Worldradio

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P O BOX 473
REDWOOD ESTATES CA 95044

Pacific Northwest DX Convention

John Minke III, N6JM
Worldradio DX Editor

The 30th Annual Pacific Northwest DX Convention was hosted by the Fraser Valley DX Club of Langley at the Richmond Inn, just south of Vancouver, British Columbia, the weekend of 31 July to 1 August.

By observing the various badges, the clubs supporting the convention included the Fraser Valley DX Club, the British Columbia DX Club, the Western Washington DX Club and the Willamette Valley DX Club. There were other DXers present, although not members of the above clubs.

Henry Thel, VE7WJ, the Convention Chairman, was there all day on Friday to greet the early arrivals at the hotel. Henry kept the convention running smoothly over the entire weekend and did a fine job. Vic Waters, VE7ALR was the Master of Ceremonies and was worth the price of the convention ticket alone. Those of you who had other plans that weekend missed out not seeing Vic in action with his fabulous wit.

There were four programs Saturday afternoon, each one hour long with two running concurrently. The first two included Peter Driessen, VE7AB discussing the role of computers in Amateur Radio, while in the other room, Stu Hoar, VE7ZZ gave his presentation of the P41C operation in the CQ World Wide DX Contest.

As in many DX conventions, there was a hospitality bar. This one was hosted by the British Columbia DX Club. This also gave the DXers a chance to finish up their QRZ DX Contest that was to end at 6:30 p.m. At registration, everyone who registered, (including non-amateur XYLs), received a sheet of log-type paper with a DX call at the top. The purpose of this contest was to go about asking each other what their DX call was and to record the call, their name and "QSO number," just as in any normal DX contest. The object was to record as many different DX countries during that Saturday afternoon. The winners were announced later.

What was it like to operate P41C?

Stu Hoar, VE7ZZ/N7ZZ presented one of the sessions Saturday afternoon about the P41C contest operation — a multi-multi entry from the Netherlands Antilles in the CQ World Wide DX Contest last October. (Multi-multi is the term used by contesters to signify a multi-operator and multi-transmitter classification.) As Stu is both a DXer and a top-notch contester, he was out to set a new record. He and his crew did just that. Stu's presentation was

(please turn to page 3)

Chip Angle, N6CA at his mobile 1296 MHz station.

New 1296 record — Hawaii to California

Gordon West, WB6NOA

The Amateur Radio 1296 band runs from 1240 MHz to 1300 MHz. It is classified 23cm, and the range is strictly line-of-sight.

At least, that's what some amateurs may think. In Southern California, a group of amateurs feels that signals may travel a great deal farther than "line-of-sight" in this elusive band that is three times as high as 432 MHz.

Friday, 30 July was a hot and muggy day for Southern California radio amateurs. There was little wind, and temperatures hovered in the 90's. It was just the right kind of day for that infamous "California to Hawaii" duct to appear.

Friday afternoon it happened. Weak signals began to appear at 432.075 MHz from Hawaii, indicating that the duct was open. Robert Cook, W6PJA signaled the alert, and several 1296 MHz systems went on the air. At first, nothing.

The rushing receiver noise from the homebrew 1296 MHz equipment changed from a steady roar to audible code. All of a sudden, the code signal peaked, and we heard the Hawaii beacon of KH6HME-Hawaii coming in loud and clear. A new record! 1296 MHz received 5 × 9 over a water path of almost 2,500 miles. This almost doubles the previous Australian record.

There was only one hitch involved with the record being a two-way contact: the beacon operator — Paul Lieb, KH6HME — was here in Southern California on business at the precise time the tropo duct opened up! He was hearing his own beacon at a world's record distance. If conditions would have maintained communications, Paul was all set to fly back to Hawaii for a two-way contact. Unfortunately, a day later, both 1296 MHz and 432 MHz fizzled out between Hawaii and California.

True pioneers

Since there is no commercial radio equipment completely assembled for 1296 MHz, it takes the true ham pioneering spirit to come up on the frequencies. There are several commercial transverters available, but some amateurs prefer to build their own conversion equipment from the ground floor up.

Chip Angle, N6CA; Gary Lopes, WA6MEM; Paul Lieb, KH6HME; Lynn Moeschler, W6KGS; Ed Tice, W6NGN; and Joe Cadwallader, K6ZMW are 1296 MHz experts. Led by Chip Angle, these devoted Southern California amateurs have developed systems with ultra low-noise figures and high sensitivity coupled into loop Yagi antennas. These high-

(please turn to page 4)

ATTN: Repeater enthusiasts

The deadline for registering your repeater for the next edition of the ARRL Repeater Directory is 1 November 1982. Please register your repeater on Form CD 240, available for an SASE, to insure the accuracy of the new edition.

Send all information to ARRL Communications Department, 225 Main Street, Newington, CT 06111.

— ARRL □

Honorable Barry Goldwater
United States Senate
Washington, D.C. 20510

Dear Senator Goldwater:

This refers to your letter of 3 August 1982 jointly signed by Senator Harrison Schmitt. I appreciate the information concerning the Treaty ratification process and your suggestion about immediate action. We have not taken action on the ARRL application for review regarding authorization of the 30-meter band (10.1-10.15 MHz) for the Amateur Radio Service because we were assuming prompt ratification of the Final Acts of the 1979 World Administrative Radio Conference, and we did not intend to initiate the implementation process until after ratification of the Treaty.

In light of your information that the ratification may be delayed and consistent with your view that immediate interim access to the 30-meter band by United States amateurs would be appropriate, I have instructed the staff to revise our approach. Accordingly, in early fall, I anticipate Commission consideration of two related matters. The first will be a Notice of Proposed Rulemaking proposing the implementation of the Final Acts. The second matter will be whether the Commission should authorize early temporary access to the 30-meter band by amateurs, under Section 115 of the Radio Regulations as you suggest. If the Commission were to act affirmatively on both matters, ARRL's concerns would be satisfied.

I appreciate your apprising me of your interest in this matter and I fully support early access by United States amateurs to the 30-meter band. The Commission is anxious to begin the implementation of the Final Acts and I look forward to ratification of the Treaty at the earliest possible date.

Sincerely,
Mark S. Fowler
Chairman, FCC □

FCC moderates proposal

ARRL efforts have led to FCC moderating its proposal to permit inland operation of nongovernment radiolocation stations in the 420 to 450 MHz band. A Report and Order in Docket 80-135 limits such operation to spread spectrum emission only, with a frequency limitation of 420 to 435 MHz, a power limitation of 50 watts, and a requirement for a manufacturer's identifier to be built into the emission to aid in tracking down interference. Conventional pulse ranging systems in the 420 to 450 MHz band will continue to be permitted only in coastal areas. Nongovernment radiolocation must not cause interference to amateur stations.

For more background, see the 'Happenings' column in the September and December 1981 issues of QST.

—ARRL

World Radio History

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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.

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Gathered together for some eyeball QSOs are (left to right) Gul Thadani, VU2GI; his son, Viki; his wife, Usha VU2UGI; James Smith, W7LZA; his wife, Georgia KA7DNF; and Jim Boland, W7GUR.

Visitors from Bombay enjoy United States

Gul VU2GI and Usha Thadani, VU2UGI of Bombay, India, with their 5-year-old son Viki, arrived in New York on 18 June 1982 to visit the United States for a month. Their itinerary included visits with ham friends across the States, the YLRL Convention in Washington D.C. and the YLISSB Convention in Milwaukie, Wisconsin.

Their week's visit in Clatskanie, Oregon was at the home of James W7LZA and Georgia Smith KA7DNF. Weather did not permit a view of Mt. St. Helens, although they did have an enjoyable trip down the Oregon coast. A number of ham friends of Gul and Usha came to Clatskanie for this special visit. Among those friends were Walter Dyke, AA7C; Ron Brunk, KB7SO; Marie Yohe, KC7GV; John Carr, W2NQ; Jim Boland, W7GUR; Jim Catto, WB7SAT; and Elton McCauley, W7GYA — along with XYLs.

Gul is a computer engineer for Swissair in Bombay and Usha is a housewife. Prior to her marriage, Usha was a classical dancer and while in the States, she performed for both conventions she attended. Gul, Usha and Viki left New York for Bombay on 17 July.

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Hjemkomst arrives in Oslo safely

Submitted by Robert McKinley Jr., W2OMR

Phil Petersen, W2DME has taken part in a voyage across the high seas in a Viking ship — without leaving his home in Atlantic Highlands, New Jersey. Via Amateur Radio, he was in daily communication with a crew of adventurers sailing a replica of a Viking vessel from Duluth, Minnesota to Bergen, Norway.

The boat — *Hjemkomst* — is equipped with 16 oars, although the crew relied on sail-power to take it across the Atlantic. The crew, consisting of 10 Midwesterners and two Norwegians, sailed on 10 May from Duluth. With the dragon head on its bow pointing the way, *Hjemkomst* sailed across the Great Lakes, through the Erie Canal, down the Hudson River and into the Atlantic Ocean. Almost three months later (2 August), the 76-foot American-built ship sailed into Oslo, Norway.

The idea for such a trip occurred to Robert Asp 12 years ago, who wanted to thank immigrants from Norway (like his forefathers) for their contributions to development of the United States. But he died before the voyage started (two years ago of leukemia), so his children decided to carry out his dream.

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The *Hjemkomst*, before it began its voyage across the Atlantic Ocean.

Phil W2DME reports that because he kept close radio contact with the crew (in particular, Jeff Solum, KA0NEX), he felt as if he were on board the ship. At one point, the ship developed a leak because of 35-foot high waves and 60 mph winds, requiring the crew to bail throughout the night until the problem could be solved the next morning.

"The storm was so strong, the dragon head was torn loose," Petersen said.

The crew used an alcohol stove for cooking. They even got to fish and swim, at times. Although primitive by modern standards, the boat did have electrical power, supplied by a drag-generator — driven by a propellor that turns when pulled through the water. At top speed, the boat traveled at about 9 knots, boosted to 11 knots when aided by the push of the Gulf Stream.

— Information from Daily Register, Shrewsbury, NJ □

Change of address?
If you are moving, we need to know your new address six to eight weeks before the address becomes effective.

Japanese YLs

In celebration of their 25th anniversary, the members of the Japan Ladies Radio League have published a handsome book with over 500 photos of their members.

Fumi Abe, JA1AEQ, president has sent copies to some U.S. YLs. The book carries excellent photographs, not only of the YLs but many of their OMs as well. In addition, a number of photos of their YL friends in other countries are included.

Although the printing is in Japanese for the most part, it is a treasure for DX-ers. The slick paper of high quality and the red and silver cover add up to a superior publication.

For more information, write to Fumi Abe, JA1AEQ, 25-6 Chome Ohi Sinagawa-KU, Tokyo, 140 JAPAN. □

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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.

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FEATURES

COLUMNS

World Radio History

Pan Am flight 759

Airplane crash brings amateur aid

Charles Otnott III, WD5BJT

At 4:25 p.m. on Friday, 11 July 1982, the United States Coast Guard (USCG) Air Station in New Orleans, Louisiana received a call on the search and rescue hotline that there was an aircraft crash at Moisant International Airport. The Coast Guard's assistance was needed. As the rescue efforts of the Coast Guard took shape, RM1 Charlie Otnott, WD5BJT — Radioman-in-Charge of the Air Station and Emergency Coordinator of the Greater New Orleans Amateur Radio Club (GNOARC), W5UK — was on radio watch at that time. Charlie contacted the New Orleans Chapter of the American Red Cross — Mr. Melvin Davis, Head of Disaster Services — to see what the Red Cross and GNOARC would do. Mr. Davis directed activation of W5UK's disaster crew and Emergency Net.

While still handling Coast Guard radioteletype traffic, Charlie contacted Mike Bryer, WB5CZV and Francis Lapeyre, WD5IAA, to have them poll the club roster and local 2-meter and 45 MHz repeaters for volunteers. Within 10 minutes of the initial call for assistance, Mike and Francis had 11 amateurs enroute to the Red Cross Disaster Shelters, the Jefferson Parish Red Cross HQ at Kenner City Hall, and Red Cross area HQ in New Orleans.

