Worldradio

Year 14, Issue 4 October 1984 • 85¢

A few of the more than 100 amateurs who assisted the LAPD Olympic Task Force are briefed by an officer as to surveillance location assignments over a three-week period. (Left to right): Roy Harrison, AA6W, coordinator for West Los Angeles; Lt. Randy Mancini; "Kit" Carson, WB6VPV; Lenore Jensen, W6NAZ, a net control; Mike Eng, N6HOI; and Joe Ehrman, KF6UG. Standing in rear (left to right): Bob Rod, K6FZ, and Dick Groll, NE6V. *(Photo by Bob Jensen, W6VGQ)*

Larry Price, W4RA, ARRL President (right), signs the VEC document. Others, from left to right, are: Robert Foosaner, Chief Personal Radio Bureau, FCC; Dave Sumner, K1ZZ, ARRL General Manager; and Ray Kowalski.

Radio at the Olympics

Lenore Jensen, W6NAZ

The Summer Games of the XXIIIrd Olympiad are over, leaving a lot of glorious, exciting memories, understandable pride and myriad notes for the record books.

Amateur Radio can be proud of its own record, from the magnificent work with the Torch Relay to the many different assignments accepted in Los Angeles and vicinity.

Negotiations had begun at least two years before with the Los Angeles Olympics Organizing Committee by Jay Holladay, W6EJJ; Tom Rothwell, K6ZT; and Irv Emig, W6GC.

Lessons learned? Advance, detailed planning and careful rehearsing really paid off. Patience, in particular. But praise was heaped upon the ham activity, and public relations were splendidly enhanced within the communities.

Olympic yacht races

A team of operators 225 strong with three years of practice served the Olympic yacht races, 31 July to 08 August, off Long Beach, California, superbly. Had it not been for the radio hams, there might have been delays, lack of information and misinformation circulating during the seven races which covered 40 square miles of ocean. Hundreds of boats, contestants and spectators required precise coordination.

Amateurs were aboard boats carrying press, photographers, officials and special spectators, as well as the measurement boat, which did spot checks to be certain all participants followed the rules precisely. At the end, race results were relayed — a very important activity.

Led by Dr. Warren Bradley, KA6HNW, and Jim Michaels, W6PGM, the amateurs representing many different clubs had participated three previous years in Olympic Class annual regattas, so they were well rehearsed for the needs.

Compliments were many from both the Commissioner of Yachting and the Director of the Races, who greatly appreciated the skill of the radio operators which helped prevent accidents or interference with the competing boats and the enthusiastic spectators.

To the amateurs, the icing on the cake was seeing U.S. contestants win three gold and four silver out of seven classes. Not only did the radio operators perform a valuable service — they had a glorious week!

Equestrian Event (Fairbanks Ranch)

"Anything worth doing is worth doing right!" is apparently the motto of Section Manager Art Smith, W6INI; Emergency Coordinator Steve Simek, WA2NNT; and a group of San Diego amateurs who provided communications on 01 August for the Endurance Equestrian Event of the Summer Olympics!

From their first alert in January, a plan went into motion that resulted in near-perfection on the big day.

As you saw on TV, the course was 25km in length and divided into various challenges to horse and rider. It would mean long hours under hot sun for the volunteer operators, which meant endurance for amateurs was very important, too. At first, it was believed nearly a hundred would be required, although the final count was less (80). All volunteers had to promise availability for all future preparedness meetings.

(please turn to page 4)

ARRL National Convention

John Minke, N6JM

The convention was at the New York Penta Hotel across the street from Pennsylvania Station. This is the former Hotel Pennsylvania or Statler that inspired a song of the 1940's. Remember Glenn Miller playing "Pennsylvania Six Five Thousand"? They still have the same phone number. The convention was a three-day affair, Friday through Sunday, 20-22 July.

Although I had Mari and Rachel (my XYL and youngest daughter) to help me with the **Worldradio** booth, I was a "one-man show," trying to take pictures and report on the convention at the same time. An unfortunate incident of having my camera ripped off Saturday afternoon (it was behind our booth) put a damper on things. I did buy another camera from one of the several camera shops close by, but without a flash, so only pictures taken after that are shown here.

Friday evening events

After being with Amateur Radio for 30 years, I have found that conventions have been flexible and deviate from the printed schedule. This, of course, has to be when you have a guest such as Dr. Owen Garriott, W5LFL, who works from a tight schedule. The tight schedule is fine, but sometimes the travel situations foul everything up.

But the New York area has some interesting amateurs who are sharp enought to flex to the situation and run the program by ear. This also gave many a chance to learn more about AMSAT, the Radio Amateur Satellite Corporation, and the radio amateur space program.

Bill Tynan, W3XO, one of the AMSAT officers — along with Bill Lazzard, N2CF, AMSAT General Manager — talked about various subjects concerning Amateur Radio, the space project and Owen's history-making flight. Roy Neal, K6DUE, of NBC News, was responsible for the real work in getting Amateur Radio on the shuttle.

Owen's schedule was that he would operate Amateur Radio for one hour per day and only during his off-duty times, and not to affect other equipment. Only a few schedules were arranged and those were of his own choice: the club at home that got him started in Amateur Radio;

(please turn to page 47)

ARRL bulletin

The FCC has received two petitions for rulemaking requesting that the 220 MHz band be shared with land mobile radio services. Remember, these are petitions for rulemaking and not FCC Notices of Proposed Rulemaking. See **QST**, March 1982, page 66, for comment procedures.

RM 4829, filed by the Land Mobile Communications Council, (LMCC), principally seeks frequencies in the 800 MHz band, but says that portions of the 220-225 MHz band could also be used for land mobile radio services.

RM 4831, filed by a manufacturer of amplitude compandored sideband equipment — Sideband Technology, Inc., asks the Commission for 216 to 222 MHz for narrow-band ASCB channels for private and government land mobile systems.

Comment deadlines for both petitions are 29 August, with reply comments due on or before 13 September. □

Third-party agreement

The United States has signed a third-party traffic agreement with St. Christopher, Nevis and Anguilla. St. Christopher is also known as St. Kitts. Call sign prefixes are VP2E and VP2K. This agreement went into effect 08 August 1984. □

Worldradio

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October 1984 Vol. 14, No. 4

Worldradio (USPS 947000) is an international conversation. You are invited to take part. Our newspaper is written by its readers.

Our goal is to be a valuable resource of ideas and experiences beneficial to the Amateur Radio community. We publicize and support the efforts of those who bring the flame of vitality into this avocation.

Our readers are participants — an alliance of active radio amateurs who are concerned with reality, who use radio as a communications tool. We ask your cooperation in helping us develop the skill, quality and full potential of Amateur Radio.

We are positively-oriented. We print all the news of this great activity, and particularly desire an input of stories dealing with the dramatic, the personal and humanitarian uses of Amateur Radio.

Worldradio needs your help to reflect the invaluable service of Amateur Radio.

Through **Worldradio** you can make contact with other individuals who share your interests.

Worldradio is an independent newspaper. It is not affiliated with any other firm, group or organization. Its pages are open to all. Permission is hereby automatically granted to reprint from this publication. If there is something useful, we wish to share it.

Subscription rates: $10.00 per year, $19.00 for two years, $27.00 for three years and $100.00 for life; $2.00 extra per year for surface mail delivery outside the U.S. Please remit international postal money order. IRCs will be accepted.

Second-class postage paid at Sacramento, CA.

Alaska Fixed Service frequency change

In a docket intended to modernize and improve the Alaska Fixed Service, there is a small change affecting amateurs in that state or within 50 miles thereof. The common emergency frequency on which stations of most radio services are authorized HF communications is changed from 4383.8 to 5167.5 kHz, effective 28 September.

The new frequency will also be a calling frequency for stations in the Alaska Fixed Service, should be continuously monitored, and accordingly should be more effective as an intercommunications frequency than its predecessor has been. Sections 97.61 and 97.107 of the amateur rules are amended to specify these conditions:

"The frequency 5167.5 kHz, maximum power 150 watts, may be used by any station authorized under this part to communicate with any other station authorized in the state of Alaska for emergency communications. All stations operating on this frequency must be located in or within 50 nautical miles of the state of Alaska.

"The frequency 5167.5 kHz may be used by licensees in the Alaska-private fixed service for calling and listening, but only for establishing communication before switching to another frequency."

No airborne operations will be permitted on this frequency, and only SSB is authorized. — *The ARRL Letter* □

Gloucester repeater

The Gloucester Amateur Radio Club has installed a 223.06/224.66 repeater in Washington Township, New Jersey, with very good results. The repeater is linked to the vast MetroCom Repeater System to gain wide coverage over all of south New Jersey, northern Delaware, southeastern Pennsylvania and northeastern Maryland.

The repeater is open, as are all repeaters in the MetroCom System. □

STS-9 survey

ARRL is conducting an informal survey on the STS-9/W5LFL mission. Specifically, how many amateurs operated amateur stations in schools, and how many students (hams and non-hams) have seen the videotape, *Amateur Radio's Newest Frontier.*

Please send your responses to ARRL Headquarters. Mark the envelope "STS-9 Survey." □

Repeater directory

A new 2-meter repeater directory is available covering New Jersey, New York City and Long Island.

An accurate directory is in demand by many base, mobile and portable stations in this heavily populated 2-meter repeater spectrum area. With numerous repeater changes occurring monthly, the national once-a-year publications are not sufficient for active 2-meter operators. To accommodate these continuous changes, up-to-date lists are printed on this computer generated directory.

The directory includes information on nets, clubs, and a column for notes. Available as a separate item is a numerically sorted frequency directory for amateurs interested in cross-reference when searching the band.

Directory orders can be made for $1 each and an SASE to Jeffrey Gornstein, KD2BE, 35 Green Hill Rd., Springfield, NJ 07081. □

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

FCC exams

Steven Shafit, NE6L, chairman of the Greater Los Angeles Amateur Radio Group — VEC for the 6th call area — has announced the dates of three upcoming FCC exams.

The first exam, sponsored by the Antelope Valley ARC, will be given Saturday, 22 September, at the Palmdale Cultural Center, 704 East Palmdale, Palmdale, California. Registration deadline is 21 September.

Contact Charles Ingram, WA6R, (805) 942-2165, for more information.

The next two exams, both sponsored by the San Fernando Valley ARC, will be given Saturday, 06 October, and Saturday, 01 November, at the Red Cross Bldg., 14717 Sherman Way, Van Nuys, California. Registration deadlines are 30 September and 25 October, respectively.

Contact Adrienne Sherwood, WA6YEO, (805) 948-1865, for more information.

Only the first 25 applicants for each of these sessions will be accepted. □

Kenwood and ICOM newsletters

Rob Pohorence, N8RT, editor of the Kenwood and ICOM newsletters, tells us he has up-to-date information ready to be published on most Kenwood and ICOM products, as the newsletters go into their sixth year of publication. If you own Kenwood or ICOM equipment, the newsletters are a worthwhile investment. They are an informational exchange for Kenwood and ICOM users.

For free information on newsletters and nets, send a 37-cent SASE to Rob at International Radio, Inc., 364 Kilpatrick Ave., Port St. Lucie, FL 33452. □

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If you received this publication and are not a subscriber of WORLDRADIO, it was no accident. Please consider it an invitation to join. We can be very friendly.

CONTENTS

FEATURES

COLUMNS

Chuck Breeding, KB7RC *(Photo by Bob Jensen, W6VGQ)*

ABC handled Olympic TV coverage

Lenore Jensen, W6NAZ

Charles Breeding, KB7RC, managed the enormous, highly complex installation for ABC known as the International Broadcast Center, in Hollywood, for worldwide TV coverage of the Summer Olympic Games, seen by two-and-a-half billion people.

For more than two years, Chuck worked on its design and production for participation by a hundred different countries that brought 1,200 broadcasters (including 500 commentators). They required 600 circuits from the 20 venues; 100 miles of audio and video cables, plus another 600 miles to tie the venues to the Broadcast Center; 5,000 pieces of technical equipment and 80 Ampex video recorders; and an audio machine with 24 tracks to accommodate multi-languages — all in the 150,000 square foot facility!

In addition to the microwave video circuits, there were 34 switched pool video feeds from the venues via optical fiber "trouble-free" circuits enclosed in a tube the size of a garden hose.

The overall director of the International Broadcast Center is also an Amateur Radio operator — Manuel Romero, EA4JW.

Chuck Breeding is shown in the photo at the plush operating position of the courtesy ham station available to visiting amateurs from both DX and domestic QTH's. Kenwood lent a 930S, Henry Radio the 2 KD amplifier and Hy-Gain the XP-14 beam. The log showed many an exciting call.

The Center, on a lot formerly used for movie-making, was a miniature city, complete with bank, post office, restaurant, customs, security (galore) and other conveniences for the more than 1,000 people who worked there each day.

The tremendous effort of the Center required a last mighty push; everything had to be dismantled and removed within 30 days after the closing ceremonies! □

Funds needed for tower fight

In the beginning (1967), Dick Knadle, K2RIW, and his wife, Charlene WB2HJD, began to look for a new home for their family. It had to be suitable, affordable, in a good school district, and of reasonably high elevation for his serious UHF work. Queries about the Huntington Zoning Rules and Regulations showed no tower prohibitions at that time! They chose the site, took title, moved in September 1969, and Dick put up one of the finest Amateur Radio UHF arrays in the Northeast.

Now, here's the wrinkle. Between the time he first checked on the tower ordinance in March 1969, and when he erected his tower in September 1969, the town of Huntington passed a tower ordinance using vague language. The new regulation appeared to concern itself with commercial broadcast towers, and addressed itself to "broadcasting." It seemed that the new regulation was tailor-made for a new AM broadcast station coming into Huntington. Dick was not a "broadcaster." No need for concern here.

All is bliss. For 14 years, Dick went on to improve, experiment and advance the state of the art in UHF communications. The "antenna farm" consisted of 304 elements on 432 MHz, 100 feet above ground, was virtually obscured by adjacent oak trees, and offended no one. Not one single TVI complaint has ever been received! From the beginning, the neighbors accepted the presence of the tower.

A strange turn of events. One day, some of Dick's neighbors approached him for help. A commercial radio relay firm had applied for permission to erect a 260 ft. tower in the immediate neighborhood. There would be perhaps as many as 40 transmitters at various frequencies and elevations and power levels. In addition to the tower and antenna array, there would be the obvious need for a shelter to house the bank of transmitters, multiplex equipment, control equipment, and telephone-interface equipment. Public sentiment was strongly against it. They asked Dick, a local resident, to be part of their expert testimony against the installation. He agreed to help, strictly on a volunteer basis.

The plot thickens. On the day the commercial tower application was denied, the town of Huntington acted upon a photo of Dick's tower it had received from the commercial tower applicant, thus beginning a series of major problems for K2RIW! For 26 months, Dick dealt with the Huntington Building and Zoning Board, trying to find out who the "official complainant" was, and at the same time trying to convince the town that his Amateur Radio tower was not in violation of the commercial-broadcast-tower regulations. The Zoning Regulation was explicitly aimed at commercial AM and FM broadcast stations. But reason did not prevail. On 03 May 1984, Dick had a hearing before the Huntington Zoning Board of Appeals to try to save his tower.

The cavalry arrives. Harry Dannals, W2HD, President Emeritus of the ARRL, spoke on his behalf and described Dick's accomplishments and impressive credentials, pointing out that as well as being a ham, he is a pioneer, at the forefront of exploration of a new frontier! A professional engineer testified as to the structural integrity of the tower and pointed out that it had a 2½ times safety factor while withstanding 120 mph winds, with a 1″ radial ice load. It was also testified that if the tower was sabotaged and made to collapse, it would fall entirely within Dick's property, and presented no threat to his neighbors. An environmental scientist and RF expert testified that the tower installation presented no threat of TVI or health hazard to Dick's neighbors.

Uh-oh! As quite often happens in tower cases, a neighborhood petition emerged. This one, however, showed that 114 neighbors unanimously agreed that they wanted Dick's tower to remain. (Dick must be doing something right!) Virtually every property owner within a 500 ft. radius supported in writing Dick's request to save the tower.

Confidence builds. This was a clear testimonial that Dick's neighbors had no objection to his tower installation; no problems with interference or worries about real estate values declining! They had a 14-year experience factor when they signed the petition. Legal opinion was expressed by Dick's attorney that the FCC well defines the difference between broadcast and amateur operations. He cited to the Zoning Board Part 97 of the FCC Rules and Regulations, which explicitly

(please turn to page 6)

Olympics

(continued from page 1)

One requirement was that they travel to Los Angeles for fittings of Olympic uniforms; some hired a bus.

Many gatherings pinned down duties, type of traffic, terminology, relationship to officials, etc., plus the actual names of individuals with whom they would work. The TV film, *International Velvet*, was screened as it showed a similar course for the riders which was designed by the Event Director, Neil Ayer.

Frequencies were kept secret until the day of the event, but much backstage investigation selected frequencies for six nets, all of which were to be integrated into the emergency medical system.

Net managers included Guy Rowlett, KB6AI; Rick Olsen, N6NR; Dave Wilkie, WA4SHP; Jack Bouvier, WD6FPJ; and Joyce Simek, KA6VMK. Officials and mobile units each had an operator to ensure smooth functioning of the race.

To avoid later confusion, all radio operators and supporting volunteers walked through the entire course, and on 27 July, a full dress rehearsal was staged with marathon runners "playing the part" of horses on the course. Simulated routine and emergency situations and typical accidents were injected to test procedures. All rough spots were ironed out.

On the actual day of the race, everything worked right. After all, they were completely prepared!

Police Surveillance Task Force

Faced with dire predictions of possible terrorism, which happily did not happen

(continued at bottom of column 3)

The Olympics Yacht Races — held near Long Beach, California — required a small army of amateur operators to provide communications for safe and efficient operation of the event, which covered an area 5 by 8 miles in size.

Row 1 (left to right): Warren Bradley, KA6HNW; Jim Michaels, W6PGM; Russ Tobler, KA6QIZ; Ken Bishop, KA6WUS; Peggy Kramer, W6JCL; L.C. Storms, KA6RYJ; Peggy Gregory, KA6TQJ; Margie Brown, KB6AZN; Marcella Poitras, N6EHB; Bill Bradley, WD6FON; Larry McDowell, KA6NSQ; C.M. Kindrich, KA6JZC; Harry Goldstick, WA6JTM; Bob Albertson, KF6JR; Bob Hennessy, WD6AVW.

Row 2 (left to right): Ed Ungerman, KB6AZH; Bill McConnel, KA6HOD; John Matzinger, KA6JYA; Hershel (N6CAR) and Dorothy (KA6BOA) Phillips; Barbara (N6CBN) and Bob (K6QXK) Alm; Ed Gregory, KA6NTF; Jenny Lukenbill, K6JCL; Steve Stanec, KA6NUJ; Arden Boyd, KB6BAE; Blaine Evans, K6GYL: Don Kramer, W6JBY; Marijean Piorkowski, NO6Y.

Row 3 (left to right): E.K. Skee Gorczyca, KA6FTH; Howard Jackson, WD6BDI; John Jordan, KA6RZB; Bob Tegel, KD6XO; John Eastman, KA6QAP; Bob Metcalf, KA6JXV; Bob Lukenbill, W6DO; Hank Cully, KA6NUU; Helmer L. Johnson, KG6DK; Don (N6HYI) and Joan (KA6KIA) Marshall; Eugene Minkler Jr., N6KSG.

Row 4 (left to right): Bob (KA6RYB) and Kathy (KA6WOQ) Busch; Mel Daybell, KM6M; Bill Joder, WD6BLI; Dave Comstock, W8HYX; Jack Palmer, N6FEA; Rosemarie Pitz, N6BCY; Steve Blake, KB6BAX; George Hively, WA6YEA; Don Boyce, NN6Q; Tom Stroud, N6FDZ; Hal Platt, W6FSE; Chuck Thomas, NQ6J; Aaron Waxman, KA6QGA.

Row 5 (left to right): Harry Whallon, KA6RXH; Cynthia Cashman, N6JHE; Ron Perich, WB6NQW; Tiffany Lopossa, KB6EQC; Bobbie Vandiver, KA6WPF; Louise Halberg, N6JDE; Cynthia (NQ6O) and Gerald (W6PCI) Thomas; Sid Myers, N6KQZ.

Row 6 (left to right): H.L. (WB6YYT) and Gloria (KB6EPU) McKinsey; Charles Cummings, WA6QXK; Sibyl Keirns, KA6RXX; Myron Godwin, N6CBG; Nancy Lopossa, KA6RXR; Wanda Alyea, KB6ERP; Gayle Morris, KB6EOO; Betty Wahl, N6KQP; Loretta Fanning, N6KAU; Esther (WA6UBU) and Lyle (N6LB) Gardner; Marda Carpenter, KA6WPN; George (K6YFG) and Bess (KA6FFH) Taylor.

Row 7 (left to right): Glenn Thorpe, WA6FJE; C. William Lapworth, N6DEN; John L. Kent, NW6W; Gene Pinegar, KB6BFB; Art Huhta, N6IVF; Bill Holder, W6TNB; Joe Francis, WB6SZK; Chuck Arnold, KD6BX; Rose Martin, WD6ERM; Jim Hoff, NR6O; Ed Beer, N6IGZ; Hank Poitras, N6EHC; Ed Hyka, KA6JYY.

Row 8 (left to right): Bill Meyers, N6KET; Ellen Jordan, KA6RYE; Lee Wahl, N6ITG; Alan Halberg, K6PQZ; Ross Sherwood, KA6WOK; Jim Nicholson, K6TLN; Dick (NR6K) and Kay (N6JDU) Kissam.

Row 9 (left to right): Norton Nelson, KA6HFU; Richard Seward, KA6HOO; H.S. (Stan) Viall, KA6UPL; Anne Barnard, WA6W; Don Bostrom, N6IC; Martin Mills, N6KQI; Jon Sommers, N6DFI; Robert Ego; Bob Cashman, K6DQK; George Cashman, KG6AS; Bob Shepperd, KA6CSS; Sue Stockwell, N6IDC.

Row 10 (left to right): Gordon West, WB6NOA; Harry Milligan, NT6O; Glenn Rickard, KA6JXT; Gordon Roberts, WA6JTA.

Row 11 (left to right): Frank Bird, WA6ODK; Stuart Skeele, K6TUO; Geraldine Hively, WB6UZV; Peder Jeppesen, KA6HYE; Jerry (KA6QIA) and Sally (KA6VYR) Dalley; Jane (NV6J) and Gerald (N6FVR) Sparks; JoAnn Hayward, KB6DAM.

Row 12 (left to right): Joanne Thill, KA6UMX; Roby Bessent, KB6BAA; Ruth Simmons, KA6JZO; Melis Kooiman, KA6JXR: Fred Poore, N6KXB; Lucille and Russ Jones, KE6YI; Chris Bracken, NU6C; Ture Roslund, KA23PJL; Betty McConnel, KA6NTU.

Row 13 (left to right): Ron Boan, AK6Y; Phil Murray, KA6NTT; Gene Stephens, KA6HOQ: Gus Erickson, N6GWB; Chris Brown, KA6OQS; Elizabeth Holiday, N6CDM; Stanley Ferguson, N6HEX; Stewart Hayward, KF6YA.

Row 14 (left to right): Colleen Carabine, Marjorie Sherwood, John E. Dombrowski, Maj. SC, USAR.

during the Olympics, the Los Angeles Police Department (LAPD) — through Captain Keith Bushey, KF6UJ — set in motion a system of backup communication from surveillance teams.

Section Manager John Walsh, N6UL, arranged for three base stations, one at the city Emergency Communications Center, another near the Coliseum, "EXPO," and a third near the UCLA Athletes' Village in Westwood. Betty Wallin, KD6CY, Paul Schou, KE6ET, and Roy Harrison, AA6W, coordinated the three, while Officer Cartez Curtiss, N6KYV, supervised.

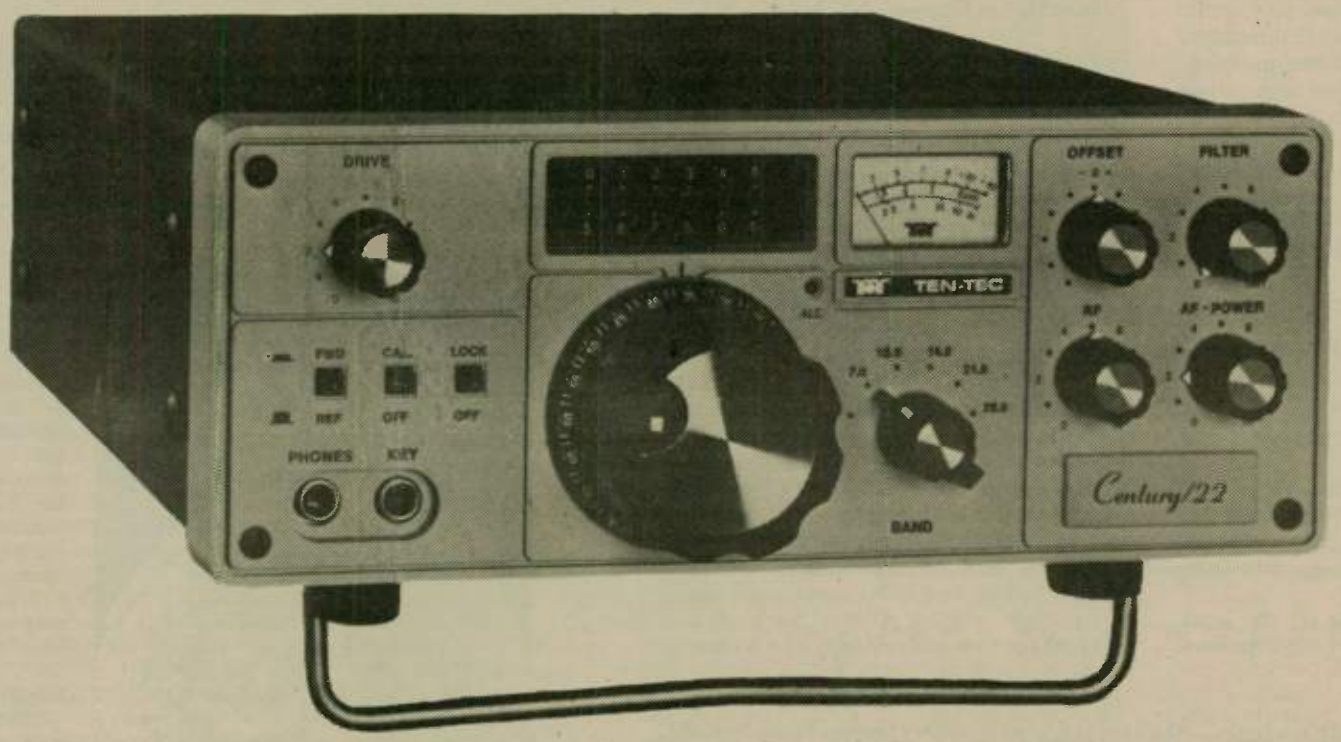
Wayne Curley, WA6NRB, took his repeater out of general service for the duration and installed a sophisticated arrangement linking all points and operators along with an emergency autopatch should police phones go out.

About 120 volunteer operators were thoroughly "background checked" by LAPD before being assigned to rooftops in strategic locations for backup surveillance. They worked eight-hour shifts without complaint. Humorously, some even claimed credit for the extremely low crime rate during their three weeks of work!

(please turn to page 19)

Century/22

A 50-Watt, 6-Band CW Transceiver that combines excellent Performance, Reliability, Simplicity of Operation, and Low Cost.



THE CENTURY IS BACK! ANNOUNCING THE RETURN OF AFFORDABLE AMATEUR RADIO — THE CENTURY/22 OFFERS THE BEST FEATURES OF THE CLASSIC CENTURY/21 PLUS A LOT MORE — VARIABLE AUDIO FILTER, AUTOMATIC GAIN CONTROL, SWR BRIDGE, AUTOMATIC LEVEL CONTROL, ELECTRONICALLY SWITCHED "S" METER, AND BEST OF ALL IT'S ONLY $389.00! SEE YOUR TEN-TEC DEALER OR WRITE—

TEN-TEC, INC.
SEVIERVILLE, TENNESSEE 37862

Funds

(*continued from page 3*)

prohibits radio amateurs from "broadcasting." It is interesting to note that a letter was also introduced by the original commercial tower applicant, stating that at this time they had no objection to Dick's tower.

The taste of victory. Dick and the many concerned amateurs attending the meeting left trusting that, based on the multitude of testimony, and absence of any opposition or complainant, a favorable decision would follow.

The agony of defeat. The town took the position, "My mind's made up. Don't confuse me with the facts." *APPLICATION DENIED!*

What's next?

If you were K2RIW, what would you do? Dick has decided to go on, and we have decided to help. Thus, DART (Defend Amateur Radio Towers) was born — a non-profit, volunteer effort to legally reverse the decision of the Huntington Zoning Board of Appeals, hence preventing commercial tower regulations from being used against radio amateurs.

It is our hope that the "Huntington Tower Case" will become a landmark decision, bringing to an end an era of radio amateurs being victimized by insensitive zoning boards! *WE'VE GOT TO GO FOR IT!*

Fellow Ham:

We are a non-profit, volunteer group trying to do a service for one ham in particular and the ham radio fraternity in general. Time is our most precious commodity.

We are working to fight anti-tower zoning regulations. The case we are supporting is an exceptional one, worthy of national support. Enclosed is data and background on K2RIW.

We intend to solicit funds for the legal battle from the ham community, and we are trying to form a group of prominent hams who, on the basis of the facts outlined, will endorse the group's efforts in this important cause. The first ham to endorse this effort was Owen Garriott, W5LFL, so you will be in good company.

If you feel comfortable with the endorsement statement enclosed, please sign it and return it to us. Your endorsement will help highlight the cause. We think we can be successful and strike a blow to the anti-tower zoning regulations in so many areas.

If you would like any additional information, please contact either of the undersigned, or Harry Dannals, W2HD, President Emeritus of ARRL. We will be happy to talk with you.

Thank you for your time and consideration in this matter.

73 & Tnx,
NORM WESLER, K2YEW
LLOYD MILLS, WB2ZIT
DART (Defend Amateur Radio Towers)
P.O. Box 2851
Huntington Station, NY 11746

Endorsement form

Funding: The funds, raised by contribution, are to be used only to pay the clear-cut legal and related expenses of the appeal of the unfavorable Zoning Board ruling regarding the tower of K2RIW, along with the direct fund-raising expenses of DART. No salaries, fees, perks or other non-direct expenses will be reimbursed. The finance committee shall control the deposits and disbursement of all funds.

Refund policy: Donations will be accepted in whole-dollar amounts only. The call or name of every donor will be recorded along with the dollar amount. In the event there is a surplus of funds after the matter is concluded, the committee will return this to the donating group at large by way of a ham raffle. Amateur Radio equipment will be purchased with the surplus funds, and one chance per dollar of donation will be allotted to each individual ham or club donor. The winners of the drawing will be announced publicly at a major hamfest, and the fund will be returned to zero balance.

I endorse and support DART as explained to me. I encourage financial support so that Dick can prepare a complete legal presentation and prevail. This is my own personal endorsement and is not meant to indicate that any group I am associated with has reviewed the matter.

ENDORSEMENT FORM

Name _____ Call sign _____
QTH _____
I am an officer or associated with the following Amateur Radio groups:
1) _____
2) _____
3) _____
Check boxes that apply:
☐ I would like to attend an organizational meeting with DART to discuss future plans.
☐ I would like to participate on the working committee.
☐ I have some ideas and suggestions. See attached sheet.

I endorse the DART Fund, as outlined, to me.

_____
(Signed)

Who is K2RIW?

Professional
- Amateur Extra Class license, 28 years
- Bachelor of Electrical Engineering degree
- 20 years RF engineer, AIL/EATON
- 1st Class Radiotelephone license with
- Radar endorsement

Published articles
- "144/432 MHz Amplifier Tripler" **Ham Radio**, Feb. '70
- "Parallel KW Amplifier for 432 MHz, **QST**, April-May, '72
- "Houston, This Is Apollo," QST, June '72

(*please turn to page 48*)

Kantronics wins piracy suit

The United States District Court for the Northern District of Ohio has issued a Preliminary and Permanent Injunction against Cindy Gladwell of Lima, Ohio, prohibiting copy and sale of software programs manufactured by Kantronics, Inc.

Kantronics sought this action following the Michigan State ARRL Convention in Detroit, where Kantronics Marketing Director Mike Forsyth purchased a pirated Kantronics program from Gladwell.

"We will take legal action against those who break the law by selling pirated programs. Kantronics will defend its copyrights and trademarks," said Phil Anderson, W0XI, president of Kantronics.

Damages of $2,000 will be paid to Kantronics by Gladwell, and all "reproducing, copying, imitating, duplicating, or otherwise infringing plaintiff's copyright," will be stopped.

Kantronics asks the assistance of all licensed amateurs in stopping this illegal activity. Software piracy is detrimental to the hobby, as it restricts development of new products. Never buy illegal copies of programs, report all pirated sales to the program manufacturer, and don't allow pirated sales at your local hamfest. □

Doctor DX™

AEA (Advanced Electronic Applications), using advanced technology, has developed the most exciting CW simulator to ever hit the Amateur Radio market. Doctor DX™ by AEA, simulates real CW band operating conditions. Doctor DX can offer more fun than actually being on the air.

With Doctor DX, you can work DX when the real bands are dead, when your antennas are down, when problems with TVI prevent you from operating, or when you would otherwise be deprived from operating due to sleeping or working schedules. With Doctor DX, all you need is a Commodore 64 computer, a key (or keyer), and a TV set to be in full operation.

Doctor DX consists of a plug-in hardware/software cartridge for the Commodore 64 computer. A phono connector mounted on the rear of the cartridge accepts the input from your handkey or electronic keyer. At turn-on, your TV screen is transformed to the visual display of a transceiver front panel. Located on the transceiver's front panel is the digital display readout which tunes the first 100KHz of each band. Also located on the front panel is the band switch, power select switch, volume and bandpass filter settings.

To begin using Doctor DX, you just need to enter in the time in GMT that you will want to begin operation, then enter the duration of time desired (this can be set to infinity), and lastly, you are asked to enter in latitude and longitude coordinates for your choice of operating location worldwide.

Have you ever wondered what it would be like to work CW DX from another part of the world? Now you can with Doctor DX. The fun begins as you tune up and down the simulated bands, realistic sounding stations in contact with other stations, plus QRM and QRN similar to actual on-the-air conditions. Doctor DX allows you to "search and pounce" for DX stations, or if you like, "running" a pile-up by calling CQ. The area below the simulated transceiver front panel tallies the number of QSO's, zones and countries worked. Doctor DX even calculates your QSO per hour rate!

Radio propagation (programmed for each band) represents what you would expect to hear on a good propagation day at the *peak* of the sunspot cycle. The propagation follows the internal real-time clock that you set at the beginning of operation.

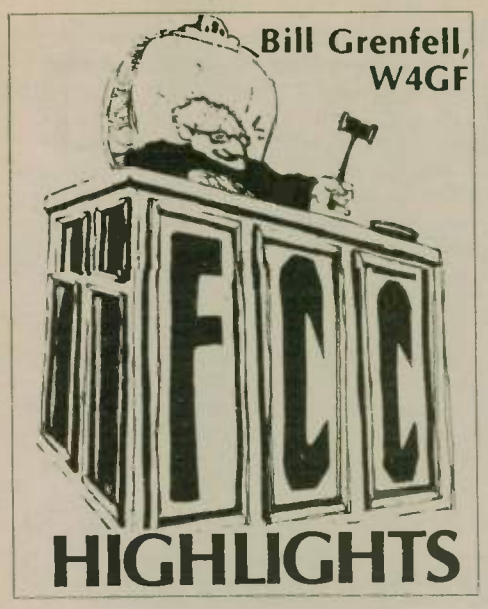
All simulated stations you hear are at distances and directions you would expect to hear for the time of day and band selected. All simulated call letters heard are mixed totally at random. The prefixes are weighted according to the worldwide Amateur Radio population density with the guarantee that for each of the 304 possible countries, there is at least one station represented. The speed of the stations operating in the lower band segments is much faster and more "polished" than those operating in the upper band segments.

All stations in Doctor DX respond to "Q" signals such as QRS, QRQ, QRZ, etc. If you miss any part of your QSO, you can ask for and receive a repeat. Should you make a mistake sending, the other station may ask *you* for a repeat!

You can learn and enhance your CW operating skills with Doctor DX; Doctor DX will not reward bad operating habits. AEA even offers an awards program to owners of Doctor DX that Work All Zones, 100 countries, 5-Band Doctor DX-CC or Doctor DX Honor Roll!

Doctor DX is the ultimate CW trainer. To see what all the excitement is about see your local dealer for a demonstration or write to AEA for additional information. Advanced Electronic Applications, Units O & P, 2006-196th SW, Lynnwood, WA 98036. □

The deadline for news releases and special announcements is the 10th of the month, *two months prior to issue date.* Example: Deadline for the August issue is 10 June.



Expansion of the 75, 15 and 10-meter amateur telephony sub-bands became effective 0001 UTC, 01 September 1984. 7075-7100 kHz, which has heretofore been available for telephony only outside Region 2, is now also available for telephony to those U.S. amateur stations located in Region 2 which are west of 130 degrees West longitude (97.61(b)(11)); e.g., Alaska and Hawaii.

The expanded telephony sub-bands are: 3750-4000 kHz, Extra Class; 3775-4000, Advanced; 3850-4000, General Class; 21,200-21,450 kHz, Extra Class; 21,225-21,450, Advanced; 21,300-21,450 General; 28,300-29,700 kHz, Extra, Advanced and General Class.

•

On 12 July 1984, the FCC adopted a Notice proposing to make the 7100-7300 kHz band available for assignment to U.S. international broadcast stations in Region 3. A petition to amend Section 73.702(f) of the broadcast rules to authorize that band, in addition to those already authorized therein, was filed by the licensee of International Broadcast station KTWR, Agana, Guam.

The Commission stated: "It appears that amendment of Section 73.702(f) as requested could increase flexibility for Commission-licensed stations in Region 3 and ease congestion for continental U.S. international broadcast stations." . . .

"In order to protect the Amateur Radio Service in Region 2 from objectional interference, a footnote is included in the proposed rule change that would prohibit FCC-licensed international broadcast stations in Region 3 from transmitting to zones and areas of reception in Region 2. If adopted, it would be the intention of the FCC to review proposed broadcasting use of this band in Region 3 to insure that the intent of the footnote is complied with."

Outside of Region 2, 7100-7300 kHz is allocated exclusively to broadcasting. Interested parties may file comments on MM Docket No. 84-706 on or before 27 September 1984, and reply comments on or before 24 October 1984, with FCC, Washington, D.C. 20554.

•

Some highlights are:

97.31(c) "Volunteer examiners may not be compensated for services. They may be reimbursed for out-of-pocket expenses, except for Novice examinations (see S 97.36)."; 97.36(a) "Each volunteer examiner coordinator and each volunteer examiner may be reimbursed by examinees for out-of-pocket expenses incurred in preparing, processing or administering examinations for amateur station operator licenses above Novice Class . . ."; 97.36(b) "The maximum amount of reimbursement is $4 for 1984 and will be adjusted annually each 01 January thereafter for changes in the Department of Labor Consumer Price Index . . . The amount of such reimbursement fee from any examinee for any one examination at a particular session, regardless of the number of examination elements taken, must not exceed the published maximum."

•

The FCC has amended its Rules, which originally implemented its volunteer examination program last year, by a subsequent Memorandum Opinion and Order, adopted 12 July 1984. This recent action was in response to two Petitions for Reconsideration: one concerning who should design the examinations and the other concerning a "one continuous minute" requirement for telegraphy examinations and the identification to be used by successful examinees for operation while awaiting the receipt of their higher class license.

A Report and Order providing for reimbursement of out-of-pocket costs for volunteer-administered Amateur Radio examinations was adopted by the FCC on 12 July 1984. The amended and new Rules were effective 31 August 1984. They are: 97.31(c); 97.33; 97.36(a)-(f); 97.507(e); and, 97.515 (introductory text). People expecting to be involved in the supervision of examinations should obtain a copy of the Order, PR Docket No. 84-265, Released: 20 July 1984.

Adopting the petitioner's recommendation, FCC has eliminated the requirement that FCC design written examination elements 3, 4(A) and 4(B). FCC said: "However, rather than immediately permitting volunteer examiners (VE's) to design amateur operator-written examinations above the Novice Class, we believe that a two-year transition period during which only VEC's would design these examinations would best facilitate delegation of this examination design function."

Revised Section 97.27(d) reads: "Elements 3, 4(A) and 4(B) will be designated by the VEC. The VEC will select questions for each test from the appropriate list of questions approved by the Commission . . . These questions must be taken verbatim from the appropriate PR Bulletin in the form in which they have been approved by the Commission."

The FCC did not adopt the "one continuous minute" code recommendation as a required procedure. It reiterated an earlier statement that it had deleted the one minute requirement " . . . on the basis that there are several alternative methods of proving competency in sending and receiving Morse code, including message content examinations, and that it is in the public interest to have the option of utilizing one or more of these alternative methods.

Adopted Section 97.27(b) requires for the General and Extra Class that: "The test shall be such as to prove the applicant's ability to transmit correctly by hand . . . and to receive correctly by ear texts in the International Morse Code at not less than the prescribed speed during a five-minute test period."

The FCC resolved the identification ". . . objective more simply by designating four discreet temporary identifiers to be appended as a suffix to a licensee's old call sign for each class of operator license to which an amateur licensee may be upgraded: KT for Technician Class, AG for General Class, AA for Advanced Class and AE for Amateur Extra Class."

•

Referring to recent questions as to broadcast stations rebroadcasting amateur (and CB) transmissions, the FCC adopted a Notice proposing appropriate review and amendment of its broadcast and amateur rules.

