Worldradio

Year 13, Issue 5 November 1983 • 85¢

Exams

At its September 22 meeting, the FCC adopted a Report and Order in Docket No. 83-27, concerning volunteer exams. Although the complete report has not been released, ARRL has learned some of the contents.

FCC envisions the establishment of regional Volunteer Exam Coordinators instead of national VECs. The FCC will have the power to retest anyone who receives a license from a volunteer-administered exam. The program will start with General and Technician. The other two classes will be added later.

Thirty days advance registration will be required of applicants. Instant upgrading will be permissible. The telegraphy test remains the same as now, (i.e., a sending test is permissible but not required). Membership in an organization cannot be a requirement for participating in a test.

— ARRL □

Registrations due

The 1984/85 edition of the ARRL Repeater Directory is now being assembled. Registrations must be received by 01 November to be included. The registration form, CD 240, is available from ARRL HQ for an SASE. Send to: ARRL, 225 Main St., Newington, CT 06111. *—ARRL* □

STS-9 orbital times

Any given orbit begins as the spacecraft crosses the equator, traveling west to east. The following orbital operating times are based on an 11:30 a.m. launch EDT on 28 October. If the launch is delayed for any reason, you must add the amount of the delay to the times stated here to obtain new orbital track timing for an operating pass. Also, what we are listing here are only the "official operating periods" scheduled as of 03 September.

Dr. Garriott says he will attempt to provide other "unofficial" operating periods as well, but these will have little advance notification. Whenever possible, advance notice of these extra operating times will be made available over W1AW, in bulletins issued by NASA-affiliated radio clubs (such as W5RRR in Houston) and on the daily updates of the Westlink Radio Network Hollywood newsline: (213) 465-5550.

All North American passes are listed in local time while those for foreign contacts with the spacecraft are in GTC. All times are approximate for the start of a given pass. You may calculate the specific time over your QTH by adding the forward speed of the space vehicle, which is 17,000 mph.

—Westlink Report, via Roy Neal, K6DUF

Typical of the thousands of amateurs involved in the Simulated Emergency Test were (from left to right): Richard Yeager, WB6YKV; Les Ballinger, WA6EQQ; and Joe Kiplinger, W6OHP, of the Sacramento Valley Section.

Simulated Emergency Test

A newcomer to New York City, not knowing his way around the city, asked a policeman, "How do you get to Carnegie Hall?" The answer was, "Practice!"

As practice is the only way to gain proficiency, several thousands of radio amateurs around the country annually participate in the ARRL's Simulated Emergency Test.

Each community writes its own scenario, dealing with problems of the past and/or anticipated problems of the future.

Typical of the activities across the nation was the exercise held from 03 to 09 October in the Sacramento Valley Section (California). Calling on an actual event of the recent past, the drill for 54 amateurs was a major fire at the Port of Sacramento.

From 5:30 to 7:30 p.m. for seven straight nights, amateurs at six locations would be handling such messages as, "McClellan Air Force base is responding with a 5,000 gallon tanker." And in this drill the trucks actually rolled. It was a test of "mutual aid," with firefighters from adjoining counties receiving their directions via Amateur Radio.

The effort was tied together by the City of Sacramento Office of Emergency Services, directed by Fire Captain Don Schroeder.

The volunteer communicators were under the direction of RACES radio officer Joe Kiplinger, W6OHP, and Keith Crandall, K6QIF, a long-time public service moving force in the area.

Among the lessons learned were that "rubber duckies" on hand-helds are not efficient devices and that even a quarter-wave antenna on a magnetic mount would be a great asset and will make a huge difference, according to Crandall.

On 15 October, the participants will attend a message handling critique. The RACES group which acts as an umbrella for MARS members and PUSH and SHAPE (amateur groups which assist the local police and sheriff's departments), will also go into training for hazardous material incidents.

In the near future, the Sacramento RACES organization will be involved in a drill as to their response to an earthquake of the magnitude of 8.4 on the Richter scale.

If your group participated in the SET, **Worldradio** would like to print your story on problems encountered and solved, lessons learned and improvements planned. □

Orbital data

Orbit #	Date	Ground Track	AOS Time
39	10/30	Spokane, Denver, Dallas, Houston, New Orleans South America	2000 CDT
40	10/30	Northern California, down Pacific Coast, east of San Francisco and Los Angeles, Mexico	1930 PDT
47	10/31	Western Australia, South America, Europe (NOTE: Standard Time begins this date)	1430 UTC
63	11/1	South America, USSR, India, Australia	1330 UTC
64	11/1	Iran, Scandinavia, USSR	1555 UTC
77	11/2	NW Africa, Eastern Europe, Poland, China	0850 UTC
79	11/2	Northern tip of South America, Caribbean, northern Europe, USSR, India	1250 UTC
80	11/2	Caribbean, all East Coast states, Newfoundland, U.K., Central Europe	0815 EST

Cable TV company vacates channels

Another cable TV company has voluntarily vacated five channels in deference to pressure from the Amateur Radio community.

Group W (formerly Teleprompter) — initiating service in Torrance, California — released their list of 160 channels of intended programming on 14 September. Thirty of these channels were left vacant, including E, J, K, WW and XX on the ham bands, plus others on FAA and maritime frequencies.

Since award of the Torrance franchise in February 1982, close liaison has been maintained between the ham community, Group W and the city. The original franchise contained wording that channels would be vacated if problems developed.

Sensing that it might be better to vacate before problems developed, and in view of the close support amateurs had

(please turn to page 36)

SSTV on STS-9

Bruce Brown, WA9GVK — of the Metrovision ATV group, which covers the Washington, D.C. and Arlington, Virginia areas — has received an FCC STA for the relaying of the upcoming STS-9 space shuttle mission television video pictures and audio sound. These pictures will be sent from the AMSAT building, located across from the Goddard Space Flight Center in Maryland. Live pictures — B/W and color — of astronaut Owen Garriott, W5LFL, working other amateurs on 2 meters will be shown.

FSTV signals will be transmitted on 439.25 MHz into the Metrovision ATV repeater system, and will be outputted on 426.25 MHz.

Dr. Robert Suding, W0LMD, of Herndon, Virginia will be linking these UHF FSTV transmissions and will convert them to SSTV pictures. These SSTV pictures will be transmitted for the duration of the flight on 14.230 MHz.

Further information and details can be obtained from Mike Stone, WB0QCD, at **A5 ATV Magazine**, P.O. Box H, Lowden, IA 52255-0408; phone (319) 944-5421. □

ARRL Net Directory

The new edition of the ARRL Net Directory is now available. Listing over 1,200 public service nets by location and frequency, as well as many computer and maritime service nets, this newly revised booklet is also packed with information on all the basics of traffic handling net operation. You may obtain a sending a self-addressed 9 envelope with 88 cents U.S. ARRL Net Directory, 2 Newington CT 0611

Worldradio™

is published monthly by
Worldradio, Inc.
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November 1983 Vol. 13, No. 5

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 and local currency will be accepted.

Second-class postage paid at Sacramento, CA.

HAM-TAGS for cars

BHC has announced their HAM-TAGS. HAM-TAGS are custom license plate frames, personalized with Amateur Radio call signs. These frames are made from black molded ABS. This is the same material used for trim on most new cars.

A set of HAM-TAGS consists of two black frames with permanent white vinyl outdoor letters in the large imprint area. When ordering, specify whether the call (large imprint area) is to be at the top or bottom of the frame. If you don't specify, they will ship the proper frame for your state (one that will not cover the name of the state). In states where cars need to have only one license plate, BHC will — if you mention it to them — furnish a front

plate and a rear frame. The normal set consists of *two frames.*

HAM-TAGS are $12.95 per set, plus $1.50 shipping, and are brought to your door via first class mail. They can be ordered from Amateur Radio dealers and distributors or from BHC, 1716 Woodhead, Houston, TX 77019; (713) 522-5755, plastic money OK. □

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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.

Need advice?

U.S. and foreign teachers, students and school radio clubs desiring to participate in an educational resource net for public schools, or those needing advice on reactivating or beginning a school station, please contact: Michael Henderson, N6JFD, Box 331, Somis, CA 93066. □

New publication

Champion Spark Plug Company has a wonderful publication, *Giving Two-Way Radio Its Voice,* that covers all aspects of ignition noise and its remedies, along with suggestions on suppression, locating sources of interference, and shielding your ignition system — for your car, boat and/or motorcycle.

This publication costs $1 and is available from: Champion Spark Plug Company, Automotive Technical Services Dept., P.O. Box 910, Toledo, OH 43661.

— *Wichita ARC, KS* □

AMSAT symposium

AMSAT and the Johns Hopkins University Applied Physics Laboratory ARC presents Amateur Radio Satellite Symposium '83. The big event will be held on Saturday, 12 November, at the Johns Hopkins University APL (just off Route 29), Baltimore, Maryland.

Free registration; preregistration is advisable. Call (301) 589-6062 to reserve your seat. Planned subjects include: how to get on OSCAR-10; how to track OSCAR-10 without a computer; how to track OSCAR-10 using a computer; space shuttle mission and W5LFL's operation; packet radio; future plans for PACSAT — your orbiting mailbox; solar sail project and Amateur space telescope.

For more information, call (301) 589-6062. □

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Contact Worldradio for hamfest prizes.

YASME travels south

Although it will probably not be by boat, the YASME Foundation once again announces that Lloyd Colvin, W6KG, and Iris Colvin, W6QL, have set forth on a half-year YASME DXpedition. The trip began on 01 October, and was planned for South America, including possible excursions to some of the more rare countries and islands.

Operation will be on the low end of all bands, both phone and CW, with special efforts on the lower frequency bands of 30, 40, 80 and 160 meters. Lloyd and Iris want all the QSLs and QSOs they can get, but please limit QSOs to only one per band, per mode, per country.

As usual, all QSLs go to: The YASME Foundation, P.O. Box 2025, Castro Valley, CA 94546. □

CONTENTS

Victory for hams in Buena Park

On page 3 of our November 1982 issue, we ran an article entitled "California amateurs fight city ordinance," about the efforts of several amateurs in Buena Park, California, to get the city to remove a recent antenna height restriction from the city zoning ordinance.

On 20 September 1982, the city's amateurs presented city council with over 220 signatures on letters and petitions. The zoning ordinance had set a height restriction of two stories or 30 feet for buildings or structures. Amateurs wanting to erect higher towers than they already had, or who wanted other improvements, would have to apply for a conditional use permit and pay a nonrefundable fee of $475. The fee would be no guarantee that permission would be granted, however.

Since then, Buena Park amateurs have formed a radio club, drawn up bylaws and pledged to help the community by taking part in civic events, in an effort to convince the council that they were serious Amateur Radio operators.

On 01 August of this year, the city council agreed and voted to compromise with the group by loosening the antenna height restriction to 60 feet rather than 30 feet.

While researching for information about how to form a radio club, Tad Kleindienst, KA6IYM, discovered that there were more than 125 licensed Amateur Radio enthusiasts in Buena Park.

Kleindienst and a group of friends notified every licensed radio person by mail about their intent to form a Buena Park-based club. On 06 June, 21 people showed up at the club's first meeting.

"That's a good start," Kleindienst said of the turnout. "By December, we hope to have 50 people in the club."

—Information from Santa Ana Register, CA □

ARRL election

The ARRL Executive Committee met on 10 September to examine nominating petitions filed by members in eight divisions for ARRL Director and Vice Director for two-year terms of office, beginning 01 January. The following candidates are unopposed, so were declared elected without balloting.

Canadian Director Thomas B.J. Atkins, VE3CDM
Atlantic Director Hugh Turnbull, W3ABC
Dakota Director Tod Olson, K0TO
Great Lakes Director Leonard Nathanson, W8RC
Canadian Vice Director Harry Maclean, VE3GRO
Dakota Vice Director Howard Mark, W0OZC
Delta Vice Director Robert P. Schmidt, W5GMP
Great Lakes Vice Director George Wilson, W4OYI
Midwest Vice Director Claire Richard Dyas, W0JCP

Ballots were ordered mailed to full members in five divisions, as follows:

Atlantic Division for Vice Director — H. Vincent Bardsley, KB3OM; E. Merle Glunt, W3OKN; George Hippisley, K2KIR; Ed Kuebert, K3KA. **Delta Division for Director** — Clyde Hurlbert, W5CH; O.D. Keaton, WA4GLS. **Midwest Division for Director** — Paul Grauer, W0FIR; Robert McCaffrey, K0CY; Wellington Stewart, K0SI. **Pacific Division for Director** — Jettie Hill, W6RFF; Bill Stevens, W6ZM; Bob Vallio, W6RGG. **Pacific Division for Vice Director** — Fred Barry, K6RTU: G. Kip Edwards, W6SZN; Jim Knochenhauer, K6ITL; Jim Maxwell, W6CF. **Southeastern Division for Director** — Frank Butler, W4RH; Stewart Woodward, K45MX. **Southeastern Division for Vice Director** — Evelyn Gauzens, W4WYR; Jim Gundry, W4JM.

Ballots must be received by noon, 20 November, and will be counted on the following day. Election results will be announced by subsequent bulletin. □

1983 DX-YL to NA-YL contest results

The results of the 1983 DX-YL to NA-YL contest were as follows:

CW winners: *(DX) Gold Cup* — DJ0EK; *Second Place* — DL2SAP; *Third Place* — VK3KS; *(NA) Gold Cup* — tie between KA3CUF, WD4NKP and NY4H; *Second Place* — Jeannine Cote, VE1BWP; *Third Place* — tie between Darleen Magen, WD5FQX, and Mary Crider, WA3HUP.

SSB winners: *(DX) Gold Cup* — Antonina La Vecchia, IT9JLA; *Second Place* — M. Paulina Bloemem, DJ0EK; *Third Place* — Mrs. M.E. Stafford, VK3KS; *(North America or NA) Gold Cup* — Martha King, WD4NKP; **Second Place** — Margaretha Ruminski, KA3CUF; *Third Place* — Martha Silver.

Combined scores (plaque winners): *DX* — DJ0EK; *NA* — WD4NKP.

—Submitted by Rose Ellen Bills, N2RE □

Martha King, WD4NKP — 1983 Gold Cup winner — is active in YLRL contests.

OSCAR-10 info

If you *don't* have a computer, and you want to know when to listen for OSCAR-10 and where to point your antenna, a complete monthly printing of azimuth and elevation for OSCAR-10 is available for just $5 per month.

Contact Ross Forbes, WB6GFJ, at (415) 948-5193, or send an SASE to Box 1, Los Altos, CA 94022 for information. □

Medical emergency

A Beverly, Massachusetts amateur saved the life of another man who experienced a medical emergency at sea. Mel Cole, WA1WTP, received a call on 19 June from an amateur aboard the 41 ft. sloop *Klee*, telling him the pilot of another boat was in serious medical trouble. He quickly called and contacted Klaus Alvermann, pilot of the 25 ft. sloop *Plum Belly*. Alvermann, located 230 miles southeast of Nantucket, was suffering from a severe bladder infection.

After patching a call to Dr. Sharad Chitre of the Beverly Hospital emergency room in which Chitre spoke to Alvermann, Cole realized Alvermann had to receive medical attention within 24 hours. He then called the Coast Guard in New York and relayed the information. The Portsmouth, Virginia Coast Guard called Cole on the radio and established communication with Alvermann. A doctor was dispatched, and Alvermann received medical attention aboard the *Plum Belly*.

Alvermann underwent surgery for five hours and is now recuperating. When interviewed for a newspaper article, Cole briefly described other acts of Amateur Radio public service and praised the actions of the Coast Guard. From the *Beverly Times*. (Thanks Marguerite Moran, KA1HVC, and Warren Andrews, W1MCX.)

—New England Report □

Computer firm loans equipment

A Lowell, Massachusetts computer firm announced it will loan $3,000 worth of equipment to an Amateur Radio club for packet radio experiments, according to Den Conners, KD2S, an engineer at Wang Laboratories.

The Wang ARC will use the money to purchase VHF and UHF equipment for an operational satellite/packet radio station. Included will be a simplex digital repeater (145.01 MHz) to allow packet radio users in northern Massachusetts to link their stations to each other, as well as through the UoSAT-OSCAR-9 satellite.

Within two months, said Conners, amateurs at Wang ARC and the University of Surrey (England) will be communicating via 1200 baud packet radio through Uo-9. Those experiments will form the "proof-of-concept" for the future AMSAT packet satellite (PACSAT).

In addition to the equipment loaned, the company will provide Wang ARC with an additional amount equivalent to $8,000 in furniture and physical facilities. Thanks, *New England Report*.

—Mitre Bedford ARC, Mitre Corp., Bedford, MA □

ATTN: Orange County

Ralph Swanson, WB6JBI
Orange County DEC
Fried Heyn, WA6WZO
SW Division Director

This letter is to disseminate information which will hopefully be of interest to the various ARRL groups such as ARES, RACES and the various Amateur Radio clubs within Orange County.

It should be noted that *NO* recruiting of volunteers is to be done at this time, with the possible exception of establishing "team captains" as defined by the LAOOC. "Team captains" will be a select group of leadership individuals whose primary purpose will be to obtain the manpower requirements needed to fulfill the communications tasks of the various events within the county.

It is suggested that the various groups that wish to participate, select a representative for that position. That person will work closely with the LAOOC counterpart starting in January 1984 until the close of the Games, August 1984. The name, address and telephone number of that/those individual(s) should be submitted to myself or Fried Heyn no later than 01 December 1983.

The following is a synopsis of the discussion that ensued at the last meeting, held on 03 March 1983 between the LAOOC and the Amateur Radio Olympic Communications Committee:

1) The Games of the XXIII Olympiad will be held from 28 July to 12 August 1984.

2) *Olympic Villages* — To be located at the following locations: University of Southern California, University of California at Los Angeles and University of California at Santa Barbara.

There will be Amateur Radio stations located at each village. They will be near the telephone message centers, the so-called "International Centers." Concern was expressed regarding the installation of large antennas at the villages and will not be allowed.

Recommendations were made for the use of VHF/UHF from the village sites to remotes and subsequently to HF stations. Satellite communicatons would be considered via the Phase IIIB OSCAR if technical expertise were available. Credentials for operators at the villages will require extensive background investigations through the FBI.

Since French and English are the offical languages of the Olympics, operators manning the village stations should be fluent in both. The goal is at least one French-speaking operator on duty whenever a station is in operation. Other languages desired are Spanish, Arabic and German. The Olympic villages will be open two weeks prior to the start of the Games.

3) *Out-of-Stadium Events* — There will be a significant role for amateurs in the out-of-stadium events. These are basically one-time events, and almost all occur on weekends. This means short-term help, as opposed to several days in a row for the same person for in-stadium events. Functions to be performed include result reporting at mile markers, support of medical teams, crowd control, etc. Comments on specific out-of-stadium events were:

A) **Yachting** — Support will be needed for the existing team through Dr. Warren Bradley.
B) **Marathon** — Men's event one weekend, women's event the following weekend. Course starting in West Los Angeles/Santa Monica area.
C) **Cycling Road Races** — Locations are in Mission Viejo and on a portion of the 91 Freeway.
D) **Equestrian Speed and Endurance** — At Fairbanks Ranch in San Diego. Possibly will be relocated to Orange County.
E) **Canoeing and Rowing** — Located at Lake Casitas (Santa Barbara jurisdiction). A radio link requested to Olympic village at UCSB.
F) **Pentathlon** — Orange County event. Will include 600 meter riding, fencing, pistol-shooting at 25 meters, 300 meter free-style swimming, and 4,000 meter footrace, to name but a few.
G) **Track and Field** — Besides the marathon, there will be 20 kilometer and 50 kilometer race walks.

4) *Transport to and from Venues* — This will be another significant role for amateurs. The Games will require approximately 800 buses up to 16 hours per day, using Los Angeles School District and ARA vehicles. Each will have a radio with five channels available, but it is expected that these frequencies will be congested.

5) *Training Sites* — There will be 56 training sites planned at local high schools in all three counties: Los Angeles, Orange and Santa Barbara. No special telephone installations are planned, so amateur links to the villages will be necessary.

The management approach was agreed upon by both groups as the best method of organization. This is supported by the idea of Amateur Radio "Team Captains" working directly with their LAOOC counterparts.

"Team captains" will be expected to devote about one evening per week to Olympic preparations, starting in January 1984. They must be available throughout the period of service to be provided, which will be well over a month for the Olympic Village stations. □

DON'T FORGET . . .
Include first and last names with call signs.

• Silent Keys •

Merrill Beam

Merrill D. Beam, K2BX — past president of the Monmouth County (New Jersey) Amateur Radio Association and past president of the Central New Jersey Chapter QCWA — became a Silent Key on 25 August 1983, in Jacksonville, Arkansas.

Merrill had been a radio amateur since 1910, at age 11. His first call was "spark MB"; he became 8BFO in 1912.

He was the first radio operator to contact Admiral Richard E. Byrd's first Antarctic expedition in 1923, and he handled all traffic in the Philadelphia, Pennsylvania area for the Byrd expedition.

The Italian government decorated him with the Grand Cross of Italy and the Grand Crown of Italy, as well as the order of San Marisa Allazzero, which carries with it a Marquis-ship, for intercepting an SOS on 29 May 1928, that led to the rescue of General Umberto Nobile, whose dirigible — the *Italia* — had crashed on an ice floe 650 miles from the North Pole while on an Arctic expedition.

K2BX was a member of Army and Air Force MARS and of the Radio Club of America. He was also a past vice president of the Old-Timers Club; past president of the Garden State Amateur Radio Association; and a member of ARRL, FDAM, ORC, Sojourners, and Delaware Valley Chapter QCWA.

—Information from Shrewsbury, New Jersey Register and Bob McKinley, W2OMR □

Parvin 'Bud' Shepherd

Parvin O. "Bud" Shepherd, WA6RBK, passed away on 27 August 1983, at the age of 65. Bud was one of the net controls for the Golden Poppies 2-meter AM Net, and was net director one year. He was a member of MARS net and was active up till the last week before entering the Veterans Hospital in Long Beach, California. *—Stanley Coutant, WA6BLK* □

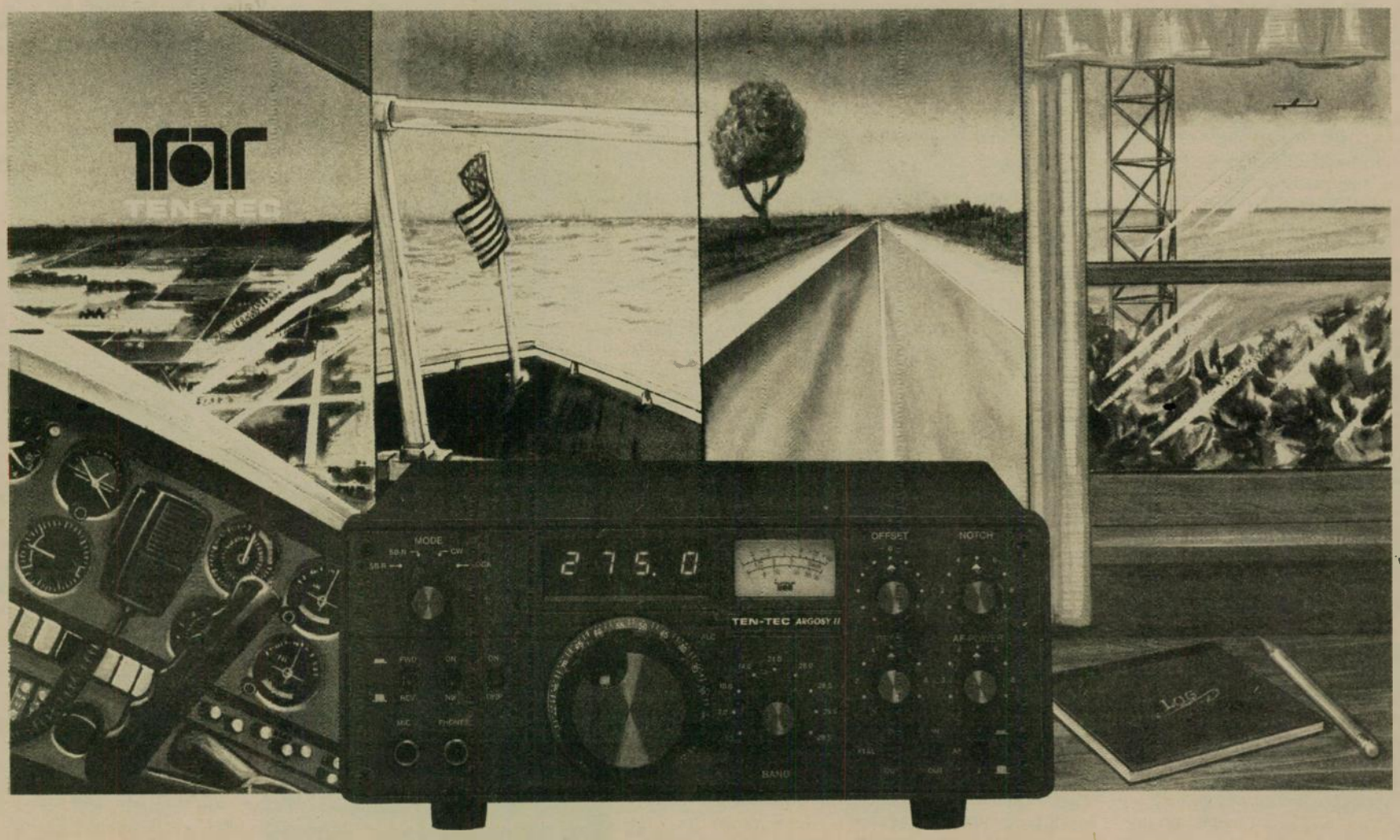
Charles Mack

Charles N. Mack, W0KVZ, became a Silent Key on 24 August 1983. Charles had been licensed since September 1932, and was 70 years old. Charles was the Station Appearance winner in the February 1983 issue of **Worldradio**. *—L.F. Ziegler, W0POX* □

Ham rescue at sea

Two Marshfield, Massachusetts Amateurs were involved in a rescue at sea. Frank Cantelmo, WB1FWS, was aboard the 736 ft.-long oil tanker, *Cove Trader*, on 23 April, when it picked up a "Mayday" from a 74 ft. fishing vessel out of Miami. The vessel had damaged her hatch in heavy seas and was taking on water. The *Cove Trader*, located 7 miles from the damaged ship, rescued all crew members and their belongings. Marilee Cantelmo, KA1BCV, assisted other amateurs on the Maritime Mobile Net on 14.313 MHz by relaying messages from the radio operator of the *Trader* to the Miami Coast Guard. (Thanks *MARA Bulletin.)*

—New England Report □



ARGOSY II
at home everywhere

Like its namesake, the ARGOSY II is a great traveler, land, sea, or air. And it has the right features to be an equally good companion at home.

Mobile/Portable/Fixed operation is easier with ARGOSY II. Broadband design eliminates receiver and final amplifier tune up. Small size permits convenient installation. Simple controls and switches make operation easy—even without looking. And its basic 13 Vdc design permits battery operation, drawing just 750 ma. on receive and 9 A max. on transmit to allow plugging into a car's cigarette lighter outlet for mobile use. Plus the easy disconnect from its mobile mount permits moving the ARGOSY II for fixed station use or safe keeping.

Two-Level Power. Switch from QRPp (5 watts output) to QRO (45 watts output). Low power for portable use from batteries, high power without a separate power amplifier. Low power for the challenge of QRP operation, high power for greater punch when conditions require it. Both power levels have ALC with optimum drive indicated by a front panel LED.

Solid-State, Six-Band Design. Covers 80-10 Meters, including the 30-meter band, in 9 segments (four for 10 Meters) with 40 kHz overrun on each band edge. Excellent sensitivity (0.3 μV), offset receiver tuning (±3 kHz), built-in notch filter tunes 200 Hz-3.5kHz, optional noise blanker, WWV reception, QSK, sidetone pitch and volume controls, and a new easy-to-read digital frequency display uses 4 large red 0.3" LEDs to indicate frequency (the bandswitch indicates band in use). Every feature you need for easy use and fine performance.

A great rig for traveling — and for staying home. Some of the features that make ARGOSY II perfect for mobile use also make it an ideal fixed station transceiver. One is its size—just 4" high, 9" wide, and 12" deep—so it fits conveniently on a desk with plenty of room left for accessories. And there's a full complement of accessories to choose from for mobile or fixed operation—microphones, filters, keyer, speech processor, mobile mount, and an ac supply. Best of all, ARGOSY II is low cost.