After notification of activation, Ray Barard, WD5HQC immediately proceeded to the club station, which is located in the Red Cross building in New Orleans. Upon arrival, Ray assumed NCS for the next nine hours.

That first day, amateurs provided on-the-scene communications for the Red Cross. Operations ceased at about midnight and were to begin at 5:00 a.m. Saturday. Bright and early Saturday, relief efforts began anew. By this time, the full realization of the massive destruction and death had now taken a full grip on everyone involved: 150 killed, many injuries, homes in a two-block by six-block area were leveled just as if a tornado had passed through. Power and land lines had been knocked down, so emergency power sources and lighting had to be air-lifted to the scene. Many needed a place to stay. People in the area not affected opened their homes to the survivors. People stood in line to donate blood, but there were no persons alive to give it to. The Coast Guard had an aircraft ready to evacuate injuries to nearby hospitals.

The most joyous part of the day came when one of the rescue workers heard the muffled whimpers of a little girl trapped below the wreckage of her home. She was pulled out of the wreckage and she had only minor scratches and burns. A great yell of relief came from the crowd.

Saturday also saw amateurs working along with disaster crews, running to houses to locate people, and notifying relatives of the health and welfare of people in the affected area. Amateurs helped man the mobile canteen service provided to relief workers by the Red Cross.

Sunday saw amateurs again assisting rescue workers with communications and health and welfare message traffic. The message traffic was picked up on 15 and 20 meters by George Vincent, WD5CKF, and on 20 meters by Frank Thrash, N5BFV. Relief efforts were winding down as far as the amateurs were concerned. All affected persons were identified and assisted; the Louisiana National Guard took over and did an excellent job as the major cleanup commenced. Power and phone service were restored, and by 7:00 p.m. the amateurs were released with the thanks and praise of Mayor Aarron Broussard, the Louisiana National Guard, the Red Cross, and the citizens of the affected area.

The Greater New Orleans ARC would like to express its appreciation to all of the amateurs who participated directly and indirectly, especially: Ray WD5HQC; Mike WB5CZV; Jack Blanke, WB5LVP; Bob Oemichen, N5ARM; Francis WD5IAA; Richard Wehrstedt, WD4IND; Ray Leidinnger Jr., KA5LQU; Skip Segall, WA4RSA; Jim Overstreet, WA5DXP; Ray Johnson Sr., KA5FVU; Mary Vernoy, WB5IOE; Wayne Knabb, KO5R; Dick Miller, KB5VH; Ed De Meritt, KB5GO; Sandy Blaize, W5TVW; Sparks Taylor, W5SIW; George Vincent, WD5CKF; Nathan Gifford, N5BFC; Bob Dunn, WA5WJZ; Ed Tyrolf Jr., W5CIL; Chip Eyman, WA5TMD; Jerry Pedigo, WB5GDN; Julie Newchurch, WB5PIN; Phillip Buras Jr., WD5DWP; Althea Buras, WD5DWO; Betty Davis, WB5NAM; and all the amateurs who curtailed their use of the 146.01 61 W5MCC/R repeater during the emergency.

Convention

(continued from page 1)

supported with color slides of this operation.

As most dedicated contesters go out to win and attempt to set new records, Stu and a group of amateurs operated PJ2CC in that same annual contest in 1980 in an attempt to break the existing record set by Kitt Carson, VP2KC and his crew. They did actually beat that score, but for some reason the contest committee chose to reduce the score of PJ2CC. After that setback, most of the crew more or less became "burned out" and threw in the towel. But then again, why not try for it in the next contest? This DX editor has a lot to learn about reporting, especially taking notes with the lights out. But one thing I was smart enough to do was ask Stu for his notes, which he graciously did. So what you read here are those notes.

"In 1980. a dozen hams from three clubs joined together to establish a world record; the target was 40 million points. The current record belonged to VP2KC who had broken the previous record of 24 million by more than 50 percent — something over 37 million points. The battle cry of the group was 'bring the record back to Amateur Radio.' PVRC and Frankford, (Potomac Valley Radio Club and Frankford Radio Club in the East, Ed.), fielded 10 members and Dan Eskenazi, K7SS and I formed the West Coast contingent.

"The results that were finally shown in CQ Magazine really disappointed us because we missed their mark by less than four QSOs. The story of how our winning score was statistically reduced would take almost as much time as I've been allotted for this show, so I'll leave it for discussion over beer. In a nutshell, we had spent slightly over $12,000 to produce 38.6 million claimed points and Kitt Carson had spent more than 20 times that much the year before to establish the Island of St. Kitts as the Amateur Radio Mecca of the contesting world. CQ Magazine and its contest committee were threatened with suits, and the result is history.

"Last fall, with about eight weeks to contest time, Louis Moody, N3ED and I decided to stop fighting CQ Magazine and go back to try one more time. The crew from the previous PJ2CC operation had a wide range of feelings about the situation, and it was apparent that few of us were eager to spend 10 days in searing sunshine to get another 'almost made it.' The sunspot numbers were already down from 1980, and it looked like we might lose 10 meters as a 'rate' band. We had a couple of things in our favor that encouraged us to press on. There were four of us willing to try again and when we started asking around we found eight other operators, some who had overseas contest experience and all who came highly recommended from winning multi-multi operations in the states.

"The hotel that Chet Brandon had built in the '60s had just been sold, and the resulting financial tangle made it impossible for us to duplicate the excellent operating setup that we had enjoyed as PJ2CC. The good news was that the hotel was about to reopen and they were anxious to get some paying guests, so the new manager — who knew nothing about Amateur Radio — agreed that she would open the facilities such as they existed. Two friends we had met the previous year have a winter home adjacent to the hotel and they agreed to let us use their lanai for a few days. The license for the hotel had been cancelled because the manager was no longer an amateur but the man in charge of licensing, PJ2MI (Jose), was very sympathetic to our plan and said he would get us a call sign for the 48-hour period. He promised us the call PJ1C, and we started informing clubs and bulletins and making our schedules for the more difficult multipliers.

"It was three days before the contest when Jose returned from the Netherlands and decided to favor us with a different call sign. He had been in The Hague to discuss implementation of the WARC changes in the Netherland Antilles and had been asked to give up his ITU-assigned block of calls in the P4 series. They were needed for developing countries and had never been activated. Jose got possessive and told them they could not have them because they were assigned and then hurried home to

(please turn to page 20)

Martha WN4FVU and Carl WB4ZNH. The Hensons were guests at the convention and presented a slide show of their Annobon DX-pedition at the Saturday evening banquet.

The Patterson brothers, Bob KC7TO (ex-WA7TTM) of the Willamette Valley DX Club, and Chuck K6RK, Treasurer of the Northern California DX Club.

A couple of British Columbia Big Guns — Henry Thel, VE7WJ, the Convention Chairman, and Mike Syrjala, VE7DX of the British Columbia DX Club. Mike is a commercial fisherman by profession.

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World Radio History

VHF/UHF conference results

Gordon West, WB6NOA

Over 100 West Coast VHF and UHF enthusiasts met in San Diego on 7-8 May for the 27th annual VHF/UHF conference. Putting the conference together was accomplisned by well-known VHF expert Louis Anciaux, WB6NMT.

The first evening of the conference, Friday, was for noise figure measurements. An HP-8970A automatic noise figure meter with a Micronetics Model No. NSA-26A as a solid-state source was used for these measurements. Special thanks go to WB6NMT and Steve Noll, WA6EJO for the technical side of measuring these preamplifiers.

The host of the conference was Louis Anciaux, WB6NMT.

The infamous antenna gain measurement tests — put together by Mike Stall, K6MYC — were held on Saturday. There were plenty of antennas available, as you can see in the photographs. How about that 23-element 2-meter long boomer on a 42-foot boom?

Here are the results of the antenna measurements of the 1982 West Coast VHF/UHF conference.

Results of antenna measurements of the 1982 West Coast VHF/UHF Conference

May 8, 1982

1296

Call	Antenna type	Gain
WB6RIR	6 section coax collinear	-1.0
WB6RIR	5 section coax collinear	1.0
W6HPH	Dipole array over groundplane	6.0
K6JEY	2-turn Helical	6.5 (9.5 circ.)
WA6EXV	HB LP PC Board	8.0
K6HCP/K6MYC	LP	8.8
K6JEY	Quad 10-turn Helix (tweaked)	10.6 (13.6 circ.)
WB6OIL	Corner reflector	10.6
K6JEY	Quad 10-turn Helix	11.0 (14.0 circ.)
K6MOZ	Loop Yagi 29 EL	11.8
K6MOZ	J Beam 30 EL (Refl =1) EL	12.0
WB6APU	Fish Pail Horn (without Fish)	14.9
K6MOZ	Loop Yagi 28 EL without Refl.	15.0
WB6OIL	Loop Yagi 27 EL	15.7
K6HCP	24 EL TONNA Single Refl.	15.8
W6HPH	NBS Corner Ref.	15.8
K6HCP	23 EL TONNA Dual Refl.	16.3
W6HPH	37" dish (spherical)	17.4
WA6OIL	4' dish (ref ant.)	18.8

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WB6APU	4 EL collinear	6.2
W6HPH	Dual dipole array with groundplane	6.8
W6HPH (early)	NBS 7.7dBd standard 1st meas. (ref ant.)	7.7
W6HPH (late)	NBS 7.7dBd standard 2nd meas. (ref ant.)	7.7
WA6EXV	5 EL Yagi	7.8
W6BHF	9T Helix	8.2 (11.3 circ.)
WB6APU	6 EL collinear	9.9
WA6KOU	13 EL Yagi	10.7
AA6TN	7 EL Yagi	11.1
WB6YVP	18 EL Yagi	12.5
WA6KOU	Array 4-KLM 14 EL Yagi	13.5
WA6EKD	10 EL Ring Saturn Loop Yagi	13.9
K6MOZ	Dual F9FT array	14.5
K6LMN	15 EL Quagi	14.7
K1LL	24 EL Cushcraft	15.7
WB9KMO	19 EL RIW	16.3
WB6KMO	19 EL TAMA	16.3

220

K6LMN	B.B. Dipole (ref ant.)	0.0
K6LMN	7 EL Cushcrat with Quad DE	8.0
WA6OIL	8 EL Quagi	9.2
WA6EKD	Ring Saturn Loop Yagi	9.5
K6DYD	9 EL HB KLM	9.8
K6 AA/K1LL	16 EL (ext, exp) (4 Bay mystery)	-6.0
	12 EL (remove 2nd director)	-7.4
	16 EL after modification	6.8
N6NR/K6DYD	16 EL Collinear Mystery	-0.2
WB6APU/		
WA6CFM	after modification (2nd)	3.4
	after modification (3rd)	5.0
	after modification (4th)	5.9
*WA6OIL/		
WB6RIR	11 EL Mystery (1st attempt)	1.30
	after modification (2nd)	1.60

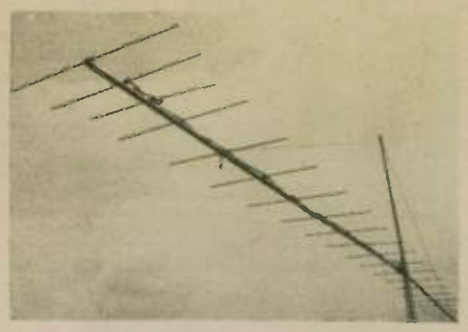
* These people were awarded the Lunar NMT-11/220 Antenna for their gallant efforts with least results.

144

N6GPH	8 EL Quagi	0.0
K6LMN	Broadband dipole (ref ant.)	0.0
WD6EJN	9 EL Yagi	5.2
KE6EA	6 EL Cubical	5.6
K6LMN	4 EL KLM	7.3
WA6EKD	14 EL Longboom 37'7"	7.7
K6DYD	14 EL KLM HB balun	10.3
K6DYD	12 EL HB KLM	12.7

10 GHZ

WA6OIL	M/A Horn	15.5
WA6OIL	M/A Horn	16.2
WA6OIL	1' dish and Yagi Feed	20.5
WA6EJO	Microlab Horn	22.0



A very long boomer for 2 meters!

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1296 record

(continued from page 1)

performance systems make communicating over long over-the-water path possible.

The KH6HME beacon operates continuously during the summer months on 1296 MHz and 432 MHz. This year, there is no 2-meter beacon because the path has been worked so many times before.

