement

Chuck Lobb, KN6H

In what is believed to be a nationwide first, protection for radio amateurs has been written into the franchise agreement between a city and a cable TV company. And all without ham participation!

The city of Torrance, California did it during the transfer of their cable TV franchise from Group W Communications to Paragon Communications in late March 1987. The wording in the new Paragon agreement, constructed by the city manager and the city attorney, reads as follows:

... Amateur Radio frequencies shall not be used on the cable system unless such channel capacity is needed to provide services to Paragon's customers. In such instance, such channels are to be used solely for alpha-numeric services. ... If after utilizing such channels for alpha-numeric services, ... channels are needed to provide other services and there is further need for other video transmis-

sions, Paragon can use these channels after consultation with the city.

What this says is that if there are any vacancies on the 60-channel cable, the ham frequencies will be assigned to those vacancies beginning with channel E and then (in order) channels J, K, WW and XX. If there are fewer than five vacant channels remaining, ham channels will be assigned to little-used bulletin boards, reader boards and other alphanumeric community notices. If there aren't enough of these, further assignments may be made only after consultation with the city.


Channel E is in the amateur 2-meter band, J and K are near the bottom of the 220 band, and WW and XX are in the 440 band.

All this was accomplished without ham participation (at least not recent participation). Back in September 1983, when the Group W franchise was constructed and programming allocated,

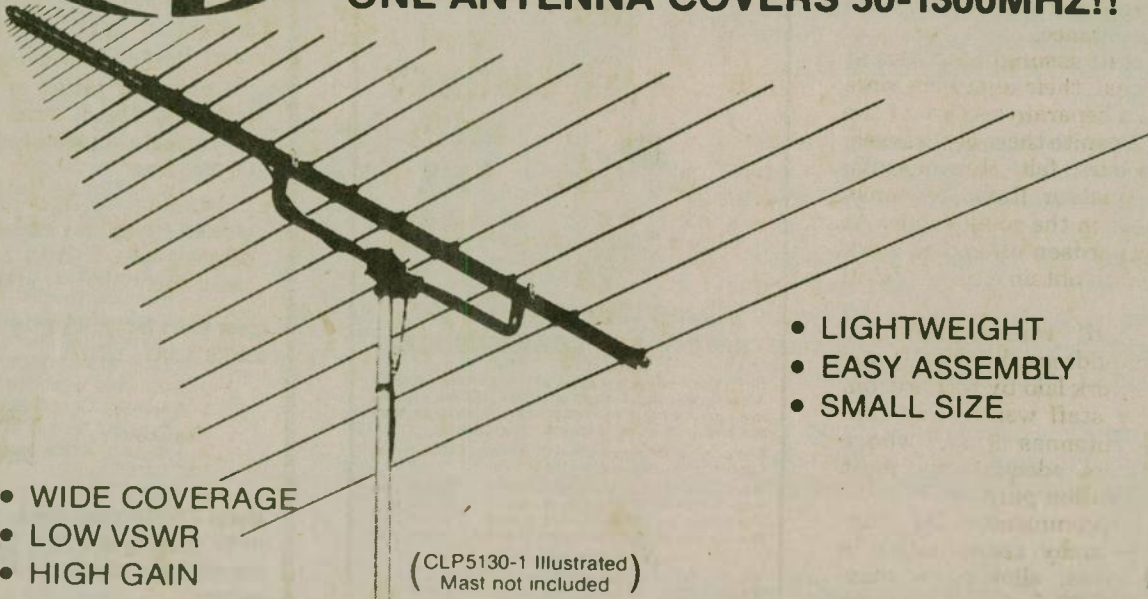
frequencies were assigned indiscriminately. Hams did their homework, forwarded knowledgeable letters advising the Council about the proliferation of leaky cable problems elsewhere, then made a public presentation on September 6, 1983. The result was an immediate reassignment of ham frequencies to vacant channels.

The message stuck. Four years later the astute council and city attorney recalled that presentation when preparing the new agreement. One or two phone calls and a letter went to the mayor, but they were little more than gentle reminders. The 4-year-old lesson had been learned well. There have been no leaky cable complaints to or from amateurs in the history of the Torrance cable system.

My, but it's nice to have a city government on the same side as hams. Try it sometime. Building rapport isn't easy, but the results are sure gratifying. □



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Victory for amateurs in KC

Mike Bellinger, K0UAA

A big antenna victory recently took place in Kansas City, Missouri. On May 15, the Kansas City city council unanimously passed a liberalized zoning ordinance allowing amateurs higher radio antennas. This action resulted from the dedicated efforts of several Kansas City amateurs over the past seven months.

Last fall, the city's attention was drawn to PRB-1, the FCC declaratory ruling, by Rod Richardson, WA0HHX. At that time, Richardson — an attorney specializing in property use issues — was representing Tom Bishop, K0TLM. Bishop's antenna had been cited for violation of the existing ordinance limiting antennas to 5 feet above rooftop in residential areas. Ordinance revision was seen by Bishop and his attorney as an alternative to litigation.

Another related issue, however, prompted action in the Amateur Radio community. An ordinance attempting to regulate satellite receiving dishes had been introduced to the city council. As an FCC ruling prevents local ordinances specifically regulating satellite receiving equipment, the broadly-worded ordinance simply prohibited any accessory structure exceeding 8 feet in height. Fearing this ordinance could be interpreted to restrict amateur antennas, hams became concerned and attended a hearing on this ordinance.

City legal staff assured amateurs at the hearing that their antennas were regulated by a separate section of the zoning code. Despite these assurances, several amateurs felt that specific mention of Amateur Radio antennas should be made in the zoning code. At this time, Richardson offered to work with the hams to obtain a more liberal ordinance.

The city staff was prepared to discuss issues addressed in PRB-1 due to the groundwork laid by Richardson. Thus, the city staff was readily convinced that antennas 5 feet above rooftop were not adequate for most ham communication purposes.

WA0HHX recommended the standard used in many communities in suburban Kansas, allowing a maximum height of 60 feet and a safety setback of one-third the height from adjoining property. To support this, Richardson submitted a compilation of the standards used for many years in surrounding communities.

Richardson felt that the successful experiences of other area communities would be more persuasive and more

easily understood than the technical arguments for various antenna heights.

The ordinance drafted following this meeting permitted antenna height up to 60 feet providing a one-third setback was observed. Support structures were limited to one per property in this initial ordinance, although the final version did not mention a limit on the number of antenna supports.

Throughout the entire legislative process, Richardson had sent the city model ordinances and recent Amateur Radio antenna court decisions as supplied by the ARRL. He worked closely with city legal staff in preparation of the ordinance. The city regularly kept Richardson informed of the status of the ordinance and solicited his advice on its wording. He, in turn, supplied the wording for the final version of the ordinance.

Meanwhile, Kansas City hams worked to assure the successful passage of the ordinance. The Heart of America Radio Club developed an Amateur Radio information packet to send to each city council member. The packet contained brochures supplied by the ARRL as well as letters of sup-



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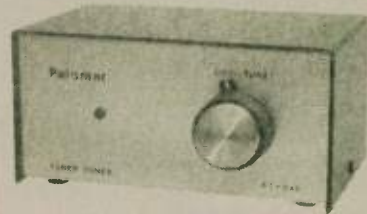
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port from community organizations served by Amateur Radio.

Various amateurs and Amateur Radio clubs around the country responded to requests from HARC for letters of support and advice to include in the packet. Other clubs aided the effort by spreading the word on nets, at club meetings and in newsletters. Petitions were circulated at club meetings and at the PHD Hamfest. As word of the ordinance spread, individual amateurs contacted Richardson to volunteer their help.

The result of these efforts was the first antenna ordinance change by a major city since the release of PRB-1, according to Richardson. □

Telephone Pioneers at 'Earthquake Fair'

Thanks to Carl Antone, W6OZA, and Gary Britten, KE6GC, the Telephone Pioneers Radio Club "beep ball" van was in attendance at the San Francisco "Earthquake Fair" which took place across the street from City Hall from 10 a.m. until 2 p.m. on Friday, April 17.

The "beep ball" van accompanied the Red Cross Disaster Services van and solicited imitation welfare messages as a demonstration of the capabilities of Amateur Radio in an emergency. Firefighting equipment from the city of San Francisco was also on display.

Next year's "Earthquake Fair" is scheduled to take place at Justin Herman Place, near the financial district, in hopes of improving the attendance and attracting more passersby. Hopefully, it will stimulate more interest in earthquake preparedness. —Will Carrier, WA6HVX □

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Virginia hams work with county

Tom Mosca, KB4OPR

On March 26, at 7:30 p.m. EST, the Gloucester County (Virginia) Planning Commission held an open hearing to discuss, among other things, a proposed tower ordinance. Although the intent of the Commission is to regulate commercial towers, the wording of the bill did not specify that amateur towers would be excepted. Accordingly, a small group of Amateur Radio operators was in attendance to make recommendations to the Commission. They were Bruce Almeida, KA2IMI; Brenda Almeida; Dr. John Myles, KB4VZV; Charles Lawrence, W4PXA; Denise Mosca, N4MYO; and myself, KB4OPR.

Bruce and John had done research and collected materials on which to base our opinion. John acted as our spokesman. When the issue came before the Commission, John was the first to take the floor.

First he distributed copies of the FCC preemption ruling to each of the

Commission members and the County attorney. He then recommended that the Commission insert the word "commercial" in a number of key places and also include a separate paragraph completely excepting amateur towers and masts from regulation. Next to speak was Charles, who emphasized the importance of amateur communications in emergencies.

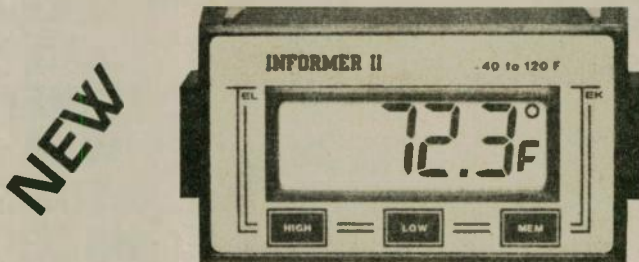
At this time the Commission discussed the matter among themselves. Walter Jackson, a committee member whom Bruce had previously contacted, urged the Commission to modify the bill as we had recommended. Happily, that is exactly what they did.

The proposed regulation will now go to the Board of Supervisors. Several of us have already talked to Supervisor Northstein who assures us he will work with us to get a satisfactory version passed.

The future of Amateur Radio in Gloucester County continues to be bright. □

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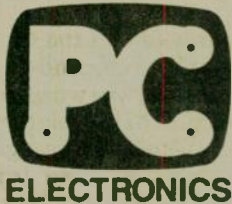
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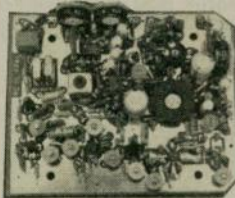


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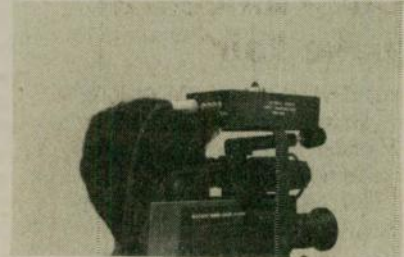
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- Transmit the video to a remote VCR rather than lug it.
- Great for public service events: marathons, parades, damage assessment, search & rescue, CAP, etc.
- Mount in a R/C airplane or robot to enable remote control when the vehicle is out of sight.
- Put it in your own cabinet for base, portable or mobile. When more power is needed, connect to either the Mirage D15N for over 15 watts or to the Mirage D24N or D1010N-ATV amps for over 50 watts.
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Operation Vatican via ATV

Ted Harris, N6IIU

What do you say when an official from your State Office of Emergency Services calls the Palo Alto Red Cross and says "I have just 'sold' your ATV capability to Monterey County; they would like you to provide medical/security coverage for the Pope's visit to Laguna Seca Race Track, near Salinas, California two weeks from now."?

The Palo Alto (CA) Chapter of the American Red Cross has been encouraging amateur emergency/disaster use of Amateur Television (ATV) for several years and the State of California O.E.S. had seen the ATV operation at the July Moffett Field Air Show. Eleven experienced ATV amateurs were recruited from the local ARES/RACES group in Santa Clara County and a request was made to the ARES District Emergency Coordinator of Monterey County for local support. This netted an additional nine amateurs.

After two trips to the Laguna Seca facility (Operation Vatican) to test TV coverage, a cautious "yes" was given to the State O.E.S. that it would be possible to provide multiple, simultaneous, live color coverage cameras to video sets in the command post. We asked for and received four 19" color TVs for the command post.

The Secret Service demanded security clearances for all of our group since they would have free access to most of the area. Some of the officials from other agencies were skeptical of our operation but we relied on the State O.E.S. to pave the way from the top down. It worked! Our group became Official State O.E.S. Amateur Radio/television volunteers, complete with O.E.S. photo identification.

To provide a "uniform" look to our group, we printed white baseball caps with "O.E.S. Television Task Force", wore white polo shirts and made ATV badges. The hats were very popular and we wound up making 10 extra for the O.E.S. officials.

No further "ATV selling" was needed the morning of the Pope's arrival at Laguna Seca. The command post was a four story structure used as the timing tower at the race track. It made an ideal command post since the windows

looked directly out over the natural bowl that made up the major portion of the race track. Unfortunately for the command post, the fog came in about 6 a.m. and visibility was re-

truck-mounted ATV picked up the motorcade on the surrounding hilltop and followed it into the embarkation point. Even though the Secret Service had 72 agents on the scene, the com-



ATV in action. Ray Antesek, WA6TKV on camera and Eric Tofsrud, N6OIM on the HT, provide live ATV coverage of medical and law enforcement activities for the Pope's visit to California, September 17. (Photo by Jim Koski, KT6W)

duced to a few feet. Somewhere out in the fog were 40,000 people that were bused in during the night!

We dispatched the ATV crews to the crowd area and ATV became indispensable showing the crowd scene to the command post who could not see a thing! For three hours, until the fog lifted, we provided the only view of the gathering crowd, bus unloading areas, and medical emergencies.

Because of the fog, the planned helicopter landing of the Pope was cancelled and a motorcade from Monterey Airport was enacted. The

mand post stayed glued to the video coming in back of the crowd scene watching the motorcade.

During our two pre-planning trips to Laguna Seca, we had extensive talks with O.E.S. and the Incident Commander, Captain Chatterton of the Monterey County Sheriffs Department. The Incident Commander asked to have all five pictures in the command post and the capability to talk directly to the camera operators to better facilitate camera positions. (This is not unlike our operations on voice-only modes where we let the

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agencies talk to each other directly on the radio.)

Over the years of providing special event and disaster voice coverage, we have learned that the more we involve the requesting agencies, and the less "ham to ham" talk, the better the public interest is served.

We solved the potential problem of having non-hams using our radios by the State O.E.S. providing 16 800 MHz handhelds. Thus, the Secret Service, O.E.S. and the Incident Commander could direct the movement of the cameras over the voice frequency. The cameras had electronic title capability and at the lower corner of the screen showed words such as "California OES, N6OIM", solving the FCC identification procedure.

Operation in the Command Post

On a long table at the fourth floor of the Command Post were the six TV sets along with County Communications, Secret Service, and the military from Fort Ord (California). All command and control of the operation was done from here. The command post could communicate directly with the portable cameras. We also stationed one of our amateurs here to control the remote 910 MHz camera (camera 4), and to answer any questions by the personnel in the room.

Personnel

Each of the remote camera crews consisted of a camera operator, backup radio person, and a sheriff's deputy. The radio person switched off with the camera operator. The truck crew had one more person as the driver.

At the command post, five amateurs were available to act as net control, logistics, repair equipment, interface with officials, give guided tours, etc. Public relations became important and at every opportunity, all types of officials were shown the operation.

Quotable quotes

Secret Service, two hours into the operation — "Can we have one of your radios to request camera movement?"

Captain Chatterton, Monterey Sheriff's Dept. (Incident Commander), "Fantastic operation! We showed that our small county can provide a much needed service in using the ATV effort on a major special event. A real feather in Monterey County's cap to be the first."

Mark Bennett, California Office of Emergency Services, "I had my doubts about using your volunteer group, but you sure showed us a thing or two about the effectiveness of ATV ... I am going to make a special presentation of your video capability

to the Governor's Emergency Council."

Jerry Verwolf, Assistant Director Communications, Monterey County. "Thanks for the absolutely superb effort. Your shots of the medical emergencies were the first we have ever seen in a command post situation."

Captain MacComb, California Highway Patrol. "Can we have copies of the videotapes you made? The view of 300 buses trying to make it up a 19% grade were invaluable. We would like to promote ATV to our Sacramento headquarters for other events such as this."

Dave Wold, Emergency Services Coordinator, California Office of Emergency Services, "After this effort, we hope to be able to buy some of the ATV equipment, and assemble a Task Force of amateurs to be ready for a disaster or a large special event."

Conclusion

Amateur Radio is doing what it does best, providing innovative technological expertise as a public service. No longer can we just show up at an event with handi-talkies and provide communications. Large special events can, and do rent hand-helds. (This event rented 280 radios just for the

medical teams and another 300 radios for parking detail.)

Packet radio is being incorporated into public safety at an increasing rate. Most of the manufacturers of ham packet controllers are offering the same units (at higher prices) to industry and public safety and it won't be long until these agencies build portable packet system using frequencies already allocated to public safety.

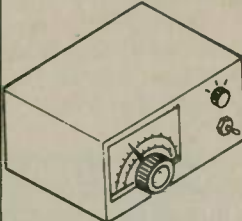
How far can we go with ATV?

ATV is still an amateur domain due to the massive frequency allocation granted to amateurs. Let's show what we can do, before we lose our frequencies. Talk to your local city or county ARES/RACES Emergency Coordinator, and find a few amateurs with non-camcorder TV cameras. Purchase one of the commercially available 420 MHz or 900 MHz wired and tested video circuit boards and mount it on top of the camera.

Give a demo to your local fire department. Show them that you have

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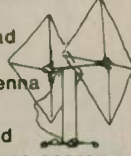
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
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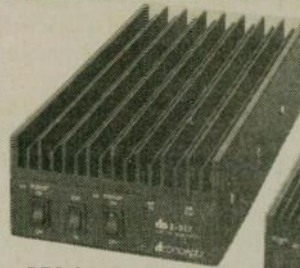



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the capability to go to the scene and provide ATV coverage back to the command post vehicle. Your local fire department will be thrilled! Demonstrate to your local Red Cross that you can perform an initial damage assessment by using video. Want to go further? How about sending the signal back to the city hall or county emergency operations center? Put up an ATV repeater.

Participating amateurs for "Operation Vatican"

Thanks to the following amateurs, who along with the Palo Alto Red Cross provided over \$15,000 worth of video equipment to make the event possible.

A special thank you to California O.E.S. for having the confidence to try our operation on a major special multiple jurisdictional event, and to Monterey County for all the steak dinners we could eat. Also to Tom O'Hara, W6ORG, of P.C. Electronics, Arcadia, who promptly shipped the perfectly working 900 MHz and 420 MHz ATV transmitters and downconverters.

For more information on the emergency use of ATV contact Ted Harris, N6IIU c/o Palo Alto Chapter, American Red Cross, 400 Mitchell Ln., Palo Alto, CA 94301 or via packet Westnet mailbox N6IIU-1. □

Sliding paddle?

Bud Asche, W9NIF

Having trouble keeping your keyer paddle from moving around on the operating table? Apply a small amount of bathtub grout sealant to the rubber feet of the paddle. Smooth it with a wet finger and let it dry overnight.

A word of caution: do not use the grout if your operating table has a fine furniture finish that you want to keep.

—Tri-Town RAC, Hazelcrest, IL □



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Quake *(continued from page 1)*

operators are no longer required. Such was not the case in the Whittier disaster. The city of Whittier reacted with a minimum of delay to provide residents with clean-up assistance. Five teams of the CCC (California Conservation Corps) were brought in to tear down tottering chimneys, to clean up the ruins of fallen block walls, to dismantle porch roofs which had collapsed, and for other needed service.