Check out the at-home-everywhere new digital ARGOSY II. See your dealer or write for information to TEN-TEC, Inc., Sevierville, TN 37862.

Special Events...

'Radio Central'

Radio Central ARC will operate WA2UEC from the former RCA High Frequency Radio Station called "Radio Central" on Saturday, 05 November, and Sunday, 06 November, to commemorate the 62nd year of the station, now silent, and part of the New York State Park (DEC).

Operations for the 24-hour period will be on 2-160 meters, up 10 kHz from the edge of the General band, and on 2 meters on these frequencies: 146.52, and 144.550/145.150 repeat. Novice band operation will be on 7.110 kHz.

A special QSL card showing a photo of the former station will be available. Send your QSL with a large SASE to Radio Central ARC, P.O. Box 680, Miller Place, NY 11764, or QSL to the Callbook address. □

Veteran's Day

The Armored Force Amateur Radio Nationwide Emergency Team (A FAR NET) will help commemorate Veteran's Day 1983 with all of its member stations participating as special event stations.

Stations will begin operating on Veteran's Day, Friday, 11 November, and will also operate on 12 and 13 November. Stations will operate from 1200 UTC to 2400 UTC, on all three days. Operations will take place in the 40-meter band between 7.280 and 7.290 MHz; in the 20-meter band between 14.320 and 14.330 MHz; and in the 15-meter band between 21.370 and 21.380 MHz.

All amateur stations making contact with any member station can obtain a special commemorative certificate by sending $1 (to cover the cost of the certificate, mailing envelope and postage) to Harry B. Thomsen, W2PJH, 348 Jefferson Ave., Apt. 15, Canadaigua, NY 14424.

Stations requesting the certificate should indicate in their requests the call letters of the station contacted, the station's A FAR membership number, the date contacted, time and band. Requesters should be sure to include their calls, names and return addresses. □

Plimoth Plantation

A special event station in Plymouth, Massachusetts (America's home town) will be sponsored by the Whitman ARC and Plimoth Plantation on Thanksgiving Day, 24 November 1983.

Call will be WA1NPO. Operation time will be from 1300 GMT to 2000+ GMT. *Frequencies:* (MHz) 1300-1430 GMT — 21 260; 1430-1730 GMT — 7.280 (± QRN) and/or 7.050 (CW); 1730-2000 GMT — 21.385. 1300-1600 GMT — 14.255 or 14.180 (± QRM); 1600-2000 GMT — 14.345. Limited 2-meter operation local club repeater tentative: 147.225/835, and 146.52 simplex.

The event will be supported by members of the Plymouth (Devon, England) Radio Club, operating their station G3PRC from a site overlooking Plymouth Sound — the sheltered waters from which the *Mayflower* began her memorable voyage in the fall of 1620.

The station will operate from an indoor site in Plimoth Plantation's 1627 Pilgrim Village. The Plantation is an unusual living history museum which depicts life as it was in the 17th century Plymouth Colony. Its sites include the 1627 Pilgrim Village, Wampanoag Summer Settlement, and *Mayflower II* — a replica of the type of ship that brought the Pilgrims to the New World.

To receive a certificate, send proof of contact and $1 (domestic) or 4 IRCs (foreign) to: Whitman ARC, P.O. Box 48, Whitman, MA 02382. Please send proper postage, as this is a non-profit organization and folding of this beautiful certificate will destroy it.

For more information, contact: Ed Hommel, KA1CZS, (617) 826-4772; Jim Russell, WB1CNM, (617) 586-7524; Rosemary Carroll, Plimoth Plantation, P.O. Box 1620, Plymouth, MA 02360, (617) 746-1622; or Peter Jackson, G3ADV, 32 Brown Ave., Parkfield, Nantwich, Cheshire, U.K. (phone 0270-626149).

Mark Twain

The Connecticut DX Association will operate KO1R from 1300Z to 2000Z on Saturday, 03 December from the home of Mark Twain — the Mark Twain Memorial in Hartford, Connecticut. The frequencies for both phone and CW will be the lower portion of the General and upper portion of the Advanced bands.

For full color QSL, send your QSL and SASE to: Connecticut DX Assn., P.O. Box 181, Columbia, CT 06237. □

STS-9 landing

Tom Neece, WD6BUK

As we all know, STS-9 will be carrying Amateur Radio — W5LFL. It will also be landing here in Kern County (California), at Edwards Air Force Base. The amateurs of the Kern County Radio Club feel this is too important an event in our nation's history, and in Amateur Radio, not to celebrate it in some special way. Accordingly, we are going to be operating a special event station under the club call W6LIE, on the weekend of the landing of STS-9 — 5-6 November. Operating times will be from 1600Z-0500Z on the 5th, and from 1400Z to about one hour after the STS-9 landing on the 6th. If the landing date changes, we will operate the day before and the day of the landing, same time schedule.

Frequencies and modes: 7275-7285 kHz SSB; 14.295 MHz SSB; 21.375 MHz SSB; 21.150 MHz CW. (all frequencies ± QRM, QRN) This last frequency will give the Novices a chance to work us.

Those stations wishing to work us will exchange call, signal report and location. Each contact will be assigned a number. A QSL and SASE to W6LIE, Kern County Amateur Radio Club, Inc., P.O. Box 743, Bakersfield, CA 93307, will bring you an 8½" x 11" commemorative "Ham Radio, Flyin' High" certificate. □

Tricentennial

The Suffolk County Radio Club will operate W2DQ from 0000Z, 28 October, until 2400Z, 30 October, in celebration of Suffolk County's 300th birthday. Frequencies will be: *Phone* — 15 kHz up from the lower 40-15-meter General Class band edges; *Novice* — 21.135.

A special certificate will be sent to those sending large SASEs to Richard Tygar, AC2P, 5 Chelmsford Dr., Saugerties, NY 12477. □

Everglades' 36th

Homestead Everglades ARC will operate W4SVI between 1300 UTC, 03 December and 2200 UTC, 04 December, to celebrate the 36th anniversary of the dedication of the Everglades National Park.

Frequencies: 10 kHz up from the lower edge of the 40-10-meter General Class phone bands, and 10 kHz from the lower Novice band edges. Also, 20-meter CW and 146.520 MHz.

Certificates will be sent to those sending QSLs and large SASEs to W4SVI, c/o Dick Dowst, WB4HZK, Everglades ARC, 14511 SW 287 St., Leisure City, FL 33033. □

USS Intrepid

On 16-17 July, the Teaneck, New Jersey PAL ARC held its second special event operation aboard the aircraft carrier *USS Intrepid*, using the call W2IVY. Any stations still needing confirmation of their contact should send their QSL and 4¼" × 9½" (#10) SASE to Bud Weisberg, K2YOF, 62 Harriet Ave., Bergenfield, NJ 07621. □

From mine to mine

Paul Turkheimer, WA6NKL

The USAF MARS Los Angeles Air Force Station Base Support Team conducted its annual Emergency Communications project on 12-14 August from deep within an old abandoned gold mine in the upper Mojave Desert. The time and place was specifically chosen to present a hostile environment to test both the human response and equipment of the Base Support Team.

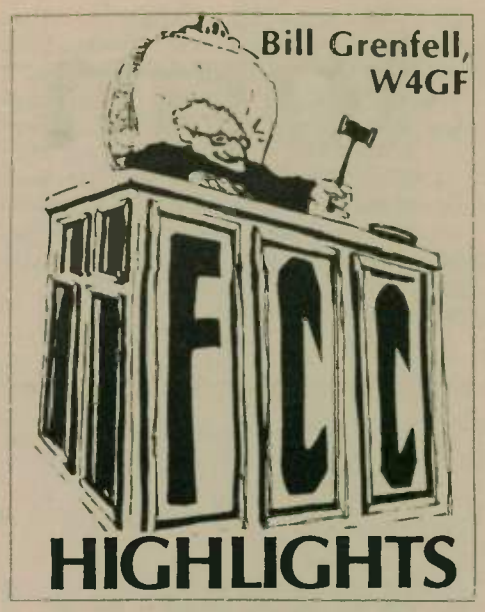
Adding interest and challenge, the project — which was a special international event — was held jointly with members of the Johannesburg Chapter of the South Africa Radio League. That group similarly established a high frequency station within the confines of a gold mine in Johannesburg, South Africa. The advanced team arrived at the California site early on 12 August and began to ready the area for the group. Immediate HF operation began from a mobile unit.

As in all three of the MARS teams' previous annual emergency preparedness exercises, this site was also selected for its harsh environment. In addition to the site's rugged desert terrain, the time of year was chosen for its high temperature. The mine tunnel was part of the nearly century-old Big Dycke gold mine in the California Rand mining district. The forward 75 feet of the tunnel was used as operating positions during the project. The rocky antenna site was above the tunnel entrance — a distance of 475 transmission line feet away. The angle of ascent to the top of the hill was about 55 degrees. Transmission line, rotor control cable and antenna rotor, the specially modified 3-element tri-band beam with a 20 ft. boom and the new portable Tri-Ex Quick Erect MRS-419-66 tower, guy cables, spikes, pipes, tools, including crow-bar and sledge hammer and drinking water were hauled to the site. The high noon 125°F temperatures and steepness of the terrain mandated that for each minute of climbing, two minutes of rest occurred.

While the beam antenna was assembled, the easily transportable 37 lb. 60 in. nested tower supplied by Tri-Ex Tower Corporation was installed.

The second contingent of personnel arrived 1300 LT (2000Z) and furnished the heavy electrical power. An additional station was assembled inside the mine. One radio was operating with a kilowatt on long-haul frequencies; the other, 500 watts on the region frequency, feeding a vertical antenna. Both positions were operational by 1500 LT (2200Z), three hours ahead of schedule. A third contingent, from Van Nuys Air National Guard (ANG), arrived at 1700 LT (2400Z) with an additional heavy-duty gasoline driven electric generator and a radio transceiver. Additional inverted "V"

(please turn to page 9)



Did the FCC provide a loophole to change power output measurement methods without going through a rule making proceeding? In its PR Docket No. 82-624 Report and Order which it adopted 18 July, FCC stated:

". . . we need to choose a measurement standard for output power that both the amateurs and the commission recognize as valid. By this order we are choosing and publicizing such a standard. It is: The output power will be determined while the station is operating as indicated by: 1) the reading of a thru-line peak reading radiofrequency (RF) wattmeter, properly matched, or 2) calculation of the power using peak RF voltage as indicated by an oscilloscope or other peak-reading device. Should we decide upon other standards in the future, we will release them in public notices."

Quoting that last sentence, ARRL followed with the statement that it ". . . fears that changing substantive standards in this manner would totally eliminate the chance for public comment that should be available in an administrative rule making proceeding." (from the 01 September 1983 *ARRL Letter)*

It should be noted that the above-quoted "standard" does not appear anywhere in the amended rules! An FCC-issued Erratum advises that it failed to include the power limit for beacons in the Order. It is 100 watts PEP. While the power level specified for operation in the Novice bands (for all classes) is switched from 250 watts input to 200 watts output, operation in the 10 MHz band must remain at 250 watts input until this band is included in the Amateur rules.

Joseph Schroeder, W9JUV, points out via the August 12 *Westlink Report* that operation in the 10 MHz band ". . . is by special waiver and is not governed directly by the Amateur rules."

•

Experimental Radio Services licenses have been granted to Amateur licensees for operation in the 18, 24 and 902 MHz bands allocated to the Amateur Service. They are not presently available for regular Amateur operation, pending further implementation of the World Administrative Radio Conference (WARC-79). Transmissions for experimental purposes can be authorized in these bands via a license in the Experimental Radio Services under Part 5 of FCC's Rules, from their Office of Science and Technology, Washington, D.C. 20554.

•

The ARRL has filed a "PETITION FOR PARTIAL RECONSIDERATION" of the prohibition of an amateur adminstrating a Novice test to a person employed by the same company (see FCC's Report and Order in Docket 82-727). ARRL also asked for clarification of the extent to which an in-law relationship acts as a bar to eligibility to act as a Novice examiner.

•

FCC has denied a request from manufacturers of cordless telephones operating just below 1800 kHz for a power increase for increased range. *(Westlink Report,* 12 August)

•

The ARRL has filed a motion with FCC for expedited action on its petition for rule making (RM-4040), requesting that cable TV operation be removed from channels E (144-150 MHz) and K (222-228 MHz).

The original petition stemmed from the volume of complaints from amateurs about excessive leakage from cable TV systems all over the country. Noting that the "Amateur Radio community has made every conceivable effort to work with the cable industry through its trade association, the National Cable TV Association (NTCA) . . .," ARRL states that: "It appears that NCTA did not seriously intend to participate in resolving interference problems . . ."

Answering Storer Communications (cable) systems claim that it had filed "outdated information" concerning Storer cases and complaints, ARRL stated: "The information cited in the Motion was as accurate as anyone could expect. The cases of interference reported are still unresolved, in the sense that interference still exists, regardless of any effort which may have been made in one or two cases to resolve the same."

ARRL also rebutted an affidavit filed with the Storer document by a Storer staff engineer, who called for "cooperation" on the part of amateurs who should turn their beams away from the in-

terference, drive vehicles with equipment installed away from leakage spots, and avoid frequencies where leakage is greatest. (from the *ARRL Letter(s)*, 18 August, 01 September 1983)

•

ARRL has requested that the FCC eliminate the two rule sections which make the sale of commercial external RF power amplifiers that operate between 24 and 35 MHz illegal. The request was filed as the League's comments on FCC General Docket No. 83-114, a Notice of Inquiry and Proposed Rulemaking on a re-examination of technical regulations. The rule sections are 2.815(b) and 97.77(c). The prohibition was originally imposed to help combat the widespread use of illegal power amplifiers in the Citizens Band Radio Service, mostly between 26 and 28 MHz.

•

RACES (Radio Amateur Civil Emergency Service) operation should be allowed in the entire 144.50-145.50 MHz repeater subband, instead of just 145.17-145.71 MHz, according to ARRL. This was included in the League's comments, otherwise in support of the FCC's PR Docket 83-524 proposal to expand the number of frequencies available for operation in RACES during a declared national emergency.

Under the FCC's proposal, the entire 146-148 repeater segment would also be available for RACES. "The expansion of VHF and UHF frequencies especially brings the RACES rules up to the level of present technology by permitting use of the numerous repeaters available in most areas of the country in time of declared national emergency," the League said. (*ARRL Letter*, 04 August 1983) □

Special Events

(continued from page 7)

antennas were erected, and a third operating position was established near the ANG camp.

Actual on-the-air operation was interrupted during the 36 hours of scheduled operation for two five-hour periods, one each on Saturday and Sunday morning, when no propagation existed. Radio equipment used were two Collins KWM-2A's, one Swan and one Kenwood transceiver. Additional Kenwoods were held in reserve. VHF simplex was used throughout the period for intra-base communications.

A total of 390 contacts on both AFMARS and on the amateur bands were made worldwide. All equipment functioned without a breakdown.

Adding interest to the event were several distinguished visitors and observers. Among those were Roland Hiscock, ZS6BFS, who made the trip from Johannesburg, South Africa especially for this event. He operated the station under a visitor's license, using his G4LRF call sign. Also present was the Information Officer of the Los Angeles-based South African Consulate, Schalk Van Der Westhuizen, who provided the official recognition as an event of international good will.

Coordination at the other end was arranged with Neville Dawson, ZS6AND; Irvine Greene, ZS6BPE; and Hans Van de Groenendahl, ZS6AKV. The Big Dycke call sign used for the project was WA6NKL. The gold mine call sign in South Africa was ZS6GMM.

USAF MARS members who participated were Dale Birmingham, WB6MMQ/AFA6CA; John Crowe, W6ULZ/AFA6FJ; Richard Mills, WA6LML/AFA6PF; Bob Plummer, WB6BFU/AFA6SG; Robert Raynor, W6ULY/AFA6SV; and Mike Pollack, KK6L/AFB6LC. The California ANG fielded six persons. Paul M. Turkheimer, WA6NKL/AFA6YJ/AFF6P, directed the project.

This field event was the fourth one held in as many years and continued to prove that the Los Angeles Air Force Station MARS Base Support Team is ready to establish a radio HF communications center in an area where no resources pre-exist. The team's technical ingenuity and resourcefulness under severe environmental conditions was again demonstrated. □

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_____

_____

OFF THE AIR

Another rod idea

In re: "Ground rod idea," page 12, September Worldradio

Back when I was in Novice class, M.L. Buchanan, W4DSU, told a story about a man pounding a 10 ft. pipe into the ground with a sledge hammer, and about a ham who hooked a water hose to a pipe and got better results.

I took a 3/4-inch galvanized pipe, 11 feet long, put a sleeve connecting a spigot to the pipe, then fastened a garden hose from the water line to the spigot. After mashing the lower end of the pipe almost shut to provide pressure, I clamped on a pair of vicegrips and turned on the water full force. Using the vicegrips to slowly turn the pipe back and forth, the pipe went 10 feet into the ground in about an hour.

The only problem comes if you run into a rock, but life is a gamble anyway — hi. Hope this will help someone as it did me.

E.T. RICHARDS, WA4UTC
Concord, North Carolina □

Memories of radio

In thinking back over my past radio experiences, as both a licensed amateur and before, I relish many thoughts and memories. I simply think back to my boyhood days and commit to paper some thoughts I would like to share.

Growing up as a boy in Little Rock, Arkansas, I had a neighbor who lived down the street, who was a bit older, wiser, and in tune with gadgets and engineering enterprises. One day, he invited me to his house to see his crystal set. I can vividly recall putting on a set of earphones, adjusting a small "cat whisker" onto a crystal, and instantaneously hearing music coming to me over the air.

This same friend gave me the plans to make my own crystal set. For a few dollars, a piece of wood, some wire, a few metal strips and a toilet paper roll for the coil, I was in business. I would go to bed at night listening to the crystal set until sleep overtook me.

In high school, I joined a radio club. I remember seeing a high school member of that club, using a 20 watt transmitter and receiver, talk via telegraphy between Little Rock, Arkansas and Mobile, Alabama. What a thrill to hear those dits and dahs coming through so loud and clear . . . all the way from Mobile, Alabama. This infatuation with radio continued, and I wrote a term paper in high school about the discovery and early history of radio.

Radio continued to be on my mind. In 1974, I began to study the code; I would take a piece of paper, fold it to the size of a pocket calculator, write about five letters and/or numbers on it for a portable study guide; as I was waiting on traffic, eating lunch, etc., I would commit to memory these dits and dahs and their meanings. It was not long before I knew the code.

In 1975, I became a licensed Amateur Radio operator. Once licensed, the world was at my fingertips. The very first night I was on the air, I had a CW contact with an amateur station in Ottawa, Canada. What a thrill it was! He later sent me a QSL card with a picture of the beautiful Parliament building, and a picture of some Royal Canadian Mounted Police. I still have this QSL card mounted in a plastic folder.

I talked to a Philippine ship at sea; this was a small sailing vessel, circumnavigating the world. He had a small CW-only rig, battery powered. I had a very interesting but clear CW QSO with him as he was crossing the Atlantic Ocean from Europe, heading for the Caribbean Islands. He was only operating with about 15 watts.

During my Amateur Radio years, one late afternoon in San Antonio, I turned on the radio and heard a "5" station talking to another station but signing as an Aeronautical Mobile Region 2. I was able to make contact. The operator was flying a commercial jet about 30,000 feet over the Pacific Ocean; he was crossing from Hawaii to the California coast. He had an Amateur Radio in the cockpit, and was using an antenna tuner to gain the proper match. He talked to me for about five minutes before signing and getting back to work in the cockpit.

I have talked to Antarctica (the South Pole) three times. One of these contacts was with a station at Siple Station. They were using a 13-mile-long dipole strung east-west with the broadside north-south. What a thrill for me on a Saturday afternoon, in the comfort of my own home, to talk personally with a research expedition at the South Pole. I remember comparing temperatures, it being warm in San Antonio in September, but frigid cold at the South Pole.

These kinds of stories can go on and on, just during my short association with Amateur Radio. What a terrific hobby we all have in Amateur Radio. The memories of interesting contacts in the past and the anticipation of interesting contacts to come will live with me the rest of my life.

To stimulate your thoughts and past experiences, and to make interesting reading for **Worldradio** subscribers, share by committing to paper some of your more interesting radio contacts. I will be reading the columns for your stories!

DAVID OBERLE, NE5E
San Antonio, Texas □

HELP — QSLs needed

I need help from someone who may be able to give me a few ideas on how to receive the following QSL cards.

I worked 3D2RJ on 25 September 1982 and FR0FLO on 26 October 1982. I have sent numerous QSLs with Green Stamps to these two amateurs, both direct and via QSL managers or addresses listed in the different publications as QSL routes for them. I desperately need these two QSLs for an endorsement on my DXCC Certificate, but for some reason they will not send me a return QSL. I've tried everything except getting on a plane and hand-delivering the QSLs.

If anyone has any ideas on how to obtain these two cards, I would appreciate hearing from them. If the two above DX stations read this, *PLEASE* send me the cards. I desperately need them. I have sent numerous Green Stamps to these two stations with my cards. I have just about given up.

EDWIN NARWID, WA2OAF
61 Bellot Road
Ringwood, NJ 07456 □

Phase IIIB questions

First off, thanks to **Worldradio** for printing my previous questions about the IIIB satellite. I received three replies, but all three were photocopies of the same story about the IIIA satellite, which dated back to 1979(!). I suppose these articles are no longer useful, so I'm still looking for answers. I wrote *AMSAT* and QST with SASEs, but haven't heard anything yet. Any help from readers in answering the following questions will be appreciated.

1) I've heard rumors to the effect that when QST takes control of IIIB on or near 01 December, Mode "B" will be only one day per week.

2) Since IIIB's much higher than planned, will the various tracking programs available still work, or will they have to be revised and updated?

3) I hear, too, that since IIIB is much higher than planned, it'll take a minimum ERP on Mode "B" of 3kW to access it on CW and 5-8kW ERP on Mode "L" to access it on CW.

4) Also, I've heard that: "IIIB moves so rapidly the use of computer-controlled rotors is an absolute necessity." As I understand it, IIIB moves so fast you'd have to keep one hand on the azimuth/elevation controls constantly to adjust them, and the only possible way to avoid this is to use computerized rotor systems. But then, to further confuse the issue, I've also heard that it moves so slowly that only one azimuth/elevation change in three to four hours is required.

My antenna is a 4-element Yagi up 20 feet. On an average pass, I can only hear signals (CW and SSB) above the noise, generally three to four hours.

As a point of interest, I went through recent ham magazines and tried to get a rough idea of how much a Mode "B" station would cost. I came up with a figure that ran over $1,500.

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

Comments welcomed

Armond Brattland, K6EA

Many responded to the June appeal for help to design a tiny CW transceiver that might serve to communicate with home, while "walking the dog," in the wilderness, or back to the homebase-camp, even 15 miles away. The response indicates much interest in such a project, but to date, only enthusiastic suggestions for possible use and need for such CW "midge." When someone comes along with practical designs for such a tiny rig, it will appear.

•

Ex-mayor Howard Menge, KA0DFV, of Bemidji, Minnesota, believes there should be a code requirement for the Advanced Class license. He suggests 16 wpm. It is his opinion that too many phone-only Generals merely upgrade to gain added phone space, but make no ef-

(*please turn to page 12*)

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Off the Air

(*continued from page 10*)

fort to improve their CW ability. He feels that such slight increase in code above the 13 wpm for Generals might tend to spread operations, reduce the pressure of further demands against the CW portions of our bands, and eventually make for more Extra Class licensees. What do you think of Howard's suggestion?

•

While operating in the 20-meter CW-band KA0DFV states he has been forced to go down to within 30 to 40 kHz of his limit as a General, because of RTTY operation. It is his feeling that Generals seeking to improve their CW are being treated unfairly by a horde of RTTY operators, many of whom have no more interest in CW beyond using that band, and he wishes it understood that he is not against the Morse Key Boarders, as he has a chance to copy them and does communicate with KB operators. In proportion to the benefits for the future of Amateur Radio, Howard feels RTTY should have a "narrow window!" How do you feel about that subject?

•

Years ago, the FCC forced a restriction upon the sale in the United States of final amplifiers capable of operating on 10 meters. Dealers sometimes got around it by shipping "EXPORT MODELS" that contained 10-meter capability, via foreign addresses. Now that the FCC finds itself in a position where it is difficult or impossible to control CB, a process of deregulating is taking place. However, the licensed amateur may have become forgotten! Dealers still cannot sell final amplifiers to licensed amateurs in the United States who have been set up to operate on 10 meters.

Should such restriction now be lifted? Or qualified, as was long ago suggested, by placing your order together with a copy of your amateur license? Do you suggest other qualifications? Are you willing to write your thoughts to the FCC and to your representatives in Congress?

•

Are you capable of listening to an amateur frequency on CW and know what is going on, without writing it down to then interpret what you hear? Many old military operators only learned to copy five-letter groups, not words such as would be used in a QSO! Page 4-2, chapter 4 of the ARRL license manual for 1982 suggests: "Traditionally, the Novice code test consists of 25 five-letter groups sent at a rate of 5 wpm." There is an alternative method stated; however, some volunteer examiners insist on using the "traditional" method, even though the Novice applicant be a retired communications professional capable of 35-45 wpm point-to-point operation.

Should the ARRL delete such suggestion of a 5-letter group Novice code test? In answering, state how you do on "head copy" and for how long and by what methods you learned such skill. Please direct your comments and suggestions: Armond Brattland, K6EA, c/o **Worldradio**. □

FCC misadventures

Serious erosion of the fundamentals of Amateur Radio has been going on for some time. Have you noticed it? If not, let me jog your memory. For the past 10 years or more the following disservices to Amateur Radio have occurred:

1) Logging of amateur communications no longer is required.

2) You can operate mobile or portable now without saying where you are, or even mentioning that you are mobile or portable.

3) You can move to another call district without having to change your call letters, and operate in your new location without giving any indication that you are not located where your call letters indicate you should be.

4) You no longer need notify the FCC that you will be going on a trip for an extended period, nor do you need to inform the FCC of the route you will take.

5) Although at this writing it has not yet occurred, it appears that the FCC soon will establish a no-code license which is opposed vigorously by an overwhelming majority of amateurs.

Most of the above actions have occurred under the aegis of "deregulation" — with the implication that there is something sacrosanct about doing away with traditional rules, without looking into the wisdom of why those rules were established. It's as if the FCC had said: "Radio amateurs, you are not important; you are not worth regulating."

It would have been understandable if the FCC had said: "We want to make it easier for ourselves to administer this bothersome business of Amateur Radio; also, look at the money we can save." Of course, no such explanation was given. The new rules were simply announced — unexpected, unwelcome, disturbing *and destructive of the quality of Amateur Radio.*

At the same time, the FCC established the citizens band service, and presently found it had a tiger by the tail. Finding control of CB impossible, the FCC threw up its hands and, in effect, admitted it had goofed. Abandonment of CB and deregulation of Amateur Radio have moved the two services closer to each other. Could it be that CB and Amateur Radio *look alike* to the FCC?

How pleasing it would have been if the FCC, with wisdom it obviously lacks, had said: "We're having a devil of a time doing all the things we're supposed to do. Amateur Radio deserves careful and competent regulation, but we are shorthanded and underfunded. We ask everyone — radio amateurs, Congress and the public at large — to consider this problem and help us cope with it." Such a ploy might not have succeeded, but it would have laid honest cards on the table. Everyone would have known the facts.

I think I can explain why this did not happen. A subtle change has come over the FCC in the past 20 or 30 years. Before this change occurred, the FCC staff had a sizable share of radio amateurs — employees who were hams *before* they went to work for the FCC. They understood Amateur Radio, knew why amateur rules were what they were, and it never entered their minds that deregulation had any merit whatsoever.

Enter now a new element — engineers. Fresh out of college, in many cases, and with no experience in Amateur Radio. Along with engineers a few lawyers, likewise with no ham experience. If the FCC had been a department of transportation, this would have been like hiring people who had never driven a car.

Dismaying as it was, deregulation worked — something like an automobile engine when you yank off a spark-plug wire. And there weren't too many complaints. Hams had grown accustomed to the good administration of former years; they thought it would reappear, perhaps. But it didn't.