1296 mobile!

An important part in working long distance 1296 MHz tropo contacts is being at the exact spot where the duct ends. Chip N6CA has a mobile unit that will rival any 1296 base station, which he takes up and down the Palos Verdes Hills, looking for the right spot in the duct.

His 1976 Chevy van contains a complete 2-meter SSB 70 watt station for local coordination. There is also a Kenwood TS-130 for high frequency band condition coordination.

A homebrew 1296 MHz receiver with a .5dB noise figure is used for mobile monitoring while locating a duct. It is fed into a Kenwood 599D receiver and the antenna is the long loop Yagi with the famous Angle low-noise GaAs Fet preamp mast-mounted.

Mobile operation — in motion — is necessary because the duct may end at the 1,000-foot level, or may be as low as 100 feet off the water. A station might actually be too high or too low and may need to move its position to adequately work into the tropospheric tube. This mobile 1296 receiver works great in finding the right spot.

The main 1296 MHz system runs 500 watts output. Portions of the 1296 MHz equipment require copious amounts of 110 volts AC. Plugging into a convenient AC outlet or a portable generator is necessary for this type of high-powered operation.

The 1296 MHz system consists of a 28 MHz IF that feeds into a pair of Kenwood twins. An audio filter on the receiver optimizes weak-signal CW reception. Large 6-by-9 inch speakers offer maximum fidelity while copying weak signals.

The 1296 MHz transverter and power amplifier are all homebrew by Chip N6CA. The transverter delivers 1 watt via a TRW-52601 transistor driven by a Motorola transistor to a rat-race mixer with a milliwatt at 28 MHz for injection.

The LO frequency is offset by about 100 kHz for complete excursion above and below 1296 MHz.

The heart of the transmitter is a single water-cooled 7289 driver tube that delivers 30 watts output maximum. This drives a 180 degree ring hybrid homebrew setup that splits the signal into two 15 watt levels. These two signals drive two individual 7289 amplifiers in parallel for a maximum power output of 500 watts. The two output tubes are also water-cooled.

The water cooling system uses one gallon of deionized water. A small fountain pump insures that the water circulates fast enough to keep all three power output tubes cool during transmit.

To protect the delicate and sensitive receiver section, homebrew time delay sequencing relays insure each stage pulls in at the proper interval.

The antenna mast supports coaxial relays for TX and RX, and a G3JVL 44-element loop Yagi, built by Chip, has better than 20dBi gain, yet is small enough for mobile operation. The length of the boom is 12 feet. Polarization is horizontal. The mast-mounted GaAs Fet preamps are also homebrew with a half dB noise figure.

World Radio History

Paul Lieb, KH6HME

Hawaii on 1296

Chip also constructed the Hawaii station, which consists of a 30 watt transmitter and a low-noise receiver. The Hawaii antenna system uses four 25-element loop Yagi's, one mounted atop the other. This vertical mounting allows for wide dispersion of the signal that is only attenuated by 3dB when it reaches from San Diego to San Francisco. The antenna is aimed at Point Concepcion, California. The antennas are fed with ⅞-inch hard-line to the beacon/transceiver. This mountaintop antenna system offers 25dBi gain with minimal wind loading.

The 1296 MHz loop Yagi

"We prefer loop Yagi antennas over a 6-foot equivalent dish because of less wind loading on the Yagi and a more predictable pattern," comments Chip N6CA. Other undesirable dish problems, according to our 1296 MHz experts, are mounting problems of a dish and the difficulty in properly feeding a dish antenna. For the West Coast operators, loop Yagi's seem to be the preferred antenna for 1296 MHz.

The Hawaii antennas and transmitting/receiving equipment are located at the 8,200-foot level on Mauna Loa, an active volcano. This is the same location where TV signals from Honolulu are repeated to Hilo, Hawaii. It offers the best shot at the West Coast.

It takes Paul approximately 40 minutes to drive from his home to the mountaintop location to establish two-way communications. A telephone call alerts Paul that the band is open, and he drops everything and heads for the hill.

The tropospheric duct

The Hawaii/California tropospheric duct usually occurs in August. It acts as a UHF waveguide that allows low-powered signals to travel thousands of miles with minimum losses. The actual tropospheric duct is formed when there is a rapid change in temperature, water vapor and air pressure. These sharp changes in the normal atmosphere may be the result of storm boundaries where moist air is pushed up and over cooler air.

"Hurricanes are usually present in Mexican waters when the tropospheric duct occurs between Hawaii and California," claims Chip. "We accurately predicted down to the day when the duct would appear by watching the local weather conditions between here and Hawaii and in Mexico," adds Chip.

The tropospheric duct usually occurs at the 8,000-foot level in Hawaii, and drops to the 1,000-foot level in California. Each station must be within the "tube" to carry on communications. Several years ago, mobile Amateur Radio operators maintained communications between California and Hawaii on 2 meters by driving along with the duct. This leads us to believe that the aperture of the duct in California may only be 20 or 30 miles wide, and only a few hundred feet thick. This requires critical placement of the transmitting and receiving equipment.

Conclusion

Getting on 1296 MHz requires some technical expertise. If nothing else, you will need to know how to hook up transverters and low noise preamplifiers. This equipment is commercially available, and you can set up a modest station in less than a day.

Amateurs like those pictured with this article have built their equipment from the ground floor up. This equipment offers the highest degree of sensitivity and the maximum amount of power output for this frequency range.

1296 MHz is wide open for Amateur Radio exploration. Antenna sizes are small, but detail to noise figures and sensitivity ratings is high. If you are looking for a new band to explore that might offer more than 1,000 miles range under certain conditions, you might listen in on 1296 MHz. □

World Radio History

Hams and balloons

Ralph Swanson, WB6JBI

On 8 May 1982, for the fourth consecutive year, the ARES groups of the combined counties of Los Angeles, Orange, Riverside and San Bernardino provided communications for the 1982 Gordon Bennett International Balloon Race.

The Gordon Bennett Balloon Race was revived in 1979 by Dr. Tom Heinsheimer. It originally started back in 1906 and continued up to the brink of World War II in 1938. Due to political and other reasons, it remained dormant until 1979.

Nate Brightman, K6OSC was approached by Dr. Heinsheimer to provide logistics support through the use of Amateur Radio. Since Nate is quite active in Southern California public service and is also involved with the Associated Radio Amateurs of Long Beach, California and sponsor of W6RO on the *Queen Mary*, his response was an obvious *YES!*

Coordination of the massive undertaking was done by Ron Boan, AK6Y — the Emergency Coordinator (EC) of the Long Beach ARES. Ron contacted the EC's of the adjacent three counties and the planning began.

In 1979, amateurs provided communications between the multiple launch pads and net control, which was in Ron's RV at Mile Square Park in Orange County. It was quickly learned that more widespread communications were needed due to unscheduled landings in the adjacent hills surrounding the Southern California basin. The 1980 race brought expansion of the radio amateurs to the various hilltops and canyons to observe the flight paths of the lighter-than-air helium vessels of the sky.

Communications now took on the added complexity of unreliability with the usage of simplex frequencies. The Keller Peak repeater, WB6FUB/R was pressed into service to solve this problem. WB6FUB/R has outstanding coverage of most of Southern California due to its 8,000-foot elevation location in the San Gabriel Mountains.

In the 1981 Gordon Bennett International Cup Race, further expansion was incorporated. Del Vaughn, K6RTR has an unusual "hot spot" in Orange County for accessing the Kingman, Arizona repeater WR7AEL. So the link was established to receive reports not only from the quad-counties, but also from the amateurs observing from the Colorado River east into central Arizona. Also, a low-band link was established from W6RO into Nevada and Utah. Eyes and voices were now accessible back to Mile Square Park from hundreds of thousands of square miles!

The 1982 race added one more dimension from the amateurs. The planning now included computer plotting of the flight paths. A suite at the Costa Mesa Holiday Inn was set up with the personal computers of the ham members of the Southern California Computer Club. Observer spottings of locations were transmitted to the computer center by means of a 220 MHz link from the *Queen Mary*. With software generated almost on the spot, the computers maintained constant vigilance on the balloonists.

A list of the volunteer amateurs and their call signs is far too lengthy to be given here, but many thanks for a job well done is certainly in order. Next year, hopefully the race will test even more resources of Amateur Radio. Amateurs seem to come up with bigger and better ideas for communications as time goes on.

Incidentally, the only mishap that occurred was a balloon that left its launch pad prematurely and landed near a shopping center. Chase crews were quickly vectored to its landing site, and all turned out well with only one minor injury.

Now, all that is left to do is start planning for the 1983 race. □

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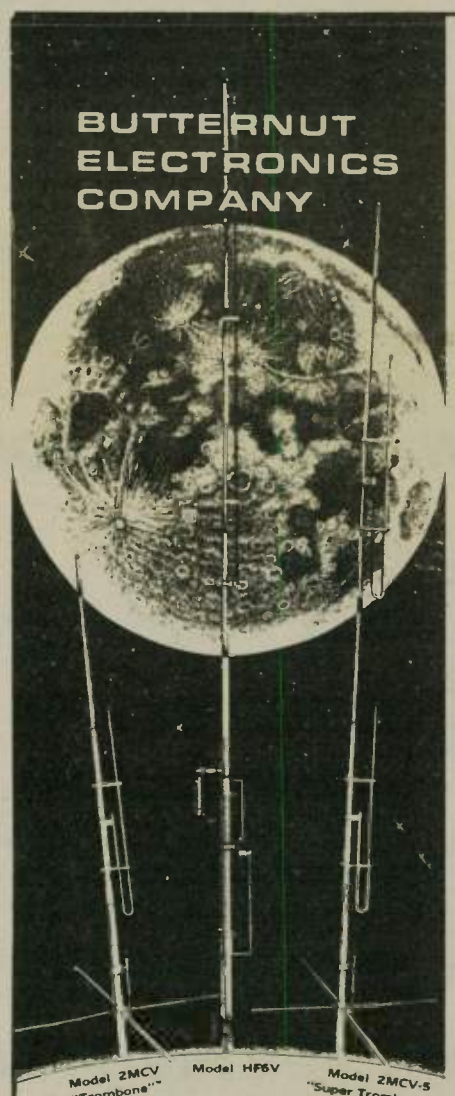

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Ten years with MARCO

This is the second in a series of five articles on the history of MARCO (Medical Amateur Radio Council, Ltd.), as written by Joseph J. Boris, honorary member of the organization. The first installment of this series ran in our September issue.

Year 1967

Charles H. Gray, M.D. WA1FMY was president. The first meeting of MARCO was held at the Chalfonte-Haddon Hall Hotel, Atlantic City, New Jersey on 22 June. On my recommendation, the following were invited to be our guests and at the first MARCO technical session they presented the following papers.

"The Eye Bank Net," by Alson E. Braley, M.D., W0GET; "The MED-AID Program (Medical Assistance for Isolated Doctors)," by Dean E. Croft Long, Duke University; "Trends in Amateur Radio Equipment," by Stuart Meyer, W2GHK, Executive Vice President, Aerotron, Inc.; "Antennas and Transmission Lines," by Lewis E. McCoy, W1ICP, ARRL.

The first MARCO Achievement Award was presented to Doctor Alson Braley, W0GET in recognition for his work in founding the Eye Bank Net. I was appointed managing editor of the *MARCO News*, later renamed *The Journal*. Jack London, M.D., W2JVA was elected president for the year 1967-68. He became a Silent Key on 25 January 1979.

Here may I say that through all the years it was my privilege to know and respect Doctor London. We met many times on the phone, and I was guided by his advice and recommendations in the interests of MARCO. He was my friend.

Year 1968

Jack London, K2HVA was president. The second meeting was held at the Jack Tar Hotel in San Francisco, California on 28 June. At this meeting, E. Croft Long — then Director of Hospital Station WB4HLK at Duke University — presented a paper, "Electrocardiograms via Amateur Radio."

Earl Weston, M.D., W8BXO reported that he and Horace Allen, W8CIP had arranged "on-the-air contact" with Glen Eschtruth, M.D., 9Q5GE, Medical Director of his hospital in the Congo, Africa.