The Notice of Proposed Rule Making, adopted 12 July 1984, notes past problems and ". . . More recently, in the context of the October 1983 United States military action in Grenada, questions arose concerning whether, and under what circumstances, the rules permit rebroadcasts of amateur communications." Specifically, the Notice proposes to delete Section 97.91 and to revise Section 97.113 as follows:

"Section 97.113 Broadcasting and broadcast-related activities prohibited. (a) An amateur station shall not be used to engage in any form of broadcasting — that is, the dissemination of radio communications intended to be received by the public directly or by intermediary relay stations. (b) An amateur station may not be used for any activity related to program production or news gathering for broadcast purposes. (c) An amateur station shall not retransmit programs or signals emanating from any class of radio station other than amateur. (d) The following one-way amateur transmissions are not considered broadcasting: 1) beacon or radio control operation; 2) information bulletins consisting solely of subject matter relating to Amateur Radio; and 3) transmissions intended for persons learning or improving proficiency in the International Morse Code. (e) Round-table discussions or net operations where more than two amateur stations are in communication with one another are not considered broadcasting."

In a footnote to the Notice, the FCC explained: "We propose to delete the emergency communications exception" (of old Section 97.91 from incorporation in new 97.113) "because we do not wish to imply that an Amateur Radio operator is free to engage in broadcasting or broadcast-related activities in an emergency. Rather, an Amateur Radio operator may make a necessary one-way communication such as transmission of a non-directed request for help or a distress signal in an emergency (see Section 97.3(w)). A rule of reason applies."

Interested parties may file comments on BC Docket 79-47 on or before 24 October 1984, and reply comments on or before 24 November 1984, with FCC, Washington, D.C. 20554.

•

As reported in last month's 'Highlights,' ARRL's petition to bar TV cable operation in the 144-150 and 222-228 MHz bands was denied by the FCC. However, in its June 15th Memorandum Opinion and Order, the Commission stated:

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 01 August 1984.

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

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	NG0J	KD0RH	N0FPW	KA0TIZ
1	KW1I	KB1OL	N1DEY	KA1MAZ
2	NG2F	KD2HW	N2FBM	KA2VUB
3	KT3T	KC3OI	N3EAF	KA3NBW
4	AA4DO	KI4PS	N4KNW	KB4LDH
5	NR5J	KE5QJ	N5HDX	KA5UKW
6	WB6W	KG6JM	N6KYY	KB6GDY
7	NJ7A	KD7YI	N7GLC	KA7TRG
8	NJ8G	KD8SS	N8FXN	KA8VGH
9	NB9J	KD9JM	N9EQR	KA9SJE
N. Mariana Is.	AH0D	AH0AC	KH0AG	WH0AAG
Guam	AH2T	AH2BA	KH2BO	WH2AED
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6U	AH6FL	NH6BQ	WH6BAQ
Kure Is.			KH7AA	
American Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAB
Alaska		AL4FZ	NL7EA	WL7BEI
Virgin Is.	KP2L	KP2AT	NP2BE	WP2ADZ
Puerto Rico	WP4D	KP4HW	NP4KR	WP4DPP

"The following example may help clarify the responsibilities of cable operators and Amateur Radio operators. If signal leakage from a CATV system merely breaks the squelch of an amateur receiver in the scanning mode, a violation does not exist unless it can be shown that signal leakage levels are in excess of the limits as specified in Commission Rule Section 78.605(a) (12).

3/"However, harmful interference clearly does exist if, for example, cable signal leakage interferes with a local Amateur Radio repeater station and its users' communications. In such an instance, the cable operator has the obligation to cooperate with the Amateur Radio operator and to use his resources fully to eliminate the interference regardless of the leakage level . . .

"In the absence of a diligent effort on the part of CATV operators, the Commission will have no choice but to enforce the rules and levy fines for violations."

•

The FCC's Field Operations Bureau (FOB) and the ARRL have agreed to develop and implement an amateur auxiliary to the FOB, the Commission announced in its 05 July 1984 Public Notice, titled "Amateur Radio Volunteers FOB Auxiliary."

The Notice states: "Now FOB, in cooperation with ARRL, is preparing to organize a cadre of volunteers trained to independently handle many of the Amateur Radio-related requests for assistance received by field facilities. Among other things, the volunteers will devise and implement means to foster wider knowledge of the rules, conduct maintenance monitoring of the amateur frequencies, develop solutions to problems arising from the operation of these radio stations, and undertake other specific projects identified as the need arises." The FCC expects ". . . this new program to begin in September 1984."

Individuals interested in volunteering their time may contact the ARRL. Organizations which qualify for the program may contact: Mr. W. Elliott Ours, FCC FOB, 1919 M St. NW, Washington, D.C. 20554.

•

By the start of the Olympics at Los Angeles, Romania had agreed to permit the exchange of third-party messages during the Games, between its amateurs and U.S. amateur stations.

•

An amateur third-party traffic agreement with St. Christopher, Nevis, Anguilla and the United States was effective 08 August 1984.

•

The ARRL became an approved volunteer examination coordinator (VEC) in all 13 examination areas on 21 July 1984. This was triggered by FCC approval of an "out-of-pocket" expenses reimbursement amendment of the rules adopted on 12 July (see paragraph three above).

The July 15th issue of the *W5YI Report* reports that the Ameco Publishing Corporation has objected to the League's VEC proposal on the basis of a conflict of interest between the League as a publisher of test questions and answers, and as a coordinator of examinations.

•

". . . When an uncoordinated repeater interferes with a coordinated repeater, the conflict is resolved in favor of the coordinated repeater," FCC's Special Services Division Branch Chief advised a New York City area amateur club's repeater trustee. "The operation of your repeater only 10 kHz" (between 145.29 MHz and

(please turn to next page)

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Check your license expiration date.

FCC Highlights

(continued from page 9)

145.31 MHz) "from both coordinated repeaters was technically incompatible with those repeaters." He was advised if he continued to operate the station and cause interference to coordinated repeaters, the FCC would begin license revocation and suspension proceedings for violation of Section 97.125 of the Commission's Rules against the club and his personal license.

The trustee advised Westlink that at the direction of club officials, the repeater was removed from operation. (from *Westlink Report*, 07/13/84)

•

Amateur license totals as of 29 June 1984 are: Extra Class 35,300; Advanced 96,607; General 117,026; Technician 79,348; Novice 82,612; Total operators 410,893.

•

The Land Mobile Communications Council's (LMCC) petition (RM-4829) to the FCC for more frequencies says that ". . . the band 220-225 MHz may prove to be valuable for future land mobile operations."

The LMCC suggests that the 800 MHz band, along with the "vacant spectrum in the UHF TV bands, spectrum allocated for federal government use, or assignments from the band 220-225 MHz (could be used) to satisfy the requirements of land mobile users." LMCC says, "Because of the limited number of channels that the 220-225 MHz band will provide, however, it is not anticipated that this spectrum can meet the immediate requirements of land mobile licensees." (from the *ARRL Letter*, 08/02/84)

•

"Simplex autopatches must have a separate control link on any amateur band — not just below 220.5 MHz . . . The FCC, however, requires positive transmitter control on any amateur frequency, not just 2 meters. The real issue here, though, is whether the Commission feels that simplex autopatches are truly in the best interests of Amateur Radio." (from W9JUV via *Westlink Report*, 07/13/84)

•

The FCC denied the ARRL, SCRBBA petitions to retain secondary status for the Amateur Radio Service in the 2310-2390 MHz band, by its action on 28 June.

The Memorandum Report and Order said there is very little possibility of sharing the band as it will be used for aeronautical telemetry at locations throughout the United States. It said that the risk of interference could not be ignored and concluded that the other adjacent 2300-2310 and 2390-2450 MHz amateur bands are adequate. (from the *ARRL Letter*, 07/05/84)

•

The 4th District VEC, Inc. appointment as a VEC has been cancelled by the FCC. The cancellation was the result of the group's failure to return a signed copy of the agreement to the FCC. The Commission was unable to establish contact with them. (from Westlink, 07/13/84)

•

Effective 17 June 1984, the FCC suspended the Advanced Class Amateur Radio operator license of Dave H. Meehan, W7IVK, Las Vegas, Nevada for one year.

The Commission began proceedings against Meehan on 18 May 1984, for willfully interfering with the communications of other amateurs operating in the vicinity of the frequency 7255 kHz, in violation of Section 97.125 of the Commission's Rules. After the beginning of the proceedings, Meehan agreed to a one-year suspension and to being restricted (after the suspension) from operating in the frequency band from 7235 to 7290 kHz. □

Amateur Radio VEC's

The Commission has executed a Memorandum of Agreement with the following entities to serve as volunteer examiner coordinators (VEC's) for the regions designated.

Region 1 — *Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont:*

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 2 — *New Jersey and New York:*

Schenectady Amateur Radio Assn., Inc.
P.O. Box 6
Alplaus, NY 12008

Metroplex Amateur Communications Assn.
P.O. Box 237
Leonia, NJ 07605

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 3 — *Delaware, District of Columbia, Maryland and Pennsylvania:*

Laurel ARC, Inc.
P.O. Box 3039
Laurel, MD 20708

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

Mountain Amateur Radio Club
P.O. Box 234
Cumberland, MD 21502

ARRL
225 Main Street
Newington, CT 06111

Region 4 — *Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee and Virginia:*

Western Carolina Amateur Radio Society VEC
P.O. Box 16189
Asheville, NC 28816

Central Alabama VEC
606 Tremont Street
Selma, AL 36701

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

MID South VEC
2020 St. Elmo
Memphis, TN 38127

Charlotte VEC
227 Bennett Lane
Charlotte, NC 28213

ARRL
225 Main Street
Newington, CT 06111

Region 5 — *Arkansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas:*

Dallas ARC, Inc.
P.O. Box 173
Dallas, TX 75221

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

MID South VEC
2020 St. Elmo
Memphis, TN 38127

ARRL
225 Main Street
Newington, CT 06111

Region 6 — *California:*

Greater Los Angeles Amateur Radio Group
c/o Steven L. Shafit
21921 Lanark Street, #201
Canoga Park, CA 91304

SANDARC-VEC
P.O. Box 5023
La Mesa, CA 92041

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 7 — *Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming:*

Boeing Employees Amateur Radio Society
P.O. Box 3707
Seattle, WA 98124

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 8 — *Michigan, Ohio and West Virginia:*

Dayton Amateur Radio Association
P.O. Box 44
Dayton, OH 45401

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 9 — *Illinois, Indiana and Wisconsin:*

DeVry Amateur Radio Society
3300 North Campbell Avenue
Chicago, IL 60618

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 10 — *Colorado, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota:*

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

PHD Amateur Radio Association, Inc.
P.O. Box 11
Liberty, MO 64068

ARRL
225 Main Street
Newington, CT 06111

Region 11 — *Alaska:*

Anchorage ARC
P.O. Box 101987
Anchorage, AK 99510-1987

The W5YI Report
P.O. Box 10101
Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Region 12 — *Caribbean Insular Areas:*

Director, Military Affiliate Radio System
P.O. Box 7388
Cidra, Puerto Rico 00639

(please turn to page 12)

Food for thought.

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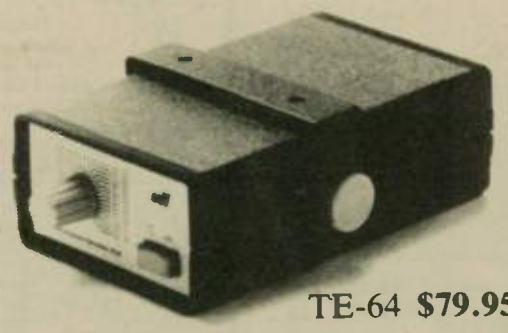

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Amateur Radio VEC's

(*continued from page 10*)
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Region 13 — *Pacific Insular Areas:*
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Dallas, TX 75207

ARRL
225 Main Street
Newington, CT 06111

Qualified Amateur Radio operators who wish to volunteer their services as examiners should contact a VEC in their region. Volunteer examiners are coordinated by VEC's.

Any entity interested in serving as a VEC should apply in writing to the FCC, Personal Radio Branch, Federal Communications Commission, Washington, D.C. 20554. Approval to serve as a VEC is contained in a Memorandum of Agreement signed jointly by the VEC and the FCC.

Entities engaged in the manufacture or distribution of equipment used in connection with Amateur Radio transmissions, or in the preparation or distribution of any publication used in the preparation for obtaining Amateur Radio station operator licenses, may be VEC's only after submitting documentation to the FCC to show that preventative measures have been taken to preclude any possible conflict of interest.

A VEC must not discriminate in accrediting volunteer examiners on the basis of race, sex, religion or national origin, or refuse to accredit a volunteer examiner on the basis (or lack thereof) of membership in an Amateur Radio organization.

Detailed qualifications of a VEC are contained in Subpart I of the Amateur Radio Service Rules (see Federal Register of 06 October 1983, Volume 48, pages 45652-45661). In order to serve as a VEC, an entity must be organized, at least partially, for the purpose of furthering Amateur Radio, and must not accept any compensation for its services in excess of the statutorily prescribed amount allowable for recovery of necessary and prudent out-of-pocket expenses.

Proposals to become a VEC must contain the entity's qualifications; a showing concerning prevention of conflict of interest; and a statement detailing how the examination program will be implemented in the region or regions for which the entity is applying to become a VEC.

The Commission's Field Office examination schedule, FO-28, December 1983, will remain effective for Amateur Radio operator examinations through 1984, and then amateur operator examinations at field offices will be discontinued. □

Amateurs learn lessons

I have enclosed an article (see below) that appeared in a local paper that covers the North Jersey area, and feel this article is of a suitable nature that bears printing in **Worldradio**. It shows how through careful advance planning by amateur groups, an emergency situation can be taken care of.

I myself am very familiar with the problems that have arisen out of this severe spring storm. In past years, there have been similar problems, but not to the extent this storm was.

The RAVEN Group dedicated many man-hours voluntarily to aid those in distress with complete disregard of their own safety and the possibility of problems that may have arisen at their homes. They all felt the safety and aid they were providing to their fellow man (and woman) was more important.

Though I was not directly involved in their operation due to my position in government service, (I was on a standby basis for callout in the event of a severe problem within the town I live in), I wish to commend all those who did participate in the flooding emergency for their outstanding operation and devotion to their fellow man. In plain and simple language, "They did one great job out there that deserves recognition, and they are all a credit to the amateur community."

I would further like to commend the members of the Oakland Repeater Club for their availability of the 10-70 repeater during this emergency.

EDWIN NARWID, WA2OAF
Police Officer
Ringwood, New Jersey

When the flooding started on the afternoon of Thursday, 05 April, Amateur Radio operators in 11 North Jersey communities and four counties teamed up to establish communications and back up the phones and the police and fire department radio frequencies.

Before the operation was concluded, they had coordinated delivery of Red Cross disaster supplies, arranged for resumption of lost telephone service at the Oakland Fire Department, arranged for a powerful state police boat for a Pequannock rescue operation, backed up the phone system when outgoing phone service was lost in the Wayne Flood Control Center, provided coordination between the various evacuation centers and Emergency Management officials, and provided up-river status information to down-river communities.

The Amateur Radio operators are affiliated with RAVEN (Ramapo Valley Emergency Network), which was formed for such service in an emergency, but is often found providing communications for community events such as walkathons and marathons.

When it became clear Thursday that a major flood was underway, Wayne Police Capt. Tom Mullaney, who also serves as Wayne's Director of Emergency Management, activated RAVEN.

Within an hour, a communications net had been established linking the towns of Pequannock, Pompton Lakes, Butler, Wayne and Kinnelon; points between Mahwah and Oakland along the Ramapo River; and the Morris County Office of Emergency Management in Morris Plains. In Wayne, the evacuation center at Wayne Valley High School was also tied into the net. Other towns and locations joined later.

Early in the operation, RAVEN operator Mike Hoeft, N2DZZ, who had traveled to Wayne to assist, was asked by Mullaney to determine river status further up along the Ramapo.

Hoeft asked RAVEN operators Clint Dysinger and George Kennedy, N2AUR (who was already in the Wayne area), to travel up Route 202 toward Oakland and Mahwah to establish radio communications for that purpose along the route. Via RAVEN, they began to radio traffic and river status reports as they drove toward their destinations.

As the evening progressed, Oakland's fire department lost telephone service. Ron Ackerman, K2VAC, in Oakland notified Jack Janicke, K2JFJ, the RAVEN net control operator in Butler, and Janicke was able to get through to emergency personnel at the phone company, and phone service was restored in a short time.

However, phone troubles were just beginning, and much of Wayne lost outgoing phone service shortly thereafter. This threatened to hamper operations at the Wayne Flood Control Center in the municipal building.

Two amateur operators stood by to place any outgoing calls that might be needed by officials in Wayne.

As water rose, Pompton Lakes was cut off to road traffic in all directions except toward Riverdale and Butler. Evacuations there increased, and Alan Lovitch, Pompton Lakes Director of Emergency Management and RAVEN operator, requested cots and other disaster control supplies. The Red Cross in New York City answered the call, but no means could be found for their vehicles to reach Pompton Lakes.

Via the RAVEN Amateur Radio net, a plan was devised between Lovitch and Ed Solov, K2SE, a RAVEN operator in Wayne. It called for the Red Cross to drive to the Wayne end of the Jefferson Bridge, at Terhune Drive, while Pompton Lakes volunteers would travel to their end of the bridge at Lakeside Avenue.

Although the bridge was closed to vehicles, it was passable on foot, and the supplies could be transferred there. At about 11:00 p.m., Solov, driving his own car, guided the New York City Red Cross people to the rendezvous point, while maintaining coordination with Lovitch via radio, and the delivery was accomplished.

Later, it was reported by Rick Reese, N2DPV, the RAVEN operator in Pequannock, that because of strong currents a powerful boat — in excess of 40 horsepower — was needed in Pequannock for a rescue.

Bob Weingaertner, WB2VUF, at the Morris County Emergency Operating Center in Morris Plains, was contacted via the RAVEN net, and arrangements began for a state police boat to be brought to the scene.

RAVEN operations continued at a lower level throughout the night and through Friday. By Saturday morning, message traffic on the net had subsided and the net operation was secured.

RAVEN was established in 1976 to provide assistance in such emergencies.

Bob Weingaertner, WB2VUF, shared the following comments on the flood emergency activities with us.

Lessons learned

Several important lessons were either learned or reaffirmed as a result of the flood relief operations. Most of the traffic was of a "tactical" or non-formatted nature. Our local ARES and RACES teams were in a high state of readiness for this type of operation due to the considerable experience gained by providing tactical safety and coordination communications for community civic events. Some traffic must go by formal radiogram, however.

Detailed status reports and official requests for assistance cannot be accurately or efficiently handled by means of informal messages. Fortunately, our better operators are NTS-trained, so they can switch from tactical to formatted traffic as the situation requires. Formal traffic produces a hard copy record, but tactical traffic does not. Therefore, when there is a large volume of tactical traffic, it is advisable to have a COR-operated logging recorder or an operator dedicated to monitoring the TAC frequency to take notes.

Logistics was not a problem in this operation — again, due to the experience of our teams in setting up portable stations for civic events, SET and Field Day. Most of the EOC's not equipped with permanent 2-meter stations have permanently installed power supplies and antennas to allow rapid setup of a transceiver. Evacuation centers were covered by mobile or hand-held radios. When operating a hand-held radio in a noisy vehicle, such as a heavy truck or helicopter, earphones and a noise-cancelling microphone allow the operator to hear and be heard. Military surplus handsets and headsets work very well in this application.

Any disaster will bring out three kinds of people: those thinking only of others; those thinking only of themselves; and those not thinking at all. It would be deceptive to pretend there were no coordination and management problems, and it would be folly not to learn from and correct these problems before the next disaster strikes.

A few problems arose which show the need for better coordination among ARES, RACES and local government officials, although in fairness, it must be stated that our EC's have worked very hard in this area. We radio amateurs tend to view everything through the eyes of the communicator, but some local government officials simply do not understand the disaster communications problem and how a good volunteer radio communications system can help them.

For example, a mobile unit was dispatched by the Wayne EOC to Oakland to relay river marker readings to the towns downstream. The radio amateur was denied access to the town, although a mutual aid agreement between Wayne

(*please turn to page 24*)

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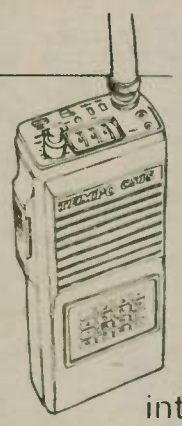

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Special Events...

Bayfest/Shrimporee

The Armadillo Gang will operate KC5UN, 28-30 September, to commemorate "Bayfest 84." Operation will be on 15, 20, 40 and 80 meters, 15 kHz, from the lower General band edges.

A color 9″ × 11″ certificate available via the Armadillo Gang (see address below).

On 20-21 October, the Armadillo Gang will operate WD5HOR to commemorate the Arkansas Pass "Shrimporee". Operation will be on 15, 20, 40 and 80 meters, 15 kHz, from the lower General band edges.

A QSL card is available via SASE to the Armadillo Gang, David Stephens, WB5YPE, 5709 Bobalo, Corpus Christi, TX 78412. □

Little Red School House

The Inland Steel Amateur Radio Association will operate special event station K9DWI to commemorate "The Little Red School House" and Hammond, Indiana's Centennial Year, from 1400Z to 0000Z on Saturday, 06 October.

Frequencies: *Phone* — General Class portions 10, 15, 40 and 80 meters; *CW* — Novice Class portions 10, 15, 40 and 80 meters; 2-meter FM 146.42 simplex. Send legal-size SASE for certificate via Lucy Schendera, N9DTG, 812 E. 40th Place, Griffith, IN 46319. □

Contact a Saint

Contacted a Saint lately? Nine of them from Michigan will be on the air, 06 October, from 1500Z to 2100Z, for the Michigan All-Saints Special Event.

Frequencies will be in the General phone portion of the 20, 40 and 80-meter bands, plus 147.480 and/or the nearest repeater to each. Look for these Saintly cities: St. Joseph KC8JX, St. Helen N8BAR, St. Johns NI8L, St. Clair W8GV, St. Charles WB8TTA, St. Ignace KC8CW, St. Louis WA8AEG, St. James KD8CG and Sault Sainte Marie WA8DLO.

A certificate with endorsements for each Saint contacted will be sent by the Southeastern Michigan Amateur Radio Association to those sending a QSL card with a copy of their log and a #10 SASE to Ed Roney, N8COY, 161 Lothrop, Grosse Pointe, MI 48236. □

Columbus Day

The Columbus Day special event is open to all Amateur Radio operators worldwide, divided into two groups: Columbus, Ohio amateurs (including area suburbs), and all other amateurs worldwide.

The special event will last from 1400Z to 2400Z, Saturday 06 October (15M phone at 21.375 MHz (± 10 kHz)), and from 1400Z to 2400Z, Sunday 07 October (40M phone at 7.240 MHz (±10 kHz)).

The overall objective is to promote the explorer, Christopher Columbus, the city of Columbus, Ohio, and Amateur Radio operators worldwide.

Columbus amateurs are to work Columbus amateurs and non-Columbus amateurs in a relaxed manner. Non-Columbus amateurs are to work Columbus amateurs as required for a certificate.

Exchange: Name, QTH and RST. Columbus amateurs should include information on a certificate.

Scoring: Count 1 pt. for each contact (excluding W8TO). Count 6 pts. for a W8TO contact. A final score of 10 must be submitted to be eligible for certificate. Scores must be submitted within 120 days to be valid.

Certificate: Certificates will be issued to all qualifying amateurs who include SASE's (SAE and 3 IRC's OK for DX). SWL's may receive the certificate on station heard basis.

Awards: A mini-contest will be in operation during the event period. The Columbus amateur with the highest score will receive a plaque for their effort.

All requests for certificates and correspondence should be sent to: Amateur Radio Station W8TO, ATTN: Special Event Coordinator, 280 East Broad St., Columbus, OH 43215. □

Treasure Island

The Garden State Amateur Radio Association, W2GSA, will hold their 5th annual special event on Treasure Island, Monmouth County, New Jersey, to commemorate the stay of Robert Lewis Stevenson on the island after he wrote the

ook by the same name.
The event will be held 06-07 October, 600-1600 GMT. Frequencies: 3.910, 235, 14.235, 21.360. A donation of $1 or ve 20-cent stamps would be appreciated help offset the cost of envelopes and ostage.

QSL to Lou Eloe, WA2SSH, 7 Carol ve., Neptune, NJ 07753. □

Daniel Boone

The St. Peters ARC will operate a ecial event station from 1700 UTC, aturday, 06 October, to 1700 UTC, 07 ctober, at the Daniel Boone Home, emme Osage Valley, St. Charles County, issouri. The event is to commemorate e place where Daniel Boone — fron-ersman, judge, trapper, surveyor, uilder and family man — spent the last years of his life. The weekend celebra-on features a black powder marksmen ntest for local participants.

One complete two-way contact is need-d to obtain a presentation quality cer-ficate on aged parchment featuring a icture of the Boone Estate and an infor-ation brochure of Boone facts.

SPARC will operate KBØJ on (±) 3.915, 240, 14.280 and 21.420, depending on nditions and band activities. A "coon-kin cap" will also be awarded to the first perator making contact on all four ands. One dollar or 3 IRC's with calls nd time of contact should be sent to Tim aake, WAØTSY, 128 Lake Point Dr., St. eters, MO 63376. □

Hot air balloons

Special event station K5MHZ and N5D will be operating during the 13th nnual International Hot Air Balloon iesta at Albuquerque, New Mexico, 6-14 October.

Most operating will be SSB; however, ome operations on RTTY, CW and STV* are planned. Hours of operation ill be variable, and primary frequencies ill be 3900, 7230, 14250, 21350 and 8550 kHz, and 147.510 MHz simplex M.

A special QSL will be available. QSL to .O. Box 997, Corrales, NM 87048. SASE sufficient postage for return required. on request □

U.S. geographic center

The Central Kansas ARC of Salina, ansas will operate WØKQU from the arker of the geographic center of the nited States, in Lebanon, Kansas. peration will be from 1700Z, 06 October, ntil 1900Z, 07 October, 10 kHz up from e lower end of the General Class band. Send for certificate via Larry White, BØBH, 2358 Aurora Ave., Salina, KS 7401. □

One-of-a-kind bridge

The Laurel ARC will operate WA3QGA om 1300Z-2400Z on 14 October to com-emorate the Bollman Truss Railroad ridge — the only one of its kind in the orld. Frequencies: 7237, 14285, 21385, 44.250 USB, and 147.540 simplex.

Certificate available for #10 SASE to ARC, P.O. Box 3039, Laurel, MD 20708.

Center of U.S. population

A special event station commemorating the "center of U.S. population" — De Soto, Missouri — will be held Saturday, 13 October, 1500Z-2400Z, on the lower end of 40, 20 and 15 meters (General band), with some CW in the Novice portion. The Jefferson County ARC is sponsoring the station.

Certificates will be sent to those who mail certificates and QSL's to: Mike Dieckmann, KAØIAR, 3009 High Ridge Blvd., High Ridge, MO 63049. □

Lewis and Clark visit

The Hermiston ARC will operate KC7LK from Hat Rock State Park on 13 October, 1800Z-0100Z, and 14 October, 1800Z-2200Z. The station is commemorating the 179th anniversary of Lewis and Clark's visit to Hat Rock and will be operated in conjunction with the Oregon QSO Party.

Operation will be on the General phone and Novice CW bands. There will also be some 2-meter and 440 MHz operation.

Send a large SASE and your contact number for a certificate to: HARC, P.O. Box 962, Hermiston, OR 97838. □

Alcatraz Island

On Saturday, 27 October, the Sacramento ARC will be operating from Alcatraz Island, using club call W6AK. We will be making CW and phone contacts from 1730Z until 0000Z on the following frequencies: *Phone* — 3.950, 7.270, 14.300, 21.400, 146.54, 147.54; *CW* — 3.725, 7.125, 14.050, 21.085.

Special QSL cards will be available for one QSO. SWL's are also welcome. Those wishing a QSL card must send an SASE and QSO information to Scott Jercich, KB6CCG, 2720 Tierra Grande Circle, Sacramento, CA 95827. □

Technology in the 'second century'

One hundred years of technological progress — from Alexander Graham Bell's talking machine and Thomas Edison's jumbo generator to the microcomputer and the laser — will be observed by a major technical convocation that will examine the impact of technology in the next century.

"The Second Century Begins: The Institute of Electrical and Electronics Engineers-Franklin Institute Centennial Technical Convocation" will be held at the Franklin Institute in Philadelphia, Pennsylvania on 08-09 October. It will feature presentations, panel discussions and papers by more than two dozen leaders in engineering, industry and academe.

To give the worldwide Amateur Radio community an opportunity to participate in the event, the Franklin Institute Science Museum Amateur Radio station W3TKQ will be operated by the Philmont Mobile Radio Club as a special event station. Operation will be during normal museum hours, from 10:00 a.m. to 5:00 p.m., Saturday, 06 October, and noon to 5:00 p.m., Sunday, 07 October, in the General Class portion of 75, 40, 20, 15 and 10-meter phone band, with some work in the Novice bands. FM and SSB operation is planned for 144, 220 and 440 MHz.

A certificate commemorating the event will be issued to those making radio contact with W3TKQ.

The convocation will mark both the 100th anniversary of the 1884 Franklin Institute International Electrical Exhibition of the first technical meeting of the IEEE's predecessor, which was held in conjunction with it. The 1884 exhibition, the first of its kind in America, was attended by such major figures in the history of science and engineering as Edison, Bell, Edward Weston and Elihu Thomson.

A three-month temporary historical exhibit will open at the Franklin Institute Science Museum in honor of the October technical convocation. Entitled "Milestones of the Electrical Age," the exhibition will include a generator made by Thomson, an original hand-made DeForest audion tube and a low-power microwave communications system. Other exhibits being planned by corporate participants include material on the history of computing, consumer electronics, aviation electronics and electrical control of industrial processes.

"The technological achievements of the last century have become so much a part of our lives that it is easy to overlook the great progress we have made in a relatively short period of time," said Dr. Joseph Bordogna, dean of the University of Pennsylvania School of Engineering and Applied Science and chair of the convocation organizing committee. "This is a most appropriate time not only to acknowledge past achievements, but also to look ahead at technology in the next

century through the eyes of some of the nation's most distinguished engineers, scholars and industrial leaders."

The technical convocation will consist of three sessions:

Session I The impact of electrical and electronic technologies on human endeavor in the next century. The major areas to be considered are space, information and communication, and medicine and biological systems.

Session II Major technical developments in the next century. Areas to be focused on are microelectronics technologies, computers, and energy and power conversion.

Session III Priorities for the next century. The specific topic areas will be integrated manufacturing technology, education and R&D management.

The keynote speech will be given by Bernard Oliver, technical consultant to

the president of Hewlett-Packard Co. and former president of the IEEE. Following will be a discussion by a panel consisting of Joshua Lederberg, president of Rockefeller University and a Nobel Laureate in Medicine; Charles H. Townes, professor of physics at the University of California, Berkeley and a Nobel Laureate in Physics; and Alvin Toffler, author of *Future Shock* and *The Third Wave.*

Richard J. Gowen, president of the IEEE; Edward E. David, Jr., president of Exxon Research and Engineering; and Richard T. Nalle, Jr., president of the Franklin Institute, will also participate in the keynote ceremonies, which will be televised nationally via satellite to section meetings of the 250,000-member IEEE.

The IEEE traces its origins back to 1884, during a period when electrical illumination, electrical power and distribution, the telegraph and the telephone were on the threshold of becoming integral parts of American life.

From 1874 to 1884, several major industrial exhibitions were held in Philadelphia to demonstrate what the industrial revolution had done to assist society in its labors. To show that electricity was ready to assume a great share of that service, the Franklin Institute held an exhibition devoted solely to electrical science and industry, which was attended by the inventors who laid the foundations for the electrical industry.

In May 1884, the American Association of Electrical Engineers (which was later to become the IEEE through a merger with the Institute of Radio Engineers) was founded. In October of that year, the association held its first technical meeting in conjunction with the Franklin Institute's International Electrical Exhibition. □

Jamboree On The Air

What it is

JOTA is an annual Scouting/Amateur Radio event. It is always held during the third weekend of October. This is the 27th year it has been held.

Thousands of stations around the globe participate. If propagation is right, it is common to work Scouting DXCC. In past JOTA's, Scouts in some remote areas like Antarctica, Ascension Island, Christmas Island, Gough and Seychelles were heard.

In the USA, many Scout Councils and Districts hold camporees to coincide with JOTA, where amateurs set up Field Day-type operations, giving campers a chance to exchange greetings with Scouts everywhere.

Generally, the exchanges include typical information: name, QTH, Scout rank, hobbies, etc., with some leading to long-lasting pen pal friendships and the exchange of photos, badges and patches. SSTV and ATV give some a chance to have a "look-see" at the other guy. Other QSO's reported were via RTTY, EME and OSCAR.

Look for K2BSA, the BSA headquarters station in Dallas, Texas; HB9S, the World Scout headquarters in Switzerland; and for other special call signs from many countries.

Who

Boy Scouts and Girl Scouts of all ages, Scouters, former members, Amateur Radio operators; in fact, anyone interested in doing a good turn for Scouting and Amateur Radio.

When

Saturday, 20 October, 0001 local time to Sunday, 21 October, 2400 local time, though some activity flops over from Friday to Monday to take advantage of DX time differences.

Where

Calling frequencies are: *CW* — 3,590, 7,030, 14,070, 21,140, 28,190; *Phone* — 3,940, 7,290, 14,290, 21,360, 28,990; *RTTY, SSTV* and *ATV* on usual frequencies. Check the Novice frequencies. Please move off these calling frequencies to avoid QRM.

Reports

NO reports in the form of logs are necessary. This is not a contest. Exchanges should be relaxed and relate to Scouting and Amateur Radio as much as possible. Brief reports are appreciated, giving Scout unit numbers, ham calls used and heard/worked, numbers of participants, interesting incidents and exchanges, etc.

Photos with captions especially welcome for the BSA report to the World Bureau. Send them to JOTA Coordinator, W2GND, 216 Maxwell Ave., Hightstown, NJ 08520.

How

Invite Scouts/Scout Units to your shack. If you do not know any, contact your local Scout office for the name of the unit leader in your area. Or, you or your radio club may volunteer to participate in a district or council camporee that weekend. Phone books list council offices as Boy Scouts of America. Call "CQ JAMBOREE" or respond to such calls. Observe all FCC regulations. Consider a Fox Hunt for more fun.

Certificates

Certificate cards (the size of a postcar are available to anyone participating any way. They may be ordered befor hand for presentation during JOTA, they may be awarded at Scout or AR meetings later. Send requests to: Jar boree On The Air, 1325 Walnut Hi Irving, TX 75062, with an SASE larg enough to hold the cards ordered, and a fixed postage at 20 cents for the first 1 cards and 17 cents for each eight card thereafter.

Pocket patches

Temporary insignia to wear on th Scout uniform or on jackets are availab at $1.25 each from the Texas address (s above). Separate orders for certificat and patches will get them to you faste

QSL card contest

The World Scout Bureau, sponsor JOTA, holds a QSL card contest with fiv prizes for the best hand-made cards an five prizes for the best printed cards. E tries must be designed by registere Scouts (boy or girl), 18 years of age less. They must be standard postcard siz and be marked on the back with nam age, Scout unit and full home addres (include USA).

Send entries to JOTA QSL Contes World Scout Bureau, P.O. Box 78, 121 Geneva 4, SWITZERLAND. They mu be received by 31 December 1984. Entrie will not be returned; winners will b notified by 31 March 1985.

It would help if radio amateurs woul initiate such suggestions, giving idea about QSL card design, including Scou and Amateur Radio cartoons, etc.

The Philippines remembered

On 20 October 1944, U.S. troops landed on Leyte Island in the Philippines. One of the four divisions participating was the 24th Infantry Division. 20 October 1984 will mark the 40th anniversary of this historic event. In remembrance of the landing and those who took part, the 24th Infantry Division Association will operate a special event station, K4TF, from Merritt Island, Florida.

The Association will offer a special commemorative certificate to any amateur station making two-way contact with K4TF during the 24-hour GMT period of 20 October. Operations will take place a proximately 10 kHz inside the Gener portion of each amateur band. Bands be used will be dependent upon propag tion conditions. Certificates will also available to shortwave listeners who su mit correct reports of reception.

To obtain a certificate, submit a QS card and a large (9″ × 12″) SASE K4TF, 1630 Venus St., Merritt Island, F 32953. If you don't mind your certifica being folded, a business-sized SASE w do.

Sunbelt Expo

The Colquitt County Ham Radio Society will be operating club station WD4KOW from the site of the 7th Annual Sunbelt Agricultural Exposition on 16-18 October. The hours of operation will be 0900-1700 EDST each day.

This annual Sunbelt Expo is held each year at Spence Field Airbase, located near Moultrie, Georgia, and is the largest agricultural show in the South. This event draws over 200,000 visitors from all over the United States and foreign countrie

Operations will be in the General po tion of the HF bands. The members w also be listening for visiting amateurs o the local repeater 146.19/.79. Visiti hams are invited to visit the amate booth at the Expo and operate th amateur station.

A special QSL card is available f those making contact during this eve and submitting an SASE to: Colqui County Ham Radio Society, P.O. Bo 813, Moultrie, GA 31768-0813.

Are you involved in public service?

Send NEWS and PICTURES to WORLDRADIO

Armed Forces Day

Joe Rice, W4RHZ

Each year, in May, all the military radio stations are permitted to work Amateur Radio stations. Each of the military branches — Navy/Marine, Army, Air Force and the Coast Guard — work amateur stations crossband. The military radio stations are assigned frequencies outside of the amateur bands, and this means each amateur operator must have a second receiver capable of tuning in the military stations.

Assume for the moment that we wish to work WAR, the Army station, which is on 6997.5 kHz, and will listen from 7025 to 7150 kHz. As I only work CW, my remarks on this writing will only pertain to that mode, but essentially the same technique is used for other modes. WAR will call CQ and then say "QSX 7030 KHZ." This means he will listen on that frequency.

Use your regular amateur rig and call sign, and all the while, listen on WAR's frequency to see who he comes back to. Assume for the moment that he returned to another station. You now monitor both ends of the QSO and you zero beat the amateur station and when they are through, call WAR again.

35TH ARMED FORCES DAY

1984 MEET US IN THE CHALLENGE 1984

A special commemorative QSL will be sent to you if you make the contact. Due to the many address changes and call sign changes, it is best to send your QSL to the address listed in **QST** or **Worldradio**. That way, they have your correct mailing address. All the Callbooks have a printing delay of several months, and I believe the military stations have been reluctant in recent years to waste postage on incorrect addresses. So it is up to you to initiate the QSL exchange.

This past 19 May marked my 27th consecutive year in participating in Air Force Day (AFD). It has been a challenge and at the same time, a lot of fun over the years. Of course, Murphy's Law is bound to set in — thunderstorms, leaky power lines, etc. — but hang in there because it it worthwhile to keep the lines open to our military. Each one of us helps keep the good relationship between the military and the ham community we have enjoyed in this country for many years.

The highlight of AFD is the CW copying contest, which begins after the call-up at 0300Z. I have copied both the CW and RTTY in years past, but my chief fun is in the CW copying contest. It begins rather abruptly after the call-up of VVV VVV VVV de WAR WAR WAR, etc. The speed is between 25 and 30 wpm and is a real test of any CW operator. As you know, printing techniques run out at speeds over 15 wpm and then a person must resort to either longhand or the typewriter — or mill, as CW ops call it.

It is only fair to tell you that the military stations deliberately misspell words to confuse a person and use all the marks of punctuation. Sometimes they will send CMN for a comma and spell PD for a period. Be careful you don't confuse PD for a badly sent AND! You may have to copy what the military calls a "separation" sign, which is used like a hyphen. Actually, this sign is a throwback to the old American Morse letter Y which is two letter I's sent didit didit and the preamble of the text may consist of this: NR 32-GR 412- which means msg nr 32 with a text count of 412 words. It is wise to be on friendly terms with the quotation mark, the bracket or parentheses, and with the period and Morse comma. Sometimes they use the letter R to mean a decimal (such as in 29.5 MHz), the dot or period.

The author, Joe Rice, W4RHZ

W1AW also uses this for a decimal.

In the matter of copying CW, there will always be those skeptics who wink at you while they mention tape recorders. Of course, we all have tape recorders, but how could I live with myself if I cheated by using a recorder as a crutch?

We dyed-in-the-wool CW people do have a lot of pride in our sending and receiving abilities. I have always ended my copy with these words: "THE ABOVE COPY WAS MADE DIRECT FROM MY RECEIVER WITHOUT PERSONAL, MECHANICAL OR ELECTRONIC HELP OF ANY KIND." signed, Joe Rice, W4RHZ

Even though I have the W1AW certificate for correct copy at 40 wpm, I too have that squeamish feeling in the pit of my innards when I take any CW test.

Seems like it is normal to freeze up at this simple word "test" and to feel sweat break out on one's forehead and feel the sweat run down our fingers. It is best to have a code speed of at least 35 wpm to copy AFD. Good luck, and see you next year.

Olympic special event stations

Dick Mannheimer, K6LAE

Spurred by Olympic Games spirit and continued dedication to public service, hundreds of amateurs in California joined to assist officials in making the XXIIIrd Summer Olympiad successful. From support of the equestrian event at Fairbanks Ranch near San Diego, activities stretched all the way north to soccer preliminaries at Stanford University in Palo Alto.

Many stories can (and will) be written about ham support of the 1984 Summer Olympics, but this one focuses on the two special event centers of activities: NG84O on Main Street, UCLA Olympic Village, Los Angeles, and K84OG/W84OG/W23OG at three sites on the Stanford campus in Palo Alto. Similar by virtue of operation from Olympic locales, the story is really two, as details will show.

The saga of NG84O started some two years ago, when the Los Angeles Council of Amateur Radio Clubs approached the Los Angeles Olympic Organizing Committee (LAOOC) with an offer to set up stations at the three Olympic Villages (University of California at Santa Barbara, University of California at Los Angeles and the University of Southern California) where the athletes were to be housed. The purpose was free message services for athletes, coaches and officials to countries permitting third-party traffic.