Each unit of about 12 persons was accompanied by an amateur operator, who maintained contact with the City Hall base station using the 2M repeater of the Rio Honda ARC (W6GNS, 146.175 MHz). These tireless workers labored for 10 to 12 hours daily, assisting the residents of the stricken community. Homeowners heaped much praise on the CCC workers, referring often to their kindness, patience and consideration.

A considerable number of the homes in the hardest hit section were occupied by seniors, many of whom lived alone. It was heart-rending to see the tears of anguish when the chimneys came down, but at the same time it was rewarding to realize that these people, many of whom live on pensions, would not find it necessary to dip into their limited resources.

On October 16, at a dinner catered by the city of Whittier, Mayor Gene Chandler presented a framed proclamation to the participating radio amateurs, in which was expressed sincere appreciation for their service and dedication. Also, the Whittier

Hospital Medical Center sent a congratulatory letter to the participants, thanking them for the help the hospital received, particularly in keeping communications open when the telephone system was inoperative.

Amateurs who assisted (several of whom worked 10-hour days for a total of 10 days) were: KA6DJK; W6CBA; KB6HKT; Al Marsden, WN6AOH; Floyd Nicholson, W6HRD; Don Olejnik, W6KAT; Joe Gonzalez, KB6MIR; Chuck Davis, KB6ISK; Niel Larsen, N6MHT; Larry Wells, N6MSP; Paul (KB6OAT) and Charlene (KB6PSJ) Hawkins; Tom Edwards, KF6HJ; Gordon Roberts, WA6JTA; and Carl Nelson, NJ6K.

The Red Cross Amateur Radio Disaster Service was also activated, and rendered many hours of assistance. □

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More on Ecuador

The letter from the Amateur Radio Club of Guayaquil published in the October issue of *Worldradio* was well prepared, forthright, clear and concise. Our thanks to the Guayaquil ARC for taking the time to prepare such an excellent letter. It would have been so much easier to just sit back with smoldering feelings of dismay and outrage that could have easily and permanently damaged our cherished friendship.

The Guayaquil letter clearly portrayed feelings of anger over the impression that hams of Ecuador are "beggars" and "takers". It enumerates a lengthy list of activities and accomplishments to refute the accusation — an impressive list indeed.

Let me hasten to assure our friends in Guayaquil it was never the intent to convey such an impression and apologies are sincerely extended to those who were offended. The intent was simply to extend a good faith "hands-across-the-sea" gesture of friendship so frequently expressed by hams around the world.

Amateurs everywhere have assisted each other in countless emergency situations, in contacting rare DX stations and in many other unselfish ways designed to further and promote our mutual hobby. Rarely is such assistance taken as condescending or begging but rather as a humble, selfless gesture of one friend helping another. This was the sole intent of my article and it is sincerely hoped our friends in HC land will accept it in this spirit. Sincerest apologies are extended for misunderstandings or misimpressions of any other nature.

Ted Moscoso, HC5K, and I have exchanged letters and conversations on 20M, and Ted feels there are many emerging technologies that could enhance Amateur Radio in Ecuador if supported by clubs and ham organizations. A few of his suggestions are as follows:

- Control links established for VHF repeaters would add a dimension of organization and discipline to VHF-FM nets and repeater usage.
- VHF and UHF equipment, particularly at 220 MHz and 70cm frequencies, would a) encourage hams to develop interest in these higher fre-

quencies, b) blunt the attacks being mounted that could result in loss of these bands, and c) discourage clandestine and illegal non-ham operations.

- Club projects could also include satellite education systems, digital nets, RBBS's, MSO and other emerging technologies.

- A new organization, DX-EX, has been established in Ecuador with a handful of members dedicated to furthering new technologies. Current projects include a digital network termed HC-Net, a linked system with Colombia to join their HK-Net and RBBS. Eventually data banks will be established in Ecuador's three major cities available for international use.

- Remotely controlled HF, VHF and UHF systems are being established to handle civil defense and emergency traffic, access remote areas, provide educational tools and familiarize hams with DX operating techniques, propagation conditions, etc.

- A 6M beacon, HC8SIX, is being constructed for donation to the Galapagos DX Radio Club.

- A complete all-mode digital system is also planned for the Galapagos club, to handle traffic and

gain experience in digital techniques to back up TELEX, FAX and telephone systems to these offshore islands.

- The wealth and history of the ham clubs of Ecuador is limited only by the vision and efforts of their membership. Let us join in a spirit of friendship to establish and implement goals that will better serve the citizens and hams of Ecuador, continue to promote the growth of Amateur Radio in our country, and thus measure up to the true worldwide potential of this tremendous hobby of ours.

In conclusion, Ted and I would like to extend our sincerest appreciation and thanks to those who responded to the original Ecuador article in the May issue of *Worldradio*. Telephone calls and letters poured in with equipment, periodical collections and new subscriptions being volunteered.

In a world sometimes characterized as callous, unfeeling and self-centered, it was heartwarming to note that the finest traditions of Amateur Radio are still alive and well, proven by your unselfish response to assisting our fellow hams below the equator. May it always be so.

CHUCK LOBB, KN6H
TED MOSCOSO, HC5K

Defending WCRA

I am writing in reference to the letter from Bart Paine, K7CC, which was printed on page 20 of the August edition. Paine refers to the hamfest sponsored by the Wheaton Community Radio Amateurs. He indicated that, according to news reports, it appears a prejudice against Novice Class operators exists. As a member of the club, I can tell you nothing could be more distant from the truth.

WCRA is a special service club with about 250 members and has been active for many years in Novice training. I know this because I graduated successfully from a WCRA-sponsored Novice class in 1964.

Since last December, 15 people who attended training classes organized by WCRA (including my son, Bill N9GQB) have passed the Novice examination. These new Novices are given complimentary memberships and are encouraged to participate in all activities of the club including use of the WCRA 220 MHz repeater. An "Elmer" program, General training class, Novice Field Day station and active club participation in the VEC program are other means used to help encourage and better these new amateur friends.

At our recent hamfest I personally

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saw no evidence of a "220 selloff." There is, however, a lot of evidence that the Wheaton Community Radio Amateurs is actively promoting the interests of all Amateur Radio operators regardless of class of license.

CHUCK HOWARD, NT9M
Lombard, Illinois

More ham plates

After seeing your license plate photos by Richard Randall, K6ARE, on page 63 of the May issue, I thought you might enjoy what my wife, Mary, KA6RCM, and I have chosen to do. We are avid RVers as well as hams and have three vehicles: one RV, one truck and one family car. In order to maintain the ham image, we elected to use WI6S on the family car, CQ WI6S on my truck and HAMS RV on the RV.

CAL TURNER, WI6S
Lake Montezuma, Arizona



First packet WAS

I have been operating a lot on HF packet for the last year and was able to make WAS. When I applied for a WAS certificate, the ARRL advised me that I was the first to apply for it. They sent me a special plaque commemorating the fact that it was the #1 Packet WAS Award.

The equipment I used was a TS-930S Kenwood, running 100W to a

*In aviation, it's Aviators,
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In gladiation it's Gladiators,
So why not call radio men Radiators?
—Pacific Radio News, August 1920*

3-element triband beam up 25 feet. The other equipment was an AEA PK64 TNC and a Commodore C-64 computer. I believe this amply demonstrates that high power is not necessary.

I received my first ham ticket in 1931, with the call W7BAH, and at no time have I ever used more than 160W.

ART BLUMENTHAL, KF6EE
Ione, California



Front row (L to R): Julie Gates, KA7TXJ, my daughter-in-law; Terri Monks, KA7VHV, my daughter; Cheryl Gates, KA7UDV, my daughter-in-law; Sheryl Gates, KA7PYY, my wife. Back row (L to R): Richard Gates, KA7QEC, my youngest son; Ron Gates, KA7TWK, my second son; Brad Monks, KA7VHW, my son-in-law; Kenneth Gates, KA7UDU, my oldest son; and myself, Jay C. Gates, KA7PVT.

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Nine-ham family

I have, in my immediate family, nine licensed amateurs. My wife and myself and our four children and the spouses of the three married children all have Technician licenses. If there is a larger licensed family, I would be interested to know about them.

About a year ago I saw in *Worldradio* a picture of a Japanese family that had seven licensed. It stated that as far as they knew, this was the largest licensed family in the world. I was going to send this in then, but did not have a picture to send with it.

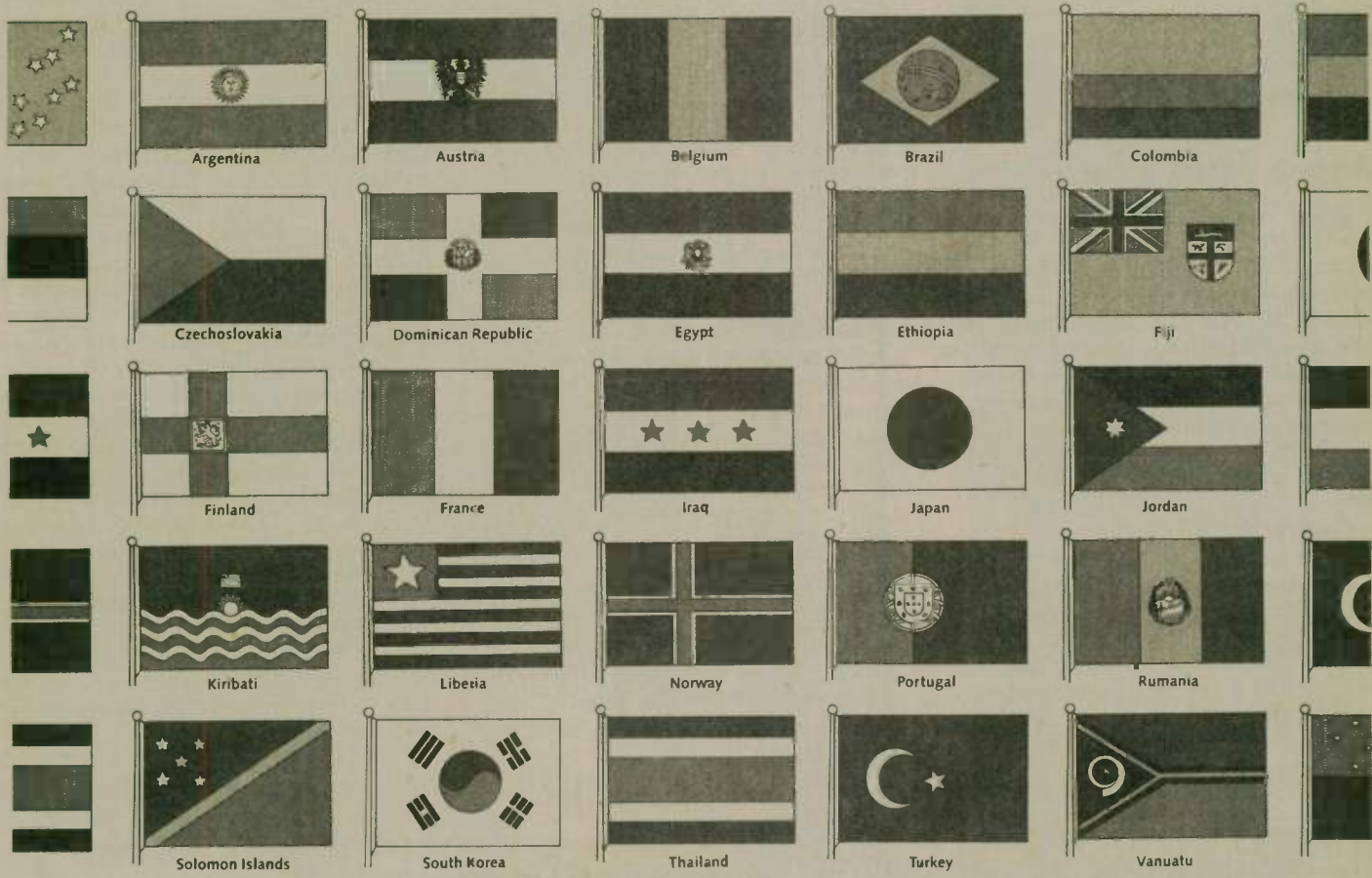
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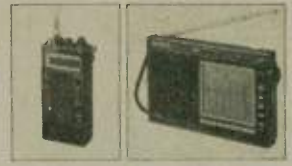
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Julian (Jerry) Faas, W6KMI, received this as a QSL card from Archie Waring, W6ACN, over 30 years ago. The photo shows Archie (right) receiving the first ham license plate from Governor Goodwin Knight in January 1954. (Submitted by W6KMI)

Amateur "Hi"

Donn Brown, WB8RAZ, of Naples, Florida passed this one on to us and became this month's winner.

Over a decade ago, in my earlier days of Amateur Radio, a group of local amateurs would meet every Sunday morning for breakfast. The popular topic of discussion at these gatherings was, of course, DX. Several of the hams were avid DXers and to this day are on many honor rolls.

I would sit and listen to all the "glory" details of the rare ones they had worked since the previous Sunday and was never able to contribute much to the conversation. The "new" ones for me were always the "old" ones for them.

Late one evening I had the old "hot-water" 101 tuned up on the CW portion of 20M and called "CQ" several times. I heard a fairly good signal coming back with my call, and I routinely began to copy the call letters "RG8AU." Gee, I thought to myself, this is a new one for me. The call did not ring a bell and I could not locate it on my countries list.

I returned with the usual RST,

name and my QTH. Then "RG8AU" came back to me with my signal report, his name (which I do not recall) and his QTH ... "Coax Island"! WOW, this is a rare one I said to myself. Wait until the guys hear about this one.

I could hardly wait for Sunday to roll around and I was the first one there for breakfast. It was hard to contain myself during the normal discussion and when the war stories began about the previous week's DX, I jumped into the conversation with both feet and proudly stated that I had worked what must be a real rare one on some remote island unknown to man (or at least to myself).

When asked what the chap's call was, I responded very proudly with "RG8AU on Coax Island." There was silence for what seemed like eternity, and then everyone burst out laughing hysterically. Then, and only then, did I suddenly realize that my new "rare one" was someone's idea of a joke and that I had been a perfect contact, not realizing it until after the QSO.

I can look back now and enjoy that contact and the kidding I have taken over the years, but I am still waiting for a QSL card. □

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AWARDS

FAR winners

The Foundation for Amateur Radio is pleased to announce the 1987 winners for the 26 scholarships which it administers.

John W. Gore Memorial Scholarship — \$900: David Swiatowski, KA2KLM, Camillus, NY

Richard G. Chichester Memorial Scholarship — \$900: Richard F. Westenberger, N9DKR, Springfield, IL

Edwin S. Van Deusen Memorial Scholarship — \$350: Richard M. Kordick, KE0AS, Creston, IA

QCWA Memorial Scholarships — \$600 each: Annette J. Barnhart, N3DKT, Mt. Pleasant, PA; Ariel Ben-Porath, 4Z4WJ, Natanya, Israel; Paul W. Hoffman, KA3PVC, Sinking Spring, PA; Douglas Kleemann, KA9LWN, Shawano, WI; Eric B. Koester, KA0YWN, Spencer, IA; Douglas Swiatowski, KA2KMT, Camillus, NY

QCWA Robert S. Cresap Memorial Scholarship — \$500: Thomas W. Larsen, NY7D, Eugene, OR

Radio Club of American Scholarship — \$500: Nathan S. Willingham, KA0UFO, Bevier, MO

Edmund B. Redington Memorial Scholarship — \$500: Douglas M. Benish, N3CXB, Pittston, PA

Young Ladies' Radio League Scholarship — \$750: Carol A. Dunlap, N1EHS, Southwick, MA

Amateur Radio News Service Scholarships — \$600 each: Michael P. Krensavage, KA3CUP, Marietta, GA;

Keith L. Watson, WB9KHL, Galesburg, IL

Columbia Amateur Radio Association Scholarship — \$750: Lora E. Katz, N3DOH, Bowie, MD

Baltimore ARC Scholarships — \$500 each: Brian J. Withnell, KB3IU, Federalsburg, MD; Maurice De Vidts, NE3S, College Park, MD

Dade Radio Club Tropical Ham-boree Scholarships — \$500 each: Scott M. Cronin, WS4E, Hollywood, FL; David P. Tancrell, KB4GIA, Palm Bay, FL

Richard N. Coan Memorial Scholarship sponsored by the Goddard ARC — \$650: Diane E. Willemin, KE8DJ, Elyria, OH

Rose Ellen Bills Memorial Scholarship sponsored by the YLRL — \$500: Lisa Ann Adler, KA1MDT, East Lempster, NH

Richard D. Chesney Memorial Scholarship sponsored by the Bowie

ARC — \$500: David S. Katz, N3DKV, Bowie, MD

Victor C. Clark Memorial Scholarship sponsored by the Vienna Wireless Society — \$500: Thomas A. Foy, N4HAI, Sterling, VA

Frederick ARC Scholarship — \$1,000: Joseph E. Renard, KA3LVV, Thurmont, MD

Department of State ARC Scholarship — \$500: Shelby C. Elborn, NC3A, Dover, DE

These scholarships were open to all radio amateurs meeting the qualifications and residence requirements of the various sponsors. The Foundation is a non-profit organization representing 50 clubs in Maryland, the District of Columbia and northern Virginia. It is devoted exclusively to the scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service. □

Young Ham of Year

Westlink Report is pleased to announce its choice as the 1987 Young Ham of the Year. He is David Rosenman, KA9PMK, of Muncie, Indiana. The 16-year-old Advanced Class licensee has been on the air since age 11 and holds a 3.9 grade point average.

David's parents are both teachers, as was the case with last year's winner, Shawn Wakefield, KA5UDL. His father, WD9EUT, is professor and chairman of the Department of Architecture at Ball State University. His mother, not yet licensed, is Associate Professor of Secondary Education, also at Ball. David's younger brother Mike is KA9SWU, while his 71-year-old grandfather has been



David Rosenman, KA9PMK

licensed one year and is now NJ2K, an Extra Class!

Besides having been a constant volunteer for walk-a-thons, sporting events and Red Cross emergency drills, he recently worked as the aide de camp for President Robert H. Helmick of the U.S. Olympic Committee at the just-completed Pan American Games held in Indianapolis. Selected from thousands, David trans- (please turn to page 37)

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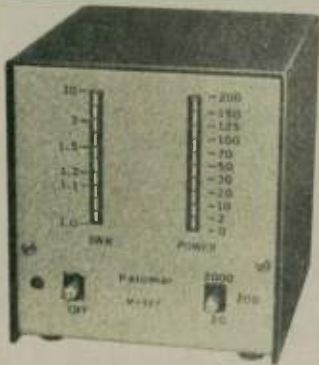


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K3SLJ

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John A. Smetona, K3SLJ, of Pottsville, Pennsylvania wins this month's STATION APPEARANCE. Since the photo is black-and-white, readers won't be able to appreciate the color scheme — red rug, chair, counter tops, shelves and curtains.



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The table top is made of plywood, covered with Formica. The desk and cabinets were assembled from "unfinished furniture" kits.

From left to right on the console: Commodore 64C computer, 1541 disk drive, and a Star NX-10 printer. Next are VHS videotapes, Kenwood speaker, a Kenwood TS-940S transceiver, phone patch, 24-hour clock, TL-922-A amplifier, and Robot SSTV monitor. A 2M Azden and Taitwister controller are behind the chair. The cabinet on the right houses a stereo, tape deck, etc. Antenna switches and a drawer for Callbooks, logs, etc. are directly under the table top.

The shelf above holds a portrait of my XYL Ann, Commodore monitor, a TV and a VCR. Next is a Collins power supply KWM-2 transceiver, 312B-4 station control, a 30-L-1 amplifier speaker and dummy load. Top shelf has scanners, CB and a CW keyer.