Thomas E. Shoupe, M.D., WA8TXG, now (W8QP) reported that he had established the MARCO Network — then 10060 at 0100-0300 GMT weekends. Thereafter, through June 1976, with his co-chairman — Walt Twain, WB4KKB — he contributed bimonthly articles entitled "Communications: MARCO is 'on' if you are 'on'." An excerpt from one such article follows:

Your Communication Committee reminds you that MARCO business in communications is the business of each member. The Communications Committee, either individual or in concert, can't get the job done alone.

The 40-meter band has generally not been regularly monitored lately and band conditions are less than ideal. But a handful of loyal members keeps communications regularly. A recent poll of directors suggested that we can improve nets greatly by simply becoming "callers" instead of "listeners." Each man on frequency should consider himself a net control and sound "CQ MARCO." He will be surprised by the response such a call will elicit.

J. Stanley Carp, M.D., K1EEG, contributed a column, 'Opinion,' which was published in the MARCO *Journal* over a period of several months. Following is an example.

Opinion

We, as a group, in the medical and allied medical fields find our prime purpose dedicated to the perpetuation of life and the fullness thereof — regardless of race, creed, color or political status.

There is little that one can do as an individual to contest the problems of the world, but through the efforts of MARCO, there is a great deal that we can do — as a group — to foster peace and good will.

It is difficult to dislike a person, 5,000 miles away, who offers medical assistance and has no interest in argument. The exchange of medical information and the desire to help through communication must be above political and social beliefs.

In MARCO, we are fortunate to have men and women, skilled in the art of their profession, who can use MARCO as a vector and bring about a better understanding as well as aid and comfort to those in need.

Our ideas and our actions can become a reality for good, if planned and purposeful. Therefore, our trend toward local participation in communication should be encouraged and pursued with vigor and coordination.

(Continued next month) □

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

World Radio History

Foundation for Amateur Radio scholarship winners

The Foundation for Amateur Radio is pleased to announce the 1982 winners of the 10 scholarships which it administers.

The John W. Gore Memorial Scholarship — $900 to Richard E. Church Jr., WA2YMS, Central Square, New York. **The Richard G. Chichester Memorial Scholarship** — $900 to Theodore S. Rappaport, N9NB, West Lafayette, Indiana. **The Edwin Van Deusen Scholarship** — $350 to Steven J. Gies, KA9EHI, Stevens Point, Wisconsin. **QCWA Silent Key Memorial Scholarship** — $500 to Brian D. Miller, KA0DGT, Englewood, Colorado. **QCWA Silent Key Memorial Scholarship** — $500 to Marc Vernon, KI9V, Hinsdale, Illinois.

Radio Club of America Scholarship — $500 to Stephen Carlson, KA9KME, Wauwatosa, Wisconsin. **The Edmund Redington Memorial Scholarship** — $500 to Nicholas L. DiFiore, N8DNF, Warren, Michigan. **Young Ladies Radio League Scholarship** — $300 to Susan Beth Solomon, KA2FLL, Uniondale, New York. **Amateur Radio News Service Scholarship** — $500 to Wayne B. Ditsworth, N0BGI, Cedar Rapids, Iowa. **Columbia (MD) Amateur Radio Association Scholarship** — $500 to Richard A. White Jr., KA3T, Columbia, Maryland.

These scholarships were open to all radio amateurs meeting the qualifications and residence requirements of the various sponsors. This year, applications were received from 31 states, Canada and India.

The Foundation is a non-profit organization representing 50 clubs in Maryland, the District of Columbia and northern Virginia. It is devoted exclusively to promoting the interest of Amateur Radio and to the scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.

Information regarding the scholarships to be awarded next year will appear in the April or May issues of major Amateur Radio publications. □

Bluegrass ARS presents award

Chris Gay, KU4A

Each year, the Bluegrass Amateur Radio Society of Lexington, Kentucky presents the Ernie Farmer Memorial Award to an outstanding amateur in the Bluegrass area. The award is named for the late Ernie Farmer, W4MWR, who was well known for helping many people get started in Amateur Radio.

The 1982 award was presented to Mike Mahlbacher, WA4UQA for his many contributions to the hobby. Mike has served as Kentucky Section Emergency Coordinator, with responsibility for conducting the statewide ARES program. He has also been involved in numerous other aspects of public service work, including the National Traffic System. He was instrumental in establishing the club's "Ready Team," a group of amateurs who are prepared to set up an emergency station on short notice.

The award was presented to Mike by Mrs. Ernie Farmer at the annual Central Kentucky Hamfest, held 8 August 1982 at Scott County High School. Nearly 700 electronics hobbyists attended the hamfest, which included a large indoor display area featuring several dealers. Several interesting forums were held, and nice prizes — including a Kenwood TS-9000 transceiver and R-1000 receiver — were given away to lucky ticket holders. Many bargains could be found in the outdoor flea market.

For more information on the hamfest, write to: Central Kentucky ARRL Hamfest, Bluegrass Amateur Radio Society, P.O. Box 4411, Lexington, KY 40544. □

Contact Worldradio for hamfest prizes.

JLRS celebrates 25th anniversary

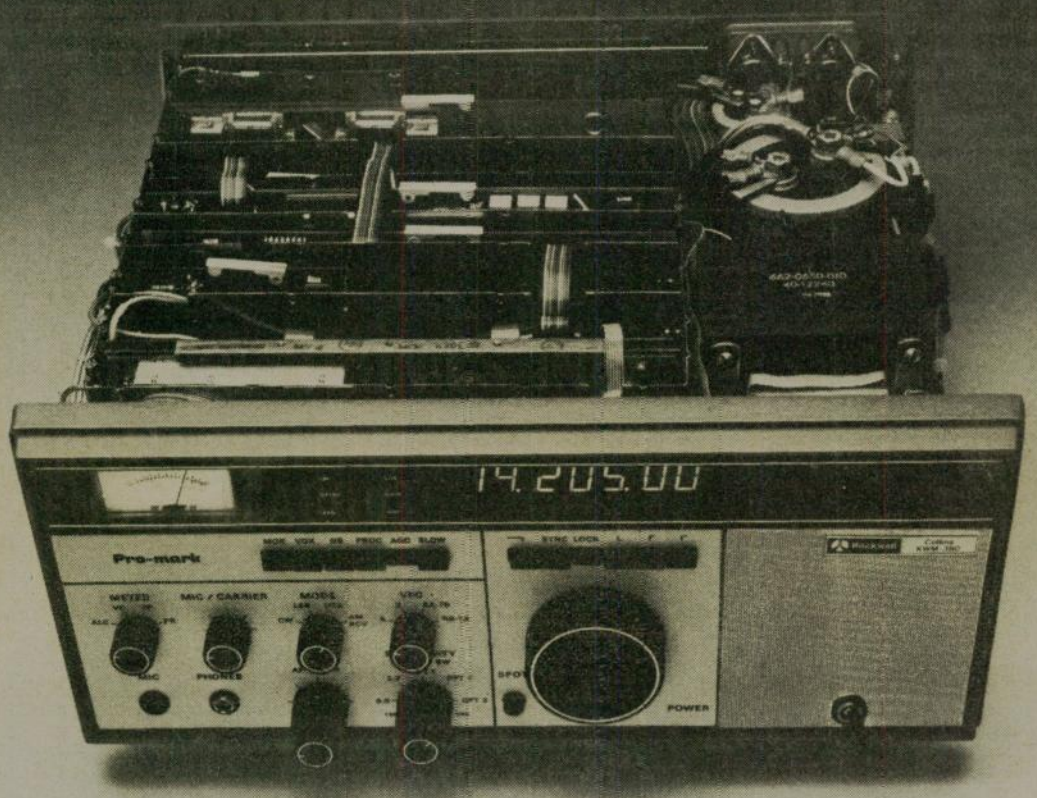
Verline Ferris, KI8V

The JLRS celebrated their 25th anniversary with a convention in Tokyo, Japan on 24-25 July 1982. About 130 members and 35 OMs and the harmonics joined the convention this year. Fumi Abe, JA1AEQ — the president; Kuni Kan, JA1YL; and Kimi Kobayashi, JA0EC formed JLRS in July 1957. When they had their first convention in 1958, only 12 YLs joined JLRS. The number of members has since increased, and now stands at about 460 members.

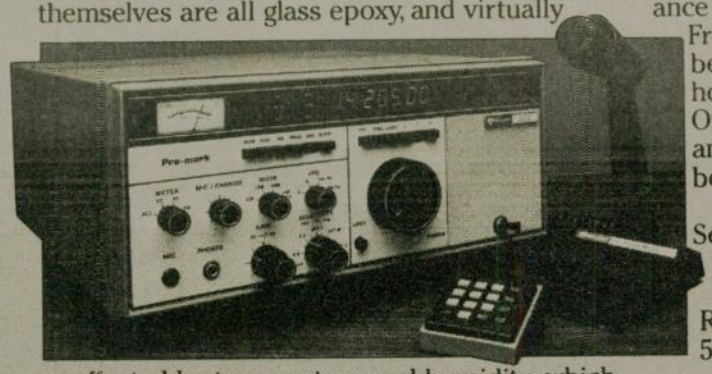
About 130 members, as well as 35 OMs and harmonics, joined the convention this year. They had a buffet-style banquet on the 24th and a YL meeting on the 25th.

Featured were plays from each district, local songs and dances. The JA1 area held prize drawings. □

The real beauty of the Collins KWM-380 is behind the panel, not on it.



At Collins, we know serious amateurs won't settle for less than professional performance. So we build every KWM-380 to commercial rather than amateur standards. For example, our PC boards are connected by ribbon cables with gold-plated pinfield connectors. The boards themselves are all glass epoxy, and virtually



unaffected by temperature and humidity which cause intermittents in the more commonly used phenolic boards.

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Add some real beauty to your station. See the KWM-380 at your nearest authorized dealer. Collins Telecommunications Products Division, Defense Electronics Operations, Rockwell International, Cedar Rapids, IA 52498. Phone (319) 395-5963. Telex: 464-435.

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World Radio History

Special Events...

Operation Randsburgh

Project Randsburgh — a worldwide Amateur Radio event between two namesakes, half a world apart — will take place between Randburgh, Republic of South Africa and Randsburgh, California on the weekend of 2-3 October 1982. To be eligible for the special commemorative QSL card, contact any of several Randburgh RSA stations and the Randsburgh USA station using the call sign WA6NKL or W6LED.

Operation Randsburgh will take place on the United States SSB, General 10, 15 and 20-meter phone bands and begins at 1300 UTC on 2 October through 2400 UTC, 3 October 1982.

For further information or special QSL card, send SAE (in United States) or IRC to WA6NKL, P.O. Box 1211, Torrance, CA 90505, USA. □

Nuclear chain-reaction experiment

The Argonne Amateur Radio Club (AARC) plans to operate the Club's memorial station, W9QVE, to commemorate the 40th anniversary of the first controlled nuclear chain-reaction experiment. This experiment was conducted at the Alonzo Stagg field on the University of Chicago campus.

Two stations will operate on 9 October 1982, from 1500 GMT through 2300 GMT, 10 October. Frequencies: *SSB* — 3985, 7285, 14285, 21285, 28585; *CW* — 3545, 7045, 14045, 21045, 28045; (Novice) 3765, 7165, 21165; *RTTY* — 14090 and 146.70 MHz; *2M* — 145.19/144.59 RPTR, 146.52 and 147.42 simplex.

Send business type SASE or $1 for 8 × 11 unfolded certificate to AARC, P.O. Box 275, Argonne, IL 60439. □

Thunderbolt-Hotfoot

The Southern Sierra Amateur Radio Society (SSARS) of Tehachapi, California will once again be conducting operation Thunderbolt-Hotfoot. This will be a simultaneous operation from the peak of Mt. Whitney (the highest point in the continental United States) and Bad Water, California (the lowest point in the Western Hemisphere).

Station K6RL will be operating from 1900 UTC, 10 October to 1900 UTC, 11 October. Frequencies will be 15 and 40 meters CW, 10 kHz up from bottom of Novice band for Mt. Whitney and 5 kHz up from bottom of Novice band for Bad Water.