Emboldened by what it thought was success, the FCC then tried an entirely new gambit, which turned out to be *regulation*, rather than deregulation. Just how this misfortune came about is perhaps impossible of discovery. It occurred about 1970 as an entirely new rule — Sec. 97.114(c) — and it declared as illegal any amateur communication "the purpose of which is to facilitate the regular business or commercial affairs of any party."

For many years, Amateur Radio had gotten along just fine without such a rule. The only restriction along this line was that radio amateurs must never use their activity for making money. Nobody, of course, ever has had any objection to *that* restriction. Amateurs never have tried to make money from their communications.

In promulgating Sec. 97.114(c), the FCC disregarded an important element in Sec. 97.1 ("Basis and Purpose of Amateur Radio"), which states that the FCC must establish rules and regulations "designed to provide an Amateur Radio Service having a fundamental purpose" of:

> *"Encouragement and improvement of the Amateur Radio Service through rules which provide for advancing skills in both the communication and technical phases of the radio art."*

By *communication* in the above key passage is meant, of course, *all kinds of communication*, not just what the FCC considers proper for amateurs. You monkey with the kinds of communication and you get into censorship, and you violate the U.S. Constitution's Bill of Rights, which guarantees freedom of speech.

The reaction among radio amateurs when Sec. 97.114(c) was promulgated was, understandably, one of revulsion. The Board of Directors of the ARRL voted unanimously against it, and instructed the ARRL headquarters staff to proceed with steps to remove Sec. 97.114(c). A couple of perfunctory attempts were made to carry out the ARRL Board's instruction, but they failed to effect a change.

At any rate, a long period of puzzlement over Sec. 97.114(c) ensued. Running at cross purposes as it does to well-established practices, both in Amateur Radio and in life in general, Sec. 97.114(c) still elicits confusion: amateurs just can't believe it is real. Before it came along, you thought nothing of asking a friend in another city to call his local ham store to see if a certain part were available. Or, if

(*please turn to page 36*)

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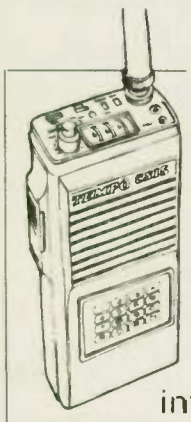

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AMATEUR RADIO PUBLIC SERVICE

Dallas firemen grateful to radio amateurs

Dr. Ralston Gober, W5ZNN

The NAVARRO ARC received letters of gratitude from the chief of the Dallas (Texas) Fire Department (DFD), Dodd Miller, for their recent help in search operations at Cedar Creek Lake.

Dallas Fire Captain J.D. Beets, of Cedar Creek, was lost and presumed drowned in the lake on 07 August and search operations were begun the next day. Unable to operate their radios effectively so far from their repeater system in Dallas, the DFD relied upon amateurs to relay information from the command post to the search boats and to order equipment and manpower from Dallas. Helicopter-to-ground communications were also provided by amateurs until a more conventional system could be established.

The communications operation was organized by the Navarro ARC with assistance from the Cedar Creek ARC and the Athens ARC.

Area hams participating were: Dr. Frank Autry, KA5BOZ; Marie Autry, N5GHB; Byford Cook, W5GXE; Robert Camplen, NJ5V; Tom Kerls, WB5VTZ; John Miller, W5SFU; Hap Smith, W5UVU. □

Hams help police

Lenore Jensen, W6NAZ

The "Specialist Reserve Officer of the Year" honor was presented to Eva Gordon, WA6YQT, by the Valley Division of the Los Angeles Police Department. Her fine work was on the Administrative Board of Operation Ham Watch, a group of amateurs working closely with the department in the huge San Fernando Valley.

The team went quickly into action on 30 June, when the entire Los Angeles police communications went out and there was no way for citizen complaints and police patrol assignments to be relayed to the cars.

Almost instantly, ham members of Operation Ham Watch were summoned, and the base station in the Van Nuys center went into action. Happily, the Los Angeles area's system was restored within a half hour, but the valley amateurs provided vital assistance for more than three hours.

Telephone information was given to the amateur base station, which promptly relayed the assignments to hams in various patrol cars. Because of the huge area to be covered, the services of the Magic Mountain repeater were provided by Dennis Hanley, KB6C.

Sgt. James Flavin, coordinator, reported excellent work by the hams who regularly participate in surveillance and communication teams. □

Big one still to come

Dick Stiern, K6REZ

For those who needed it, nature gave us an abrupt reminder last May 2nd in Coalinga. That quake and its aftershocks should have refreshed our memory that we are due for a major quake — the granddaddy of them all — sometime in the next 30 years. As horrible as events at Coalinga have been with 6.5 magnitude, predictions are for something over Richter 8 in the next 30 years — maybe next week, or tomorrow.

The news media believes it. Network camera crews now take their equipment home with them in anticipation of "the big one." Downtown urban areas have been filmed and the film stored away to provide the "before" pictures when the big quake happens. A Federal Emergency Agency has stated that casualties and destruction "would surpass any natural disaster thus far experienced by the nation" and would be a catastrophe comparable to the Civil War.

So why am I so excited? Because it appears to me that ARES activity in our area has never been more apathetic. Recently, a darned good ham told me, "I don't belong to ARES, but don't worry; I'll be around if I'm needed." Well, the Monday night practice nets might sound pretty dull and ritualistic at times, but they're a lot more fun if you and your buddies are there.

I'd like to see all of us become more competent, and giving practice nets our attention and our best shot is a good starting place. Let's train more people to take control of a net.

One positive result of the Coalinga quake was that the emergency services and the media came away with increased respect for what a few very dedicated hams did up there. We all listened, and we heard them do a great job for their community. I'll bet there's not much apathy in Coalinga now, especially among the hams.

Take time for the ARES Net on Monday night. See you there.

—Central Valley RC, Bakersfield, CA □

Empire Games a success with Radio

The flame was extinguished, and smiling winners of gold, silver and bronze medals boarded buses with others who had tears in their eyes. The 1983 Empire State Games had been a success.

Playing a major part in this sport spectacular were the close to 100 Amateur Radio operators who provided the communications between the various 27 venues, the five mobile units and headquarters of the Games.

Coordinating opening events were Damon Baughman, WB2PEL; Ken Evans, WB2FXG; and Ed Leubner, KC2KB. The net officially opened the four-day event with Nancy Coe, KA2HQF, and Vivian Douglas, WA2PUU, assisted by Don Brate, KA2HGB, and Jim Mozley, W2BCH, at the main headquarters in the Faculty Center at Syracuse University.

Ham operators each day filled up to 70 assignments, ranging between three and six hours each. Many of those with access to extra battery packs would sign up for 14-hour days.

There was one problem during the event, that hindered ham activity for awhile. A jammer tied up the channel that 60 amateurs were using, interfering with communications between hams and doctors and ambulances — a real danger in times of medical emergency. The suspected jammer — Edward Johnson, WA2JHU — was arrested on Friday, 12 August. If found guilty, the suspect could pay a fine of as much as $10,000 and serve up to two years in prison.

"We had injuries in the field and we were trying to get ambulances," said Vivian Douglas, Games coordinator, "but we couldn't get them. We couldn't get through. We had to do it through a Red Cross radio channel. It was patchwork."

—Information from articles by Erik Kriss of Syracuse Herald Journal, and Vivian Douglas, WA2PUU, of Syracuse Herald American Stars Magazine, NY □

August ARES activity

Roger Peister, KAØCRI

On 6 August, the Scotts Bluff ARES supplied communications for the Wyo Braska 5K and 10K run. Equipment included hand-helds and the WDØBQM repeater. A total of 11 amateurs, along with the Scottsbluff Police Department, Nebraska State Patrol and the county sheriff, kept a watchful eye on runners throughout the race.

One hundred-plus runners entered the event, which was routed through busy downtown streets, creating a need for periodic reports of runner locations and traffic conditions.

Eight days later, 14 August, seven Scotts Bluff ARES members provided communications for Sonny's 26-mile bike-a-thon. Mobile units and the repeater were used to supply information to race officials. As amateurs reached their stations, they found several signs directing the race had been turned around. Correcting this problem before the race diverted a very large problem into a very clean-cut operation. Race officials and promoters were very pleased.

Then, to round off a very busy three weeks, on 20 August, the Scotts Bluff ARES participated in the Business and Professional Women's Nike 5K and 10K Fun Run. Nine amateurs using hand-helds and the repeater supplied communications, while the local law enforcement and state patrol kept traffic under control.

Communications and law enforcement are a necessary component for any public activity where officials cannot oversee the entire event. A smooth, safe operation will gain more for all who take the time. □

Cities become friends, thanks to Radio

On 09 August 1977, Edward Holmes, KL7HFX, made a contact that was to be long remembered as the start of something big. The contact was with Mutsuhiro Ishiguro, JA8AP, of Saroma Town, Hokkaido, Japan. Three years later, Palmer, Alaska (where Ed lives) and Saroma Town became sister cities.

The decision to create this special bond between the two cities was reached on 27 May 1980, with JA8AP and KL7HFX as coordinators of the event, and on 28 October of the same year, a delegation from Saroma Town arrived in Palmer to sign the sister city charter.

In July 1981, Mutsuhiro paid a visit to Palmer, Alaska — it was his first trip outside of Japan. His account of the visit was printed in the monthly publication put out by the Asahigawa Agricultural High School, where Mutsuhiro teaches, and following are some of his observations:

". . . I was amazed at the large forest belt in Alaska. They built a variety of houses of which some are built from tree logs. Most older farms have in their homes old antique furniture. However some homes have more modern furniture. Some people have said to me, 'We have been poor all our life.' All Americans are not rich. They too have poor people that work very hard to make a living. People on Alaska's farms work just as hard as our people on Japanese farms. They too depend on a good crop to make a living wage . . .

"I was given an opportunity to drive a motorboat on Big Lake Alaska. It was quite an experience for me, but lots of fun . . . Another friend of Ed's, Vern Cherneski harnessed up a team of Huskey(sic) dogs to a sled and gave my daughter and I our first dog sled ride. The sled had wheels, because in summer there is no snow to use the regular sled. These dogs are very strong. I had the opportunity to drive a sled team by myself. An experience I shall never forget . . .

"As I see American lifestyle, they enjoy their life more and more as they grow older and have no concept of leaving a large fortune to their children. They also have an expression they use quite often, 'Don't work too hard.' In Japan it would be difficult for us to use such an expression as it would mean we would be idle in our work. What I really think it means is, 'You should not overwork as it would be injurious to your health.'

They also have another expression, 'All work and no play makes you a dull person.' In other words we should all take time from our work to relax and enjoy the company of our families and friends, otherwise life would be boring. We must never let stress and strain get the best of us. Thus — say to yourself, "I did the best I could today then go and enjoy a peaceful good night's sleep.' "

Less than a year later, in April 1982, Ed made a second visit to Saroma Town, during which time he taught English — as a volunteer — at Hokkaido Asahigawa Agricultural High School.

"This weather makes me feel right at home," said Ed Holmes during his visit, commenting on the large amount of snow the town had received. "I have no trouble with our cultural difference in habits and food. I want to help the students speak good English and to make themselves understood in English at home," he said.

George Brown, M.D. — a member of the 1982 delegation — included the following comments in his farewell speech to citizens of Saroma Town:

"Your Mayor Funaki and our former mayor, Jack Maze, showed wise leadership so that Mr. Holmes and one of your most honorable teachers, Mitsuhiro Ishiguro, deserve the first thank you. They made our towns 'sister cities.' Without their ham radios and their deep friendship, we would not be here . . . Your principals and teachers have shared the energetic spirit of your children . . . We are most impressed by the computerized and automated excellence . . . We are awed by the patient, wise, and intelligent craftsmanship of your farming, fishing, furniture manufacturing, hand crafts, food stores and plumbing facilities . . . The creative spirit of Japan is easy to see, hear, touch and feel . . . We are most happy to be your friends . . ."

In early 1983, a student exchange program was started between the two cities and is now underway.

"To date," Ed writes, "105 contacts have been made with JA8AP."

—Information submitted by Edward Holmes, KL7HFX □

Karnik visits New York

Phil Ingraham, W2OSY

To a 20-meter sideband DXer, M.G. Karnik, VU2CK, needs no introduction. He is the president of the Amateur Radio Society of India. In 1981, he retired from India Airlines. He and his XYL, Indu, visited their daughter, Alka VU2ALK, and their son-in-law, Kishor, who reside in Painted Post, New York.

It was my pleasure to let it be known on 20 meters that Karnik was visiting here. They were in the area last spring for nearly three months. Much of Karnik's time was spent in visiting some of the local amateurs throughout the area. Karnik also attended the Dayton Hamvention and was able to meet many of his old friends whom he had contacted over the years. He and Indu spent part of their time visiting their son, Ajit VU2AMK, and their daughter-in-law, Nanda, who live in Hamilton, Ontario, Canada.

Neither Alka nor Ajit are on the air at the present time on the low bands due to apartment restrictions. However, they both use 2-meter FM.

From left to right (sitting): Bob House, W2JPE: Alka VU2ALK: and Whitey Sherwood, W2YIF; (standing) Karnik VU2CK; Phil Ingraham, W2OSY.

We certainly enjoyed Karnik and Indu and are hoping they will return soon for another visit. □

PR tips

Lenore Jensen, W6NAZ

A jokester at the Media Meet held at the Dayton HamVention said, "Newsmen are basically lazy, so you should do their work for them!"

The truth is that news people are extremely busy and offered material from all sides. Therefore, well-prepared. concisely written material and possibly audio or videotapes presented from amateurs (who previously have briefly introduced themselves) stands a better chance of being used.

This was made very clear from a brilliant panel composed of Bill Leonard, W2SKE, former president of CBS Network News; Peter O'Dell, KB1N, Public Information Officer of ARRL; Bill Pasternak, WA6ITF, producer of Westlink Radio News; plus two experts from the media — Skip Hapner, news editor of WHIO-TV, and Jim Zofkie of the *Dayton Daily News.*

In the audience were many active PIAs from various call areas who have worked hard to spread the good word about Amateur Radio. Bob McKay, N8ADA, editor of DARA's publication, introduced the moderator, Jim Davis, KU8R, General Manager of WVAF, who is also frequently heard as announcer on *Westlink Report.*

The following are notes and tips heard: . . . Surprisingly, our hobby/service actually has been well sold in the past and is nicely acknowledged among people who regulate us — the military, Congress, FCC, the technical community; however, most amateurs feel the public is not so aware, witness the ever-confusion with CB . . . we actually have had excellent coverage considering our size (.018 of the population . . . one person in 550 being an amateur licensee) . . .

Selling our story should follow the lesson observed by watching the National Rifle Association which uses professional guidance, (spending money for the purpose), by airing a great deal about their cause, *never giving up,* using professionalism . . . ("If you can sell the idea of everyone having a gun, you can sell anything") . . . we must learn how the system works to gain results . . .

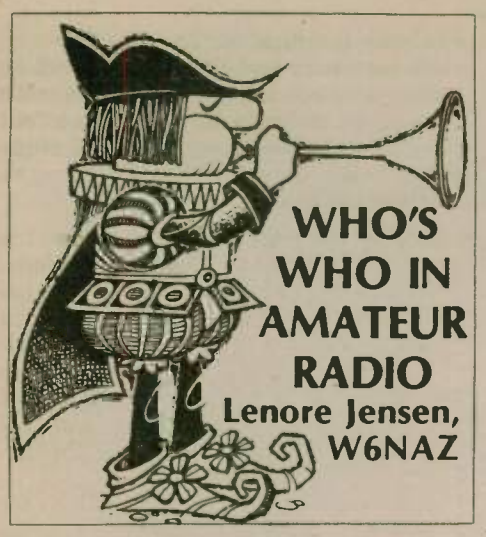
Remember, we are competing for limited resources in limited space, so offer editors something of great interest to a lot of people; editors sometimes must choose between hard news and a feature — they must find a balance . . . realize that stations have distinct departments which may not communicate with each other very often: news, public service, programming . . . seek out radio amateurs working for stations and enlist their help in paving the way, if possible . . . assignment editors in news need at least a week's warning to cover a good event, with written material well ahead . . . be very accurate . . . taking them audio or videotapes sometimes works . . . it pays to make friends in advance at both statons and papers . . . leave your name and number . . .

When actually out on emergency communications, be politely aggressive in letting reporters or cameramen know you are ham and not CB and what your mission is . . . ARRL will send you a fine publicity kit; also their AMATEUR-RADIO publication should go to all elected officials or VIPS — just advise their addresses . . . ask Public Service Directors if they prefer written announcements (10, 20, 30 or 60 seconds) or our PSAs which are available from the League . . .

Slant things to young people (we're all aging too rapidly!) . . . Roy Neal, K6DUE, and Bill Pasternak will be making a documentary about Astronaut Garriott's upcoming space flight carrying Amateur Radio . . . "take a news director or mayor out to lunch" if you find the opportunity . . . capitalize the A and the R in Amateur Radio . . . if you have bad ham news (such as abusers of repeaters, and the word is getting around), your earlier friendship with newspeople may pay off in heading off an unpleasant story . . .

Remember what Alan Kaul, K6RCL, suggested: If you have a station set up at an emergency situation, make your sign say something like *Survivor Messages* — anything intriguing . . . don't overlook talk shows . . . the grassroots approach works best nationally — editors want a local-tie-in . . . remember the gold mine of Cable TV Public Access channels; Larry Horn, N2NY, showed bits of his 100-show series on Amateur Radio . . . Cable isn't sold out, so they welcome PSAs, too . . .

Think about suggesting us to a local columnist . . . events on Sunday stand a better chance of getting in Monday papers . . . keep trying to find a new, interesting angle . . . to be *different* is the big thing . . . follow-up calls are OK if brief (assignment editors spend 45 minutes of each hour on the phone) . . . when doing emergency work, *call it in* promptly (there's nothing older than yesterday's news) . . . remember, PR includes making friends with local elected folks — they might end up on a Zoning Board . . . and in promoting Amateur Radio *never give up, never give up, never give up . . .* □



Ideas are the business of Dave Bell, W6AQ, whose Hollywood production company, DBA (Dave Bell Associates), has collected a swarm of prestigious awards. He has a right to be extremely proud of more than 20 Emmy awards, the coveted New York Film Festival Gold Award, the Grand Prize of the Milan International Film Festival, CINE Golden Eagles and dozens more.

Although he spent many years in the heart of TV studios, directing camera coverage of shows he dreamed up, after writing and attending to the myriad details of getting them on the air, today Dave Bell spends a great deal of time at his desk and telephone or commuting to New York.

"I like to have ideas and make them work," says the man who has turned out countless documentaries, always topical and frequently controversial. "I also *massage* ideas; I guess I get paid to recognize and develop ideas."

The approximately 70 talented producers, writers and technicians who comprise Dave Bell Associates turn out regular programs for HBO (Home Box Office) as well as for network television. The Disney Channel has DBA's *Epcot America!-America!* hosted by Lloyd Bridges.

Among recent hour-long specials for ABC-TV and National Syndication was the thought-provoking *Not The Same Old Story,* featuring Danny Thomas and profiling seniors who have found creative solutions to the common problems of aging. *Five American Guns,* Dave says, "recreated the circumstances under which five law-abiding citizens made the decision to use deadly force." The living survivors performed their own roles in this program.

"We do some which cannot be aired on regular TV," he remarked, "such as *Hooker,* which profiled — without interpretation — several prostitutes." Other successful docu-specials concerned teenage pregnancy, missing children, a cancer victim, divorce, and adolescents who abuse drugs.

He's presently deeply involved in a full-length theatrical feature film to be called *Nadia,* a dramatic presentation of the young Romanian gymnast who captured the affections of all who saw her perform in the 1976 Olympics.

"She's 21 now," says Dave," but our film will concern her early and teenage years; we expect to have it finished by the first of the year, when interest in the upcoming Olympics should be great."

Behind glass at DBA, amid all the other honors, is a unique, amusing award labeled *Hammy* — for producing the three ARRL films: *Ham's Wide World, Moving Up to Amateur Radio* and *The World of Amateur Radio.* They are credited with bringing thousands of new licensees into our service. (He made them more for love than profit.) On the wall is his Life Member plaque and a tribute to his outstanding support for WARC '79.

"To my surprise," Dave says, "ham radio has been of unexpected help to me in my travels. Wherever I go overseas, I find instant friends. Amateur Radio is an incredibly tight fraternity — more so than any other group one can think of."

One such example was the enormous help in encouraging King Hussein of Jordan to appear in the most recent ARRL film. "Blackie" Blackburn, JY9BB, is the electronics assistant to His Majesty. Through his good offices, JY1 generously agreed to be filmed at his station in the palace.

The trip to Jordan, luncheon with the king, and the filming of him at his transmitter were so special that the memory will always be a vivid pleasure. "And just think," Dave adds, "he even invited me to spend an hour operating JY1! I hope my crew will forgive me for not helping them pack up our gear — but I couldn't resist the rare opportunity!

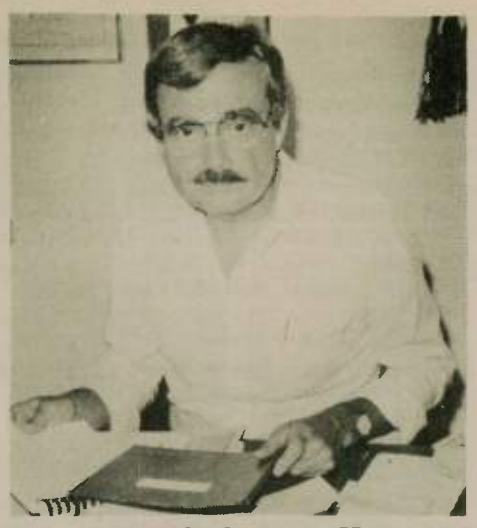
(Dave has been asked many times to give talks about this experience. His delightful sense of humor paints a wonderful picture of that special day.)

Dave is a past president of the 350-member Southern California DX Club and is on the Board of Directors of the Northern California DX Foundation. Although he has little spare time, he operates from his Hollywood Hills home (*high* on a hill, of course) whenever possible, dividing operating between CW and phone.

His wife, "Sam," pleased him when she earned her own call, N6FTW. They have four grown, non-ham children.

"I think the most fun in the hobby is to operate a modest DXpedition — you know, where there's running water and an airport," he laughs. "I certainly enjoyed operating the 1977 CW World-Wide Phone contest at CR9AJ's place in Macao!"

Amateur Radio first found Dave when he was in high school in Andover, Ohio,



Dave Bell, W6AQ, in his Hollywood office. (*Photo by Bob Jensen, W6VGQ*)

and heard the phrase "J9AAI" over and over on the family broadcast receiver. (It was W8LIO trying to reach Okinawa.) Finally he discovered who was transmitting, biked to the home and was invited in to observe. He was hooked forever, became W8GUE, then W6BVN and finally W6 African Queen.

Dave's Master's degree in communications came from Syracuse University. His first job was to produce a Peabody Award-winning *John Hopkins File 7* for ABC-TV. He remembers, "It was the first series on the air of what we called 'reality programming.' "

Then in 1960, he came to Los Angeles to produce TV specials and created *Medix* — a series which attracted much industry attention. He was on his way. His ability to couple timely problems with entertainment is probably the secret of his success.

Early on, he also created a show still running, *On Campus.* Another informative and interesting series is for cable, called *Alive and Well* on the USA Network and is devoted to "wellness" for two hours a day.

An anti-smoking half-hour film, *The Feminine Mistake,* has been extremely valuable to health organizations; it is aimed at teenagers and includes a powerful scene of a woman dying of cancer brought on by smoking. But the list of his filmed and videotaped programs goes on and on. Just look for the credit: DBA or Dave Bell Associates!

Claiming he is a man who does not take life (nor Amateur Radio) *too* seriously, his works dispute. Certainly he's been tremendously helpful to the Amateur Service. And as a famous newsman once wrote to him, "Dave, you are a man who *cares* about what we are all doing in this business."

It's true. □

Osijek Award

Radio clubs in the city of Osijek, Yugoslavia have established the Osijek Award, marking the 35th annual radio amateurship in town.

The award is assigned for contacts made — no matter which kind of emission (CW, SSB, FM) — as of 01 January 1980, and separately for SHF and VHF.

EU stations: *SHF:* Contacts with eight different stations in the Osijek area. *VHF:* Contacts with five different stations in the Osijek area.

DX stations: *SHF:* Contacts with five different stations in the Osijek area.

SWL stations: Same as for EU and DX stations.

Contacts with the following places will also count for this award: Cepin, Dalj, Laslovo and Josipovac, which are near the city of Osijek.

GCR list and 5 IRCs or $2 for postage must be sent to manager: Kruno Ferić, YU2OM, Vij. B. Kidrica 102/12, 54000 Osijek, YUGOSLAVIA. □

THERE'S A WHOLE NEW WORLD OUT THERE WAITING FOR YOU — JOIN IN.

Focus on Amateur Radio

J.A. "Doc" Gmelin
W6ZRJ

Times do change, and during my 35 plus years in Amateur Radio, I've seen a lot of these changes.

When I first started operating my amateur station on a 10-meter phone band in 1947, most everyone either operated on CW or AM phone — or both, and all the equipment used vacuum tubes, no solid-state.

There is a tendency to expect that times will always remain the same, and little did we expect that changes would come about in such a short period.

I remember in 1947 or '48, when a couple of amateurs from San Francisco came down to the local club to demonstrate single-sideband equipment. Boy, what a joke that was. You could hardly understand that "Donald Duck" talk, and was the equipment ever complicated. The average ham probably would not build equipment that complicated and single-sideband would never replace AM — or so we thought.

We were close to being right about the matter of radio amateurs building SSB equipment, but we never expected that most hams would end up buying instead of building their own gear.

Speaking of solid-state equipment, during that same time period, someone from the telephone company came to a club meeting and demonstrated something called a "transistor." It was interesting, but didn't appear to have much value or useful application. It certainly would never replace the vacuum tube because it would never develop enough power.

We were wrong again. Guess we were not very good at looking into the old "crystal ball." Besides, crystals were for frequency control and not for looking into the future.

I remember in 1960 when Chuck Townes, K6LFH, came to the same local club and told us about a new project involving the building and launching of an Amateur Radio satellite. OSCAR they called it, and some of us thought *that* was another pipe-dream.

But there was something about the way Chuck talked and his absolute belief in the project that got some of us interested, and many of us locals ended up working with the OSCAR Association, to build and launch OSCAR-1.

Not long after that, many of the same OSCAR people were talking about something called a 2-meter repeater. There had been an AM repeater in the San Francisco Bay Area previous to that time, but this one was on FM and promised relatively long ranges from a transceiver "you could carry around in your hand."

Well, by then most of us had a pretty good idea that solid-state equipment could be built in a small package, but that would only be for the "way out" experimenters and not for the average ham.

We weren't altogether wrong on that one, but it was pretty hard to see that in just a few short years, a radio amateur in space would use a "hand-held" to talk to other amateurs all over the world.

Change has come so fast in the last 30 years that by the time many of us could afford to acquire the newest in gear and techniques, those pieces of gear and the radio techniques were already out of date.

What a miracle it was to see amateur teletype in operation. All that clanking and clatter. It was enough to warm any good ham's heart. And that old teletype equipment really did work. When the "mouse" Model 28 machines came out, what quiet operation we started to enjoy.

With the 28 "stunt box," there were many interesting things you could do. I've never gotten around to making the many modifications one can enjoy with that old "stunt box" on the 28, though, and already the machine is outmoded. TV screens, computers and all the latest advances have made all the old RTTY gear seem ancient.

Of course, all of the new modes, techniques and equipment have changed Amateur Radio in other ways. Many feel that at least some of the changes have been bad for Amateur Radio.

As an example, some decry the fact that, instead of building their own equipment, radio amateurs generally go out and "buy" a box with a "number", and put it on the air.

It used to be common to hear someone say they were running 300 watts to a pair of "Taylor TZ-40s." Remember Taylor tubes? Now one often hears the comment that an amateur station is "using" a TS-820 or other model, and likely the operator knows little about what's inside the rig.

Some amateurs think this lack of knowledge that an individual can acquire by building their own gear is bad, and that amateurs have lost their technical skills. Perhaps this leads to a lack of pride in what amateurs can do, but I suspect that things were not all that good 30 or 40 years ago.