Antenna is a Wilson Systems 40 tri-bander on a 64' Rohn fold-over tower. I also have monoband dipoles for 40, 80 and 160M. □

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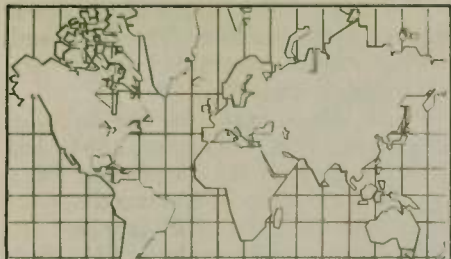
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- 21-22 Nov OVSV All Austria Contest (CW)
- 28-29 Nov CQ World Wide DX Contest (CW)
- 05-06 Dec URE Spanish Contest (CW)
- 05-06 Dec ARRL 160M Contest (CW)
- 12-13 Dec ARRL 10M Contest

W-100-N

On October 1, the following DXers were issued certificates for World-radio's Worked 100 Nations Award:

- 323. W6DNY Virgil J. McCluskey
- 324. KA6TFC Milton J. Taggart

Grenada (J3)

Dave Short, W5PWG, reports that he and the O'Kains — Bill, K4LTA, and Ruby, N4FKO — are planning a trip to Grenada this February. We will keep you posted for further details on this one.

If you can't wait until this winter, you might find on 20M J37AJ working Europeans on 14.136 MHz around 2145 UTC or on one of the new WARC bands near 24.950 MHz at 1930 UTC. On 75M J37ZY was found on 2.796 MHz at 0230 UTC.

Somalia (T5)

Although not heard from in several weeks near mid-October, a station signing T5GG was quite active during a few days in September. The

operator, who goes by the name Juliano, spoke very limited English. In the event he may return to the bands, try checking 20M near 14.200 MHz after 1800 UTC and on 15M near 21.270 MHz after 1800 UTC.

Heard Island (VK0HI)

Remember the Heard Island DXpedition back in early 1983? There were two simultaneous DXpeditions at the time. Jim and Kirsti Smith with one and Dave Shaw, VK3DHF, and Al Fischer, K8CW, with the other, kept things hopping, although propagation wasn't the best.

Dave will be returning again to Heard Island, and should be there about now. QRZ DX reports that he has left aboard the *Nella Dan* and should be there for a year. His duties in the communications field will take priority over his DX activities.

Operation is planned on most of the bands, 80 through 15M. Net operation is not anticipated.

Andaman Islands (VU4)

The VU4GDG DXpedition team, headed by Gopal, VU2GDG, showed up on the bands as scheduled. The operation was planned to continue through to near the end of October. Unfortunately, information was received via the DX bulletins too late to be included in last month's column. Not only that, nothing was mentioned during the W9DXCC convention by Miss Bharathi, VU2RBI, when she was visiting in Illinois mid-September, although the word was out on Gopal's activity.

QRZ DX reports that logs and cards for the past VU4APR/VU4NRO operation are now with George Buchanan, K2ON. If you have not received a card or you had one returned with a "not in the log" comment, you might try again. Be sure to include that SASE.

Vanuatu (YJ8)

QRZ DX reports that after almost a year of trying to obtain a license to operate from an African nation this fall, Don Simmonds, K5BDX, and Brenda will be operating from Port Vila in Vanuatu, November 26 through December 3. Don will be using the call YJ0AA with Brenda using YJ0AYL. Most of Don's operating will be on CW, which will include the CQ World Wide DX Contest. Look for Brenda in the YL DX nets.

Also from this one YJ8JH was worked on 21.294 MHz at 0300 UTC, and also has been on 20M SSB working the Europeans. And, along with YJ8JH, the Europeans were blessed with YJ8MC on 14.115 MHz around 0930 UTC.

Auckland and Campbell Islands (ZL9)

In a letter to QRZ DX, Ron Wright, ZL1AMO, has about completed his plans for a February DXpedition to Auckland and Campbell Islands. Ron reports that his trip will include Baz Kirkwood, ZL1BN, Roly Runciman, ZL1BQD, and himself, with the calls ZL9BN, ZL9BQD and ZL9AMO.

Two scientific personnel will accompany them to provide documentation and photography. Ron reports that they will need about \$8,000 (U.S. funds) to meet the cost of transportation, fuel and food, and donations will be greatly appreciated.

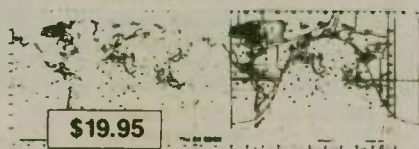
Ron has organized several DXpeditions and has given many a deserving DXer a new one. In fact, Ron's successful DXpeditions placed him in CQ's DX Hall of Fame a couple of years back. This will probably be the last DXpedition he will organize. You may send your contributions in IRC's, personal check or even cash. Send it to Ron's Callbook address. All donations will be recorded and a receipt will be sent if requested.

Niger (5U7)

According to QRZ DX, 5U7/12VA contacts have been accepted for DX-CC credit. As for the other two stations presently active — C53FC/5U7 and TU4BR/5U7, action is still pending.

The first of the two, C53FC/5U7, was reported active on 14.152 MHz (please turn to page 34)

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Bob Mgr. K7R0H
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Tom Mgr. K6M6X
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DX World

(continued from page 31)

around 2145 UTC during the middle of September, while TU4BR/5U7 preferred the E.T. Net on 14.160 MHz. Check for this one from 2300 UTC.

Zaire (9Q5)

Two stations have recently been active from this one. Duncan, 9Q5DA, has been down in the CW portion of the bands after 1900 UTC. Check for him on 14.015 or 21.021 MHz. 9Q5DA has also been reported on SSB near 21.226 MHz at 1530 UTC working into the Midwest.

The second station, 9Q5NW, has been reported frequently near 14.180 MHz after 2100 UTC working into various parts of Canada. Also, take a listen on 15M near 21.250 MHz after 1800 UTC.

The K1BV DX Awards Directory

Chod Harris, VP2ML, editor of *The DX Bulletin*, recently sent us a copy of *The K1BV DX Awards Directory* for review. Published by Ted Melinosky, K1BV, the directory is an annual publication. This first edition was published in July and contains 170 pages of rules for approximately 680 different awards from around the world.



Earlier this year, Marjan Mankoc, YU3KI, handed out a new one on CW for many a DXer. On assignment in Kinshasa, Marjan kept things buzzing signing 9Q5KI. Marjan has also operated from other locations on the African continent. Here we have a shot of him last year from his Lagos location where he signed YU3KI/5N0. (Photo courtesy of YU3KI)

The awards are listed alphabetically by country name and include the big-name DX awards such as DXCC and WAZ, along with awards sponsored by the various national Amateur Radio societies and lesser known awards. The directory also includes awards offered by DX clubs for contacts made with their membership, such as Worked Frankford Radio Club award. If you are an awards hunter/paper chaser, this item is for you.

Awards from the United States are included at the end of the directory.

Since the directory deals with DX-oriented awards, this section is greatly limited. It will be expanded if there is interest from those who subscribe to the directory.

The directory is printed on standard 8½" x 11" stock and is punched for notebook binding. You furnish the notebook. Cost is \$14.35, which includes first class postage. Outside of the United States the cost is \$13.75 if surface delivery and \$16.75 if air mail delivery is desired. We assume Canada would be the same as



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You may order your directory direct from Ted at 525 Foster St., South Windsor, CT 06074-2936, or from *The DX Bulletin*, P.O. Box 50, Fulton, CA 95439-0050. Connecticut and California residents should remember their governor's coffee funds if they purchase the directories from within their own states.

TDXB survey

The results of *The DX Bulletin's* 1987 Most Wanted Survey are in. Every year the subscribers of the DX newsletter fill out a form to indicate the DXCC countries they still need, which includes a list of 100. The easy-to-work (garden variety) DX are not included in the survey. We will not list the 100, but will limit it to the top 25.

Rank	DXCC country	Prefix	% need
1	Albania	ZA	84
2	Burma	XZ	77
3	Bouvet Island	3Y	74
4	South Yemen	7O	74
5	Viet-Nam	XV	71
6	Afghanistan	YA	68
7	North Yemen	4W	67
8	Laos	XW	59
9	Bangladesh	S2	58
10	Spratly Islands	1S	55
11	Bhutan	A5	54
12	United Arab Emirates	A6	53
13	Mount Athos	SV/A	53
14	Andaman & Nicobar	VU4	52
15	South Sandwich Is.	VP8	52
16	South Georgia Is.	VP8	51
17	Marion Island	ZS2	51
18	Kampuchea	XU	50
19	Laccadive Islands	VU7	46
20	Mozambique	C9	46
21	Tromelin	FR/T	45
22	Niger	5U	45
23	Juan Nova	FR/E	44
24	Abu Ali		43
25	Ethiopia	ET	43

How do you stack up in the list?

Antique QSL Department

This little item was taken from the pages of *Salt Tablet*, the newsletter of the Salt City DX Association, 'Old Time QSL Cards by N2RT.' The contact was made with MP4QAQ by W2NCI (former call of N2RT) on 20M CW back in 1961.

The operator of the station in Qatar

QATAR - ARABIA

MP 4 QAQ

L. M. RUNDLETT P. O. BOX 5043 BEIRUT, LEBANON

QSO No	RADIO	DATE	GMT	RST	MODE	MC
879	W2NCI	11/16/61	CC49	55	CW	4

TKS FOR QSO PER QSL 73 *Handwritten* One.

was L.M. "Rundy" Rundlett. If you remember, we ran another one of Rundy's cards in the May issue (XV5A). His last call was K4ZA and became a Silent Key last year.

The present prefix for this country is now A7.



This old QSL was submitted by Don Haskell, W7CL, of Hurricane, Utah. Don worked VK4UL back in 1936 when he was living in Glendale, California, signing W6CPM, the call he held from 1932 through 1976. Don received an RST 459 for this 40M CW contact the latter part of that summer. Paul Hubsher, the Australian operator, no longer holds the call VK4UL. Whether he is a Silent Key, we do not know.

QSL routes

A22RB	-KA3OYY	VP2E/N3JT	-W2GHK
C30CAM	-DF6EJ	VP5W	-WW6F
FJ5BL	-F6AJA		(See Note 3)
FR5AI/E	-FR5AI	VU40LBW	-VU2AU
FR5ES/J	-F6FNU	VU40NTA	-VU2AU
HD8CQ	-KTIN	W87PAX	-W9SU
JG1AKK/		WY5LKH3	-N5DAS
JDI	-JO1QUB	XE0KNE	-W5KNE
JW6E	-LA5NM	XU1SS	(See Note 4)
JW6ND	-LA5NM	XX9TDM	-W7TIR
JW7FD	-LA5NM	XX9YD	-K8PYD
KA2HH	-K3LTV	YE0S	-YB0DOG
KA2IJ	-K3LTV	YJ0AA	-K5BDX
KG4AN	-N8GG	YJ0AYL	-K6BDX
KH2F/KH4	-N2AU	YN3EO	-Y32KE
LU7MAJ	-WD8ILW	Z21EV	-W3HMK
N4FD/V47	-W4MGX	ZB2CN	-D99WH
NP4JV/KH2	-N2AU	ZD7AF	-N2AU
NY6M/KH4	-NY6M	ZK1XO	-KA7NLE
	(See Note 1)	ZL6BA	(See Note 5)
OF9MA	-OH0NA	ZL8HV	-ZL3HV
OZ4UN/OY	-OZ4UN	3C2A	-AK1E
P29SR	-WB8IOQ	3D2RY	-OH1RY
P40V	-WA6AHF	3V8RFA	-WB7RFA
PJ0J	-K4PI	4N8N	-YU8BPQ
SP5EXA/		4U1ITU	-K7OZ
JW	-SP5EXA		(See Note 6)
T20EE	-N6NDH	5H3GI	-VE7CNT
T32BM	-KF4CI	5N1MRE	-K4ZKG
T77Q	-IV3SUS	8A0IT	-YB0DOG
TF6PS	-W3HMK	8P6SG	-8P6AW
TJ1DL	-DK8SO	8P9AF	-VE3LGC
TZ6CVY	-F6CVY	8P9HR	-K4BA1
V31TP	-WB0DLT	9M2DU	-DK5BH
V32FI	-KA0YNN	9N1MM	-K8PYD
VK9AB	-ZLIAMO		(See Note 7)
VK9YV	-G3TBT		
VK0HI	-VK3EVN		
	(See Note 2)		

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DECEMBER 1987

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(9)	9	12	(7)	11
12	(9)	9	11	(7)	(11)
14	(18)	9	11	(14)	28
16	23	9	16	(13)	33
18	22	(9)	(18)	(8)	35
20	19	(9)	25	(8)	36
22	(16)	23	29	(7)	34
24	14	25	32	7	28
2	11	21	29	7	15
4	10	(12)	15	7	13
6	(9)	(11)	13	7	12
8	(9)	10	12	7	12

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(11)	7	12	7	11
10	(11)	7	11	(7)	(11)
12	24	7	11	15	21
14	30	8	19	17	31
16	32	(7)	(16)	15	34
18	23	(7)	(19)	(9)	36
20	19	(7)	25	(8)	35
22	17	18	29	8	32
24	14	16	28	7	23
2	13	(9)	(15)	7	14
4	12	(8)	(13)	7	13
6	(11)	(8)	(12)	7	12

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	(11)	7	(12)	7	12
9	(11)	7	11	7	11
11	25	7	11	15	21
13	31	8	21	18	31
15	33	(7)	17	18	33
17	27	(7)	(18)	16	35
19	22	(7)	23	(9)	34
21	18	(15)	28	8	32
23	14	(15)	28	8	24
25	13	(9)	(15)	7	15
3	12	(8)	(13)	7	13
5	11	(8)	(12)	7	12

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 YN3AG - P.O. Box 2419, Managua, NICARAGUA
 6W7HG - P.O. Box 175-A, Toies, SENEGAL
 9L1RK - P.O. Box 341, Freetown, SIERRA LEONE

Notes

1. Use the 1986 edition of the Callbook or later.
2. This applies for the upcoming Heard Island DXpedition only.
3. This applies for the November 1987 CQ World Wide Contest only.
4. At least three versions have been given: SETA, KP1NF (Keo Piseth) and Keo Piseth. All go to P.O. Box 1974, Nonthabury, 11000 THAILAND. Take your pick!
5. You have a choice: VK7RM or WB6AFJ.
6. This applies only for contacts made by Alan, VK8AV, September 19-20, 1987.
7. Only contacts made by Leo himself will be via K8PYD.

Our thanks to this month's contributors go to W9LNQ, W9NN, KA2CC, WW6F, YU3KI, W6HEX, VP2ML, W5PWG, W7CL, the Salt City DX Association (KB2G), Western New York DX Association (WB2ABD), Greater Milwaukee DX Association (NK9G), Albuquerque DX Association (W5OLN), Kansas City DX Club (AB0X), Northern Arizona DX Association (KD7XO), Southern California DX Club (NK6A), Western Washington DX Club (K7ZR), *The DX Bulletin* (VP2ML),

QRZ DX (W5KNE), DX News Sheet (G4DYO), The Long Island DX Bulletin (W2IYX) and Long Skip (VE3IPR).

As we prepare this month's column, it is a bit distracting as it is in the middle of the baseball playoffs. I am not really a big baseball fan, but watching the top teams in action is something

to admire. At times we even imagine ourselves out there on the field. Kind of like the big guns in action. Don't you ever imagine yourself as a big gun when on the air? So what do you do after baseball is over? CQ's World Wide DX Contest, of course! GL DX es 73! de John, N6JM. □

Iceland . . . land of fire and ice

Jim Jackson, WA6DDM

Have you ever imagined becoming DX on a small budget and having the opportunity to see a beautiful country and meeting interesting people? Well, perhaps Iceland (TF-land) is just your ticket.

Last year I decided to go to Europe and travel while the dollar was so strong and, being budget-minded, chose to fly on one of the many budget carriers. The fare to Europe on Icelandair is substantially less than on most European carriers and it had a nice bonus; you can stopover in Iceland for no extra cost. In fact, Icelandair has package deals that include an automobile and hotel for as long as you wish to stay. (I recommend the Hotel Loftleidir near Reykjavik Airport. A little less expensive is the Hotel Esja south of downtown.)

I wrote to the ARRL and obtained the necessary information on how to apply for an Icelandic reciprocal license. You need to fill out the form, supplied by the ARRL, return it, so they can endorse it, certifying that you are a member of the ARRL in good standing. Then you need to send it on to Iceland with a notarized copy of your U.S. license. You need to have an Iceland address, so use your hotel address (make your hotel reservation prior to sending the application). This is then bundled up and sent to Islenskir Radioamatörar in Reykjavik (their FCC).

Your application will first be processed by the government in Iceland and then sent to the Icelandic Amateur Radio Association (TF3IRA) where it will be inspected and then returned to the government with any notations. Upon arriving in Iceland, you go to the Post and Telecommunications Office and pay the license fee of 446.40 Kronur (about \$10) and you will have a license good for six months. Iceland will not

issue you a TF call; rather, you use your call with a portable TF identifier.

To aid in understanding your license, it is written in Icelandic on one side and English on the other. (A big help because Icelandic is not one of the easiest languages to quickly pick up!) As for language, Icelanders speak Icelandic which is an extremely old language — the language of the Vikings. The language has not changed much since the days of the Vikings. An Icelandic child can easily read the old sagas in their original text! But, never fear, everyone I met in Iceland has some knowledge of English because it is taught in school as a mandatory subject. As for the amateur population, everyone I met spoke English quite well.

When the visitor arrives in Iceland, he arrives at Keflavik Airport which is about 45 km south of the city of Reykjavik; Keflavik is where a NATO base is located. (Reykjavik Airport is not used for international flights.)

Since imported goods in Iceland are so expensive, the arriving Icelanders take advantage of the stores. The woolen prices there are almost comparable to the prices in town. When the visitor leaves the terminal, there are buses that will take him into town for a few dollars (Kronur). At the air terminal, there is a money changer so you can convert your dollars to Kronur and the rates are the same as the rates in the banks in town.

The local repeater is located in Reykjavik and usually cannot be accessed from Keflavik on low power with a rubber duck! The frequency is 145.600 (-.600) referred to as R-zero. The Reykjavik ARC plans to put up another repeater so Iceland will then possess two repeaters. Activity on the repeater is mostly in the evenings, although it is monitored by everyone. (Give Konni, TF3FG, a call; he is always monitoring since he got his new HT!)

Because of the small amateur population, simplex frequencies are not monitored a great deal. The Reykjavik ARC's call is TF3IRA and is located in the southeast portion of Reykjavik.

Iceland is a small country and Reykjavik is a medium-sized city where everyone knows everybody else's business, so it's difficult to remain anonymous. To illustrate how informal

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WB3ON

everyone is, the telephone book in Iceland has everyone listed by their first names rather than sorted by their last names.

As soon as I announced my presence on the repeater, I was immediately invited to the Monday night club meeting which is located right off of Ellidavogur near the new harbor (Sundahofn). The radio club station is a state-of-the-art Kenwood/Yaesu setup coupled to a series of dipoles.

I met 75% of the Amateur population of Reykjavik at the club meeting and found that they are an extremely gregarious bunch. I told them that I have been an amateur for over 25 years and never have made a contact with a TF station; how come?

The answer was very quick in coming;

You don't have to worry about TVI much because Iceland has one television station ... on the air about four hours a day.

I was offered the use of the station and I called a brief CQ and generated a pile-up. Watching the S-meter bend around the pin, I simply reached up and depressed the OFF switch! No further explanation was necessary. The major complaint was that they usually have a hard time having a QSO because of the people that want to work Iceland. They said "We would rather chat with stations than to get involved with the QSL card mess plus it is expensive! Whenever we chat, many stations tailgate our QSO with 'this is W6xxx on frequency' and telling them to standby usually generates jamming."

You don't have to worry about TVI much because Iceland has one television station and it is only on the air for about

Young Ham *(from page 29)*

lated for Helmick into Spanish and Portuguese for various foreign government officials, as well as Olympic personnel. (David also speaks French and Italian.)

During his 30 days away from his family (over 50 miles), David carefully introduced his companion to Amateur Radio with his HT and copies of QST magazine. He also explained to him the function of W87PAX, the official Pan American station.