When the LAOOC showed interest, efforts were started through official radio and diplomatic channels to expand third-party agreements. The hope was for stations in all three Olympic Villages with worldwide traffic handling authority (as was the case with W6USA during the 1932 Los Angeles Olympics).

Well over one year later, May 1984 to be exact, the LAOOC finally decided there could be Amateur Radio operation, but only in one village — UCLA. All the planning for three stations had to be restructured to establish an optimum team of 40 operators with the available time, dedication and traffic handling experience to cover the minimum 12-hour-per-day 14 July-15 August schedule required by LAOOC. Once scheduled, the detailed process of obtaining clearances and badges started. Considering the spotless safety record of the Olympics this year, it undoubtedly was necessary, but it took lots of time.

Having decided on 2 meters for traffic handling; 70cm for traffic back-up and maintaining contact with the team managers (LAOOC wanted $800 to install a telephone); and 20/15/10 meters for special event contacts when not busy with traffic, Chip Margelli, K7JA, and Jim Rafferty, N6RJ, arranged Yaesu and Cushcraft equipment for use by the station and the managers.

Yaesu included the FT-726R with 440-450 MHz unit; FT-77 with FP-757HD power supply and FV700DM VFO; SP-980 speakers; MD-1B8 microphones FT-708R handies; and a FT-730R mobile transceiver with FP-80A power supply. Cushcraft included a compact 3-element tribander Model A-3 for 20/15/10; a 6-element 440 MHz model A449-6; and a 4-element 2-meter model A147-4.

Due to the location of the station, a tower was not permitted, so the antennas went up 15 feet on two sets of telescoping TV masts. That was quite enough for VFH and UHF. It wasn't really for 100W on 20/15/10, although during the first two weeks of operation, the special event station worked 40 countries. Halfway through, one of the operators brought in a spare linear which brought the power to approximately 1000W PEP. This helped raise the country total to 80+ — not bad, considering band conditions and the low antennas down in the trees.

Message traffic turned out to be far below plans and expectations. Athletes were much more constricted by training, travel to remote sites and periods of competition than anticipated. The station was well off the beaten track and not too well advertised, perhaps understandably since the activity was not part of the LAOOC staff nor a paying contractor. And the ease with which calls could be made over commercial lines, well publicized by the sponsoring companies, took much of the Amateur Radio message charm away.

The heaviest traffic was for Romania, Israel, Australia, Costa Rica, Brazil, Colombia and other parts of the United States; most other South and Central American countries had one or two each.

The greatest regret was the number of athletes from other countries that came by but found their country had not accepted the invitation for the temporary third-party agreement. Total traffic exceeded 100 messages and could have been two to three times that had the third-party concept taken hold.

With traffic at low ebb, the opportunity for special event contacts exceeded expectations. When the dust settled on 15 August, more than 8,000 contacts were in the logs. As there were only a sprinkling of Field Day and contest operators among the team picked for traffic skills and scheduling flexibility, some pile-ups were not worked to their limit. Many Los Angeles operators learned for the first time how it feels to be a rare one in these days of DX, prefix and special event hunters.

Fried Heyn, WA6WZO (left), ARRL District Manager, and Don Wallace, W6AM, one of the 1932 Olympic Village operators, pass out special event contacts from NG84O.

The story of the Stanford station is one of significant contrast next to NG84O. As plans for the Olympic Soccer preliminaries first began to develop, the Disaster Services Division of the Palo Alto Red Cross offered the LAOOC assistance with disaster control, crowd and traffic handling, and message traffic for the visiting teams in the Olympic venue. The response was enthusiastic. Not completely devoid of delays and time-consuming arrangements, the acceptance was nonetheless far quicker and laid the foundation for support integral to the success of the Olympic activities on the Stanford campus.

At this point, the Red Cross was joined by the Northern California DX Foundation to provide three well equipped stations right in the middle of things. Each featured appropriate 2-meter equipment for Olympic needs, but also had privately loaned exciters and full gallon linears variously driving 6-element monobanders, tribanders, half-wave slopers, verticals and dipoles covering 432 MHz through 160M — all at heights assuring highly effective signals and major pileups.

One station was adjacent to the Stanford football stadium, one of the four sites for soccer competition (Pasadena Rose Bowl, Harvard and Annapolis being the others). A second station was adjacent to the Red Cross facilities. The third, operational only for the 28-29 July opening weekend, was at the site of the BIG dish used by the Stanford Research Institute for deep space research and tracking. Not only was this dish used as the foundation for the ham antennas, but it was also loaded up on 434 MHz for some direct communications with Long Beach and other Los Angeles locales. (Unfortunately, NG84O was in the 440-450 MHz spectrum or direction communication might have been set up between the two operations.)

The 11 Red Cross operators selected on the basis of service skills and time availability became a most necessary adjunct to Olympic officials during opening ceremonies and each of the ensuing soccer games which ended on 08 August. Over the weekend of 28-29 July, first class 48-hour special event operations were staged by 25 members of the Northern California Contest Club, not only from the BIG dish site but from the Stadium and Red Cross sites. Thereafter, the various bands were operated on a non-interference basis with Olympic support activities.

Contact count exceeded 11,000 during the 28 July-08 August period. During a period of disturbed ionosphere, 59+ contacts were made between NG84O, K84OG and W84OG on 20 meters at 0430 UTC, which — it turned out — was the only time the two Olympic sites could clearly hear each other.

Of the Olympic teams at Stanford, only two (Brazil and Costa Rica) were from third-party countries. Phone patch traffic was planned and briefly implemented for them until some athletes from a non-third-party country complained about unequal treatment of the teams at the venue. LAOOC officials quickly prohibited further patching of any kind (by making the stations off limits to the athletes).

As the Stanford stations pulled the switch on 08 August and the UCLA Village Station did so on 15 August, the Olympic operations went from power on to storage. For more than 75 Northern and Southern California amateurs who operated the stations, and the many behind-the-scenes traffic handling stations, the 1984 Summer Olympics memories will always be "as good as the gold." □

Correction

Page 56 of the September 1984 issue of Worldradio showed a display of Steve Solo, W8IEC's license plates, as well as a list of awards Steve has won over the years. An error was made in the total number of awards, however. Steve has over *450,* not 45. Our apologies to you, Steve. □

Olympics

(continued from page 4)

Ham Watch

Another group assisting LAPD is the nearly four-year old Ham Watch of the Van Nuys Division. It provided 300 man (and woman) hours of surveillance by 27 amateurs covering shifts between 8:00 p.m. and 5:00 a.m.

They were assigned by Captain Art Sjoquist to the important perimeters of the athlete villages at UCLA.

Leading the group was John Olip, WB6YQT.

RACES

As usual, Los Angeles County RACES was able to strongly support the Sheriff Department with the excellent mobile van, K6CPT. Each day, around the clock, seven days a week, a dozen amateurs provided backup communications for the Department of Defense and all law enforcement and public safety agencies, under the leadership of Dave Jensen, WA6HXF.

Topsail '84

A spectacular prelude to the Olympic Games, part of the Olympics art festival, featured the full-rigged Tall Ships parade, with representatives from many nations, off Long Beach, Manhattan Beach and the famous Marineland, 04 July.

A hundred amateurs from the Southcoast Radio Amateur Network and Hughes Aircraft Company Radio Club provided an operator aboard each ship, assisting the ships to maintain precise positions.

Thousands of spectator boats presented a special safety problem as well.

In addition to the usual 2-meter FM rigs, packet radio was used — possibly for the first time in such a large event, and it was highly successful, not only for the ship captains but for visitors who could visually observe the digital communications.

Red Cross

A complete station, permanently equipped for 80 meters through 440 MHz, was set up at the Los Angeles Chapter of the Red Cross. For the entire Olympics period, it was manned 24 hours a day. The station was in touch with other Red Cross chapters in Southern California, Nevada and Arizona through a 440 MHz repeater network.

Equipped with emergency power, this very flexible station is now permanently available to the Red Cross. □

Jack Newell, KM6R, stationed at Obstacle #4 of the Endurance Course, Equestrian Event, for reporting progress of participants as well as accidents which might occur. One HT is on a 450 MHz net, the other as backup on 2-meter net. Eighty Amateur Radio operators provided communications for the event and were coordinated by Steve Simek, WA2NNT.

Phil Smith, WB6LQP (left), and Bob Kneebone, N6AZV (center), stand by as Ernie Williams, WB6BAP, looks through a telescope toward camera/transmitter site #3. The *Queen Mary* and dome covering Howard Hughes' *Spruce Goose* loom into view.

At camera/transmitter site #1 in Rancho Palos Verdes, Phil Smith, WB6LQP, gets a binocular view of the Tall Ship parade's start near Manhattan Beach Pier. Near Bob Kneebone, N6AZV (center), is a 10-inch cassegrain telescope with color video camera feeding video modulation to the 434 MHz transmitter on the picnic table. The Yagi, above Ernie Williams, WB6BAP (right), points to Long Beach Harbor.

Operating the Torch Relay base station aboard a motorhome of the caravan is Les Turner, K4ZGE, keeping in daily QSO with the AT&T headquarters in White Plains, New York, as well as the hundreds of local repeaters as the caravan crossed the country, in a plan arranged by Steve Mendelsohn, WA2DHF. *(Photo by Bob Jensen, W6VGQ)*

Doug Jeffcoat, K2VLK (left), is shown with the computer next to the amateur station in one of the 14 large motorhomes in the caravan which serviced the Torch Relay. Ron Moorefield, W8ILC, traveled with him for five weeks and was responsible for much of the well-run ham operation. Doug is District Engineer, Research and Technical Support. AT&T from White Plains, New York. Ron is active with the Dayton group staging the yearly huge HamVention. *(Photo by Bob Jensen, W6VGQ)*

The sacred Olympic flame, kept safe in miner's lamps, and the torches given to each runner were under the care of Harold Littell, WA8MRT (right), who went the entire way with the Torch Relay caravan. At left, is Ron Moorefield, W8ILC, who was one of the dedicated amateurs responsible for the success of the thrilling event. *(Photo by Bob Jensen, W6VGQ)*

Olympic Torch Relay

Norm Brooks, K6FO

On Saturday, June 09, as the Olympic Torch Relay ran through the storms in Kansas, I was aware that Bob Carpenter, W0NLQ (Oswego, Kansas); Gene Hanner, WB0ZEN (Overbrook, Kansas); and Bill Wood, WB0GCJ (Waverly, Kansas), were giving us reports while "watching the weather radar." At the time, I was not aware of the details until I read this item in the July 1984 issue of the *Procrastinator*, the newsletter of the Pittsburg (Kansas) Repeater Organization:

During the second of two "tornado watch" evenings last week, new equipment in the Labette County Emergency Operations Center was used to assist members of the Olympic Torch Relay caravan as it passed through southeast Kansas.

Marilyn Martin, County Emergency Preparedness Director, said the EOC at Oswego and volunteer spotters were on standby alert both Friday and Saturday nights. On Saturday night, as the torch runners left Burlington on their way south to an overnight stop at Altoona, Bob Carpenter, W0NLQ — communications officer for the EOC — made radio contact with the torch relay director to advise him of the tornado watch. Carpenter, a ham operator since the late 1930's, reported the location of thunderstorm cells that might have affected the runners.

Martin said that a new color TV set, recently purchased by Labette County for the EOC, was tuned to a special Amateur Radio TV (ATV) frequency used by amateurs of the Pittsburg Repeater Organization to transmit a continuous picture of the KOAM-TV area radar during periods of severe weather.

"The new amateur equipment is proving to be of great help in showing the location and movement of individual storm cells and will aid in directing our volunteer storm-watch teams to the best spots to watch for funnel clouds," Martin said.

"Carpenter, using the new ATV radar picture, the EOC amateur station, and a 2-meter Amateur Radio repeater at Humboldt, made several contacts with the Olympic team to reassure them that the lightning they were viewing ahead of their caravan was from storms that would be out of the way before they reached Altoona, at the caravan's 8 mph rate of travel.

We again say "thank you" to the above amateurs and to the members of the K0VEV/R repeater, all of whom served us so well that stormy Saturday. □

Marathon officials impressed with hams

Chuck Lobb, KN6H

"Your communications are fabulous. How did you learn to do all that?"

The words are those of Dr. Eugene Osher, Senior Medical Officer for the men's and women's marathons. Continuing, Dr. Osher stated, "From the top to the bottom in this organization, everyone has a right to be proud." From LAOOC Executive Vice President Harry Usher through Co-Commissioner of Athletics, Bill Bedford, this sentiment was echoed.

How did amateurs do it? How was it possible?

It took work — enormous work — that began in very early planning stages. The marathon run, the longest and most grueling Olympic event, covers 26 miles, 385 yards of significant organizational challenges, particularly communications.

From the start at Santa Monica City College to the finish inside the Los Angeles Memorial Coliseum, the course wound through some of the most densely populated areas in Los Angeles. The task required nearly 4,500 volunteers (supported by 56 individually selected radio amateurs) to meet this challenge. Fourteen zone chiefs, 52 mile chiefs, 4,000 course marshalls, eight physicians, 12 nurses, 14 trainers, 20 roving Red Cross teams, security and law enforcement personnel and 23 race management officials all had to be supported by a smoothly running communications system.

In early 1984, ARRL Vice President Jay Holladay, W6EJJ, selected Bill Carpenter, WA6QZY, to head up this effort. Bill — with extensive experience in providing communications with ARES, the Edgewood Amateur Radio Society, and management of the W6FNO repeater system — already had a developed cadre of amateurs experienced in supporting running events.

The Olympic Marathon was initially envisioned as a network to support the medical team, but the task soon escalated as the eleventh hour approached. Chuck Lobb, KN6H, of the Hughes El Segundo ARC, was contacted to supply additional amateurs experienced in supporting long-distance runs. When the dust finally settled, a total of 56 amateurs from seven radio clubs in Southern California were ultimately qualified for the two marathons.

The Medical Team, in the words of Marshall Manager Len Wallach, needed the "communications experts," and that meant radio amateurs. The Medical Net included five ambulances and a Command Car (each with a physician, nurse and ham); two "sag wagons" (with hams), eight on-course fixed aid stations (each with a nurse, trainer and ham); 21 roving teams of two Red Cross first aid personnel for spectator first aid (each team with a ham); and additional amateurs at net control, for technical support, and at the

The Olympic Torch at long last approaches the Los Angeles Memorial Coliseum through a suburban Los Angeles neighborhood. ***(Photo by KN6H)***

Sports Medicine facility in the coliseum.

In addition to the Medical Net of amateurs, Bill Carpenter was commissioned to take charge of the Security Net, the Operations Net, and the Command and Control Net. These latter three were non-ham networks, involving repeaters and hand-held transceivers allocated to the marathon venue by the Los Angeles Olympic Organizing Committee.

Bill and his cadre of technical specialists were therefore charged with a massive and short-fused logistics and training task over and above ham duties, to (a) set-up portable repeaters in a suitable location to cover the hand-helds on the course; (b) maintain, control, distribute and collect 212 hand-helds prior to and subsequent to each marathon event; (c) train over 200 non-ham volunteers how to participate in a some-time-simplex, sometime-repeater controlled net operation; and (d) somehow keep all the batteries charged, all the channels properly crystalled, and all maintenance actions promptly completed.

Did it work? Was all this ham capability up to the task? Let's follow through a marathon race and see how it went:

On race day, amateurs began reporting 10 hours prior to the starting gun, for the 8:00 a.m. start on the Women's Marathon, 05 August, and 5:00 p.m. start on 12 August for the Men's Marathon. In bright yellow and orange uniforms, the 41 amateurs with on-course assignments checked and rechecked hand-helds, spare batteries, rubber ducks and magmounts.

Coverage with net control was verified, and last-minute instructions conveyed. Rendezvous with medical team personnel followed, including five ambulances, eight fixed stations, "shadows" for senior medical personnel (both Red Cross and physicians), the ambulance dispatcher and 22 roving first aid teams. Each of the groups subsequently headed for their assignments with a lump in their throats but confidence in their abilities.

Once on the course, the first item of business is check-in with Net Control. Since a 55-ham VHF net poses special problems due to its size, radio amateurs were careful to stick to very short, direct transmissions and only when related to medical or emergency matters. Furthermore, each used an earphone or headset to conserve battery power and provide some insulation from spectator noise. Lengthy call signs were abandoned (with the exception of W6NRY Net Control), in favor of abbreviated "Team 5", "Medic 2", "Ambulance 3" designators, that were not only shorter but instantly identified the location and assignment of the caller.

Few problems occurred. On the contrary, the smoothness of the Medical Net was so evident that after a period of several minutes of monitoring, Senior Medical Officer Dr. Gene Osher made the "fabulous" statement at the beginning of this article.

Once the SMO and his team of first aid, trainer and ham support personnel entered the coliseum, net operation changed slightly. A direct simplex frequency was activated between the floor of the coliseum and the sports medicine facility inside the tunnel. (A special antenna atop the coliseum was rigged to ensure coverage from the depths of the tunnel.) Medical personnel attending to runners needing attention on the coliseum track were therefore in constant touch with the facility, with physicians on the field, physicians on the course and with a fleet of electric-powered ambulances stationed in the tunnel.

As an illustration of the success of this system, spectator and competitor medical attention, subsequent steps and transportation arrangement, first aid team whereabouts, ambulance whereabouts, and even the status of a spectator inadvertently stepped on by a police horse were all at the fingertips of the SMO and Deputy SMO.

It worked. It was a fantastic success, particularly when compared to the side-by-side operation of the three non-ham nets. The secret of success? Clearly, experience and discipline with net operations and an absolutely outstanding Net Control. Terrie Maguire, WB6MRZ, was so impressive that nurses on the course were moved to comment on the efficiency of her operation.

As with most events when working closely with others — particularly if the event is successful — a strong camaraderie develops. The 56 amateurs all felt this attachment, and were saddened a bit knowing the Olympics only happens once. "No it doesn't," one ham chimed in, "We'll do it again in 52 years, won't we?" You bet we will. *All* of us. □

OFF THE AIR

K6FO will celebrate 50th anniversary

As an old and long-time friend of one of the members of the **Worldradio** staff, I thought I should call your attention to an event you may not be aware of. I do not know the exact date, but either some time this year or early in 1985, your Associate Editor, Norm Brooks, K6FO, will celebrate his 50th anniversary as a licensed Amateur Radio operator.

I have known Norm since the mid-'30s, when we both lived in Cleveland, Ohio. Back in those days he was W8NIC. Our paths separated with the start of World War II, when he went into the Air Force and I into the Navy. I saw him briefly in 1945 in California, when I was on my way home after being discharged at the end of hostilities.

That was our last real contact until September 1983. At that time, I was a delegate to a national convention of the Telephone Pioneers of American being held in Chicago. The morning after our arrival, the telephone in our room rang and my XYL announced that it was for me. The voice at the other end was Norm. What a pleasant surprise!

His lovely wife, Rita, had not been able to fall asleep easily the night before and while Norm was pounding his ear, she spent her time reading through the directory of delegates in attendance. When she came across my name she circled it in red and left a note for him to look on the marked page.

He too was a delegate. To say our reunion was a joyous occasion would be an understatement. He was still the same Norm I had known 40 years earlier. The same twinkle in his eye, the same always pleasant smile on his face, the same enthusiasm he had always exhibited toward life.

Norm's recent participation in the Olympic Torch Run is an outstanding example and measure of that enthusiasm. Norm had been helping to carry the torch for Amateur Radio for 50 years and a loyal and hard-working member of the Telephone Pioneers of America for at least 25.

God bless you, Norm, and Happy Anniversary.

RUSSELL SIEVERT, W8OZA
Columbus, Ohio □

Olympic activities in San Diego

There were approximately 100 amateurs involved in the Olympic event (equestrian) at Fairbanks Ranch, Del Mar, San Diego County. What a memorable experience that was. Also, I am very proud to say that Southern California amateurs showed rare form during this strength-and-endurance equestrian event. There was absolutely no interference or jamming of any frequency we were on. We were on 2 meters, 220 and 440 MHz.

We arrived on site around 6:00 a.m. and stayed until after the last horse and rider had finished, around 5:00 p.m. There were amateurs stationed at each of the 33 jumps, advising the control room of what horse and rider had penalties or falls, etc. Further, every vet and medical site had its own amateur stationed with them. The life flight helicopter had an amateur, as did all vet and medical mobile teams, the spectator hospital and sports medical trailer. There were amateurs who did nothing but repair faulty equipment (tote boards, commercial radios, etc.).

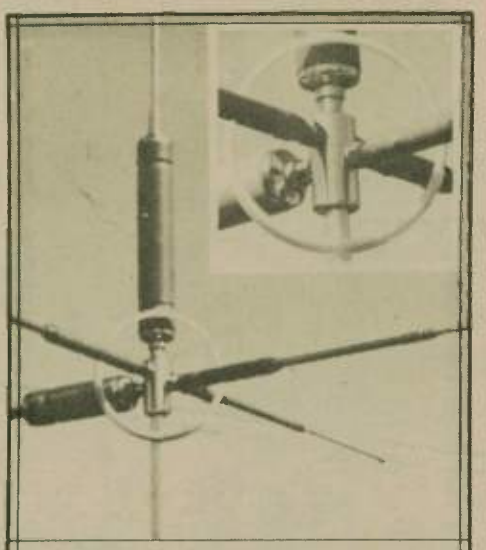
Dee Crumpton, N6ELP

No Amateur Radio failed during those long hours. The base station had rigs on 2, 220 and 440 (two each), covering four "networks" at all times, for there were no breaks in the scheduled event, other than five minutes between starts. Sometimes there were as many as four horse-and-rider teams on the obstacle course at a time. Of course, there were falls of riders and horses, and medical emergencies of horses, riders and spectators. Obstacles had to be repaired; galloping lanes cleared of spectators; people, equipment and horses moved. All worked as smooth as clockwork.

I happened to draw 'choice' duty and got to ride on a golf cart with the chief fence judge and saw a lot of the "action".

I was so proud of America for hosting the Olympics; San Diego County for being included, showing off its beautiful weather and lovely area (I live about five miles from the site); Fairbanks Ranch for having the event; but mostly, I was bursting my buttons for the fantastic job done by Amateur Radio operators, who gave so much of equipment, time and dedication to seeing that the job was well done.

DEE CRUMPTON, N6ELP
Editor/Publisher, RTTY Journal
Cardiff-by-the-Sea, CA □



Where's the QSL?

(ED: Perhaps some of our readers can help Roger out.)

On Sunday, 05 February, I made contact with a special event station for the Bing Crosby Pebble Beach Tournament. The special event station call was K6LY. Contact was made at 12:09 p.m. PST, on SSB (7246 kHz).

The operator of the station was asked if an SASE was required for the special event QSL and the answer was "No." I am still waiting for one of those fancy cards. I wonder what happened?

ROGER ALEXANDER, W6FGN
1934½ Edgemont St.
San Diego, CA 92102 □

WIA agrees with RCA

Fred Shunaman is incorrect to say the Wireless Institute of Australia is claiming the title of oldest Radio Club.

The WIA is, however, the world's oldest Radio Society. One would not describe the ARRL or RSGB as radio clubs, and to call Australia's National Radio Society a club is also wrong.

Extreme care has been taken, and all publicity for the WIA's 75th Year next year is to use the term "Radio Society".

In Australia, we were aware of the Junior Wireless Club Ltd. (now Radio Club of America) and its 75th birthday.

Hope this clarifies the matter for Mr. Shunaman, yourself and **Worldradio** readers.

JIM LINTON, VK3PC
Victorian Division President
Wireless Institute of Australia □

Questions from Fresno

I heard somewhere that about 1,964 reprints had been made of the 1914 and 1915 editions of the ARRL *Complete List of Stations* book. Does anyone have any information about these reprints, and whether they are still available? Also, can a Shure 444 microphone be wired to use with a Kenwood TS-520S transceiver?

GARY PAYNE, KE6CZ
1347 East Dakota
Fresno, CA 93704 □

Father-son hobby?

On a cold and bleak winter Sunday afternoon, my son and I were reading the Sunday newspaper when he discovered an advertisement that attracted him. "Amateur Radio class to be held at the University of Arkansas Campus; those interested call 'Ace' Goodwin, K5AR."

As the log in the fireplace was transformed into orange-colored dust, I heard all of the reasons why Jody should become a ham. After a considerable amount of time, it became obvious that most of his reasons could not be debated (emergency communications, family messages "worldwide", new friends, geography lessons, electronic education as preparation for his world to come). How could I argue? All of his points were valid. Why would I want to cool his interest? After all, many years before I had had the same interest and was a Novice for two years before my license expired — WN5DDV.

Soon, I began to realize that Jody wanted and needed my support. So, I took him out into the storage room and found a box containing my old outdated DX-60 Heathkit Transmitter and Hammarlund 129X Receiver. In those two old boxes with knobs, meters and dials on them were Tokyo, London, Munich and California. Those fantasies were overwhelming to a 9-year-old boy.

Jody was told on that Sunday afternoon that if he was really willing to study and obtain his license, I would provide the necessary transportation and would even set up his station for him. I really did not feel he would follow through, but it was necessary that he be given an opportunity to try. A 9-year-old boy should be overwhelmed with volts, amps, ohms, formulas and *code*.

Man, was it cold the first night of the Novice class and because of Jody's anxiousness, I had taken him to the university much too early. As we sat in the car to stay warm, we talked of all the magic and power of Amateur Radio. Was I talking Jody into it or was he talking me into it? As we talked and waited for the instructor to come, I detected a little anxiety in Jody. A 9-year-old boy in a classroom of adults that he did not know could be quite uncomfortable.

By now, I began to realize that I too might be showing a little interest, but, "I don't have time." I decided to make Jody more comfortable and offered him my company for this first class, just until he had proper introductions with his classmates. I vowed to be with him only until he was comfortable and quote, "I don't have time to devote to Ham Radio."

A question suddenly appeared on the video screen of my brain, "Do you have time for your son? Do you have time for Ham Radio?" Meekly and humbly, I had to ask the computer, "Must I tell the truth?" Before the computer could respond (mine uses cassettes), I turned it off.

Eventually, the students and instructors began to arrive and the introductions started. I think most of the students wondered about a 9-year-old's ability to grasp formula code and only the FCC knows what else. I do not think Jody detected any of these adult's questions, but had questions of his own that were, in fact, the same questions everyone else had, but definitely independent of anyone's influence.

There was, however, a person who knew youngsters could be taught Amateur Radio, as he had been successful at this endeavor before. "Ace" K5AR spent extra time convincing Jody and the class that yes, Jody will become a ham "if he wants to."

The first night was spent talking about the things that boys' dreams are made of: experiences at NASA and the space program, contacts with exotic countries, and helping neighbors with an emergency. Were these the things that only little boys made dreams of, or were they things that we big men also make dreams of?

The time came to purchase books and tapes for the class and Jody had his check to pay for it. I watched with pride as he purchased his books and appeared, to me, very independent and becoming a small but effective man. As "Ace" reached my position in the class, I did not respond that I was not in the class, but instead, purchased another set of books. "Dad, why did you buy books?", Jody asked. I replied, "We can't read the same book at the same time."

A very small light instantly turned on, deep within Jody's eyes. That gleam answered my question from earlier in the evening. "Yes, I *do* have time for my son and Ham Radio." Remembering the embarrassment of a 9-year-old son with a father's arm around him in public, I restrained myself, but as we walked to the car that evening, and his small hand was placed in mine, I knew that we had found something special and it was not Amateur Radio. Oh, radio had become a very special part. It had served as a catalyst.

Jody was the first student to pass his code test and from then on, we all had to work very hard just to prevent looking like boneheads.

The next year was very exciting for us. KA5HNB (Dad) and KA5HQO (Jody). Incidentally, I was informed HQO stood for "High Quality Operator".

At Field Day that year, Dad and "The Pup" operated a Novice station and did reasonably well. This probably caused in us an intense desire to upgrade.

I received my General and Jody received his Technician on 02 January 1931. Dad is now N5CQD and "The Pup" is N5CQE. I will forever remember the jubilation we felt the day we upgraded. We had earned together an important piece of paper and, in doing so, had found each other. This day has not been exceeded, but we were pretty excited the day we received sequential calls in the mail.

If any readers of this article are ever in Little Rock, Arkansas, feel free to use the 146.25/.85 repeater, but be sure to listen to it identify, "N5CQE/R Jody."

Amateur Radio is not for everyone, but for us it was an important beginning. Others may find hunting, fishing or other hobbies their catalyst. For our household, it was Amateur Radio.

I am dedicated to the preservation of our hobby and admit that, for me personally, it is much more than a filler of idle time. The League has all of my support in their attempts to preserve Amateur Radio. I have found that the criticisms of the League are usually followed by the loud noises of inactivity on the part of those who criticize. I feel truly threatened by jammers, rule violators and the like, as they cause questions regarding the future of Amateur Radio.

N5CQD and N5CQE are continuing to enjoy the new relationship and hobby. We have found each other and many others. The ladies in our household do not seem to be interested in becoming licensed hams, but they do show a great amount of interest in what we are doing, especially when it's too loud or affecting the television.

Well, this is the final paragraph. Thanks go to "Ace" Goodwin, members of the Metropolitan ARC, and all those who had a part in our progression through Amateur Radio.

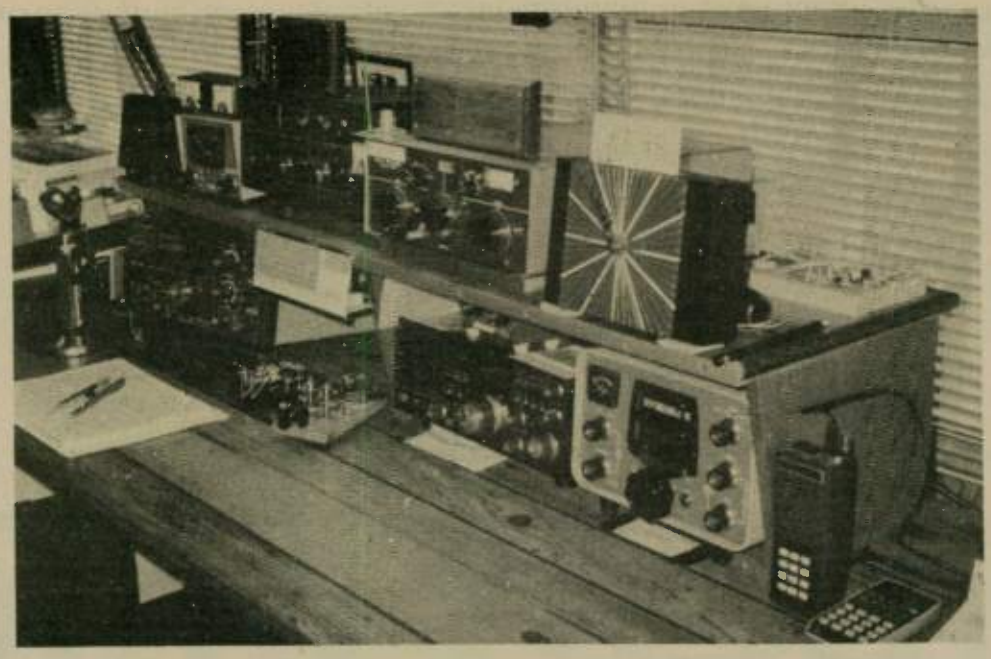
PHILLIP MAINS, N5CQD
Little Rock, Arkansas □

STATION APPEARANCE

Jack R. Lewis, W6IHR — an Extra Class licensee from Vallejo, California — wins the Station Appearance award this month with his homebrew station. Read on for his description of the equipment in his station.

"Obviously, equipment consists of commercial equipment: 901-DM, Dentron amplifier at 800 watts, Murch coupler and Yaesu FRG-700 all-band receiver. The rest was put together by myself, including the operating table and the overhead shelf — all homebrew in the carport of our mobile home, which serves as office and ham shack.

"I have three antennas: a vertical from 10 through 160; a homebrew 2-meter ver-



tical located about 20 feet above the roof; and a Hustler vertical, which uses the entire metal roof of the mobile home as a groundplane. Works FB.

"The clock with blue face is entirely homebrew, since I couldn't find anything on the market to meet my needs — namely, Z time and local time at a glance. So I simply used a cigar box, electrical clock drive and two hour hands on an extended shaft. The two gold hands indicate hours and minutes, local. The extra red hand mounted on the extended shaft is the hour for Z time.

"The whole thing cost me about $12.50. Have made several for other amateurs who liked the idea. So practical, including the cost.

"A 15 amp Variac is mounted under the operating table, in a homebrew box with meters showing voltage and amps. Heath station monitor on the lower right, with phone patch, SWR meter and 24-hour clock. Two keys, bug and fully automatic key.

"The other antenna for the all-band uses No. 26 wire (practically invisible), which runs from one end of our small lot to the other. Wattmeter, Heath on top deck at left. SWR from 901-DM out, external speaker from 901-DM gives better listening. Thermometer hanging from ceiling gives indoor-outdoor temperature in Fahrenheit and Centigrade. Flip cards hanging above key location give me all band locations in two ways. Two-meter 1.5 watt transceiver drives a 30 watt amplifier (not shown).

"I have a 6 ft.-long 3/4" pipe to which all equipment is grounded. It makes for safety and good operation on all bands.

"I've been a ham since 1947 and wouldn't have any other hobby. The bronze plaques in the picture are copies of my Extra Class license and QSL cards."

Lessons

(*continued from page 12*)

and Oakland was in effect. He was essentiaily told, "If you want river readings, call us on the phone."

Telephone service out of the Wayne flood control center failed shortly thereafter, and ironically, telephone service at the Oakland fire house also failed. As stated earlier, Amateur Radio was instrumental in getting landline service restored.

My best advice to EC's and RO's faced with a disaster or potential disaster is "Don't wait!" Don't wait for officials to call you. In the early stages of an emergency, they may not be thinking about communicatons, and in the later stages they may be too bogged down in problems to be able to contact you in time.

When disaster threatens, call your local officials and tell them your group is activating and will be available. It is better to spend a few hours at the EOC "standing by" than to wait until communities are isolated by floodwater, and telephone service has failed before thinking about activating your net.

Of course, the various problems described are not radio problems per se, but they are included in this report "as a warning for those who would be warned" in order to encourage radio amateurs and local officials to pursue coordination to the maximum extent possible.

Another tip I would give to EC's is if you operate in an urban or suburban area, pick an odd frequency for your simplex net. The popular 2-meter simplex channels are sometimes difficult to clear in an emergency.

In one instance, our operation was temporarily disrupted by two "hams" far removed from the disaster area who were obviously using tight squelch and high power in apparent violation of FCC rules 97.67(b) and 97.78.

Conclusion

Despite the problems mentioned, which can (and will) occur during any emergency, this emergency communications operation was successful. The conduct "under fire" of the ARES and RACES operators who participated was exemplary. Most had never been in the middle of a real disaster before, yet they handled themselves like old pros.

We were pleasantly surprised by the "woodwork" operators who came out to help. Although lacking in formal training, they exhibited a high degree of discipline. We hope some of them will become permanent members of the team.

We must also thank those operators who merely stood by until they were sure they could assist. Restraint in an emergency is often the hardest skill to learn.

In conclusion, it can be stated without reservation, that those agencies that utilized Amateur Radio were far better equipped to handle their disaster relief tasks than those which did not and were consequently forced to operate in a partial communications vacuum. In short, Amateur Radio was needed. Amateur Radio was there. Amateur Radio was ready. □

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Share your knowledge with your fellow amateur and Worldradio reader .

Antenna ordinance approved

An ordinance regulating the escalating number of radio- and satellite-dish antennas has been approved by the Glendora (California) City Council.

The law, unanimously approved on first reading in mid-July, gives the city the ability to control the height, size and placement of antennas on commercial and residential property.

"The installation and use of satellite dish antennas for television reception has increased dramatically in the last couple of years," said James Nash, director of planning and redevelopment.

Nash said regulations have become necessary in order to protect property values and avoid a proliferation of antennas.

"This ordinance should give the public more direction and concrete guidelines to avoid improper installation," he said.

According to the law, most roof-mounted antennas are prohibited. An exception is any television dish antenna with a diameter of 2 feet or less.

Ground-mounted antennas must be located in rear or side yards, according to the new ordinance. Also, ground-mounted antennas must be at least 15 feet from property lines and 3 feet from structures.

Under the law, antennas cannot be higher than 25 feet above the ground, except satellite-dish antennas which must not exceed 15 feet in height.

A maximum of two antennas shall be allowed per lot, and antenna owners will be held responsible for any interference generated by their antenna.

— *Inter-City Express, Baldwin Park, CA; submitted by Walter Gaebel, K6DMN* □

MM sailors alone

Lenore Jensen, W6NAZ

Twenty-meter contacts with Harry (Ken Roper, Jr., KA4NZP/MM, confirmed his arrival at Hanalei Bay, Kauai, after 19½ days at sea, alone.

In his 31-foot sailboat, he had departed San Francisco in the Single-Handed Transpac race.

Two other amateurs were also competing: Mark Rudiger, N6KDN, and Robert Marotta, WA6MHR.

"We had radio help from several, such as Peter Sutter, N6DQN, who was in a boat ahead of us, said Ken, "as well as from Bill Bailey, KH6S, on Kauai. And Donna Kirby, N6HSR, talked to us from Sausalito."

What's it like to be all alone on an ocean? "Except for some strong winds that took my spinnaker and three slow days, it was uneventful. I saw nothing manmade (except my boat) the entire trip."

Ken's boat has auto-pilot, allowing naps, and satellite navigation made the trip easier, but expert seamanship is essential. He's made the trip alone before and also once sailed to Tahiti.

Ken, a graduate of West Point, is a retired Brigadier General of the U.S. Army and has served in both Viet-Nam and Korea.

The return trip to the mainland was to take 24 days, due to demands of the sea in that direction, and he planned to land in San Francisco before sailing to his home port of Marina del Rey. The helpful hams on 14,313 MHz stood by to aid, if needed.

Repeater activity in West Virginia

Johnny Jones, WB8CQV, has added a General Electric voting panel to his Charleston 146.28/88 repeater. The panel, widely used in commercial installations, determines which signal arriving from several receivers is best and repeats that one over the transmitter. It has provision for six receivers.

There are now two receivers operating — the old one on Coal Branch Heights and another on Bee Mountain. A third in South Charleston was to be added in late June. Still later, a fourth is planned in the Coal Mountain area near St. Albans.

Johnny said his goal is to make it possible for amateurs anywhere in the Kanawha Valley to access the repeater with a hand-held unit. Bill Hunter, K8BS, is working with him on a proposed linkup with the W8KMN 147.66/06 repeater at Point Pleasant. All functions will be touch-tone addressable, with links in the 440 MHz band. A "Star-74" dial up should activate a tape mechanism which will carry amateur news and be changed or updated weekly.

— *Ted Wolfe, WD4KHL* □

Ham competitors

At least two amateurs, and probably more, competed in the 1984 Summer Olympics. One was Sheila Conover, KB6CZX, in the kayaking event. Bravo, Sheila! We'll all be listening for you from your home QTH in Newport Beach, California.

Darrell Pace, N8FTS, won a gold medal in archery. Congratulations, Darrell!

.....

The arm of Amateur Radio reaches around the world; **World-radio** is out to reach you.

DX WORLD

John F.W. Minke III, N6JM
6230 Rio Bonito Drive Carmichael, CA 95608

Activities Calendar

22-23 September	Scandinavian Activity Contest (SSB)
22-23 September	Can-Am Contest (CW)
27-28 October	CQ World Wide DX Contest (SSB)
10-11 November	DARC European DX Contest (RTTY)
24-25 November	CQ World Wide DX Contest (CW)

W-100-N

236. W9JBR Jack J. Carr

Western Malaysia (9M2)

Dick Emrich, 9M2RT, is active from this one and plans to be there for a year. His interest is in the lower bands, so try 3.795 MHz from 0900 UTC. If you need him on other bands, he will be happy to arrange a schedule with you, and on either mode. Dick, whose home call is NN6U, uses Ron Jones, KB6UF, as QSL manager.

Other calls reported from Western Malaysia include 9M2DC on 14.168 MHz, 9M2CH on 14.152 MHz, 9M2HB on 14.227 MHz and 9M2TZ on 14.009 MHz — all around the 1400 UTC time period. European stations should look for 9M2MI, who has been worked on 7.005 MHz at 1930 UTC.

Tunisia (3V8)

In the July issue, we made some comments regarding activity from Tunisia, in that the licenses were invalid, according to the Tunisian authorities. Frank Tukey, KA2EIO, sent me a photocopy of his 3V8AA card that he has for a 1982 contact which was verified by IS0LYN. But the activity still continues, so work them if you hear them and worry about it later.

Dieter Monauni, IN3RZY, and his XYL recently spent 10 days in Tunisia operating as 3V8ZY and 3V8AI, respectively. Angela, his XYL, is reported to be the first YL operator to have operated from there.

In addition to the above, 3V8AL and 3V8AM are active there and both claim to have valid licenses.

China (BY)

Many DX'ers still need this one as it still ranks high on the most-wanted lists. With the additional stations coming on the air, this will ease out the need.

Yoshi Hayashi, JA1UT, will be heading up a team of Japanese operators for the debut of BY5RA, the fifth station from China, which was to come on the air on 17 August from Fuzhou, Fujian-sheng. The event is to celebrate the 35th anniversary of the liberation of this city.

QSL cards for BY5RA go to Fuzhou China Sports Association, P.O. Box 730, Fuzhou, PEOPLE'S REPUBLIC OF CHINA.

Bouvet (3Y)

The latest on the Norwegian DXpedition to Bouvet Island is that they will be departing 01 January and returning 20 February with about nine days of operation on the remote island. More on this one in the next couple of months.

Paul Granger, F6EXV, of Talence, France, hosted Gerhard Jaeger, DF2RG, President of the East Bavaria DX Association, during a recent visit last year. Paul has been a member of several DXpeditions including such calls as FG0EUU/FS, C31VK, FR0RX/J, FR0EUT/G and FH0EUT. *(Photo courtesy DF2RG)*

Somalia (6O)

Charles Signer, WA9INK, was to have been in Somalia during August and had been trying to obtain a license to operate. Subscribers of **Worldradio** prior to 1978 will recall that Charles was DX Editor. As he was deeply involved with putting together the Clipperton Island DXpedition, it was then I assumed the role of DX Editor.