For QSL information, send large SASE or $1 to SSARS, Rt. 2, Box 338, Tehachapi, CA 93561. □

Sunbelt Expo

The Colquitt County Ham Radio Society will be operating club station WD4KOW from the site of the 5th Annual Sunbelt Agricultural Exposition on 12-14 October 1982. The hours of operation will be 0900 to 1700 EDST each day.

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

Operations will be in the General portion of the HF bands. The members will also be listening for visiting amateurs on the local repeater 146.19/79. Visiting amateurs are invited to visit the amateur booth at the Expo and operate the amateur station.

A special QSL card is available for those making contact during this event and submitting an SASE. □

'Tallest ham shack'

The Fox River Radio League, Inc. — using its club call sign, W9CEQ — will operate "The World's Tallest Ham Shack" from the top of Sears Tower in Chicago, Illinois.

The station's antennas will be on the roof at 1,454 feet (110 floors) above ground level. The station itself will be located inside the building on the Sears public observation deck, on the 103rd floor.

Two HF stations will operate CW and SSB on 10 through 80 meters from 1500 UTC, Saturday, 16 October until 2000 UTC, Sunday, 17 October. If band conditions permit, operation will also be conducted on CW and SSB in the bottom part of the 2-meter band.

U.S. stations wanting QSLs, send SASEs; foreign stations send SAEs and 2 IRCs. A special commemorative certificate will be available for $1 (U.S.). All QSLs and related correspondence should be sent to W9CEQ, 1501 Molitor Rd., Aurora, IL 60505. □

North Carolina Peak

Bob Cross, KA4MBZ will operate a mini-expedition to an interesting North Carolina recreational mountain peak on Saturday, 16 October, from 1300 UTC to 2100 UTC. Frequencies will be on the low end of Novice and General CW bands as propagation permits. Also, VHF contacts will be available on 146.55.

Certificates will be awarded for an 8½" x 11" SASE and QSL to Gene Turner, KA4MBJ, 205 Windsor Dr., Graham, NC 27253. □

Telephone, Texas

The North Texas High Frequency Association (NTHFA) of Denton, Texas has scheduled another of their famous mini-expeditions. On 16 and 17 October, the NTHFA will operate Telephone IV from the world-renowned Calvin Felts barbershop in beautiful downtown Telephone, Texas.

Using the call KB5TO (Telephone Operator) the club will operate about 25 kHz up from the bottom edge of the General Class phone segments on each band according to propagation. Also planned is a CW station near the center of the 15 and 40-meter Novice bands as permitted. Operation is planned to begin about 1700Z Saturday and end about 1700Z Sunday.

The NTHFA would also like to thank all those who worked us on the Novice bands from Novice, Texas. You should have your QSL by now. If not, please let us know. This trip was a great success and a return is planned unless someone warns the city and they set up roadblocks. □

Mount Sunflower

"The world is not flat and neither is Kansas." The Western Kansas DX Society announces the first annual Mount Sunflower DXpedition, to be held 23-24 October 1982, from 1700Z Saturday to 1700Z Sunday. The station — which will operate from the highest point in Kansas (4,025.5 feet) in Wallace County — will be on SSB, CW, RTTY and FM. Frequencies will be 160 - 2 meters. Call sign is KØEQH.

CW	(kHz)	SSB (kHz)	RTTY	FM (kHz)
160		1830		
80	3660 and 3730	3935	3625	
40	7060 and 7125	7260		
20	14060 kHz	14300	14095	
15	21060 kHz 21160	21360		
10	28060 kHz 28160	28560		
6		50160		
2		144210	144210	146520

To set up skeds, contact Western Kansas DX Society, P.O. Box 811, Garden City, KS 67846. Send SASE for commemorative QSL. □

Tricentennial

The University of Pennsylvania and Holmesburg Amateur Radio Clubs of Philadelphia, Pennsylvania — in conjunction with the city's 300th Birthday Committee, Century IV — will be operating W3WP for 24 hours on 24 October, from Penn's Landing, Philadelphia to celebrate the birthday of the city's founder, William Penn. The event will be an official part of the year-long celebration observing the 300th birthday of Philadelphia.

The special event station will operate from 0000 GMT to 2359 GMT; the exchange will be : RS(T), city, state, country and W3WP log number. Frequencies will be: *Phone* — 3.925, 7.275, 14.290, 21.365, 28.550 ± QRM. Also, Holmesburg/Univ. of PA repeater, 2 meters, 146.685/.085. *CW* — just inside the high end of each CW band.

The handsome commemorative QSL card will be sent to all stations making contact with W3WP. All North American and Canadian stations must send SASEs. QSL manager is Harry White, N3HW, 7520 Verree Rd., Philadelphia, PA 19111.

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World Radio History

USQS

U.S. QSL Service, Inc. has been in operation for over two years now, and many of you have heard of it by now. For those of you who haven't, read on. USQS probably has QSL(s) for you to claim! For the faithful readers of this monthly article, read on . . . the statistics we promised you are here!

USQS is a non-profit, *free,* independent QSL bureau that provides a way for amateurs within the USA to exchange QSL cards. The bureau is also known by the call sign of Laryl Berry, KM7Z. You may have heard DXpeditions, special event stations or individuals saying "QSL via KM7Z." Writing this article is yours truly, Laryl. I have been busy these last two months getting USQS data on computer.

USQS works like the ARRL bureau in that it has incoming and outgoing QSL cards. USQS handles state-to-state (Hawaii, Alaska and Puerto Rico included) QSLs rather than DX cards. All under one roof, the bureau efficiently handles both your incoming and outgoing QSLs for all 10 call areas! When sending QSLs via USQS, please sort cards into the 10 call areas (0-9) and then sort each call area alphabetically by suffix . . . and print plainly! Remember that USQS is a *free service,* operating on the donations we receive. Donations are important to keeping and building the system, and we appreciate them very much.

If you have questions about USQS, you may wish to read last month's **Worldradio** where we tried to answer many of the commonly asked questions. Among the questions asked were questions regarding statistics about the numbers of people in the USQS system. I am pleased to announce that I can answer those now.

At this time, USQS borrows a computer, a TRS-80 COLOR with one disk drive. Now that the entire system is on computer, I have found that there is a need for a full-time computer and printer. The information that is being kept and updated will make USQS a very desirable bureau. The computer will be able to tell us who have SASEs on file; who have unclaimed QSLs; who have received complimentary mailings; who have upgraded and have new calls; which clubs have one SASE and what calls are cross-referenced to it; the total numbers of all the mentioned data (for each call area); and even if mistakes were made in entering data! And more!

The programs for the system were written by Patrick Berry, KN7B who promises more to come! The computer aids in the accuracy of files and saves time when it comes to getting information that would otherwise have to be taken from the files (manually getting them) or which would be impossible to even estimate. The need for a computer of our own is great, and hopefully we will be able to acquire one solely for business use by donations.

The information I now have is compiled, sorted, alphabetized and displayed (printed as soon as we can get a printer!) in a matter of minutes. Since I know you would like to know what kind of volume USQS does, here goes. The following totals are as of 31 July 1982.

SASEs (number of call signs covered by SASEs includes cross references) **for all 10 areas:** 3,284

Unclaimed QSLs total for all areas: 11,948

Even though the totals change daily with SASEs coming in and QSLs coming in and going out, you can see that many have SASEs on file and many need to claim their waiting cards. *We need* SASEs to help get the waiting cards delivered! Contributions are used to send out these unclaimed cards, but as you can see, the cards are coming in faster than funds to get them delivered! *PLEASE* help by sending SASEs for the file and tell your friends to do the same.

Since we cannot list all 11,948 calls of amateurs with unclaimed QSLs on file, following is a partial list. If you would like a complete list, simply send USQS your donation of a serial input printer and we will gladly send an up-to-date printout! hi! Your help in spreading the word to send SASEs to USQS will be a great help.

Thanks to all who support USQS; keep the cards and letters coming!

AK1A	W2AAD	KA3ADH	K4ADI	KI6A
KA1A	W2AAE	N3ADJ	KA4ADV	KS6A
KB1A	N2AAP	W3AE	KQ5A	NB6A
KC1A	W2ABB	WB3AEI	WD5ACR	NC6A
KA1AAD	WH2ABI	W3AFA	N5ACU	NI6A
N1AB	N2ABR	W3AFM	WD5ACZ	N6AA
WB1ABF	KA2AC	KV4A	W5ADH	WB6AAF
WA1ABI	K2ACE	NP4A	W5ADT	WB6AAG
WA1ABO	KA2ACJ	NQ4A	N5ADU	W6 .BC
AZ1ABO	N2ACL	N4AA	N5AF	AA6AC
N1AC	KD3A	KC4AA	WA5AFG	W6ACT
KA1ACC	KE3A	WD4AAM	WA5AFO	AA6AD
K1ACE	KF3A	WA4ABD	KB5AH	AF7A
N1ACH	W3AA	W4ABK	N5AHH	KE7A
KF2A	N3AAU	KA4ABM	KD5AI	KG7A
KN2A	KH3AB	WB4ABW	WD5AIW	NL7A
K2AA	N3AD	KC4AD	AA6A	N7AAW
N2AA	W3AD	K4ADB	AC6A	KA7ABF
WL7ABW	AI8A	N8ACC	KA9ACC	KE0A
WB7ABX	AK8A	AA9A	N9ACG	KF0A
WL7ACK	KC8A	KA9A	K9ACN	KG0A
N7ACY	KF8A	KI9A	N9ACX	KK0A
N7ADA	KJ8A	KJ9A	WD9ADE	K0AA
WA7ADK	WD8AAQ	WB9AAD	K9AE	N0AA
AL7AF	N8AAU	N9AAI	AC0A	W0ABA
KA7AFH	KC8AB	N9AAJ	AE0A	KB0AB
AF8A	K8AC	N9AAO	AJ0A	KF0AB
AH8A	N8ACA	N9AAR	AK0A	N0ABE

73, Laryl Berry, KM7Z, USQS □

Correction

On page 33 of our August issue, the chairman of QCWA Chapter 92 was listed as being Jerome George, KL7PU. It should have read Chuck Sappah, KL7PJ.

MFJ ANTENNA TUNERS 16 MODELS

MFJ-941C 300 Watt Versa Tuner II

Has SWR/Wattmeter, Antenna Switch, Balun. Matches everything 1.8-30 MHz: dipoles, vees, random wires, verticals, mobile whips, beams, balanced lines, coax lines.

Ham Radio's most popular antenna tuner. Improved, too.

$89.95 (+ $4)

Fastest selling MFJ tuner . . . because it has the most wanted features at the best price.

Matches everything from 1.8-30MHz: dipoles, inverted vees, random wires, verticals, mobile whips, beams, balanced and coax lines.

Run up to 300 watts RF power output.

SWR and dual range wattmeter (300 & 30 watts full scale, forward/reflected power). Sensitive meter measures SWR to 5 watts.

Flexible antenna switch selects 2 coax lines, direct or through tuner, random wire/balanced line, or tuner bypass for dummy load.

12 position efficient airwound inductor for lower losses, more watts out.

Built-in 4:1 balun for balanced lines. 1000V capacitor spacing.

Works with all solid state or tube rigs.

Easy to use, anywhere. Measures 8x2x6", has SO-239 connectors, 5-way binding posts, finished in eggshell white with walnut-grained sides.

4 Other 300W Models: MFJ-940B, $79.95 (+ $4), like 941C less balun. **MFJ-945, $79.95** (+ $4), like 941C less antenna switch. **MFJ-944, $79.95** (+ $4), like 945, less SWR/Wattmeter, **MFJ-943, $69.95** (+ $4), like 944, less antenna switch. Optional mobile bracket for 941C, 940B, 945, 944, $3.00.

MFJ-900 VERSA TUNER

MFJ-900 **$49.95 (+ $4)**

Matches coax, random wires 1.8-30 MHz.

Handles up to 200 watts output; efficient airwound inductor gives more watts out. 5x2x6".

Use any transceiver, solid-state or tube.

Operate all bands with one antenna.

2 OTHER 200W MODELS:

MFJ-901, $59.95 (+ $4), like 900 but includes 4:1 balun for use with balanced lines.

MFJ-16010, $39.95 (+ $4), for random wires only. Great for apartment, motel, camping, operation. Tunes 1.8-30 MHz.

MFJ-949B VERSA TUNER II

MFJ-949B **$139.95 (+ $4)**

MFJ's best 300 watt Versa Tuner II.