KA9PMK has tirelessly recruited classmates and others to attend ham club classes where he teaches. One was his 72-year-old neighbor Sylvia, who is now KA9TBO. When her husband passed away recently, she was kept busy and stimulated, having made over 800 contacts as a Novice.

four hours a day. Iceland has two radio stations AM; one is Icelandic and the other is the Armed Forces Radio Station (NATO) located at Keflavik (broadcasts in English) and is easily heard in Reykjavik.

If you decide to visit Europe in the near future, may I suggest you fly Icelandair (goes to Luxembourg, Germany, Denmark) with a free stopover in Iceland. Iceland is indeed one of the best kept secrets because it is one of the most beautiful countries I have ever seen.

As for food, you cannot believe the fish dinners that the Icelanders can prepare; the only way it can be fresher is to serve it while it is still kicking! Also, they are noted for their lamb dishes! So, going over to DL-land, LX-land, OH-land?? Stop off in Iceland on your way for good food, friendly people and some of the most magnificent scenery you have ever seen. Just make sure you spend enough time (you cannot do it on an overnighter!). Bring along that 2-meter HT and set it to 145.600 (no toneburst is necessary). If you are there on a Monday, stop by TF3IRA and say "Hi" to the boys for me and be prepared to stay awhile (I arrived at 8:30 p.m. and left at 1 a.m.).

Remember that during the summer, it never gets dark because you are by the Arctic Circle so it's difficult to tell time by how light it is. Iceland is truly a land of the midnight sun. Icelanders love camping; the entire country is set up for it with many hostels for the backpacker (contact the Icelandic Tourist Office, Washington, D.C.). There is a campground almost in the center of the city of Reykjavik with bathrooms and showers.

Reykjavik has an extensive bus system although I recommend renting a car and driving along the southeast coast for the best scenic views; waterfalls abound and the fishing is out of

As club secretary, she just hosted the radio club's annual picnic in her backyard.

The well-rounded ham plays the piano and violin and enjoys tennis when not participating in his school's Thespian group where he is president.

David Rosenman received his award and a substantial prize from Yaesu USA at the ARRL Southwestern Division Convention in Scottsdale, Arizona on October 10.

—Westlink Report

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this world! The air in Iceland is pollution free because all household heat is via natural volcanic springs. The water is some of the purest in the world coming from nearby glaciers. But, be careful, the hot water is really HOT! Whichever way you choose to visit Iceland, you can't go wrong — and don't forget the HT! □

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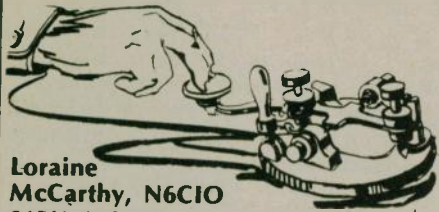
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Code Matters



Loraine
McCarthy, N6CIO
315 1/2 Ruby, Balboa Island, CA 92662

This month let's review some additional questions that students have asked about their code studies.

There are several ways to practice code — computers, code tapes and on the air. Probably the most used method at this time is the code tape for speed building and exam preparation. Students often comment about how easy it is to memorize taped material that isn't random, and yet this is a valuable kind of practice because the exams are text.

First, never stop your recorder and replay a section that you have just copied because you have not copied it as well as you would have liked. Remember that this keeps you from building up an endurance to copy the code for five minutes. Also remember that when the real exam is playing, there is no instant replay! Always try to run your recorder and copy for at least five minutes.

Playing a small area over and over will tend to cause more rapid memorization of an area of your tape. Also, it is a good idea to practice through one complete side of your tape before you start to recopy that side. When you are doing fairly well on the first side, begin to phase in practicing the second side of your tape.

On tapes with sample exams,

remember after each exam to check your work. Again, do not copy the same practice exam over and over. Rather, do several on the first side before you begin again and this will assist you in avoiding memorization.

If you have more than one cassette close to the speed range you are copying, practice some from each tape each day. I find students tend to only work from one tape before they begin to phase in the next one in their series.

Another comment I hear often from students that are just beginning is about their lack of familiarity with the terminology relating to rigs and antennas when copying tests. I remind them to copy letter by letter because the best way to have a complete answer is good code copy. It can, however, be helpful to be familiar with common rigs and antennas.

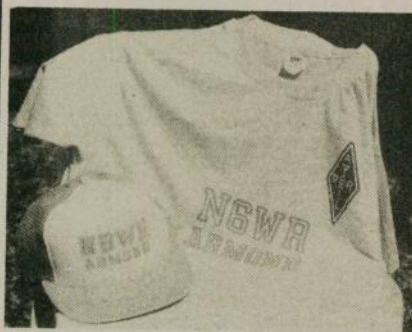
I find that the more a student knows about all aspects of the test, the more comfortable he/she is while testing. Many times answers are left blank on a test and the student will say, "I didn't write it down because I've

never heard of that city or that rig or antenna," etc. Always write the material you have copied into the answer blank! An example might be the antenna "Quagi." Students tend to change that to the word "Quad" because they aren't familiar with the word "Quagi," even though their copy does not support the change.

Below is a copy of the handout I give students to help them become familiar with different antennas and rigs.

ANTENNAS	RECEIVERS
QUAD	ATLAS 210
CUBICAL QUAD	COLLINS 7583, 75A4
VERTICAL	DLAKE 2B, 2C
RHOMBIC	DUAL CONVERSION
GROUND PLANE	DOUBLE CONVERSION
INVERTED VEE	DUAL DIVERSITY
TRAP DOUBLET	HOMEBREW
#5 ELE BEAM	HEATHKIT SB202, SB301
#2 ELE YAGI	HQ100, HQ101
#3 WIRE DIPOLE	HAMMRLUND
LONG WIRE	HALLICRAFTERS
WILSON	ICOM
QUAGI	JOHNSON
DELTA LOOP	KENWOOD
WINDOM	MILLEN
MOWBANGER	NATIONAL
TRIBANDER	RCA
HUSTLER	SUPERMET
HYGAIN	SWAN 350
METZ	TEMETC
DIPOLE	TAESC
FOLDED DIPOLE	antennas cont.
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Matching cap printed with your call and name has foam front and mesh back, is adjustable for size, and costs \$5.50.

High quality golf shirts available, printed one side \$14, both sides \$15.

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Pomona, CA 91768

(California residents add 6% sales tax.)

It is helpful to understand that an antenna or rig can be given as a brand name, a general type, a name and model number, or even as just a model number on different exams. It is also helpful to know terminology such as there are "element" beams and Yagis, but there are "wire" dipoles. OK, keep practicing and we'll see you in February!

Here at Radio School we have sample exam tapes at 5, 13 and 20 wpm. There are also random tapes at 5-7, 13-15 and 20-22 wpm, as well as many speed builders. Single tapes are \$9.95 each plus \$1 for P&H.

If you know someone who would like to become a ham, we have a new "21-Day Novice Course" that includes a text, rebate certificates on equipment, two 90-minute code cassettes for learning the code and much literature. This package is \$19.95 plus \$2.50 for P&H. These items can be ordered directly from me: Loraine McCarthy, N6CIO, Code Instructor, 315 1/2 Ruby, Balboa Island, CA 92662.

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ALABAMA

Birmingham Amateur Radio Club, Inc. (BARC)
Meets at the American Red Cross Building
2225 3rd Ave. North in downtown Birmingham, Alabama
1st and 3rd Thursdays/monthly at 7:30 p.m.
For info call Chuck Conkell, N4MLN, (205) 833-9555

ALASKA

Arctic Amateur Radio Club
Geophysical Institute West Ridge U of A
PO Box 81389
College, AK 99708
1st Friday/monthly - 7:30 p.m.

ARIZONA

Tucson Repeater Association
P.O. Box 40371, Tucson, AZ 85717-0371
2nd Sat./monthly — 7:30 p.m., Pima Co.
Communications Bldg., 2145 E. Ajo. Net Thurs. 7:30 p.m.
146.28/88 (146.22/82, 147.68/08, 147.70/10-PKT)

CALIFORNIA

Amador County Amateur Radio Club
P.O. Box 1094, Pine Grove, CA 95665, Pioneer Elementary
School, Pioneer, CA • 1st Thurs/monthly 7:30 p.m.
WA6WIY Rptr. — 146.835, 146.235.
Net Tues. 7:30 p.m.

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

Citrus Belt Amateur Radio Club
777 East Rialto Ave.
San Bernardino, Calif.
P.O. Box 3788, Zip-92413
Meets: first Friday/monthly—7 p.m.

Coachella Valley Amateur Radio Club (CVARC)
Columbia Savings and Loan Association
Highway 111 and Highway 74
Palm Desert, CA 92260
1st Monday/monthly 7:30 p.m.

Contra Costa Communications Club WD6EZC/R
PO. Box 661, San Pablo, CA 94806
Meets 2nd Sunday at 9:00 a.m.
Hickory Post Restaurant/Lucky Lanes
For info call Carl KA6OLK (415) 237-2621

Gabilan Amateur Radio Club
South Valley J.H.S.
385 IOOF Ave. • Gilroy, CA 95020
Meets: 2nd Thursday/monthly — 7:30 p.m.
Talk-in 145.47-

Golden Empire Amateur Radio Society (VEC)
P.O. Box 508 • Chico, CA 95927
Club call W6RHC — Repeater 146.25/85
Meets at Esplanade House, 1528 Esplanade
Room 101, 3rd Friday/monthly — 8:00 p.m.

The Hayward Radio Club, Inc.
Fire Station #6 — 1401 West Winton Ave.,
Hayward, CA. Classroom in back of station.
Meets: 3rd Friday/monthly — 7:30 p.m.
For info contact Mrs. Elfy Griffiths N6DOC

Hilltop Amateur Mastertie System (HAMS)
Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza,
12924 Washington Blvd., Mar Vista, CA.
Meets 3rd Mon./monthly at Bicycle Shop Cafe,
12217 W. Wilshire Blvd., W. LA. Info, N6FD 213/823-0767

Kern River Valley Amateur Radio Club
P.O. Box 1902 • Lake Isabella, CA 93240. Meets 4th
Sat./monthly at 4 p.m. (Pot Luck). Veteran's Hall, Lake
Isabella WA6UYW Reprts.—146.085/146.685 224.22/Down
1.6 WB6ODZ Reprtr.—224.58 Down 1.6. Low-Level

Livermore Amateur Radio Klub (LARK)
St. Bartholomew's Episcopal Church
Meets: 3rd Saturday/monthly — 9:30 a.m.
Net Mondays 7:00 p.m. 147.12 +
For info call WD6J (415) 829-5229

Marin Amateur Radio Club (MARC) W6SG
Box 1231, San Rafael, CA 94901. Meets 1st Fri./8 p.m.;
MARC Clubhouse Bldg. 549, HAFB, Novato, CA (415) 883
9789 (Summer exceptions; contact Pete N6IYU, 924-1578)
Sunday AM Club at Red Cross, San Rafael

North Hills Radio Club
PO. Box 41635, Sacramento, CA 95841
3rd Tuesday/monthly — 7:30 p.m., Carmichael Elks Lodge
5631 Cypress Ave. • Carmichael, CA
Net 145.19 Thur. at 8:00 p.m.

Radio Amateur Mobile Society
Meets: 2nd Tuesday/monthly — 7:30 p.m.
Carmichael Elks Bldg.
Cypress and Hackberry, Carmichael, CA
Net Saturday a.m. 224.84 8:30/146.79 9:00

River City A.R.C.S.
Meets: 1st Tuesday/monthly — 7 p.m.
SMUD Building, Room A
Elkhorn and Don Julio, Sacramento, CA
For info: (916) 483-3293

Sacramento Amateur Radio Club, Inc.
Contact: Bob Lyman, K16FT, (916) 726-2694
Meets Sacramento Blood Bank
32nd St. & Stockton Blvd., Sacramento, CA
2nd Wednesday/monthly-7 p.m.

Sacramento "Old Timers" Ham Radio Brkfst Club
Meets 2nd Wednesday/monthly — 8 a.m.
Carrows Restaurant near Watt Ave. and Hwy 80 exit
For info contact Paul Wolf, W6RLP (916) 331-1830

San Fernando Valley ARC Inc. (W6SD)
Meets 3rd Friday/monthly — 7:30 p.m. • Red Cross
Bldg. 14717 Sherman Way, Van Nuys, CA 91407. Exams
8 a.m. 1st Sat./monthly • Pre-registration via P.O. Box
3151, Van Nuys, CA 91407

San Gabriel Valley ARC
Bowling Green Clubhouse
405 S. Santa Anita Ave. • Arcadia, CA 91006
Meets: 1st Tuesday/monthly — 7:30 p.m., except Dec.
W6QFK — Repeater 147.165/765

San Mateo Radio Club
Beresford Park Recreation Center
28th Ave. and Alameda de las Pulgas
San Mateo, CA 94403
3rd Friday/monthly — 7:30 p.m.

Santa Clara County Amateur Radio Assoc. W6WU
P.O. Box 6 • San Jose, CA 95103. W6UU 146.385 +
Meets: Santa Clara County Service Center
1555 Berger Dr., Building 2 Auditorium
2nd Monday/monthly — 7:30 p.m.

Santa Clara Valley Repeater Society (SCVRS)
P.O. Box 3085 • Sunnyvale, CA 95087
(408) 247-2877. 146.76(-600 KHz),
224.26 (-1.6 MHz), 444.60 (+5 MHz). 2 meter/220 net
Mon. 9 p.m. • Mtgs.—3rd Fridays.

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

Sierra Foothills Amateur Radio Club
P.O. Box 3262 • Auburn, CA 95604
Office of Education Bldg., 360 Nevada St. Auburn, CA
Meets: 2nd Friday/monthly — 7:30 p.m. Nets: Tues.
7:30 p.m. 28.443 MHz. Thurs. 7:30 p.m. Rptr. 145.43/223.86

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

Sonoma County Radio Amateurs, Inc.
P.O. Box 116 • Santa Rosa, CA 95402
Meets: 1st Wednesday/monthly 7:30 p.m.
Repeater frequency: 146.13/73
Contact person: Hank, W6DTV, 823-7885

Southern Calif. Amateur Transmitting Society (SCATS)
P.O. Box 1770 • Covina, CA 91722
Meets: Cortez School
2226 E. Rio Verde Dr. • West Covina, CA 91791
1st Monday/monthly — 7 p.m. (coffee 6:30 p.m.)

Southern California Six Meter Club
P.O. Box 448, Cypress, CA 90630
USB Net Tue., 8:00 p.m., 50.150
FM Rpt. Net Thur., 8:00 p.m., 52.28/88
FM Smlpx Net Thur., 9:00 p.m., 50.300

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

Stockton-Delta Amateur Radio Club, Inc.
U. of the Pacific, Rm 122
Kensington & Mendocino
2nd Wed. monthly, 7:30 P.M.
Rptr. 147.165/765 Net Wed. 8:00 P.M.

Tehama County Amateur Radio Club
13620 Trinity Ave. • Red Bluff, CA 96080
Meets: 1st Friday — 7:00 p.m.
Lincoln Street School
Net Wednesday 8:00 p.m. 147.705 repeater

Western Amateur Radio Assoc.
Cerritos Park East
166th St. and Carmenita Ave.
Cerritos, CA.
1st Tuesday/monthly 7:00 p.m. - 145.400

Yucaipa Valley Amateur Radio Club (YVARC)
Gibraltar Saving's Community Room
34880 Yucaipa Blvd., Yucaipa, CA 92399
Pres: Fred Schmidt KG6QN (714) 794-1244
Meets: 3rd Monday/monthly — 7:30 p.m.

FLORIDA

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

Platinum Coast Amateur Radio Society
1150 S. Hickory St., P.O. Box 1004
Melbourne, FL 32902-1004
Meets: 2nd Monday/monthly at Melbourne Red Cross
Talk-in on 146.25/85 or 146.01/61 rptr.

Sarasota Amateur Radio Ass'n, Inc.
Meets: 3rd Tues./monthly — 8 p.m. on the 6th floor (board
room) of the County Admin. Bldg. corner of 301 & Ringling
Blvd. Club Rptr. W4IE, freq. 146.91/31, open to all. Phone
patch *Up #Down Welcome

South Brevard Amateur Radio Club
P.O. Box 2205 • Melbourne, FL 32902
Meets 1st Tuesday/monthly — 7 p.m.
Melbourne Library, 2275 S. Babcock St.
Melbourne, FL

HAWAII

Big Island Amateur Radio Club
PO Box 1938 • Hilo, HI 96721-1938
Meets: 2nd Tuesday/monthly - 7:30 p.m.
Helco Auditorium, 1200 Kilauea, Hilo
Call in: 146.88(-) or 146.76(-)

ILLINOIS

Bolingbrook Amateur Radio Society
P.O. Box 1429
Bolingbrook, IL 60439-7429
(312) 759-4747 • Call in 147.93/33
Meets: 3rd Monday/monthly — 7:30 p.m.

Chicago Suburban Radio Association (CSRA)
P.O. Box 88, Lyons, IL 60534
Meets 2nd Wed./monthly — 8 p.m. Community Rm.
Clyde Federal Savings & Loan Association
7222 W. Cermak Rd. • North Riverside, IL

Dupage Amateur Radio Club W9DUP
Mid-America Savings and Loan
55th & Holmes (55th St. near RT 83)
Clarendon Hills, IL • 4th Monday/monthly — 7:30 p.m.
Club repeater 145.250 — 600 KHZ

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

North Shore Radio Club
Karger Rec. Center—1850 Green Bay • Highland Park, IL
2nd Monday/monthly — 7:30 p.m.
For info call (312) 945-0356
WB9FRM Repeater 147.945-600, PL 1B

Six Meter Club of Chicago - K9ONA
Rptrs. 146.37/146.97 448.300/443.300
Info net - Tues. 9:00 p.m. 146.37/97
Annual Hamfest 2nd Sunday in June
Santa Fe Park, Willow Springs, IL.

INDIANA

Fort Wayne Radio Club
James Wolf, KR9U
P.O. Box 15127 • Fort Wayne, IN 46885
The Salem Church
Meets: 3rd Friday/monthly — 7:30 p.m.

Northeastern Indiana Amateur Radio Club
P.O. Box 745, Auburn Indiana 46706
Meets: 2nd Tuesday/monthly — 7:00 p.m. at members homes
Daily traffic net at 2300Z
on 147.96/36 MHz, the WB9VDK repeater

MARYLAND

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

MICHIGAN

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

South Eastern Michigan A.R.A.
Meets: 1st Fri./monthly 7:30 p.m. K8FC Rptr. 147.70/10
Grosse Pointe North High School
Building C, Cafeteria Commons
For info contact: AK8I (313) 372-1252

MISSOURI

St. Charles Amateur Radio Club, Inc. (SCARC)
St. Peters Civic Center, St. Peters, MO
I-70 and Salt Lick Road
Meets: 4th Tuesday/monthly—7:30 p.m.
WB0HSI Repeater 07/67

Heart of America Radio Club
211 W. Armour
Kansas City, MO
Meets: 3rd Tuesday — 7:30 p.m.

NEVADA

Frontier Amateur Radio Society (FARS)
Meets: 1st Friday at the Fly-N-Chef at 7 p.m.
Scenic Airlines Terminal, McCarran Airport,
Las Vegas, NV • Net Mondays 7:30 p.m. 145.39
Info: Bob Herrell, WB5PTO, 641-6682

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG
P.O. Box 911, Dover NH 03820
(603) 742-0130/755-2600
2nd Sunday/monthly — 7:00 p.m.
Dover Dist. Court. Talk-in 147.57

NEW JERSEY

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

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

NEW YORK

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

Hall of Science Amateur Radio Club, Inc.
P.O. Box 131, Jamacia, NY 11415 — HOSARC — 2nd Tuesday/
monthly — Hall of Science Building. 47-01 111 St., Flushing
Meadow Park at 7:30 p.m. The tristates' only 3-band linked
rptr. system 144.300 S/223.600 — /445.225 —

Radio Club of Junior High School 22 N.Y.C., Inc.
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English thru Ham Radio at (516) 674-4072, 24 hrs.