Tony 6O84TI has been handing out contacts for this one in the 14.020-14.030 MHz slot from 2000 UTC. QSL manager for this one is Giorgio Broggini, I2YAE.

Gibraltar (ZB2)

Look for Gordon Black, ZB2J, who has been reported on 21.044 MHz around 2015 UTC. He is also active at 14.132 MHz at 1800 UTC.

Also, look for ZB2EO after 2200 UTC, as he has been reported on 7.005 and 14.011 MHz.

Trinidade (PY0T)

Present plans for PV1BVY include a trip to Trinidade Island, possibly the end of the year.

Niger (5U7)

Lucio 5U7LD has been operating periodically, as he is in and out of the country, and he shows without advance warning. As for the validity of his QSL cards, the DXCC desk has not received any documentation.

The Nigerian government has several license applications on file and many of them are from Americans, and it is reported that the security people in that country look upon us positively.

Turkey (TA)

The Rare DX Net is often a host for TA1AS with JY3ZH. Check the net at 14.220 MHz after 2300 UTC. QSL this one via DJ0JC.

The DX reports list another one from this country. A station signing TA1MN near 14.035 MHz after 0100 UTC. Also, check 15 meters for TA1UA, who has been reported on 21.025 MHz around 2100 UTC.

Mellish Reef (VK9M)

The Down Under DX'ers Contest Club will have a DXpedition to Mellish Reef from 25 October through 06 November 1984. This will be an all-band affair, 160 through 10 meters, hopefully with the call VK9MR.

In 1983 the club took Oceania in the CQ World Wide DX Contest (SSB), for their multi-operator, single-transmitter entry from Lord Howe Island, operating as VK2LHI.

The club will be sending its contest team to Mellish Reef for about two weeks in what must rate as the most professionally organized assault ever on the demand for this rare DXCC country. The team hopes for the VK9MR call, although at this stage (mid-July), the Australian Department of Communication has assigned the VK9ZM through VK9ZR call sign block to this location.

Equipment to be used will include three Kenwood TS-830S transceivers supplied by Trio Kenwood of Australia; Yaesu FL2100Z amplifiers supplied by Dick Smith Electronics; antennas supplied by Emona Electronics, and will be the 4-element quad type by TET, model HB-443. Additional support will be coming from **Amateur Radio Action** magazine and their sister club, the Dixie DX'ers of Atlanta.

Organizers of this DXpedition include Les Cullen, VK2WU; Tony Gilbert, VK3CE; and Jim Powell, VK2CK. Les is president of the club and Tony is editor of **Amateur Radio Action.** Jim was a member of the 1978 team to Mellish Reef. Other members of the team are Rob McKibbin, VK5ARO, Janek Wakulicz, VK2CIA, and Sandy Bruce Smith, VK2AD.

The DXpedition team will depart for Mellish Reef on 19 October aboard the 35-foot ocean-going yacht, *Spitfire*. The captain of the yacht has an interest in learning about Amateur Radio, so while at sea, the DXpedition team will be coaching him in the basics of Amateur Radio.

Mellish Reef is located about 580 miles northeast of Bundaberg, Queensland, in the Coral Sea. Some would call it "Smellish Reef" due to the all-pervading smell of fresh superphosphate which is replenished daily by the reef's large bird population. The only other inhabitants of Herald's Beacon, the 300-by-60 meter main reef, are nocturnal crabs.

Donations toward the enormous cost of this DXpedition will be much appreciated as the cost is estimated at more than $10,000 (Australian). These tax deductible contributions may be sent to Les Cullen, VK2WU, P.O. Box 31, Winmalee, NSW, 2777, AUSTRALIA. Les will also handle the QSL's.

Liechtenstein (HB0)

This one usually surfaces during the summer months when the hearty DX'ers head for the high country. Frank Acklin, HB9NL, will be active from the Principality of Liechtenstein for one month, 15 September through 14 October. Frank will be active on all bands, 10 through 160 meters, on both CW and SSB. Frank has operated from Liechtenstein before and holds the call HB0NL.

All QSL cards should be sent direct to Frank at CH-6233 Bueron, LU, Switzerland, or the USKA QSL bureau. Remember, direct QSL's should include funds for a direct return.

Baker and Howland Islands

The Northern California DX Foundation has suggested the deletion of the present DXCC country of Baker, Howland and American Phoenix Islands and creating the new DXCC country Baker and Howland Islands.

Since 1939, both the United Kingdom and the United States have jointly administered the Phoenix Islands as they both made a claim on them. As a result of this, one could have worked a single station and have it count for two DXCC countries, (a VR1 for British Phoenix Islands and a KB6 for American Phoenix Islands).

In 1979, the new nation of Kiribati was formed and the United Kingdom released all claims to the Phoenix Islands, consisting of eight individual islands. Later in that year, the United States also released their claim to the islands. The British Phoenix Islands now count as

Central Kiribati for DXCC purposes.

Those who worked the old Baker, Howland and American Phoenix Islands most likely worked Canton Island, one of the eight American Phoenix Islands. Canton Island is no longer U.S. territory and contacts with this area can no longer count. This leaves Baker and Howland Islands, which were never claimed by the British, and are not part of the new nation of Kiribati. These islands are uninhabited.

IOTA

Geoff Watts' "Islands-on-the-Air" awards program may be of interest to DX'ers. The award — IOTA for short — is available for working the various islands or island groups around the world. Some islands will count only for a single DXCC country, or in some cases, several DXCC countries will only count for one island group.

Additional information on the awards program and a list of the qualifying islands is available from Geoff for $2. Write to Geoff at 62 Belmore Road, Norwich NR7 0PU, ENGLAND.

From *DX News Sheet*, published by the RSGB and formerly by Geoff Watts, several IOTA islands have been gleaned.

AS-55	Ushakova Island	UA0BDG	14.152	1530	EU-47	East Frisian Islands	DL0PJ	7.067	1130
EU-08	Inner Hebrides	GM4TRH	7.078	1330	EU-51	Ustica Island	IT9GSF/IE9	14.187	1300
EU-09	Orkney Islands	GM4CPA	14.205	1400	EU-54	Favignana Island	I4ALU/IF9		
EU-10	Outer Hebrides	GM4GM/P	7.080	1215	EU-56	Otteroy Island	LA9PCA/P	14.197	1615
EU-11	Scilly Island	G3RPC	3.762	0200	EU-57	Rugen Islands	Y48ZA		
EU-19	Franz Josef Land	RZ1OWA	14.025	1900	EU-74	Fair Isle	GM4AUP/A	14.256	1900
EU-28	Tuscan Archipelago	I1DFS/IA5	14.215	0545	EU-87	Dino Island	I2DMK/ID8		
EU-30	Christians Island	OZ4CHR/0			EU-88	Kattegat Island	DL8NU/OZ		
EU-31	Napoli Island	IK8CWB/IC8	14.200	0845	NA-29	Prince Edward Island	VE1LI	7.078	2330
EU-32	Iles de Re	F6AXP/P	14.172	1830	NA-46	Martha's Vineyard	N1DL	14.242	2300
EU-35	Novaya Zemla	RZ1OWB	14.024	2015	NA-57	Bay Island	N4FKZ/HR6		
EU-36	Hitra Island	LA9PX	14.196	1030	OC-12	Yap Island	KC6DX	14.200	1600
EU-37	Oland Island	SM7DLZ			SA-20	Iles de Salut	FY9IS	21.295	1915

Frequencies and times, when known, are in MHz and UTC.

Most of the above frequencies and times favor Europe, obviously as the newsletter is published there.

A few additional islands were listed, but these have not yet been assigned an IOTA reference number:

Gryp Island	LA7UAA	21.230	0900
Inishbofin Island	EJ4ALE		
Palagruza Island	YT2P		
San Andrea Island	ID7DYD	14.194	1945

Francesco Durante

We received a set of rules from the Associazione Radioamatori Italiani for the National and International HF Contest Entitled to Francesco Durante. This is a six-month-long contest that began on 01 July of this year.

In the occasion of the Third Centenary of Byrd of "Francesco Durante," (1684-1755), well-known music composer born in Frattamaggiore (Napoli), the local ARI Radio Club is sponsoring a national and international HF contest with the following rules:

1) *Period* — 0001 UTC 01 July to 2400 31 December 1984

2) *Modes* — SSB, CW, RTTY

3) *Bands* — 3.5, 7.0, 14.0, 21.0 and 28.0 MHz

4) *Contacts* — In order to qualify you must make the following type of contacts:

a) Maximum number of different DXCC countries.

b) No less than 10 contacts with members of the Frattamaggiore ARI Radio Club.

c) Contacts necessary to form the name "Francesco Durante," using the first letter of the prefix of the DXCC countries worked.

5) *Scoring* — The total score will be the sum of the points calculated as above, where each contact counts as one point.

6) *Awards* — Cup, Plate and Medal to the First, Second and Third place winners for each mode. A diploma will be awarded to all participants who have contacted at least 10 members of the Frattamaggiore ARI Radio Club. "Prizes will be delivered in Frattamaggiore on 31 March 1985. Winner will be duly advised."

7) *Logs* — Logs must show all details of the contacts made under Rule 4 above. Send your entry with a fee of 10 IRC's, or 5000 lira to: ARI Radio Club, P.O. Box 15, 80027 Frattamaggiore (Napoli), ITALY, and postmarked not later than 31 January 1985.

The membership of this club includes IK8CVZ, IK8DGO, IK8DYB, IK8EQL, I8FTV, I8HDG, I8HFU, I8IHG, I8IKL, I8IYW, I8INW, I8JOV, I8ISX, I8KLW, I8KNT, K8KUT, I8NOF, I8QHP, I8SRP, I8VKM, I8WES, I8WY, I8YRK, I8YZP, I8XTX and I8ZTE.

Prefixes

Of course, the most sought after DX award is our own ARRL DXCC issued by the Newington Radio Club. Others have tried to top it, but have failed. So, rather than try to compete with the DXCC there are several other awards that can be said to complement the DXCC. One such award is the WPX (Worked Prefixes), sponsored by CQ and administered by Norm Koch, K6ZDL. This award even has an "Honor Roll."

The object of this award is to work as many different prefixes as you can. After the basic award (CW, SSB or mixed modes), endorsements are available in steps of 50 prefixes, plus band and continental endorsements. It is possible to get on the WPX honor roll and be nowhere near the DXCC honor roll. (That is the case with this DX editor.)

So, if you are chasing prefixes, or just like to work them for the fun of it, here are a few that have surfaced during the summer months.

The call VY0V was a special call in Quebec City to celebrate the 450th anniversary of Jacques Cartier's landing in Canada. QSL this via the bureau only.

During early August, the Chiltern DX Club operated with the call GK0JFK from the John F. Kennedy Memorial Site at Runnymeade, England. QSL this one via the RSGB bureau, or direct to Peter de La Mothe, G3VIE, 35 Brookside, Wokingham, Berks, RG11 2ST, ENGLAND.

New French prefixes are showing due to the recent call sign changes. These include FY9IS, FM4DJ and FV6PAX, to name a few.

And the Soviets have thrown in a lot of new calls. The call RL0G is active from Oblast 190, and will be active in contests. QSL this one via UL7QF.

Most Needed survey

Jim Cain, K1TN, editor of *The DX Bulletin*, has released his 5th Annual DXCC Countries Needed Survey. Each year Jim polls his subscribers to find out what they still need. Here are the top 10 out of 73.

1	ZA	Albania	83
2	7O	People's Republic of Yemen	78
3	XZ	Burma	78
4	3Y	Bouvet Island	76
5	CE0X	San Felix Island	73

If a foreign amateur visits your area, do a picture story for Worldradio

Propagation

Maximum Usable Frequency from Burbank, CA
(courtesy of W6LS)

The numbers listed in each column are the Maximum Usable Frequency (in megahertz) for contacting five major areas of the world (Nairobi, Tokyo, Melbourne, Frankfurt, Rio de Janeiro) for low fire angle antennas.

You can get a free *complete* set of these predictions for both high and low angle antennas, Maximum Usable Frequency (MUF) and Frequency of Optimum Transmission (FOT). Requests should be sent to Bill Welsh, W6LS, 2814 Empire, Burbank, CA 91504. Each request should be accompanied by a self-addressed stamped (54¢) envelope at least 9" × 11½".

NOVEMBER 1984

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	19.1	25.7	30.7	10.9	20.2
0200	15.2	20.7	26.7	10.8	17.3
0300	13.1	16.9	21.8	10.0	15.5
0400	11.5	14.8	18.6	8.4	14.7
0500	10.8	13.3	16.8	7.4	14.3
0600	10.9	12.1	15.7	8.3	14.2
0700	11.3	11.4	15.1	11.4	14.9
0800	11.5	11.9	14.2	11.7	15.9
0900	11.2	11.8	13.2	12.6	15.9
1000	10.4	12.3	13.2	11.7	14.1
1100	9.4	12.8	13.9	10.6	11.9
1200	9.5	12.1	13.5	9.8	12.0
1300	11.8	11.2	11.9	11.5	16.0
1400	16.1	11.2	12.1	14.7	22.3
1500	20.6	13.5	17.0	19.6	27.8
1600	24.0	12.1	19.7	22.1	30.5
1700	26.4	11.2	18.5	19.0	31.0
1800	28.5	11.3	19.0	15.8	30.7
1900	30.3	12.9	21.3	13.0	30.8
2000	30.2	16.2	24.1	10.9	31.2
2100	29.7	21.3	25.8	9.9	31.3
2200	28.2	26.7	26.4	9.8	30.3
2300	26.2	29.9	27.2	10.2	27.8
2400	23.0	29.6	28.9	10.6	24.1

6	VU7	Andaman and Nicobar Islands	71
7	XV	Viet-Nam	67
8	4W	Yemen Arab Republic	66
9	YA	Afghanistan	64
10	XU	Kampuchea	58

The last figure is the percent that need it (83 out of 100 DX'ers still need Albania).

DXPO 84

Don't forget DXPO 84 on 13-14 October, at Tysons Corner in northern Virginia. This event is sponsored by the National Capitol DX Association, and they promise a great event.

And if you like to plan in advance, mark your calendars for 27-29 September 1985 for DXPO 85, this one sponsored by the Southeastern DX Club. The date for this event was originally set for 03-05 May, a date chosen to complement the Dayton Hamvention held close to the same period. This would give international DX'ers a chance to attend two conventions while visiting the United States. But it was felt that the attendance from neighboring states would far outweigh the benefits of a few additional international visitors. The DXPO 85 will be held at the new Lanier Plaza in Atlanta.

Northwest DX Convention

The Fraser Valley DX Club will host the 1985 Northwest DX Convention next summer, the weekend of 27-28 July. It will be held in Richmond at the Richmond Inn, close to the Vancouver International Airport.

Clubs

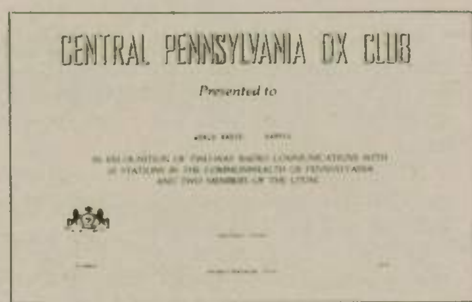
The Stark DX Association recently elected Carl Mani, WD8OTZ, as president; Randy Phelps, KD8JN, as vice president, and Dick Princehorn, N8BBB, as treasurer/secretary. Dick was a cofounder of the association.

In California, the Redwood Empire DX Association chose Ron Pipes, WB6NBR, for president; Dick Wilson, K6LRN, for vice president; and Chod Harris, VP2ML, for secretary/treasurer. Chod is also DX Editor for **73 Magazine**. The Redwood Empire DX Association is a DX and contest-oriented club serving the Pacific Coast of California north of the Golden Gate Bridge. REDXA sponsors the Redwood Empire Award for working stations in the North Coast region. Contact REDXA at P.O. Box 4881, Santa Rosa, CA 95402, for details.

The 1984-85 officers of the Northern California DX Club include Len Geraldi, K6ANP, as president; Lou Beaudet, K6TMB, as vice president; Dick Letrich, WB6WKM, as secretary; and Lyle Meek, N6BLN, as treasurer. Len and Lyle are also members of the above REDXA. During the last few years, the NCDXC seems to be more like the Palo Alto DX Club — or at least, that is where most of the meetings are held. With some of the new officers out of the Palo Alto area, perhaps the club will again be *the* Northern California DX Club.

Central Pennsylvania DX Club Award

This award is available for working at least 25 Pennsylvania stations plus two members of the Central Pennsylvania DX Club. All bands and modes count. All contacts must have been made since 01 January 1984. Send your log data, certified by another amateur, with a fee of $1 (or 3 IRC's), to Glenn Kurzenknabe, K3SWZ, 403 Centerview Ave., New Cumberland, PA 17070. QSL cards are not required. Presently, there are over 30 members in the CPDXC.



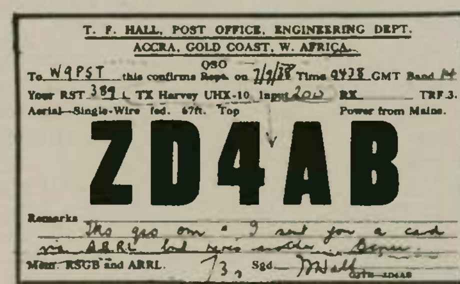
Antique QSL Department

Bob Truhlar, W9LNQ, a regular contributor to this column, sent in the following oldies. The cards had belonged to Roy Weisbach, W9UX, who recently became a Silent Key. Roy's earlier calls were W9PST and NU9UU, (or just plain 9UU).

The PK6HA card is for a contact that

Roy made in 1947. No band or mode is given, except for the "568" signal report. The reverse side of the card does list Roy's call. The location is listed as Biak Airstrip in Dutch New Guinea.

The next card is also for a 1947 contact made with I6USA, which was the U.S. Army Radio Station located at Asmara in Eritrea. The station set-up consisted of a BC-447 transmitter running 600 watts, (with parallel 813's), and an old Super-Pro receiver. Roy worked this station on 20-meter CW. After a prefix change, this country was deleted from the DXCC list in 1962.



Here is another one of those deleted countries, this one getting the axe in 1957. Roy worked ZD4AB located in Accra, Gold Coast in 1938. The operator was T.F. Hall, whose home call was G2TH. Although this one was worked prior to the deletion date, it still doesn't count as the contact was made prior to 15 November 1945 (see DXCC rules). See April 1981 issue for this one, also.

In regard to the W3JAK/U QSL card that we ran in the August issue, at least two readers responded with comments. The first was from Bruce Frahm, KØBJ, of Colby, Kansas, who says he met Flav Jankauskas, W3JAK, in 1979, in the Cayman Islands. He was the radio operator on the *USNS Lynch* doing mapping in the Caribbean. Flav now signs K3JA.

Larry Flavin, W3CV, also adds his comments and writes, "At the time of the QSO with G2YS, W3JAK was in the Black Sea port of Novorossisk, which is in UA6. That accounts for the suffix U(A6), which should really be /UA6 without the brackets. Whether or not he was on board his ship at the time of the QSO or on land is open to conjecture."

Larry worked W3JAK/MM about three weeks after the contact John Swinnerton, G2YS, had with him when he was still at Novorossisk. Flav was homeward bound at the time.

We also received a note from Leonard Mendel, K5OVC, concerning the cartoons of Otto Eppers, W8EA, along with samples of his work when he was a staff cartoonist at Harrison Radio in New York City. Otto was signing W2EA at that time, which was in 1947. As Otto's work was discussed elsewhere in an issue of **Worldradio** a month or two ago, we will save these for a future issue.

QSO information

Jay Musikar, AF2C, writes concerning QSL cards for the KP2A/D Desecheo DXpedition back in 1981. Jay says it has been over three years since the DXpedition, yet the QSL cards are still coming from the amateur community. Jay was QSL manager for this operation.

Jay will close the logs for this one in December. After December, he will only honor *direct* QSL cards with the proper SASE or proper postage. About 80 percent of the over 40,000 contacts have been confirmed.

Bill Snyder, KF8N, writes concerning the YVØAA DXpedition in March and wonders if anyone has received their cards for this one yet. He knows of no one in his DX circles who has. In my past experience, this doesn't sound unreasonable, even for direct QSL cards to managers. I've waited even longer for cards direct to stateside managers. Oh yes — I haven't received my YVØAA card yet either, Bill.

North of the border, Henry Thel, VE7WJ, reports that he has mailed out about 8,000 QSL cards via the bureau for operations with the special Canadian prefixes XO7 and CY7. Bill says that if you want a direct QSL to remember it costs 37 cents (Canadian postage) to mail a QSL from Canada to the United States. Incidentally, the cost is the same regardless if the card is in an envelope or not.

QSL routes

A92DQ	—K2IJL	DU7XX	—DU6JM
AH8A	—K6EDV	ED8RCT	—EA8RCT
BVØJA	—JG1QGT	FM4DJ	—W5JLU
BVØYL	—JG1QGT	FOØFB	—WB6GFJ
CO2HQ	—XE1XF	FOØKI	—KA6LAF
DA1WA/HBØ	—DJØLC	FOØKW	—WB6RFI
DF4RD/SV9	—DF2RG	FY9IS	—FY7AN

HH5JS	—KC8JH	TZ6FIC	—F6CRS
HI3RST/KP5	—WP4ATF	VE7LB/KH8	—VE7LB
HL9AH	—N7DOF	VG1ASJ	—VE1ASJ
HL9TA	—K0LST	VK4BZZ	—WB6GFJ
I1DFS/1A5	—I1FNX	WB6WOD/	
I2DMK/ID8	—I2MQP	HR2	—WB6WOD
I2NYN/ID8	—I2MQP	WP4ATF/KP5	—WP4ATF
ID7YSU	—I8TSL	YB0AFA	—WA7OGU
IK0CAK/OX	—I0JAJ	YB3DC	—KO2A
JT0DJT	—I8YGZ	YZ2AW	—YU2SRH
KA0CYR/SV9	—WB4TDB	ZK1MD	—W6KNH
KH6JEB/KH7	—KH6JEB	3D8CW	—G4BAC
KX6OI	—N3DLO	3D2FR	—NE4S
OD5PA	—Bureau	4U9ITU	—W1RR
OH0BA	—OH2BAZ	6Y5IC	—KE3A
OX3GH	—WA2TTI	8J1ITU	—JARL
T31AT	—G4GED	9H1EL	—LA2TO
TF3IRA	—Bureau	9M2HB	—N4FFN
TR8DR	—W2PD		

C21BD —P.O. Box 225, REPUBLIC OF NAURU
FH4AA —Jacque, P.O. Box 4, Mamudzu 97600, Mayotte Island, via FRANCE
FM7CL —P.O. Box 119-F97209, Fort de France, MARTINIQUE
G4DUW/DU1 —P.O. Box 518 MCC, Makati, Manila, PHILIPPINES
IS0WJS —P.O. Box 30, Tempio, N. Sardinia, ITALY
J28EB —G. Lafon, 2417 Djibouti City, DJIBOUTI
K5KG/OH0 —8302 Flower Gardens Drive, Houston, TX 77095
SV5OX —P.O. Box 157, Rhodes, GREECE
SV5TS —P.O. Box 251, Rhodes, GREECE
V85BM —P.O. Box 281, State of Seria, BRUNEI
WD5AJE/SU —KA4CBE, APO New York, NY 09679
X0YG —P.O. Box 496, San Luis, Potosi, Potosi, MEXICO
XU1SS —4-3-9 Yuigahama, Kamakura 248, JAPAN
YN1CC —P.O. Box 89, Managua, NICARAGUA
4U1UP —P.O. Box 199, COSTA RICA

DXPO 84

DXPO 84, sponsored by the National Capitol DX Association, will take place during the weekend of 13-14 October, at the Best Western Falls Church Inn, 6633 Arlington Blvd. (Rte. 50), Falls Church, VA 22042. Special room rates are available for this weekend. The Falls Church Inn is conveniently located three miles inside the Beltway (I-495) on the U.S. Route 50.

DXPO 84 — an ARRL-approved event — provides total immersion in DX and starts at 1:00 p.m. on Saturday. An evening banquet (optional) follows, and phase two of the program concludes at 1:00 p.m. on Sunday.

A broad variety of DX subjects are included in the program. Father Moran, 9N1MM, will be the featured banquet speaker.

For further details, contact: DXPO 84 Chairman Stuart Meyer, W2GHK/Forever, 2417 Newton Street, Vienna, VA 22180; (703) 525-6286 (office); (703) 281-3806 (home). □

Hams take dream trip

Don Wallace, W6AM

Five amateurs, with three of their ladies, took their dream trip to French Polynesia, 11-21 July. Willard Monohan, K6KH, worked 21 OSCAR-10 satellite stations. All worked SSB and CW on the 100-watt transmitter.

Irvin Emig, W6GC/FO0ILE had a fine RTTY set-up, partly loaned by Donald Bostrom, N6IC, and worked RTTY stations by the hour.

Warren Simmons, W6MI/FO0SIW, brought a complete station. Don Wallace, W6AM/FO0DCW, filled 37 pages of the large ARRL logbook on CW. The logbooks totaled 54 pages, including the "Firefighters" and other nets by Harold Burba, N6AXQ, and Warren W6MI.

The local amateurs — Stanislaw Wisniewski, FO8IW, president of the Radio of Astronomy Club; Guy Grard, FO8FB; Wilber Trafton, FO8GW (customs clearance); FO8KS; FO8KI; and 35 others at a special meeting — made the trip incredibly pleasant.

The deluxe Beachcomber Hotel furnished a boy to put the all-band G5RV antenna high in the palm trees. □

DX news is always welcomed, especially news of a planned DXpedition. What is most important, though, is that the information be sent well in advance. My lead time is two months. This particular column is being submitted mid-August and will appear in the October issue, which is in the mails in September.

I received a note from one DX'er dated mid-June for a DXpedition that was to begin early July, about three weeks from the date of the letter. Unfortunately, that information was received too late to be used. If the information was received before my mid-May deadline, it would have been in time, as you would have had the information by the end of June.

Contributors for this month's column include AF2C, KA2EIO, W3CV, WB4ZNH, K5KG, K5OVC, WB6GFJ, KF8N, W9LNQ, K0BJ, VE7WJ, DF2RG, HB9NL, I8YRK, VK2WU, VK9NS, Grupo Argentino de CW, Central Pennsylvania DX Club, Stark DX Association, Kansas City DX Club, Kansas DX Association, Southern California DX Club, Northern California DX Club, Redwood Empire DX Association, Western Washington DX Club, Northern California DX Foundation, *Long Island DX Bulletin, The DX Bulletin, DX News Sheet* and *QRZ DX*.

As I come near the finish of this month's column, the Olympic Marathon is in progress. It suddenly occurred to me that I have missed the annual Northern California DX Club summer marathon. But then again, I have been gone most of the summer, leaving 08 June and returning the last day of July.

We drove over 11,000 miles as far south as Houston, as far north as Rouses Point, New York, and as far east as Wolfeboro, New Hampshire. Included in this trip were the two conventions in which Worldradio had a booth, giving me the chance to meet several of our readers.

Now that we are back, we will have to get back in the swing of DX. Hope your summer was as fun as ours. 73 de John, N6JM. □

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Prices, specifications, descriptions subject to change without notice. Calif. and Arizona residents please add sales tax.

"Rigs afloat time"

This month we're going to cover some of our most popular subjects, including rig reviews, "secret" modification techniques for high-frequency (HF) radios, and some more frank comments about maritime mobile nets.

Let's start with all those HF rigs available for maritime mobile, mobile home and mobile installations.

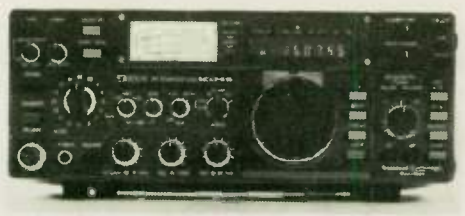
The Kenwood TS-430 still enjoys popularity. This rig is found on hundreds of boats plying the Atlantic and Pacific waters, and it has a reputation of a rig that works and stays working. Incidentally, they also lowered the price to make it more competitive with the popular Yaesu 757.

Kenwood TS-430S

The Yaesu 757 is also working out quite well for maritime mobile, motor home and vehicular installations. This set should appeal to the CW buff with its extra built-in filters, built-in keyer, full break-in capabilities, and they even give you 10 meters FM — all at no additional charge. Like the Kenwood, it's simply a flick of the switch on the inside to make it play on marine frequencies.

ICOM recently lowered the price on their popular IC-745 worldwide transceiver. It's now priced competitively with the Kenwood and Yaesu sets, and offers some additional features.

The ICOM 745 has 16 memory channels — twice as many as the 757 or 430. Its general coverage receiver can also be modified for emergency marine channel transmit by simply cutting J-7, pin 1 (the



ICOM IC-745

light brown wire) located on the RF board on the side of the IC-745.

I have personally tested the 745 and find that its receiver is one of the hottest and most selective ones I have found yet in any $700 category, HF set. The operation of the set is straightforward, and those 16 memories can easily be filled up with maritime mobile nets, weather FAX frequencies, popular mobile nets, or any other set frequencies you want — ham or otherwise.

ICOM also produces a mega-memory transceiver ideal for maritime mobile use — their top-of-the-line IC-751 with 32 memories. Each of the 32 memory channels will also store mode data such as upper sideband, lower sideband, AM shortwave reception, weather facsimile reception (LSB), etc.

The IC-751 also incorporates a general coverage receiver that may be adapted for emergency transmit on marine frequencies. This requires snipping J-2, pin 1 (the black wire) located on the RF board that's on the side of the radio.

A word of caution about transmitting on frequencies outside of the Amateur Radio bands — except in an emergency where your life or property is at stake, it's simply illegal. Although general coverage receive sets make a dandy marine single-sideband transmitter, they are not type-accepted under Part 83 of the rules and, therefore, cannot be used for marine transceive operation. If you are looking for a super, type-accepted marine HF transceiver that will also operate on ham frequencies, write ICOM America, Inc., 2112-116 Ave. NE, Bellevue, WA 98004, and request product information on their new M-700 marine/ham synthesized transceiver.

More on Maxcom

I am still receiving mail regarding more information about the automatic antenna tuner. Please go back and read my follow-up views on this product. It does work, and it is probably nothing more than a transformer and some resistors. Although there appear to be circuit boards on the side, experts tell us they are not connected. This seems a little fishy to me; however, several letters from boat owners swear by the set-up.

The tests I have conducted on the unit indicate it will provide a nice match to any solid-state transceiver (just like a dummy load). It also manages to get some of the energy into the air waves (transformer and resistive coupling).

The bottom line is that Maxcom does work, but the amount of RF that actually goes into the wire would probably put your station in the QRP classification! Hi hi!

Lightning protection

Good grounding techniques that we described last month will definitely give you better lightning protection. However, did you know that nearby lightning strikes can also zap the front end of your HF radio or your VHF marine and 2-meter set on that masthead antenna?

One of the best devices we have seen for the mobile and marine community for lightning protection is the Alpha Delta Communications, P.O. Box 571, Centerville, OH 45459, "Transi-trap" (R) lightning and static protector. It simply connects between your coax and your transceiver with your ground connection going to the ground terminal on this tiny device. A gas-filled tube safely bypasses lightning surges to ground, saving your receiver from instant death.

This particular device, that I have tested nicely, isolates its ground which also keeps any energy off the chassis of your equipment. The insertion loss is undetectable, but its protection is tremendous. They have several models for different power levels, but all are priced in the $30 category, which is cheap insurance. This product I have tried and heartily recommend.

Super goo

Since we are talking about antennas and protective goodies that will keep your radio installation running when out on the high seas or plying the highways, let me again mention the benefits of Tom Harrington, W8OMV's Coax-Seal (R). This stuff works wonders in keeping moisture out of antenna fittings, baluns, coax connectors and feedpoints. You can also use this gooey stuff to stop leaks in the deck, and to plug up the hole where your antenna wire runs through your cabin or motorhome.

"We now have 1"-wide material that cuts down on the amount of winding necessary to make a good sealed connector," comments Tom W8OMV. "We have also stiffened up our sealant, which we consider an excellent improvement," he adds.

Coax seal

I think the biggest improvement was when they changed the color from nauseous green to military black. Hey,

Tom, how about some white Coax-Seal (R) for us mariners? This stuff is great, and if you put together an antenna, you're absolutely crazy in not completely weatherproofing the feedpoint and those water-susceptible PL-259's.

A marine or mobile home antenna installation without sealed connectors is unthinkable. It's available at your local ham store or directly from Universal Electronics, 4555 Groves Rd., Ste. 3, Columbus, OH 43227.

By the way, if you are into radio teleprinter reception and transmission at your ham shack, or on the boat, Universal Electronics also produces a detailed directory of radio teleprinter transmitting stations, RTTY equipment, and dialogue that will answer all of your questions about going computer with your ham station. It's written by Dave Ingram, K4TWJ, the RTTY guru, and it's available at most ham stores; or for more information, write Universal Electronics, Inc.

MUF prediction

Speaking of computers, I just tested a dandy program for your personal computer that lets you instantly develop maximum usable frequency predictions. Once you run the software, it will tell you precisely what it needs to know — your location, where you want to talk to, time of day, etc. Plug in a little bit of information and sit back and watch "MUF Plot" do its thing. There are so many features of this program I haven't got room to put them in. Do you want to work a LU5 on Sunday afternoon? Hit a couple of keys, and it will give you all the details of when, how, where, and what frequency. For MUF programs, this one is truly a joy to watch on the screen. For more information, write Base (2) Systems, 2534 Nebraska St., Dept. MM, Saginaw, MI 48601.

I'm still receiving letters of praise regarding the company that modifies Kenwood transceivers explicitly for maritime mobile, motorhome, and mobile installations. Rich Adams, W8MFD, 826 Lea Ave., Miamisburg, OH 45342, has complete details for you, on what can be done to a Kenwood transceiver to "marinize" it for heavy weather use. They add the filters, tweak the coils, burn it in, life-cycle it, add audio equalization equipment, and really spruce up a Kenwood 430 like you never heard before. Write them for more details.

Nets and tests

Now that the new volunteer examination program is here, we are trying to set up Extra Class volunteer mariners who might give ham tests out on the high seas and in those distant cozy coves. It takes a team of three Extra Class volunteers who will give the test together to qualify; if you are interested, drop me a note.

I think there is a great opportunity to serve those of you who are far off at sea who may wish to upgrade. The new volunteer examination program may be just the answer. All we need are the Extra Class volunteers — we have plenty of test takers!

By the way, staying up to date on the latest rules is very important if you are a club officer of a net controller. A company called Fair Press Services, P.O. Box 19352, 20th Street Station, Washington, D.C. 20036, offers a monthly FCC Amateur Radio information service that will keep you up to date on the very latest of happenings at the Commission. For $15 a month, it's a necessity if you are relied upon to give out accurate information on what's happening in Washington. Ethel Eickhoff is your contact at this information office.

Finally, on to maritime nets. My chastisement of mariners who use nets as private telephone connections to their office drew considerable response from both sides. Some mariners indicated that it was simply economics that prevented them from putting aboard an authorized marine single-sideband station for commercial marine channel telephone calls. Their stationery bears a photograph of their 95-footer, so it's a little hard to see this type of rationalization.

Several net control operators indicated that it was about time somebody brought this sore issue up, and the following paragraphs written to me by a prominent Atlantic net controller pretty well sum up their feelings:

> In a nutshell, the private vessels are guilty of several abuses:
>
> 1) Using us for *business* phone patches. The regulations are most clear, but they want to bend them to the point where I have to cut them off. I had to cut off two of them today, one from the Marshall Islands, and another from a boat in the South Pacific.

(*please turn to page 38*)

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

Signals from space are of interest to the Amateur Radio community. Scientific interests are listening for ET's. Commercial interests are listening for their geostationary satellites.

We in the Amateur Radio community have operational AMSAT/OSCAR's 9, 10 and 11. The Russian RS Satellites are 3-8, of which two are being heard currently; I'm not sure which they are.

But what about the future of Amateur Radio satellites? It appears that there's no need to worry. AMSAT is planning a Phase IIIC and a Phase IV. The Japanese amateurs are constructing JAS-1. Netherlands amateurs and Italian amateurs are also planning amateur spacecraft. Swedish amateurs are planning an AMSAT-SM program which we have learned about via AMSAT UK's *AMSAT/OSCAR News* for August 1984. The 6,000-member Swedish Amateur Radio Society (SSA) is supporting the AMSAT-SM project fully.

The Swedish amateurs supported by their government and scientific communities have the know-how, the will power and interest in bringing about an Amateur Radio satellite.

The SWASAT plans include educational programs for comprehensive or secondary schools. Among the backups proposed are included: a computer system; a CPU; a BOOT-PROM for restarting a program if it should fail; also a backup, a 4-8 Mbyte dynamic RAM; an interface for Amateur Radio communication; an instrument measurement interface for control and readout on board the satellite; a camera to cover various spectral ranges; magnetometers; G-M Counter; a telescope; indicators for attitude control; a temperature sensor and indicator; and who knows what else? All we can say is WHEW!

I can only think of the "Ballad for Americans" in which, after a listing of all of the ethnic and occupational groups in the country, the singer says "— and that ain't all —." What an ambitious program!

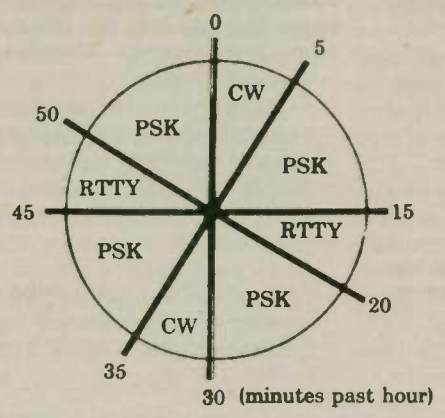
We can look forward to a spate of communications satellites in space by and for amateurs, with an added benefit to the educational community, where kids will be able to observe signals from space directly and, as in the case of the UOSAT's, simply by tuning in with small hand-held FM transceivers.

Radio amateurs work with other volunteers in developing countries as experts, missionaries and aid workers. Communications back home may not always be easy. Making a contact to obtain medical, technical or scientific information can very likely provide the only link with the home base.

AMSAT in the USA together with VITA, an aid organization, has planned a PACSAT operation. The PACSAT is intended to have two 4 Mbyte computers. One of these would be used by VITA for just such communications as described above. Some of the experiments could be designed for particular benefit to the people of the developing countries.

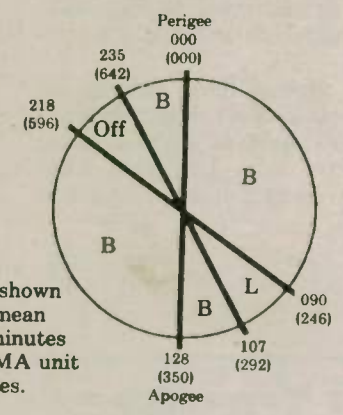
There is more amateur-related space-oriented activity coming up in the future.

General Beacon Operating Schedule for AO-10



Effective August 1984

AO-10 Transponder Operating Schedule (Preliminary)



NOTE: Values shown are in units of mean anomaly and (minutes of time). Each MA unit is 2.7326 minutes.

Effective August 1984

Preliminary operating schedules were set up for AMSAT/OSCAR-10 in August, which are depicted in WA2LQQ's drawings above. TNX ASR.

The Jet Propulsion Laboratory ARC, through its station W6VIO, has several projects in the planning stages. They will continue to provide retransmission of the shuttle audio as long as permission is granted. In 1986, there will be two big space events that the JPL group is planning to support. The launch of the Galileo spacecraft, which will orbit the planet Jupiter and send probes into the planet's turbulent atmosphere, is one of these. The other is the flyby of the planet Uranus. Look for commemorative operations during both of these events.

UOSAT-2 is in a 700km circumpolar orbit. UOSAT-1 is in a 500km circumpolar orbit. One of the advantages of the higher orbit is that there is less atmospheric drag. This results in a reduction in the number of orbital element updates with UOSAT-2 as compared with UOSAT-1. Whereas UOSAT-1 necessitated updates every few weeks, UOSAT-2 requires orbital parameter updates at intervals of only three months.

The transmitting frequencies of both UOSAT-1 and UOSAT-2 are the same. Nevertheless, only over the Arctic and Antarctic latitudes are the satellites likely to be in view at the same time. The orbits of both are sun synchronous, but they are at approximately right angles to one another with respect to the sun. As the Earth rotates beneath them once every 24 hours, they are sufficiently far apart so that only one of them is in view at any time. UOSAT-1 crosses the orbital plane at approximately 3:00 a.m. or 3:00 p.m. local time, while UOSAT-2 crosses the orbital plane at 9:00 a.m. or 9:00 p.m. local time.

The AMSAT Annual Meeting will take place on Saturday, 10 November, at the AMFAC (formerly Airport Marina) Hotel. Contact Dennis Dinga, N6DD, P.O. Box 4111, Diamond Bar, CA 91765 for further information.

A call for papers has been made. For more information, contact Papers Chairman Cleyon Yowell, AD6P, c/o Aerospace Corp., Mail Station, M4-930, P.O. Box 92957, Los Angeles, CA 90009; (213) 615-4234. ☐

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

way from Greece. That unique responsibility fell to Harold Littell, WA8MRT/AAV5DL, of Akron, Ohio.

Harold was born and raised in Akron, Ohio. He retired from the Ohio Bell Telephone Company two years ago, after 37 years of service. During his telephone career, he had worked all over the state of Ohio. In 1956-7, he was loaned to the Western Electric Company, and spent a year on the DEW line in northern Canada. At one time he went to the New England states to help rebuild a telephone plant after a devastating storm. Of course, his most exciting tour away from home came two years after retirement, spending 82 days with the Olympic Torch relay.