Remember when one of the main topics of discussion on the air revolved around how to get an 807 tube to operate in a stable manner?

I was one of those amateurs who fought "the battle of the 807." It really wasn't too bad until commercial TV came on the scene. Why, 807's were known to knock out TV viewing in half a city in those early days.

Did we solve the problem? Well, in a way I guess we did. Someone invented the 6146, which quickly replaced the 807. The result? Boy, I sure have a lot of 807's left over from those days.

While there has been some change in the attitude of radio amateurs in the past 30-plus years, I still find amateurs to be pretty much the same as they were when I started in the 1940's and '50's. Most are friendly, and most are still dedicated to our fine hobby.

I suspect that the young hams coming into Amateur Radio today will carry on in the spirit of "The Old Man." In the long run, they might do a better job than we have done over the years.

Yes, we do have troubles in Amateur Radio, but there have always been troubles and conflict, and I suspect this will always remain with radio amateurs.

Will the upcoming young amateurs solve these problems? Many of them will, but new problems will come along to take their place. And as these young amateurs become older, they too will have their memories about the good times they had when they first started in Amateur Radio. It might not be problems with an 807, but it *will* be something else.

I'm sitting back and watching. I want to see the latest "pipe dream" come along that will make Amateur Radio even better. □

YL wins scholarship

Philip Latta, W4GTS

For the first time in its six-year scholarship program, the Atlanta Radio Club has made an award to a YL. Valerie Ennis, WD8KVD, of Clio, Michigan, received the $500 offered as a memorial to Cliff Tritchler, W4IO.

Val, who is an entering freshman at the University of Michigan/Flint rose to the top among the applicants largely because of her outstanding contributions to public service.

Winner of the Mike Zuckerman, K4AEJ, memorial award was Jim Luciani, WA2JNN, Egg Harbor, New Jersey. He is now a freshman at Penn State University.

Sam Martinez, N4HSE, won the Bill Clark, N4YO, scholarship. Sam will be studying at Georgia Southern University this fall. His home is in Macon, Georgia. □

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

AMSAT/OSCAR-10 Frequency Conversion Chart

(Revised 9/8/83)

Revised Mode B Frequency Guide*
(Exclusive of Doppler Shift)

Uplink			Downlink
		145.987	Engineering Beacon
435.0323	Scheduled Use	145.9720	SSC H1
435.0423	Scheduled Use	145.9620	SCC H2
435.0447		145.9600	GCB Upper Limit
435.0477		145.9570	ACNF
435.050		145.955	
.055		.950	
.060		.945	
.065		.940	
.070		.935	
.075		.930	
.080		.925	
.085		.920	
.090		.915	
.095		.910	
.100		.905	
435.1037	Center Band	145.901	
.105		.900	
.110		.895	
.115		.890	
.120		.885	
.125		.880	
.130		.875	
.135		.870	
.140		.865	
.145		.860	
.150		.855	
.155		.850	
.160		.845	GCB Lower Limit
435.1647	Scheduled Use	145.8400	SCC L2
435.1747	Scheduled Use	145.8300	SSC L1
		145.810	General Beacon

*Based on conversion frequency of 581.0047 MHz.
SSC — Special Service Channel
GCB — General Communications Band
ACNF — AMSAT Calling and Net Frequency

Preliminary Mode L Frequency Guide*
(Exclusive of Doppler Shift)

Uplink			Downlink
1269.050		436.950	Upper Limit
.075		.925	
.100		.900	
.125		.875	
.150		.850	
.175		.825	
.200		.800	
.225		.775	
.250		.750	
.275		.725	
.300		.700	
.325		.675	
.350		.650	
.375		.625	
.400		.600	
.425		.575	
1269.450	Center Band	436.550	
.475		.525	
.500		.500	
.525		.475	
.550		.450	
.575		.425	
.600		.400	
.625		.375	
.650		.350	
.675		.325	
.700		.300	
.725		.275	
.750		.250	
.775		.225	
.800		.200	
.825		.175	
1269.850		435.150	Lower Limit
		436.040	Engineering Beacon
		436.020	General Beacon

*Based on a translation frequency of 1706.00 MHz, estimated.

Sorry to have missed you all in the October issue. There are just so many hours available for the column effort and the preparation for the SW Division Convention of the ARRL over the Labor Day weekend and one's job, etc. Well, be that as it may, we have much good news about the AMSAT/OSCAR-10 spacecraft.

AMSAT/OSCAR-10 is continuing in its current orbit of 26.0670° inclination with respect to the equator and apogee of 35,496.521km and perigee of 3959.501km. The orbital period is 699.518484 minutes so that there are approximately two orbits each day (2.05855810 to be exact). One can hear the Mode B beacon's telemetry and CW transmissions for periods of several hours each day with very little need to adjust the antenna position. The listing here of the frequencies for the Mode B and Mode L transponders are updated as of 08 September.

Note that the passband for the transponder in Mode B is 435.050 uplink to 435.160 MHz. The downlink passband is 145.955 to 145.845 MHz. In the listing prepared by the editors of the *Amateur Satellite Report*, the special service channels (SCC's) are listed along with the AMSAT Calling and net frequencies. The listing also shows the projected Mode L frequencies. The Mode L uplink passband for the transponder is 1269.050-1269.850 MHz, and the downlink is 436.950-435.150 MHz.

The Mode L transponder will be on the air on Wednesdays, between the periods one hour before and one hour after apogee. As the use of Mode L expands, more time will be allotted.

When listening to the Mode B beacon at 145.810, you will hear five minutes of CW beginning on the hour and half hour, with 25 minutes of telemetry in the interim periods. At times, the 145.810 general beacon will be replaced for a short time antenna. This has proven very successful, due to the fact that the transponder input is quite sensitive. If you have a well- with the engineering beacon on 145.987.

If you are equipped to use the 70cm uplink and 2-meter downlink of the Mode B transponder, remember that *only* SSB and CW are to be transmitted. From the chart listing, you can see what to expect your own frequency to be received at when you transmit in the 70cm band. For example, if you transmit on 435.1037 at the center of the band, you should receive your own signal at 145.901.

You will not need loads of power to access the transponder. On Mondays, there is a QRP night when users are encouraged to operate with 3-5 watts input to your designed antenna (10dB or better) and preamplifier on your SSB or CW receiver, there should be no difficulty in achieving a good QSO.

(please turn to page 32)

Commander Marion "Butch" Mason, W6KAG (USN Ret.), demonstrates his orbital model of OSCAR-10's trips around the Earth at the ARRL SW Division Convention in Anaheim, California. ***(Photo by K6PGX)***

DX WORLD

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

Activities Calandar

29-30 October CQ World Wide DX Contest (SSB)
29-30 October ARRL International EME Competition
12-13 November DARC European DX Contest (RTTY)
26-27 November CQ World Wide DX Contest (CW)
26-27 November ARRL International EME Competition

Refer to **CQ** or **QST** for details regarding the above activities.

W-100-N

216. WA6SLO Richard G. Whisler

Taiwan (BV)

Tim BV2A and BV2B, is moving to a new location at Kaoshuing as a result of a high noise level at his present Taipei location. As Tim has a new job that requires traveling during the week, his operating schedule has been changed. Look for him on Fridays between 1130 and 1600 UTC. He should be signing with BV2A on 14.040 MHz or BV2B on the SSB segment of the band between 14.218 and 14.277 MHz. QSL cards go direct to Tim Chen, P.O. Box 30-547, Taipei, TAIWAN. Cards for BV2A only may be sent via Charles Moraller, K2CM.

There was a report that an Italian group was to have gone to Taiwan sometime around mid-September. The team, including Pietro Ambrosi, I2MQP, and Enzo Pannuzzi, I2BVS, had applied for the BV0 prefix, but received I2MQP/BV0. The operation was to have been associated with the World Communications Year.

Malpelo (HK0)

Right about now, the Malpelo DXpedition should be happening. Originated by LCRA (Liga Colombiana de Radiofi-cionados), to celebrate their 50th anniversary, the group should be heading out on 12 October for five days. Look for the call HK0TU. Additional details were in the July issue of **Worldradio**, page 22.

Kampuchea (XU)

Operation from this one was reported to have commenced on 10 August, with the call XU1SS. The initial operation was made with JA1UT operating on SSB; the very first contacts were made with JA6GRX, JA1ELY and VK1WB. The first stateside contacts were KD7Z and KZ6E. Six days later they were to have logged 5,000 contacts. Two other stations are reported on as part of the operation from other locations, signing XU1KC and XU1PV. The Japanese operators are reportedly training the local Cambodian operators so they can take over the operation.

Via the *Bulletin* (Southern California DX Club's newsletter), Don Search of the DXCC desk says, "have more against them than for them," in reference to the operation. "You're not dealing with the government of Kampuchea, but an ex-government, a government-in-exile, and that's either another country or nothing at all. Plus the fact that these small enclaves where the Japanese are operating during daylight hours could be wiped out at any time." The daylight hours refer to the fact the government does not allow foreign operators in the country between 5:00 p.m. and 8:00 a.m. the next day.

Look for these stations: XU1SS, XU1KC, or XU1PV, operating both CW and SSB. Just tune for the pile-up; no lists are expected.

Madeira Islands (CT3)

This DXCC country is often selected by DXers as a choice spot for a DXpedition, especially for a DX contest. Fortunately, there are also some active local stations from this one.

An amateur signing CT3AR has been reported working into the central reaches around 1800 UTC on 21.368 MHz, who is supported by CT3BM on the same band on 21.253 MHz. On 20 meters, look for CT3BD on 14.243 MHz after 0200 UTC.

Also active from this island group is CT3DJ, who has been reported on 14.034 MHz after 2300 UTC, and an hour earlier on 21.293 MHz.

Pakistan (AP2)

This one is still needed by many. Look for AP2MQ, who has been reported on 14.216 MHz after 0100 UTC; AP2SQ on 14.265 MHz at 0200 UTC; and AP2P on 14.161 MHz around 0400 UTC.

Solomon Islands (H44)

Some years back, stations signing from the Solomons used the former VR4 prefix, which has now been replaced with the present H44 prefix. Those deserving DX-ers looking for contacts with the Solomon Islands might find H44SH, operated by Stu G6VUO. He has been reported on 14.195 MHz from 1200 UTC. If you don't find him near that frequency, tune about as he seems to operate at the time given. Stu is to be one of the team members to Jarvis Island in October. The *DX News Sheet* states that he promises to be very active on 80 and 40 meters this coming winter.

Also from the Solomons is H44GP, who has been reported on 21.239 MHz at 1045 UTC working Europeans. This station

runs 10 watts to a vertical antenna.

Other active stations reported include H44IA, who has been found near 14.195 MHz at 1200 UTC; H44AR on 14.192 MHz at 1200 UTC; H44DX on 14.227 MHz at 1300 UTC; and H44DJ on 21.031 MHz from 1100 UTC. From the above reports, it appears that the best time to look for the Solomon Islands is 1200 UTC.

Seychelles (S79)

Only two stations have been reported active from the Seychelles. Look for S79MC on 14.174 MHz around 1200 UTC or 21.298 MHz from 1800 UTC. S79WHM is the other station reported and has been worked on 20 meters SSB after 0300 UTC near 14.200 MHz.

Tuvalu (T2)

Gordon Huckin, T2GSH, is active from Funa Futi, meeting the demands of the deserving DXer. He has been reported on 21.320 MHz at 1000 UTC and 14.190 MHz between 0700 and 1100 UTC working into Europe. Stateside DXers might check for T2GSH near 14.190 MHz from 1000 UTC, although he has been reported as high as 14.215 MHz.

Also active is Chris T2ADE, who hangs around 20 meters. Chris favors no special frequency as he has been found on 14.195, 14.210 and 14.280 MHz. He has no special times either, as he has been reported on at 0800, 1100 and 2200 UTC.

A third call has also been reported, this being T2GFA, who was reported on 14.208 MHz after 1200 UTC into the central states.

Niue (ZK2)

During the early part of October, ZK9RW was operated by R.W. Wright, ZL1AMO, which was reported to be an all-band affair — 6 to 160 meters, with 60 percent CW. Bob ZK2RS plans to be on 14.190 MHz from 0900 UTC, through mid-November. Also, check 75 and 40 meters on 3.795 or 7.210 MHz every day at 1000 UTC.

ZK2IK, running 700 watts into a 250 ft. vertical antenna, is on 160 meters daily from 0600 UTC. Elsewhere on the higher frequencies you can find this station on 14.220 MHz after 1100 UTC and 21.298 MHz around 0900 UTC.

Another station, ZK2JS, has been reported on 21.291 MHz working Europeans between 0630 and 1030 UTC.

Ogasawara (JD1)

JD1BBR has been busy operating daily from 0600 to 0800, and 1000 to 1400 UTC. This station was scheduled to have operated until mid-September. He was to have favored both CW and SSB.

Another station, that we assume to be on Ogasawara, is JJ1BMB/JD1, who has been reported on 7.007 MHz around 1100 UTC working into the East Coast.

Pribilov Islands (KL7)

The DXpedition to the Pribilov Islands is history. The group, members of the Alaska DX Association, operated from the local hotel on St. Paul Island, where they used two calls. All CW contacts were made with KL7PJ, and SSB contacts were made with KL7RA. Propagation was not in their favor, but the contacts were made. The group still insists this island group will count as a new DXCC country. I went and worked them on both modes, just in case. All QSL requests go via John Bierman, KL7GNP.

Vacation DXpedition

Recently, Bob and Dot Truhlar, W9LNQ and N9ALC, vacationed to Jamaica, where they were given permission to operate. Of course, Jamaica is no rare location, but so what. DX is DX, rare or otherwise. Dot prepared a summary of their operation there and would like to share it with you. This was the first time they were DX operators, and it was an exciting experience for them.

"Six months prior to date of departure, we sent a letter requesting permission to operate as portable 6Y5. The Jamaican government was very cooperative. We listed our equipment and serial numbers; this made it easier to get through customs.

"Saturday, 16 July: Left O'Hare at 11:30 a.m. and arrived Montego Bay at 3:30 p.m. We went through customs without any difficulty. The mini-van that we rented for the week was waiting for us when we landed. After riding for one and one-half hours, we reached the seaside villa, poured a tall, cool drink and then jumped into the pool. Later, Bob set the rig up.

"We brought our 830S transceiver, MFJ tuner and MFJ keyer. Our antenna was 130 feet of wire through the window and up into a coconut tree about 35 feet high. This worked out very well for us.

"We checked into YLISSB system every morning and afternoon when propagation permitted. Bob was on CW every evening, and I would take over on SSB. One of the highlights was having a list waiting to contact us.

"Jamaica is a beautiful island. Each day for a few hours we visited one of their tour attractions. All of them were beautiful and very interesting. The wind blows constantly, but it's very refreshing.

"Halfway through the week, our antenna blew down so we tried another coconut tree. This didn't work out as well so we took it down and put it back up in the original coconut tree. Now we were back in business again.

"Saturday, 23 July: Bob was still operating CW. Later we checked into the YLISSB system for the last time as 6Y5. At noon, everything was down and ready to be packed. For the week we made a grand total of 600 contacts and took 140 pictures which turned out great.

"It was a fabulous vacation and we will be talking about it for some time. We are getting lots of mail since we returned home, and are trying to keep up with it each day. Just knowing that we were able to give so many hams a 6Y5 contact made our DXpedition a huge success."

The first YL operator on Heard Island! Kirsti Jenkins-Smith, operating as VK0NL, was part of HIDXA team on Heard Island early in 1983. While not on DXpeditions, Kirsti is home on Norfolk Island signing VK9NL. ***(Photo courtesy of J.B. Smith, VK9NS)***

Perhaps the above will give the average DXer an incentive to try a DXpedition of his own. Not all DXpeditions need be to rare locations such as Heard Island with top-flight operators. Trips to less than rare countries by ordinary DXers can be fun too.

●●●

IOTA

The following have been reported in *DX News Sheet* and are valid toward the IOTA awards program by Geoff Watts.

OC-12	KC6RN	Yap Island	21.291	0730
NA-28	KL7RA	Pribilov Islands	14.195	0730
NA-47	VE8DX	Baffin Island	14.220	2230
NA-36	VE7DAR	Vancouver Island	14.007	2200
AS-27	EK0KA	Wrangel Island	14.240	1900
NA-46	W1BDF/1	Nantucket Island	21.337	2100
NA-29	VE3KLE/1	Prince Edward Island	14.174	2300
EU-36	LA9PX	Hitra Island	21.157	1000
AS-18	UA0FAU	Sakhalin Island	14.027	2130
AF-18	IT9HLO/IH9	Pantelleria Island	21.292	1530
EU-28	I2DMK/IA5	Tuscan Archipelago	21.027	1730
EU-31	IC8HBR	Napoli Island	14.217	2100
EU-77	EF1ISG	Sisargas Island		
EU-52	SV8RV	Zante Island	14.216	0630
EU-85	EK1NBR	Kolguev Island		
EU-86	EK1NBR	Vaigach Island		
EU-05	EJ4IDX	Inishboffin Island		

Frequencies for the above are in megahertz and the times are UTC. The times reported are for contacts made with U.K. stations. Those stations listed above without the frequencies or times are now off the air.

(please turn to page 24)

ICOM IC-730

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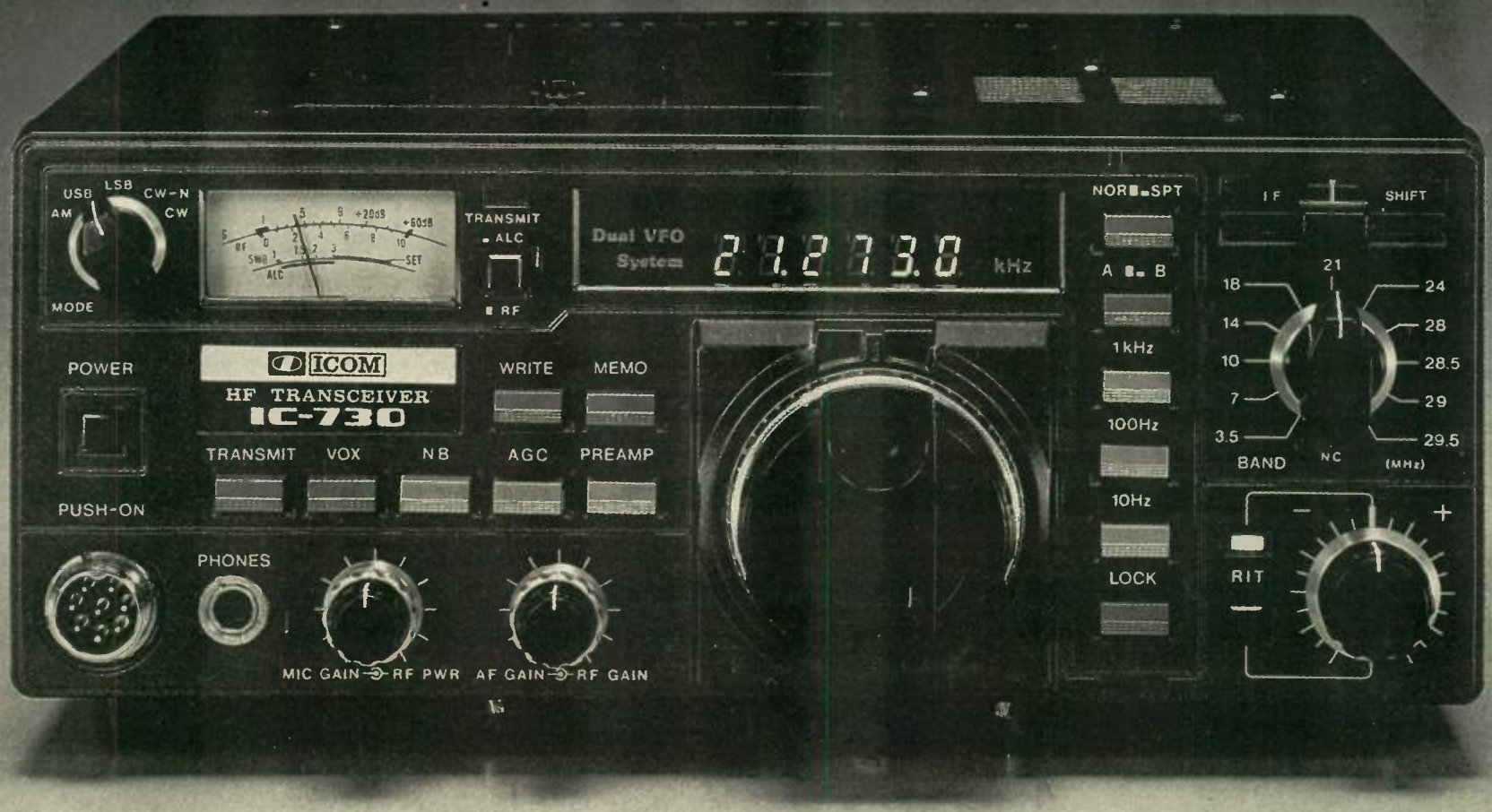

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- IC-EX241 Marker Module
- IC-EX242 FM Module
- IC-EX243 Electronic Keyer
- IC-FL52A 500Hz 455KHz CW Filter
- IC-FL45 500Hz 9MHz CW Filter
- IC-FL54 270Hz 9MHz CW Filter
- IC-FL53A 250Hz 455MHz CW Filter
- IC-FL44A 2.1KHz 455KHz SSB Filter
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DX World

(continued from page 21)

Back to Moorea

I guess the O'Briens didn't have enough of DX'ing from French Polynesia. Jay and Jan O'Brien, W6GO and K6HHD, will head west on another DX-pedition, to operate as FO0JO and FO0OJ, effective 19 November. They will be operating only from Moorea this time (not Bora Bora), with Jay concentrating on CW and 80 and 40 meters. This will include the CQ World Wide DX Contest at the end of the month.

There will be two stations so that Jan FO0OJ will have more time to operate this time. There is also the possibility of operation on 160 and 30 meters.

Kiev celebration

Harvey McCoy, W2IYX, reports in his *The Long Island DX Bulletin* that he received a letter from UB5XCM requesting that those Ukrainian stations using the special EV5 prefix have their QSL cards sent to P.O. Box 785/1, Kiev 58, 252058 USSR, with 3 IRCs. This also includes the calls ER5U, R5U and RK5O, which will be operating between 06 September and 06 November to celebrate the 40th anniversary of the ending of the German occupation of Kiev.

RTTY World Championship Contest

There were 65 entries in the 2nd Annual RTTY World Championship Contest last winter. This annual event is co-sponsored by *RTTY Journal* and 73 Magazine. The top 10 include:

1. G3ZRS	15,744
2. SM6ASD	15,364
3. XT2AU	13,855
4. I4JXE	13,272
5. W3BE	10,758
6. W3FV	10,731
7. SM5FUG	9,102
8. IT9EAI	8,787
9. K4AGC	7,788
10. TO6AUS	6,262

Other active DX calls in this contest included: I2DJX, SM7LSU, JA1BYL, GW3EHN, ON7EP, OK1AWC, VK2BQS, TI2DO, LU3DSU, YB3ON, GM4KHE, PY6ACP, OH5YW, YO3RF and SL5AR. Several other DX calls were reported in this contest.

With the computer technology incorporated into Amateur Radio, gone are the days of those noisy machines that were needed for RTTY. About 20 years ago, I made an attempt at RTTY with an old Model 15, but I could not get the noise suppressed, which in turn interfered with receiving. When I changed locations in 1966, I never re-installed the RTTY gear and gave it away.

In February, the 3rd Annual RTTY Contest will be sponsored by the magazines. Look for details in a future issue of **Worldradio.**

The top ten

Every year, *The DX Bulletin* conducts a survey among its subscribers to see what DXCC country or countries are most needed. 658 DXers responded, and the results — tabulated by Everett Jackson, WA8CZS — will be published soon. The average DXCC total for this group was 280, after deletions. For a matter of interest, the top 10 most-needed DXCC countries (with the percentage needing the countries) are as follows:

1.	ZA	Albania	84%
2.	VU7	Laccadives	82%
3.	XU	Kampuchea	78%
4.	7O	South Yemen	76%
5.	XZ	Burma	73%
6.	VU7	Andamans	73%
7.	3Y	Bouvet Island	73%
8.	CE0X	San Felix	72%
9.	BY	China	71%
10.	XV	Viet-Nam	68%

This DX Editor needs the first eight of the above (assuming that the present Burma stations do not count for DXCC).

Pirates Week

Each October, the Cayman Islands have a celebration known as "Pirates Week". This year, the event will also be celebrated by Amateur Radio.

Special calls have been authorized where the ZF1 and ZF2 prefixes will be substituted with ZF1**0** and ZF2**0**, respectively.

The Amateur Radio portion of the celebration runs from 0500 UTC 22 October through 0500 UTC 30 October, with activity on all bands, both CW and SSB. The event is open to residents and non-residents. An attractive Pirates Week certificate is available for working at least five stations using the special calls. Send your QSL cards for the stations worked plus 3 IRCs to Pirates Week, P.O. Box 1029, Grand Caymans, B.W.I.

DARC WCY Award

The DARC WCY Award is sponsored by the Deutscher ARC in respect of the World Communications Year 1983.

Valid are all two-way contacts with the special WCY stations operating on the bands. A minimum of 15 contacts on HF or five contacts on VHF are required. All modes and frequencies may be used. Only contacts made during 1983 with the WCY (determined by the suffix of the call) are valid, and application must be made prior to 31 December 1984.

To apply for this award, send a GCR-list (confirmation by two licensed radio amateurs that the QSL cards are in your possession) with a fee of $3 (U.S.), 5DM or 10 IRCs to: DARC WCY Award Manager, Hans-Peter Gunther, DL9XW, Am Strampel 22, D-4460 Nordhorn, WEST GERMANY (FRG).

The "WCY" fever

The MARTS of Malaysia invites all active Amateur Radio operators to participate in working toward their MARTS WCY Certificate. To qualify for this award, you must contact at least seven Malaysian Amateur Radio stations (9M2, 9M6 or 9M8) during the month of December 1983. Contacts made during any other time period do not count. There are three classes — SSB, CW or Mixed mode, and you may work the required contacts all on one band or multi-band.

To apply for this award, send your log extract, (QSL cards are not required), certified by two licensed Amateur Radio operators, with a fee of 3 IRCs to: The MARTS, P.O. Box 777, Kuala Lumpur, WEST MALAYSIA.

CQ awards

CQ Magazine sponsors a few very popular DX awards that are often sought after by the deserving DXer. Perhaps the most popular is WAZ, Worked All Zones. Many DX clubs allow the substitution of WAZ in lieu of DXCC for membership.

The WAZ award requires confirmation of a two-way Amateur Radio contact in each of the 40 zones around the world. These zones are not to be confused with the 75 ITU zones. These are the 40 CQ zones, although they are not created by CQ, as many DXers have thought. The WAZ award is available in SSB only, mixed (CW and phone), single band-mode, and five-band. For additional information, contact Leo Haijsman, W4KA, 1044 SE 43rd Street, Cape Coral, FL 33904. Be sure to include a large-size envelope with 37 cents postage.

The next most popular award sponsored by the magazine is WPX. The award is obtained by confirming Amateur Radio prefixes around the world. The award is available in mixed mode, SSB or CW. Endorsements are available in groups of 50 prefixes, plus continental and band endorsements. Further details are available from Norman Koch, K6ZDL, P.O. Box 1351, Torrance, CA 90505-0351. Don't forget the SASE.

CQ also sponsors the DX Awards Program. Anyone interested in further information on this should send an SASE to Billy Williams, N4UF, P.O. Box 9673, Jacksonville, FL 32208.

There is a fee of $4 for each of the above awards, provided you are a subscriber to CQ. Non-subscribers will be charged $10 per award. The above fee structure does not include the Five-Band WAZ, which is a plaque.

NCDXF

Presently, the membership in the Northern California DX Foundation is over 2,400, with about 500 new members enrolled in the past six months. All continents, all 50 states and 87 DXCC countries are represented. Finland is well represented with 133 members and leads the world on the basis of percentage of active amateurs.

The NCDXF reports that Beacon QSL cards will be available soon. They would appreciate it if you would wait to send your QSL until you have heard and given a report on all eight beacons; these are the beacons that are transmitting on 14.100 MHz.