Staten Island Amateur Radio Assn. (SIARA)
P.O. Box 495, Staten Island, NY 10314-0020
Meets 3rd Friday/monthly — 8:00 p.m.
Rm. B-201, College of Staten Island, Sunnyside
Club Repeater — W2CWW/R — 440.325/445.325

Westchester Amateur Radio Assoc. (WARA)
Scarsdale Village Hall
Scarsdale, New York
Meets: 1st Wednesday/monthly — 8:00 p.m.
For info call B. Dubbs, Pres. (WA2FSR)(914) 725-1191

NORTH CAROLINA

Raleigh Amateur Radio Society, Inc. (RARS)
P.O. Box 17124 • Raleigh, NC 27619
Meets: 1st Wed./monthly, 7:30 p.m. • First Presb. Church
Club net daily, 8 p.m. on RARS 04/64, W4DW
Annual Hamfest, 2nd Sunday in April

OHIO

Amateur Radio Fellowship, Inc. (ARF)
N8HUN, Linda Delugach, Secretary
P.O. Box 2486 • Streetsboro, OH 44241
Meets: 1st Sat./monthly at Kent Wally Waffle
KA8PHO repeater 147.675/075

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

PENNSYLVANIA

Mercer County Amateur Radio Club — W3LIF
P.O. Box 996 Sharon, PA 16146
Meets: 4th Tuesday/monthly at 7:30 p.m.
at Shenango Valley Medical Center — Farrell, PA
Net — Thursdays 8:45 p.m. on 147.75/15 W3LIF/R

Penn Wireless Assoc. Inc.
Falls Twp. Municipal Bldg.
Trenton Road
Fallsington, PA 19054
4th Monday/monthly — 8:00 p.m.

Warminster Amateur Radio Club
P.O. Box 113, Warminster, PA 18974
Meets: 1st Wednesday/monthly — 8:00 p.m.
at St. Johns Lutheran Church, Hatboro, PA
Net Wednesdays — 8:30, 147.09/69

UTAH

Ogden Amateur Radio Club
P.O. Box 3353
Ogden, Utah 84409
Meets: 3rd Wed./monthly—7:00 p.m.
at the Red Cross Bld., 20th & Washington

VIRGINIA

Southern Peninsula Amateur Radio Klub (SPARK)
Meets: 1st and 3rd Tuesdays
Salvation Army Community Bldg. • Hampton, VA
Operates 146/13 147/73 Repeater
For info call 480-2346 or 851-5573

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

WASHINGTON

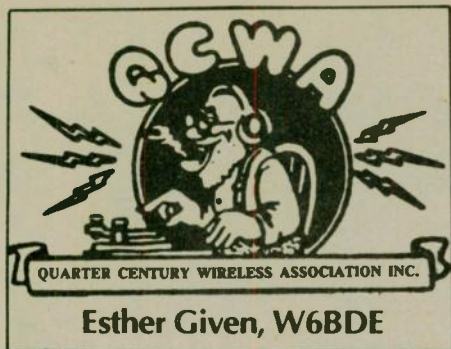
Mike & Key ARC K7LED
Good Neighbor Center
305 So. 43rd Street
Renton, WA 98055
Meets monthly on 3rd Sat. - 10 a.m.

WEST VIRGINIA

Jackson County Amateur Radio Club, Inc.
D. Geneal Bailey, NK8P, Sec.-Treas.
113 Winters Dr., Ripley, WV 25271
First National Bank of Ripley
Meets: 1st Thursday/monthly - 7:30 p.m.

The Kanawha Amateur Radio Club
P.O. Box 1694 • Charleston, WV 25326
Meets: 1st Friday/monthly-7 p.m.
South Charleston City Hall annex
Repeaters 6.82 and 6.88

For information on how to get your club listed in "Visit Your Radio Club," plus receive many other benefits, write to Jennifer Kinugawa, KB6TAA, Club Liaison, Worldradio, 2120-28th Street, Sacramento, CA 95818.



Two vacancies on the QCWA Board of Directors have been filled recently.

Director Hugh Winter, W5HD, has been named Vice President to fill the vacancy created by the regrettable resignation of Ethel Smith, K4LMB. Winter's term of office is for two years.

Elbridge Charlton, W5MD, has been appointed to the Board of Directors replacing Wade Holland, W4AZT, who became a Silent Key in August. Charlton who was high runner-up in the recent QCWA election will complete Holland's term which expires in 1988.

QCWA's constitution and by-laws provide that vacancies occurring among the officers or directors during their tenure of office shall be filled for the unexpired term by a majority vote of the Board of Directors. The vacancy on the Board of Directors resulting from Winter's appointment as vice president will be filled and announced shortly.

A copy of *The QCWA News*, Volume 21, #4 of December 1972 recently passed into the hands of this writer. That issue celebrating QCWA's 25th anniversary, contained an article written by charter member, Uda Ross, W2UD/OA4J, concerning the origin of QCWA and included a thumbnail sketch on six of its founders. Fifteen years later as QCWA's 40th anniversary approaches, excerpts from this article make interesting reading:

"1947 found the ham bands burgeoning under the vast influx of new blood from the hordes of ex-service men who had gotten a taste of radio during the late hostilities. The additional drain on the three letter call list had exhausted it and new prefixes had to be coined to take up the overflow.

"By then, the possession of a two letter call automatically placed one among the Elite, a sort of 'first family' of radio which entitled one to due respect as a pioneer just behind Hertz and Marconi. Picture six such ancients, all two-letter men who by extraordinary coincidence ran into one another on the air one night in

November of that year on the 10M band, then in its heyday."

Participants in that early QSO were: John Di Blasi, "W2FX, known to all second district hams since he managed the radio department at Mesco on Park Place, one of the early hang-outs"; Dr. E.A. Cyriax, "W2DI, famous from Spark Days for his 500 cycle note"; John Gioe, "W2FD over in Brooklyn where the tree grew."; E. S. Crane, "W2EF who was Fire Chief or something equally authoritative in Hempstead"; Irving Groves, "W2DX then residing over the frontier in Jersey" and Uda Ross, W2UD/OA4J, a Westrex sound engineer and Radio Editor for the *New York Sun*.

This three hour QSO between the six veteran hams who, in 1947 had each been licensed 25 or more years, accomplished much more than an evening of tale swapping.

Ross states, "The seed of our present organization was planted. Before the final "30" sign off signal, a date was set for the following month for a general meeting and dinner."

"The place selected was the Fraunces Tavern at the foot of Pearl Street, the same inn where General Washington bade farewell to his staff at the end of the Revolutionary War." (Some charter members recall the meeting place was changed to Pappa's Restaurant.) "The turnout that Fri-

day night in December was beyond all expectations."

The article notes that following election of officers, DiBlasi, W2FX, presided ably at that first meeting where much discussion was carried on concerning establishing the organization, setting goals, membership requirements and selecting a name; the latter creating a major point of disagreement on whether to use the word "Radio" or "Wireless" in the title. The upshoot was a decision that "Wireless" was more in keeping with original terminology and "sounded more romantic."

During the meeting Otto Eppers, "W2EA, Cartoonist par excellence, hastily pulled out a fountain pen and drew on the tablecloth a caricature depicting an old greybeard tapping a telegraph key. It has remained our emblem. The labor pains then ended and the Quarter Century Wireless Association closed its first meeting."

W2UR/OA4J, the charter member quoted in this article, is now a Silent Key. QCWA applauds his knack for recording QCWA history.

Editor's note: Esther has been presented the BAYLARC Award at the PACIFICON in San Jose, California, October 3. She is the very first person to receive this award. Congratulations! □

10-15-20 METER
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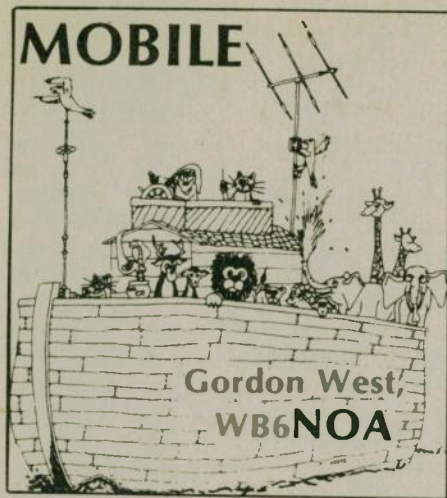
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10M mobile/portable/marine

Have you tried the excitement of running 10M mobile and portable? If you have, you probably enjoyed most the pleasant absence of noise — no electrical noise, no engine noise, no atmospheric noise, and no power line noise. When signals magically appear on 10M, they are usually well above your receiver's white noise, and the contact from your mobile or portable station will be loud and clear.

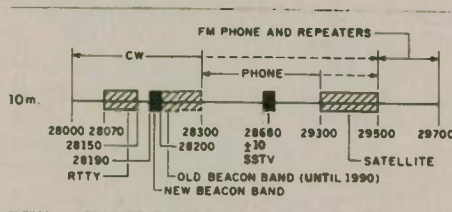
Because 10M is at the top end of the high frequency band, man-made and atmospheric noise is almost absent. Yet 10M is still low enough in the radio spectrum to be regularly affected by ionospheric skip. Summertime E-skip is a regular occurrence, and winter and spring long-haul F-skip is now coming back in strong as we head back up to solar cycle 22. You can just about always count on some sort of a daily band opening on 10.

Now that Novice and Technician Class operators are allowed voice privileges on 10M, the activity on this band has skyrocketed.

Most computer activity takes place

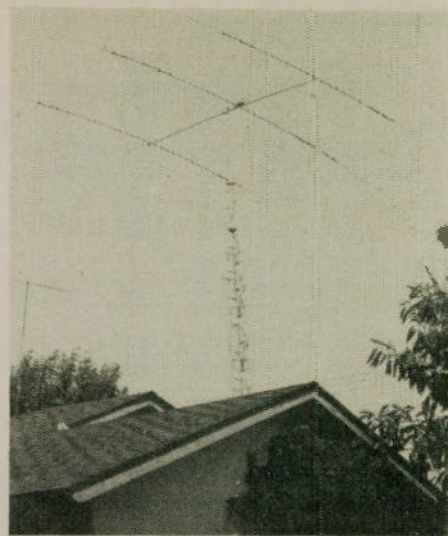
from 28.100 MHz to 28.150 MHz. It's easy to tie in some of the new LCD portable computer set-ups to your mobile or portable transceiver. Smart TNC interface boxes make this job easy.

CW is found from 28.150 MHz to 28.2 MHz. 28.200 to 28.300 MHz may be monitored for worldwide Amateur Radio beacon reception. There are more than 100 worldwide beacons sending their call signs in CW to test propagation. When you begin to hear the faint sounds of CW coming in between 28.200 MHz and 28.300 MHz, chances are the band is really going to open *big*. (For a worldwide list of 10M beacons on the air 24 hours a day, send an SASE to Gordon West, 2414 College Dr., Costa Mesa, CA 92626, marked "10M Beacons".)



28.300 to 28.500 MHz is where the voice action is. Novice and Technician Class operators have flocked to the band and have created some real excitement. The mode is upper sideband, and signal levels are usually quite strong when the band is open. 29.6 MHz is the center of 10M FM activity.

For portable and mobile operation, you may wish to select one of the new mono band 10M transceivers. Tokyo Hy Power has a new unit, the HT-110, and this unit may soon appear private-



Author's 10-15-20-40M beam

labeled by several other domestic manufacturers.

The RF Parts Company (San Marcos, California) offers mobile and portable operators the compact "Ranger" AR-3300 10M transceiver. The set is just slightly larger than a CB radio, and offers some real excitement on 10M single sideband.

If you have an old single sideband CB around, you can modify that for 10M, too. Write CBC International, P.O. Box 31500X, Phoenix, AZ 85046 for their \$2, 16-page catalog on CB modifications. Remember, Novice and Technician Class operators are not allowed to operate double sideband AM on 10M.

Antenna considerations for 10M mobile and portable operation are small! A 1/2-wave 10M dipole is just 16' long, and is quite effective just 15'

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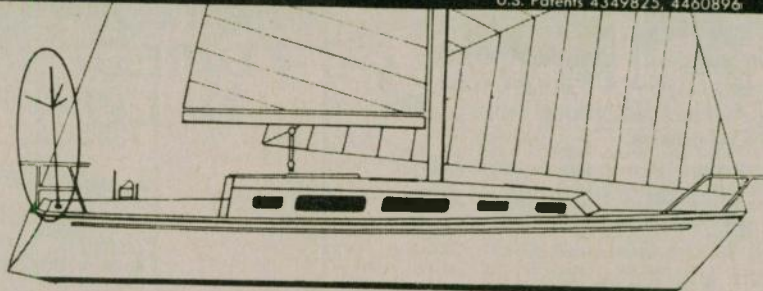
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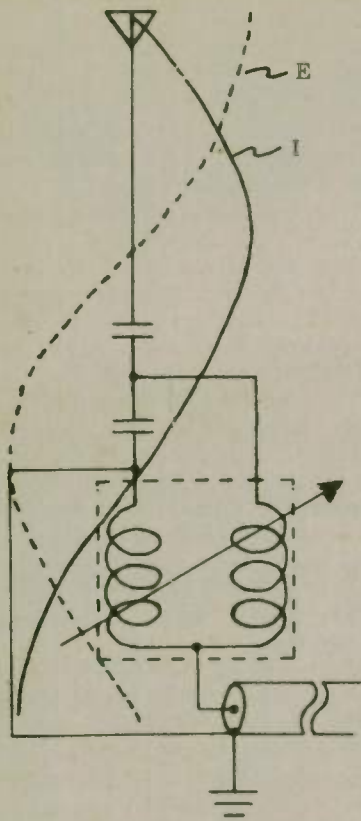
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Voltage and current distribution on the Antron 10M base antenna

off the ground. 1/4-wave mobile antennas for 10M are only 8' long, and they can use just about anything metal beneath them as a great ground plane.

CB antennas are easy to convert to 10M. In fact, many CB antennas work quite nicely without any retuning at all. A company called Signal Engineer-

ing, Mountain View, California, offers some tremendously large arrays for either 27 or 28 MHz operation. They mostly offer giant quad antennas with as many as six elements. This would really bring in the DX.

10M base antennas that offer omnidirectional range are made of fiberglass and are 1/2-wave in design, vertically polarized. The Consumer Products Safety Commission outlawed metal ground plane CB antennas years ago, so manufacturers of CB or 10M vertical antennas have all gone fiberglass for omnidirectional coverage. One of the nicest fiberglass CB antennas that I have tested is the relatively new model from Antron, P.O. Box 2744, Youngstown, Ohio 44507. It's light as a feather, and sets up quickly for portable or mobile marine operation. It's 18' tall and separates in the middle.

For mobile operation, a 96" whip works quite nicely on 10. You can cut

off about 3" from the top of any CB antenna, and it will also work quite nicely at 10. Try and mount the antenna in the center of your roof for maximum results. Putting the antenna too low on your vehicle or boat will cause tremendous signal absorption.

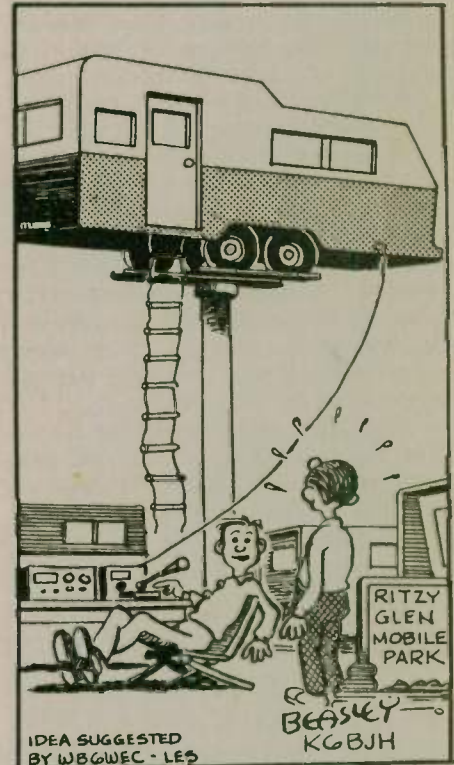
Once you have your portable or mobile 10M antenna in place, tune around 28400 kHz for single sideband activity. Try some different combinations of antennas to find out what works best for your particular installation.

Don't be surprised if you think your set isn't working when you hear almost nothing on 10 but noise. If the band is not open (such as in the middle of the night), you'll hear probably nothing but sweet silence. But get ready the next day — when 10 opens up, signals will come in loud and clear and exceptionally strong to any well-planned mobile or portable station. □

Velcro works well

Velcro, a commercial item that works so much better than the usual "magnetic" or metal hanger for the mike. It does hold like mad, is very easy to use and releases instantly when pulled apart. Glue a small piece of it on your rig and the other part on the back of your mike.

When through with the mike, just press it onto the Velcro on the panel. It is easy and worthwhile. Try it, you'll ... etc. —ARNS Bulletin, Hughes RC □



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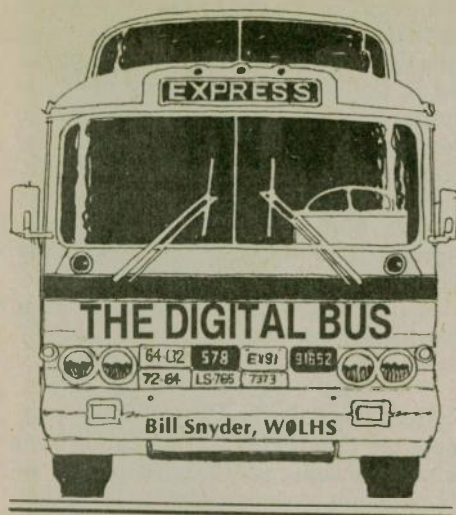
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If you will recall, I previously asked readers with packet capability to "send me a message" via the packet system, and many did. At first I thought the system worked very well. I received messages from all over the United States. I answered most of them by the packet system. I missed returning three or four, because I accidentally erased the incoming messages before I printed them. I apologize for that error.

I was happily gloating that the packet system really worked when I made an interesting discovery: a bunch of my answers were hung up in a forwarding station down the line from me. The messages were piled up in memory because the forwarding files didn't know what to do with them, and the SYSOP was not paying too much attention to the traffic in his BBS (he had a good excuse for his inattention, so I'm not blaming anyone). One message had been stuck for over three weeks. Now a system like that ain't too great!

So, I have been doing some serious thinking about the system in general. I have always had difficulty with the addressing of traffic on the packet

system. Heretofore, I have limited my message origination efforts to RTTY DX-buddy contacts and net house-keeping traffic — no NTS message traffic at all.

Just how does the average packet ham — like me — send a packet message to a ham friend across the country? Where does he go for the information on routing, message form, etc.? The new ARRL Operating Manual (a terrific book!) has some information, but the authors admit there are gaps in the traffic system, and I think I have found a number of them.

How do you aim a message at some ham across the country when all you know is that he is in Slippery Rock, Pennsylvania and you are in Fargo, North Dakota? Years ago, when I was pounding brass in the Region Ten net, it was easy — I just dumped it into another net. But now I must send the message through automated bulletin board systems that have very little human input.

There have been articles in packet publications about the use of postal ZIP codes and telephone area codes for routing. Because the postal code number is available in the Amateur Radio Callbook, it would seem that the ZIP code would be the more desirable

system to use as an address for a ham radio message.

VE4AFO recently relayed a series of notes by Hank Oredson, W0RLI, which deal with the use of ZIP codes in addressing packet traffic. As Hank is the godfather of the BBS network, I pass some of them along.

"Several people have suggested using ZIP codes for routing identifiers. There are many possible ways to do this. In this note I outline two suggestions. These two routing schemes are compatible, and can co-exist on the network at the same time.

"Two features are required in the BBS to support these routing schemes properly: wildcard capability in the route table destinations and "@ BBS" replacement. Either of these systems will help users; they no longer need to know the callsigns of all the BBS in the world. Users need only know the state, province, region or ZIP code of the message destination.

"ZIP code routing for NTS traffic: Use the form "ST nnnnn @ NTSxx" where nnnnn is the destination ZIP code and xx is the state, province or region identifier. In route tables far from "xx" only the path toward "xx" need be known. Once the message reaches "xx" the receiving BBS should remove the "@ BBS" designator. Routing will then continue using the ZIP code.