Harold's forte is technician in Teletype and data. Working with things precisely mechanical eminently fitted him to maintain the miners' lamps that carried the master flame. Stop and think — when the flame was run into the Olympic stadium on 28 July, how did it survive the windstorms of Kansas on 12 June? It didn't. In fact, it was blown out several times by high winds, and each time it was relighted from the master flame in the miner's lamp — the lamp that was Harold's responsibility to maintain. Sound important? It was!

Harold first became a radio amateur in 1939 while still in high school. He let the original call lapse, but renewed his license in 1962. He became an Army MARS member in 1967, dropped out in 1971 and renewed in 1983. His current effort is to get his teletype station working well on the local 2-meter net.

He and wife Marge have three grown children. Marge is especially proud of his contribution to moving the Olympic Flame across the country.

By the time you read this, the Olympic games will be over, just a TV memory to most who watched the games on TV. The memories will be more vivid for a small number of Amateur Radio operators who took a direct part in the torch relay across the country. We were proud to have been given a opportunity to become a part of Olympic history. □

Norm Brooks, K6FO/AAR9NI

When you saw the Olympic Torch carried into the Los Angeles Olympic Coliseum on 28 July, you saw the culmination of efforts of about 10,000 people, most of whom were volunteers. The Olympic Flame, originating in Greece, came to New York on a jet plane. It then made an 82-day journey, carried torches for 9,000 miles through 33 states to arrive at the Olympic Games site on time.

AT&T sponsored the relay and primarily used volunteer manpower from the Telephone Pioneers of America, a service organization made up of active and retired telephone employees. About 80 people, each week, manned the necessary jobs to move the Torch's 37-vehicle caravan across the country. An important segment of this group was the Amateur Radio operators who provided communications for the huge caravan.

Harold Littell, WA8MRT/AAV5DL

The caravan moved at about 8 mph, which is the running speed of the marathon class runners on the AT&T cadre team. Each of these cadre runners ran four miles twice a day for a week. Some of the distance was also run by Youth Legacy Kilometer (YLK) runners. Each YLK runner was sponsored by a $3,000 donation to a fund set up to promote athletics for youth. When the YLK runner ran his or her kilometer, the cadre runner lighted the runner's torch, and the YLK runner became the only person in the world carrying the Olympic Flame to the Olympic stadium.

The 80-person crew changed each week. One of the jobs, computer operator, was for two weeks, which included a one week apprenticeship, because of the importance of the computer to the entire operation. One other job was the *only* job where the volunteer worker stayed on the job for the entire 82 days. That job was to maintain the miners' lamps in which the master Olympic Flame was carried all the

MARS assists during Special Olympics

Jerry Pixton, AF36CV

On 23-24 June, nine MARS members from Northern California provided communications support for the California Special Olympics (CSO) Summer State Games, held for the second straight year at the University of California, Berkeley. U.S. Air Force MARS was again asked to provide volunteer assistance to CSO, as they have for so many years in Los Angeles with the Los Angeles Air Force Station Base Support Team.

Dr. Jerry Pixton, AFB6CV, was contacted in January and asked to coordinate not only the MARS communications involvement, but all communications to be used at the special summer games. The various support agencies required eight different communications networks. MARS provided a gateway service for message exchange between the eight nets and the primary communications between the 14 game sites.

Seven MARS members participated on Saturday the 23rd, and five on Sunday the 24th. The following MARS operators staffed the radios for the second year: Jim Day, AFB6DR; Jay Dunlevy-Wilson, AFB6KG; Doug Horton, AFA6KQ; Jerry Pixton, AFB6CV and Tom Walden, AFB6TW. First-time operators were: Bon Bartley, AFB6LZ; Don Crist, AFB6LU; Orson Hildebrand, AFB6MY; and Leon Reichard, AFA6TC. CMSgt. Lee White and LtCol. Bob Choplin also helped with the radios.

Again this year, additional support was obtained from the following radio operator trainees: Jim Fennel, Tencia Gonzales, Nancy Pixton, Dan Rhoads, Maryfrances Walker, Randy Walker, Mary West and Henri Willis. Many of the emergency messages were successfully handled by these operator trainees.

Jerry Pixton, AFB6CV, served as Communication Coordinator; Jay Dunlevy-Wilson, AFB6KG, got all the MARS volunteers; Nancy Pixton obtained the volunteers from the San Andres Regional Center; Randy Walker assisted in installing radios and antennas on Friday. Prior to the start of the field events, on Friday afternoon, MARS was asked to help during the opening ceremonies because the CSO radios were not working well. Jerry Pixton, Maryfrances Walker and Randy Walker operated the only three radios available that evening, and Nancy Pixton ran between radios and the parade officials to provide the necessary communications. A portable MARS repeater was loaned by Kevin Green, for use during the Games. It provided solid coverage to all the sites.

Air Force MARS members, mark the calendars now for 29-30 June 1985, when your participation is needed to continue to carry out this valuable community service. This is one place where you can get first-hand experience under real emergency conditions in situations you will never forget. — *Paul Turkheimer, WA6NKL/AFA6YJ* □

Tokuzo Inoue, JA3FA (left), became the first Japanese member of the Wireless Institute of Australia (WIA), Victorian Division, during his recent visit to Australia. On the right is Jim Linton, VK3PC, president of WIA's VK3 Division.

ICOM president visits Australia

Jim Linton, VK3PC

Insights on future equipment trends and Amateur Radio in Japan were revealed recently by the founder and president of ICOM, Inc., on a visit to Australia.

Tokuzo Inoue, JA3FA, proudly became the first Japanese member of the Wireless Institute of Australia (WIA), Victorian Division, and is the latest overseas member of the world's oldest radio society (see **Worldradio**, May 1984, page 17).

Tokuzo said computer technology was developing so fast, it was diffucult to predict, but advances would go into amateur equipment with some exciting possibilities. He said rigs in the future will have an in-built capability for RTTY, AMTOR and data communications as these modes increase in popularity.

"Maybe pretty soon, computer-controlled language translators will be included," he said.

International QSO's will become much easier. At the present time, with DX communication, many Japanese operators have difficulty with the English language. Spanish-speaking amateurs (*please turn to page 50*)

VISIT YOUR LOCAL RADIO CLUB.

ARIZONA

Tuscon Repeater Association
P.O. Box 40371, Tucson, AZ 85717-0371
2nd Sat/monthly — 7:30 p.m., Pima Co. Bldg.
Net Thurs 7:30 p.m. 146.22/82 (146.28/88 & 147.69/09)
(602) 747-8903 or 899-4776

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.

The Amateur Radio Club of El Cajon, Inc.
Parkway Jr. High School
La Mesa, California
2nd Thursday/monthly — 7:30 p.m.

Electronic Museum ARC
Foothills College, Los Altos
Last Monday/monthly - 7:30 p.m.
(except January and December)

Fresno Amateur Radio Club, Inc.
P.O. Box 783, Fresno, CA 93712
Meets: 2nd Friday/monthly - 8:00 p.m.
Wawoha Middle School; 4524 N.
Thorne; Fresno. W6TO/R 146.34/94

Gabilan Amateur Radio Club
Monterey Savings & Loan Public Room
Corner First & Westwood
Gilroy, CA 95020
2nd Thursday/monthly - 7:30 p.m.

Livermore Amateur Radio Club
3508 Gresham Ct., Pleasanton, CA 94566
Meets: Valley Memorial Hospital
Multi-purpose room, Livermore, CA
2nd Saturday/monthly - 9:30 a.m.

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

San Fernando Valley ARC (W6SD)
Red Cross Building
14717 Sherman Way
Van Nuys, CA 91704
3rd Friday/monthly - 7:30 p.m.

San Gabriel Valley ARC
Bowling Green Clubhouse
405 S. Santa Anita Avenue
Arcadia, CA 91006
1st Tuesday/monthly - 7:30 p.m.

Santa Cruz County ARC
P.O. Box 238, Santa Cruz, CA 95061-0238
Last Friday/monthly — 7:30 p.m.
Dominican Hosp. Educational Center
K6BJ repeater 146.19/146.79

S. Counties Amateur Teleprinter Society (SCATS)
2nd Sat/monthly — alternates in L.A. & Orange Counties.
60 WPM RTTY Net, Wed. 8 p.m. on 146.10/.70 W6IWO/RPT
For info. call Howard Rose, N6CPP, (818) 997-1067

Sierra Foothills ARC
PO Box 3262, Auburn, CA 95604
Office of Education Bldg.
360 Nevada St., Auburn CA 95603
2nd Friday/monthly — 1930

Simi Settlers ARC (SSARC)
PO Box 3035, Simi Valley, CA 93063
3rd Thursday/monthly - 7:30 p.m.
Bank of A. Levy (across Larwin Sq.)
K3HZP/R 147.165/.765 Simplex 147.48

South Bay Amateur Radio Association
P.O. Box 91 • Fremont, CA 94536
Fremont School, 40230 Laiolo Rd
3rd Wednesday — 7:30 p.m.

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

Sonoma County Radio Amateurs, Inc.
Box 116, Santa Rosa, CA 95402
Hank Davis, W6DTV (707) 823-7885
County Office of Emergency Service
1st Wednesday/monthly - 7:30 p.m. rpter 146.13/73

Southern Calif. Amateur Transmitting Society (SCATS)
Vine Elementary School
1901 E. Vine St.
West Covina, CA 91790
1st Monday/monthly - 7:00 p.m.

Ukiah Amateur Radio Club
P.O. Box 1373, Ukiah, CA 95482
Meets: Carpenters Union Hall
2nd Monday/Monthly 7:30 p.m.
President: Bob Rowe - KA6CXM (707) 485-7147

Valley of The Moon Amateur Radio Club
358 Patten St., Sonoma, CA 95476
Darrel Jones, WD6BOR (707) 938-8086 For Info.
Meets: odd months, 2nd Tuesday, 7:30 p.m., Sonoma Police Dept.; even mo., 2nd Sun., 11 a.m., bkfst.

West Coast Amateur Radio Club
Fun Meetings — No Business
Fountain Valley Elementary School
Visitors welcome — call in 144.330 simplex
Call KA6RRR (714) 636-8661 for dates

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

West Valley Amateur Radio Club
American Legion Hall Post #826
5320 Fallbrook Ave.
Woodland Hills, CA
2nd Thursday/monthly — 7:30 p.m.

West Valley A.R.A. W6PIY
Meets: Los Gatos Red Cross Bldg.
18011 Los Gatos - Saratoga Rd.
Los Gatos, CA 95030
1st and 3rd Wednesdays/monthly

Yolo Amateur Radio Society (YARS)
Rolind Mahan, AJ6P (916) 756-0882
Heart Federal S&L, Conf. Rm.
3rd & F Sts. (opposite Davis PD)
Davis, CA 95616

CONNECTICUT

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

FLORIDA

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.

Indian River Amateur Radio Club
PO Box Five, Cocoa, FL 32922
1st National Bank, Merritt Island
Cor. SR 3 and SR 520, Merritt Island
4th Tuesday/monthly - 7:30 p.m.

Vero Beach Amateur Radio Club W4OT
Walter Camuso, W1ESN, President
Meets second Thursday/monthly - 8:00 p.m.
American Red Cross Bldg.
2506 17th Ave. • Vero Beach, FL 32960

HAWAII

Big Island Amateur Radio Club
Helco Auditorium
1200 Kilauea Avenue, Hilo
Call-in 146.28/88
2nd Tuesday/monthly - 7:30 p.m.

ILLINOIS

Bolingbrook Amateur Radio Society
215 Monroe, Bolingbrook
(312) 739-0045 / call in 147.93/33
3rd Monday/monthly - 7:00 p.m.

For information on how to get your club listed in this column, plus receive many other benefits, write to Dave Tykol, WA6RVZ, Club Liaison, Worldradio, 2120-28th Street, Sacramento, CA 95818.

Chicago Suburban Radio Association (CSRA)
Clyde Federal Savings & Loan Assn.
7222 West Cermak Road
North Rivrside, IL 60546
2nd Wednesday/monthly - 8:00 p.m.

Dupage Amateur Radio Club
Mid-America Savings and Loan
55th & Holmes (55th St. near RT 83)
Clarendon Hills, IL • 4th Monday/monthly 7:30 p.m.
(312) 971-1156 for more information

Fox River Radio League
Valley National Bank, Lower Level
Northgate Shopping Ctr. & RT. 31, Aurora, IL
(312) 898-2779 for more information
2nd Tuesday/monthly - 7:30 p.m.

Radio Amateur Megacycle Society, Inc.
Irvingwood Acacia Church
3900 N. Plainfield Chicago, IL 60634
(312) 625-2879
3rd Friday/monthly - 8:00 p.m.

INDIANA

Allen Co. Amateur Radio Tech'l Society, Inc.
PO Box 10342 Ft. Wayne, IN 46851
Allen-Wells Chapter House• Amer. Red Cross
1212 E. California Rd., Ft. Wayne, IN 46825
3rd Tuesday/monthly - 7:30 p.m.

Fort Wayne Radio Club
Ron Koczor, K9TUS
PO Box 15127, Fort Wayne, IN 46885
The Salem Church
3rd Friday/monthly - 7:30 p.m.

Indianapolis Repeater Assoc.
4th Monday/odd numbered months
Carson Manufacturing
5154 N. Rural St., Indianapolis
146.10/70 147.72/12 146.625/025

Northeastern Indiana ARC
Jim Sellers
P.O. Box 745, Auburn, IN 46706
Daily 6 p.m. net on 147.96/.36
2nd Tuesday/monthly - 7:30 p.m.

IOWA

RSCB (Radio Society of Council Bluffs)
Richard Swig, WA0ZQG, Secretary
104A Jennings Road
Council Bluffs, IA 51501
2nd Tuesday/monthly - 7:30 p.m.

MARYLAND

Frederick Amateur Radio Club
Old Frederick Court House
Rick Ogden, N3RO
(301) 845-2670
Meets: 2nd Tuesday/monthly - 8 p.m.

MASSACHUSETTS

Q.R.A. (Quannapowitt Radio Assoc.)
Masonic Hall — Salem Street
Wakefield, MA 01880
2nd Friday/monthly Sept-May 8:00 p.m.

Whitman Amateur Radio Club (WARC)
Pine Street, P.O. Box 48
Whitman, Massachusetts 02382
Call-in 147.825/225
1st & 3rd Mondays/monthly — 8:00 p.m.

MICHIGAN

The Metropolitan A.R.C.
Harper Woods City Hall
I-94 & Eastwood (Between Vernier & Moross)
Repeater - 448.55T./443.55R.
1st Sunday/monthly - 2:00 p.m.

South Eastern Michigan A.R.A.
Meets: 1st Fri./monthly 7:30 p.m. K8FC Rptr. 147.75/15
Grosse Pointe North High School
Building C, Cafeteria Commons
Info. Contact WB5YKO (313) 774-2531

MISSOURI

Heart of America Radio Club
American Red Cross
3521 Broadway
(816) 756-2365 x65
3rd Tuesday — 7:30 p.m.

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG
P.O. Box 911, Dover, NH 03820
(603) 742-0130/332-8667
2nd Sunday/monthly - 7:00 p.m.
Dover Dist. Court. Talk-in 147.57

NEW JERSEY

Central New Jersey Chapter No 138, QCWA
Net: Ea Tue. evening-10:00 p.m. 147.645/147.045 MHz
Mtgs: Quarterly; Membership or more info:
Bob McKinley, W2OMR, Sec., 89 Stratford Rd.,
Tinton Falls, N.J. 07724 (201) 542-2113

NEW YORK

Long Island Mobile Amateur Radio Club (LIMARC)
146.25/85, 147.975/375, 223.22/.224 .82, 444.125/449.125
Membership: Woody Gerstner, WB2IAP, 42 Mohawk Ave.,
E. Atlantic Bch., NY 11561. Net Mon. 8:30 p.m. 146.25/85
Meets 1st Tues/8 p.m., H.B. Thompson, JHS, Syosset

Suffolk County Radio Club
Meets 3rd Tues. monthly, 8 p.m.
Bohemia Recreation Center
Smithtown Ave., Bohemia, Long Island
More info! Dave Potter, W2GZD, (516) 472-2394

OHIO

Ashtabula County ARC
Ken Stenback, AI8S (964-7316)
County Justice Center
Jefferson, OH
3rd Tuesday/monthly-7:30 p.m.

C.A.R.S. (The Clyde Amateur Radio Society)
Ervin Remaley, KA8CAS Secretary
2nd Tuesday/monthly - 7:30 p.m.
Community Rm., City Building, Clyde, OH
Repeater 144.75/145.35

OREGON

Oregon Tualatin Valley ARC
Beaverton Elks Lodge
3500 SW 104th Ave.
Beaverton, Oregon
2nd Wednesday/monthly - 7:00 p.m.

SOUTH CAROLINA

Trident Amateur Radio Club (TARC)
P.O. Box 73, Summerville, S.C. 29484-0073
Meet-Park Circle Presbyterian Church
North Charleston, S.C.
3rd Monday — 7:30 p.m./Nets — Tuesday 8 p.m.

TEXAS

Panhandle Amateur Radio Club, Inc. W5WX
Meets at Naval Reserve Center
2309 Line Ave., Amarillo, TX
2nd Tuesday/monthly 7:00 p.m.
Pres: Gary Rutherford, WB5MDJ

VIRGINIA

Eastern Shore ARC (ESHARC)
110 Church Street
Chincoteague, VA 23336
Repeater WA4TVS 147.855/.255
Net Mon. 9 p.m. Mtgs. as announced

Virginia Beach Amateur Radio Club (VBARC)
Open Door Chapel
3177 Virginia Beach Blvd., Va. Beach, VA
1st Thursday/monthly — 7:30 p.m.
For information (804) 497-1235

WEST VIRGINIA

Jackson County Amateur Radio Club, Inc.
Bob Morris, WA8CTO, Sec.-Treas.
308 Edgewood Cir., Ripley, WV 25271
First National Bank of Ripley, WV
1st Thursday/monthly - 7:30 p.m.

AWARDS

FAR scholarships

The Foundation for Amateur Radio is pleased to announce the 1984 winners of the 15 scholarships it administers.

John W. Gore Memorial Scholarship — $900
David J. Schmocker, KJ9I, Oconomwoc, WI
Richard G. Chichester Memorial Scholarship — $900
Paul D. Sargis, KI6U, Modesto, CA
Edwin S. Van Deusen Memorial Scholarship — $350
Timothy Wettach, N2TW, Webster, NY
QCWA Silent Key Memorial Scholarships — $500 each
Bruce A. Wade, N9UR, Glendale, WI
Ien R. McNicholl, KA9KOW, La Habra, CA
Scott Smith, KA2EMO, Malone, NY
Radio Club of America Scholarship — $500
Doyle B. Johnson, KF6BD, Pleasant Hill, CA
Edmund B. Redington Memorial Scholarship — $500
David Swiatlowski, KA2KLM, Camillus, NY
Young Ladies' Radio League Scholarship — $500
Diane E. Willemin, N8CAY, Elyria, OH
Amateur Radio News Service Scholarship — $500
Marc C. Vernon, KI9V, Hinsdale, IL
Columbia (MD) Amateur Radio Association Scholarship — $650
Eric J. Smith, KA3KJO, Silver Spring, MD
Baltimore (MD) Amateur Radio Club Scholarship — $500
Richard A. White, Jr., KA3T, Mt. Airy, MD
Dade Radio Club Tropical Hamboree Scholarships — $500 each
Wayne F. Poole, KC4XL, Surfside, FL
Craig F. Rodgers, WA4C, Boca Raton, FL
Lewis G. Wilkinson Memorial Scholarship — $500
David Cheitel, KA2PNR, Bronx, NY

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.

Information regarding 1985 awards will appear in the April or May issue of the major Amateur Radio publications. □

A FAR NET Award

The Armored Force Amateur Radio Net offers its A FAR NET Award certificate to Amateur Radio operators of any nation. The 8½" × 11" certificate is printed in four colors on white on heavy stock and is intended for framing.

Endorsements are available for making additional contacts and for making contacts in one mode or on one band. Application may be made for any award level, mode or band operation at any time.

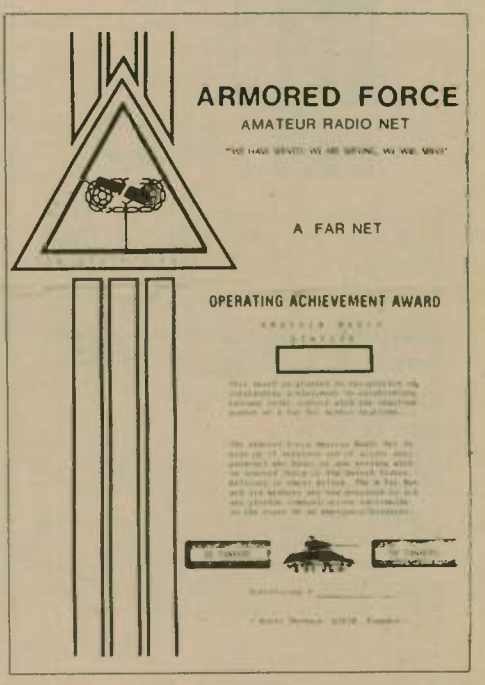
Qualification requirements (non-member stations):

1) To qualify for the basic award, non-member stations must establish two-way contact with a minimum of 15 different A FAR NET member stations.

2) To qualify for endorsements, non-member stations must make contact with 10 or 35 additional members on any band or in any mode.

3) Confirmation of the required contacts must be through a copy of the non-members log that has been certified by two other Amateur Radio operators.

Applicants for the basic award certificate must submit a minimum of 50 cents along with their application to cover postage, envelopes, etc. Endorsements, not mailed along with the basic certificate will require only a normal 4½" × 6" SASE.



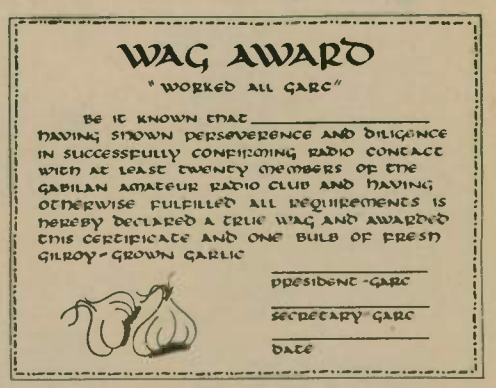
Applications for the basic award or endorsements should be sent to the A FAR NET Certificate Manager: Alfred G. Beutler, K2DWI, A FAR NET Certificate Manager, 36 Manchester Rd., East Aurora, NY 14052. NOTE: Please allow from two to four weeks for mailing of the certificates or endorsements.) □

Worked All GARC

The Worked All GARC (or WAG) Award is given free to any Amateur Radio operator who can submit written confirmation (QSL cards) of at least one two-way contact with each of 20 or more members of the Gabilan ARC (GARC).

The award consists of an attractive certificate suitable for framing and one bulb of fresh locally grown garlic. Contacts may be made on any band or mode or combination of these.

The Gabilan ARC was founded in 1979 and draws its membership from the area surrounding Gilroy, California. This includes cities in the Santa Clara, San Benito, Santa Cruz and Monterey County area such as Salinas, Hollister, Morgan Hill, Castroville and San Juan Bautista. The area lies on the fringe of "Silicon Valley," south of the San Francisco Bay, but its primary industry is agriculture, including the growing and processing of garlic. The city of Gilroy


WAG AWARD
"WORKED ALL GARC"
BE IT KNOWN THAT _____
HAVING SHOWN PERSEVERENCE AND DILIGENCE IN SUCCESSFULLY CONFIRMING RADIO CONTACT WITH AT LEAST TWENTY MEMBERS OF THE GABILAN AMATEUR RADIO CLUB AND HAVING OTHERWISE FULFILLED ALL REQUIREMENTS IS HEREBY DECLARED A TRUE WAG AND AWARDED THIS CERTIFICATE AND ONE BULB OF FRESH GILROY-GROWN GARLIC
PRESIDENT-GARC
SECRETARY-GARC
DATE

sponsors an annual Garlic Festival, and this award is in keeping with that spirit.

Award submissions should be sent to the GARC Secretary, P.O. Box 2178, Gilroy, CA 95021-2178. QSL cards will be returned only if accompanied by sufficient return postage. For a current roster of GARC members, send an SASE to the GARC Secretary at the address given above. To be valid for this award, stations must be members of GARC at the time of the contact, but need not be members at the time of the award submission. □

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Worldradio

Firemen honor doctor

Fire chiefs representing 16 Southern California cities and Los Angeles County honored Dr. Theodore Palmer, WA6MUK, chiropractic orthopedist of Pasadena, for his "contributions of public service" at a recent ceremony in Sierra Madre.

Awards were presented to Dr. Palmer from the Southeast Foothills Fire Chiefs Association and from the City of Arcadia Fire Department.

Dr. Palmer videotaped 42 hours of training lectures from the National Fire Protection Association, which were televised over the Westar 4 satellite from Washington, D.C., between December and May. As a result of Dr. Palmer's videotaping, the fire chief's association will be able to duplicate the lectures for all member fire departments.

"These state-of-the-art lectures will keep our department up to date on the new technology in such fields as leadership, public fire education, arson investigation, fire ground management and human behavior," Robert McClelland, West Covina fire chief and president of the Southeast Foothills Fire Chiefs Association, said in making the presentation.

Gerald Gardner, chief of the Arcadia Fire Department, awarded the plaque from the City of Arcadia.

Represented at the ceremony were fire departments from Alhambra, Arcadia, Burbank, Covina, El Monte, Glendale, La Verne, Los Angeles County, Monrovia, Monterey Park, Pasadena, Pomona, San Gabriel, San Marino, Sierra Madre, South Pasadena and West Covina.

Dr. Palmer is past president-elect of the Los Angeles County Chiropractic Society, and past president of the Los Angeles College Chiropractic Alumni Association, the San Gabriel Valley Chiropractic Society, Arcadia Toastmasters, and East Pasadena Optimists.

In accepting the awards, Dr. Palmer indicated that additional satellites will increase world understanding through communication. □

Gerald Gardner, chief of the Arcadia Fire Department (left), presents Dr. Theodore Palmer, WA6MUK (center), with a plaque, in honor of his "contributions of public service." Dr. Palmer also received an award from the Southeast Foothills Fire Chiefs Association (SFFCA), presented by Robert McClelland (right), West Covina fire chief and president of the SFFCA.

Maritime Mobile

(continued from page 33)

2) Recently, about four or five boats, seem to "use" us as PBX boards, going on and on and on and on, without realizing the time element, until we have to ask them to shorten it up so we can return to net and help the most number possible. I don't think it is unreasonable to restrict a patch to five minutes. It is embarrassing to have to break in and shorten it up.

3) The "content" of about 50 percent of the patches is questionable, at least to me. We have four boats on frequency the past few weeks who, it seems to me, are catching up on two or three years of non-communications with friends and relatives, traffic they have been too lazy to write. I guess they have plenty of time to sit in the boat and make it up the easy way, via us slobs on the land; but seems a more selective choice of traffic would be acceptable to us in the States who have spent much time and money to be good guys.

In short, Gordon, I feel more and more "used" with trivia traffic, and attempted business traffic. I have had exactly one postcard from the South Pacific during the past year, thanking me for my services, all of which are free. This is evidence that we have arrived at the status of a servant, accepted as routine, unpaid, links to anyone they wish, on any subject they wish, including business, and catching up on two-year delayed correspondence.

I don't want to offend anyone, and perhaps I should get off the net and quit handling this traffic, at least that part which is inconsiderate as above outlined. I am thinking of doing so. □

Packet Radio — a first at the Olympics

The site of the 1984 Olympic Soccer matches — Stanford University, Palo Alto, California — became the first use of Packet Radio during an Olympic event.

The Los Angeles Olympic Organizing Committee (LAOOC) was having a problem with messages being taken from a Centrex telephone system that had 60 telephones that would ring back to a central point when busy or rang five times. Complicating the problem, the message center was located two miles from the place the messages needed to be delivered.

The Palo Alto Area Chapter of the American Red Cross, already involved in the Stanford LAOOC operation by supplying 20 first aid volunteers and 11 Amateur Radio operators to coordinate communications/technology within the venue, had another problem to solve.

When the subject of hard-copy messages via a point-to-point radio circuit was first discussed with the message center personnel, loud cries could be heard: "We don't know how to run computers," "We don't want a complicated system," and "How much will it cost?" When told this was an experiment and they did not have to pay anything, they seemed to be resigned that this group of radio amateurs was willing to do almost anything to solve problems. After all, the LAOOC had already agreed to a 60-foot portable tower trailer, KT-34, wire dipoles for 40 and 80, to be located inside the security fence in the administrative area, the purchase of 78 ICOM 2AT's and the large Red Cross van with the 2kW amplifier (for K84OG) that selectively chewed up telephones in a radius of 500 feet. What was one more crazy idea!

The Packet system consisted of stock Kenwood TM-201A's, Tucson Packet boards, and Texas Instruments Silent 700 hard-copy devices. Simple 2-meter quarter-wave magnetic mounts were used for antennas. Four frequencies for the HT's and packet system just outside the 2-meter amateur band were obtained through the cooperation of the Department of Defense to avoid any conflict of using Amateur Radio for "commercial purposes." Once installed, and after a five-minute training session, the system worked almost flawlessly until one day the personnel secretary came over to the Red Cross van and said, "I thought you said this thing worked. Well, it's broken, and hurry up and fix it because we depend on it!"

Wait a minute! This was an experiment . . . no amount of talk was going to suffice. The board was substituted, and the system ran 24 hours per day for 11 days. Over 1,300 messages were sent and received, hours were saved by not having to shuttle handwritten messages over a distance of two miles through — on game days — as many as 80,000 people going to the games.

Packet Radio, indeed, helped solve a problem at the 1984 Stanford, California Olympics.

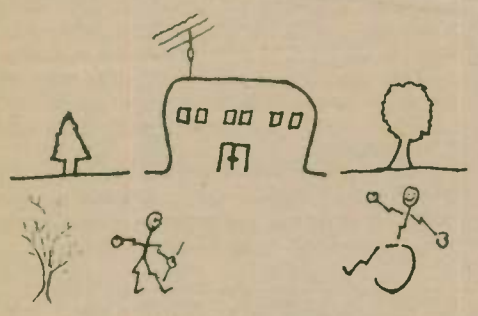
P.S. If you sent an SASE for working K84OG, W84OG or W23OG, be patient! Over 12,000 QSO's were made, and cards are being worked on. — *Ted Harris, N6IIU, Disaster Director, Palo Alto Chapter, American Red Cross* □

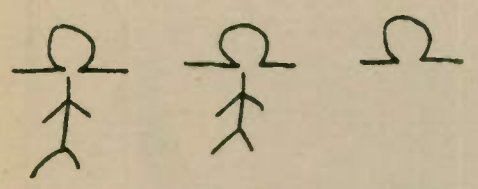
Ohm-Brew

Since we did not have an "Ohm-Brew" section last month, we're running two winning entries in the October issue.

The first was sent by Michael Quinn, N4DNX, of Charlotte, North Carolina. The second was sent by David Rogers, WA7ZYQ, of St. Maries, Idaho.

For answers, please turn to page *41*.





All "Ohm-Brew" entries should be neatly drawn on 3" × 5" cards, for easy handling. On the backs of the cards, print or type your name, address and call sign. Entries not used will not be acknowledged, due to the volume of entries received. □

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Bypass

We're not talking about a capacitor to keep RF in its proper place, nor about an operation to supply blood to the heart when the coronary arteries fail to function, but about something that is a dirty word in the communications industry these days.

With the divestiture of Ma Bell and the chaos and confusion now rampant in the industry, telephone companies are now having to scramble for business that formerly came their way automatically because of their monopoly. Local phone companies still have their protected service areas, but there is competition even here.

Those who can afford it and for whom it is profitable install their own microwave systems and sometimes satellite terminals, and bypass the local telephone companies. And the local companies scream "Foul!" The firms that are doing such things are the very ones that would otherwise have lucrative accounts with the phone company.

What does that mean for us amateurs? Simply that especially during this time of transition, we should be particularly careful to observe the rules about what may and what may not be handled on the amateur bands. I don't particularly mean we should scrutinize every message we handle or that we should refuse to relay anything that sounds in the least "commercial", but rather that those of us who originate traffic should be careful of what we put into the system, particularly when we do it for somebody on a regular basis.

Remember, the FCC is short-handed. It simply can't police our nets to insure observance of the rules. If too many complaints about amateurs come in, it could be that the only practical solution in the Commissioners' minds would be to use the ax, to make excessively strict rules that would make traffic handling almost if not entirely impossible. Thus far, we're doing fine. Let's do what we can to keep it that way.

SET

The ARRL Simulated Emergency Test (SET) is scheduled for 20-21 October, and has a somewhat different program this year. Long-haul traffic is not expected to reach as high a volume as in previous tests; rather, local communications are to be stressed.

In particular, *all* traffic during the SET should be originated and delivered via VHF, with the HF nets serving to provide interconnection between the VHF nets. Traffic is to be solicited from the agencies we would be serving during an emergency, Red Cross, Civil Defense and Weather Service.

This seems to be a more realistic way to run the SET. Emergencies these days tend to be local in nature, encompassing a few counties at most. Our extensive system of communication in this country now has so much redundancy built into it that outside a local area, it's almost always possible to re-route traffic to bypass (that dirty word again) any point where communication is interrupted, and it's done automatically so that the users don't even know it's being done — a transparent linkage, as they would say. Wide area communications emergencies once required help from amateurs, when available commercial circuits were fewer and needed operators to select them, but now communication failures are usually limited to a few telephone exchanges.

Furthermore, the SET was never as realistic an exercise of the National Traffic System (NTS) as is normal December traffic, or fair traffic. Many traffic handlers felt the only thing the high volume of traffic during SET accomplished was to delay handling of other ordinary traffic such as the NTS handles every day.

Still, the planners have left something to cause confusion even for the National Traffic System. Normally NTS operates on cycles 2 and 4 (beginning section nets at 1:00 and 7:00 p.m. local time, respectively), but during SET these cycles will be cancelled, and cycles 1 and 3 (10:00 a.m. and 4:00 p.m.) will be activated instead.

Doomsday planning

As said above, emergencies these days tend to be local in character. But there is always the possibility of a big one coming, and we should be ready. We have not had any big *communications* emergencies in a long time, but remember the recent power blackouts that have plagued our electrical distribution systems. The amount of power involved in a communication system is not enough to trigger such a general and widespread interruption of telephone service, so it's not really a parallel case. But there are things that could happen, particularly these days with trigger-happy terrorists loose in the world — some of them in government offices.

When the archangel blows reveille on his trumpet and the dead rise to meet the Lord, there won't be any need for Amateur Radio — not even 2-meter handhelds for crowd control. But lesser earth-shaking events could require our services. Nuclear war would — I suppose — be the worst, and there might be some amateurs with gear who survive. (I hope, as one preacher put it, "the bomb blows the rest of us up and doesn't blow us down!")

Then there is electromagnetic pulse (EMP) resulting from a high-altitude nuclear burst that does no significant damage on the ground except that caused by a very high-intensity electromagnetic wave that packs a wallop a hundred times as powerful as that of a lightning bolt. Such a blast could disable electric power systems and communications systems over an area half the size of the United States.

We might have to dig out our old rigs from the attic and put them to work to provide communication — if we have some way to power them. And old-timers who still use vacuum tube rigs might be telling us that such an event shows the superiority of the glass bottles, as they are much harder to destroy by a high-voltage pulse than solid-state devices.

Then there is the possibility of a coordinated attack by saboteurs on telephone switching centers that could interrupt communication for days or weeks.

Could such a widespread outage be caused by a natural disaster? Perhaps. There's a lot we don't know about how the sun operates. Solar flares contain tremendous amounts of energy. We know how they can interrupt HF communication. Could a more intense flare cause something like EMP? There could be earthquakes that cause widespread damage, like the one the prophets have been predicting for the West Coast. And occasionally, a storm will plow through large areas that are highly developed. And other possibilities can be dreamed up.

Planning

While such disasters are possible, and — according to Murphy's law — are therefore inevitable, they are rare. And their rarity makes it impossible to plan for them except in a most general way. Emergency planning has to concentrate more on local disasters and emergencies. Here we have experience to draw on, both our own and that of agencies we serve. Here we can test our plans, both in non-emergencies and in the real thing. Here we know the people we are dealing with, know the area we are serving, know the needs to be met.

Plans should be developed in cooperation with the agencies to be served, should make full use of Amateur Radio's available facilities and personnel, and should be thoroughly tested.

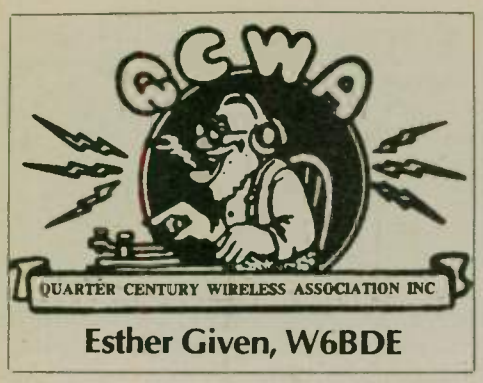
Such testing need not be in simulated emergencies only. Getting a group of amateurs out to assist at a parade, an athletic event, or anything else that requires help with communications, is an important way to learn which amateurs are best suited for which jobs, where the weak points are, how well the alerting system works, and also allows the amateurs involved to have the experience of working together.

Plans themselves should be general and deal mainly with principles. One thing about an emergency — it's usually unpredictable. No matter how much one has prepared for it, it almost always happens differently. Plans therefore should be flexible. In particular, one must not sacrifice efficiency and effectiveness for the sake of sticking to the plan. Planners should try to foresee what will happen anyway, then work that into the plan. The plan should be fitted to the job, not vice versa.

But planning there should be. If you aim at nothing, you'll hit it. □

See you in *Worldradio*

If you participated in or know of an interesting event involving Amateur Radio, send in the story to **Worldradio**. Pictures are especially welcome and will be returned. ***Worldradio, 2120-28th St., Sacramento, CA 95818.*** □



Esther Given, W6BDE

QCWA's 1984 ballot presented nine candidates from which five were elected to serve two-year terms as directors at large. The successful candidates include three incumbents — Lew McCoy, W1ICP; Esther Given, W6BDE; Wade Holland, W4AZT; and two new directors, Hugh Winter, W5HD, and John Kanode, N4MM, who will take office at the QCWA Convention being held 21-23 September at the Howard Johnson Conference Center in Windsor Locks, Connecticut.

In 1983, QCWA increased the number of directors from five to 10 due to the growth of the organization and its wide range of membership. Five directors are elected each year with election of major officers occurring in odd-numbered years. The full executive board consists of the president, vice president, secretary, treasurer and 10 directors at large.

•

QCWA will not conduct a Fall QSO Party in 1984. However, new activities manager Onie Woodward, W1ZEN, is preparing a wholly new program which will include an exciting Fall QSO Party for 1985. More information on 1985 activities will appear in this column in the near future.

•

QCWA created its longevity recognition awards program to honor its members who attain 50 or more years as licensed Amateur Radio operators. These Golden Anniversary certificates are awarded to QCWA members commencing on the 50th anniversary of licensing with follow-up certificates in five-year increments thereafter. Two rules apply:

1) Recipient must be a member in good stancing of QCWA at the national level.
2) Recipient must hold a current Amateur Radio license.

The arrival and development of the electronic age has provided a lifetime of accomplishment and enjoyment to its pioneers, and celebrating "hamiversaries" is a thrill for all concerned, whether it be a member of one's local chapter, the old friend at the other end of a QSO, or oneself who receives the certificate of achievement.

Today we are bombarded by computerese and the miracles of another world of discovery of electronic adventure. No amateur is astonished at the tremendous abilities our youth are evidencing in the computer sciences. Surely not too far in the future someone somewhere will establish a "Quarter Century Computer Club," and by 2025, they will probably be issuing 50-year certificates and asking their membership to donate ancient Atari games or antiquated Apples for their museum. Could it be that by that time they will have advanced to the point where a whole museum of computer history can be stored on one chip? □

1985 YLRL officers

The election results of the Young Ladies' Radio League for 1985 officers are as follows:

Rose Ellen Bills, N2RE, president; Martha Silver, NY4H, vice president; Jeanette Ellis, WO4U, secretary; Karla Holmes, WA1UVJ, disbursing treasurer; Dot Bedford, K4AOH, receiving treasurer (Districts 1, 2, 3, 4); Mary Lou Brown, N7DHA, receiving treasurer (Districts 5, 6, 7); Connie Hamilton, WD8MIO, receiving treasurer (Districts 8, 9, 10 KH6, KL7, VE).

And the following District Chairmen: Mariana Armstrong, WB1DJL (1st District); Minerva Fronhofer, WB2JNL (2nd); Betsy Robinson, WB3FQH (3rd); Carol Shrader, WI4K (4th); Richea Gayle Brigance, KU5L (5th); Betty Bravin, AG6C (6th); Phyllis Douglas, K7SEC (7th); Donna Burroughs, KB8YS (8th); Ann Arnholt, K9RXK (9th); Marjorie Tiritilli, KBØZC (10th); Val Von Holt, KH6QI (KH6); Betty Marsh, KL7FJW (KL7); Thelma Woodhouse, VE3CLT (VE). — *Jeanette Ellis, WO4U* □

Ohm-Brew Answer

OLD VOLTS' OHM
NO BODY OHM

WITH THE HANDI-HAMS

Maureen Pranghofer, KFØI

"HANDI-HAMS," I said as I picked up the phone. "Maureen speaking."

"Yes," says the voice on the other end. "This is John Smith in New Jersey, and I'm wondering if you could give me the name and address of my one-to-one you told me I would be working with? I accidentally misplaced the information."

"Sure," I said as I checked the computer and found that the information had not yet been entered. "Just hang on a second, okay?"

I went over to the files and took the roladex of cards over to my desk where I could look up the information. In a minute or two, John Smith had the address, name and telephone number of his one-to-one and was on his way.