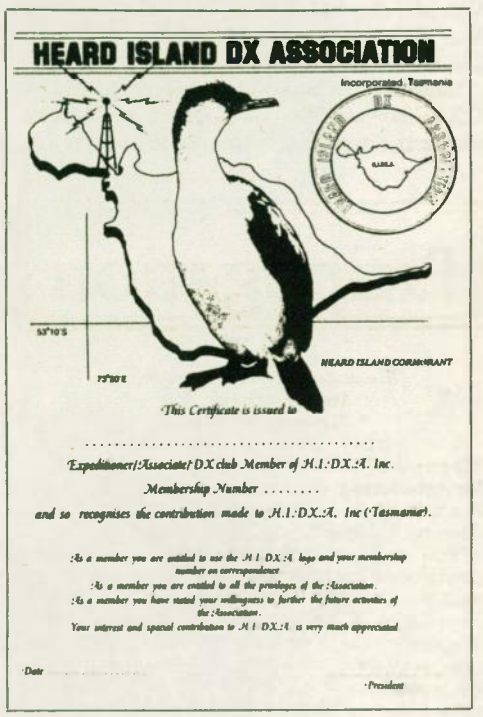
To join the NCDXF, send a donation of $10 to the Northern California DX Foundation, P.O. Box 2368, Stanford, CA 94305.

HIDXA

Jim Smith, VK9NS, of the Heard Island DX Association, wrote to us recently and included a few pictures of his last DXpedition to Heard Island. If you remember, this was one of the two DX-peditions to Heard Island at the same time. The other DXpedition, the Heard Island Expedition, included two amateurs, Al Fischer, K8CW, and Dave Shaw, VK3DHF. Jim states that the HIE was paid $30,000 to put two amateurs on the island, with two-thirds of that amount donated by the two major foundations in the United States. Neither foundation chose to support Jim's HIDXA group in any way.

This, of course, is unfortunate, and has generated some hard feelings. Many of the DXers who didn't work the HIE group did work the HIDXA group, and it is unfortunate that the HIDXA didn't get the same support.

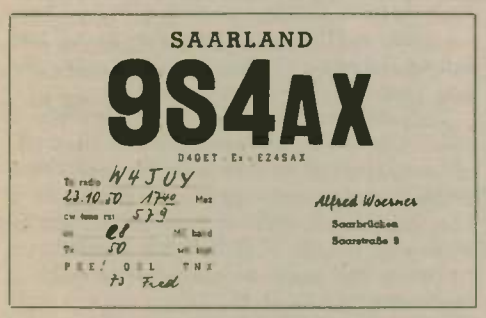
The HIDXA still exists and will sponsor future DXpeditions — hopefully, one of them the upcoming one to Kermadec. Those interested in joining the association can send $25 for one year's membership to: The Secretary, HIDXA Club, P.O. Box 90, Norfolk Island, AUSTRALIA 2899. Members will receive a certificate as shown below. Other contributions are also welcomed.



Antique QSL Department

Bill Schuchman, W7YS, submitted the following two QSL cards for contacts with the same operator that took place 29 years apart. On 23 October 1950, Bill who was signing W4JUY, worked 9S4AX in Saarland on 10-meter CW. The call belonged to Fred Woerner.

On 25 October 1979, Bill, now signing



W7YS, again worked Fred, now signing DL8AX. That was almost 29 years to the day. The contact was also on 10-meter CW.

Notice all the former calls on Fred's DL8AX card that he has held since 1926. The cards also indicate that Fred lived at the same address in 1950 and 1979. Those of you who keep back issues of **Worldradio** may wish to refer to the March 1983 issue for a print of Fred's TS4SAX QSL card dated 1934.

Saarland (or Saar) was deleted from the DXCC country list on 01 April 1957. Any contacts since that date would be only for Germany and after 17 September 1973, West Germany. Of course, 9S4AX would still count for DXCC today, but not the Honor Roll listing.

QSL information

Please note a change of address for Bob 9V1VP, listed under QSL Routes. Jay O'Brien, W6GO. forwards this information, stating that Bob doesn't want the new occupants of his former address to be deluged with his mail. The antenna at his new location is 175 feet high!

Leonard Kaufer, KH0AC, writes that his QSL manager is not K7LA. as listed under QSL Routes in the July issue (and K7ZM listed in the September issue). The correct call should read K7ZA. We hope this didn't cause an inconvenience to anyone as we try to get the correct routes.

As these routes come from many sources (DX newsletters, readers, over the air, etc.), it is not possible to check them out. If anyone detects an error or errors in these listings, please let us know.

Ross Forbes, WB6GFJ, reports that 5T5JD is now living in French Polynesia and is now operating as FO8JD. Anyone still needing a QSL card for a contact with 5T5JD should send his request to Jose Dumoulin, B.P. 85, Papeete, Tahiti, FRENCH POLYNESIA.

The TO80 and TO00 prefixes were used by stations in French Polynesia only during the Tiurai Celebration, 10-17 July.
(*please turn to page 40*)

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 Freqency (MUF) and Frequency of Optimum Transmission (FOT). Requests should be sent to W6LS, 2814 Empire, Burbank, CA 91504. Each request should be accompanied by a self-addressed stamped (28¢) envelope at least 9" × 11½".

DECEMBER 1983

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	18.0	24.5	29.3	9.9	19.6
0200	14.4	19.4	24.6	10.0	17.0
0300	12.1	15.6	20.6	9.8	15.5
0400	10.9	13.5	17.8	9.0	14.7
0500	9.9	12.1	15.8	7.7	14.0
0600	10.0	10.8	14.5	7.5	13.4
0700	10.8	10.7	13.9	8.6	13.5
0800	11.5	10.3	13.2	11.2	14.6
0900	11.6	10.3	12.2	12.5	15.3
1000	11.1	11.0	12.0	12.8	14.1
1100	10.1	11.6	12.7	11.4	11.7
1200	9.3	10.4	12.7	9.8	11.0
1300	10.3	9.8	11.2	9.5	14.0
1400	14.0	8.9	10.7	12.4	19.7
1500	19.3	11.4	14.5	17.7	25.4
1600	24.0	12.3	21.8	19.6	28.7
1700	27.3	11.2	21.5	16.1	29.5
1800	29.2	10.7	21.4	12.8	29.4
1900	28.4	11.7	22.7	10.2	29.5
2000	27.6	13.8	24.9	8.6	30.1
2100	26.4	18.6	26.7	8.2	30.5
2200	24.5	23.5	27.7	8.6	29.7
2300	22.2	26.9	28.8	9.1	27.1
2400	20.4	28.8	30.6	9.6	23.3

The Sport of Contesting

Yuri Blanarovich, VE3BMV

After reading the second part of W0JF's excerpts from a letter to ARRL on the subject of contesting and DXCC, plus reply of Kurt N. Sterba to critique of his critiques and his decision to quit in disgust, I can't help but wonder: where is our hobby going? Is it being steered by half-baked hams and ex-CBers with support of quick-buck artists who try to make a killing out of our misery on overcrowded bands?

What is happening? Is wrong trying to be right or is right trying to be made wrong? I think it is like this: There is a group of amateurs who decided to make a buck because there is an opportunity. Opportunity is all of those who want the easy way out, which could be: memorizing the exam questions, dropping the code from exams, working DX on lists and nets, buying the best (i.e., most expensive) radios, etc. The ultimate goal is to be able to talk about nothing (who cares about listening?) with Godzilla amplifier with his buddy across the street. Who is stirring all the fuss about no-code licenses, deregulating the Amateur Radio and working stuff on lists? 1) Those who want to make a buck from us, and 2) those who are lazy and inconsiderate and want something for nothing. Should the FCC, ARRL and RF know who listen to those "representatives of industry," or to those distinguished who have done something for the radio art and science?

If anyone asks kids at school, "Do you want to study and graduate, or would you rather play Pac-Man?" what do you think you'll get for an answer? I am sure 95 percent will vote for Pac-Man. We, as parents, know what is more important; kids will know when they grow up!

Isn't this similar to our trends in Amateur Radio today? Who is the loudest voice? Radio Pac-Mans. Who is almost silent? The minority that loves the hobby and quietly enjoys the many aspects of it without looking for a quick buck. This is why it saddens me that Kurt Sterba has decided to quit.

Goodness forbid we should criticize something. All the magazines write the reviews of new products in such a way that they all look good. (Don't want to lose advertising.) So sometimes we get fed baloney. I have to confess that I have sat quietly — partially due to being busy, partially hoping someone else would write and try to correct misconceptions. Many times nobody did, and baloney spreads. Another "author" picks it up and we get big baloney mushroom. Then the knowledgeable speak up and hell breaks loose — "How dare you."

I have seen a few books and articles that do not make much sense, and when I see someone criticize those, it makes me feel good. I would like to beg K.N. Sterba to stay! I hope many others will express the same wish and make him come back! Let's not sit quietly when we see the "right" being attacked; let's stand for it even if it is not always pleasant.

One should write about things he is thoroughly familiar with. He should not try to write a Spanish language manual if all he knows of Spanish is "hola". I fully agree that there is a need for consumer type of reviews and critiques, and I think magazines should support it and honest manufacturers accept it and learn from it. **Worldradio** should be applauded for doing it, and I hope more and more people will appreciate it and join the forces to make our hobby better and enjoyable for all of us — from Novice to contest tiger to packet radio whiz.

Getting back to the W0JF beef. Without getting too deep, it appears to me that he is perhaps more of a VHF type and not too familiar with contesting and DXCC'ing problems. The variety of contests that exist range from Field Day, where you do not need to exchange reports, to sweepstakes, where you exchange everything but your telephone number. There are short ones such as NCJ Sprint, where you cannot stay on frequency and call CQ, and the All Asian contest, where you exchange your age, etc.

If W0JF were to look through the rules, I am sure he or anyone else could find the one he liked or that fit him the best. If not, he could start another one, and see how well it takes off! I think the popularity of a contest is partially due to its rules and peculiarities. The number of participants in contests and awards is an indicator of their value. The good ones will grow; the bad ones will disappear.

On the subject of DXCC: I think it is a similar situation — awards that are popular have high serial numbers because they could mean something. There are ones where you have to work WAS two-letter calls; well, whatever turns you on.

If we tried to project W0JF's thinking, it would probably go like this: cancel all awards and contests, and do . . . I am not sure what. We all turn into the weathermen (or persons), eliminate CW and all exams for licenses, run all power you can, possibly only phone on frequencies from DC to light, work DX nicely organized (on lists), etc.

I have just one big qustion. Why do all those who advocate such things bother with Amateur Radio? Why don't they stay on CB bands? All those things are there! Do we want the same thing that happened to CB band to happen to our hobby (or public service)?

Let's hear the opinions of those who have done something for Radio, not of those who cannot pass the minimum requirements for the license or who want the easy way out. We all know there is nothing for free. If you want to enjoy the most wonderful and intelligent hobby, you have to deserve it and work at it.

ARRL log checking

Looks like the ARRL has heard W0JF crying for justice in contesting and has already started to act accordingly. It just so happened that VE3BMV was No. 1 on 20M CW in the 1983 DX test (first VE to beat W's?). The log checking team had a really close look at the log.

To make a long story short, BMV was disqualified for having two dupes, one /mm QSO and 59 call sign/exchange errors. This was out of 718 QSOs claimed. Two multipliers were removed because of a discrepancy in the logs in the signal report! Most of the errors are a type of one dot or dash plus or minus in the call sign or exchange. The ARRL computer calculated 10.49 percent of errors, and that is more than 2 percent stated in the rules (usually applied to dupes or "cheating").

When I calculate actual percentage of errors I have made, it comes to about 0.35 percent, which I am actually proud of! (718 QSOs × about 11.6 characters per QSO = 8328 characters. 60 errors out of 8328 characters is 0.7 percent. Being rather pessimistic about my copying skills, I take blame for half of the errors — that is, 0.35 percent.

Show me the whiz who can copy Morse code without error for 48 hours, with QRM, noise and poor sending at the times. It is possible; anything is possible. The point is that this method of evaluating the logs is not publicized. If I had known it, if it was in the rules, I would have used the tape recorder to record the whole contest, to: 1) verify my own copying, and 2) have evidence that what I have in the log I actually heard and was perhaps the other guy's mistake.

I have been a member of the CQ WW Contest Committee and have processed the logs. Procedure usually is to correct the logs — especially of those who are top contenders, and if an excessive amount of problems exist, to notify the contester or send the log back to him for corrections. If the problem persists, disqualification is in order.

Disqualification is applied for negligence of having over 2 percent of dupes or unverifiable contacts (i.e., phony multipliers, QSOs, etc.) and not the mistakes in the signal report or exchange! In the worst case, those QSOs should have been removed and the score adjusted accordingly, with a warning to the "guilty". But the decision of the CAC is final, so let it be.

The advice is: to operate in an ARRL contest, you had better be sure you do not make more than 2 percent of *any mistakes* or that the stations you have worked do not send you one thing and write another thing in the log. Also, getting close to the top scores, you had better have a BIG tape recorder going the full 48 hours so you have evidence in case you need it.

This makes me wonder if contesting is a sport where human mistakes are allowed, or an anti-trust trial, where you need two witnesses signing your log, swearing on a holy handbook that what is in the log is what you heard. Well, I think I will have to decide if I want to bother with such a contest(s). At least W0JF can sleep well knowing that the "wheels of justice" are turning, and that this "meaningless" exchange can be deadly!

I hope the ARRL Contest Advisory Committee is aware and in agreement with the above actions and ruling.

CQ WW CW Contest

The second part of our "Ham Radio Olympics" — CQ WW DX Contest — is on the last weekend of November. With declining sunspots and propagation getting worse on the high bands, we will probably see a decline in scores on the higher bands. The fact that the CW part is in November and there is a bit less activity on CW than on phone (fewer true hams?), it might be desirable to jump ahead of the Phone part; that is, run the CW part on the last weekend of September. Propagation is actually better than in October; we are closer to the equinox, and this could be a welcome boost to CW operators, giving them an opportunity to work more stations. What do you think all you CW literates? Worth considering? Write to your friendly Contest Committee member and your Congressman. hi The CAN-AM Contest would gladly vacate the weekend.

On the subject of changing the CQ WW Contest rules: There were some voices in Dayton asking for some changes in the scoring. In my opinion — and perhaps the majority of contesters — I think there should be no major changes in the rules. You can never make the rules to be perfect, giving all the same opportunity. Geographical location, changing density of Amateur Radio population, sunspots and propagation patterns affect the results. One has to study the rules and scoring system carefully, try to predict the propagation, decide what he wants to achieve and decide what to do — operate from his uncle's farm or go to the Caribbean. If the scoring system changes, that just opens up a different bag of "inequalities."

One question that deserves attention is the "hired gun" category. Is it really single-operator category? Or is it two-operator category: one, the "owner" who has the big mother station and is either too old or useless as an operator, and two, the "hired gun," who gladly operates that station for the bowl of soup? To me it was always single operator — me, my skills in operating and my station. Anything else belongs to the multi-whatever category. But this is another subject.

Again, I would especially like to hear from the "silent contest minority." Let's use this column to discuss the good and bad things with the aim of making it better; a picture or two would not hurt. 73 and Good Contesting! □

AWARDS

Scott R. Douglas Jr., KB7SB
P.O. Box IARS
Glendale, CA 91206-7609

Worked Liverpool Award (WLA)

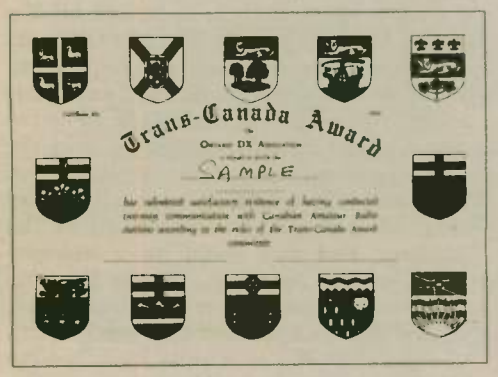
Issued to licensed amateurs stateside for confirmed contact with at least 10 different amateurs located in Liverpool, England. To apply, send your log extract (GCR) along with 12 IRCs or $4 to the Liverpool & District Amateur Radio Society, G3XSN, 7 Thurne Way, Liverpool 25, ENGLAND.

Heard Liverpool Award (HLA)

This is an SWL version of WLA and the same rules apply. Application should be sent to the address above.

R-15-R & R-10-R Awards rule change

The 24-hour completion requirement for these awards has been deleted. All contacts after 01 July 1958 are considered valid and creditable.



Trans-Canada Award

This award is issued to licensed amateurs worldwide for confirmed contact with five different stations in each of the eight VE call areas, five amateurs located in VO1/VO2 and one VE0 maritime mobile station. One of the VE8/VY1 contacts must represent the Yukon Territory and one must represent the offshore islands of the Northwest Territories. A grand total of 46 contacts must be accumulated. All bands and modes may be used to obtain the contacts and only those contacts made after 01 January 1945 are considered valid.

To apply, send your log extract (GCR) along with $1 or 10 IRCs (I strongly suggest the $1) to: Ron Nickle, VE3SF, 286 Burnett Ave., Willowdale, Ontario, CANADA, M2N 1W1.

The Seaway Award

Issued to licensed amateurs worldwide for confirmation of 10 different VE stations located along the St. Lawrence Seaway. Represented in the 10 must be the following: Thunder Bay, Greater Toronto, Greater Montreal and Greater Quebec City. Only contacts after 01 July 1959 are considered valid, and all other requirements are the same as above. Applications to VE3SF.

Provincial Capitals Award

Issued to licensed amateurs worldwide for confirmed contact with each of the 10 provincial capitals of Canada. They are St. Johns, Newfoundland; Charlottetown, Prince Edward Island; Halifax, Nova Scotia; Fredericton, New Brunswick; Quebec, Quebec; Toronto, Ontario; Winnipeg, Manitoba; Regina, Saskatchewan; Edmonton, Alberta; and Victoria, British Columbia, amassing a grand total of 10 confirmations. Only contacts made after 31 March 1949 are considered valid, and the same rules as above apply. Applications to VE3SF.

SPAM Award (Society for the Promotion of Amplitude Modulation Award)

With the increased usage of AM, due to this facility being provided on much of the new gear appearing on the market today, the SPAM offers this award as a hopeful encouragement to everyone to rediscover the world of amplitude modulation. There is no fee. All one has to do to acquire this fine certificate is to get on the bands and make contact with a SPAM group three times. According to their president, Robert Watson, WA5WTF, this should not be a hard task as most of the activity involving AM

(*please turn to page 29*)

New Mexico USAF MARS Program

Paul Turkheimer, WA6NKL/AFF6P

The New Mexico Air Force MARS program consists of 30 members. New Mexico is made up of 121,666 square miles with a population of only 1,299,968. There are three major Air Force bases; Cannon, Holloman and Kirtland. The most active Base Support Team is located at Holloman; it is comprised of 14 members. The base station is AGA6HO. It supports all major contingencies associated with its TAC Base, not least among them air crashes. Its proximity to White Sands Missile Range results in numerous MARS projects oriented toward support of the range. Last year, the space shuttle landing preparations consumed much of the team's time.

New Mexico is unique in that about 75 percent of its land is federal property; therefore, many agencies call on the MARS program for assistance. There have been forest fires, spilled chemicals, lost persons and civilian air crashes in which New Mexico USAF MARS members have assisted.

The State MARS program is administered by Bill Farley, AFA6HC/AFF6NM, who has been an affiliate member for 18 years. "We have dedicated, professional members who go out of their way to assist our program," Farley proudly states. □

MARS was there

Amongst C-141's, C-130's, helicopters and 1200 Allied World, Air Force personnel, MARS was present at Pope Air Force Base, North Carolina for the 5th Annual Volant Rodeo, (a Readiness Exercise to determine the best prepared Allied flyers in the world), held during the week of 13-17 June.

Teams from West Germany, Canada, Italy, Portugal, Brazil, Australia, New Zealand and the United States competed

Some of the operators of the Rockwell International MARS station, AFC6RI, are (left to right): Jack Ambriz, AFA6AH-K6APY; Russ Carlow, AFA6IB-WB6MOY; Jim Shaw, AFB6CU-W6JOX; Gary Chase, AFA6AD-WA6VES; Bill Weise, AFA6ZG-W6CPB; Mac McDonald, AFA6OJ-WA6YMG; Ed Elliot, AFA6GU-N6AEY; Russ Hudson, AFA6MT/AFF6PC-N6ANK; Frank Doting, AFA6GE-W6NKU; Jim Farley, AFA6HD-KE6LX; Lloyd Stave, AFA6WN-W6DMS; and Dick Blosser, AFA6CI-WA6RJE. Not shown in the photo are: Aaron Cohen, AFA6ES-K6JWO; Ed Hodges, AFA6KK-K6YJ; Quent Cassen, AFA6DZ-N6AF; Ted Almgren, AFA6AG-K6ZFO; Charley Glenn, AFA6IO-W6GCJ; Al Olson, AFA6QW-W6QFU; Dave Smith, AFA6EN-KA6HWV; and Frank Verano, AFA6YR. The items held by several members in the front row are special brass belt buckles engraved with their names. These are gifts of appreciation from station AGA8KJ, Kwan Ju, Korea.

VISIT YOUR LOCAL RADIO CLUB.

ALASKA

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

Borealis Amateur Radio Club
Mission Road
P.O. Box O
North Pole, AK 99705

ARIZONA

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.

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

Antelope Valley Amateur Radio Club, K6OX
Lancaster School Board
44711 N. Cedar Ave., Lancaster, CA 93534
4th Wed/monthly-7:00 p.m.

Conejo Valley Amateur Radio Club
Home Federal Savings and Loan
454 W. Hillcrest Drive
Thousand Oaks, CA
1st Thursday/monthly — 8:00 p.m.

East Bay Amateur Radio Club
P.O. Box 6017, Albany CA 94706
Salvation Army Bldg., 36th & Rheem,
Richmond (415) 525-6200
2nd Friday/monthly — 7:30 p.m.

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.

MT. Wilson Repeater Association
P.O. Box 977
Yorba Linda, CA 92686
WA6KOS Repeater — input 146.40 output 147.435
Amateur Radio QST Net — Monday at 7:00 p.m.

North Hills Radio Club
P.O. Box 41635, Sacramento, CA 95841
Meets: Gethsemane Lutheran Church
4706 Arden Way, Carmichael, CA 95608
3rd Tuesday/monthly

Sacramento Amateur Radio Club, Inc.
Contact: Chet Almond, N6DRU, (916) 967-4295
Meets: MARS Building, Sacramento Army Depot
Troop gate, Florin-Perkins Road
2nd Wednesday/monthly - 7:30 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.

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 Jean Carter, KA6HJK, (714) 523-9519

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

Six Meter Club of Chicago, Inc.
Land of Lincoln Savings
6655 W. Cermak Rd.
Berwyn, IL 60402
2nd Friday/monthly — 8:00 p.m.

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

South Bay Amateur 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 Thurs./monthly 7:30 p.m.
145.39 MHz WD6EJF

Stockton Amateur Radio Club
U. of Pacific, Rm. 122
Kensington & Mendocino Sts.
2nd Wednesday/monthly - 7:30 p.m.
Rptr. roll call: Wed. 8 p.m. - 147.165/765

West Coast Amateur Radio Club
Fun Meetings — No Business
Fountain Valley Recreation Center
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

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

Fort Myers Amateur Radio Club, Inc. W4LX
Jeff Beals, WB2OUK, President, (813) 334-4004
Meets 1st Wednesday/monthly-7:30 p.m.
First Federal Savings and Loan of Ft. Myers
121 Pondella Rd., North Fort Myers, FL

Platinum Coast Amateur Radio Society, Inc.
American Red Cross Building
1150 S. Hickory • Melbourne, FL 32901
Dan Yelverton WA4RGK President
Call-in 25/85 Rptr. • Meets 2nd Mon/monthly 7:30 p.m.

HAWAII

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

ILLINOIS

Bolingbrook Amateur Radio Society
Fountaindale Library
300 W. Briarcliff Rd., Bolingbrook
(312) 739-0045 / call in 147.93/33
3rd Monday/monthly - 7:00 p.m.

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.

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.

Indianapolis Repeater Assoc.
4th Monday/odd numbered months
Carson Manufacturing
5154 N. Rural St., Indianapolis
146.10/70 147.12/72

Northeastern Indiana ARC
John E. Zumbaugh, WD9CVI
507 E. Quincy St., Garrett, IN 46738
Daily 6 p.m. net on 147.96/.36
2nd Tuesday/monthly - 7:30 p.m.

IOWA

Muscatine Amateur Radio Club
Info: Jere Yanek, KA0KPO (319) 264-5490
Meets: Basement Meet. Rm., Public Safety Bldg.
Muscatine, IA
1st Monday/monthly - 7:30 p.m.

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
Frederic Electronics
Orville C. Bowersox, N3AGM
(301) 662-4550
2nd Tuesday/monthly — 2000

MISSOURI

Heart of America Radio Club
3521 Broadway
Kansas City, MO 64111
3rd Tuesday/monthly

NEW HAMPSHIRE

Great Bay Radio Assoc.
Dover District Court, Dover.
(603) 332-8667/332-8015
WB1CAG/Talk-in 147.57
2nd Sunday/monthly — 7:00 p.m.

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

Gloucester County ARC, W2MMD
PO Box 370, Pitman, NJ 08071
VFW Post #2117, Woodbury, NJ
1st Wednesday/monthly - 8:00 p.m.

NEW YORK

Amateur Radio Assoc. of the Tonawandas
City Hall, Community Room
200 Niagara Street
City of Tonawanda, NY 14150
3rd Tuesday/monthly - 8:00 p.m.

Hall of Science Amateur Radio Club, Inc.
PO Box 131, Jamaica, NY 11415
Queens County Dental Society Bldg.
86-90 188th St., Jamaica, NY
2nd Tuesday/monthly - 7:30 p.m.

Long Island Mobile Amateur Radio Club (LIMARC)
146.25/85, 147.975/375, 223.22/.224 .82, 444.125/449.125
Membership: Tom Koutsis, WB2IQT, 1341 Harry Ln.,
No. Merrick, NY 11566. Net Mon. 8:30 p.m. 146.25/85
Meets 1st Tues/8 p.m., H.B. Thompson, JHS, Syosset

Staten Island Amateur Radio Assn. (SIARA)
P.O. Box 495
Staten Island, New York 10314
Third Friday/monthly — 8:00 p.m.
Rm. B-127, College of S.I. — Sunnyside

Westchester Emergency Communications Assoc.
Little Theater — County Center
White Plains, N.Y.
Talk-in WB2ZII/R 147.66/06
2nd Monday - 8 p.m.

OHIO

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

Findlay Radio Club
1333 W. Sandusky St./Box 587
Findlay, OH 45840
Repeater 147.75/15
1st and 3rd Thursday/monthly - 7:30 p.m.

NOARS-Northern Ohio Amateur Radio Society
P.O. Box 354, Lorain, OH 44052-3rd Mon. 7:30 p.m.
K8KPG-Home of the WW II Submarine USS COD WB8JBM-
Noars Contest Station — K8KRG/Repeaters:
146.10/70; 144.55/145.15; 449.8/444.8; 223.10/224.70

Xenia Weather Amateur Radio Net (XWARN)
2nd and 4th Monday — 7:30 p.m.
Xenia PD, City Bldg.
call in/147.165-147.765
Xenia, Ohio

OREGON

Oregon Tualatin Valley ARC
Portland General Electric Auditorium
14655 S.W. Old Scholls Ferry Road
Beaverton, OR 97005
3rd Wednesday/monthly - 7:00 p.m.

TENNESSEE

Lakeway Amateur Radio Club
Randy Hall, Activities Mgr.
Box 1636, Morristown, TN 37814
State Area Vocational School
Last Thursday/monthly - 7:30 p.m.

VIRGINIA

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

Southern Peninsula Amateur Radio Klub (SPARK)
Repeater 146.13/146.73 — WR4ALW
VEPCO Bldg. (Penbroke Av. & G St.)
Hampton, VA
1st and 3rd Wednesday/monthly - 7:30 p.m.

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.

WISCONSIN

Racine Megacycle Club
Red Cross Building
452 Taylor Avenue
Racine, WI 53405
2nd Monday/monthly - 7:30 p.m.