Matches everything from 1.8-30 MHz, coax, randoms, balanced lines, up to 300W output, solid-state or tubes.

Tunes out SWR on dipoles, vees, long wires, verticals, whips, beams, quads.

Built-in 4:1 balun. 300W, 50-ohm dummy load. SWR meter and 2-range wattmeter (300W & 30W).

6 position antenna switch on front panel, 12 position air-wound inductor; coax connectors, binding posts, black and beige case 10x3x7".

MFJ-962 VERSA TUNER III

MFJ-962 **$229.95 (+ $10)**

Run up to 1.5 KW PEP, match any feed line from 1.8-30 MHz.

Built-in SWR/Wattmeter has 2000 and 200 watt ranges, forward and reflected.

6 position antenna switch handles 2 coax lines (direct or through tuner), wire and balanced lines.

4:1 balun. 250 pf 6KV cap. 12 pos. inductor. Ceramic switches. Black cabinet, panel.

ANOTHER 1.5 KW MODEL: MFJ-961, $189.95 (+ $10), similar but less SWR/Wattmeter.

MFJ-10 3 foot coax with connectors $4.95.

MFJ-984 VERSA TUNER IV

MFJ-984 **$329.95 (+ $10)**

Up to 3 KW PEP and it matches any feedline, 1.8-30 MHz, coax, balanced or random.

10 amp RF ammeter assures max. power at min. SWR. SWR/Wattmeter, for./ref., 2000/200W.

18 position dual inductor, ceramic switch.

7 pos. ant. switch. 250 pf 6KV cap. 5x14x14".

300 watt dummy load. 4:1 ferrite balun.

3 MORE 3 KW MODELS: MFJ-981, $239.95 (+ $10), like 984 less ant. switch, ammeter. **MFJ-982, $239.95** (+ $10), like 984 less ammeter, SWR/Wattmeter. **MFJ-980, $209.95** (+ $10), like 982 less ant. switch.

MFJ-989 VERSA TUNER V

MFJ-989 **$329.95 (+ $10)**

New smaller size matches new smaller rigs — only 10-3/4Wx4-1/2Hx14-7/8D".

3 KW PEP. 250 pf-6KV caps. Matches coax, balanced lines, random wires 1.8-30 MHz.

Roller inductor, 3-digit turns counter plus spinner knob for precise inductance control to get that SWR down.

Built-in 300 watt, 50 ohm dummy load.

Built-in 4:1 ferrite balun.

Built-in lighted 2% meter reads SWR plus forward/reflected power. 2 ranges (200 & 2000W).

6 position ant. switch. Al. cabinet. Tilt bail.

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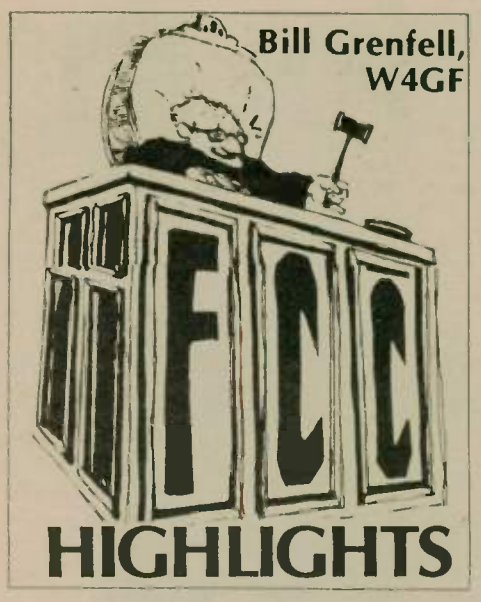
World Radio History



A possible replacement for VHF FM with a 3 to 5 time increase in useful channels per band is being investigated by FCC's Office of Science and Technology. Known as Amplitude Compandered Side Band (ACSB), it was described as roughly equivalent to FM with an estimated original per-unit cost about 50 percent higher, due to the considerable audio processing and the discrete circuitry required therefor. Popular use of ACSB with development of integrated circuits for the audio processing could bring the cost down to equal or even lower than present typical FM equipment. Such a prospective increase in spectrum utilization should be of considerable interest to the manufacturers and users of land mobile radiocommunication systems, and to Amateur Radio Service licensees.

A report by the Experimental Engineering Branch of the findings resulting from this investigation is expected in October or November of this year. Those interested may obtain a copy of the report from FCC's Technical Analysis Division at P.O.B. 429, Columbia, MD 21045.

•

Effective 29 July, the maximum power of repeaters was modified by FCC's amendment of Rule Section 97.67 (c). All repeaters transmitting between: 29.5 and 420 MHz are limited to a maximum of 800 watts for antenna heights below 32 meters (105 feet) above average terrain; 400 watts between 32 and 160 meters (525 feet); 200 watts between 160 and 320 meters (1050 feet); 100 watts above 320 meters. All repeaters transmitting between 420 and 450 MHz are limited to a maximum of 800 watts for antenna heights between 32 and 320 meters; and 400 watts for antenna heights above 320 meters and below 32 meters, within the limits of Section 97.67 (a) and (b). Above 1215 MHz, the limits of Section 97.67(a) and (b) apply.

•

The 50 watt power limit areas in the 420-450 MHz band were increased and expanded around four Air Force bases by FCC Order 82-302, effective 16 August 1982. The 50 watt amateur transmitter power limit is "... to minimize interference to government operations, which are the primary users of the 420-450 MHz band." Section 97.61(b)(7) of the Amateur Radio Service Rules was amended "... to add circles with a 100-mile radius around Elmendorf Air Force Base, Alaska, and Grand Forks Air Force Base, North Dakota; and to extend the radius at Otis Air Force Base, Massachusetts, from 50 to 100 miles and the radius at Beale Air Force Base, California, from 50 to 150 miles." Requests for higher-powered amateur stations in these and other restricted areas are considered individually."

•

FCC action on a proposed no-code amateur license is to be expected sometime this fall, in the form of a Notice of Proposed Rule Making. Being considered are at least two options. One would be to delete the code requirement for the present type of Technician examination for operation limited to the bands above 30 MHz. Another would be to provide a codeless experimenters type license for operation above 30 MHz. However, present international regulations do not permit the option of waiver of the code knowledge requirement for amateurs operating below 144 MHz. Therefore, implementation of anything below that limit by FCC will probably have to wait for approval of the 1979 WARC regulations by the U.S. Senate. The WARC 1979 permits waiver of the code requirement down to 30 MHz.

•

H.R. 5008 was scheduled to go the floor of the U.S. House of Representatives on 16 August. See the August (Worldradio) 'Highlights' for a summary of the changes affecting the Amateur Radio Service which are included in this bill amending the Communications Act. A reported attempt by ARRL to get a rider to the bill to give FCC jurisdiction over antennas and towers (preempting local ordinances), is given little chance of success by a Congressional staff member.

•

Comments on petitions for rule making filed with FCC should include the Commission-assigned "RM" number and indicate that a copy has been sent to the petitioner. When a petition becomes the subject of a Notice of Proposed Rule Making (NPRM) issued by the FCC, it is not necessary that copies of comments on the NPRM be sent to the petitioner.

•

A letter dated 3 August, sent to FCC Chairman Mark Fowler by two U.S. senators, requested permission be granted for immediate use of the 30-meter band by U.S. amateurs. The senators were Barry Goldwater, (R) Arizona and Harrison Schmitt, (R) New Mexico. Apparently, FCC is unwilling to act to implement the WARC 1979 frequency allocations in absence of the "advice and consent" of the Senate, and the Senate shows little disposition to act promptly on the business of ratification of the 1979 Convention.

•

Interference by simplex operation on recognized, coordinated repeater frequencies is considered by FCC to be in violation of the good amateur practice rule, Section 97.78. In a letter to a simplex 2-meter operator, who objected to a frequency-coordinated repeater being established on "his" frequency, FCC pointed out that each repeater was used by many amateurs; the very nature of repeaters requires planned and recognized use of frequencies; that these band plans included recognized simplex frequencies; and that the nationally recognized (2-meter) band plan left more than 1 MHz for other-than-repeater operation!

•

On 5 August, the U.S. Senate voted (71-27) to reduce the FCC from seven to five Commissioners. Besides economy and a purported increase in effectiveness, another reason for the move appears to be to defeat the president's nomination of the current FCC General Counsel, Stephen A. Sharp, to fill a vacancy in the seven-member Commission. The Senate Commerce Committee has apparently opposed Sharp's appointment because one of its members had a different candidate, from his home state.

At present, each Commissioner's term is seven years. One Commissoner's term ends each year and the president then may renew or appoint a new person. A new appointee must be approved by the Senate before becoming a Commissioner. No more than four of the seven may be from a single political party.

•

A probable shift in future radio service requirements is given for further unspecified delay in use of a new set of questions for FCC's general radiotelephone operator license examination.

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MT-1 amateur net 129.95	7.00 UPS in U.S.
MT-1A (marine) stainless steel 179.95	7.00 UPS in U.S.

master charge **208-423-4100** VISA

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World Radio History

A proposal to specify and to measure amateur station power at the transmitter output was being circulated to the Commissioners for approval during the first week of August. The result, if any, was not available at the end of the week. The Commission was in recess during the rest of the month. In any event, a new Docket and NPRM on the subject may be expected in a month or two. □

Woodpecker

Robert Haviland, W4MB

If you do any listening at all on the HF bands, you don't have to be told about this. It's a Russian over-the-horizon radar, putting out a goodly amount of power and operating on whatever frequency band gives best propagation to the area they want coverage for. There's a good chance that this frequency is in a ham band — in fact, in the best one for DX.

The signal is definitely harmful interference. It's got mucho watts — with good propagation is S9 + 40, and is usually at least S9. Even when the band is completely closed to the USSR area, the signal may be S4 to S7 on reflected skip or some other propagation mode.

Also, the pulse is long — about 20 microseconds — so the energy is fairly concentrated. Most is in about 50 kHz, but some go out to 150-200 kHz. It's just about impossible to QSY to avoid it. Anyhow, the frequency is changed at intervals. Because of the long pulse, an ignition noise blanker does nothing to it.

The repetition rate is slow for radar, but 10 pulses per second, giving a range capability of about 9,000 miles. This rate is too fast for any normal AGC to follow. As a result, it desensitizes the receiver. No copy on any normal signal.

It may be a good radar signal, but it also seems to be fiendishly designed to be a good jammer. How come it's allowed? Well, there have been protests — plenty of them. But the radio regulations have a gray area when it comes to transmissions for "national defense." Anyhow, the protests have done no good.

What can you do? Well, you might work on a noise blanker. **Ham Radio** recently had a good design. The blankers built in some receivers can be modified to work against long pulses as well as ignition interference, but will add capacity to the pulse holding circuit. The AGC can be speeded up by reducing the holding capacitor. My 820 will now take one of the jammers from S9 to S5. But it won't touch the others — at least not yet.

There is a more radical step. Set up your keyer so the dot looks like a radar pulse-dot speed and length (weight). You can get close by ear, exact with a scope. Then tune to the strongest QRM, and send a few seconds of test dots. The QRM will quickly move off that frequency.

Illegal? I don't think so. The radio regulations specifically allow measures against QRM of this type. But it makes for an interesting discussion. If you QRM a QRMer, are you a deliberate QRMer? — *Florida Skip* □

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Worldradio is a two-way communication. Send in Amateur Radio information and news. Share your knowledge with your fellow amateur and Worldradio reader. We are most interested in your comments and suggestions. We would appreciate being placed on the mailing lists of amateur club bulletins.

_____

_____

Amateurs defend themselves •

Ted Wolfe, WD4KHL

When the **Charleston** (West Virginia) **Daily Mail** published an article on television interference in its 31 March 1982 issue, the story left the false impression that amateurs were the cause of most RFI. That's because amateurs were the only other broadcast service specifically named in the story. No mention was made of CBers, business and commercial radio, cable TV firms, computers, home video games or other possible causes of TVI.

The story generated a lot of talk on area repeaters, and indignant amateurs discussed the item at length at club meetings. A number were moved to write to both the newspaper and the FCC. In fairness, the paper did print six rebuttal letters from radio amateurs in its "Letters to the Editor" column over the following two weeks.