This is not a hypothetical situation at all. In fact, it happens several times each week at Courage Center. And I simply take it for granted. Folks ring us up and get needed information. It wasn't until about two weeks ago on a bright, shiny Sunday morning that it occurred to me how remarkable it was that such a situation could take place at all.

I was sitting in our kitchen reading the news from the Associated Press through Compuserve when I heard my OM stirring in the other room. I really enjoy getting up early on weekends and reading. I waited for the expected sounds of my OM — the sounds of him coming into the living room and opening the front door to retrieve the newspaper. From then on he would be stretched out on the living room floor reading while my guide dog, Clover, sits on the pages, licks his face, and mostly gets in the way.

But this morning, I heard the front door open, a disgusted sigh, and the trotting of feet over to the phone where he called our local paper carrier to complain that it was 9:00 on a Sunday morning, and the news had never arrived. When I asked what was up, my OM explained that there would be no paper because of a temporary mixup, and he didn't think it was fair. I laughed and offered to read my paper to him. That was really turning the tables. Me, a blind person, reading the news to my sighted OM.

Then it occurred to me — just how amazing it was that I could read the paper, look up and keep accurate records of some 700 HANDI-HAM students and their volunteers, and even read ordinary typewritten letters. (I read all typewritten letters that come to me at Courage HANDI-HAM headquarters independently, though I am totally blind).

I am able to do this through the technological breakthroughs that have occurred within just these last 10 years. Devices such as the ones described below have opened the doors to many blind persons in the fields of education, employment and recreation, and I believe this is just the tip of the technical iceberg.

Firstly, let's look at the Optican, a device that has been around since the early 1970's. With an Optican, it is possible for a blind person to read printed material. The Optican consists of a square box about 12 inches across. It is small enough that it can easily be carried in one hand and comes in a leather case which looks somewhat like any shoulder bag carried by the average YL.

Inside the box, there is an array which is large enough so that one can stick their hand into the opening palm down, without difficulty. Inside this opening, or array, there is an indentation which is made so that the first finger of the left hand fits comfortably into it when the palm is face down. In this indentation there are 12 rows of 12 sunken pins, or 144 pins in all.

Protruding from the box is a cable having some 137 wires wrapped tightly inside. At the end of this cable is a small camera. It is no bigger than a tube of lipstick and has rollers on the underside of it, so when it is placed on the printed page it can be moved easily. When the left hand has been placed in the array and the Optican turned on, a buzzing sound is emitted whenever the camera (which is held in the right hand) comes into contact with print on the page. This allows the blind person to locate the spot where print can be found on the paper. Once it has been found, reading begins.

As the camera comes in contact with print, it photographs each letter it comes in contact with and changes that photograph into impulses which travel through the cable to the array. Then the appropriate pins necessary to duplicate the picture of the letter being photographed pop up and can be felt by the first finger of the left hand, which is placed in the array.

The Optican does not photograph print and turn it into Braille. It merely turns it into a tactile representation of the photograph. If the camera is positioned over the capital letter L, for example, then I feel the letter L — a vertical line going down with a horizontal line going off to the right at the bottom of the vertical line.

Drawbacks of the Optican are that it takes practice to be able to position the camera correctly. If letters are not positioned correctly, you would have to read them sideways, for example. Also, it is tedious because words must be read letter by letter. Therefore, it is not practical to read entire books with it unless one has *LOTS* of time; but for looking up information, reading mail and reading short things, it is marvelous.

Some formats are difficult to read, such as newspapers, because it is difficult to know when you are at the end of one column and confusing to read straight across the page. Adjustments can be made to read any size or darkness of print. With a magnifying lens attachment, it is even possible to read the Callbook. In fact, on a couple of occasions, I have been faster then my sighted counterparts at finding calls.

It has also helped me beyond measure to better understand theory since I can now "see" schematic and block diagrams. It takes about six weeks of training to learn how to use one, and all that is required is patience and the ability to learn what print letters look like. For totally blind persons this can be a challenge, but for persons who have had some vision in the past it is not necessary to learn print.

The second device I use is a Versa-Braille computer. It is about the size of a lunch box and is a free-standing terminal with an RS-232 port so it can be interfaced with another computer or a modem. On the left side of the Versa-Braille is a standard cassette deck. The cassette is used to store information as in some other computers, or as a normal tape recorder. The right side of a Versa-Braille is used in the same manner as a Braille writer — a device having six keys with a roller like a typewriter. When combinations of these keys are depressed, Braille is written.

With the Versa-Braille, the blind person simply enters information by pressing appropriate keys as in a normal Brailler. Rather than the traditional screen, there is a one-line display. When the keys on the Braille writer are pressed, the appropriate corresponding Braille letters pop up on the one-line display. When the display is full, these characters are then stored on the cassette tape in digital form until they are requested by word search or other commands. In this way, vast amounts of information can be entered, stored and retrieved — all in the familiar Braille format.

A normal Braille book, which is two to three volumes in length, can be reduced down to the size of two or three cassette tapes. (A normal Braille volume is as large as a large print dictionary.) This paperless Braille system is a great space saver.

The Versa-Braille is able to handle word processing tasks to some extent. It has functions which are common to other computers such as word search, line advancement and page advancement, movement of the cursor, and deletion and addition of materials. Additionally, one can set parameters so that the unit can be interfaced with the modem and the ASCII coming over the phone line can be changed into Braille and easily read and then stored on the tape for later retrieval. (That is how I read the paper through Compuserve.)

One last thing — the Versa-Braille can be hooked up to a printer so that material which has been edited and checked in Braille can be transformed into error-free print. (Fortunately for you, you are reading a copy of this column which has been patiently re-typed. Reading my typing is like deciphering 35 wpm of CW when you are questioning the difference between a dit and a dah.)

And that's it — the ways in which technology has helped me and many others. And what, you may ask, does this long dissertation have to do with Amateur Radio? Well, ever since my pre-Novice days, I have read that one of the purposes of Amateur Radio is to enhance the technical art. I firmly believe that behind many of the great technical advances there has been a ham, building, experimentally, and sharing ideas and thoughts. I, for one, am proud to be part of such a community and would like to extend my thanks. □

• Help a friend become a ham! •

TEACHER

Alan Kline, KB1DJ
P.O. Box 54
West Lynn, MA 01905

While you are reading this column, I will be recuperating from our ham convention weekend. I am a permanent member of FEMARA (Federation of Eastern Massachusetts Amateur Radio Associations). FEMARA is the sponsor for the bi-annual ARRL Region 1 convention

FEMARA's director — Gene Hastings, W1VRK — asked me to become the VEC (volunteer exam coordinator) for the convention. At first, I was reluctant to say yes. For months I had been following the VEC/VE developments and sensed there was going to be a lot of work involved. I wanted to wait to see how the ARRL's system was going to be set up.

Once the ARRL announced they were going to become the VEC, I contacted Curt Holsopple, K9CH, at the League and begins discussions with him about giving exams at the convention on the weekend of 29-30 September. We would be one of the ARRL's first accredited exam sessions.

During the month of July, the ARRL sent all of their potential volunteer examiners a booklet entitled *Accreditation and Reference Manual for Volunteer Examiners.* Authored by Curt K9CH, it is a very concise explanation of how to have an exam session under the ARRL's VEC program. Without that booklet, I would have been lost.

The booklet contains chapters on the relationships between the FCC, VEC (ARRL in this case) and you, the examiner. It tells you why timing is critical in having an exam session, how to get your session accredited and has some good advice on finding rooms and potential examinees. Also, it tells you what to do about the $4 fee and how to shuffle all the paperwork.

The most critical factor in having a test session seems to be your timing of the event. The ARRL, in their role as a VEC, wants to know 90 days in advance of a test session. This way, they can have ample time to tell the FCC and start advertising the exam.

My VE team consists of John Maglio, KJ1J; Wilson (KA1AE) and Amanda (N1BYI) Smith; and myself. They are all Extra Class amateurs, as required. As I am only an Advanced Class, I can only give the Technician Class and help police the examinees from cheating.

The convention is being held at a Sheraton Convention Center so we have requested the use of their seminar room. The room is multi-leveled, which might encourage cheating, but we are going to spread out the exam takers from each other. The front of the room has ample room for the three VE's to correct the tests and do the other required paperwork.

One of the FCC's rules is that you must advertise you are having the exam session. To do this, I put it in the largest regional newspaper I could find. This didn't work. It got lost in the pages of the Sunday edition. It is much easier to use our own ham systems to spread the word. The ARRL Section Manager notified all special service clubs, and it was put on as many bulletin nets as possible. And lastly, it is on the convention flyer.

As our convention flyer artwork was completed months before the required 90-day notice of exams, I made one mistake on the flyer. The $4 fee should be made payable to the ARRL/VEC, not North Shore Ham Services. Well, minor mistakes I can always accept.

(*please turn to page 48*)

F.C.C. EXAMS

ALL LEVELS!

We expect the new Volunteer Examiner program to be operational in time for the convention. F.E.M.A.R.A., with the assistance of North Shore Ham Services, has tentatively scheduled exams for novice, technician, general, advanced and extra classes.

If you are upgrading you must bring your original FCC license (not a copy) with you to Boxboro.

SATURDAY, SEPT. 29 & SUNDAY, SEPT. 30

ALL EXAMS ARE SCHEDULED IN ADVANCE. YOU MUST DO THE FOLLOWING:

1. Obtain and correctly complete FCC form 610
2. Make out a check for $4.00 to "North Shore Ham Services"
3. Obtain a #10 envelope. Stamp it and address it to yourself.
4. Mail all three items before August 30, 1984
   TO: NORTH SHORE HAM SERVICES
   c/o Alan Kline, KB1DJ
   P.O. Box 54
   West Lynn, MA 01905

Alan's phone for emergency use *ONLY* is:
Days (617) 598-6010 — Evenings (617) 598-0873

Remember the August 30 deadline!
Applications received too late will be returned.

Sample flyer

ENGINEERING MAKES THE DIFFERENCE

Production Expertise And Service Integrity Form The Foundation For Your Long-Term Satisfaction

The fact that the Computer Patch Interface unit by Advanced Electronic Applications, Inc. is known as the best value on the market is no accident. The CP-1 was designed by Al Chandler, K6RFK (PHD-E.E.), an active RTTY user since 1963.

Given a cost per unit budget for the CP-1, Al designed as much performance as possible into the Computer Patch, including a unique new tuning indicator, referred to by one of our customers as the "Dead Eye Dick" tuning indicator. This indicator is ideal for RTTY and CW, in that it is both fast to tune and (within 10 Hz) as accurate as scope tuning. It also performs under poor signal to noise conditions in which other indicators provide no useful data.

Al's variable shift tuning was designed to move the space filter center frequency from 2225 Hz to 3125 Hz without changing the bandwidth (by varying the Q of the filter). All this is accomplished using a precision ganged potentiometer to assure proper tracking of the multiple filter stages. We could have used a pot costing a tenth as much by simply using a two-pole filter design, but we feel the advantage of a sharper filter reduces the noise bandwidth significantly and allows the variable shift control to be used like passband tuning for extra elimination of adjacent channel interference.

Some manufacturers are concerned that amateurs might try calibrating their own equipment and, therefore, have used non-adjustable components, which results in sub-optimal performance. Although more costly, trimpots used in AEA equipment allow factory adjustment for performance to design specifications. Competently designed active filter circuits need not be adjusted after leaving the factory; however, for specialized use the owner can easily change filter parameters.

Mindful of the fact that many of our customers are new to RTTY, Al made the CP-1 tuning as forgiving as possible, while providing the most critical operator a piece of equipment in which he could be proud. Even old "pro's" are surprised at the poor signal conditions under which the CP-1 will still provide good copy.

You can now experience the BEST RTTY, CW, and AMTOR offered. Couple the CP-1 with our new AEASOFT™ software packages designed for the MARS, SWL, or amateur radio operator, and you will feel a pride reminiscent of what "made in U.S.A." brought in years gone by. Please do not hold the low price of the CP-1 against us. This is one case where you get much more than you pay for relative to any of the competitive units. For more information send for our FREE catalog. Better yet, see your favorite dealer.

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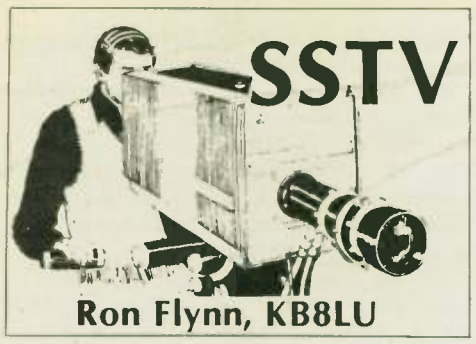

Ron Flynn, KB8LU

Courtesy is one of the attributes most Amateur Radio operators pride themselves on, especially SSTV'ers. There are many ways of being courteous, or discourteous for that matter, on the air. There is one aspect of SSTV I would place in the courtesy category. A number of people have commented on the air about it and pointed it out to me.

We have a number of different color and B&W SSTV formats in common use. Not everybody can copy all of them. I can copy just about any SSTV format, so this hasn't bothered me, but I have noticed it happen several times. What's bugging some people is that they will be in an SSTV QSO or round table and sending SSTV formats that everyone in the QSO can copy, when someone will break in and send some odd 51-second or 34-second R-G-B format that nobody else in the QSO can copy.

People think this is done on purpose. I don't know the motives of the people who regularly pull this stunt. They know full well that no one else can copy what they are sending.

One day I was listening on 14.230, and a guy admitted that no one in the QSO would be able to copy what he was sending, but he would send it anyway just for anyone listening.

C'mon, who's going to swallow that? Sure, people listen and copy the pictures, but nobody knows who they are or what they can copy at any given time. Listeners take what they get. Nobody realistically sends video to potential listeners. This practice is annoying and discourteous to other SSTV'ers.

To avoid coming off as a troublemaker and discontent, be aware of what others in the QSO can copy and send those formats *ONLY*. If you or your format don't fit in, don't spoil it for everyone else. Start your own SSTV QSO somewhere else.

Used SSTV equipment

There are many new and exciting developments that have occurred in SSTV in recent years. Color SSTV has been perfected and high-resolution B&W SSTV has been introduced. There is excellent local SSTV activity on 2 meters in many parts of the country. After the usual summer lull, HF SSTV activity is picking up on all bands. An increasing number of amateurs are sending SSTV on satellite via OSCAR-10.

If you have thought about trying SSTV, but as yet have not, there are a number of relatively inexpensive ways to do so.

There are very inexpensive programs for TRS-80C, VIC-20 and C-64 computers which allow SSTV picture reception in B&W. Other computer programs are available with hardware interfaces which allow B&W and color SSTV transmit and receive. Of course, there are a number of types of dedicated SSTV scan converters. In an upcoming column, I will discuss in great detail the various options and SSTV products which can be purchased new from a variety of sources.

I have written all the SSTV companies which I have no current product literature from, to determine their status. I'll report on this in an upcoming article. We have heard from several people and also heard Clay Abrams, K6AEP, say on the air that he is discontinuing his SSTV software business. For several years, Clay had written SSTV software for the TRS-80C.

I'll comment another time on what this bodes for TRS-80C owners on SSTV. Clay says he will get a new Robot 1200C and do some sophisticated interfacing with an IBM PC for his personal enjoyment.

Another inexpensive way to start in SSTV is to buy used SSTV equipment. With the new interest in color SSTV and the development of new SSTV products, there are some very good deals in used SSTV equipment to get one started.

As the author of this column, people from time to time write or call me to let me know of good used SSTV equipment they have available. I keep a current list of available used equipment and pass it along to other people who write or call me inquiring about how to get into SSTV.

If you are interested in SSTV and might want to start out with good used equipment, send me an SASE for my current list of available equipment and who has it. (See address at end of column.)

Magnum problems continue

Back in my May 1984 column, I mentioned that I had received a number of comments concerning service and communiction problems that people were having with Magnum Distributors of Pompano Beach, Florida. I stated that I had experienced similar problems in communications with Magnum. At that time, I had written Magnum four separate times and never received a reply!

I have had a Magnum system since March 1984. It was supposed to operate on CW, RTTY and SSTV, and in addition, have the speech option. The SSTV portion has always worked. I had to wait until the end of April to get the CW, RTTY and speech options, and they never worked. As of this writing, 01 August, Magnum still has not fixed or provided working CW, RTTY or speech for my system. That's over three months!

I am going to back up a bit in my story. I was told that though Ben Blish, N4EJI, developed the hardware and software for the Magnum system, he had no business connection with Magnum. However, Ben showed up at the Dayton Hamvention with a stack of Magnum systems to sell. About that same time, it was announced that Ben would be doing all warranty and service work on the Magnum systems. He has also been on the air quite regularly, "servicing" the problems that have come up on various systems. To me, all that adds up to some business connection.

Anyway, I was instructed to work with Ben Blish to get my Magnum system working. Several suggestions were tried, to no avail. I saw Ben at Dayton, told him it still didn't work, and got new components and more suggestions to try. Still no luck. I told this to Ben in a phone conversation about the first week in May and he had no more suggestions.

I have written Ben twice since early May and received no reply. I have written Magnum twice since 01 May and received no reply. I phoned Magnum in early June and my call was not returned. I'm tired of writing letters that don't get answered and refuse to spend money on more phone calls to them. In my mind, it is as though they just gave up and don't care.

Before writing this column, I contacted a number of Magnum owners I know. Many of them were well satisfied with everything about their Magnum systems. For them, everything worked fine and they had no complaints. A smaller number had problems.

I listened on the air and on the phone to various problems. I heard about phone calls and letters and excuses and delays. Magnum kept one person's broken system for a month to fix. It then broke within a week, and it was two months before he got it back the second time, and it's broken again.

I don't have an answer to all this. The problems vary, but there don't seem to be quick fixes and the service is poor. Before you say operator error, these Magnum systems are assembled and tested with no alignment. You are supposed to just plug them in and away they go. The only control on the TU is an on/off switch.

The Magnum system plugs into standard TRS-80C computers. I've tried my Magnum system on two different computers, and it still doesn't work. Both computers work perfectly and are regularly used for video games, word processing and RTTY using another manufacturer's TU and K6AEP 7.2 software. These are my experiences to date. I recommended this system before, but based on the past three months, I can no longer do so.

My new address is 28770-67th St., Bangor, MI 49013. □

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The world of CW, RTTY, and new DUAL AMTOR is as close as your fingertips with the new brilliantly innovative state-of-the-art microcomputer controlled* EXL-5000E.

Automatic Sender/Receiver: Due to the most up to date computer technology, just a console and keyboard can accomplish complete automatic send/receive of Morse Code (CW), Baudot Code (RTTY), ASCII Code (RTTY) and new ARQ/FEC (AMTOR).
Code: Morse (CW includes Kana), Baudot (RTTY), ASCII (RTTY), JIS (RTTY), ARQ/FEC (AMTOR).
Characters: Alphabet, Figures, Symbols, Special Characters, Kana.
Built-in Monitor: 5" high resolution, delayed persistence green monitor — provides sharp clear image with no jiggle or jitter even under fluorescent lighting. Also has a provision for composite video signal output.
Time Clock: Displays Month, Date, Hour and Minute on the screen.
Time/Transmission/Receiving Feature: The built-in timer enables completely automatic TX/RX without operator's attendance.
Selcal (Selective Calling) System: With this feature, the unit only receives messages following a preset code. Built-in Demodulator for High Performance: Newly designed high speed RTTY demodulator has receiving capability of as fast as 300 Baud. Three-step shifts select either 170Hz, 425Hz or 850Hz shift with manual fine tune control of space channel for odd shifts. HIGH (Mark Frequency 2125Hz)/LOW (Mark Frequency 1275Hz) tone pair select. Mark only or Space only copy capability for selective fading. ARQ/FEC features incorporated.
Crystal Controlled AFSK Modulator: A transceiver without FSK function can transmit in RTTY mode by utilizing the high stability crystal-controlled modulator controlled by the computer.
Photocoupler CW, FSK Keyer built-in: Very high voltage, high current photocoupler keyer is provided for CW, FSK keying.
Convenient ASCII Key Arrangement: The keyboard layout is ASCII arrangement with function keys. Automatic insertion of LTR/FIG code makes operation a breeze.
Battery Back-up Memory: Data in the battery back-up memory, covering 72 characters x 7 channels and 24 characters x 8 channels, is retained even when the external power source is removed. Messages can be recalled from a keyboard instruction and some particular channels can be read out continuously. You can write messages into any channel while receiving.
Large Capacity Display Memory: Covers up to 1,280 characters. Screen Format contains 40 characters x 16 lines x 2 pages.
Screen Display Type-Ahead Buffer Memory: A 160-character buffer memory is displayed on the lower part of the screen. The characters move to the left erasing one by one as soon as they are transmitted. Messages can be written during the receiving state for transmission with battery back-up memory or SEND function.
Function Display System: Each function (mode, channel number, speed, etc.) is displayed on the screen.
Printer Interface: Centronics Para Compatible interface enables easy connection of a low-cost dot printer for hard copy.
Wide Range of Transmitting and Receiving: Morse Code transmitting speed can be set from the keyboard at any rate between 5-100 WPM (every word per minute). AUTOTRACK on receive. For communication in Baudot and ASCII Codes, rate is variable by a keyboard instruction between 12-300 Baud when using RTTY Modem and between 12-600 Baud when using TTL level. The variable speed feature makes the unit ideal for amateur, business and commercial use.
Pre-load Function: The buffer memory can store the messages written from the keyboard instead of sending them immediately. The stored messages can be sent with a keyboard command.
"RUB-OUT" Function: You can correct mistakes while writing messages in the buffer memory. Misspellings can also be erased while the information is still in the buffer memory.
Automatic CR/LF: While transmitting. CR/LF automatically sent every 64, 72 or 80 characters.
WORD MODE operation: Characters can be transmitted by word groupings, not every character, from the buffer memory with keyboard instruction.
LINE MODE operation: Characters can be transmitted by line groupings from the buffer memory.
WORD-WRAP-AROUND operation: In receive mode, WORD-WRAP-AROUND prevents the last word of the line from splitting in two and makes the screen easily read.
"ECHO" Function: With a keyboard instruction, received data can be read and sent out at the same time. This function enables a cassette tape recorder to be used as a back-up memory, and a system can be created just like telex which uses paper tape.
Cursor Control Function: Full cursor control (up/down, left/right) is available from the keyboard. Test Message Function: "RY" and "QBF" test messages can be repeated with this function.
MARK-AND-BREAK (SPACE-AND-BREAK) System: Either mark or space tone can be used to copy RTTY.
Variable CW weights: For CW transmission, weights (ratio of dot to dash) can be changed within the limits of 1:3-1:7.
Audio Monitor Circuit: A built-in audio monitor circuit with an automatic transmit/receive switch enables checking of the transmitting and receiving state. In receive mode, it is possible to check the output of the mark filter, the space filter and AGC amplifier prior to the filters.

CW Practice Function: The unit reads data from the hand key and displays the characters on the screen. CW keying output circuit works according to the key operation.
CW Random Generator: Output of CW random signal can be used as CW reading practice. **Bargraph LED Meter for Tuning:** Tuning of CW and RTTY is very easy with the bargraph LED meter. In addition, provision has been made for attachment of an oscilloscope to aid tuning.
Built-in AC/DC: Power supply is switchable as required; 100-120 VAC; 220-240 VAC/ 50/60Hz + 13:8VDC.
Color: Light grey with dark grey trim — matches most current transceivers. **Dimensions:** 363(W) x 121(H) x 351(D) mm: Terminal Unit.
Warranty: One Year Limited

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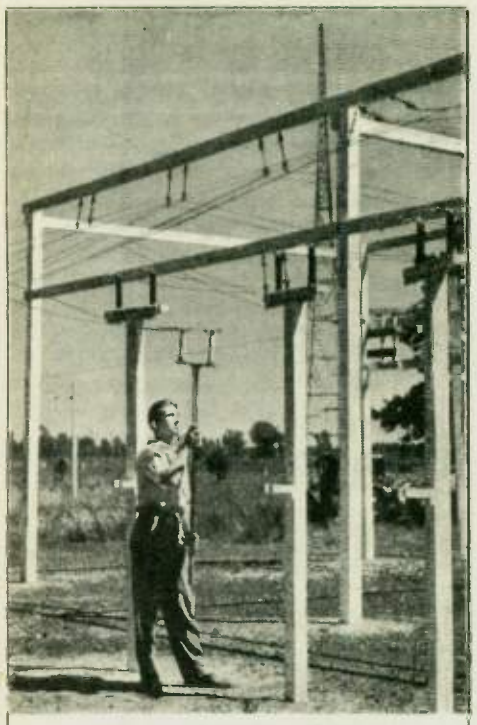
**Dual Amtor: Commercial quality,* the EXL-5000E incorporates *two completely separate modems* to fully support the amateur Amtor codes and *all* of the CCIR recommendations 476-2 for commercial requirements.



Aerials

Kurt N. Sterba

A letter to **Worldradio** from a reader said, "Maybe K.N. Sterba could devote more space to aerials and let **QST** alone. I am not interested in whether or not he thinks **QST** is writing correct articles or not."

Well, how does that statement go? "Know the truth and the truth shall make you free." Nowhere is there written a doctrine of Connecticut infallibility.

Next, I and my colleagues don't "think" an article is correct or not; we "know"! And, since journalism is supposed to be devoted to accuracy and truth, when an article is neither, we feel obligated to bring such to the attention of our readers so they will not be MISLED by information they read elsewhere.

We have a sense of responsibility to those who read this column. Some are old-timers, and many are newcomers. Thus, we'd be quite remiss in our duties if we didn't try to protect them from junk information.

For example, there is a book on the market that tells hams to space the director three-eighths of a wavelength in front of the driven element. I'd just hate to think of our readers struggling to put up such a monster. The dimensions for the Yagi are HALF of what the book said.

Three-eighths is .375. The actual dimensions for the spacing range from .15 to .20. Now, some may accuse me of taking a "pot-shot" at a book. I prefer to look at it as keeping some unsuspecting ham from having a lot more aluminum up in the air than he really needs.

If a book says a Yagi is a phased array, should I say no, it is a parasitic array? If a book says the velocity factor of coax is .08, should I attempt to protect my many readers by pointing out that it is instead (RG/8-U foam) .80? Would it be criminal to let people out there struggle around with 10 times the length of wire while trying to build a stub?

And if a book says the antenna tuner is "fooling" the transmitter and does not make the antenna "work" . . . You should hold your nose with one hand and with the other hand drop the book into the trash.

Now, I'm not picking on anybody. I'm not being mean. I'm not arguing because there is no argument! Facts are facts! I'm not being arrogant or anything like that. Not on an ego trip. I don't do this for fame, glory or money (obviously). I'm not nit-picking or taking things out of context.

If I see something that is wrong, I feel it should be pointed out so that the newer hams (and some older ones) are not led astray. I'm doing this on your behalf.

To another subject. The true antenna experimenters may wish to try something different. Make your vertical antenna longer than a quarter-wave! Yep. Make it any length that you want. (Do not go beyond five-eighths wavelength, however.) The longer — beyond quarter-wave — you make it, the better it will work.

Presently, a ground-mounted quarter-wave vertical has the high current point and maximum radiation right next to the absorbing earth. Not too good. Making the vertical longer (still feeding it at the bottom) will raise the radiation point up the antenna, away from the Earth. Much better.

All you have to do is put a tuner between your transmitter and the line leading to the antenna.

When the people on your net tell you that your signal is stronger, tell them you read the idea here.

(The author goes by the KNS disguise to avoid autograph seekers, arguments with noodinks at club meetings and hams wanting to talk while he's contesting.) □

Please
send **NEWS** and **PICTURES** to
Worldradio

Dear Kurt . . .

I have been a ham for almost 50 years and have always had antennas and transmission lines as a major interest. Naturally, I read your column in **Worldradio** every month.

Many of the misconceptions about antennas and transmission lines that hams still have were clearly explained in ham magazines many years ago, before most of today's hams were born. Some are worth rereading.

For instance, the idea that self-resonant antennas radiate better than non-resonant ones was exploded by Robert S. Kruse, W1FG, in "Debunking Tuned Feeders and the Exact Length Mania" in the May 1935 issue of R/9, a magaine that merged with **Radio** in 1936, which in turn became **CQ**. Kruse had been the Technical Editor of **QST** during most of the 1920's. He had a thorough engineering education and a very clear writing style.

Later, in November 1937 **QST**, there was an article titled "Match and Mismatch," by Stuart W. Seeley, W2ZH. Seeley, an RCA engineer, clearly explained the effects of mismatches and losses in transmission lines, and everything he said is as true today as it was in 1937. Of course, in 1937, coaxial cable was not available to hams, and most used either open-wire lines or "twisted pair". But the principles have not changed. Some years ago I suggested to the editor of **QST** that they reprint this piece, but he did not think much of the idea. I still think it is one of the best.

A much later article that seems to have been generally neglected is "Antenna and Feedline Facts and Fallacies" by Carl Drumeller, W5JJ, in **Ham Radio**, May 1973. Not content with theorizing, Carl and a few of his ham friends decided to try to measure some of the effects we read about — principally, what happens when a dipole is fed with coax and without a balun.

W5JJ's measurements showed that while without a balun, the current in the two halves of the dipole were unbalanced 1.4:1, the unbalance current supposed to flow on the outside of the shield was *very* small.

This result obtained by W5JJ is interesting because Walt Maxwell, W2DU, in a March 1983 **QST** article, said that current flowing on the outside of a coax shield due to failure to use a balun could cause "serious" beam pattern distortion. This might be true for a multi-element very narrow beamwidth VHF or UHF array, but I have to doubt whether it would be true for the almost universally used 3-element Yagi, which has a horizontal half-power beamwidth of about 70°.

It is difficult for me to see how a small amount of feedline radiation could combine with the beam's principal radiation to cause a noticeable change in pattern. I would think that nearby structures, trees, power lines, etc., would have a much greater effect.

What do you think?

HARRY HYDER, W7IV
Tempe, Arizona □

Sergeant Pilot net

Are you an Amateur Radio operator? Interested in setting up a Sergeant Pilot net? If so, John Sury, W5JSN (Morgan's Point, Texas); R.L. Poorbaugh, WB4MII (Plantation, Florida); and Raymond Otey, KA5RNW (Tulsa, Oklahoma) have already started.

If you are interested in joining this network, send a copy of your QSL card to: John Sury, Morgan's Point, 5 Jesse James, Belton, TX 76513. Phone (817) 780-1056.

John operates 2 meters FM and SSB. Low bands 80, 40, 20, 15 and 10 meters SSB (General Class segment).

Sergents Pilots' Newsletter, Columbus, NC □

ARRL

(continued from page 1)

W5RRR, the Johnson Space Center in Houston; W1AW, ARRL Headquarters at Newington; Barry Goldwater, K7UGA, and King Hussein, JY1.

Future flights will also include Amateur Radio. In March 1985, flight 41F will include Tony England, W0ORE, as a member of the crew. Ron Parise, WA4SIR, is another amateur assigned to flight 51F or 61F in March 1986.

DX'ers of the future will not be talking about the new ones they worked on some new island they worked, but Mars or one of the asteroids. DX will be measured in millions of miles!

Word was received about 8:15 p.m. that Owen had arrived. It had taken him about 36 minutes to fly up from Houston and another two to three hours to land at LaGuardia. Steve Mendelsohn, WA2DHF, Vice Director of the Hudson Division, commented that it would have been easier to go to the moon.

After being given a chance to freshen up a bit, Owen walked into a full house in the Georgian Room, Here he presented his audience with a slide show of the early days of the moon landing and a film of the STS-9 flight.

Several questions were directed to Dr. Garriott from the floor, one being what did it feel like during lift-off. Owen commented on his experience with Saturn 5 and compared it with sitting in the rumble seat of an old Model A Ford, traveling down a washboard road.

Owen reported that we will be going up again less than a year from now. Asked why the lack of Japanese or Russian amateurs from the logs, he said it was a lack of coordinating the operating times to those amateurs from their national societies.

Saturday events

This was the big day. One could not say there were not enough activities. I would say there was too much going on. At one period, the program listed six simultaneous activities. The DX program, run by the Long Island DX Association, was an all-day affair and was continued into the next day. In addition to the DX forum, there was a forum for Traffic, AMSAT, MARS, VHF contests, RTTY, packet radio, YLRL, FCC, ARRL, and many others. I had intentions of attending more of these sessions than I did, but found this rather difficult.

The DX program was moved to the 18th floor — most appropriate, as most DX'ers consider themselves on top of the heap.

Down in the Georgian Room at 11:00 a.m., the program "Emergency Communications and ARES" — a debate between Chuck Johanson, KB2KW, for RACES, and Bob Weingartner, WB2VUF, for ARES — was in full swing.

Chuck outlined RACES, and its purpose was to send messages from the district level up to the state level. Stations have insurance protection during operations and are supported by the FCC. Bob countered that RACES cannot handle health and welfare traffic and said it was a bureaucratic operation that could work against the system.

Both RACES and ARES have advantages and disadvantages, and it was felt that the two organizations should be able to work together. RACES has direct FCC support plus local police support, but only RACES members can operate on the RACES nets. Of the two groups, the ARES operators are the best trained.

Gene Zimmerman, W3ZZ, presenting $1,000 check to Jon Willis, WD0AIT

Jon Willis, WD0AIT (left), receiving the Hiram Percy Maxim Award

DX Panel

Another one of the sessions of the DX program was the DX Panel, a collection of various DX'ers whose purpose was to answer questions from the floor. The panel included such noted and active DX types as Father Dave Reddy, CE0AE; Alan Leith, VE3FRA, editor of *The DX Report*; Stu Meyer, W2GHK, of "QSL of the Month" fame; Don Search, W3AZD, from the DXCC desk in Newington; Harvey McCoy, W2IYX, editor of *The Long Island DX Bulletin;* Sam Zaidi, AP2ZA; Ron Wright, ZL1AMO; Stu Greene, WA2MOE, of the Peter and Paul Rocks DXpedition, and Tom ZD8RC.

Father Dave was asked about the activity on Easter Island. He said that only four can speak English. He also commented on San Felix and said it was a top secret military facility and was restricted to Chileans only.

Other questions included when was the best time to work Pakistan on 80 meters. Sam AP2ZA replied that the best time would be December through March, with February the best month, as static will be at a minimum.

Don Search, W3AZD, was asked why Antarctica only counted as one country, while other locations could count as two different countries at the same location. The reply was that Antarctica is an international territory.

Don also commented that it takes five to six months for the DXAC (DX Advisory Committee) to make a decision, as all correspondence depends on the mails.

On QSL cards, Stu W2GHK remarked that plain cards are sufficient. As most of the DX stations who use DX managers never see the card, why waste the money for a fancy card? It is important that all information be on one side. (The reporting information should be on the same side as your call.)

Larry Price, W4RA, ARRL President

FCC Forum

Representatives from the FCC included Robert Foosaner, Chief of the Personal Radio Bureau; Ray Kowalski, Chief of the Special Services Branch; and Alex Zimmi, head of the New York office. Robert Foosaner was very interesting to listen to and had a good sense of humor, but what made him the most popular was that it was he on the FCC level who killed the no-code proposal. He said we must find another way to entice people into our Amateur Radio hobby. As the FCC will no longer be administering exams, he urged the amateurs to get behind the volunteer examiner program for future Amateur Radio exams.

Effective 0001 UTC, 01 September, the new phone privileges will be in effect. The frequencies were not mentioned, but you should have that information by the time you read this.

The highlight of the forum was the presentation of the document to Dr. Larry Price, W4RA, president of the ARRL, and Dave Sumner, K1ZZ, General Manager of the ARRL, for their signatures. Upon the signing of this document, the volunteer examiner program is official. Representing the FCC were Foosaner and Kowalski.

ARRL Forum

The forum consisted of Dave Sumner, K1ZZ, General Manager; Larry Price, W4RA, the new ARRL president; George Diehl, W2IHA, Hudson Division Direc-

tor, (also General Chairman of the convention); Steve Mendelsohn, WA2DHF, Hudson Division Vice Director; and Tom Atkins, VE3CDM, Canadian Division Director, (also president of the CRRL).

After introductions of Leonard Nathanson, W8RC, new vice president of the ARRL, and other directors, vice directors and IARU officials, the forum was opened for questions from the floor.

A WA3 from Philadelphia did not have a question but wanted to mention that his local club was making an attempt to populate 220 MHz. His club was to be commended for their attempt to keep that band active in their area.

Gerard Valadier, N2BFL, remarked that he was dissatisfied with the courtesy of the American amateur, and suggested we learn a foreign language. Larry Price, W4RA, responded that English is the official language of Amateur Radio, and amateurs of other countries in communication will be found using English.

This amateur also wondered why the League was promoting contests. The response to this was that contesting is popular or it would not populate the bands. It was also noted that the ARRL does not sponsor the majority of the contests on the bands.

Norm Sternberg, W2JUP, suggested a Telephone Bulletin Board at ARRL headquarters. The League is studying this. At the present time, a computer base message system is available for board members.

There was a question concerning the $4 fee suggested by the ARRL for each exam administered by the new examination program. The purpose of this fee is to recoup out-of-pocket expenses. The FCC is a tax-supported organization and the ARRL is not. Also, the membership of the ARRL should not be burdened by expenses of non-members. The Novice Class licenses will still be a no-fee examination.

Saturday night banquet

For a national convention, the banquet was not well attended. Perhaps the $26 price for chicken was a bit too much for most amateurs. But then, everything is high in New York City. The Master of Ceremonies was Harry Dannals, W2HD, past president of the ARRL, introduced Father Mike Mullen, WA2KUX, who gave the invocation.

Following the dinner, various remarks were given by Larry Price, W4RA, the 10th president of the ARRL; Robert Foosaner, Chief of the Private Radio Bureau and representing the FCC on its 50th anniversary; Rose Bills, N2RE, president of the YLRL; Dave Sumner, K1ZZ, - ARRL General Manager; and George Diehl, W2IHA, Hudson Division Director, who introduced the convention committee. George was also the convention chairman.

ARRL awards were presented by Larry Price, W4RA, to W2TP for 60 years of ARRL membership and President Emeritus to Harry Dannals, W2HD.

Next was the awarding of the Hiram Percy Maxim Award. This award was established in 1937 and was first given to a young amateur named Vic Clark, W6KFC. The award was dropped during World War II and about two years ago it was re-established by Vic Clark, W4KFC, the same young man who received the award in 1937.

The recipient must be a young amateur under 21 years of age and must have dedication and ambition toward his hobby of Amateur Radio. The Hiram Percy Maxim Award was presented this year by Gene Zimmerman, W3ZZ, to Jon Willis, WD0AIT, of Littleton, Colorado. Jon is Section Traffic Manager for Colorado, is involved with emergency communications, and is a student at the University of Colorado studying architectural engineering.

The YLRL award was presented by Vi Grossman, W2JZX, to Ruth Schlitt, WA2RIX, president of the Hudson Amateur Radio Council.

The keynote speaker at the convention was Dr. Owen K. Garriott, W5LFL, who spoke about his historic flight aboard the *Columbia*. He said that one of the reasons for selecting 2-meter FM was to avoid the doppler shift problems that would have been encountered with SSB. Owen said he tape recorded the logs and spent 12-16 hours his first weekend on the ground trying to pick out the calls on the tapes. The antenna was a split-ring radiator placed in one of the windows which had to be taken down after each operating period.

The transceiver was made by the Motorola ARC. He did have some problems with the squelch circuit, as it did sometimes activate when some signals were present. About 13,000 cards were received from amateurs who had heard Owen in space.

The next national convention will be in Louisville, Kentucky on 04-06 October 1985. □

Funds

(*continued from page 6*)

- "A 12 ft. Stressed Parabolic Dish," QST, Aug. '72
- "Antenna Ratiometry, An Outdoor Range Improvement Technique," IEEE Intercon Conference, NY, NY March '75
- "Antenna Ratiometry," QST, Feb. 1976

Technical developments
- Stripline Ampl/Trplr for 144 and 432 MHz
- 12 ft. Stressed Parabolic Dish Antenna, 1969
- KW Stripline Ampl. for 432, 1972
- Apollo Voice Reception Technique, 1971
- Antenna Ratiometry Testing Technique, 1975
- 19-element 432 MHz Yagi, 1977
- 16-Yagi Array With Zoom Control, 1980
- 13-element 432 Insul. Yagi, 1972

Awards/contests
- John Chambers Memorial Award (Nat'l), for Contribution to VHF/UHF Amateur Radio, 1974
- 3 QST Cover-Plaque awards: Mar. '72, Aug. '72, Feb. '76
- Antenna Design Contests, East Coast VHF Society: 11 1st place awards
- ARRL VHF/UHF Contests: 10 1st place awards
- World's highest-gain 432 Yagi, 1977-81

Operating achievements
- Operated all bands 3.5 MHz through 2304
- Confirmed W5LFL QSO, Space Shuttle Acknowledged
- Daily 432 TROPO schedule with K4CAW (North Carolina), 480 miles, for four years

Membership in organizations
- ARRL Life Member
- Mt. Airy VHF Radio Club (Pack Rats)
- East Coast VHF Society
- Central States VHF Society
- Northeast VHF Association
- Southeastern VHF Association
- Larkfield ARC
- QCWA
- IEEE: Antennas and Propagation Society
- IEEE: Microwave Theory and Techniques Society

Significant 432 DX
- First USA to Bermuda (756 mi.) Sept. '80
- First NY to Florida (944 mi.) June '81
- NY to Alabama (880 mi.), Sept. '79
- NY to Iowa (950 mi.), Aug. '78
- NY to Missouri (950 mi.), Aug. '78
- 28 states, three countries worked on 432

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If a foreign amateur visits your area, do a picture story for Worldradio

Teacher

(*continued from page 43*)

Please notice that there is a cutoff date to apply for an upgrade — 30 August. This is required by the ARRL so we can get the correctly filled out 610 Forms to the League. Then they can supply us with the exact amount of exams we need.

This ARRL System allows for no walk-ins — those who decide at the last minute that they want to take an exam. Also, you cannot take a General Class exam and decide to try for the Advanced. You must apply to take the highest level you might try for on the original 610 Form. The ARRL will not send out extra exams.