— 65 in all. The AF MARS Station AGA2PO-Unit 1, with its repeater station and base support team members George Pasquet, KA9BRO/AFA2IY; Bob Straughan, WD4HRC/AFB2IN; and Jim Mulhall, WA4KBI/AFB2NS and the 1943d Comm Sq. Maint. section were there. In the 90-degree heat, dust, noise and jet exhaust blasts, they operated in the field. Sending traffic via AGA2LA, AGA3HQ and AFA2IM to Germany, Japan, Korea, and internal and external United States, from Florida to Alaska and Maine to Washington.

After six days of setting up in the morning and removing the station each night and over 50 hours of operation, it came to an end — all over until next year, which promises to be bigger, with more countries participating, and an even greater MARS program. □

Awards

(continued from page 27)

usually has SPAM members in participation. A few places to look might be 14.280, and 7.160 before 8:00 p.m. California time. For further information regarding SPAM or to apply for the award, contact F.A. Dunlap, WA5TWF, 14113 Stoneshire, Houston, TX 77060.

Here is a super club award

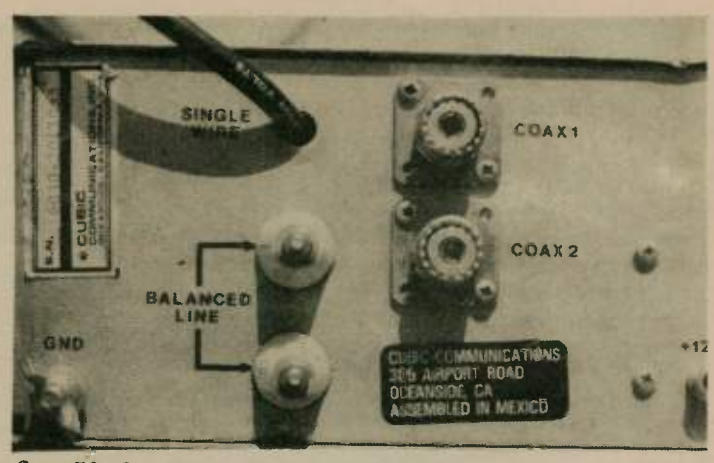
How long has it been since your local radio club has applied for and received an award? Better yet, how often have you had the opportunity to be paid for your application? Well, here is a unique certificate that brings with it not only a way to earn your club a few extra green stamps for the always short kitty, but day-in day-out benefits for the club as a whole! It is called ARRL Affiliation, and with it you cannot only do your local organization a sizable benefit but Amateur Radio in general. The certificate your club receives is the same size and general design as DXCC and is signed by both the president and general manager of the League.

To find out how you can obtain affiliation for your club, write for details to: Sally O'Dell, ARRL, 225 Main St., Newington, CT 06111.

Well, that's all for this month. I look forward to receiving your clubs' awards and information so we can let amateurs across the country know what is available for their efforts. You may send your information to me at the address heading this column. Till next month ... Best 73, Scott. □

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

Nye manual antenna tuner



3 or 50 ohm feedpoints on rear of tuner

Tuners and nets

Marine high-frequency Amateur Radio installations will require a tuned antenna system or an antenna tuner.

A "tuned antenna system" might consist of mobile whip antennas for each band of operation. A multi-band mobile antenna is another way to go. Mobile whips all require a substantial groundplane directly beneath the mount. If you are using mobile whips for high-frequency operation, but can't get your transceiver to load into them, chances are you are not presenting a good groundplane directly beneath the whip assembly.

Other forms of tuned antenna systems are the dipole, multi-band dipole and the inverted Vee. Each of these antenna systems create their own ground — they are half-wave in design and are usually good, reliable performers if installed away from all other standing rigging.

Many mariners, however, prefer to use an insulated backstay as their primary high-frequency Amateur Radio antenna system. Variations of the backstay as a long-wire antenna are wires hoisted up a wooden mast, wires up to a spreader, and the relatively unknown but good performing sloper which uses the mast as a groundplane. All of these antenna systems just described are random length in their ground, as well as their radiating elements. This will require an antenna tuner in order to resonate the antenna on each band of operation.

Before we go on to look at the tuner, a few more specifics about any type of marine long-wire antenna system. The long-wire radiating element must be balanced by an equal or greater amount of groundplane. Simply running a long wire and plugging it into the back of your tuner won't work. A good groundplane must emanate from the feedpoint and the tuner and go directly to the ship's grounding system in order for the tuner to work properly.

Good grounding techniques do not include just grabbing the engine cooling block. A good ground is not a simple plate 6 inches square on the outside of your hull.

A good ground system is one that uses the seawater as a counterpoise. Your best pickup point for the seawater ground is a keel bolt connection. Even though there may not be any actual contact between the lead keel and the seawater, a "capacitive" ground is achieved that works just as well. In actual tests I have performed, there is little difference between actual water contact to a ground plate of large size under the water, and a ground plate completely encased in fiberglass. Both configurations act as a good groundplane. The biggest excuse in not using a keel bolt ground aboard a sailboat is that you can't get to it. Figure out a way. If you have to, bore a hole in the lead and then attach your ground strap to it.

Ground connection should only be made of 2 or 3-inch wide copper foil. Thickness is not important. Run the foil from the ground point up to your radio setup. Also run the foil up to where the coaxial cable splits apart to become an active antenna system.

For powerboats, you may need to lay quarter-wavelength groundplanes in your hull, as well as connect ground foil strips to water tanks, refrigeration system copper hosing, etc. The better your groundplane, the better your radiating wire will transmit.

Tuners

There are several types of antenna tuners available that will accommodate a long-wire feed. There are also tuners available with strictly a 50 ohm output that will work well in particular installations. We have received the greatest predictable results from the Cubic (Swan) ST-3B tuner, as well as the new ICOM and Nye tuners. The ICOM, Nye and Cubic tuners are relatively compact, feature dual forward and reverse meters, and allow the mariner to feed his antenna system either 50 ohm or 3 ohm long-wire. We recommend trying to feed your antenna off the 50 ohm output coax port.

This type of feeding allows you to confine the radiating energy within the coaxial cable until it reaches your actual antenna feedpoint. However, at that feedpoint a good groundplane must be available. Simply connecting the center conductor and leaving the braid ungrounded will lead to devastating results. Usually, RF will transfer onto the unterminated braid, and everything on the ship gets RF hot. This could also damage some

of your sensitive navigational equipment.

If you feed your antenna system with coaxial cable, make sure that foil from your groundplane source indeed connects with the coaxial copper braid up at the feedpoint.

If you elect to feed a long-wire system directly to the long-wire output of your tuner, make sure the tuner is well grounded. Also keep in mind that the long-wire is radiating just as soon as it leaves the tuner.

Nye and Cubic tuners size comparison

Tuning a manual antenna tuner is tricky. You usually need to find a weak signal, and then play around with the controls until their signal strength is maximized on your S meter on receive. Then go into the AM (continuous carrier) transmit mode, and tune for maximum forward power and minimum reflected power. Note the settings immediately so you don't have to search for them again. Your tuner should not require readjustment each time you switch to this particular band.

Automatic tuners

Most automatic tuners only offer a narrow response to each Amateur Radio band. They also require some sort of DC voltage and some elaborate switching techniques. Trying to use a home automatic tuner aboard a boat usually doesn't work out well.

The marine electronics market has been using automatic tuners for their single sideband radios quite successfully for years. The automatic tuner is placed at the antenna feedpoint. The very latest in automatic tuner technology is going from mechanically tuned tuners to fully solid-state automatic tuners. The idea works well, but it's quite expensive.

Now, something new from a company in Florida — an automatic tuner that requires no DC voltage and will tune a long-wire, with a good groundplane, anywhere from 300 kHz to 70 MHz! They claim a VSWR less than 1.5:1 with an antenna longer than 35 feet and a good groundplane. Instant band switching, 50 ohms input, and the ability of the solid-state tuner to work on anything from a dipole to a sloper and an insulated backstay.

We are presently testing the antenna tuner, and we will give you the results in the next issue of **Worldradio**. You can drop me a QSL card for more information about this exciting new product designed for the military, but now available for amateur and commercial use. I have seen larger varieties work well in the past, and I am quite confident that the time has come for a small antenna tuner to take over the arduous job of tuning up a random wire with a good groundplane for each band of operation. All the details next month.

14.313 MHz net

As you all know, the best place for high-frequency maritime mobile operation hangout is the 14.313 MHz maritime mobile net. There are many nets that operate on this frequency, each taking turn to offer coverage to a different part of the world. This month we would like to feature the Maritime Mobile Service net, as explained by net manager Chaplain A.W. Robertson, KB5YX, P.O. Box 92, Donie, TX 75838.

"The primary purpose of this net is for transmitting Amateur Radio messages for maritime mobiles and deployed U.S. military personnel outside the continental limits of the United States of America or for any U.S. citizens who do not have access to public telephone service, and any country that has third-party agreements with the United States. Net control stations are selected by the net manager, and there is no membership requirement in the Marine Mobile Service net to take part with check-ins. All net expenses are paid by the net manager and net control stations, but donations from net friends, mariners, and memorial gifts are always appreciated."

The Maritime Mobile Service net meets seven days a week during spring and summer, from 1700 to 2200 UTC, and from 2400 to 0200 UTC; during the fall and winter months, the net meets from 1800 to 2300 UTC, and from 0100 to 0300 UTC. There are over 200 active participating amateurs who help keep this net running, and it is estimated that over 10,000 pieces of traffic are handled each year.

The Board of Directors of the Maritime Mobile Service net are: Jack Mays, K4DMK chairman· Dick Eastman,

N5FX; Tom Churchill, W1KCY; Tom W3KVG; Randy Maurer, WA3HLP; Dick KV4IJ, and Verne Moffitt, KV4II; and Ted Clifton, W9TC. Net manager: Chaplain Alla W. Robertson, USN (retired), KB5YX; emergency telephone (817) 359-4210. When seeking information from Chaplain Robertson, always enclose a self-addressed stamped envelope for his reply.

Depending on the priority of your communications, the net control stations will ask the Maritime Mobile to go ahead with the traffic. Here is a list of the order of priorities: Emergency, Maritime Mobile station, Overseas medical or priority traffic, Stations that have schedules with Maritime Mobile stations, Deployed U.S. military personnel, Health and Welfare traffic, Stateside stations that have traffic going outside the United States, and Stateside traffic and overseas traffic.

In reviewing the net control procedures that were outlined to me, it appears that this is a very well and formally run net. They have procedures for any type of emergency. If you should have a maritime emergency, simply announce your call on frequency, and let them do the question-asking. They will ask you questions that you should immediately respond to to quickly get the emergency under control.

All maritime nets

If you regularly check into a regular maritime mobile net, give some thought to helping support that net. Either join in as a net control, or consider a donation. Remember, their services are strictly voluntary, and donations and gifts would be greatly appreciated. These usually go to defray newsletter costs, information and postage costs, etc. Obviously, no amateur may ever receive remuneration for any service.

Be sympathetic to net control stations. Don't treat them like telephone operators. No net control operator appreciates the same maritime mobile station asking, every day, for phone patches into the states. This is especially true when the phone patches are simply non-essential and strictly routine. Call CQ on another frequency and request phone patch traffic. Save the net control stations for important patch calls.

Don't compromise the Amateur Radio Service or risk your license and the net control operator's license by trying to conduct *any* form of business traffic over the air. Recent FCC rules spell out clearly that any form of radio traffic that has *anything* to do with business is strictly prohibited.

Also get the word out to your fellow cruising friends who may have Amateur Radio aboard that most net control operators double-check the authenticity of every Amateur Radio call sign heard. Bootlegging, phony call letters, using call letters of friends, and obvious third-party traffic when the control operator is not even aboard is foolish, taboo, and will not be tolerated. If you know of cruising friends who have Amateur Radio aboard — but no license — and who are placing telephone patch calls, remind them that they may eventually be tracked down by the telephone numbers they have called.

Next month, we'll give you full details about that new solid-state antenna tuner. Until then, good cruising!

●●●

ATTENTION: Technician Class Mariners. The only thing that stands between getting your General Class license with your present Tech ticket is the 13 wpm code test. Our Radio School General Class tape course does the trick every time! I have received letters from hundreds of hams throughout the Pacific who have flown back to the states and passed their General Class code test from our set of four stereophonic General Class license code test training tapes. (They can even be played on a mono tape player.)

Pass the test now before all exams change under the VEC program next year. Send $39.95 plus $2.50 for postage for the General Class code course. We also include a free vinyl carrying case for the four stereo, 1½ hour-long tapes. California residents add $2.50 sales tax. These tapes are available from Gordon West's Radio School, 2414 College Drive, Costa Mesa, CA 92626. □

●●●

Maureen Pranghofer, KF0I

Once there was a ham.
Let's call him Jack.
Who made many a QSO from his basement shack.
Be it late or early, dusk or dawn,
His rig was nearly always on.

CW was what he liked the most,
And of his speed he'd often boast.
Twenty-five words per minute for him was a breeze,
And forty he could do with ease.

But if a fellow ham did not like code,
He'd gladly try another mode.
He oft could be heard on SSB,
Working OSCAR or slow scan TV.

Some days he'd ragchew with old friends he knew,
Work DX pile-ups or pass traffic through.
While other days he'd just stay on 2 meters,
Making contacts through the nearby repeaters.

He was having so much fun operating his station,
That he took little time out for much contemplation.
For realizing that he should be thankful and proud
For the privilege of hamming with which he was endowed.

That ticket is more than an address and call,
It's a gentle reminder to one and to all,
That ham radio is a gift that comes from above.
A means to communicate service and love.

The Courage HANDI-HAM System tries to provide handicapped persons with an opportunity to be givers to others through Amateur Radio. Too often, persons with disabilities don't get that opportunity. They need assistance from others for personal care, transportation, extensive medical needs, and even many forms of recreation. The need to feel good about one's self by giving to others is vital for good mental health.

Amateur Radio provides a unique way for handicapped persons to independently give to others in their community. If you would like to be part of this effort, your donations of time as a one-to-one volunteer for a student, money or equipment are most welcome. For information, please contact us at the Courage HANDI-HAM System, 3915 Golden Valley Rd., Golden Valley, MN 55422; phone (612) 588-0811. □

AMSAT/OSCAR

(*continued from page 19*)

There is an AGC system aboard the transponder which reduces the passband output in proportion to the highest powered signals in the band. If you transmit with 5 watts ERP and along comes a 100 watter into the band, your signal will be reduced to 1/20th of the level of the 100 watter's received signal on the downlink. *Courtesy is the order of the day.* If you transmit a signal at a power which permits your signal to be received on the downlink at about the same level as the general beacon signal level, you will be producing an adequate signal and a better chance at a successful satellite QSO.

At the ARRL Southwest Division Convention during the Labor Day weekend, the Southern California AMSAT participants manned a booth and presented a program which described AMSAT past, present and future ala the Dickensian *Christmas Carol.* Your correspondent described AMSAT history; Skip Reymann, W6PAJ, discussed the current AMSAT/OSCAR-10 activity; and Col. John Browning, W6SP (USAF Ret.), discussed the future of AMSAT programs. (Skip remarked about John's call: "W6SP — *S*pace *P*rogram. I wish I had a call like that.")

The booth at the convention was organized by Bud Schultz, W6CG, and "Butch" Mason, W6KAG. Butch designed and built an orbit model of the AMSAT/OSCAR-10 in which a red LED representing the spacecraft moved about the orbit a step. The orbital period was speeded up so as to produce one orbit in about two minutes. It clearly put across how the spacecraft zips around near the perigee and moves very slowly through the apogee.

Available from the AMSAT Software Exchange are details concerning the various types of computer programs for calculating the OSCAR-10 orbital parameters, azimuth and elevation antenna pointing positions from your QTH. An SASE sent to AMSAT Software Exchange, P.O. Box 27, Washington, D.C. 20044 will bring you the lists. A program for the TS/1000 Timex-Sinclair (ZX-81) computer is available from Bob McCaffrey, K0CY, 3913-29th Street, Des Moines, IA 50310 at $15.00 on cassette tape.

If you are not equipped to produce your own orbital position programs, there is a set available from Julian Macassey, W6ARE, 475 North Daisy Ave., Pasadena CA 91107. The printouts are available on a monthly basis for $6 plus 60 cents postage. Currently, they are available only for the Los Angeles area. If enough interest is shown, perhaps other listings may be prepared. The current listings include, in addition to specific pointing directions for the antenna in 15 minute increments, the identification of DX possibilities by indicating the cities in various parts of the world with each of the orbits from the user's area.

What about the future of AMSAT? There is currently well underway an AMSAT Phase IIIC. One big feature of future plans is the use of PACSAT. Harold Price, NK6K, has been experimenting with PACSAT through OSCAR-10 with Dr. Thomas Clark, W3IWI, and with Australians and New Zealanders. The results are promising.

If you are computer-equipped, you may want to access the AMSAT Bulletin Board at (512) 852-8194. It uses Bell 103 standard 300 BPS, no parity, eight data bits, one stop bit, and full duplex. When you call in, the Bulletin Board will instruct you on your computer display. This gives information about AMSAT activities and the spacecraft.

An AMSAT Calculator Program Library is maintained by John Montague, W0RUE, Box 541, Willenie, MN 55090. An SASE to him will bring you information. □

Oregon ECC

Robert Olson, KZ7S, and XYL, Frances KZ7W, have joined the ranks of Extra Class couples. Robert's license was effective 10 June and Frances received hers 13 September. Both got their Novice licenses last year. The Olsons live in Eugene, Oregon. □

(Part II of a series)

An antenna tuner is a virtual must when working with balanced feedlines, but there are several things to watch for when buying or building tuners — especially those in conjunction with SWR bridges and wattmeters.

There are those QRPers who shun tuners as just another device to gobble up critical power, and their point is well taken, provided one is matching the low-impedance output of a transmitter (50 to 75 ohms) with a like impedance in an antenna. Usually this involves a coaxial cable transmission line, which — as was pointed out last month — we are trying to avoid.

On the plus side of the ledger, the tuner lets the transmitter output "see" the 50-ohm load into which it was designed to work, and the tuner acts as a low-pass filter of sorts, suppressing unwanted harmonics and emissions.

Numerous varieties of antenna tuners are available either commercially made or in kit form. It's important to see that the tuner is designed for balanced as well as unbalanced feedlines, however. Some popular commercially-made tuners will work only with unbalanced lines (coaxial cable), but do not actively advertise the fact.

It's important, too, for the QRPer to read the fine print carefully when considering purchase of one of the many antenna tuners — or transmatches as they are popularly known — sold with combination SWR/wattmeters built into them.

The vast majority of these units will work only at power levels of 5 watts or more and were not designed with the QRP operator in mind. Since 5 watts is the upper limit (on CW) for most QRP contests, awards and other operating events, these tuners with the built-in measuring devices are not a good investment. They offer only marginally accurate readings at less-than-design-minimum power levels; and in many instances, accuracy in measuring wattage, for example, is critical to the QRPer.

If a low-power transmitter comes equipped with an SWR/wattmeter combination, use it and skip the added cost of buying or building a transmatch with those features. In those instances where the transmitter design does not include that combination or where it reads either SWR or power out but not both, it may be necessary to buy or build an outboard SWR/wattmeter with a full-scale reading of 5 or 10 watts forward power.

Several homebrew designs have been offered in various Amateur Radio publications in recent years. And MFJ's Power Sentry series of meters comes with a QRP sensor with a choice of 2 or 20 watts full-scale reading.

Antennas for balanced feedlines are simple and easy to build, erect and use. Last month's column listed two sources of balanced feedlines, and those firms also sell antenna wire and insulators, so all the ingredients for an antenna are available from a single source.

But what about the dimensions? The accompanying drawing gives that answer and shows how measurements should be made. The length of the feeders with relation to the antenna is critical in dealing with balanced feedlines, but even that problem can be managed.

The typical antenna shown in *Figure 1* is 51 feet on each leg, although this length can be varied to meet space requirements. A portable version of this antenna (fed with 300-ohm TV twinlead) is 33 feet on a leg, for instance, while one commercially-made version (fed with 450-ohm ladder line) is 65 feet on each leg.

The feedlines must be cut so that when the length of one leg (AB in the diagram) and the feedline length (BC) are added, their sum is not a whole number multiple of 16 or 22. For instance, if AB=51 and BC=81, and if their sum (132) is divided by 22, the answer is 6.0 — not an acceptable result. When divided by 16, the result is 8.25, which is better.

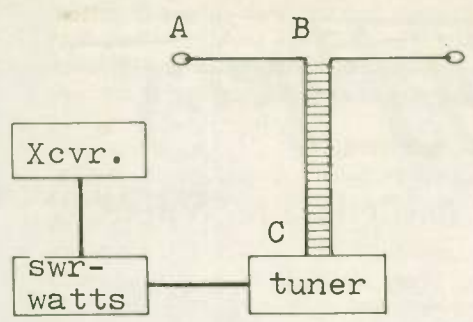


***Figure 1* — A typical balanced-feedline station arrangement. Short lengths of 50-ohm coaxial cable connect the transceiver with the SWR/wattmeter and the tuner.**

An even better combination would be: AB=51 and BC=54. That would yield 6.6 when divided by 16 and 4.7 when divided by 22.

The purpose of this is to make sure the feedlines are not resonant on any of the ham bands. However, if space constraints require an antenna and feedline combination that is resonant, the signal is going into the air anyway.

Feedline measurements, by the way, are from the center insulator to the output terminals on the antenna tuner.

This is an all-band design, including the new 30-meter band. It can be hung in a flat-top fashion or as an inverted doublet. It's an economical design and, because of the balanced feedlines, it's a highly efficient antenna for low-power buffs. □

Happy Flyers

HAMS & PILOTS

"THERE IS NO LIMIT TO WHAT YOU CAN DO – IF YOU DON'T CARE WHO GETS THE CREDIT"

INTERNATIONAL COMMANDER, **Hart Postlethwaite, WB6CQW**
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International Vice Commander, Paul Hower, WA6GDC
Box 2323, La Mesa, California 92041 - (714) 465-5288

ARRL Reno convention

Having any type of convention in Reno provides an extra "something" that few other places can match. Janie and I stayed in the home of one of the very hard-working crew that was responsible for its existence. There were certainly some wonderful people and workers on that crew. A lot of thought and pre-planning went into the final product. One cannot please everyone, but they certainly deserve an "A" for their effort and planning.

From the standpoint of those who like to attend the seminars and hear speakers on special subjects of interest, they took pains to avoid having to choose between two things one might wish to attend. This was appreciated by many. Judging by those who filled the room and stood around the walls for our DF Seminar, many were happy to make most of the meetings they wanted to. A fair number of those who came to delve into the mysteries of VHF DF, stayed another hour after we ended our demonstrations. We enjoyed meeting many of those who attended, and felt a greater understanding of the ease of DFing, when one uses common sense, was a major result of our time together.

This was probably my last speaking engagement at one of these large meetings. Few realize the tremendous cost involved for traveling speakers. We generally receive nothing for our travel expenses or for speaking. Most of us love to share our personal specialty with others, but after eight years of donated travel, many of us are having to quit. Some of the conventions still insist that a speaker pay the convention registration fee if they wish to see anything or listen to another speaker. This has contributed to many speakers declining invitations to affairs.

Sometimes, the leaders think they are doing the speakers a favor when they invite them. Most speakers are fairly well known, and have been to many meetings and conventions each year. To spend $170 for plane tickets, and then find you are not even welcome to visit the display areas, is taking its toll. It seemed worthy of sharing this with **Worldradio** readers, so that when you plan an affair, you may be able to treat your speaker properly. Someone I would like to have heard did not come to Reno for this reason (according to a friend).

Emergency locator transmitter

This column came into being as a result of our interest in Search and Rescue (SAR), specifically searching for downed aircraft with a squeaking emergency locator transmitter (ELT). The national average at that time to locate this 100mW transmitter was 42.5 hours. Amateurs used to transmitter hunting could hardly believe it could take that long. Eight years later, we can hardly believe it is still so much of a problem.

The latest attempt to get around the problem is the use of special equipment on a satellite. I have been sent many articles about the system that is being tested and is on the horizon for the future. Trouble is, those in charge have still forgotten to use common sense. As we try to explain each month, no one can change the "realities of VHF radio wave propagation." When one takes realities into account, and designs with common sense, some very simple solutions are evident.

False alarms from ELTs

Almost all stories on this new system mention the problems of false alarms from hard landings and malfunctioning ELTs. Even the AOPA, which has basically been anti-ELT, is now suggesting pilots check their ELTs before leaving their plane. This is wishful thinking, and we have years of evidence that pilots have not been checking; thus, the over 5,000 falses each year.

The powers that be recognize that something will have to be done. One of the solutions being offered is to require every plane to have an extra receiver that is crystal-controlled to the ELT frequency. This way, if they had a false in their plane, they would hear it and could turn it off. In theory, this would save millions of dollars and countless hours of SAR activities.

Common sense would take a much simpler approach, as we long ago suggested. To have the extra receiver detect the malfunctioning ELT and then convert this RF information to a DC voltage to sound an alarm, is a waste. The ELT transmitter has a "G" switch arrangement that produces a DC voltage whenever the "G" threshold has been exceeded by the proper number of milliseconds. This DC voltage then turns on the transmitter; people now suggest using a radio to convert the ELT RF back to a DC voltage.

Why not add a transistor base to the DC point that turns on the transmitter, so that the transistor switches on when the transmitter does? Using an NPN transistor, you would then have a path to ground whenever the ELT was transmitting. The current required to turn on a transistor or an FET would certainly not make an appreciable difference in the battery life.

Reduced battery life in a real emergency is the main reason for not installing an audible alarm in ELTs at the factory. With the transistor-switched ground, one could have a bell, siren or whatever installed in the plane and powered by the airplane battery. This way, you do not shorten the ELT life, but could have a loud alarm that even a blind person could find — when you have a false activation at an airport. Why convert an original DC level to RF, then RF back to DC? If anyone has an ear in the proper place, why not become a hero and suggest they give a simple answer a try?

Limited satellite hearing

As expected, the satellite ELT listening is limited to the short period when its antenna is relatively line-of-sight. If one had an accident just after the satellite passed by, your plight cannot be identified by satellite until the next one comes into range. At present, that is too long. It is not our intention to say the satellite concept is not good or usable, but it is somewhat like making a trip downtown to use the largest computer available — just to add 2 + 2. One could use their fingers to figure out that 2 + 2 = 4.

So it is with ELT DF and the false alarms. As reported in this column many times, three-fourths of the DFs we have checked in our four years of traveling did not work! Most were improperly installed — some were in backwards, some were not connected to receivers, some had no antennas, some no power, etc. This was sad, since most of the units would have taken a knowledgeable pilot directly to an ELT less than an hour after hearing it. The pilot's find should have been accurate enough to get the ground DF crew to the site in record time.

Known target DF

Many problems of ELT DF (and even jammer hunting) could have been avoided by *practicing on known RF targets!!!* If you could not find a transmitter when you knew where it was, you would know that either the DF wasn't working or you didn't understand how to use it. Trouble is, almost every training I hear of hides a transmitter for training. This way, those who know how (or are lucky) will find the hidden transmitter. Those who most need the help may become dicouraged, or draw some erroneous conclusions from freak situations.

We cannot overstress the importance of practice on known targets. Find the same thing from every compass quadrant. See how objects can deflect known signal paths. Have someone walk between you and the target. Watch what happens when a plane flies between you and a known target. Figure pool table bank shots and see how you can be misled. It can be fun and rewarding. When you become good, the life you save might be mine or Janie's. □

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Stupid question

The front-page editorial in the September issue asks if the FCC is just plain crazy. The Commission ruled in Report 2198 that "Using an amateur station . . . in conjunction with a normal police patrol is prohibited."

I would say the stupidity is more to be sought in those who asked the question. For the most part, the FCC issues rulings because someone asked. And when are we going to get enough sense not to ask?

Actually the Commission could not have been expected to answer otherwise. Consider the facts. There are millions of radio stations using thousands of channels, and the regulators have worked hard to devise some equitable way to allow these channels to be used for the benefit of as many people as possible. All the various services are allocated frequencies throughout the spectrum in accordance with their needs, the amount of communication and the number of stations involved, the urgency of their communication needs, the distances to be covered, propagation conditions, equipment and modes used, and — it must be admitted — to some extent depending on the political clout of the services in question.