Amateurs whose letters were published were Calvin White, W8ZHN; Jim Davis, KC8BL; Clyde Marshall, WD8KOY; Jim Lingan, AC8K; Charles Niday, N8DBN; and Ted Wolfe, WD4KHL. □

The Amateur Radio call signs did not arrive in time for the October issue.

World Radio History

Guest operators welcome at DA1US

Dave Mann, DA1BB

DA1US is the Headquarters, United States Army Europe Club Station, located at Patton Barracks, Heidelberg, West Germany. The station presently has a complete Kenwood line, an H8 Computer system, and a potent signal from our 19-element log periodic antenna atop a 120-foot tower. We operate 10 through 160 meters, using the log periodic on the top five bands and the tower loaded up for 160 with the antenna as a top hat.

DA1US has worked over 6,000 contacts in the first quarter of 1982. Direct QSLs may be sent to the Callbook address. Also, QSLs may be sent to our U.S. military address: "DA1US Radio Club Station, c/o MARS-Command Radio Station, Patton Barracks, APO New York, NY 09403." If you use the Callbook address, international postage is required. With the APO address, only U.S. first class postage is needed. QSLing via the "Buro" is good, but cards should be marked "DOK-A06" near our call sign. Stations wishing for an immediate reply should send their cards direct with an SASE using U.S. first class postage for 1 ounce. IRCs are valid here, but save your "Green Stamps" for your favorite charity, please.

When we work 40 and 80 meters, we will call around 3.725 and 7.098, listening for you at the bottom of the U.S. General Class band. We are still figuring out how to work the 160-meter DX problem, and hopefully the ARRL bandplan for 160 DX will help.

Anyone visiting Germany who would like to operate DA1US as a guest operator, please contact us and we will make arrangements. Be sure to obtain your reciprocal license first! The ARRL can supply the blank forms for Germany, a simple one-page affair that permits three months of portable operation. Good luck and Good DX — see you in the next contest! □

380 years of Amateur Radio! QCWA awards for 70 or 60 years of being licensed have been given to: (left to right) Don Wallace, W6AM (70); Graham MaConomy, W6BUK (60); Jim Brown, W6VH (60); Moe Joffe, W6PHE (60); Clayton Blake, W6AGK (60); Forrest Barr, K6BV (70). The chapter also boasts Ben Hackson, W6JF and Ray Meyers, W6MLZ, who previously received their 70-year certificates. ***(photo by Bob Jensen, W6VGQ)***

450 years of Amateur Radio! QCWA certificates were awarded the following members of the Southern California Chapter at their May 8th luncheon for 50 years each: (left to right, rear row) Kendrick Moore, W6WIS; Otto Dedrick, W6NGK; Herb Gleed Jr., W6FQ; Ted Gillett, W6HX. (Front row) Wendell Chapman, W6VIF; Edgar Cameron, W6DC; Dr. Charles Mert Moser, W6HS; George Corcoran, W6EEA; Stewart Wolf, W6FYV. ***(photo by Bob Jensen, W6VGQ)***

Mendocino County commends ham action in formaldehyde spill

The Board of Supervisors of Mendocino County recently passed a resolution, commending members of the Radio Amateur Civil Emergency Services (RACES) for their performance following the extensive spill of a formaldehyde solution from a railroad car in Ukiah, California on 28 March 1982.

The formaldehyde, which posed a serious potential threat to the public and the environment of Mendocino County, was pumped into tank trucks for the next 48 hours, after which operations were suspended until conditions changed due to very heavy rainfall.

Resolution No. 82-125 commends the following RACES personnel "who contributed a great deal of time, energy and equipment, leading to a successful operation in the protection of the people and environment of Mendocino County: Bill Voreis, N6CQH; Tom D. Ruddock, WB6ERE; Leonard D. Gwinn, WA6KLK; Greg M. Glavich, WA6RQX; Judy L. Ruddock, WB6ZIU; Fred B. Twigge, WA6DTU; Rod P. Whitney, WD6FGX; Thomas K. Garber, KA6MQH; Hudson G. Gillis, W6SVQ; Dan DeVorss, KD6WS; Marlis Whitney, KA6IEB; Timothy Morgan, KA6JHC; L.G. von Schriltz, WA6QXV; Earlene Polen, WB6UVG; and Bob Mayo." □

A letter from the White House

Mr. Ray E. Myers
President, Old-Old-Timers Club

Dear Mr. Meyers:

Hearty greetings to the members and friends of the Old-Old-Timers Club!

As a former member of the broadcast fraternity, I appreciate the role of organizations like the OOTC. Having played a part as pioneers in the vital communications field, you have experienced those first crucial steps that led to remarkable growth over the decades.

It is a pleasure to commend your contributions. I encourage your continued active interest in all aspects of communications.

With best wishes,
Sincerely,
RONALD REAGAN
The White House
Washington, D.C. □

ROAR operates station at convention

The world's largest international service organization, Rotary International, has a fellowship group of 1,200 Amateur Radio operators from 58 countries. The fellowship, known as ROAR, maintains networks around the world.

At the International Rotary Convention in Dallas in early June, ROAR had a station on the air in the convention hall. Seventeen countries were worked. Sixty-seven members visited the station.

The station was put on the air by Craig Millis, WD5CKH and other amateur operator members of the Dallas Rotary Club.

At the biannual meeting of the fellowship, Archer was re-elected president; Jim Cox, WA4BHW, of Siler City, North Carolina was re-elected secretary; Roger Barton, W2LOG of New York was re-elected treasurer. □

Young amateurs valued in Santa Cruz County

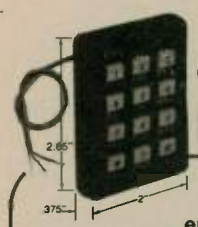
Mary Duffield, WA6KFA

Santa Cruz County Radio Club (California) is finding young amateurs very useful these days. For instance: Jeff Kinzlie, KA6LAF put on a dazzling demonstration of code before the Cabrillo College young people's electronics seminar. And Shawn Rudnick, KA6RFZ is the trustee of the new radio station being established at the San Lorenzo Valley Junior High School. This station will inspire the 7th grade Planetary Citizen class, now an official part of the school curriculum, to work for their licenses, and Shawn will be getting high school credit for helping the 7th graders.

Of course, the adult amateurs are in there pitching, setting up the station and teaching some of the facts of radio: J.F. Rudnick, K6HJU — a block off the young chip Shawn; and Dick Edwards, KE6AH will make it all work. Teacher Barbara Vogl is experimenting with some innovative educational techniques in this class, hoping to encourage the kids to step out on the cutting edge of their culture. □

(*please turn to page 14*)

Pass it on . . . WORLDRADIO



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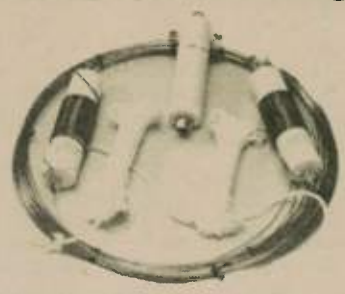

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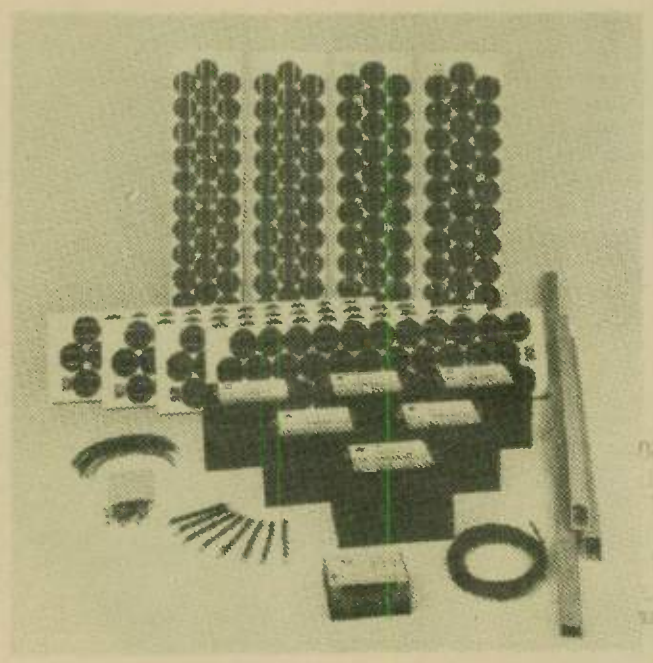

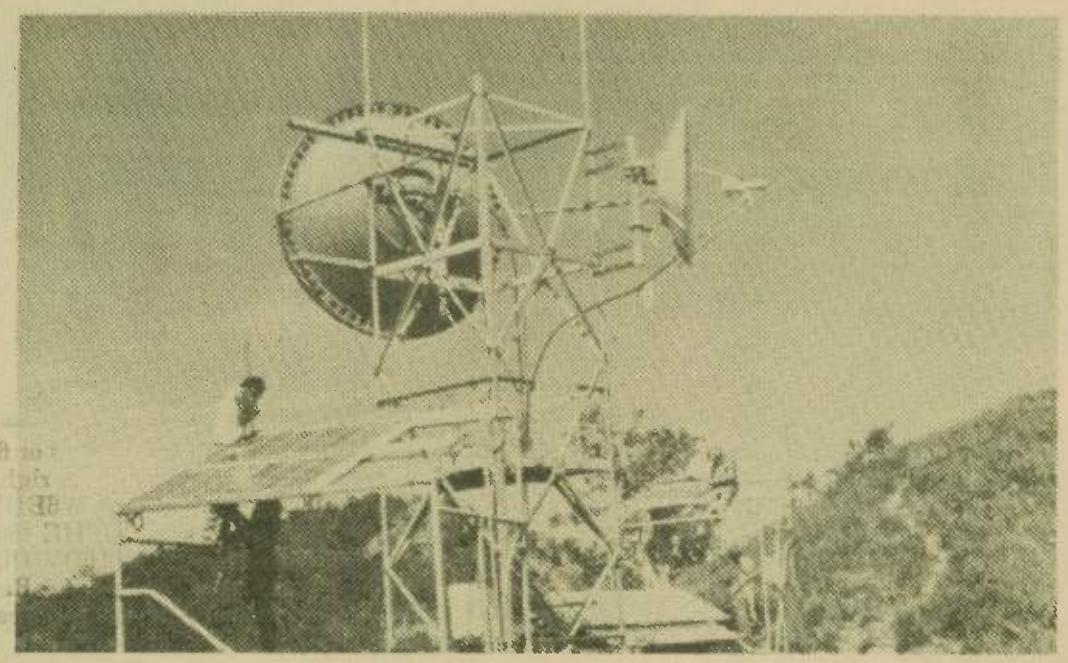

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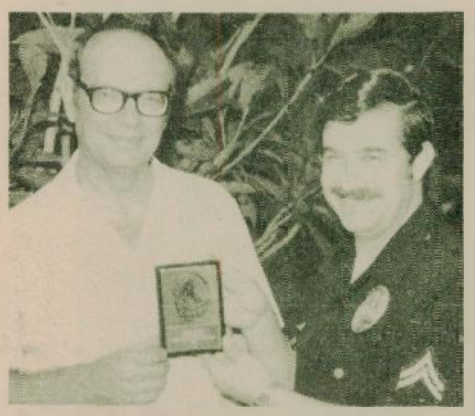
PUBLIC RELATIONS

(continued from page 12)



"Reserve Officer of the Year" for 1981 plaque is awarded to Bob Burns, N6ZH (left) at a dinner given by the Los Angeles Police Department. Officer Frank Pettinato, WB6ELR (right) congratulates Bob for his more than 150 hours monthly of service to the Hollywood Division. N6ZH coordinates the Amateur Radio volunteer operators who participate in crime surveillance programs, providing the police with additional "eyes and ears." Bob is a Specialist Reserve Officer volunteer. ***(Photo by Bob Jensen, W6VGQ)***

Canada appreciates Amateur Radio

The usefulness of Amateur Radio in emergencies has been given concrete recognition by the Canadian government by its establishment of an all-band, fully-equipped Amateur Radio station in Ottawa — Canada's capital.