As I am writing this column the week of 06 August, 610 Forms are coming in slowly. Almost half of them are filled out incorrectly and don't have copies of the applicants' current licenses attatched. These 610's are sent back to the prospective upgraders for corrections. I expect to give only 75 to 100 exams at this convention. The small turnout will be due to the fact that the convention flyer was mailed out very late in relation to the cutoff date for submittal of 610's, but I do think all will run smoothly.

CQ PBS watchers

I am not only involved in Amateur Radio education. In my business, Lynn Ladder and Scaffolding, I have prided myself on the fact that our company has helped lead our industry in consumer education about all climbing equipment.

As a part of our continuing attempt to educate the end consumer, we have videotaped a show for the PBS's (Public Broadcasting System) local affiliate WGBH-TV. *This Old House* is in its award-winning sixth year, and we were glad to take part in the year's show. Our segment will be aired the second week of October and stars (?) myself. I have never been one to not brag about my educational achievements, so give the show a watch. □

ENCOMM ENCOMM ENCOMM E

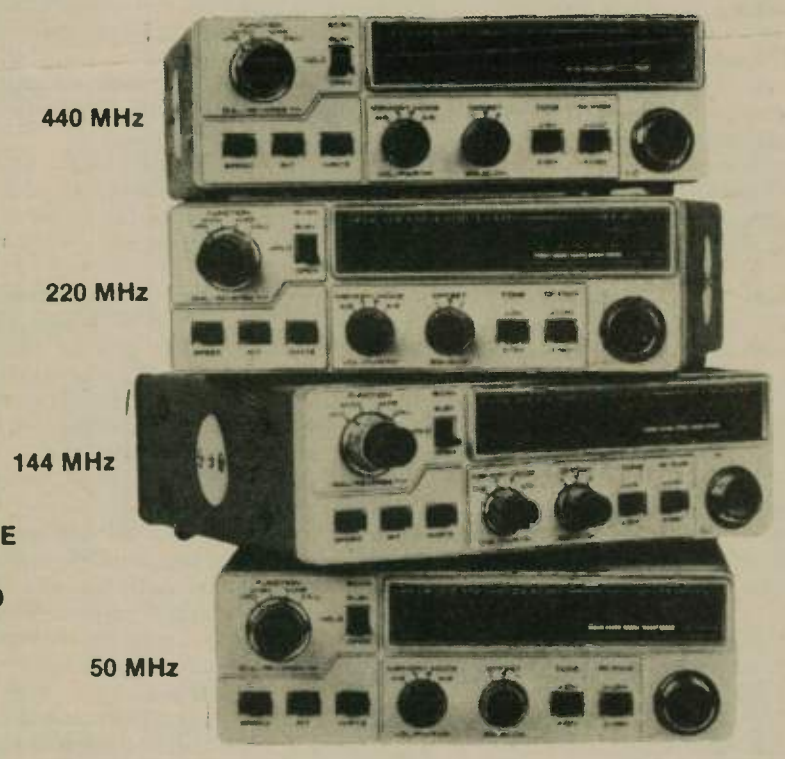
KDK STACKS UP!

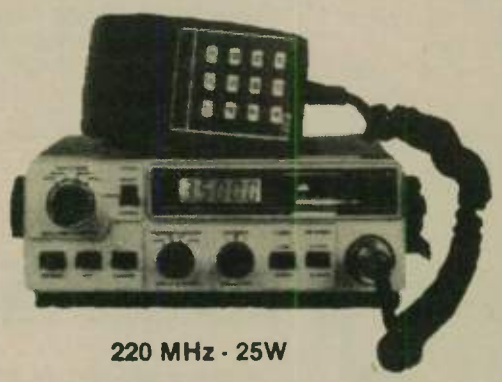
Quality Value Performance

KDK presents THREE NEW MODELS to join the FM-2033. Now ONLY KDK has One model for each of the amateur bands from 50 MHz to 440 MHz. The FM-6033 for 50 MHz is an FM radio for the 6-meter FM enthusiast. The FM-4033 is the 220 MHz radio just about everybody has been waiting for, and the FM-7033 is the 440 MHz UHF band model. All of these fine radios are models of simplicity of operation. One-hand single-knob tuning and memory recall provide the most convenient method of operating FM mobile. All models have automatic recall of the repeater offset from memory, subaudible tone encoders standard, small size for easy mounting (but big enough to be comfortable to use). The KDK FM-2033 (2M) and FM-4033 (220 MHz) are both a full 25 watts output. The FM-6033 (6M) and FM-7033 (440 MHz) are 10+ watts output. KDK radios are the most value-packed line of FM mobiles around. See your local KDK dealer and compare price and performance. You will be very glad you bought a KDK.

KDK

MAXPAC STACK





220 MHz - 25W

NOW ALL KDK MODELS HAVE THE ENCOMM TWO-YEAR EXTENDED SERVICE PERIOD IN ADDITION TO THE 90-DAY LIMITED WARRANTY.

THL CORP.

AMPLIFIERS • PREAMPS • COUPLERS

AMPS • PREAMPS • COUPLERS

The helpful line of handsome products.

The THL line of amplifiers, pre amps, antenna couplers and transceivers provides a broad line of solutions to help solve life's problems of needing "just a little more." Whatever it might be, look to THL helpful products to aid in solving the problem. THL can make your signal stronger, your receiving better and can make your HF transmitter happier with the match to the antenna. THL amplifies to a level of 160 Watts on VHF and 90 Watts on UHF. Using THL amplifiers, handy radios can talk like mobiles with low power input models which provide 30, 100 or 160 Watts of output. Models for 10-14 Watts input power or 25 Watt output mobiles are available.

The THL line of antenna couplers provides fine quality hand crafted antenna matching networks for both low power applications and larger power amplifiers running the legal limit. The THL antenna coupler series has full features like built-in antenna switching for changing antennas or by-passing the coupler and an accurate V.S.W.R./power output indicator on all models. Sturdy construction and honestly rated components and capabilities make the THL series of tuners your best choice.

THL has introduced a unique 440 MHz handheld product, the MICRO-7 utility transceiver. This transceiver can be on the air for less than you would ever guess. THL now has 1 dB GAS-FET pre-amplifier for the 2 m and the 70 cm bands. See your THL dealer for details.

Put The Helpful Line to work helping you. Drop us a QSL type card with your name and address for a full catalog of THL products and specifications.

Bottom row: HL-160V25 25W in 150W out 2m ● HL-160V - 3 or 10W in for 160W out 2m ● HL-90U 10W in 90W out UHF ● HC-2000 2KW antenna tuner ● Second Row: HL-110 3 or 10W in 100W out 2m ● HL-82V 10 in 80W out 2m ● HL-45U 10W in 45W out UHF ● HC-400 200W antenna tuner and VSWR Power Meter ● Third Row: HL-30V economy HT amp 3W in 30W out 2m ● HL-32V 3W in 15 or 30W out 2m SSB or FM portables ● HL-20U .2 or 3W in 20W out UHF ● HC-200 the Economy-With-Quality HF antenna tuner. An HRA2 GAS-FET preamp sits atop the HC-200 ● Also shown is the MICRO-7 Utility UHF transceiver and headset.

ENCOMM

2000 Avenue G, Suite 800, Plano, Texas 75074
Phone (214) 423-0024 TLX 79-4783 ENCOMM DAL

ENCOMM E

Hardly a month goes by that I don't hear from someone — usually a newcomer to QRP — asking about a piece of equipment. Most of these inquiries, sadly, are from those more interested in buying than building gear.

Many have asked who makes a truly low-power wattmeter and/or standing-wave-ratio bridge (SWR) offering some reasonable degree of accuracy without it costing an arm, a leg and another part of the anatomy.

I mean, some of these laboratory-standard meters are into serious bucks. Of course, they also are into serious measurements which, for the most part, are above and beyond the call for Amateur Radio.

Up to now, I've had to direct folks to MFJ and Heath. I've also directed them to construction articles from which they could build gear at a fraction of the over-the-counter cost of commercially-made products.

While Heath and MFJ have marketed their respective versions of QRP watt/SWR meters for a year or more, their availability to the low-power enthusiast has not been emphasized. The meters, for the most part, were "also-rans" in ads which focused on other, mostly high-power equipment. If the ads were not read carefully, the QRP gear was overlooked.

For instance, I received a letter late in 1983 from an amateur in Mississippi. He was jubilant that a months-long hunt for a commercially-made QRP watt/SWR meter had ended with the introduction of Heath's HM-9 kit.

When I told him that MFJ's Power Sensor (the 820 meter and 832 QRP sensor) had been on the market more than a year at that time, my friend wrote back to say he saw the MFJ ads but missed mention of the low-power unit because it was buried in the text for the full line of meters, with emphasis on those measuring a kilowatt or more.

Anyhow, the folks at Encomm in Plano, Texas, a suburb of Dallas, have gotten into the act now with a handy little meter, the Welz RP-120, which ought to attract some interest from QRP'ers.

This is a wattmeter only — no SWR bridge in this one, although the instruction sheet provides a chart from which the SWR can readily be determined from the forward- and reflected-power readings.

Unlike the others (and this is *not* a side-by-side comparison of the three meters mentioned), the Welz is designed with portability in mind. It can be taken on Field Day, in the car, camping, backpacking and so on. I wish I'd had it last December while operating ZF2AL from the Cayman Islands.

It fits in a shirt pocket and is about the size of a pack of king-size cigarettes — but with SO-239 coax fittings sticking out the sides. It weighs less than 8 ounces and has an easily read meter movement.

The real plus for the QRP'er, especially the experimenter and the milliwatter, is that it has three scales: 0-20 watts, 0-2 watts and 0-200mW with 10mW being the lowest claimed resolution.

It will measure from 500 kHz to 60 MHz with a claimed accuracy of *plus or minus* 10 percent, which for a meter of this size and price (about $60) is not too bad.

The accuracy of the RP-120 Encomm sent for evaluation was a mixed bag, however, with the meter scoring well at higher levels but being off by as much as 50 percent on the mW scale. Measurements were made with a transmitter fed through the meter into a Bird 50-ohm dummy load, with the power output checked on a Tektronix 2445 'scope.

For instance, with the RP-120 set on the 0-2 watt scale and with 1 watt of power fed into it, the meter showed .925 watts — an error of only 8 percent. On the 0-20 watt scale with 1 watt in, the meter read 1.1 watts for a 10 percent error.

When the transmitter power was reduced to a half-watt and the meter set on the 0-2 watt scale, the reading was right on the money at a half-watt.

The power then was reduced to 200mW. With the meter on the 0-2 watt scale, it read 300mW (a 50 percent error), and on the 0-200mW scale, it showed 150mW — a 25 percent error.

The batteries supplied with the RP-120 (it uses two AAA cells to power an internal op-amp circuit to drive the meter) were fresh. No attempt was made to adjust any of the internal potentiometers from their factory settings.

No effort was made to check the accuracy of my MFJ-820/832 combination, and I have not gotten a Heath HM-9 for testing, which is why this is not a comparison of all three units.

All the above notwithstanding, I am genuinely pleased with the RP-120. It offers convenience, a reasonable degree of accuracy, a compact size and light weight, rugged construction and a realistic price tag.

It's about time a unit of this type was available to those who would rather buy than build. □

ICOM

(*continued from page 36*)

have the same difficulty. But with the advanced technology, using translators will make it easier for international QSO's."

That's rather mind-boggling — imagine a Japanese- or Spanish-speaking radio amateur speaking into the microphone using his native tongue, but the QSO being transmitted in English.

The ICOM president and long-time radio amateur said he believed having a no-code license had been a good thing for Japan. He said the JA no-code license had enabled many more people to join the hobby, including some 6-year-olds.

Tokuzo said that while people of all ages are able to study the license theory, he was convinced there were those who, perhaps due to age and other factors, were unable to obtain code proficiency.

He said the advantages of a no-code license include the long-term higher level of technology among the citizens of Japan, which has partially contributed to the technological advancements made by Japan.

Tokuzo said the no-code license has attracted young people to the hobby who have since grown up to be engineers, and this license has also enabled complete families to become radio amateurs.

Japan has the largest number of "ham families" in the world, and this is evident when you look at JA statistics, which show 1 million radio amateurs who share 600,000 licensed amateur stations.

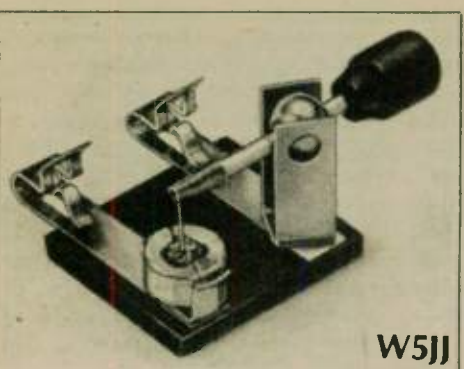
The amateur growth rate in JA had been around 10 percent a year, but has fallen to about 7 percent recently. Tokuzo said this slow-down in growth is due to many youngsters turning to hobby microcomputers and the personal radio (CB) introduced in November 1982. But he's confident it's only a temporary slow-down and that another upturn will occur when some of the computer and a large number of personal radio hobbyists move up to Amateur Radio.

Tokuzo explained how, in the first 12 months of personal radio, there were 400,000 licenses issued. It uses 5-watt 80-channel FM radios operating on 900 MHz and is rather a unique lottery-type system.

The radios have touch-pads, so operators can punch in random combinations of digits. These are transmitted by data on a call-channel, and should there be another personal radio sending out the same combination, the radios electronically shake hands over the air.

An automatic search is made for a vacant channel; the radios then QSY by themselves and the operators can talk.

To pre-arrange a QSO, operators simply decide to call each other using a digit combination of their choice on a planned sked.



W5JJ
Carl C. Drumeller

OLD-TIME RADIO

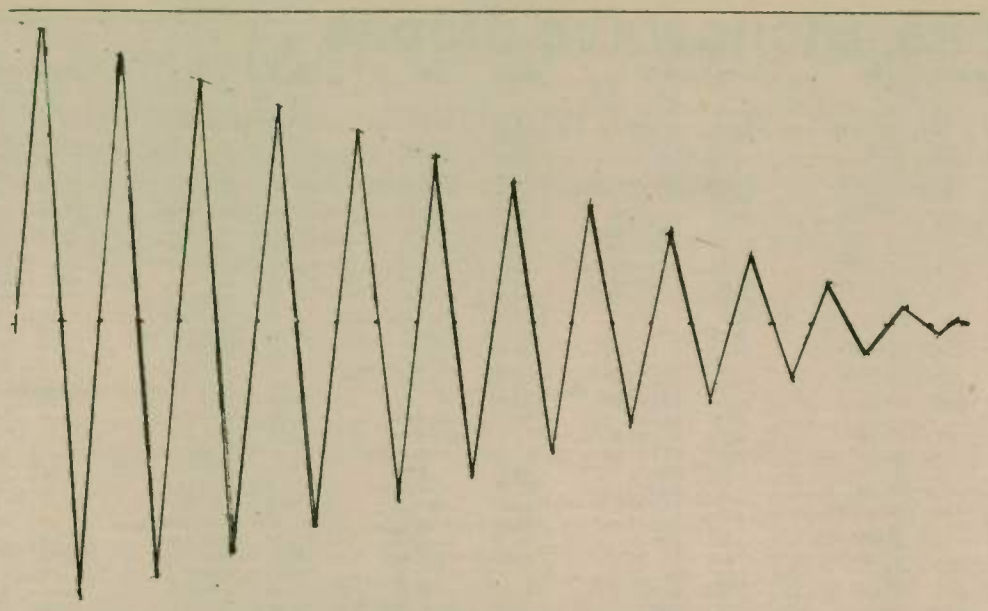
Pa and Ma of Amateur Radio

Old-timers will recall the major role Pa Ford Spark Coil and Ma Bell Telephone played in supplying parts for early-day wireless experimenters. I can't speak for the amateurs who were active the first two years after the end of the Kaiser War, but those of 1921-23 drew heavily upon those two sources of material.

One's first thought would go to the Model T Ford spark coil as the main element of a transmitter. They were readily available. Every garage had a stack piled in its junk heap, yours for the asking. Although these had been unsatisfactory in an ignition system, they'd perform quite well in a transmitter if you were patient enough to play around a bit with the adjustment of the vibrator. Screwed down to just the right degree of tightness, they'd give that high-pitched musical tone so eagerly sought by users of "squeak boxes."

Torn apart, the primary wire could be (and was) used as an antenna, even though you had to tear up many coils to get enough wire to make the multi-wire inverted L antenna that was considered the only type worthy of use in those days.

The primary plus secondary, connected in series served as the inductor for choke-coupled audio frequency amplifiers; the coupling capacitor could be the capacitor from the coil. Usually, though, the capacitor was torn apart and small portions of the foil and paper used to make bypass capacitors to be used across one's headphones.



Damped wave or pulse from a spark gap. Note that fewer than the needed 24 complete are completed. Such a wave would not meet the requirement for no fewer than 24 complete cycles.

Nor were the spark coils the only useful by-product of the Model T Ford. Its magneto provided copper ribbon that some preferred to wire for antennas. The magnets sometimes were used close to detector tubes to obtain greater sensitivity. There were those who doubted the alleged improvement, but a study of serious textbooks reveals that magnets were used to control the electron flow between cathode and anode before De Forest introduced his control grid. Who knows? Maybe that Ford magnet set up just the right kink in the tube's characteristic curve to enhance detection!

Ma Bell was a great donator, too. It's a safe bet that almost every experimenter with wireless telephony used a microphone "liberated" from Ma Bell. Maybe that's why most of those radiotelephones sounded so horrible; Ma Bell's early microphones had much to be desired in quality. Later, in the '40s, a much better microphone button was used in telephones. If one held the microphone current to a low value, quite good voice quality could be had.

Some of Ma Bell's equipment contained iron-core coils wound with silk-covered wire. This wire often was used for winding tuning coils of various forms.

Salvaged telephone wire was the source of guy wires. It could be bought at a very reasonable price, was of high quality, and seemingly lasted forever.

Let's zip back a bit to that pleasant note from a spark coil. Most amateurs of that time believed a high-pitched note indicated a low-decrement signal. Amateurs in general, as well as a goodly number of professionals, had only a hazy idea about decrement.

In magazines and in bull-sessions there were "learned" discussions about decrement and about "shock excitation." It was generally held that the antenna system was shock-excited into oscillation at signal frequency. This probably is correct, considering that with the Class C stage the resonant tank circuit is "shocked" into oscillation through a full 369 degrees by a pulse of aproximately 90 degrees duration. The matter of decrement is not so easily shrugged off.

The pulse from a spark gap is not a single cycle (or part thereof) but a full cycle of maximum amplitude followed by a train of additional cycles of decaying amplitude. At least one manufacturer, Kilbourne and Clarke, introduced a resistor into the LC circuit with the intent of giving a quickened decay to trailing cycles. One wonders what this must have done to the decrement of the station. I suspect (but don't know) that the loaded Q of the primary oscillatory circuit while coupled to the antenna system was the major factor in determining the station's decrement. Perhaps some old-timer can provide a full explanation.

Information about decrement and how to obtain a low (desirable) figure is hard to come by. Let's see how decrement is defined in the 1927 edition of S. Gernsback's *Radio Encyclopedia*.

"DECREMENT: A term used to indicate the rate of decay or dying out of an electrical oscillation that is subject to damping."

Now let's read a little bit more from the same source — "DECAY OF CURRENT. It will be noticed that the decrement or the rate of decay of the oscillations directly affects the number of oscillations in a wave train that will be useful in transmitting signals.

"For instance, if a certain oscillation in the figure should represent the smallest voltage that will operate a detector, it is evident that all oscillations in the wave train that have smaller amplitudes will be useless. Consequently, the lower the decrement of the wave, the greater will be the number of oscillations before the amplitude becomes too small for useful purposes. This likewise means that a greater amount of the energy in the wave can be utilized."

Very interesting, but somehow I feel this is not the whole story. It doesn't tell us much about why the goverment required a decrement of 0.2, which was obtained when there was a minimum of 24 whole cycles of oscillation in the antenna system. This strongly hints that there was a direct but inverse relationship between decrement and wave broadness. One method of measuring decrement strengthens this presumption. That method involved measuring signal strength at a resonance with a meter in a high-Q LC circuit, then detuning a given amount off-frequency and noting the percentage of signal decay.

A minimum, "dry bones" type of spark transmitter was easy to build, as many a youngster of tender years proved. But an efficient (and legal) spark station was not something one could slap together without considerable knowledge . . . or utterly incredible luck! □

RF TRANSISTORS, MICROWAVE DIODES

TYPE	PRICE
2N1561	$ 25.00
2N1562	25.00
2N1692	25.00
2N2957	1.55
2N2857 JANTX	4.10
2N2857 JANTXV	4.10
2N2876	13.50
2N2947	18.35
2N2948	13.00
2N2949	15.50
2N3375	17.10
2N3553	1.55
2N3632	15.50
2N3733	11.00
2N3818	5.00
2N3866	1.30
2N3866JAN	2.20
2N3924	3.35
2N3927	17.25
2N3950	25.00
2N4012	11.00
2N4041	14.00
2N4072	1.80
2N4080	4.53
2N4127	21.00
2N4427	1.30
2N4428	1.85
2N4430	11.80
2N4957	3.45
2N4959	2.30
2N5090	13.80
2N5108	3.45
2N5109	1.70
2N5160	3.45
2N5177	21.62
2N5179	1.04
2N5216	56.00
2N5583	3.45
2N5589	9.77
2N5590	10.92
2N5591	13.80
2N5637	15.50
2N5641	12.42
2N5642	14.03
2N5643	15.50
2N5645	$ 13.80
2N5646	20.70
2N5651	11.05
2N5691	18.00
2N5764	27.00
2N5836	3.45
2N5842/MM1607	8.45
2N5849	20.00
2N5913	3.25
2N5916	36.00
2N5922	10.00
2N5923	25.00
2N5941	23.00
2N5942	40.00
2N5944	10.35
2N5945	11.50
2N5946	14.40
2N6080	10.35
2N6081	12.07
2N6082	12.65
2N6083	13.25
2N6084	15.00
2N6094	11.00
2N6095	12.00
2N6096	16.10
2N6097	20.70
2N6105	21.00
2N6136	21.85
2N6166	40.24
2N6201	50.00
2N6304	1.50
2N6459	18.00
2N6567	10.06
2N6680	80.00
2SC703	3.00
2SC756A	7.50
2SC781	2.80
2SC1018	1.00
2SC1042	12.00
2SC1070	2.50
2SC1239	2.50
2SC1251	12.00
2SC1306	2.90
2SC1307	5.50
2SC1424	2.80
2SC1678	$ 2.00
2SC1729	20.00
2SC1760	1.50
2SC1909	4.00
2SC1946	36.00
2SC1946A	40.00
2SC1970	2.50
2SC1974	4.00
2SC2166	5.50
2SC2237	32.00
2SC2695	47.00
A50-12	25.00
A209	10.00
A283	5.00
A283B	6.00
AF102	2.50
AFY12	2.50
BF2272A	2.50
BFR21	2.50
BFR90	1.00
BFR91	1.65
BFR99	2.50
BFT12	2.50
BFW16A	2.50
BFW17	2.50
BFW92	1.50
BFX44	2.50
BFX48	2.50
BFX65	2.50
BFX84	2.50
BFX85	2.50
BFX86	2.50
BFX89	1.00
BFY11	2.50
BFY18	2.50
BFY19	2.50
BFY39	2.50
BFY90	1.00
BLX67	15.24
BLX68C3	15.24
BLX93C3	22.21
BLY87A	8.94
BLY88C3	13.08
BLY94C	21.30
BLY351	10.00
BLY568C/CF	$ 30.00
C458-617	25.00
C4005	20.00
CD1899	20.00
CD2188	18.00
CD2545	25.00
CTC3005	100.00
Dexcel GaAs FET	
DXL3501A-P100F	49.30
Fujitsu GaAs FET	
FSX52WF	58.00
GMO290A	2.50
HEP76	4.95
HEPS3002	11.40
HEPS3003	30.00
HEPS3005	10.00
HEPS3006	19.90
HEPS3007	25.00
HEPS3010	11.34
Hewlett Packard	
HFET2204	112.00
35821E	38.00
35826B	32.00
35826E	32.00
35831E-H31	30.00
35831E	30.00
35832E	50.00
35833E	50.00
35853E	71.50
35854E	75.00
35866E	44.00
HXTR3101	7.00
HXTR3102	8.75
HXTR5104	30.00
HXTR6104	68.00
HXTR6105	31.00
HXTR6106	33.00
J310	.70
TRW	
JO2000	10.00
JO2001	25.00
JO4045	25.00
Motorola Comm.	
M1131	8.50
M1132	11.95
M1134	16.90
M9579	7.95
M9588	7.50
M9622	7.95
M9623	9.95
M9624	11.95
M9625	17.95
M9630	18.00
M9740	29.90
M9741	29.90
M9755	19.50
M9848	37.00
M9850	16.90
M9851	20.00
M9887	5.25
MEL80091	25.00
MM1550	10.00
MM1552	50.00
MM1553	50.00
MM1614	10.00
MM1943/2N4072	1.80
MM2608	5.00
MM3375A	17.10
MM4429	10.00
MM8000	1.15
MM8006	2.30
MM8011	25.00
MPF102	.45
MPSU31	1.01
MRA2023-1.5	42.50
MRF208	16.10
MRF212	16.10
MRF233	13.25
MRF224	15.50
MRF231	10.92
MRF232	12.07
MRF233	12.65
MRF237	3.15
MRF238	13.80
MRF239	17.25
MRF245	35.65
MRF247	35.65
MRF304	43.45
MRF309	33.81
MRF314	28.52
MRF315	$ 28.86
MRF316	POR
MRF317	63.94
MRF420	20.00
MRF421	36.80
MRF422A	41.40
MRF427	17.25
MRF428	46.00
MRF433	12.07
MRF449/A	12.65
MRF450/A	14.37
MRF453/A	18.40
MRF454/A	20.12
MRF455/A	16.00
MRF458	20.70
MRF463	25.00
MRF472	1.00
MRF475	3.10
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MRF628	8.65
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MRF901 (3) Lead	1.00
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MSC1720-12	225.00
MSC1821-3	$ 125.00
MSC1821-10	225.00
MSC2001	40.00
MSC2223-10	200.00
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MSC3001	50.00
MSC73001	50.00
MSC82001	40.00
MSC82014	40.00
MSC82020	40.00
MSC82030	40.00
MSC83001	50.00
MSC83005	100.00
MT4150	14.40
MT5126	POR
MT5596/2N5596	99.00
MT5768/2N5768	95.00
MT8762	POR
NEO2136	2.50
NE13783	POR
NE21889	POR
NE57835	5.70
NE73436	2.50
TRW	
PRT8637	POR
PT3190	POR
PT3194	POR
PT3195	POR
PT3537	7.80
PT4166E	POR
PT4176D	POR
PT4186B	POR
PT4209	POR
PT4209C/5645	POR
PT4556	24.60
PT4570	7.50
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PT4590	POR
PT4612	POR
PT4628	POR
PT4640	POR
PT4642	POR
PT5632	4.70
PT5749	POR
PT6629	POR
PT6709	POR
PT6720	POR
PT8510	POR
PT8524	POR
PT8609	POR
PT8633	POR
PT8639	POR
PT8659	POR
PT8679	POR
PT8708	POR
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PT8731	POR
PT8742	19.10
PT8787	POR
PT9783	16.50
PT9784	32.70
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40081	5.00
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40280	4.62
40281	10.00
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40292	13.05
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* R F TRANSISTORS *

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SD1009	15.00
SD1009-2	15.00
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SD1013-7	13.50
SD1014	11.00
SD1014-6	11.00
SD1016	15.00
SD1016-5	15.00
SD1018-4	15.00
SD1018-6	15.00
SD1018-7	15.00
SD1018-15	15.00
SD1020-5	10.00
SD1028	15.00
SD1030-2	12.00
SD1043	12.00
SD1043-1	10.00
SD1045	3.75
SD1049-1	2.00
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SD1065	4.75
SD1068	15.00
SD1074-2	18.00
SD1074-4	28.00
SD1074-5	28.00
SD1076	20.00
SD1077-4	4.00
SD1077-6	4.00
SD1078-6	24.00
SD1080-8	6.00
SD1080-9	3.00
SD1084	8.00
SD1087	15.00
SD1089-5	15.00
SD1095	15.00
SD1100	5.00
SD1109	18.00
SD1115-2	8.00
SD1115-3	8.00
SD1115-7	2.50
SD1116	5.00
SD1118	22.00
SD1119	$ 5.00
SD1124	50.00
SD1127	3.50
SD1133	14.00
SD1133-1	14.00
SD1134-1	3.00
SD1135	8.00
SD1136	15.00
SD1136-2	15.00
SD1143-1	12.00
SD1143-3	17.00
SD1144-1	3.00
SD1146	15.00
SD1147	15.00
SD1188	10.00
SD1189	24.00
SD1200	1.50
SD1201-2	10.00
SD1202	10.00
SD1212-11	4.00
SD1212-12	4.00
SD1212-16	4.00
SD1214-7	5.00
SD1214-11	5.00
SD1216	12.00
SD1219-4	15.00
SD1219-5	15.00
SD1219-8	15.00
SD1220	8.00
SD1220-9	8.00
SD1222-8	16.00
SD1222-11	7.50
SD1224-10	18.00
SD1225	18.00
SD1228-8	POR
SD1229-7	13.00
SD1229-16	13.00
SD1232	4.00
SD1240-8	15.00
SD1244-1	14.00
SD1262	12.00
SD1263	15.00
SD1263-1	15.00
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SD1272-4	15.00
SD1278	20.00
SD1278-1	18.00
SD1278-5	$ 18.00
SD1281-2	8.00
SD1283	10.00
SD1289-1	15.00
SD1290-4	15.00
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SD1300	3.00
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SD1308	3.00
SD1311	1.00
SD1317	10.00
SD1335	3.00
SD1345-6	5.00
SD1365-1	2.50
SD1365-5	2.50
SD1375	7.50
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SD1379	15.00
SD1380-1	1.00
SD1380-3	1.00
SD1380-7	1.00
SD1405	40.00
SD1409	18.00
SD1410	22.00
SD1410-3	21.00
SD1413-1	18.00
SD1416	50.00
SD1422-2	24.00
SD1428	33.00
SD1429-2	15.00
SD1429-3	15.00
SD1429-5	15.00
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SD1444	6.00
SD1444-8	6.00
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SD1451	18.00
SD1451-2	18.00
SD1452	20.00
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SD1453-1	$ 48.00
SD1454-1	48.00
SD1477	48.00
SD1478	21.00
SD1480	60.00
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SD1488-7	27.00
SD1488-8	28.00
SD1499-1	39.00
SD1520-2	18.00
SD1522-4	33.00
SD1528-1	24.00
SD1528-3	34.00
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SK3048 RCA	5.00
SK3177 RCA	15.00
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01-80703TO4/ 458-949 Mot. Comm.	65.00
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62803 RCA	100.00
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TA7487/2N5920	75.00
TA7995/2N6267	150.00
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MRF479	8.05

We Can Cross Reference Most RF Transistors, Diodes, Hybrid Modules And Any Other Type Of Semiconductor.

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1N21WE	5.80	1N21WG	5.80	1N22	5.00	1N23A	10.00
1N23B	3.40	1N23C	3.40	1N23CR	3.40	1N23D	4.95
1N23DR	4.00	1N23WE	5.00	1N25	7.50	1N25AR	18.00
1N28WE	10.00	1N29	10.00	1N32	20.00	1N53A	55.50
1N76	26.00	1N76R	28.00	1N78	26.00	1N78A	20.00
1N78B	26.00	1N78D	28.00	1N78DR	28.00	1N78R	28.00
1N149	6.00	1N150MR	18.00	1N415	4.00	1N415C	4.00
1N451G	15.00	1N416D	5.00	1N416E	6.00	1N446	10.00
1N831	10.00	1N833	10.00	1N950	4.00	1N1084	2.00
1N2930	15.00	1N2932	15.00	1N3540	15.00	1N3712	11.00
1N3713	18.00	1N3714	11.00	1N3715	16.00	1N3716	10.00
1N3717	14.00	1N3718	10.00	1N3721	14.00	1N3733	10.00
1N3747	21.00	1N4386	20.00	1N4396	15.00	1N4785	11.00
1N4812B	9.00	1N5139A/B	4.25	1N5140A/B	4.25	1N5141A/B	4.25
1N5142A/B	4.25	1N5143A/B	4.25	1N5144A/B	4.25	1N5145A/B	4.25
1N5146A/B	4.25	1N5147A/B	4.25	1N5148A/B	4.25	1N5167	5.50
1N5453	3.75	1N5465	7.65	1N5711	1.00	1N5711 JAN	2.00
1N5713	5.00	1N5767	2.00	1N6263	1.00	1S2199	15.00
1S2200	15.00	1S2208/9	1.00	8B1087/48R869558	65.00	8D3020	65.00
A2X116M Aertech	50.00	BB105B	1.00	BB105G	1.00	BD4/4JFBD4 G.E.	15.00
BL161 Bomac	5.00	CMD514AB C.M.	POR	D4060 Alpha	POR	D4159 Alpha	POR
D4233B Alpha	POR	D4900 Alpha	POR	D4959 Alpha	POR	D4987M Alpha	POR
D5047C Alpha	POR	D5147D Alpha	POR	D5503 Alpha	POR	D5506 Alpha	POR
DGB6158-98 Alpha	POR	DMD6022 Alpha	POR	DMD6460A Alpha	POR	DP20054 Crown	POR
GC1691-89 GHZ	31.35	GC1602-89 GHZ	31.35	GC1607-40 GHZ	31.35	GC2531-88 GHZ	37.40
GC2542-46 GHZ	37.40	GC3208-40 GHZ	37.40	GC17044 GHZ	50.00	HP33644A-HO1	125.00
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HP5082-0375	POR	HP5082-0386	POR	HP5082-0401	POR	HP5082-0438	POR
HP5082-1028	POR	HP5082-1332	POR	HP5082-2254	POR	HP5082-2302	10.70
HP5082-2303	5.20	HP5082-2696	POR	HP5082-2711	23.15	HP5082-2727	POR
HP5082-2800	1.00	HP5082-2805	4.45	HP5082-2835	1.00	HP5082-2884	POR
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* OUR STOCK CHANGES DAILY SO CALL IF THE PART YOU NEED IS NOT LISTED

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CONFIRMING ORDERS: We would prefer that confirming orders not be sent after a telephone order has been placed. If company policy necessitates a confirming order, please mark "CONFIRMING" boldly on the order. If problems or duplicate shipments occur due to an order which is not properly marked, the customer will be held responsible for any charges incurred, plus a 15% restock charge on the returned parts.

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PRICES: Prices are subject to change without notice.

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

Suppressor/filter

Electronic Specialists announces the introduction of the Super Filter/Suppressor. Featuring a dual balanced Pi Super Filter and 6500 Amp Spike/Surge Suppressor, this unit is specifically designed to clean up stubborn power line noise, hash and spikes for efficient, interference-free communication equipment operation.

Connecting to the 120VAC line with a standard three-prong plug, the three sockets of the Super Filter/Suppressor can accommodate a 1250 watt load.

Particularly troublesome power line interference control, combined with spike and surge protection, is available for $66.95. (Model AC-SFK-33S)

For more information, contact: Electronic Specialists, Inc., P.O. Box 389, Natick, MA 01760; (800) 225-4876. □

SOFTTY 1.2

Woodall & Associates announces a new concept in Amateur Radio and computer interfacing. SOFTTY 1.2 is a software-only radioteletype transmit and receive program for the Radio Shack Model III and Model IV microcomputers.

This unique program uses the standard TRS-80 cassette I/O ports for input and output connections to a communications receiver and transmitter (or transceiver). *NO TERMINAL UNIT IS REQUIRED!*

This machine language program has special routines that handle tone and shift decoding of received Baudot RTTY signals. The program also generates the normal tones and shifts used in amateur RTTY communications (2125 Hz with 170 Hz shift).

Transmit and receive speeds of 60 and 100 wpm are selectable from the computer keyboard. Keyboard selection is also available for normal and inverted tone decoding. High- and low-frequency receive tones are also supported.

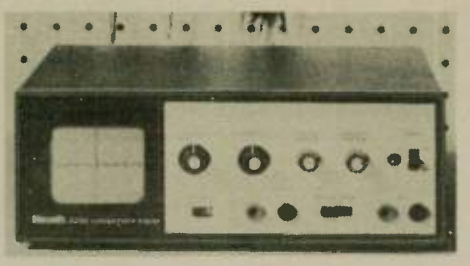
A built-in spectrum analyzer gives a visual indication as an aid for proper receiver tuning. The program has a split-screen display that allows transmit text to be composed on half of the screen while received text is being decoded and displayed on the other half. There are five message buffers available for use that can hold up to 255 characters each. The contents of the buffers can be saved and loaded to/from cassette tape.

The tone output is connected to the microphone input of the radio transmitter. Most rigs can handle the simulated (stair-stepped) sine wave without any other components being required. A small capacitor may be required for some installations. Patch cords and/or connectors are all that is required to interface your ham transmitter/transceiver or communication receiver to your TRS-80 Model III or 4-III computer!

The SOFTTY 1.2 program is being offered on cassette tape at a cost of $34.95, plus $2.50 shipping and handling. The program is also available on diskette for an additional $4.

To order send $34.95 plus $2.50 shipping and handling to Woodall & Associates, P.O. Box 284, Plainfield, IN 46168. VISA and MasterCard orders are also accepted. Questions can be answered by calling Gary Woodall at (317) 271-2565 Monday through Saturday evenings. Be sure to include computer model and your ham call when ordering.

(The COMPCODE program, which can only be used on CW, will run only on Radio Shack TRS-80 Model I, III and IV computers.) □



Component Tracer

Heathkit introduces an economical, simple and highly effective troubleshooting test instrument.

Heathkit's IT-2232 Component Tracer allows a user to test individual components or entire circuits without the need of circuit power. On a 3" CRT, the Tracer displays the electrical characteristics of a component or a circuit under test. Dual displays allow comparisons between good and suspect devices for quick, easy and reliable checks. Two voltage ranges are provided for varying test situtations and are current-limited to protect the circuit or component under test. Two sets of color-coded test leads are supplied.

The IT-2232 Component Tracer features two separate inputs that can be viewed as individual traces or together in a superimposed display. One channel is seen as a solid line while the second is converted into a unique dotted line display by a special patent-pending circuit. In the A/B mode of operation, the superimposed solid- and dotted-line traces allow the user to compare good and suspect units. Any differences in electrical characteristics are clearly identified, providing a visual check of the condition of the component or circuit.

The IT-2232 Component Tracer is a self-contained test instrument that offers an effective means to service all types of components and circuits, especially digital and microprocessor-based products. It produces triangular signals that are amplified and passed through attenuators. The attenuators provide selectable test voltages of 50 volts peak-to-peak or 5 volts peak-to-peak at the two test jacks. When the Tracer is connected to a circuit or component, the triangular voltage waveform is changed by a resulting loading effect. The result is a visual display of the dynamic condition of the component or circuit under test.

The IT-2232 Component Tracer operates on 120/240VAC at 50/60 Hz at 22 watts.

It measures 4"H × 10"W × 12-1/2"D and weighs 8.4 lbs. Price is $249.95, kit form.

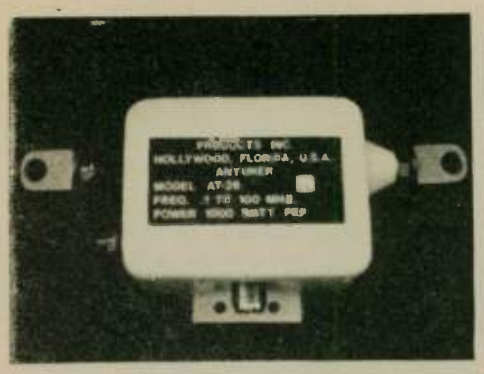
More information about the IT-2232 Component Tracer, and other quality test instruments, can be found in Heathkit's colorful *FREE* catalog. Write to Heath Company, Dept. 150-305, Benton Harbor, MI 49022. In Canada, write to Heath Company, 1020 Islington Ave., Dept. 3100, Toronto, Ontario, M8Z 5Z3, CANADA. Free catalogs are also available at 65 Heathkit Electronic Centers in the United States and Canada. Consult the white pages of the telephone directory for the nearest store.

Heath Company and Veritechnology Electronics Corporation (which operate Heathkit Electronics Centers) are wholly-owned subsidiaries of Zenith Radio Corporation. Product availability, specifications and prices are subject to change without notice. □

Product list

Communications Specialists has announced the availability of an updated product list for "Summer 1984". This new brochure features such products as their new super-small hybrid encoder and their first DTMF decoder. Also included is their growing "crop" of direct plug-in encoder-decoders.

The new product list is free for the asking. To obtain a copy, contact: Communications Specialists, 426 West Taft Ave., Orange, CA 92665; (800) 854-0547. □



Automatic antenna tuner

J.L. Industries introduces a non-moving parts automatic antenna tuner, called Antuner. Antuner covers a wide spectrum of frequencies from 1 MHz to 100 MHz. The efficiency in this range is such that an antenna system with Antuner tying 50 feet of wire to the hot end of the unit and a minimum of 25 feet to the ground side of the unit will produce SWR of no higher than 1.5 to 1, and for frequencies above 12 MHz, it rarely exceeds 1.2 to 1 SWR.

To achieve these results, Antuner incorporates the use of sophisticated circuitry for tuning as well as input impedence stabilization. All this is accomplished by the use of specifically arranged circuitry that forms a three-port circulator. The system is phased so that there is minimal attenuation in the feed direction and a much greater attenuation in the reverse direction. There are many variations of circuit configurations that can achieve this effect.

What we have achieved here is making currents in the feed direction induce currents in the windings that are in phase, while currents in the reverse direction induce currents that are out of phase.