The FCC is also constrained by the international allocations made by the International Telecommunications Union, and by allocations made by other agencies of the federal government. I'm sure the FCC won't be offended if I say that the resulting sharing of the spectrum is far from perfect, but it's the one we have to live with, and may well be about the best one possible under the circumstances.

For the distribution to succeed, however, it must be followed and put into effect. So, when Skunk Hollow's fire department decides it doesn't need a radio channel and asks the FCC to assign it instead to the dogcatcher . . . or when the residents of Little Diomede, Alaska, have no taxi service and ask to use taxi frequencies for walrus hunts . . . if the FCC were to adopt a policy of freely granting exceptions, the result would soon be utter chaos. So when someone asks to use a frequency allocated to one service to carry communications properly belonging to another service, the answer will be an automatic no, unless you can show some very special reasons why an exception should be made.

The Police Radio Service has hundreds of channels allocated to it, from medium frequency to microwave — most of them exclusively for police use. Good order demands that they use these frequencies for their normal communication needs. The Amateur Radio Service was not intended to provide communications for police departments, and if it were to become a normal thing, the quality of the communication would in most cases be inferior to that which proper police radio equipment would provide.

One trouble we have with actions of the FCC like this is that we fail to read them carefully. We fail to note the word *regular* in the FCC's definition of business communication, or to note the word *normal* in the present Report.

Normal police communication would be contacts between police personnel in their ordinary operation. It would not include contacts by a citizen to the police to report something suspicious, nor communications by a volunteer crime-watch organization not operating under direct police control. It would not include use of Amateur Radio in a particular case where the police have reason to believe their quarry is listening on the regular police frequencies. Nor would it include the use of Amateur Radio to provide communications in an emergency when their normal communication system is not operating. None of these could be called normal police operations.

The moral is, don't go asking the FCC. Just go ahead and operate if you think it's justified, and especially if you think it's in the public interest. I believe some FCC staffers take the view that it's better to say no to any such questions. It's safer, and maybe it will discourage questions when they already have more work than they can handle.

Nets on the spot

It seems that another stupid question has been asked. Ted Cohen, N4XX, in the August issue of *Signal*, reports that friction between WCARS and a number of HF nets has resulted in Ray Kowalski, Chief of the Special Services Division of the FCC's Private Radio Bureau, announcing plans to open a dialogue between the FCC and the Amateur community regarding the rights and obligations of nets. An official announcement is expected shortly, and may have already been issued by the time this appears in print. One result of the FCC's inquiry may be rules in Part 97 to govern nets in the Amateur Radio Service. Somebody asked for it!

Some issues certain to arise are the right of a net to hold a frequency, whether a band of frequencies around the net frequency should be available for traffic handling, whether domestic phone patching is a legitimate net function (or just a way to avoid paying long-distance charges), and interference to nets and by nets.

Ted reported that Kowalski said that neither he nor others in the FCC's organization have any preconceived positions, but merely want to learn our views, and intend to take them into consideration should the Commission see the need for formal action.

I personally hope this inquiry will spur us on to resolving the problem ourselves without any new rules from the FCC. Rules have a way of restricting the good along with the bad. Here are some suggestions:

Frequency coordination

Back in the 1930's when nets first began, somebody found a bunch of crystals real cheap for a frequency in an amateur band, so a net began on that frequency.

Later, someone wanted to start a net, and found an unoccupied frequency and landed there. The result is that nets are distributed haphazardly throughout the various amateur bands, and it's difficult to find a frequency in the General Class portion of the phone bands that some group doesn't claim.

Add to that contest activity, with somebody scheduling a contest or QSO party almost every weekend, and the poor amateur who wants to get on the air without participating in an organized activity will find himself squeezed out. This is particularly true on the 80 and 40-meter bands. Other bands have at least rudimentary band plans or gentlemen's agreements to concentrate the various types of amateur activity in specific segments of the bands. The only arrangement on 80 and 40, however, is that which keeps RTTY around 3610 and 7290. And these two bands are the ones that support most of the nets and the ones where the friction is most acute.

Contests and QSO parties often have preferred frequencies. For example, the sponsors may say to operate in the neighborhood of 7260 kHz. Such an arrangement will reduce interference with general amateur activity, as well as with nets, unless the net happens to use 7260 as its calling frequency. What is needed is an agreement to confine nets to a specified segment of the bands, with net frequencies coordinated so as to make the best use of that segment, as is done now in the selection of repeater frequencies on VHF.

Better equipment

Some interference is caused by the equipment used, whether for transmitting or receiving. On voice nets, the fault is usually with the transmitting station, whether net or non-net, whose operator over-drives the rig. Some speech processors can cause trouble also. The result is a signal much wider than it has to be, with alligators crawling out on both sides to bite holes in communications a few kilohertz away.

On CW nets, the problem is with both transmitting and receiving stations, net and non-net. Most amateurs these days use sideband transceivers when working CW, rigs that were designed for voice operation, with CW added as an afterthought. Their receiving bandwidth is much wider than needed for CW; often you have to set your transmitting frequency by guess, with no provision made for zero-beating the other station, and in a few rigs the quality of the CW signal leaves much to be desired. As a result, stations using state-of-the-art equipment, with passbands of 100 Hz or so, can communicate easily in conditions where your average transceiver's bandwidth of 2 kHz would pass so much interference that you couldn't even hear the other station.

A net using up-to-date CW gear could operate and cause all kinds of interference to others nearby with broadband receivers and not even be aware there is anyone else around. Such a net, however, would find it hard to accommodate a station with a sideband rig that couldn't put the signal reliably within 50 Hz of the net frequency and keep it there.

The answer here, then, is better equipment and operators who keep their signals clean. Not only net operations will benefit from this; cleaner signals and more selectivity means more room for others, effectively widening our amateur bands.

Courtesy

There is no doubt that there is deliberate interference to nets, but nets often bring it on themselves. Arrogantly ordering interfering stations off the net frequency is asking for trouble. So is starting a net right on top of someone else's operation. Net operators say we have to start at the scheduled time on the scheduled frequency, otherwise nobody will find us, and maybe someone else will start the net at another spot nearby. But if the net frequency is already occupied, the net should move. The best solution is to occupy the frequency some minutes before net time so it will be available when the net starts.

When interference develops during a net, it's for the net control station to do what must be done. If it's someone calling CQ, answer it, and invite the operator to join the net if he wishes. If it's someone calling a particular station, let him make his contact and then arrange to move off frequency.

Perhaps W8XYZ had previously set up a schedule to meet W2ZYX on this frequency at 7:00 p.m., not knowing there would be a net there. Yes, doing this will delay the operation of the net, but will create no hard feelings. Creating hard

feelings can result in much more delay later on, when frustrated operators decide to fight back.

And some go to a lot of trouble to fight back. There are the testers and tuner-uppers, the CQ callers — sometimes this is accidental. But then there are the cat-callers and foul mouths. One station even went to the trouble to play back a tape recording of a previous session right on top of a net.

The only way to fight such spoiled brats is to move. Take advantage of the fact that they can't hear while they are transmitting (something that our net members should remember who shout, "This frequency is in use" while the offender is transmitting). I've done it several times as net control on CW, and have heard it done successfully on a voice net.

On a CW net, I'd send EBN EBN DE K4ZN K4ZN QSY UP 1 QSY UP 1 followed by a string of dots as I moved up the band, then give a net call on the new frequency. Usually the whole net follows and resumes operation on the new frequency with no more interference, at least until the offending station discovers that we have given him the slip and finds us again. But the second time it's even easier, as the net members will be expecting the move back to the original spot, and usually the offending station will get tired of chasing us around and getting no response and go elsewhere to pester someone else.

That's what seems to be the solution. Let us amateurs handle it ourselves without any need for action by the FCC. That's the way it should be done and the best for all concerned.

One objection to nets must be answered, however, and the answer never be forgotten. Objectors say nets cause congestion and additional interference. The opposite is true. If the 20 stations that checked into a net were instead engaging in two-way contacts in the more usual amateur fashion, they would take up 10 to 20 times as much band space. There may be other objections to nets, but band hogs they are not. □

Off the Air

(continued from page 12)

you were driving to another city, to ask a ham there to phone a motel for a reservation. Since Sec. 97.114(c), however, you can't do this. A lot of the time, however, as Horatio said to Hamlet, "it is a custom more honoured in the breach than in the observance."

Of course, the communications involved are always made somehow, if not by Amateur Radio. The FCC rule just makes you mad as you dial the phone and pay for a long-distance call. So far as I know, there have not been any citations of hams for not observing Sec. 97.114(c). Possibly the FCC, knowing full well how shaky is the ground on which this regulation is based, is not willing to take a chance on having it knocked out by a court of law.

I have heard more than one ham remark about the bonanza the telephone company enjoys in toll calls made in overseas phone patching. More money comes into telephone-company coffers that way than by the squeeze put on by Sec. 97.114(c), surely. Can't the telephone company be content with that?

Well, what can we do to get the FCC back on track?

It is too much to expect it to hire radio amateurs for its administrative work; that would be intelligent. We *can* bring pressure on the FCC to change its ways, though. The ARRL has done a fine job of letting the FCC know how amateurs feel about no-code licensing. And you can always write your senators and congressmen. You could even ignore Sec. 97.114(c) and sue the FCC if you got a citation.

Litigation, anyone?

LOUIS HUBER, W7UU
Seattle, Washington □

Cable TV

(continued from page 1)

developed with the mayor and city council, Group W's decision to vacate was finalized after four ham groups read a joint statement into the Council minutes the evening of 06 September. In addition to vacating channels, the mayor and council further directed the city's Cable Administrator to form a standing committee including himself, Group W and ham representatives.

The four ham groups involved in Torrance include the Hughes Aircraft ARC in El Segundo; the South Bay ARC; the South Coast Radio Amateur Network; and the South Coast Repeater Group. With channels E, J, K, WW and XX vacant, with the Council and mayor alerted to the problem, and with a standing committee formed including hams, it is felt amateurs a) have done everything possible to avoid conflicts going in, and b) have established a mechanism to resolve future problems, should any develop. The moral is that it really does pay to establish a ham presence in your community.

For further information, contact Chuck Lobb, KN6H, the president of the Hughes club, at 1843-244th St., Lomita, CA 90717.

**See Worldradio, Year 12, Issue 1, July 1982 (front page)* □

• People reaching People •
Amateur Radio is what Worldradio is all about.

I have received many notes and letters on various subjects from readers of this column since last April's Dayton Hamvention. As I did last year about this time, I will devote an entire column to your thoughts and concerns in the near future.

Two questions regularly appear in your letters, and I'll answer both now. Many of you have asked when and where I operate SSTV. I live in Michigan, and therefore I am in the Eastern time zone.

Generally, each weekday morning I am on 14.230 for one to two hours. I am also on during my lunch hour, 12:00-1:00 p.m. Eastern time. On rainy days, I'll occasionally get on a little in the afternoon. I try to be around an hour or two each evening. I am mostly on 14.230, but regularly check 14.340 as well as 10 and 15 meters. I try to make the SSTV nets each Saturday and maybe work some SSTV before and after these nets. On Sundays, I operate a little each afternoon.

The second most-asked question in your letters is how I can be on the air so much. Totaling up the hours listed above adds up to 20-30 hours each week that I am on. However, this is monitoring time, not operating time.

I am a semi-retired consultant and have an office in my home. My shack is in my office, and I listen on the SSTV frequencies while working. My actual SSTV operating time each week might add up to eight to 12 hours. Other than SSTV, I keep a few regular schedules with friends and operate a little RTTY.

As we get more into the fall and winter, I hope to be on 10 meters during the day and 20 meters in the evening. There should be some good days on 10 this winter. Maybe 15-meter SSTV will pick up? I have never found much SSTV activity on 21.340.

Robot 800C

The Robot 800 has for years been considered mainly a RTTY TU. It is quite versatile, however, and can send and receive CW plus generate SSTV graphic characters. The Robot 800 has been upgraded and improved and is now available as the Robot 800C. A retrofit kit is also available to upgrade Robot 800s with the new features of the 800C.

The 800C is the first of the new Robot Research products unveiled at Dayton to be available to hams. 800Cs and 800C retrofit kits have been available since mid-August.

If you are thinking of upgrading your 800 with the 800C retrofit kit, you will find the conversion quite easy if you have done any soldering. The main circuit board of the 800 is removed and a 50 pin connector is soldered to the 800 circuit board.

Obviously, the original 800 board was designed with expansion in mind, because the holes and traces for the 50 pin connector are already on the board. The 800 board is reinstalled and a 800C board, supplied wired and tested, is plugged into the 50 pin connector on top of the 800 board. Some minor rewiring of power supply connections and connections to output jacks completes the conversion. A supplied ribbon cable is plugged into the 800C board and hung out the back for a parallel printer interface.

800C features and operation

Some of the features of the new Robot 800C for RTTY include an expanded transmit buffer of 1,023 characters; 730 characters when operating split-screen. There are 10 programmable 64-character message memories. These 10 memories can be used separately or linked together for a total of 640 characters of messages.

There is on-board battery backup for all programmable memories so they will not be lost when power is off. Both serial and parallel outputs for printers are provided so that hard copies of both transmitted and received CW and RTTY can be made at baud rates from 150-9600.

There are two SSTV modes on the 800C. Mode 2 is the old 800 SSTV graphics mode and will work with any Robot scan converter. Mode 1 is the new color SSTV graphics mode and will only work when the 800C is attached to a Robot COLOR scan converter. For the old Mode 2, crystal-controlled audio FM SSTV is output. In Mode 1, serial data is output to the color scan converters, where the graphic character set and colors are located.

There are eight full-screen color graphic programmable memories protected by battery backup. Each screen can have 48 characters (six lines of eight) or 24 characters (three lines of eight). Each character, as well as the block each character is in, can be assigned any one of eight colors. In addition, any character block may be made transparent. This is useful in overlaying graphics on SSTV pictures.

With eight different character colors and eight different background colors, graphic screen possibilities are endless, and some interesting video can be produced. Quite a bit of time can be spent in composing a colorful graphics screen. It can then be stored in one of the eight memories and recalled for transmission at any time. With the use of the transparent background character block, you can store a transparent screen in memory with just your name or call sign on it, and quickly overlay it on a picture in memory in your color scan converter.

In August, about a week after 800C retrofit kits were shipped, Robot Research started shipping 400C retrofit kits to dealers. The 400C kit upgrades the old Robot 400 to color SSTV. As of this writing (early September), several people have installed the 400C kit and have been on the air transmitting the new Robot 12-second single-frame color SSTV.

More on this and the new Robot equipment in upcoming columns.

QSL bureau for all USA

Laryl Berry, KM7Z

Did you know that there is one QSL bureau that handles all 10 call areas, both incoming and outgoing QSLs, and it's FREE?! Do you know any of the following listed calls? The bureau has unclaimed cards for these and more:

N1BRH	NR4F	KA6IZQ	W8IDM
W1DHZ	KA4JVM	KA6LXH	W8JLH
W1ERV	KV4N	KK6M	WA8LKI
WB1GQR	K4RJS	N6MB	WA8MAM
K1PR	WB4SKI	K6MZW	WD8MNV
KA1UA	KC4SO	KA6NAN	KM9D
W1YA	KA4VIW	K6SE	KJ9R
W1YK	KA5ALN	W6YX	W9ZRX
KA2FQD	W5FOY	KA7CDG	KA0CFI
KB2FX	WB5FWN	N7COV	N0CNV
K2KMC	KY5P	K7EFA	WD0DSW
KA2NYQ	WB5SZO	WA7KGY	KM0E
K2SWP	N6AHA	KA7LTU	AD0M
W3KBG	W6BVM	AJ7O	KA0MJI
NR4A	N6CWR	WB7TBM	KG0N
K4CG	WD6DET	K7TBT	AC0W
KM4F	K6HIII	KE7V	W0ZRT

U.S. QSL Service, Inc. — also known as USQS/KM7Z — is that bureau. Available to everyone, the service offers one location through which you can send and receive your QSLs. Cards going into the bureau should be for USA hams (or stations who specify KM7Z); however, the cards may come from domestic or DX stations. Example: if you work HH2WL, your QSL will be sent through KM7Z.

To claim QSLs, please keep several self-addressed stamped envelopes (SASE) on file. A 5" × 7" or #10 size is best, with your call in the upper left corner. Clubs, families or friends may all receive cards in the same envelope; just list the calls you wish to receive cards for (clubs send roster of those who attend meetings).

There is no charge for any of the services that USQS provides. If you would like us to provide the stamps and envelopes for your SASEs please send

(*please turn to page 40*)

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

Computer Interface

MFJ introduces its new Computer Interface. This unit lets you use your personal computer as a computerized full-feature RTTY/ASCII/CW station for sending and receiving.

The MFJ-1224 allows you to transmit and receive RTTY and CW when used with your transceiver. During reception, the 1224 converts the CW or AFSK tones from your receiver into computer-compatible TTL level signals. The computer then translates these signals and displays them on the screen.

In the transmit mode, the computer generates the signals which are converted by the interface into AFSK tones from RTTY or into CW keying for CW transmission.

The unit copies on both mark and space. It also contains an automatic noise limiter that helps suppress static crashes for better copy, and a demodulator that maintains copy even on a slightly drifting signal.

A sharp eight-pole active filter for 170 Hz shifts and allows good copy under crowded, fading and weak signal conditions. It uses FET input with optional amplifiers.

A 2 LED tuning indicator makes tuning fast and easy. Once tuned in, the interface allows you to copy any shift (170, 425, 850 Hz and all shifts between and beyond) and any speed (5 to 100 wpm on RTTY/CW and up to 300 baud on ASCII). There is a Normal/Reverse switch that eliminates retuning while stepping through various RTTY speeds and shifts.

High voltage grid block and direct outputs are provided for CW keying of your transmitter. A CW transmit LED provides for visual indication of CW transmission. There is also an external hand key or electronic keyer input jack.

DC voltages are IC-regulated to provide stable AFSK tones and RTTY/ASCII/CW reception.

Phase continuous AFSK transmitter tones are generated by a clean, stable EXAR 2206 function generator. Standard space tones of 2125 Hz and mark tones of 2295 and 2975 Hz are generated.

A set of microphone lines are provided for AFSK ground, AFSK out, PTT out and PTT ground.

FSK keying is provided for transceivers with FSK.

A +250VDC loop output is available to drive your RTTY machine. A convenient speaker output jack is also available.

The interface plugs between your rig and your VIC-20, Apple, TRS-80C, Atari, TI-99, Commodore 64 and most other personal computers.

The MFJ-1224 uses Kantronics software, which features split-screen display, 1024-character type ahead buffer, 10 message ports (255 characters each), status display, CW-ID from keyboard, Centronic type printer compatability, CW send/receive 5 to 99 wpm, RTTY send/receive 60, 67, 75, 100 wpm, ASCII send/receive 110, 300 baud, plus more.

In addition to the Kantronics compatible socket, an exclusive general purpose socket allows interfacing to nearly any personal computer with most appropriate software. The following TTL compatible lines are available: RTTY demod out, CW demod out, CW-ID input, +5VDC ground. All signal lines are buffered and can be inverted using an internal DIP switch.

The MFJ-1224 Computer Interface is housed in a black aluminum cabinet with brushed aluminum front panel. It measures 8″ × 1¼″ × 6″.

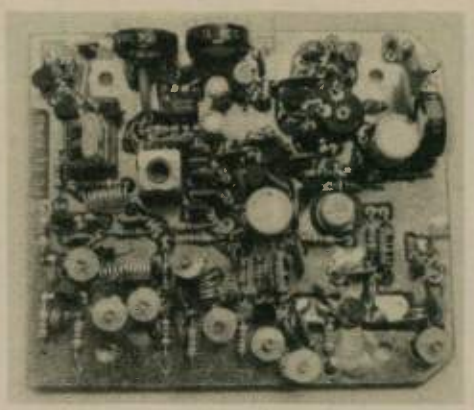
MFJ provides a 30-day money back trial period, if purchased from MFJ Enterprises. If you are not satisfied, you may return the unit for a prompt refund (less shipping). A one-year unconditional guarantee is also provided.

The MFJ 1224 RTTY/CW/ACII Computer Interface is available from MFJ Enterprises INC. for $99.95 plus $4 for shipping and handling. To order, call TOLL FREE 800-647-1800 and charge it to your Visa or MasterCard, or mail check or money order to MFJ Enterprises, INC., P.O. Box 494, Mississippi State, MS 39762. □

ATV kreepie-peepie

You may want to call it a handie-lookie rather than a kreepie-peepie, as they did during the 1964 Republican Convention, when the first cordless TV cameras were extensively used. P.C. Electronics has come out with a 1 watt UHF ATV transmitter module board which will allow you to do the same thing for Amateur Radio portable applications using any portable consumer color TV camera.

When mounted in an aluminum box that is mounted above a portable color camera, the Model KPA5 allows freedom to move around to catch all the action at parades, races and other public service events. If you are into videotaping, you won't have to lug around a portable VCR. In fact, a standard AC-powered home VCR can be used with just an ATV downconverter ahead of the tuner set to channel 3.



DX depends a lot on antennas, terrain, etc., but up to a mile is typical under most conditions, and 50 miles has been done from an airplane. For base station use or higher power mobile, it can easily be matched to the Mirage D24N amplifier for 40 watts output. Other applications include video from R/C model airplanes, robots, computer video, weather radar video, or practically any case where cables become too long for composite video from any source.

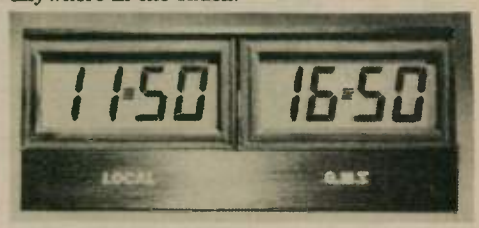
The KPA5 is a wired and tested board capable of full color and sound. Output is a nominal 1 watt PEP of amplitude modulated RF with standard 4.5 MHz sound subcarrier into 50 ohms. It comes standard with one crystal on either 439.25 (east), 434.0 (west) or 426.25 MHz. Two channels are available with the addition of a second crystal and external spst switch. Inputs are: composite video from a camera, VCR, or computer, low Z microphone, and line audio from a VCR, camera mic, or computer. Power requirement is 13.8VDC at 280mA. Board size is only 4″ × 3.25″.

Price of the KPA5 board is $159, delivered in USA. Additional crystals are $15 each. Buyer must hold a Technician Class or higher amateur license to operate or purchase from the manufacturer. For more information or a complete catalog of ATV products, call or write P.C. Electronics, 2522 Paxson Lane, Arcadia, CA 91006; (213) 447-4565. □

BIG HAM CLOCK

BHC, Inc. has just introduced their BIG HAM CLOCK. The BIG HAM CLOCK represents the latest state-of-the-art large liquid crystal display clocks in small packages. The clock has two large 5/8″ tall LCD modules. One for local time (12- or 24-hour type) and one for GMT. Each clock module can be programmed for your desired combination of: month/day, hours/minutes, seconds, and set to WWV (hack).

Each of the big modules will run one to three years on the replaceable battery. Both modules are mounted in a nice-looking, black anodized desktop frame that looks good just about anywhere in the shack.



The BIG HAM CLOCK is available from Amateur Radio dealers and distributors or, if they don't have them, order direct from BHC, Inc., 1716 Woodhead, Houston, TX 77019. Price is $29.95 each, plus $1.50 shipping. □

FM mobile transceiver

The IC-120 is a 1.2 GHz FM mobile transceiver, covering 1260 to 1300 MHz. This unit is styled similarly and has features similar to the IC-25A/H series of 2-meter transceivers, and has many common features. Duplex split is variable, but is initiated at 20 MHz when the unit is first turned on. Duplex up and down as well as scanning features are offered. Power output is 1 watt. ICOM is the first to offer the hams a full-featured mobile transceiver for this mostly unused band. Suggested retail is $499.

For more information, write to ICOM, 2112-116th Ave. NE, Bellevue, WA 98004. □

1.2 GHz repeater

To complement ICOM's entry into the 1.2 GHz amateur band with its IC-120 mobile transceiver, ICOM is announcing the inclusion of a 1.2 GHz repeater in our equipment line. This repeater will have a power output of 10 watts, CTSCC capability, IDER and DTMF control. The RP1210 is synthesized to be complementary to the IC-120 transceiver, and has a duplex split of 20 MHz. Price and availability of the RP1210 will be announced shortly.

For more information, contact ICOM, 2112-116th Ave. NE, Bellevue, WA 98004; (206) 454-8155. □

1983 North Carolina QSO Party

The Alamance ARC announces the 1983 North Carolina QSO Party, to be held 12-13 November, 1700Z Saturday through 2359Z Sunday.

Frequencies: (Phone) 28.580, 21.380, 14.280, 7.280, 3.980; (CW) 60 kHz up from lower band edge; (Novice) 20 kHz up from band edge.

Exchange: North Carolina stations give signal report and county; non-North Carolina give signal report and ARRL section. Work mobile stations as they change counties. North Carolina stations may work each other for point credit only.

Scoring: North Carolina stations count 1 pt. per QSO and multiply by number of ARRL sections worked, others count 2 pts. per QSO and multiply by number of North Carolina counties worked (max. 100). Add 25 pts. to final score for working club station K4EG.

Awards: Highest score from in and out of state will receive a set of 1984 Callbooks; high score in each ARRL section will receive certificate.

Mail logs to F.R. Ashley, WB4M, Rte. 1, Box 471, Mebane, NC 27302. Logs must be received by 16 December 1983. Send large SASE for results. □

Delaware QSO Party

The Delaware ARC will be sponsoring the annual Delaware QSO Party on 12-13 November. Operation time will be from 1700 GMT, 12 November, to 2300 GMT, 13 November. Stations may be worked once per band and per mode for QSO and multiplier credits.

Exchange: QSO number, RS(T) and QTH. County for Delaware stations, ARRL section or country for others.

Suggested frequencies: CW — 1805, 3570, 7070, 14070, 21070, 28070; SSB — 1815, 3975, 7275, 14325, 21425, 28650; Novice — 3720, 7120, 21120, 28120.

Scoring: DE stations score 1 point per QSO. Multiply total by the number of ARRL sections and DX countries worked. Others score 5 pts. for each Delaware station worked. Multiply total by the number of Delaware counties worked on each band and each mode (maximum of 36 multipliers possible). There are three Delaware counties — Kent, New Castle, Sussex.

Awards: Appropriate awards will be given to top scorers. In addition, a certificate will be awarded to all stations working all three Delaware counties. If you work all three counties and want the "WDEL" award, send two 20-cent stamps and an address label.

Mailing deadline for logs is 16 December. Mail to: Charlie Sculley, AE3H, 103 E. Van Buren Ave., New Castle, DE 19720. Send an SASE for a copy of the results. □

New Products

TS-930S cascade kit

In the UIRC (Users International Radio Club) TK Newsletter #81 page 4, Harrison Clark, KA2R, showed how the FT 2.1 kHz filters improved selectivity. The modification works well, but does not add the versatility of being able to switch back and forth between the original Kenwood crystal filters and the newly added ones. Also, some question exists regarding transmit audio quality using the 2.1 kHz filters. For some users, the transmit audio will be good, but for others — because of voice characteristics or microphones, etc. — the audio quality may sound slightly restricted. Finally, the mod requires complete removal of the entire Signal Unit PC board. Removal of this board is not for the beginner, by any means.

We now have a TS-930S 2.1 kHz cascade kit that basically works as described in the February issue. But it has all of the above bells and whistles, and does not require removal of the large signal unit PC board.

The kit features two matched 2.1 kHz 8-pole crystal filters (8.83 and 455 kHz), two diode switching boards with relay, all parts and instructions. This modification is done without removal of the large Signal Unit PC board which is the large board in the bottom of the 930. All soldering is done from the top of the PC board; no tuning of any kind is required, and no insertion loss will be noted. In fact, because of the reduced bandwidth, you will notice about a 2-3dB decrease in noise floor and an increase in sensitivity. Of course, the main improvement will be in selectivity, from 2.7 kHz at 6dB to 2.0 kHz; and from 4.0 kHz at 60dB to 2.5 kHz. You will also notice the slope tuning controls are much more effective with the narrower filters switched in.