"ZIP code routing to humans: Use the form 'SP call @ ZIP' or 'SP call @ xx'. These forms are not ideal. What should be used is a form with three address fields. None of the BBS codes support this yet. The ideal form for routing of personal messages is 'SP call @ ZIP #9 xx.' This form would follow the NTS routing scheme as above. Since we do not have a three address scheme, the first and second forms are the best available."

Here are some routings that should work for messages to me using Hank's suggestions:

"ST 58103 @ NTSND", "SP W0LHS @ ND", or "SP W0LHS @ 58103".

In the last example, and with the use of wild cards in the route tables and "@ BBS" replacement tables, only a few identifiers are required to cover the entire USA. If the last message had originated in New England, for example, the BBS in New England need only have "5*" in its route table to start it on its way to me. The others along the way would have to have their tables set to do the best routing for the 58103 area.

All traffic to North Dakota at the moment goes through the VE4AFO gateway on HF. It might not hurt to put in the title of your message to me "Via VE4AFO on HF". That will help

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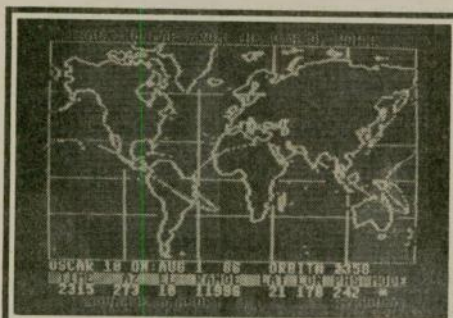
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some BBS operators figure out where ZIP code 58103 is located and how the message should be routed.

This explanation is sort of sketchy — but let's try it and see if it works. There is no tougher area to reach with packet than North Dakota, because our packet population is such that we are more or less isolated — no grid system to make it easy. Send me another test message and address it with my ZIP code. Let's see if we can find more bugs in the system.

Eavesdroppings

THE HOUSE PAYMENT COMES JUST BEFORE HAM RADIO.. THE BEST BRAG TAPE I HAVE SEEN SAYS: TOO MUCH GEAR TO LIST ... THE QSB IS MURDER THIS MORNING ... MY TOWER REALLY HOWLS WHEN THE WIND BLOWS, AND MY ANTENNA CLUNKS ON THE ROOF ... I USE A DUMB TERMINAL AND I AM DUMBER THAN IT ... 73 FROM THE COW SHEDS AND PIG STYS OF BALLADOOLE FARM ... YOUR SIGNALS ARE GOING TO THE DOGS AND I THINK THEY ARE PIT BULLS ... RST 30 OVER DOG BISCUITS ... CU AGAIN ON THE FLIP-FLOP BURP MODE ... MY PRIMARY PURPOSE IN LIFE IS TO HUNT DX ... SORRY MY ENGLISH IS NOT SO HORRIBLY NICE ... IN THIS SHACK WE HAVE TWO COOLING FANS — ONE FOR THE RIG AND THE OTHER FOR THE OPERATOR... I LIVE IN THE LAND OF DX DISAPPOINTMENT — HIGH

LATITUDE AND NO BACK YARD ... I HAVE THE BEAM ON YOU NOW AND YOUR SIGNAL STRENGTH WENT DOWN DRAMATICALLY ... THE COMPUTER HASH HERE SOUNDS LIKE SOMEONE BLOWING HIS NOSE ... I DON'T HOLD WITH TWO THINGS: GROWN MEN PLAYING BASEBALL AND HAMS WORKING DX ON LISTS ... I NEVER LIKED RTTY BECAUSE I DID IT EIGHT HOURS A DAY FOR A LIVING ... I HAVE BEEN A HAM SINCE QWOP XXX I MEAN QOWP ... PLEASE LEAVE ME A MAIL TO CONFIRM THE ACKNOWLEDGEMENT OF THE ACKNOWLEDGEMENT ... I HAVE ONE END OF THE INVERTED VEE TIED TO THE NORTHWEST AND THE OTHER TO A TREE ... I THINK MY ANTENNA PROBLEM IS ON THE TOP OF MY 100' TOWER ... THE RTTY UNIVERSE IS GETTING LARGER ... MY STATION IS ODDS AND ENDS — MORE ODDS THAN ENDS ...

If you dabble in packet like I do, you should be a member of the Tucson Amateur Packet Radio group. In the July issue of the Packet Status Register (a very good newsletter) there is a cure for HF RFI caused by the TNC-2. Dues are \$15 and address is Box 22888, Tucson, AZ 85734.

Thanks to everyone. Bill Snyder, W0LHS, 1514 South 12th St., Fargo, ND 58103. 73 and DIT DIT. □

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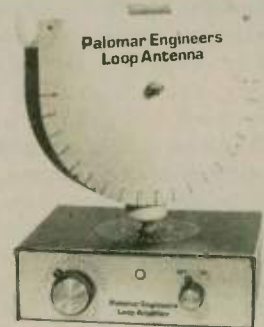


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From time to time I receive information which arrives too late to pass on to you readers before the action takes place. You should time your information concerning DXpeditions, or other activity to arrive at my address at least two months in advance. For instance, activity which is to take place in December, should be in my hands no later than the 5th of October, and preferably the 5th of September to be sure to give it plenty of advance notice.

Band conditions in this area during August and September dropped considerably compared to the same time period last year. One can hardly complain though, considering the terrific summer season we just went through! However, September has had its compensations in the form of F2, and F2 backscatter activity occurring in this

part of the country and into the southeast United States on a few occasions. We have been advising our check-ins on the SMIRK Net (meets Tuesday 9 p.m. on 50.2) that we could see the return of F2 conditions into South America. I am pleased to say that on September 19 at 2120Z, HC5K was in here very weak, and worked only by ND2X, to my knowledge.

The following day, at 2100Z till approximately 2230Z, there was considerably strong F2 backscatter from New Mexico, Oklahoma, Arkansas, and the southeast United States. Numerous stations in these areas were worked here by this mode. In addition, Gus, HC2FG, Darrell, OA8ABT, and HK1BAU were worked on F2 by many of the stations in the states and areas mentioned above. There were also strong FM stations, probably the off shore oil rigs often heard during these openings, within and below the band.

However, this was not the highlight of the activity during September, which admittedly was not lengthy, but very noteworthy. On September 25 at 2016Z, with no apparent indication of F2 activity on 6M being in effect, HD8CQ, Galapagos Islands, with Gustavo at the mike, suddenly showed up on 50.110 with very workable signals.

He was first worked by this conductor, who promptly notified everyone available on this Friday afternoon. About a half dozen in San Antonio worked him, several for new country status, before he faded out after about 15 minutes.

Gus, HC2FG had forewarned us he would be operating from this location and would be leaving a beacon operating on 50.080 MHz when they left the island. Apparently the beacon was in operation but they had it turned off while they were operating on 6M. This is the only time we heard them during the week they were there, although some who worked them on 6 also worked them on the HF bands.

Just as I was about to put this column to bed, I received word that Geoff Lord, XE1GE, had received the HC8SIX Galapagos Island beacon operating on 50.080 on October 1 in the afternoon.

On October 4 we had an F2 opening to Gus, HD8GR-Galapagos Islands at

2120Z-2150Z. He worked a number of stations in San Antonio and in W4 land. Shortly after he was last heard around 2150Z, I started hearing, for the first time, the HC8SIX beacon coming in weakly on 50.080. It was in until 2230Z, just readable above the noise level.

Nothing more in the way of F2 propagated signals have been heard since then. There have been a few isolated Sporadic Es openings occurring but you would have to be johnny-on-the-spot to catch them. It is entirely possible that we will see some more F2 activity as we go through October and into November. The best recommendation I can give is to keep the rig on at all times, and monitor for FM activity in the 48-50 MHz range.

If you heard, or worked, Joe Mancuso, KG6JDX from his Greenland DXpedition in October, please let me know. The same applies to Rick Dorsch, NE8Z, of Galapagos Island fame, who was planning an October 23-31 trip as ZE8Z/NP2, the 26th or 27th, as NE8Z/VP2V, and a day or so later, as NE8Z/J73 or J79.

What does the future of this new Solar Cycle have in store for us? Not much, if you believe the voices of doom and gloom. I have seen predictions that we will only see minimal solar activity this cycle, which should prevent much activity from reaching the 50 MHz band. Other predictions are not so gloomy, claiming we will see solar activity at somewhat lower levels than last cycle, which means we should have some of the effects reach the 50 MHz band — perhaps not on the scale of the last cycle. What is safe to say is that no one knows for sure. We had some of the same voices of doom and gloom predict very low conditions last cycle. It turned out to be the best in the way of worldwide 6M activity.

If you are not on 6M now, this is the time to take action and gear up. Some very good DX was worked as we went up the new cycle last time. We will probably peak out during the early 1990's. Don't miss out on what could be another exciting time of working worldwide DX on 6M! Those of you who already know that you will be operating from exotic lands during the peak of the next cycle should let me know now what countries you will be active from so we can spread the word.

That is all the news that will fit in print! See you on The Magic Band all of a sudden!

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— See page 9

10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

Feedback

Many of you YL/OM Teams have sent me your information for the YL/OM Team list and have asked for a copy of the list. I am still collecting YL/OM Team information, and have not compiled the list as yet. This may be your last chance to get your names in the list, so if you have not sent me your information, now is the time to get it in the mail. A QSL card with all of your info is all that is required: call, name, 10-10 number and address.

While we were away attending the Shreveport 10-10 Information-Packets really built up. There were close to 75 pieces of mail waiting for our return. If your reply was a little late, that was the reason.

A strong signal from the south

When tuning across the 10M band and you hear a strong signal from the south, down Brazil way, it just might be "Papa Tango Two Tango Foxtrot" or just plain PT2TF. Therezinha Feliz Cardoso — Tereza for short — was first licensed in 1972 and received her 10-10 #9806 in 1974.

Tereza, who is 58 years young, and OM Walter, PT2TG, live in Brasilia, Brazil, have two sons that are hams — Walter Jr., PY1WC, and Ricardo, PY1OA, and a third son, Victor. Tereza and Walter have been married 36 years and their three sons have given them nine grandchildren. Dur-

ing the period of 1979-81, Walter was a delegate to the Inter-American Defense Board in Washington D.C.

Contesting, DX hunting, county hunting and a little RTTY are just a few of Tereza's ham activities besides 10-10. She is close to the DX Honor Roll with 299 countries confirmed. She also checks into many of the traffic nets. Tereza has many, many awards from around the world, and she says the more difficult they are the better she likes them.

The equipment at PT2TF consists of an FT-101ZD, TS-130 and a 2-element quad. For her Christmas present last year, OM Walter and the boys lowered her 10-year-old quad and did a complete rework. So now when you hear that strong signal from PT2TF, you will know a little bit more about the lovely lady from Brazil on the microphone.

A family affair

How many complete families are there in Amateur Radio? Meet the Fors family. First there is dad Phil, N9FXQ, 10-10 #41288; mom Sue, N9FWW, 10-10 #42312; son Tom, N9FYM, 10-10 #42329; son Jeff, N9GAZ, 10-10 #42313; and last, but not least, son Dan, N9GDX, 10-10 #42314. All are members of the City of Lights Chapter. What great boosters of Amateur Radio and 10-10! Who can top "The Five Fors"? Send me your family information along with a picture. I wonder if there is a certificate for working all five Fors.

10-10 Winter Phone QSO Party

Mark the weekend of February 6-7, 1988, on your calendar as that is the next 10-10 Phone QSO Party. This is the first 10-10 contest of 1988; with conditions continuing to improve, chances are a lot of new numbers will be just waiting for your "CQ Contest." With all of the new members joining 10-10, here is a chance to set new records for the number of contacts made in a 10-10 contest. More on the contest details next month.

Briefly

If you are not a 10-10 member and would like information about 10-10 and how you can become a 10-10 member, a #10 (business-size) SASE to me at 18130 Bromley St., Tarzana, CA 91356-1701, will get you an information package. If you would like a sample copy of the *10-10 International News*, the official publication of 10-10, drop me a note with a "green stamp" (\$1) and you will receive both the info pack and magazine. No SASE required if you send a green stamp.

Can't remember your 10-10 number or forgot who to send your dues to? I can supply you that information. An SASE with all of your old calls will allow the computer printout to locate your number. Get active on 10; conditions are on the upswing!

With the holidays just around the corner and a new year approaching, it is time once again to wish each and every one of you the most happy and joyous holiday season and a very prosperous and healthy new year.

Best 73 es cu next month.

Comment on "Cannibal" filler, page 55, October issue: His call was 4HELP — Tnx Walt Ottinger, NS8N

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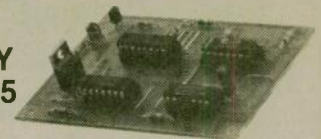
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The following is a letter from one of our most enthusiastic HANDI-HAM students — Gene Dodge, of Benton Harbor, Michigan. He wrote in response to my asking him how he got involved with Amateur Radio. Although he is active on the air, he could use a hand in getting his SWR lower and in maintaining his station, should any hams in the Benton Harbor area be interested in assisting him.

"Don't ever touch a radio chassis like this one, with both of your hands at the same time," Thomas said as he spoke to me in a firm knowledgeable voice. "To do so," he continued, "could make your body into a ground source, and your two hands could conduct a high voltage flow of electricity from this chassis, up one arm and down the other, back to the chassis."

I looked over his shoulder in wonder and he could read the quizzical expression on my face.

"The jolt could kill you!" he said.

Thomas had been a radio man in the Navy. He had a good attitude toward everybody with whom he came in contact. It didn't bother him a bit that I had been born dyslexic. At that time in my life, I could not talk.

Thomas had been hired by my mom and dad to help in the blueberry harvest. He had shown up one day early in the harvest season, asking for work, and my dad had hired him. After work, in his spare time, Thomas loved to do things with radio parts. He had put together a one-tube battery-powered cigar box shortwave radio for my brother, John, a few evenings earlier. This particular evening's project was to be something for me.

He had taken an Arvin tube-type table radio, added a few parts to its chassis underside, and added a hand-wound coil to its top side.

"A radio receiver is basically only a transmitter working in reverse," he said as he worked. He was using a tool to alternate the condensers, and was holding an old Navy signalman's key down as he did so. The household radio, playing in the next room, suddenly picked up a high-pitched squeal, which stopped when Thomas let up on the key. His facial expression reflected a warm, happy grin of satisfaction.

"Gene, this is a wireless code transmitter. I made it for you."

Mom came in wiping her hands on a dish towel. "Thomas, could you look at our family radio? It was just making a noise it's never made before!"

Thomas smiled and began punching out long and short tones on the key, and mom put her hands on her waist and looked over at Thomas sheepishly. I didn't play with my wireless code sender very much and my dad finally

put it away in a box and took the box out to the storage shed and I forgot about it.

When the blueberry season was over, Thomas moved on and I never saw him again. Years later, my dad sold the farm and we settled into a new neighborhood. I became a member of a Boy Scout troop and one of several scouts working on a signaling merit badge.

I had a choice between learning the two-flag semaphore code alphabet, the signal flag Morse system or Morse code tone signaling. I chose the Morse Code tone signaling and so did my neighbor, "Ted," who lived about a half-mile away.

I remembered the wireless code transmitter Thomas had made for me and I dug it out of storage. The tubes all lit up and when I pressed the key, I could use the front panel tuner to get on the station of our broadcast radio two rooms away. Ted couldn't tune in my transmitter at all at his house.

I decided to try and lengthen the antenna on my wireless code transmitter and that made a difference at Ted's house, where my signal came in loud and clear. Ted and I did learn the code alphabet and we practiced sending each other's name and address over the wireless transmitter.



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One day as I was coming home from school, I noticed that we had company. There was a new olive-drab-colored station wagon parked in our driveway. My mother introduced me to a man who went by the initials FCC. He was nice and interested in my wireless code transmitter. He explained that I had been heard 500 miles away and that the clarity of my signal had gone even farther than that. My transmissions had caused interference.

A special document, called an amateur license, was necessary for me to operate such a wireless transmitting device. Since I did not possess one, I had my choice of one of two alternatives — the choice was up to me. I could give him my wireless code transmitter, or my dad and mom could pay a big fine for my having and using it. I gave him the transmitter. He let me keep the old key, and made me promise not to put another transmitter on the air again until I had acquired the proper license necessary to do so. I did get my signaling merit badge.

Now, years later, I have fulfilled my desire to pass the requirements to legally operate a wireless transmitter. I possess a Novice Amateur Radio license. It took just a little inspiration to pursue the hobby of Amateur Radio, and I'm glad I did.

There is nothing to compare with belonging to this terrific group of people. Three fellow amateurs, knowing I could not afford equipment, donated me pieces to make up a station. My thanks to Ed for his HW-16 transceiver, to Eliot for his matching VFO, and to Jim for his wire dipole. After I tried to establish a CW contact unsuccessfully, many times, the Courage Center in Golden Valley, Minnesota, sent me a digital transceiver on loan, to use until I can have my equipment repaired or secure other transmitting equipment.

My thanks to Maureen and the staff at the Center who made this equipment loan to me possible. And my thanks to Roger for restringing my wire dipole system for me.

On Friday, July 17, 1987, I began a CQ at 11 a.m. on 7.116 MHz (40M band). After my third try, I heard my class call letters on the air, and an incredible sensation of success flooded through me. Then I suddenly became confused! My knowledge of the Morse code evaporated. Then some of the alphabet came back to me.

The station was at Naperville, Illinois. I sent my call, name, address and an apology about forgetting some of the letters. The other station said, "I have your name and address." I

was thankful. I gave my call and signed off. I looked down at the antique signalman's key I was using. I was exhilarated. □



Solder splatters: Index your Callbook. Place staggered marking pen stripes for each call area, and number that stripe. —*Dave Guimont, WB6LLO; North Shores ARC, San Diego, CA*

Antenna information

Bill Rinker, W6OAV

Tests by Antenna Specialists show a 2.5dB increase in signal strength when a ¼-wavelength antenna is moved from the trunk lip to the center of the roof. The ½-wavelength shows a 1dB increase when moved from the trunk lip to the center of the roof. So, when the XYL isn't looking, get out the hole punch.

—*The Denver Radio Club, CO* □



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First, I'd like to wish everyone a very merry Christmas and a prosperous New Year. Starting with the January QRP column, I'll be addressing some issues that have been voiced by those of you who have written and called over the last several months. Also, we'll have our first construction project . . . a QRP transmitter of proven design that will knock your socks off with its simplicity! Nice way to start the New Year, don't you think?

Red Reynolds, K5VOL has provided the following list of QRP ARCI contests for the 1988 contesting season. As a general rule, the contest (either QSO party or sprint) will take place on the second full weekend of the month of the contest. This holds true for all contests *except* the Hoot-Owl Sprint. This logical approach will take a lot of the guess work out of trying to figure when the next QRP contest is supposed to take place.

A new addition for the '88 contest year is the single band entry. I have long felt that there are a lot of QRPers out there who aren't competitive on all bands and are forced to compete in an all-band category. They suffer tremendously against highly competitive all-band stations. This new addition definitely puts the fun back into QRP contesting for the smaller station.

In addition to the single band entries, Red has included a series of bonus multipliers for using homebrew equipment. To further impress the importance of using homebrew gear, the Holiday Spirits Homebrew Sprint requires the QRPer to utilize some homebrew equipment. If you enter this contest with commercial QRP gear, your log will be considered as a check-log only!

The definition of "homebrew" includes transmitters, receivers and

transceivers. Accessories like keyers, tuners, SWR meters *DO NOT* qualify as homebrew gear for entry into the contest. I am trying to get a ruling about kit-type equipment like the HW-7, 8, 9 and highly modified commercial gear like Ten-Tec PM and Argonaut series of transceivers. Also, I've asked Red to give us a reading on a rig like an HW-7 that has a completely new front end (like the DeMaw modification from a '74 QST). It is my feeling that a kit-type rig (TX/RX or transceiver) should qualify as homebrew, especially in the light of the QRP ARCI Two-Fer kits that have been packaged and sold at Dayton. More as soon as Red gives me a ruling.