The three-port circulator is just part of the additional components and technique required to accomplish what is essentially a wide-band instantaneous antenna tuner without moving parts. Completely passive, it is an efficient coupling system for an asymmetrical dipole antenna, or if desired, a long wire could be connected to the hot end of Antuner and a good ground to the ground side of Antuner.

Antuner can be used for marine installations, especially sailboats, commercial ships, oil rigs, Amateur Radio for airplanes, and for special situations in which unobtrusive horizontal antennas are needed which will work on practically any frequency between .1 MHz and 100 MHz without tuning.

Specifications: Dimensions — 3″W-4″L-2″D; Weight — 1.4 lbs.; Connector — PL259; Antuner — 0.1 MHz to 100 MHz; Ham-Antuner — 0.1 to 30 MHz; SWR 1.5 or better. Weatherproof, rustproof. Antuner 1000 watt PEP — $699; Ham-Antuner 300 watts — $599.

For more information, contact J.L. Industries, P.O. Box 547, Hallandale, FL 33009.

'Kansas City Keyer'

Lance Johnson Engineering of Kansas City, Missouri introduces a microprocessor-based, fully programmable keyer system called the Kansas City Keyer.

Designed for the serious contester and traffic handler, the KC-1 features digital and analog speed controls, 1500-character memory, 14 memory buffers, wpm monitor, adjustable side tone, automatic paddle reversal, tune-up function, variable weight, simplified editing, flexible serial number management, and more.

The most powerful aspect of the design is the KC-1's program buffer, which allows the operator to program any of the functions into a message.

Using a "Wait" command and some of the KC-1's loop routines, it is possible to automate all contest activity, except for the sending of the other station's call.

The KC-1 system comes complete with all necessary cables, a power adapter, and two different users' manuals.

Accessories include a 10-year memory backup system using a state-of-the-art non-volatile RAM. A nicad-based memory backup, and a chrome-plated remote memory bracket that permits access to four of the KC-1's message buffers, at the owner's paddle.

A 10-page brochure describing the KC-1 system is available with an SASE from Lance Johnson Engineering, P.O. Box 7363, Kansas City, MO 64116. Price class — $229.95. □

QRP transceiver

Join the world of low-power QRP. Heathkit's all-new HW-9 Transceiver sets a standard for comparison in wide dynamic range performance. Broad band circuits cover the CW portion of the 80, 40, 20 and 15-meter bands and eliminate the need to tune circuits within a band. An inexpensive HWA-9 Band Pack Accessory expands transceiver coverage to include the 30, 17, 12 and 10-meter bands.

Totally new design of the transmitter and receiver sections brings state-of-the-art performance to QRP fans. Microelectronic circuits reduce weight and provide a level of performance and features unexpected at this price. The wide-band front end uses a double-balanced mixer and four-pole crystal filter to handle wide dynamic range signals and eliminate the customary RF amplifier.

Automatic AGC circuits provide superior receiver performance and audio response. A single RF conversion reduces spurious responses and maintains excellent image rejection. Active audio processing follows the balanced product detector to ensure optimum clarity. Four watts of clean RF output (3 watts at 10 meters) ensure you'll be heard. Receiver Incremental Tuning permits tuning the receiver 1 kHz above or below the transmitter frequency.

Ideal for portable operation, the HW-9 CW Transceiver can be powered by batteries, a lighter socket or an optional AC power supply. Price: $249.95, kit form.

For more details about the HW-9 Deluxe QRP CW Transceiver, plus nearly 400 other build-it-yourself electronic kits, send for the latest, free 104-page Heathkit Catalog. Write to Heath Company, Dept. 150-365, Benton Harbor, MI 49022.

In Canada, write to Heath Company, 1020 Islington Ave., Dept. 3100, Toronto, Ontario, M8Z 5Z3, CANADA. Catalogs are also available at more than 65 Heathkit Electronic Centers in the United States and Canada; see your telephone directory for the nearest store.

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Multi-mode transceiver

ICOM announces the IC-471H 430-450 MHz transceiver with 75-watt transmitter, extremely low-noise PLL circuitry, and excellent receiver sensitivity.

Standard features: 430-450 MHz coverage; 75 watts RF output; FM, SSB, CW modes; 32 full-function tunable memories storing frequency, offset, offset direction and tones; 32 built-in subaudible tones, front panel selectable; 10 Hz tuning increments; 1 MHz up/down buttons; scanning of memories, memory modes or band; all-mode squelch; easy-to-read fluorescent display; "S" meter plus discriminator meter; RIT readout with ± 9.9 kHz range; dual VFO's. Preamp switch for controlling external, mast-mounted preamps. Size is 4½″H × 11½″W × 13¼″D.

The IC-471H uses 12V DX power and may be supplied from an external source (IC-PS15 or

IC-PS30, optional) or from an optional internal AC power supply (IC-PS35).

Other optional features include an IC-AG35 switchable mast-mounted preamplifier, UT15S encoder/decoder (PL encoder is standard), IC-CT10 computer interface, IC-EX309 computer interface connector and IC-EX310 voice synthesizer.

The IC-471H is available as of June 1984, and the suggested retail price is $1,099.

For more information, write to ICOM, 2112-116th Ave. NE, Bellevue, WA 98004. □

Satellite station

Communication through satellites is an exciting facet of Amateur Radio that presents challenge as well as satisfaction. Until recently, all amateur satellites were placed in near circular orbits close to the earth, with orbit periods of approximately 90 minutes. Station access time, although repeating every hour-and-a-half for several passes, is merely 10 to 15 minutes, during which time constant antenna reorientation is necessary to keep it pointed correctly.

The newest AMSAT/OSCAR satellite, A/O-10, changed this since it is in a large elliptical orbit with a period of approximately 11-2/3 hours. Access time for a single pass is about 10 hours, once a day, so that antenna direction needs to be updated no more than every hour or so.

The new satellite operates either Mode B (435 MHz uplink, 145 MHz downlink) or Mode L (1296 MHz up and 436 MHz down). Mode L has some problems and as a result, most activity is on Mode B. A low-noise 2-meter receiver or converter with an antenna with at least 10dB gain is all that is required for receiving. Ten watts at 435 MHz into a 12dB antenna is ample power under average conditions, but at times, a 50- or 100-watt amplifier is necessary.

Model 2510

The Ten-Tec Model 2510 Mode B Satellite Station incorporates a complete 435 MHz, 10-watt output, single-sideband or CW transmitter and a 2-meter to 10-meter receiving converter, both tuned with a common

frequency-adjusting knob.

The transmitter is VFO-tuned across the required 435.0 to 435.5 MHz segment and features selections of CW or SSB modes and of upper or lower sideband. The output power level is automatically maintained at a preset level (ALC) so that overdrive is not possible. The present level can be reduced from the factory set 10-watt level if a linear power amplifier with drive requirements below this level is used.

The receiving converter employs a gallium arsenide field-effect transistor (GaAsFET) preamplifier for lowest noise figure and an output frequency of approximately 29.0 MHz. The 10-meter band of any amateur HF transceiver or receiver, or a high-quality general coverage receiver, can be used in conjunction with the converter. Once the HF receiver is set to the correct frequency, all satellite tuning is performed with the Model 2510 tuning knob. (Transmitter and receiving converter are automatically tracked, thus producing a pseudo-transceiver.)

Provisions are made to allow duplex operation so your transmitted signal can be received simultaneously for system and frequency checks. A front panel SPOT pushbutton switch places the transmitter in operation with carrier inserted.

This unit has important advantages over other satellite equipment. It greatly simplifies station assembly, reduces the number of separate items and interconnections, and eliminates the need to buy separate converters. It converts your HF station into a transceiver-type OSCAR station, efficiently and at low cost.

Specifications: 4-1/2″H×7-9/16″W× 11″D; 6 lbs. **Amateur net price:** $489.

For more information, write to Ten-Tec, Inc., Sevierville, TN 37862. □

Pennsylvania QSO Party

The 27th Pennsylvania QSO Party, sponsored by the Nittany ARC of State College, Pennsylvania, by the Nittany ARC of State College, Pennsylvania, will be held 13-14 October. Operating periods: 1600Z, 13 October to 0500Z, 14 October, and 1300Z-2200Z, 14 October.

Exchanges: RST + three-digit sequential serial number plus county and/or ARRL section. Stations on county lines will give out *ONE* number; both counties are multipliers.

Modes: Phone and CW. Station may be worked once per mode on each band. CW in CW subband only. *NO* repeater QSO's.

Frequencies: *SSB:* 1850, 3980, 7280, 14280, 21380, 28580; *CW:* 40 kHz from bottom and 1810 kHz; *Novice:* 10 up from bottom of subband; *Mobile window:* 5 kHz below listed frequencies. Try 160M at 0300Z Saturday evening.

Scoring: *Pennsylvania stations* — 1 pt. per

Heathkit catalog

Heath's Amateur Radio line has been expanded to include an HD-1986 Microphone Equalizer; SA-2500 Automatic Antenna Tuner; HD-1481 Radio Frequency Coax Switch; HD-3006 RTTY Tuning Display; and an SW-7800 General Coverage Receiver.

These are just a few of the more than 400 electronic kit products offered in the new Heathkit Catalog. To receive this colorful catalog *FREE OF CHARGE*, write Heath Company, Dept. 150-385, Benton Harbor, MI 49022. In Canada, write to Heath Company, 1020 Islington Ave., Dept. 3100, Toronto, Ontario, CANADA M8Z 5Z3. Free catalogs are also available at over 70 Heathkit Electronic Centers in the United States and Canada. Consult telephone directory white pages for the nearest store.

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Product availability, specifications and prices are subject to change without notice. □

CW transceiver

Ten-Tec announces its Model 579 — Century/22, a 50-watt, six-band CW transceiver that combines excellent performance, reliability, simplicity of operation and low cost.

The CENTURY/22 fills the need for a reliable, low-power, no frills yet effective HF CW-only transceiver. It is ideal for beginners-on-a-budget, as well as established amateurs as a second set, for mobile and portable operation.

With power input up to 50 watts, communications can be worldwide, as was proved by its predecessor, CENTURY/21. By reducing the power to 10 watts, a CENTURY/22 owner can enjoy the fun and challenge of QRPp.

Specifications include: direct frequency readout, full break-in (QSK), full band coverage, forward power indicator, linear crystal mixed VFO, automatic gain control, automatic level control and built-in compression loaded speaker. Size: 4″H × 10″W × 10.5″D. Weight: 6 lbs.

For more information, contact Ten-Tec, Inc., Sevierville, TN 37862. □

SSB QSO; 1.5 per CW QSO; 2 per 80/160 CW QSO. *Multipliers:* ARRL Sections + Pennsylvania counties + maximum of 1 for DX (142 total) *Out-of-state:* Points as above × counties. *Mobiles:* Add 500 pts. for each county you operate from (min. 10 QSO's). Mobiles may be reworked as they change county.

Logs: Logs must be submitted on official form or reasonable duplicate. Entries with 100 QSO's must include check sheet. Illegible logs will be treated as "check logs." 100 pts. will be deducted for each duplicate.

Class of entry: There are only five classes of entry: *Single operator* — no assistance; *Mobile* — FULLY mobile, multi-op permitted; *Multi-single* — one transmitter, spotting receivers and nets OK; *Multi-multi* — anything (almost) goes, and *QRP* — maximum 5 watts output.

Awards: *Trophy:* Club with top aggregate score of membership. Annual revolving award. *Plaques:* Top EPA, WPA, Out-of-state, Multi-single, Mobile, Multi-multi, VE/VO and QRP. *Certificates:* Winner in each county, section, club (minimum three members). (minimum of 20 QSO's required)

Log, summary and check sheets available from W3HDH. Please send 50 cents for copy of results — please, *NO SASE.*

Send logs by 15 November 1984 to: Douglas R. Maddox, W3HDH, 1187 S. Garner St., State College, PA 16801. □

QRP ARCI Fall QSO Contest

The QRP Amateur Radio Club International (ARCI) Fall QSO Contest will be held 13-14 October, from 1200 UTC, Saturday to 2400 UTC, Sunday. Participants may operate a maximum of 24 hours.

Mode: Only one mode of operation — CW or SSB — may be used. The operator must select which mode he desires to use, then stick with it! *NOTE:* Stations desiring to compete for the Triple Crowns of QRP *must* work SSB in this contest. (except for Novice/Technicians).

Exchanges: Members give RS(T), state/province/country and QRP ARCI membership number. Non-members give RS(T), state/province/country and power *output.*

Stations may be worked once per band for QSO points. (For example, a station may be worked on both 40 meters and 15 meters and receive QSO credit for each contact.)

Each member contact counts 5 pts. regardless of location. Non-member contacts count 2 pts. if in same continent. Non-member contacts count 4 pts. if in a different continent.

Multipliers:
4-5 watts output CW or 8-10 watts output PEP × 2.
3-4 watts output CW or 6-8 watts output PEP × 4.
2-3 watts output CW or 4-6 watts output PEP × 6.
1-2 watts output CW or 2-4 watts output PEP × 8.
Less than 1 watt output CW or 2 watts output PEP × 10.
More than 5 watts output CW or 10 watts output PEP will be counted as check logs only.

The highest power used for any contact, any band, will determine multiplier.

Bonus multipliers: *Natural power* (solar, wind, etc. — with or without storage) × 2. (With storage, storage cells must be charged by the natural power source for eight of the 48 hours preceding the contest.) *Battery power* × 1.5. No other source of power may be used at any time during the contest to qualify for these multipliers.

Scoring: QSO points (total all bands) times total number of states/provinces/countries (a s/p/c may be worked on more than one band) × power multiplier × bonus multiplier (if any) = claimed score. Send in large SASE or IRC's to contest chairman for scoring summary sheet in advance of contest.

Suggested frequencies: *CW* — 1810, 3560, 7040, 14060, 21060, 28060 and 50360 kHz; *SSB* — 1810, 3985, 7285, 14285, 21385, 28885 and 50385 kHz; for Novices and Technicians; 3710, 7110, 21110 and 28110. No 30-meter (10.1 MHz) contacts will be counted.

Calling method: CQ CQ QRP DE (call sign) or CQ QRP CONTEST FROM etc.

Awards: Certificates to highest-scoring station in each state/province/country with two or more entries. All SSB entries are automatically considered for Triple Crowns of QRP Award. Separate scoring each mode.

In addition, Adrian Weiss, W0RSP, is sponsoring a special MILLIWATT certificate to be awarded to the highest scoring station in the less than 1 watt category, provided there are two or more entries in that category.

Logs: Suggest use of separate log sheets for each band for ease of scoring. Send full log data plus separate worksheet showing details and time(s) off the air. No log copies will be returned. All entrants desiring results and scores please include a large SASE with 1 oz. of U.S. postage or IRC's.

It is a condition of entry that the decision of the QRP ARCI contest chairman is final in case of dispute.

Deadline: Logs must be received by 12 November 1984. Logs received after that date or, missing information will be used as check logs.

Send all material to: QRP ARCI Contest Chairman, Gene Smith, KA5NLY, 8201 Chatham Dr., Little Rock, AR 72207. □

Oregon QSO Party

The Hermiston ARC will sponsor an Oregon QSO Party, 13-14 October. Operating times will be from 1700Z, 13 October, until 0800Z, 14 October; and from 1500Z, 14 October until 0000Z, 15 October.

Exchange: *Oregon stations* — signal report and county. *Others* — signal report and state/province/country. A station may be worked once per band and once per mode. Crossband and crossmode contacts are not permitted.

Categories: mixed mode or CW only.

Suggested frequencies: *Phone* — 18.0, 3929, 7260, 14300, 21370, 28600; *CW* — send CQ OR, 60 kHz up from the bottom of each Novice band; *VHF* — contacts on simplex only, excluding 146.52.

Scoring: Count 1 pt. per QSO. Oregon stations multiply QSO points by sum of Oregon counties, states, provinces and countries. All others multiply by the sum of Oregon counties worked. There are 36 counties.

All logs must have a summary sheet, and if more than 200 contacts are made, a dupe sheet should be included. Entries may be disqualified if logs are incomplete or too many errors are detected. You must sign the summary sheet, stating you observed all the rules.

You may Xerox log sheets and dupe sheets, or you may obtain extras from the HARC (please send SASE). Send SASE for results. Log sheets must be received by 12 November.

Mail entries to and request log sheets from: Hermiston ARC, P.O. Box 962, Hermiston, OR 97838. □

YL Anniversary Party

The YL Anniversary Party will be held in two sections. The CW portion lasts from 1800 UTC, 17 October to 1800 UTC, 18 October. The SSB portion lasts from 1800 UTC, 31 October to 1800 UTC, 01 November. Both sections will be held Wednesday to Thursday.

Eligibility: All licensed women operators throughout the world are invited to participate. YLRL members only are eligible for the cup awards. Non-members will receive certificates. Only YLRL members are eligible for the Corcoran and Hager awards.

Procedure: Call "CQ YL."

Operation: All bands may be used. No crossband operation. Net contacts, repeater contacts and contacts with OM's do not count. A station may be counted *only once* in each contest for credit.

Exchange: Station worked, QSO number, RS or RST, ARRL section or country. Entries in log must also show time, band, date and transmitter power. (Please know your ARRL Section. A section list is available with an SASE to YLRL Vice President.)

Scoring:

A) CW and SSB will be scored as separate contests. Submit separate logs for each contest.

B) All YL's within an ARRL Section — Score 1 pt. for each QSO with another station located within an ARRL Section. Score 2 pts. for each contact with a station not located within an ARRL Section (i.e., DX).

Definition of DX: All stations not located within an ARRL Section. DX YL's shall score 2 pts. for each contact with a station located in an ARRL Section and score 1 pt. for each contact with another DX station. Multiply the number of contact points by the total number of different ARRL Sections and countries worked.

C) Contestants running 150 watts or less on CW and 300 watts PEP or less on SSB, at all times, may multiply the results of B by 1.25 (low-power multiplier).

Logs: All logs must show ARRL Section or country to qualify for awards. Logs should also state whether or not the operator is a member of YLRL. Do not send carbon copies of logs. Please print or type. Logs must be signed by the operator; no logs will be returned.

Remember to file separate logs for each contest. Logs must show claimed score, be postmarked by 12 November 1984, and received no later than 10 December 1984, or they will be disqualified. Send logs to: Marty Silver, NY4H, 3118 Eton Rd., Raleigh, NC, 27608, USA.

Duplicates: For each duplicate contact that is removed from the log by the vice president, a penalty of 3 additional and equal contacts will be exacted.

Awards: A) *Highest CW score* — Gold Cup YLRL member. *Highest phone score*— Gold cup YLRL member. First, second and third place CW and phone score (not combined) will receive a certificate. Highest CW log and highest phone log in each U.S. and VE call district and country will receive a certificate.

B) *Corcoran Award:* A plaque given for the highest combined CW and phone score for *YLRL members within an ARRL Section.*

C) *Hager Award:* A plaque given for the highest combined CW and phone score from North and Central America, including the Greater and Lesser Antilles, for *YLRL DX members only.* A duplicate plaque given for the highest combined CW and phone score from any other part of the world for *YLRL DX members only.*

Suggested frequencies: The same in all contests. □

RTTY DX 'Maple Leaf' Sweepstakes

The 24th Annual RTTY DX "Maple Leaf" Sweepstakes will be sponsored by the Canadian Amateur Radio Teletype Group (VE3RTT), 20-22 October.

Test period will be from 0200 GMT, 20 October to 0200 GMT, 22 October. No more than 30 hours of operating is permitted for single-operator stations. Non-operating periods can be taken at any time during the contest. Multi-operator stations may operate the entire 48-hour contest period. A summary of operating times must be submitted with each score.

Bands: Use all amateur bands 3.5, 7, 14, 21 and 28 MHz.

Classifications: Single-operator (one transmitter); Multi-operator (one transmitter); and SWL Printer.

Messages: To consist of RST, time (GMT) and zone.

Exchange points: All two-way RTTY QSO's with one's own zone counts 2 pts. All other contacts will receive points as listed on CARTG Zone Chart. (Send SASE for Zone Chart).

Multipliers: Country status as ARRL Countries List, KL7, KH6, W/K, VE/VO, VK Districts counted as separate countries. Stations not to be counted more than once on any one band. Additional contacts counted on different bands. One's own country counted as a multiplier.

Scoring: Total exchange points × number of continents (max. 6). 200 bonus points added to final score for each Canadian contact on all bands.

Logs: Logs to contain band, date, times GMT, RST, call signs, exchanges sent and received. Use separate log sheet for each band. Multi-operator logs must be signed by each operator.

Send SASE or IRC's to CARTG for log sheets, Zone Charts, etc. Logs must be received before 01 January 1985, with time, summary and scores.

Awards: Engraved plaques for top 10 scores, Green RTTY'er, Top Canadian score, station contacting most Canadian stations, top multi-operator, and highest-scoring SWL.

Mail logs to: Canadian Amateur Radio Teletype Group, VE3RTT, 85 Fifeshire Rd., Willowdale, Ontario, CANADA M2L 2G9. □

Montana QSO Party

The Yellowstone Radio Club of Billings, Montana will conduct this year's Montana QSO Party from 1700Z, 10 November, to 0400Z, 11 November, and from 1700Z, 11 November to 0100Z, 12 November.

Work stations once per band and mode. Montana-to-Montana QSO's allowed. Work portables/mobiles again as they change county. No repeater QSO's.

Exchange: Signal report, serial number and QTH (county for Montana stations; state or country for others).

Suggested frequencies: *CW* — 1.810, 3.540, 7.035, 14.035, 21.035, 28.035; *Phone* — 1.835, 3.905, 7.285, 14.285, 21.385, 28.585.

Scoring: Count 1 pt. for phone QSO's and 2 pts. for CW QSO's. For final score, Montana stations multiply total QSO points by number of states, countries, Canadian provinces and Montana counties. Others multiply total QSO points by number of Montana counties worked (max. 56).

Mail logs by 15 December 1984 to: Yellowstone Radio Club, 2626 Burlington, Billings, MT 59102.

Connecticut

The 2nd Annual TRI-CITY ARC Auction will be held on 20 October, at the St. James Parish Hall, Poquonock, one and a half miles east of Rte. 12 on Rte. 2A (south of Norwich).

Set-up begins at 9:00 a.m.; auction lasts from 10:00 a.m. until sold out. Admission is free, and there will be food available. Bring your equipment to be auctioned.

Talk-in on 146.52 direct.

Call Tom Scott, WA2RYV, at (203) 464-6555 for more information. □

Iowa

The 8th Annual 3900 Club Hamboree and Iowa State Convention will be held 12-13 October, at the Marina Inn, South Sioux City, Nebraska. The event is being sponsored by the 3900 CLUB and SIOUXLAND AMATEUR RADIO REPEATER ASSOCIATION.

There's a possibility amateur license exams will be given under the guidance of the ARRL as a volunteer examination coordinator. Also featured will be a flea market, exhibitors and ladies' programs, and forums on such topics as QRP, Air Force MARS, QCWA, UHF/VHF, DX and Novices. Friday night get-together and Saturday night banquet featuring Dr. Beverly Mead of Creighton University, speaking on "Who talks and who listens." All indoor facility. Iowa State ARRL officials will be on hand to answer questions.

Flea market and convention, $6; banquet, $10 ($12 at the door). Flea market tables, $4 each.

Talk-in on 146.37/146.97.

Send advance reservations to Dick Pitner, 2931 Pierce, Sioux City, IA 51104. Advance flea market reservations go to Al Smith, 3529 Douglas, Sioux City, IA 51104. □

Maryland

The COLUMBIA AMATEUR RADIO ASSOCIATION will hold its 8th Annual Hamfest at the Howard County Fairgrounds (15 miles west of Baltimore just off I-70 on Rt. 144, one mile west of Rt. 32) on Sunday, 07 October, 8:00 a.m. to 3:30 p.m. Admission is $3; XYL's and children FREE.

Tables are $6 additional if Payment is received by 30 September, $8 after September. Outdoor tailgating is additional $3. Indoor tailgating is additional $6. Food is available. Prizes.

Talk-in on 147.735/135 and 146.52/52.

For table reservations and information write: Mike Vore, W3CCV, 9098 Lambskin Ln., Columbia, MD 21045; (301) 992-4953. □

Massachusetts

The HAMPDEN COUNTY RADIO ASSOCIATION will host its annual auction on Friday, 02 November, at the Granger School, intersection of Routes 57 and 187, Feeding Hills, Massachusetts (same location as last year).

Doors will open about 6:00 p.m.; auction starts promptly at 7:30 p.m. The club takes 10 percent of all sales to benefit the club newsletter's printing costs.

For more information, contact John Balboni, AC1T at (413) 786-2438. □

Michigan

The BLOSSOMLAND AMATEUR RADIO ASSOCIATION will hold its annual 1984 Blossomland Blast on Sunday, 07 October, at Lake Michigan College Community Center. The Center is located just west of the twin cities of St. Joseph/Benton Harbor, Michigan (I-94 exit 30 and west just over one mile).

Events of interest this year include an Air Force MARS display activity, an amateur Skywarn Training Program and a display of radio-controlled scale model airplanes. A homebrew contest will also be held.

The St. Joseph/Benton Harbor area is home of the Heathkit. Heathkit's annual display of equipment is always of interest to attendees.

There is plenty of free parking and all activities are inside the Center, so weather is never a problem. Admission is $3 at the door. Seller tables are $5 each.

Talk-in on 146.22/82.

For further information, write BARA, POB 175, St. Joseph, MI 49085, or contact Paul Reissmann, WD8MWT, at (616) 983-1710. □

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The HAM 10 FM CLUB OF KAZOO will hold its 2nd Annual Hamfest/Electronic Flea Market on Sunday, 28 October, at the Kalamazoo County Fairgrounds, Kalamazoo, Michigan.

Dealer set-up begins at 8:30 a.m.; doors open from 9:00 a.m. to 4:00 p.m. Hourly door prize drawings start at 11:00 a.m. Hamfest/flea market will be held indoors, with 400 4 ft. table spaces available.

Admission is $2 in advance, $2.50 at the door. Table spaces (4 ft.) $3 each; advance tables $2.50 each. Spaces with power must be reserved and paid for in advance.

For more information, contact Ken Losey, KA8RUA, 2825 Lake St., Kalamazoo, MI 49001. □

New Mexico

The Northern New Mexico Hamfest — sponsored by the NORTHERN NEW MEXICO ARC — will be held 07 October, 8:00 a.m. to 3:00 p.m. at the Terrero Group Shelter along the Pecos River east of Santa Fe.

Tailgate flea market, group meetings, games for the family members, fishing and picnicking. Admission $3; children $1.50. Includes hot dogs, chips, and free Saturday night camping. Soft drinks and coffee available.

Talk-in on local repeaters and 52 simplex.

For further info, please send SASE to: Northern New Mexico ARC, c/o Bob Norton N5EPA, Rt. 3, Box 95-15, Santa Fe, NM 87501, or call on 3.939 MHz at 0100 UTC. □

New York

Come see the Yonkers Electronics Fair and Giant Flea Market on Sunday, 07 October! The fair will be held rain or shine, from 9:00 a.m. to 4:00 p.m., at the Yonkers Municipal Parking Garage (max. height 6'10"). The YONKERS ARC is the sponsor.

There will be two floors of big value sales and new and used equipment, live demonstrations all day long, hourly prizes, a giant auction at 2:00 p.m., and unlimited free coffee all day. Free parking and refreshments.

Admission is $2 each; children under 12 free. Sellers: $6 per parking space; bring tables. Gates open to sellers at 8:00 a.m.

Talk-in on 146.265T, 146.865R or 52 simplex.

For more information, call (914) 969-1053. Or write to YARC, 53 Hayward St., Yonkers, NY 10704. □

Ohio

The MARION ARC will hold its 10th Annual Heart of Ohio Ham Fiesta on Sunday, 28 October, from 0800 to 1600 hours at the Marion County Fairgrounds Coliseum. Large parking area, door prizes, XYL prizes, check-in prize, food. Tickets $3 in advance, $4 at door. Tables $5.

Check-in on 146.52 or 147.90/30.

For information, tickets or tables, contact Paul Kilzer, W8GAX, 393 Pole Lane Rd., Marion, OH 43302. □

Tennessee

The 4th Annual TRI-CITIES HAMFEST — sponsored by Johnson City and Kingsport, Tennessee and Bristol, Tennessee/Virginia — will be held on Saturday, 20 October, at the Appalachian Fairgrounds, Gray, Tennessee.

The site is located five miles South of I-81 on Highway 23. Features include flea market, forums, dealers and RV hookups. Registration fee is $2. Prizes awarded.

Talk-in on 146.37/97 and 147.87/27.

For further information, write: Tri-Cities Hamfest, P.O. Box 3648 CRS, Johnson City, TN 37601. □

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HAMFEST CHATTANOOGA and the Tennessee State ARRL Convention will be held 27-28 October, at the Memorial Auditorium, Chattanooga, Tennessee. The auditorium is located in downtown Chattanooga on Oak Street at Lindsay Avenue.

State-of-the-art Amateur Radio and computer equipment will be given as main prizes on Saturday and Sunday. Other activities will include forums, contests and non-ham activities.

Amateur exams will be given Saturday, 27 October, in the West Assembly Room of the Memorial Auditorium at 8:00 a.m. Examinations will include Novice through Extra elements. Please send a completed 610 form with a copy of your license and a check or money order for $4 payable to WCARS/VEC by 15 October 1984 to the following address: Hamfest Chattanooga, P.O. Box 22161, Chattanooga, TN 37422.

The Admiral Benbow Inn will be offering special hamfest rates. A hospitality party will be held at the Admiral Benbow on Saturday, 27 October. Phone (615) 267-9761 for room reservations, and be sure to ask for "Hamfest Chattanooga" rates.

Inside space is available for dealers and flea market vendors; 8 ft. flea market tables will rent for $6 per day or $10 for both days.

For further information, contact: Hamfest Chattanooga, P.O. Box 3377, Chattanooga, TN 37404; or call Nita Morgan, N4DON, (404) 820-2065. □

WORLDRADIO ON CASSETTES — Worldradio for blind amateurs on cassettes. To receive this free service send $3.00 check, payable to George Hickin (for one time only contribution for tapes) with your name, address and call to George Hickin, W4GH, Box 7497, Macon, GA 31209.

DISTINCTIVE QSLS — Largest selection, lowest prices, top quality photo and completely customized cards. Make your QSLs truly unique at the same cost as a standard card, and get a better return rate! Free samples, catalogue. Stamps appreciated. Stu, K2RPZ, Box 412, Rocky Point, NY 11778. (516) 744-6260.

RTTY JOURNAL — Now in our 32nd year. New Beginners Handbook — $8.00 PPD USA, foreign add postage. Year's subscription to the RTTY JOURNAL, $7.00, foreign $13.50. Send to: RTTY JOURNAL, POB RY, Cardiff, CA 92007.

WYOMING AND UTAH RANCH LAND. Wild horses, antelope, deer. Near paved road. 10 acres — $60 down, $60/month. FREE information, maps, photographs. (Offer void in Calif.) Will trade equity for ham gear, home computer, test equipment, etc. Owner — Dr. Michael Gauthier, K6ICS, 9550 W. Gallatin Road, Downey, CA 90240.

The SOCIETY OF WIRELESS PIONEERS, Inc., invites all professional operators, active or retired, military or commercial, to join the world's largest organization of its kind. Many active nets. Write Box 530, Santa Rosa, CA 95402 for details or send $1 to pay postage on sample SPARKS JOURNAL.

EDITING A CLUB PAPER? Need one for your club? Interested in Amateur Radio public relations? Need some help? Amateur Radio News Service would like to hear from you. For info write Fran Norrick, WB9WPS, Route 6, Box 239, Kankakee, IL 60901.

POOR MAN'S VOICE PROCESSOR/ACCENTUATER for "MC-50/60" microphone — $9.95. KD7X, 405 Whittier, Silverton, OR 97381.

QSLS. QUALITY AND FAST SERVICE FOR 24 YEARS. Include call for free decal. Samples 50¢. Ray, K7HLR, Box 331, Clearfield, UT 84015.

COPY SATELLITE PHOTOS, WEATHER MAPS, press photos on our full size 18" wide facsimile recorders. We provide the equipment and information to get you started. FAX Guide, $1.00. ATLANTIC SURPLUS SALES, 3730 Nautilus Ave; Brooklyn NY 11224. (212) 372-0349 — Ask for ED, WA2FBY.

CHASSIS AND CABINETS kits. SASE, K3IWK.

SUBSCRIBE TO THE *DXers Magazine.* Gus Browning, W4BPD, editor. Only $15.00 per year. The DXers Magazine, Drawer DX, Cordova, SC 29039.

MOBILE IGNITION SHIELDING, provides more range with no noise. Free literature. ESTES ENGINEERING, 930 Marine Drive, Port Angeles, WA 98362.

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CODE PROFICIENCY DRILLS are transmitted from WB3IVO Brass Pounders ARC, each Saturday, Sunday, Monday and Thursday on 7060 kHz, starting 2000Z. Each Tuesday and Friday on 14060 kHz, starting 2000Z. Speeds range from 20 to 60 wpm.

COMPUTER SOFTWARE for: Apple, Atari, C-64, IBM/PC, TI, Timex-Sinclair, TRS-80, VIC-20. Please specify machine. Send S.A.S.E. to: MARK ELECTRONICS, Box 373, Dept WR, Romulus, MI 48174-0373.

B&W #14 AWG ANTENNA WIRE, 140 foot rolls, $10 each. B&W Phonepatch, Model 3002W with speech preamp/limiter, $125 each. Brand new, in original boxes, shipped UPS prepaid. Send check to Peter Onnigian, W6QEU, 1236 40th Ave., Sacramento, CA 95822. (916) 392-8964.

HATS WITH NAME AND CALL, $4.95 plus $1.50 shipping. Fourteen colors, SASE for information. SPECIALTY PRINTING, Box 361, Duquesne, PA 15110.

TELETYPEWRITER gears, ribbons, manuals, parts, supplies and toroids. SASE list. Buy unused parts. TYPETRONICS, Box 8873, Ft. Lauderdale, FL 33310 N4TT.

AUTO-CALL KEEPS UP WITH THE LATEST Ham info from Washington, DC area. Subscription $6.00 a year, sample copies $1.00. Address: AUTO-CALL, c/o W2GHK, 2417 Newton St., Vienna, Virginia 22180.

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SOLID BRASS BELT BUCKLES. Name or call. One line — name or call — $8.50. Two lines, name and call — $9.50. Add $1.00 postage. S. Slonim, 320 Rose St., Massapequa Park, NY 11762.

CW IS EASY — Pass the Extra code exam with SYSTEM EXTRA, a one-hour cassette tape with one side of random code and a second side with six FCC QSO's (20 WPM). Included are FCC type examinations to test your skill. $6.50 post paid. SYSTEM GENERAL, (13 wpm), consists of two cassettes, ten FCC QSO/exams and more text. $12.25 post paid. LANCE JOHNSON ENGINEERING, P.O. Box 7363, Kansas City, MO 64116.

HAMS FOR CHRIST — Reach other hams with a Gospel Tract sure to please. Clyde Stanfield, WA6HEG, 1570 N. Albright, Upland, CA 91786.

SELL NEW COILS AND VARIABLE CAPACITORS. B & W type 3035 coils, 198uH, $9.50 each. Miller type 2152 variable capacitors, 40-1,000pF, rated at 1,500 volts, $32 each. Groth type TC-3S turn counters with spin dials, for ¼ inch shafts, $13 each. All items brand new, in original boxes, shipped prepaid by UPS. Send check to Peter Onnigian, W6QEU, 1236 40th Ave., Sacramento, CA 95822. (916) 392-8964.

CERTIFICATE FOR PROVEN TWO-WAY RADIO CONTACTS with amateurs in all 10 USA call areas. Award suitable to frame and proven achievements added on request. Send $2 (USA) or $3 (DX) to cover certificate cost. W6LS, 2814 Empire Ave., Burbank, CA 91504.

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NEW DRAKE TR7/DR7 — $1195. R7/DR7 — $1195. Dentron GLA1000 — $315, GLA1000B — $350. TA36 — $250. Hy-Gain 105BA — $115, 155BA — $149. TH3 mk 3 — $185. ORGANS AND ELECTRONICS, Box 117, Lockport, IL 60441 (815) 838-1580.

JAMES MILLEN COMPONENTS — Many types available. Inquire SASE. Ralph, KA1FAA, 16 Hansom Road, Andover, MA 01810.

NOTICE NOTICE: Your ads seen daily by new people for a 4-week period on our Computer Bulletin Board. Very Low ad rate. Call (201) 962-4956 to view ads at no charge. Full details, send large SASE to NARWID BBS, 61 Bellot Road, Ringwood, NJ 07456.

SUPER SAVINGS radio computer electronic parts; accessories, supplies. SASE for catalog. BCD, P.O. Box 119 Richardson, TX 75080.

COMPUTER PRINTERS for SALE: Model 35 teletype machines; ASR, KSR and RO. Have interface boards also. $35 to $50. KB6LO, DON BREMER, 3200 Tobin Lane, Santa Rosa, CA 95407.

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FANTASTIC DISCOUNTS — ICOM ICR-71A $689.50, Kenwood R-2000 $499.50, R-1000 $409.50, Sony 2002 $219.50, Uniden 2021 $159.50, Bearcat DX-1000 $479.50, Bearcat BC-300 $359.50, BC-155 BC-100 BC-201 in stock. Call! Regency MX-5000 $388.50, HX-1000 $249.50. Call! Panasonics, MFJ, antennas, coax, CB's, CW/RTTY decoders, much, much more! Free UPS shipping and insurance to 48 states. 25-page picture catalog $1.00 (refundable). GALAXY ELECTRONICS, Box 1202, 67 Eber Ave., Akron, OH 44309. (216) 376-2402 9-5 p.m. EST.

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WANT PLUG-IN COIL ASSEMBLIES. Prefer swinging link, for old-fashioned link coupled transmatch similar to Handbook 1984, page 19-12. If already assembled, it's OK. (707) 527-8124, WB6TMY, 9 a.m. on 7045 kHz.

DRAKE TR-7 SALE: PS-7, two filters, fan, updates to 5000 serial number. $799 plus UPS. Heath Microkeyer $75. Kantronics RTTY/CW Software plug-in for TI-99, $75. MFJ 1224 interface, $75. Cables for TR-7. New factory sealed Avanti on glass 5dB 450 MHz ant. $30. New factory-sealed ASP 5dB trunk mount ant. $30. Regency Hr2 some xtals, w/CES front pad TT-mike, $110. Certified check for $995 gets it all shipping paid. Bill, NQ4G, (803) 884-1112.

ATTENTION KENWOOD & ICOM OWNERS: Informative separate newsletters! 5th year. Back issues available. Send 37¢ SASE for free brochure to INTERNATIONAL RADIO, INC., 364 Kilpatrick Ave., Port St. Lucie, FL 33452; (305) 335-5545. MC/VISA accepted.

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SELL, COLLINS 75A4 RECEIVER, SERIAL 2041. Estate of WA6CQG. Needs AVC work and some realignment, otherwise in good condition, manual and vernier knob. $100 plus shipping. W6DSX (916) 877-3912.

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VACATION IN THE CARIBBEAN — On a warm, friendly, uncrowded, inexpensive, easily accessible tropical island QTH. $275-$325 weekly rate (for two) includes large harborside room, private bath, Jeep, 17' outboard skiff, Sunfish, Windsurfers and kitchen. Station privileges to licensed amateurs. Excellent fishing, diving, beaching and snorkeling. VILLA BOHEME, Culebra Island, PR. (809) 742-3508.

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WANTED — Manual used to assemble kit for Viking Valient 2 transmitter or someone familiar with VFO in that transmitter. Bob W6AEJ, (213) 758-6503 or Callbook.

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TEN—TEC CENTURY 21, $200. HW-8, including A/C supply, $125. Phil K6CJ, (916) 489-2737.

FOR SALE: DRAKE TR4, MS4 speaker, AC power supply, Henry Radio TP400 DC supply, Shure hand mike and all mounting brackets — $400 firm. WB6GKR, Rte 1, Box 4089, Dunn Road, Valley Springs, CA 95252. (209) 772-2047.

HALLICRAFTER S40B, 4-band receiver. Excellent condition — $55 + UPS. J. KARR, Rt 1, Box 579, Lakeview, AR 72642.

SELL OR SWAP MFJ 496 Super keyboard with power supply, Kantronics Minireader and power. Hallicrafters HT-44 with PS-120 matching power supply. Heath HW-2036. Make offer. OVIDE LEE, W8TZE, 220 Adams, Alpena, MI 49707.

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Goia Marconi Braga, the daughter of Guglielmo Marconi who visited the LARE (Louisiana Amateur Radio Exhibition) exhibit at the Louisiana World Exposition on 20-22 June, stands next to Seymour D. Fair — the symbol for the Fair.

HAM COMPUTER SOFTWARE for the TRS80(TM) I or III. HAM-HELP includes DX bearings; ham math package, QSL label and QSL card generator. Send $5 to MIKE AVERY, AIØZ. Roland, IA 50236.

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NEED MANUAL for Wilson 1405SM hand-held. Will pay any reasonable price. George Kasdorf, W9FSA, RD #3, Box 251, Lewistown, PA 17044.

HEATHKIT SB-220 LINEAR AMPLIFER, 2kW PEP. Has 10-meter band. Never assembled. $600. Joseph Burt, WA6FJI (916) 485-9008.

CURTIS KEYBOARD, Model KB 4900. Never used; cost $395 plus tax. Will sell $295. W6DAC. (916) 272-1208 (Grass Valley).

SELL REPLACEMENT TUBES for Collins 32V series, Molded Mica Antique Transmitting Capacitors, all sizes, voltages, currents and makes. WANTED: Machinest tools, reasonable. W5QJT, P.O. Box 13151, El Paso, TX 79913. (915) 532-2509.

KENWOOD 520S with Autek filter. CW filter installed, $450. N6HSN, (916) 489-1462, 2607 Park Hills Dr., Sacramento, CA 95821.

WANTED: pre-1950 bugs and pre-1925 wireless keys for my collection. Neal McEwen, K5RW, 1128 Midway, Richardson, TX 75081.

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