We provide instructions on modifying the 930 Dim Switch, which will then become the wide-narrow SSB switch, (the S-meter and display can be hard wired bright or dim).

After the installation of this modification, the Dim Switch or the added switch will allow you to select back and forth between the original Kenwood filters or the newly added 2.1 kHz filters. The Kenwood filters will automatically be switched back into use during transmit to preserve the original Kenwood transmit audio quality. This modification will not change your transmit audio quality in any way. In CW mode, you may also select the narrower SSB 2.1 kHz filters for improved CW reception.

The kit is available only through the UIRC for $190 plus $3 shipping and handling. This kit will require good soldering skills and the knowledge of locating parts and components on printed circuit boards. Installation time is about two hours.

Oh yes, we asked a Kenwood spokesman at Dayton how this modification would affect the 930 one-year warranty. The answer was — as long as the modification did not interfere with the operation, they would ignore it and repair the unit under warranty. For example, if your 930 is under warranty and is modified as above, and the final transistor fails, *Trio Kenwood would replace the finals under warranty.*

For more information, contact UIRC, 364 Kilpatrick Ave., Port St. Lucie, FL 33452; (305) 335-5545. □

USQS

(*continued from page 37*)

name, call, address and $1 for each four SASEs you would like to have put on file. When sending QSLs out to stations you have worked, put the cards in call area groups 0-9, and if there are many, please sort each area alphabetically by suffix. Again, there is no charge for using this bureau; it is made possible by donations from those who wish to help.

Donations are very much appreciated and *needed*. There are costs involved in printing flyers, postage and envelopes for complimentary mailings that are made almost daily. No payment is made to anyone for working on the bureau; all donations go to further the flow of cards so this bureau will continue to work better. Please help by sending in donations, SASEs and by telling friends about the bureau.

This service has been operating for almost four years now, and is still struggling to be well known. If you belong to a club, suggest that an SASE be put on file for club members (outgoing QSLs may be sent in from group as well). Include info in club newsletter, and perhaps the club would consider a donation.

There are many, many unclaimed cards on file — too many to mail out complimentary, but we are trying. If you have not already sent an SASE for our file please do so today. Include your call on all correspondence. For cards and/or further information — USQS/KM7Z, P.O. Box 814, Mulino, OR 97042. For larger packages that you wish to send via UPS (like after Field Day, California QSO Party, etc.) — USQS/KM7Z L. Berry, 15871 So. Howards Mill Rd., Mulino, OR 97042.

As winter approaches and we find ourselves on the air, don't forget to QSL . . . the easy way . . . via KM7Z. This station is active on all bands at most any hour, hope to see you! 73, Laryl Berry, KM7Z □

●●●

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

DX World

(*continued from page 25*)

Ross says that any station signing this call other than the above dates should be questionable. As of now, there is a six-month waiting period when applying for a license in French Polynesia.

QSL routes

A4XGY	—K2RJ	C30XB	—EA3ALC
A4XJO	—WB3JRU	C31WE	—F6ARI
A6XJC	—WB3CQN	CE0ZAD	—WB6WOD
A71AU	—DJ9ZB	CN9CL	—DL0OI
A71BJ	—G4HNP	CN9CM	—DL0OI
AH9AA	—KW6HF	CN9CN	—DL0OI
C6ADJ	—DJ2BW	CN9CO	—DL0OI
C30LAB	—EA5AQX	CN9CP	—DL0OI
C30LAE	—EA3CRX	CQ4NH	—W3HNK
C30LAI	—EA3BKZ	CR4NH	—W3HNK
		CS2FE	—CT1BWY

CS4NH	—W3HNK	OH0TTY	—OH2AA	JY5HY	—P.O. Box 1977, Amman, JORDAN
CT4NH	—W3HNK	OJ0MA	—OH0NA	JY9CZ	—P.O. Box 2353, Amman, JORDAN
CU4NH	—W3HNK	OK2WCY	—OK2KGV	KC6HA	—P.O. Box 221, Koror, Palau, WCI 96940
CU6FSJ	—CT1ARE	OK3TAB/ D2A	—OK3ALE	KC6IN	—P.O. Box 296, Ponape, ECI 96941
D68AR	—F6ACB	OK0WCY	—OK2KGV	KD7P/ KH2	—P.O. Box 2124, Everett, WA 98203
DF3GX/ VP2V	—DF3GX	OX3WJ	—OZ7BW	KX6AJ	—P.O. Box 1464, APO San Francisco, CA 96555
DF9FM/ 5N8	—DF9FM	OZ4CHR	—OZ4DZ	KX6OD	—P.O. Box 765, APO San Francisco, CA 96555
DL5KAT/ 3D6	—DL5KAT	P29KY	—JR1WMT	N2ATR/ 4X	—P.O. Box 570, Jerusalem 91056, ISRAEL
DL7NS/ HB0	—DL7NS	P41C	—WB3JRU	OD5AS	—P.O. Box 121, Tripoli, LEBANON
ED9IAL	—EA9JV	PA0GRI/ OD	—PA0 Bureau	OD5NW	—P.O. Box 182, Beirut, LEBANON
EH3ITU	—EA3AOC	PJ2CC	—WB3JRU	OD5ZF	—P.O. Box 135892, Beirut, LEBANON
EI8EK	—WA9AEA	PJ8I	—N8II	P29KSA	—P.O. Box 50, Ukurampa (via Lae), PAPUA NEW GUINEA
EK1NBR	—UA1NBR	R2PR	—UP2BFE	PZ1DT	—P.O. Box 2163, Paramaribo, SURINAM
EK9D/1	—N8ACA	S79ARB	—WA2PPN	PZ1DV	—P.O. Box 9006, Paramaribo, SURINAM
EL2AD	—WA3HUP	SM5AHK/ OH0	—SM5AHK	SV8RV	—P.O. Box 48, Zante Island, GREECE
F0FWW/ FC	—OE31BW	ST2SS	—YU2DX	T2ADE	—P.O. Box 5, Funa Futi, TUVALU
F0GVU/ FC	—DF9KY	SV0CTI	—N4AXT	T2GSH	—P.O. Box 40, Funa Futi, TUVALU
FB8WI	—F6GXB	T30AT	—G3XZF	T30BL	—P.O. Box 498, Betio, Tarawa Atoll, KIRIBATI
FG0DDV/ FS	—W2QM	T32AB	—N7YL	TA1AM	—P.O. Box 31, Istanbul, TURKEY
FG0HUL/ FS	—N3CQM	TE32CCC	—TI2CCC	TA2MES	—P.O. Box 11, Baglarbasi, Istanbul, TURKEY
FG0HVL/ FS	—F6AJA	TJ1KR	—DJ9HR	TG9VT	—P.O. Box 296C, Guatemala City, GUATEMALA
FK8CE	—K2ROR	TL8CK	—F6EWM	TR8JLD	—P.O. Box 484, Libreville, GABON
FM0HVL	—F6AJA	TL8ER	—F6GQK	UK4WAE/ U9G	—P.O. Box 15, Ishevsk 426064, USSR
FM0VG	—DJ0FX	TN8EE	—F6ECX	VK3WCY	—P.O. Box 87, Mitcham 3132, Victoria, AUSTRALIA
FO8IW	—K1CC	TO6AXP	—F6AXP	VR6KB	—P.O. Box 11, PITCAIRN
FO0JO	—W6GO	TR8DR	—W2PD	VS5GF	—P.O. Box 914, BSB, BRUNEI
FO0OJ	—K6HHD	TR8DX	—WA4VDE	XQ5BIB	—P.O. Box 1134, Concepción, CHILE
FP0HOQ	—NS4M	TR8SDP	—F8BC	YB5OD	—P.O. Box 179, Rumbai, W. Kalimantan, INDONESIA
FY0HIG	—DK5GB	TS8WCY	—IS0LYN	YC2CEV	—P.O. Box 187, Surabaya, INDONESIA
G4DUW/ DU1	—RSGB	U3WKB	—UK3WAA	YJ8TT	—P.O. Box 162, Espiritu Santo, VANATU
G4JMB/ CT3	—KB2XS	U3WP	—UK3WAA	YN1MAT	—P.O. Box 1474, Managua, NICARAGUA
GB1BOY	—G4AAL	UK1PGO	—UK3SAB	YS1GMG	—P.O. Box 2067, San Salvador, EL SALVADOR
GU5BLG	—DL4FF	VK9WCY	—VK9NS	YS1GMV	—P.O. Box 1557, San Salvador, EL SALVADOR
H5ADX	—ZS6J	VK0GC	—VK3RK	YS1OD	—P.O. Box 1300, San Salvador, EL SALVADOR
H5AE	—ZS Bureau	VP2KBH	—K8EFS	ZB2CF	—P.O. Box 292, GIBRALTAR
HB0CIQ	—HB9CIQ	VP2KBJ	—K8EFS	ZK2IK	—P.O. Box 37, NIUE
HB0LL	—DJ9ZB	VP2KBK	—K8EFS	ZK2JS	—P.O. Box 37, NIUE
HC1BP	—K4SQT	VP2KBM	—W4UY	ZK2RS	—P.O. Box 17, NIUE
HG2ROB	—HA2KSD	VP2MIU	—AB1U	3B8FK	—P.O. Box 1080, Port Louis, MAURITIUS ISLAND
HI8LC	—W2KF	VP8ALD	—G4CHD	3D2DB	—P.O. Box 3722, Suva, FIJI
HL5BGB	—DJ9NB	VP8AQU	—K0JW	5H4TM	—P.O. Box 429, Mbeya, TANZANIA
HP1XEK	—DL1HH	VQ9JD	—N6AFD	5N2LED	—P.O. Box 4587, Kano, NIGERIA
HP1XJC	—NR4V	VU2JXO	—WA3TLB	5N7BJG	—P.O. Box 261, Jos, NIGERIA
HP3JRP	—K4WVX	W3TB/ TF	—W3IVG	5Z4CY	—P.O. Box 42039, Nairobi, KENYA
I2DMK/ IA5	—I2MQP	W9LNQ/ 6Y5	—W9LNQ	7P8CM	—P.O. Box 949, Maseru, LESOTHO
I2DMK/ IG9	—I2MQP	WB3JRU/ KV4	—WB3JRU	8P6OM	—P.O. Box 141, Bridgetown, BARBADOS
I8UDB/ ID8	—I8UDB	XF1AD	—XE1AD	9V1UD	—Blk 148, 903-A, Toa Payoh, SINGAPORE 1231
J39BS	—WB2LCH	XU1KC	—JA1HQG	9V1VB	—19 Toh Heights, SINGAPORE 1750
JA1LW/ 5N0	—JARL	XU1PV	—JA1HQG	9V1VP	—Bob Furzer, 12-01 Naga Court, 355 Bukit Timah, SINGAPORE 1025
JD1BAE	—JG3KAB	XU1SS	—JA1HQG	9V0OK	—P.O. Box 2728, SINGAPORE
JD1BBR	—JA7AGO	Y83ANT	—Y44ZK	9X5LR	—P.O. Box 5, Ruhengeri, RWANDA
JX6BAA	—LA7JO	YB5AES	—W4BBP	9Y4BA	—P.O. Box 1167, Port of Spain, TRINIDAD
JY8OC	—F6BOC	YB8ARM	—PA0EBC		
JY9TS	—WA3HUP	YB0ADJ	—KA6N		
K4DY/ SV5	—K4DY	YS1TSB	—SM7TSB		
K4JPD/ C6A	—K4JPD	YT3T	—YU1EIJ		
K8MFO/ OH	—W8TPS	ZD7LM	—W4FRU		
KA4BFT/ HP1	—KA4BFT	ZD7WT	—ZD8TM		
KA4JRY/ DV9	—KA4JRY	ZD8FX	—G3VBY		
KD7P/ KH2	—KD7Z	ZD8LM	—ZD8AR		
KG4AW	—KA4TAY	ZD8RB	—W8LCZ		
KH6LW/ KH7	—KH6JEB	ZD8YH	—ZD8AR		
KH0AC	—K7ZA	ZF2FF	—WB3JWJ		
KX6OR	—AD1S	ZF2FM/ V2A	—K2SHY		
KX6PO	—W4FRU	ZF20HC	—K4BWV		
LA2WW/ 9L1	—N0AFW	ZK1AR	—WB6HGH		
LA5YQV	—I0YQV	ZP5XDW	—N4DW		
LU4MDR/ Z	—LU7MAY	1Z9A	—W7PHO		
LX0WCY	—Bureau	3B9FK	—3B8FK		
N9ALC/ 6Y5	—N9ALC	3D2TI	—JA1FBD		
OA3AK	—W8AVH	3V8AA	—IS0LYN		
OD5LX	—SM0DJZ	3X4EX	—N4CID		
OH0AM	—OH2BH	4K1F	—UQ2OC		
OH0PA	—OH1PA	4T3S	—OA4CIT		
		4U1UN	—W2MZV		
		4X6DF	—KC2MS		
		5N1OL	—N0AFW		
		5N3RTF	—DK2IF		
		5N6WCY	—K6EDV		
		5T5RY	—F6FNU		
		5Z4CQ	—KA7KSY		
		5Z4CT	—JA0CKE		
		5Z4DR	—YU3TU		
		5Z4LW	—LA2UA		
		6W8DS	—WA4VDE		
		6W8HL	—WA4VDE		
		7P8CQ	—DJ5CQ		
		7P8CT	—DL2CI		
		9J2BO	—W6ORD		
		9K2EZ	—PA0NCV		
		9V0VM	—WB0TEC		
		9X5AL	—SM5IB		

A92DW	—P.O. Box 30100, Duraz, BAHREIN
C21BD	—P.O. Box 225, NAURU
C21RK	—P.O. Box 139, NAURU
CE0FQU	—Box Entel, Easter Island, Chile
CN4DKH	—P.O. Box 299, Rabat, MOROCCO
EA6OK	—P.O. Box 295, Palma de Mallorca, SPAIN
EA9NW	—P.O. Box 195, Ceuta, SPAIN
EJ0ARS	—P.O. Box 938, Dublin, IRELAND
FG7BM	—P.O. Box 1249, Pointe a Pitre, GUADELOUPE
FG7CM	—P.O. Box 42, Pointe a Pitre, GUADELOUPE
FK8EJ	—P.O. Box 672, Noumea, NEW CALEDONIA
FK8KAA/P	—P.O. Box 190, Bourail, NEW CALEDONIA
FM7BX	—P.O. Box 152, Fort de France, MARTINIQUE
FM7WD	—P.O. Box 879, Fort de France, MARTINIQUE
FO8BI	—P.O. Box 5924, Tahiti, FRENCH POLYNESIA
FO8FO	—P.O. Box 8053, Tahiti, FRENCH POLYNESIA
FR0GGL G5DBD/	—P.O. Box 386, St. Pierre 97410, FRANCE
VS6	—P.O. Box 541, Willernie, MN 55090
H44GP	—P.O. Box 292, Honiara, SOLOMON ISLANDS
HL9TI	—PSC Box 2611, APO San Francisco, CA 96366
J73BB	—P.O. Box 389, Roseau, DOMINICA
J73YB	—P.O. Box 266, Roseau, DOMINICA
J87BS	—3 Chesterfield Hill, London W1, ENGLAND
JT1AS	—P.O. Box 639, Ulan Bator 13, MONGOLIA

Contributors this month include 9M2DW, W6GO, K6HHD, WB6GFJ, KH0AC, K6JG, W9LNQ, N9ALC, VK9NS, W7YS, the Southern California DX Club, the Northern California DX Club, the Redwood Empire DX Association, the Western Washington DX Club, the Kansas City DX Club, the Stark DX Association, the Northern California DX Foundation, the Heard Island DX Association, *RTTY Journal*, *The Long Island DX Bulletin*, The *DX Bulletin*, and *DX News Sheet*.

This fall we enrolled our youngest daughter in a local Christian school as we were not too pleased with the local public school. During the first week of school she came home with the assignment to find in the Bible where it says that the world is round. My first reaction was that it isn't in the Bible at all. Well, it is, and says, "It is he who sits above the circle of the earth". Check Isaiah 40:22 and see for yourself. This was supposedly what convinced Columbus that the world was indeed round and not flat that the others believed. He was a true believer. And, as in DX, be a believer. Circle signals work DX. Seriously, if the world was flat, there would be no long-path. 73 es gl in the circle of DX, de John, N6JM. □

Newsy note

W. Gregg Tyler, N5FFW, of Victoria, Texas, put his newly acquired General Class license to good use on 18 August, when Hurricane Alicia hit southern Texas. Gregg had passed the test eight days earlier in Houston, and hopes to pass the Advanced Class test next time around. □

Indiana

AC-ARTS' (ALLEN COUNTY AMATEUR RADIO TECHNICAL SOCIETY) will hold their 11th Fort Wayne Hamfest at the Allen County Memorial Coliseum on 13 November.

Forums: KA9A on OSCAR; W9NTP on fast and slow scan TV; K9EID on 10 meter FM; audio forums; computer forum; and W9UMH/W9JUJ on traffic handling.

Tickets in advance $2.50 (with SASE); at door $3. Children under 12 admitted free. Deadline for advance tickets by mail is 01 November. Plenty of parking for $1. Tables $6. Premium tables $20.

Talk-in .88 and .52.

For more information, write to: Hamfest Chairman, AC-ARTS, Inc., P.O. Box 10342, Fort Wayne. IN 46851. □

Massachusetts

The HONEYWELL 1200 RADIO CLUB, sponsor of 147.72/12 repeater, and the WALTHAM AMATEUR RADIO ASSOCIATION, sponsor of 146.04/64 repeater, will hold their annual Amateur Radio and electronics auction on Saturday, 19 November, at the Honeywell Plant, 300 Concord Rd., Billerica, Massachusetts. Exit 27 off Route 3.

Snack bar and bargain parts store. Doors open at 10:00 a.m. Free admission and parking.

Talk-in on both repeaters.

For more information, contact Doug Purdy, N1BUB, 3 Visco Rd., Burlington, MA 01803. □

Michigan

The OAK PARK HIGH SCHOOL ELECTRONICS CLUB proudly presents the 14th Annual Swap N Shop, to be held 27 November, at Oak Park High School, Oak Park, Michigan, 8:00 a.m. to 4:00 p.m. East and west doors open at 6:00 a.m.

Admission is $2. All 8 ft. tables $6. Door prizes and refreshments.

For more information, send SASE to: Herman Gardner, Oak Park High School, 13701 Oak Park Blvd., Oak Park, MI 48237; or call (313) 968-2675. □

New York

RADIO CENTRAL ARC presents the 5th Annual "Ham-Central" — an all-inside flea market and hamfest. The 'fest will be held Sunday, 27 November, 9:00 a.m. to 3:00 p.m.; doors open at 7:30 a.m. for sellers and dealers. Location will be the main social hall of Temple Isaiah, 1404 Stony Brook Road, Stony Brook, Long Island.

General admission $3 (XYL and kids under 12 free). Tables (8 ft.) $7; bring own tablecloths. Ham-related items *only*. Featured will be two seminars, plenty of door prizes, free parking and refreshments.

Talk-in on 144.550/145.150 and 146.52.

For more information, contact Scotty Policastro, KA2EQW, 80-7th St., Bohemia, NY 11716; (516) 589-2557; or Bob Yarmus, K2RGZ, 3 Haven Ct., Lake Grove, NY 11755; (516) 981-2709. □

Ohio

The MASSILLON ARC, W8NP, will present "Auction-fest 83" on Sunday, 13 November, from 8:00 a.m. to 5:00 p.m. at the Massillon Knights of Columbus Hall, 988 Cherry Rd. NW. Massillon.

Flea market set-up at 7:00 a.m. and auction at 11:00. Advance tickets $2.50; $3 at the door. Tables available for $5 per 8 ft. space. Main prize line-up includes all Yaesu, FT-102, FT-230 and FT-208, plus over 50 door prizes.

Talk-in on 147.78/.18.

Information and reservations for SASE to MARC, 920 Tremont Ave. SW, Massillon, OH 44646. □

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Check your license expiration date.

Pennsylvania

The FOOTHILLS ARC will hold their 15th Annual Hamfest on Saturday, 05 November, at St. Bruno's Church in South Greensburg, Pennsylvania, 8:00 a.m. to 3:00 p.m. Tables are $5 full size, $3 half size. Registration $2 each; three for $5. Free parking. Plenty of good food and refreshments will be available. Prizes, including 50-50 drawing.

Mobile talk-in on 146.07/67.

For advance registration, tables or information, write to FARC, c/o Ron Naviglia, WA3HOL, P.O. Box 236, Greensburg, PA 15601. □

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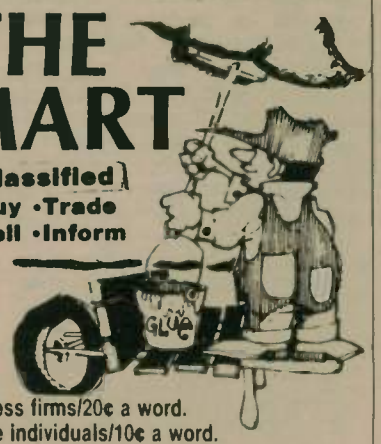
The R.F. HILL ARC will hold its annual "Winterfest" Amateur Radio flea market and exhibit on Sunday, 13 November, at the Sellersville, Pennsylvania National Guard Armory, on PA Route 152, Sellersville. Take Sellersville or Perkasie exits from PA Route 309; location is about halfway between Philadelphia and Allentown.

Indoor sales space is available on site; outdoor tailgating permitted. Refreshments on site, and many good places to eat nearby. Flying hams should land at Pennridge Airport in Perkasie. Buyers $2; indoor sellers $4; tailgaters $3. Door prize and grand prize drawings.

Talk-in on 144.71/145.31 Almont, 146.28/146.88 Souderton, and 146.52 simplex.

For more information, write to R.F. Hill ARC, P.O. Box 29, Colmar, PA 18915. □

THE MART



Classified
•Buy •Trade
•Sell •Inform

Business firms/20¢ a word.
Private individuals/10¢ a word.
Mart deadline/20th of the month.

THE MART *Worldradio*
2120 28th St., Sacramento, CA 95818

FOR SALE: HRO 50T mint $275; HQ 180, $160; Swan 350C and 117XC AC PS, $275; Ten-Tec Argonaut 509, $235; Tempo 2020, $300; Morrow Twins MRB-5 and MB 560A, $100; IC-2AT, $150; KWM-1 s/n 263, needs work as is. All mint to very good. Bob K7EYT (509) 928-0641.

BUMPER STICKER — "My favorite radio station is (your call sign)." Display on car, in shack, anywhere! Nice gift for ham friends. Only $3. ARPRESS, Dept. 10-B, 1556 Hicks Pike, Walton, KY 41094.

TRADE OR SWAP, my CW station. Knight Twins Plus for mobile rig or ?? SASE for reply to Ham Box 46, Mobile, AL 36601.

DYMEK-McKAY DR-22C RECEIVER. Frequency-synthesized 50 kHz-29.7 MHz. Excellent condition. $595. Brad Lentz, KB1IA, 29 Elmwood Ave., Attleboro, MA 02703; (617) 222-6315.

ADVERTISERS' INDEX

AMATEUR RADIO REPAIR: FCC-licensed (1st Class Commercial) Technician. Reasonable rates. Inquire at H-R ELECTRONICS, 722-24 Evanston Ave., Muskegon, MI 49442. Mon.-Fri. 0800-1500 UTC, Sat. 0500-1200 UTC. (616) 722-2246.

KWM-2 ROUND, 516F-2 power supply, Waters notch filter, DX Engineering speech compressor; very clean; $650. K6XE, Box 237, Goleta, CA 93116.

HENRY 2K4 LINEAR w/10 meters, mint condition, $995. Microlog AVR-1 RTTY, Morse, ASCII demodulator and VM-12 video monitor. Good condition, $200. Pick up or FOB. George, K6SG, (916) 944-3838.

FOR SALE: HW-101 with CW filter, power supply, speaker, Shure 444 microphone. Spare set of tubes included. Mint condition, all for $350. WA8IBT (614) 653-5268.

MINI-DXPEDITION: Grand Cayman Island (ZF). 7 nights, arrive 09 January 1984. Luxury 2 bdrm apts. $380 each on island coast. Beautiful beach and food. Running out of time. WB9OTX. Call (812) 689-5960 after 0100Z.

YAESU FT-101EE with processor and CW filter and new finals; excellent condition. YC-601 display, YO-100 scope, landliner speaker/patch and Shure 444 microphone, asking $700 for complete station. Kenwood TS-700A multimode 2-meter base $290. Siltronix 1011D 10-meter base with matching digital display and speaker $425. Call Mike WB7SUY, Reno, NV — (702) 747-6506.

VIC-20 CW RECEIVE PROGRAM on cassette and plans for $10 interface. Receives near perfect CW 5-20 wpm. Fun program, $12.50 pp $12.50 pp. R.C.J., E. 16109 Longfellow, Spokane, WA 99216.

ICOM IC730 w/CW and PBT filters, new mobile bracket, mike, original packing, mint (used twice), $575. Collins KWM-2A (R/E), with 516-F2 supply. Nice condition, $575. Mint Henry 2K-2 80M-10M 2kW linear, pick-up only, $650. Dean (916) 965-1027 days, 965-4904 eves.

FOR SALE — Heathkit Digital Techniques Course with wired trainer, $95. GSC 12V, 20 ft. regulated power supply, $45. Ten-Tec 645 keyer with paddles, $29. Ten-Tec ceramic microphone, $10. Ham-Key squeeze key, $10. Hallicrafter HT37 SSB/CW transmitter needs work, $65. NM6L, Rt. 2, Box 323, Aliso Circle, Bishop, CA 93514.

ATTENTION DXERS! Get your Russian QSLs faster. All local Soviet QSL buro addresses. In two languages. Send $4 to KA2MXO, P.O. Box 715, Brooklyn, NY 11230.

INNOVATIVE DESIGN — 2-meter direction-finding loop, 142-150 MHz, 50 ohm transmits and receives, exceptional null—18dB. Small size 8″ x 5″ x 1″, one degree of arc accuracy. Transmitter hunts, interference, jammers. Low price — $39.95. Accessories available. 14-page manual & direction-finding procedures $3.00. ELECTRONIC SYSTEMS DESIGN, Rt. 3, Box 7644, Show Low, AZ 85901.

FOR SALE: Complete Collins S-Line station 75S-3, 32S-3, 312 B-4 P/S, 516 F/2 station Control, Shure S/L 440 mic. Good condx. K6TST, (408) 624-5496.

ROHN TOWERS — Wholesale direct to users. All products available. Write or call for price list. Also, we are wholesale distributors for Antenna Specialists, Regency and Hy-Gain. HILL RADIO, P.O. Box 1405, 2503 G.E. Rd., Bloomington, IL 61701-0887 (309) 663-2141.

HAVE AM CAPABILITY? Join SPAM (Society for Promotion AM). Membership is free. Write: SPAM, c/o F. Dunlap, 14113 Stoneshire, Houston, TX 77060. -73 de WA5TWF (SASE please).

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.

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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.

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WOW! NEW MFJ 1224 CW/RTTY/ASCII terminal units at $90. Full featured. Works with popular software packages for VIC, C64, Atari, PET, Apple, TRS-80C TI99/4A. Free shipping, VISA/MC, check, C.O.D. AMATEUR ACCESSORIES, 6 Harvest Ct, RD 7, Flemington NJ 08822, (201) 782-1551 after 6 p.m. Eastern.

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TI-99/4A 5BDXCC & 5BWAS LOG-TI basic 2/$17.00 or $9.75 each. DXCC log $8.50 All on cassette. Leon, 2525 Avenido del Pinar. Gautier, MS 39553.

AUTO-CALL KEEPS UP WITH THE LATEST Ham info from Washington, DC area. Subscription $5.00 a year, sample copies $1.00. Address: AUTO-CALL, c/o W2GHK, 2417 Newton St., Vienna, Virginia 22180.

SELL NEW COILS AND VARIABLE CAPACITORS. B&W type 3034 coils, 120uH, $9 each. 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 Onigian, W6QEU, 1236 40th Ave., Sacramento, CA 95822. (916) 392-8964.

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HEATH SB-100 80-10M Transceiver and HP-23 power supply. Works well. $200 + UPS. Brad Lentz, KB1IA, 29 Elmwood Ave., Attleboro, MA 02703. (617) 222-6315.

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