The bonus points in the various QRP contests make or break a winning contest score. By using battery only or a solar/natural power source or

a battery charged via natural power you will be allowed to multiply your total score by either 1.5 or 2 depending upon which method you chose. By reducing your power from 5 watts to under 1 watt, you qualify to multiply your total score by a factor of 10! Homebrew gear for the homebrew sprints and the spring and fall QSO parties will gain from 200 to 500 points per band!

It is the wise contesteer that avails him/herself of the most bonus multipliers. It cost me three places in the Fall '86 QSO Party because I did not use solar/natural power source to charge my battery bank. I had to settle for sixth place overall when I could have had third! The moral is obvious . . . if you have the chance, go for the bonus points!

Here is the '88 QRP ARCI contest calendar:

Month/Date	Zulu time	Contest
Jan 10	2000-2400	Winter Fireside Sprint
Apr 9-10	1200-2400	Spring QSO Party
May 28	0500-0900	Hoot-Owl Sprint
Jun 25-26		ARRL Field Day
Jul 10	2000-2400	Homebrew Sprint (Homebrew gear bonus pts)*
Aug 14	2000-2400	Summer Daze Sprint
Oct 8-9	1200-2400	Fall QSO Party
Dec 11	2000-2400	Holiday Spirits Homebrew Sprint (HB gear req'd)*

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An SASE to the QRP ARCI Contest Chairman, Red Reynolds, K5VOL, 835 Surryse Rd., Lake Zurich, IL 60047 will get you a copy of the current QRP ARCI contest schedule along with a sample log sheet, scoring sheet and summary sheet. If you really get froggy, jump on into the QRP ARCI. Eleven autographed pictures of good old George Washington sent to the QRP ARCI Membership Chairman, Bill Harding, K4AHK, 10923 Carters Oak Way, Burke, VA 22015 will get you a lifetime membership (including a QRP ARCI number, which is *very* useful in contests).

Don't forget the G-QRP-Club's QRP Winter Sports which starts December 26 and continues through the first of the New Year. Good chance to work some European QRP DX. Look for G-QRP-Club stations on 3.560, 7.030, 14.060 and 21.060 during this period. Gud DXing!

Time to "Pull The Big Switch" on 1987 . . . so PLEASE, however you intend on celebrating the Holidays, do it *safely*. I want you back next year!! God Bless ev 73s: Rich K7YHA, 9 Vine St., Shavertown, PA 18708. ☐

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Silent Keys

Bob Jensen, W6VGG

W6 "Very Good Quality" became a Silent Key on September 8, after a long illness, but leaves a large legacy of friendliness and skill.

Bob had the good fortune to be the son of Dr. John Christian Jensen, who was experimenting with radio as early as 1906. As head of the physics department of Nebraska Wesleyan University, the professor built a very early broadcast station operating on CW, transmitting weather and farm information. Young Bob grew up amidst spark gaps and primitive experimental radio gear, learning fast.

When WCAJ became an AM station, airing public service as well as entertaining programs to the Lincoln area, Bob was made Chief Operator. (The station later was sold to Omaha's WOW.) His first official ham license was earned in 1930, treasured ever since through a couple of changes of call signs.

He became a studio engineer for KLZ in Denver, then signed on with

NBC Chicago where he put on the network many a soap opera and nighttime variety shows such as Red Skelton's first.

Moving to Hollywood NBC in 1943, Bob did big-time shows such as Eddie Cantor's and the prestigious Standard Symphony. Come TV, he enjoyed doing Dinah Shore's daily 15-minute show for years along with *This Is Your Life* plus "thousands" of game shows, such as *Hollywood Squares*.

NBC sent him traveling often: two trips on aircraft carriers to televise recovery of Apollo astronauts, World Series games, political conventions and the Western White House Press Corps.

All during these years, he enjoyed tinkering with ham rigs, especially challenged by surplus gear. To him, however, the major benefit of Amateur Radio was the friendships our hobby brings.

With his wife — Lenore, W6NAZ — he was in great demand to show the professional-type slide shows he had made. "Marconi to Hollywood Squares" was particularly popular.

Among survivors are daughter, Cindy Wall, KA7ITT, son Steve Jensen, W6RHM, and grandson Michael Wall, KA7ITR. □

Bruce Portnoy, KB3TN

Bruce Portnoy, KB3TN (formerly KA3BLP) became a Silent Key on August 31 as a result of an auto accident. Bruce was well-known among the contest crowd. He was a member of the Frankford Radio Club and achieved recognition in various contests during his 10 years as an active ham.

Bruce held an Extra class license and was in the process of setting up a contest location in the Pocono Mountains in Pennsylvania.

Any correspondence may be sent to: Portnoy Family, 7156 Oakland St., Philadelphia, PA 19149. — *Tony Musero, K3UKW* □

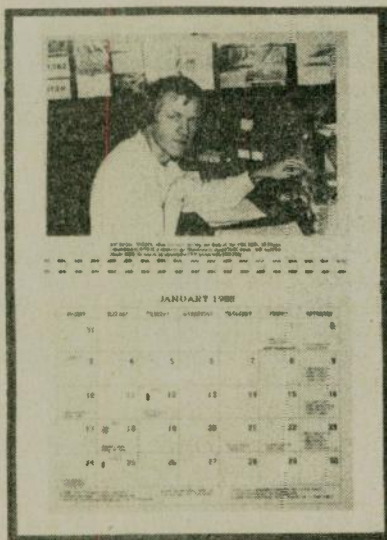
John Fryer, WA1THH

On October 6, 1986 following a lengthy illness, John J. Fryer, WA1THH, became a Silent Key.

The Elite Amateur Radio Society, Inc. — an ARRL-affiliated, non-profit radio club — supports the operation of the WA1USU/R repeater in Lowell, Massachusetts on 145.490/144.890 MHz. The society also continues to host the Nightly Nut Network founded by John.

(turn to next page)

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My shack is colder

Craig Renier, KB3KK

The technical articles in the Amateur Radio magazines are very enjoyable but Amateur Radio is more than the sum of its electronic parts. The human side of this hobby is one of its most appealing characteristics.

My ham shack is very modest by modern-day comparisons. It has an HW-101 transceiver, an antenna tuner and assorted accessories. My apartment is on the second floor with the ham shack located in what was the back bedroom. I use a multi-band mobile antenna that is fastened to the terrace railing.

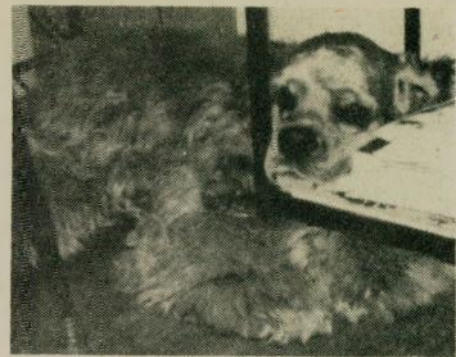
Silent Keys *continued*

Because of the interest generated by John on the Nightly Nut Network, many scanner listeners were inspired to get their Amateur Radio licenses, some of whom are now Extra Class licensees. John was friendly, courteous and helpful to all, and became known as the "Ambassador of Amateur Radio." — *Theresa E. Fryer, WA1USU* □

Whether I make a two-way contact or not is not the most important aspect of the day. Just listening to other hams and what they have been doing to make life enjoyable is also enjoyable for me. Unfortunately, for the last several years I have been disabled but Amateur Radio is one way of keeping in touch with the world even if I just listen.

I am sure that the hams we contact are not aware of all the little idiosyncrasies that every ham shack has. A dog named Crocker shared in my hobby and was the idiosyncrasy in my shack. He would lay down at my feet under the desk while I was operating. He was a cocker spaniel that loved to be touched and stroked, and as a side benefit he kept my feet warm.

Crocker was well aware when a successful contact was in progress. As I would get excited, he would raise his head and share in the feeling of success. My QSL cards were placed on the floor next to the desk, and after each contact I would immediately reach down to fill out a card. Crocker was always curled around my feet so that his nose was right next to the



Crocker in the shack

QSL cards. In order to get a card out, a pat on his head was always gladly given and gladly received.

And now, to the title of this article. Hams are usually good communicators and we share what we know in a caring fashion. Most of the time it is with other amateurs, but not always. My shack is not heated. The air ducts are shut off as this room is not used very often and usually only for short periods of time. Crocker died last December. The warm feet and sharing of each contact and success are now gone.

I will continue in my hobby and enjoy making new friends and contacts on the air, but my ham shack is colder.

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Readers write

Over the past 15 months that *BOB'S CORNER* has been in publication, quite a number of letters have been received. And, unfortunately, few have been answered. I have, from time to time, had a "Readers Write" section in the monthly column, but either there is not enough space to devote to both this and some technical article, or some other reason. Hence few acknowledgements of letters get published. Therefore, in an effort to rectify this, the majority of this column will be devoted to past letters.

Regenerative receiver response

A couple of my columns were devoted to simple regenerative receivers — both straight regenerative and super-regenerative. Most of them attested to the fact that they sure are simple and work reasonably well, all things considered. George Hermann, N9BNH, wrote me several times, indicating how many good memories I had regenerated (pun intended!). He also sent in the modified regenerative detector circuit shown in *Figure 1*.

As George didn't put in all of the component values, I have given it my best shot and have done so. Arnold Timm, KA0TPZ, sent in the basic regenerative detector circuit shown in *Figure 2*. This one is simpler than mine in that no audio stages are used after detection.

Other interesting letters were received about the circuit and its operation. Hopefully, I have acknowledged these people at the end of this column.

Antennas

Many of my articles have featured antennas. The very first article was on a simple two-element, 2M quad. No letters received concerned the technical aspect of the antenna. However, several readers wrote to thank me on designing such a hot performing antenna! Bob Wright, KB4HXD, wrote such a note on a neat space shuttle QSL card.

My all-band dipole column brought responses from several indicating that they have been using them for ages! I guess good designs have a way of

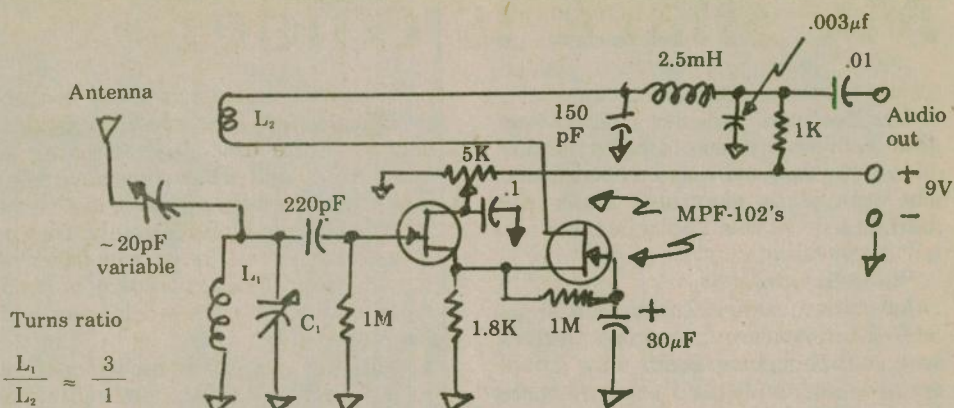


Figure 1 — Modified regenerative detector (submitted by George Hermann, N9BNH)

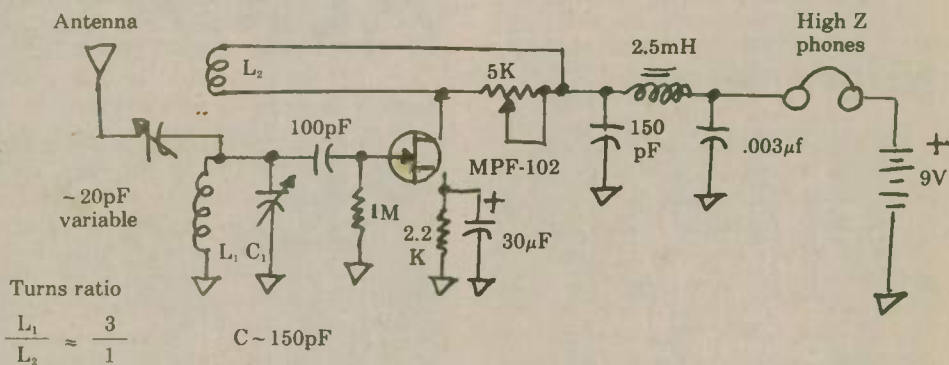


Figure 2 — Regenerative detector (submitted by Arnold Timm, KA0TPZ)

sticking around.

Bob Quenstedt, KA0REJ, sent me a catalog showing me where I could buy a similar antenna! Dr. John Dougherty, W7HWX, took issue with the need for an antenna tuner with this type of antenna (mine still works better with one!). And Charley Spencer, W8PQO, indicated the need for antenna wire sag on the various elements of the antenna. The experimental helical antenna column brought an interesting letter from Dale Meyers, W4BIM, on the techniques of winding such an antenna.

Plug-in coils and other things

Several months ago, I asked the general readership if they had any ideas on modern-day plug-in coils. Many wrote. Some indicated that one could still buy plug-in coil forms from Modern Radio Laboratories. However, I recently learned that MRL's owner passed away and the business is now uncertain.

I had suggested the use of phono plugs and assorted in-line connectors and jacks could be used for plug-in assemblies. The response from the majority of readers was similar, some including AC power plugs. Leonard Kloc, WA9CAH, included octal tube basis for 10, 12 and 14 dram pill bottles for the coil form mounted to the octal base. The forms fit perfectly to the base, according to Leonard.

Another hot subject was how to remove enamel from very fine wires. The majority of the letters received in-

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icated that sandpaper should be used. However, Jim Longthorne, WA6KPW, sent us the spec sheets on a GC Electronics product called STRIP-X. Obviously, it is intended to strip off enamel from wires. Other suggestions were the use of paint removers and thinners, the flame of a match, and assorted ammoniated household products. I vote for the STRIP-X!

Acknowledgements

And now I intend to list call signs and/or names of numerous letters received. Somehow I am sure I will leave someone off, as I am sure there are a few letters which are inadvertently filed in the dog's house or some other area where things seem to end up in mysterious ways. So, if you have recently written to me and don't see your call or name in acknowledgement, don't feel too offended!

Thanks to: WA6KPW, K9GDX, Chuck Graham, WA9CAH, W6PZV, KA2AON, W8VEL, W5WRS, W2FOX, WB9UDV, KA1FAA, W6FGE, W7WX, W2VBR, WA6SCJ, N9BNH, KA0TPZ, KB4HXD, N6IJF, W7HWX, W7DVS, Leo Roberts, W4BIM, KB6OFS and W8PQO. □

Safety tip

Although fingers are considered digits, they are not to be used in place of a digital voltmeter. When checking voltage, always use the proper meter or device for that purpose. We need all the members we have.—*Morongo ARC* □

25 Years a Ham?



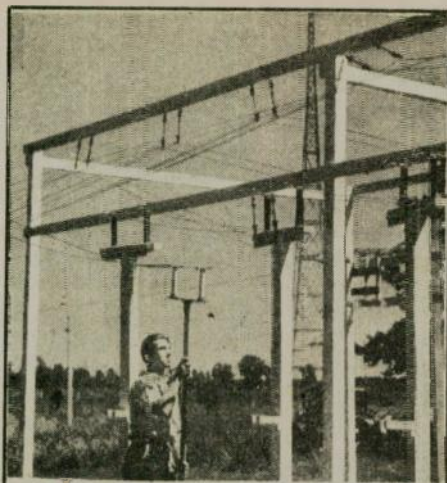
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AERIALS

Kurt N. Sterba

Gain and directivity are *not* the main thing! Before you advocate boiling me in transformer oil, let me explain.

Pattern and directivity are the same thing, but gain has nothing to do with either. And, as we say, the proof of the pudding is in the dB's.

For example, at the VHF-UHF conferences, some of the guys will bring sophisticated test gear from the labs where they work, and your tears begin to flow. The references are set up and you quite proudly hook up that 27-element zanger. Along comes some junior high school kid with a piece of welding rod run through his skateboard and he beats you out! What happen?

You had *tested* your antenna at home and your friend read from his S-meter as you rotated it. That was directivity, not gain.

Gain is only a measurement — in this case, over something else, such as a dipole. Unless you go "A-B" against something else you are using as a reference, there is no gain.

Yes, you can have front-to-back and

front-to-side pattern, and it can be quite impressive. But in the forward direction, a much less ambitious array could have more power radiated for the same amount of power sent into the coax.

Where is the flaw in what we've been led to believe? First, the matching system could be awful, and there have been some commercial antennas that were just that.

Then, you may say, with all those elements that must be the problem too. Elements do not gain make. Boom length is where gain comes from. Then, if the manufacturer wishes to dazzle us in something resembling the horsepower race, he sticks in more elements — usually where they don't belong.

Do not be snowed by elements. And do not be snowed by wild claims. Here is the scoop. If you have a 3-element Yagi and you want to add 3dB, you'd add two more elements, making it a 5-element Yagi. Should you want to pick up another 3dB, you would have to add four more elements. At this point you have a 9-element Yagi. You want to add another 3dB? Add eight more elements! This is, of course, assuming the spacings and element lengths are correct for what you are trying to do.

If you're really interested in seeing reality, you can model antennas in the 420 band. Find a couple of empty acres, take some binoculars and put a field strength meter out as far as you can. Who knows, you may find that the best antenna is a 2-wavelength circular driven element with a quad reflector, a Yagi director, and a ¼-wave vertical for second director. With that, you will have to stay out in the country.

Then we heard from a manufacturer of a shortened antenna taking us to task for saying they were not as good as full-size antennas. Hue and cry went up. (You remember Hue, that was near Phu-Bai.)

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Such an outcry. So I checked with my oracle. I explained the case to him as I found him in his cave at Mount Rose. He pulled out his slide-rule (no kid, he), and as I sat at the feet of the master with rapt attention I heard (his voice echoing in the cave), "Until the laws of physics are repealed," (there was a clap of thunder) "and aperture and capture area are for naught," (lightning flashed) ... I listened for the wisdom ... "a short stick is a short stick!" How deeply profound! He drew on the side of the cave with a rock and explained that as size decreased, so did signal at the other end, and at the same ratio — assuming, at best, that reactance could be balanced out and resistance-matched.

As I prepared to leave, he handed me a piece of folded paper saying, "However, if your manufacturer friend should ever be able to load up a watchband so it radiates as well as a full-size dipole, call this number in Langley, Virginia. He'll never be able to patent it and can't say he invented it, but the U.S. Treasury will pour a lot of money into his hat."

Someday I hope to understand what these mystics mean.

A long letter was received from Jack Lo Monaco, WA1YYK.

Jack finds that some of his antennas (as measured with the Palomar noise bridge) show zero reactance but resistances of from 20 to 35Ω. Jack has a tuner, but would rather go direct as an academic challenge. What should he do, he asks.

Two ways to go. First is the actual physical placement of the antennas.

Height above ground plays a far more important part than most people give it credit for. If at all possible, raise the antennas. Possibly re-positioning them would change things.

When taking readings on the beam, take the readings at various rotating

points and you may see quite a bit of change if you have power or telephone lines going by your backyard. Having the four antennas, which you described, so close to each other can cause interaction. Greater separation may be in order, possibly running them at right angles to each other.

Before I forget, a lot of this may be over-academic as the transmitter itself can vary widely from 50Ω, not only from band to band but within a band itself. In order to determine which direction you really want to go, you may wish to measure the transmitter itself. (This is getting more precise than one out of a thousand even think about.)

For example, tying the sloper off on a support of a different height may make enough difference. (I hope you are using nylon instead of wire for the support.)

You said the Yagi showed 50Ω on 10 and 15, but 25Ω on 20M. I'd leave well enough alone on that one. To my knowledge, no one has ever gotten a triband Yagi to look great on all three bands, (I'll entertain rebuttals). As element spacing makes up part of the impedance picture, the spacing can only be correct for one of the bands; the others will have to be some sort of compromise, and hopefully, the gamma or whatever will bring it close enough. This is why the purists go to the monobanders.

But now we get into something else. Before we can claim any degree of accuracy for these measurements, the instrument either has to be at the feed-point itself, or at the transmitter, where the length of coax must be multiples of a ½-wavelength — verified by the noise bridge — at some specific frequency that the entire system is peaked for. Also, have we verified the 50Ω spot on the noise

bridge? Was the zero accurately calibrated?

Judging from your meticulous pursuits, Jack, I can assume in your case yes; but I mention it as just a little warning to others. I hope this has been of some help. Let us know the results.

On to another point — I wonder how many of you have tried this? On your SWR bridge, swap the leads and see if the readings are the same turned around. If not, you've got some tweaking to do. □

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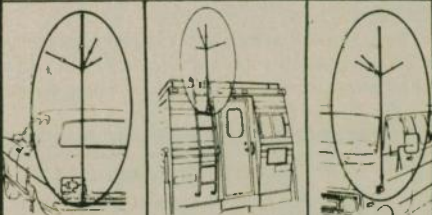
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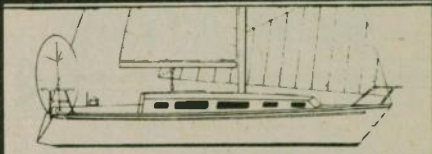
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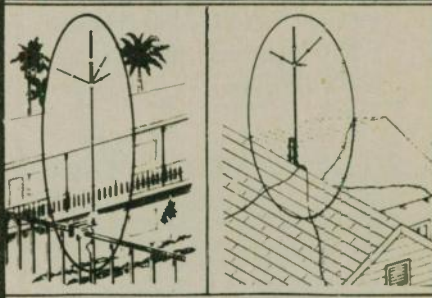
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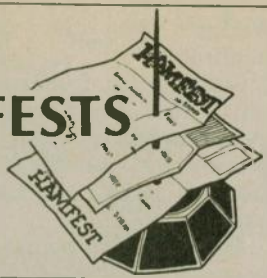
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HAMFESTS



Arizona

You are cordially invited to spend a weekend in Apache Junction, on the weekend of December 5-6, at Superstition Hamfest '87, sponsored by the SUPERSTITION ARC.

The hamfest is located on the rodeo grounds at the northwest corner of Brown Road and Meridian, 1½ miles north of US-60 on the west side of Apache Junction.

There will be free camping on the grounds Friday and Saturday nights (self-contained), with swap and shop opening at 7 a.m. Saturday and closing at 2 p.m. Sunday. Breakfast will be served both days, along with hamburgers and hot dogs throughout the weekend. A test booth with 120VAC and antennas will be available for testing of gear before purchase.

Primary talk-in is 147.12 RPT and 223.5 MHz simplex. Other area repeaters include 146.72, 146.74, 145.41, 146.94, 223.82 and 224.94 MHz.

There is a \$3 admission charge for sellers, or \$1 for nonsellers, which covers both days. For more information contact Superstition

ARC, P.O. Box 1551, Apache Junction, AZ 85217-1551. □

Michigan

The HAZEL PARK ARC will hold its 22nd Annual Swap & Shop on December 6, at the Hazel Park High School, 23400 Hughes; north of 9-Mile, west of Dequinder. General admission \$2 advance, \$3 at the door. Children under 11 years free. Tables \$1 per foot. Plenty of free parking.

Talk-in from the 9-Mile and I-75 area on 146.52 simplex.

For tickets and table reservations, mail to HPARC, P.O. Box 368, Hazel Park, MI 48030. □

Minnesota

The Annual COURAGE CENTER HANDI-HAM Winter Hamfest will be held Saturday, December 5, at the Eagles Club in Faribault. Registration at 9 a.m.

There will be a Handi-Ham equipment auction, dinner at noon and more. Amateur Radio license exams will also be given.

Talk in on 19/79.

For more information contact Don Franz, W6FIT, 1114 Frank Ave., Albert Lea, MN 56007. □

Two 50Ω loads and a coax tee will check your SWR indicator for accuracy at 2:1 —Richard West, KF6KE; North Shores ARC, San Diego, CA

CONTESTS

23rd Annual Pioneer QSO Party

The John D. Burlie Chapter again cordially invites all Telephone Pioneer Amateur Radio operators in the United States and Canada to participate in contacting as many individual members as possible and to reach members in as many different chapters as possible. Members of the United States Telephone Pioneer Association (USTPA) are also cordially invited to participate.

Rules: The QSO party will start at 1900 hours UTC, Saturday, December 5, and will end at 0500 hours UTC, Monday, December 7.

Fifteen "bands" are defined for use in the QSO party. They are:

*1.8: 1.800-1.900 MHz	21.3: 21.25-21.45 MHz
3.5: 3.500 - 3.750	28.0: 28.00 - 28.30
3.9: 3.750 - 4.000	29: 28.3 - 29.7
7.0: 7.000 - 7.150	50: 50.0 - 54.0
7.2: 7.150 - 7.300	144: 144 - 148
14.0: 14.00 - 14.20	220: 220 - 225
14.3: 14.20 - 14.35	UHF: Above 420
21.0: 21.00 - 21.25	

*In accordance with a rules change, contacts on this band are authorized for the entire QSO Party.

Any station representing a different chapter from the contestant, may be contacted on any or all of the 15 bands, for a maximum of 15 pts. per station, with no more than 1 pt. per band. Any station in the same chapter as the contestant may be counted once for a maximum of one point per station — this contact may be on any band.

Phone: Call "CQ Telephone Pioneers". CW and RTTY: Call "CQ TP". Please observe good sportsmanship. Share frequencies with low-power stations. Give way to established nets. Contacts via simplex or repeater are valid.

Suggested phone frequencies (MHz): 1.855-1.895; 3.905-3.985 per rule change; 7.245-7.295; 14.255-14.305, 21.355-21.405; 28.350-28.450 (USB) contacts to/from Novices/Techs; 29.0-29.1; 50.1-54.0; 144.1-148.0; 220.1-220.5; 222.2-222.3 for contacts to/from Novices.

Suggested CW/RTTY frequencies (MHz): CW — 1.800-1.825; 3.555-3.595; 7.030-7.070; 14.055-14.095; 21.055-21.095; 28.055-28.095; 21.1-21.2 and 28.15-28.25 to/from Novices/Techs; 50.0-50.1; 144.0-144.1; 222.1-222.2 for all license classes. Other Novice/Tech. freqs: 3.725; 7.125. RTTY — 3.630; 7.100; 14.100; 21.150.

Scoring: Total score equals contact points times Chapters contacted. Only one multiplier may be taken for each Chapter worked. The maximum multiplier is 115 (all TPA Chapters, plus a maximum of 15 USTPA groups).

Exchange: Contact number and Chapter number. (USTPA: Club or Chapter Name/No.)

Reporting: If possible, return log sheets via your Pioneer Amateur Radio Coordinator. Send logs showing date, time station worked, Chapter number, contact number and your claimed score, postmarked no later than January 15, 1988, to: Ted Phelps, W8TP c/o John D. Burlie Chapter 89, Telephone Pioneers of America, 6200 East Broad St., Columbus, OH 43213. □

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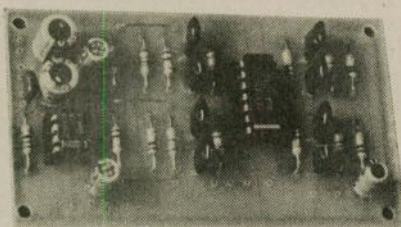
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NEW PRODUCTS

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

New battery packs

Two new battery packs are now available from Centurion International, Inc., Lincoln, Nebraska, for radios from King Radio Corporation.

Centurion Stock #KR0105 is a 9.6V 800 MAH nickel-cadmium rechargeable battery pack. Centurion Stock #AL0514 is a 13.5V 2100 MAH throw-away alkaline pack. Both new battery packs are available immediately.

For information and pricing, contact: Centurion International, Inc., P.O. Box 82846, Lincoln, NE 68501; (800) 228-4563; (in Nebraska, (402) 467-4491). □

Lightning-surge arrestors

Spi-Ro Manufacturing offers a complete line of lightning-surge arrestors that install in the antenna line.

The "High-Tech Arrestors" protect transmitters, transceivers, receivers, base stations, etc. from harmful damage caused by lightning surges, transients, etc.

The units utilize a gas-filled discharge element, and a secondary stage to provide "double protection" to the equipment. The units restore themselves time and time again for repeated use.

The "High-Tech Arrestors" divert unwanted surges (such as lightning) away from



the equipment to a safe ground. Rated up to 2000W for transmitters. Prices start at \$29.95. Available with UHF, BNC and N-type connectors.

Contact: Spi-Ro Manufacturing, Inc., P.O. Box 1538, Hendersonville, NC 28793. □

Technician Class "quick course"

Gordon West Radio School announces the availability of their new Technical Class FCC Element 3A home-study theory course. This course contains two stereo, long-play theory cassettes, plus a fully illustrated textbook and examination test guide book. The new program reflects the recent changes in the Technician Class examination.

The new Gordon West Technician Class theory "quick course" covers only those 283 questions dealing with Technician Class theory. Out of this pool, 25 questions will be selected for the multiple-choice examination for the new Technician Class license. A sample theory test is also included with this course.

"Book publishers were caught by surprise and still have thousands of books left to sell that feature both Technician and General Class questions all mixed together. Our course specifically singles out just the Technician Class questions for those who want to simply upgrade from Novice to Technician," adds West.

For more information on the \$19.95 Technician Class theory course on cassettes and books, as well as information about other Radio School home study training courses, contact Gordon West Radio School, 2414 College Dr., Costa Mesa, CA 92626; (714) 549-5000. □

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Low Band DX-ing software

A new software package, "Low Band DX-ing," has been written for Amateur Radio by John Devoldere, ON4UN, a well-known DXer from Belgium. Originally written for the Apple II c/e, this software has now been converted for Kaypro/CPM, Commodore 128/CPM, Macintosh and MS-Dos formats by Bill Jorden, K7KI. A version for the Commodore C-64 is in the works and will be released in early 1988.

This software package reduces the normally difficult and complex job of antenna, transmission line and impedance calculations to a menu-driven set of questions that the average ham will quickly master. Impedance transformations along a coax feedline, matching networks, impedance calculations, vertical antenna array pattern calculations and measurements, line stretchers and phase

shifters are typical of the first part of the programs.

Other programs which will be of significant aid to the DXer are those which provide exact distance and direction to DX locations by knowing either the longitude, latitude or even the name of a city or country. This is done by using the data base of over 500 locations which includes prefix, city, country, longitude and latitude. In addition, the best time of day to attempt a DX contact and even the best time of year can be easily determined from the sunrise/sunset and grayline calculations.

The grayline calculations use an improved method which accounts for the relatively fast sunrise and sunset at the equator and the slower sunrise and sunset at the polar regions. This improved accuracy is of signifi-

cant benefit to the 160/80M DXer. A set of sunrise and sunset tables can be printed out for any longitude and latitude worldwide.

In all, the 30 menu-driven programs are balanced between helping you to improve your antenna array, to getting a better signal to and from your antenna, and to tell you when the best times are to make contact in a particular area. This set of programs augments the book *Low Band DX-ing* written by ON4UN and is currently being published by the ARRL. This book is available from ARRL.

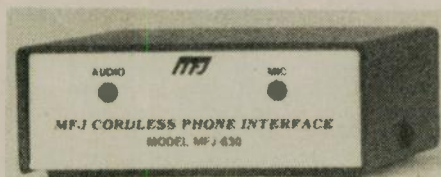
Price for the software for the Macintosh version is \$25. Other formats for the Apple II c/e, Kaypro II, Commodore C-128 and IBM compatibles are \$20. Contact Bill Jorden, K7KI, P.O. Box 36373, Tucson, AZ 85740. □

Cordless phone interface

Wouldn't it be fun to remotely operate your HF transceiver that's in your ham shack from your living room as you relax, watching the evening news? Or how about remotely operating your HF rig while mowing grass, raking leaves or shoveling snow?

MFJ's new cordless phone interface lets you use your cordless phone to remotely operate your rig!

For remote operation, you simply plug the base unit of your cordless phone and the microphone input and speaker output of your transceiver into the MFJ-630 cordless phone interface. Then with your cordless phone you can operate your rig using VOX anywhere within range of your cordless phone.



You can have remote operation for only \$39.95 plus \$4 shipping and handling! If you're not satisfied for any reason, you can return it within 30 days for a full, no-hassle refund (less shipping and handling) if you order the MFJ-630 from MFJ. The MFJ-630 comes with the famous MFJ full one-year unconditional warranty.

For additional information, contact MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762, (800) 647-1800 or (601) 323-5869; or Telex 53-4590 MFJ STKV. □

New from ICOM

Satellite interface unit

Instant satellite communications are now possible with ICOM's CT-16 Satellite Interface Unit when used with an ICOM CI-V System Transceiver. The CT-16 features an



uplink switch to control the downlink and uplink transceivers, and a switch to select either normal or reverse tracking. The CT-16 may also be used in coordination with the UX-14 CI-IV/CI-5 converter. Suggested list price: \$97.50.

CI-IV/CI-V converter

The UX-14 Converter enables you to adapt a CI-IV system to a CI-V system. This allows the transceiver to be computer-controlled, or for satellite operations using the CT-16 Satellite Interface Unit. The following radios are equipped with a CI-IV port and can be converted for CI-V use with the UX-14: IC-R71A, IC-271A, IC-271H, IC-471A, IC-471H, IC-751, IC-751A and IC-1271A. Suggested list price: \$72.50.

Communication Interface-V (CI-V) Level Converter

Radio operations can now be externally controlled by a RS-232C I/O port-equipped personal computer by using ICOM's CT-17 Communication Interface-V (CI-V) Level Converter. Up to four ICOM CI-V radios can be used for controlling frequency, mode and memory information. Suggested list price: \$97.50.

220 MHz repeater

To complement the growing activity on 220 MHz, ICOM now has a 220 MHz repeater

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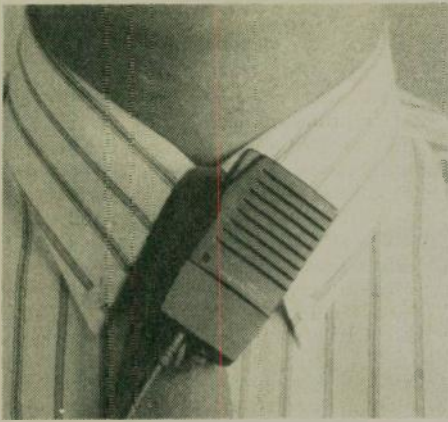
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For more information, contact ICOM, P.O. Box C-90029, Bellevue, WA 98009-9029; (206) 454-8155. □

STATEMENT OF OWNERSHIP MANAGEMENT AND CIRCULATION (Required by 39 U.S.C. 3685)

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Extent and nature of circulation:

	Average No. Copies	
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Total No. Copies Printed	26,765	26,771
Paid Circulation:		
1) Sales through dealers and carriers, street vendors and counter sales	914	963
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Total Distribution	28,515	26,521
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New antenna rotor

The new KR-1000SDX Azimuth antenna rotor will fill in nicely between the already established KR-2000 and KR-600. Kenpro has done a super fantastic job on this one. See for yourself...

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- Weatherproof outside connector resists corrosion and decay of wiring.
- Computer interface (optional) board area inside the control box.
- Limit switches at 450°.

The KR-1000S will also be available. This model does not include the preset and speed control.

KR-1000SDX suggested retail \$489; KR-1000S suggested retail \$399. For further details, contact Encomm, Inc., 1506 Capital Ave., Plano, TX 75074; (214) 423-0024. □

All 'Round Fiddle

Washington, D.C. area bluegrass musician Jim Queen, KB3Y, has just released his first solo album, *All 'Round Fiddle*, on his own Round Fiddle Records. The album includes 12 tunes in all — seven bluegrass standards like "Old Joe Clark" and five originals, including "Brass Pounder," a song that features CW.

The tune, "Brass Pounder," is the reminiscing of an old radio amateur about his experience as a shipboard radio operator in the Navy. Hams will be interested to know that the CW that occurs in the tune was recorded with a Heathkit SA-5010 Keyer and mixed with just a little bit of background noise from a Sony WA-5000 SW receiver for added realism.

All 'Round Fiddle was recorded at Masterworks Studios in Fairfax, Virginia.

Two unusual features of the album are the mouth bow playing on the tune "Back to the Bayou" and the "round" fiddle whose photograph appears on the back cover. Jim bought the 100-year-old American instrument from Bob Husband, W31NH, at a hamfest.

All 'Round Fiddle is available from Round Fiddle Records, Box 274, Oxon Hill, MD 20745. (\$7.50 plus \$1 shipping, 38¢ tax in Maryland. Allow six weeks for delivery.) □

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The 1988 International Callbook lists 481,000 amateurs in countries outside North America. Its coverage includes South America, Europe, Africa, Asia, and the Pacific area (exclusive of Hawaii and the U.S. possessions).

The 1988 Callbook Supplement is a new idea in Callbook updates, listing the activity in both the North American and International Callbooks. Published June 1, 1988, this Supplement will include thousands of new licenses, address changes, and call sign changes for the preceding 6 months.

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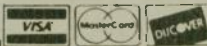


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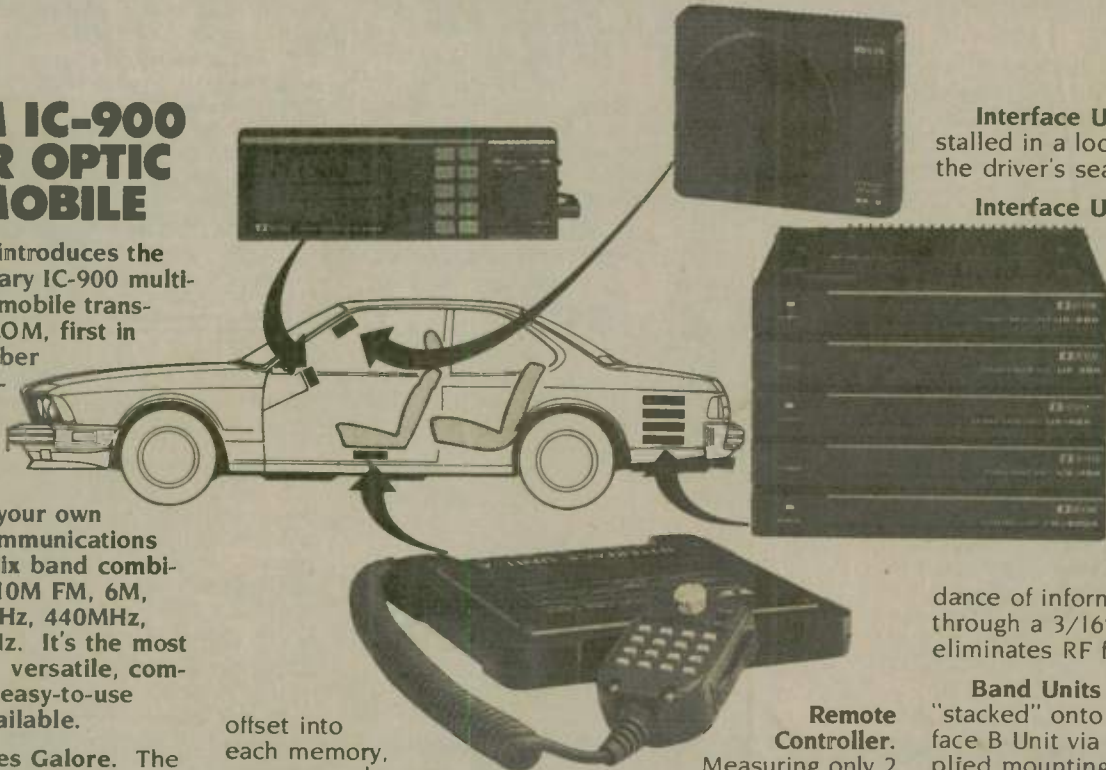
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