The station, designed to play a key role in emergency situations, is located a short block from the Parliament Buildings in the headquarters of Emergency Planning Canada, formerly known as Canada Emergency Measures Organization. With the call VE3GOC for "Government of Canada," the station will give federal emergency authorities direct communication with any domestic or international site right from their operations room.

Such disasters as the Italian and Guatemalan earthquakes and the last Manitoba flood showed the value of amateur communications and the necessity of an official station to relieve the difficulties associated with operating from stations in private homes.

In an emergency, VE3GOC will be manned by amateurs from various government departments, which eliminates these problems. The idea for such a station was recommended four or five years ago by a committee convened by the Canadian Amateur Radio Federation and was brought into reality by the persistent efforts of Emergency Planning Canada (EPC) officials Wiggy Wigglesworth, VE3YE and Nick Evanoff, VE3BED.

In anticipation of expanding the official EPC station network, the call suffix 'GOC' has been reserved in all districts except VE2 where VE2PUC — which stands for "Planification d'Urgence Canada," the French name for EPC — has been reserved.

— *Canadian Amateur Radio Federation* □

Contact Worldradio for hamfest prizes.

ARES exhibit for 'earthquake preparedness'

Sunnyvale, California ARES members were asked by the city's Emergency Preparedness Coordinator to participate in a display and exhibit for "Earthquake Preparedness Day" (17 April 1982), and to demonstrate the amateurs' backup communications capabilities.

As part of the demonstrations, Steve Stuart, N6IA exhibited his CW simulator/trainer — a computerized robot ham station.

Participating were: Gerald Starkey, WA6LIJ; Dave Gray, KE6N; Ken Mitchell, WD0ELQ; John Weil Jr., WA6BXN; John Hallyburton Sr., W6BCY; Steve Stuart, N6IA; Richard Joslin Jr., WB5VUL; Barney Green, WA6VAL; Sam Chambers, WB6WII; Hugh Bryant Jr., W6TWU; Willis Freested, KK6A; Bob Elliott, N6AHH; and Walter Rees, WA6BAX. □

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World Radio History

American Red Cross and Amateur Radio

Submitted by Guy Rowlett, KB6AI

On 14 May, the American Red Cross officially dedicated their new building in Oceanside, California. This facility is designed to serve the north coastal area, which includes coastal cities from Del Mar to the Orange County line, Olivenheim, Rancho Sante Fe, Vista and San Luis Rey. The office will offer complete Red Cross services and in addition has one of the most progressive and up-to-date Red Cross Amateur Radio installations in the United States.

In 1940, the American Radio Relay League made a cooperative understanding with the American Red Cross to provide emergency communications during disaster or emergency situations. This agreement was updated in 1964 and again in 1980. To better complement the above understanding and to provide the most efficient system, local North County Amateur Radio operators approached the Red Cross during the planning stages of their new facility and requested that certain Amateur Radio antenna components be included in the building plans. This request was approved.

As a result of this, plus additional funds, equipment and personal service donations made by Palomar Amateur Radio Club, San Diego Amateur Radio Club composite group, and local amateurs, the new building has one of the most modern and efficient Amateur Radio Red Cross communication installations in the United States.

Through the efforts of Fred Speigel, WA6KEY; Charles Gibbs WB6ZJZ; Fred Schnell W6OZF; and Guy Rowlett, KB6AI — local radio amateurs, all of whom assisted in the planning, coordination and installation of the communication system — the North Coastal Service Center of the American Red Cross is now prepared to handle local, county, state and worldwide communications in the event they are called upon to participate in any emergency or disaster. □

Official recognition

Lenore Jensen, W6NAZ

Years of effort by many amateurs have finally paid off as the City of Los Angeles adopted, 19 April, Guidelines and Understandings for Amateur Radio activity in times of emergency.

Lawrence E. Lindstrom, Engineer of Communications, sent an official letter thanking all in the achievement and looking forward to the implementation.

This good news was presented before the Los Angeles Area Council of Amateur Radio Clubs on 4 May by Section Communications Manager (SCM) Stan Brokl, N2YQ, along with specifics for Amateur Radio Emergency Service (ARES) organization and a stepped-up recruiting drive.

"I wish to point out," said Stan, "that this does not conflict with Radio Amateur Civil Emergency Service (RACES) which is under the supervision of the Sheriff Department of Los Angeles County. In fact, I would hope most operators would belong to both. At any rate, ARES and RACES will complement each other."

Coordination with the city will be by an ARES executive committee of three to five amateurs, presently the SCM, Section Emergency Coordinator (SEC) and three District Emergency Coordinators (DECs). Preregistration by volunteers will mean they are covered by worker's compensation insurance. The operators will provide their own rigs except for equipment set up in an Emergency Operating Center with probable supply of antennas and cables by the city.

A tie-in to the National Traffic System is planned. Any agency requesting ham help will do so through the engineer's office.

Because Southern Californians are all too aware of the possibility of a massive earthquake, Stan urged all amateurs to sign up for ARES or RACES and to keep their emergency equipment in tip-top shape.

"Regular nets and drills," he added, "are the best ways to insure efficiency. And knowing your neighbor hams' capabilities, phone numbers and situations is also of great help."

SCM Brokl runs an organizational net Thursday evenings at 8:00 p.m. on 147.705 MHz, K6QQN/r. Volunteers are invited. □

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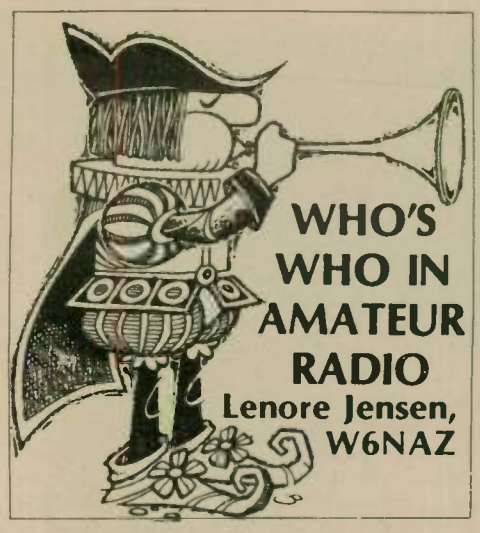


WHO'S WHO IN AMATEUR RADIO

Lenore Jensen, W6NAZ

In Hollywood, you'd find it hard to name anyone who's been involved with more prime-time radio and TV shows, worked with more stars, or who is better liked than Murray Bolen, W6ABR.

In fact, 300 VIPs of the industry and Amateur Radio recently gathered at an elegant dinner in his honor for a star-studded evening of praise and humor.

If you ask Murray how he feels about Amateur Radio, he says, "I just couldn't imagine living without it!"

His show-business career started with a trombone (which he had mastered at age 10) in Montana. It helped him work his way through Carleton College (Minnesota) by playing in dance bands. Also, he was student director of the school symphony.

As a Boy Scout, Murray had learned code and then indulged in the popular delight of winding wire on an oatmeal box, using a galena crystal detector and earphone to carefully tune in some "far off" signal, such as that of 9ZT some 60 miles away. (It was the early call of DX Champ, Don Wallace, W6AM.) A year later he was on the air himself and answering back. Then, once home again in Montana, he earned a ticket, signed by Herbert Hoover, carrying the call 7EV. It was 1922.

Murray Bolen, W6ABR (seated) enjoys surprise entrances by celebrity friends. Dennis Day (left) enters to remind Murray of former radio and TV shows they worked together. Ralph Edwards emcees the happy version of his former TV show, "This Is Your Life."

At the college he had distinguished instructors, Dr. Charles Culver and his associate, Lee DeForest. They planned a radio station for the school and Murray was paid 25 cents an hour to help build the transmitter. He even earned a 2nd Class commercial license so he could run the equipment. They let him "announce" — and seed was sown.

At the same time, no matter what the hour, he'd rush home to his ham rig to build up points in the Brass Pounders League — even after playing a dance band date till 2:00 a.m.

The show bug had definitely bitten. After graduation he traveled on Chautauqua circuits as an actor musician and eventually gravitated toward — naturally — Hollywood. But there were no openings for musicians. However, his Amateur Radio and college training qualified him as an engineer/announcer at the clear channel station, KFI.

After a while, a prep school chum showed up, Harris Brown. The two star-struck young men formed an act they called "Murray and Harris." By now, he'd learned to play "fake piano" and did the songwriting for the comedy song-and-patter duo; they eventually landed at KJR, Seattle. This led to radio popularity, vaudeville tours and 10 happy years at KFRC, San Francisco (then the star spot on the West Coast), featured on "The Blue Monday Jamboree," "Al Pearce Hour," "Shell Chateau" and others.

The lure of travel took the team to club dates in Shanghai, Saigon, Singapore, etc., before they decided to call it quits.

Murray chose to settle in Los Angeles as a broadcast engineer. But his talent for music led him into the control rooms as producer/director of programs featuring the orchestras of David Broekman, Raymond Paige, Meredith Willson (with whom he wrote a couple of songs) and others. Word got around.

It was 1937. Network radio was getting bigger with nearly all major shows produced by advertising agencies. One of the largest, Young & Rubicam, invited him in. For four happy years he presided over the J-E-L-L-O activity, producing and directing "The Jack Benny Show" — probably the choicest job in show business of the time.

Intermittently, he also did "Burns and Allen" (with Paul Whiteman's orchestra), Abbott and Costello, Fred Allen (remember the feud with Benny?) and other sure-fire hits. Murray's combination background of music, vaudeville, acting, comedy and technical radio experience had found him excellently qualified for the challenges and pressures of live network radio.

"Except for one thing," he laughingly remembers. "I couldn't get Benny *off* on time, due to the great laughs from the studio audiences. So I believe I was personally responsible for NBC's resorting to automatic chimes on the hour. From then on, all programs started and ended (or were chopped) precisely on the correct second.

"I've always been glad that I helped with the casting of Rochester. Eddie Anderson was a super find!"

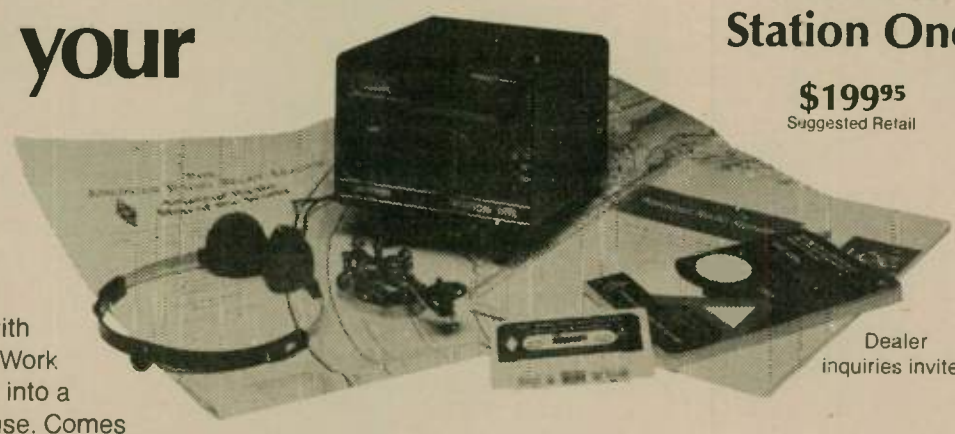
From then on, Murray Bolen's career was brimful with top shows and stars. Sometimes he produced, often directed, supervised or headed the entire office for some of the finest agencies: Ruthrauff and Ryan, Compton, Benton & Bowles. He was a direct link to sponsors such as Proctor and Gamble, Mobil Oil, Lever Bros., Ford, General Foods, etc. He developed a keen sense of what a sponsor would approve or dislike, what would please audiences, and the "care and feeding of stars."

Among the countless shows he worked with were "Amos and Andy" (half hour), "Mayor of the Town" (Lionel Barrymore), "Bob 'Bazooka' Burns," "Your Obedient Servant" (Orson Welles), "Benny Goodman Show," "Victor Borge Program," "Club Fifteen" with Bob Crosby and the Bobcats.

One of Murray's jobs was helping to get Ralph Edwards to move to California with "Truth or Consequences" and later the memorable "This Is Your Life."

Musicians and singers were always a special pleasure, so he enjoyed the work of the Andrews Sisters, Margaret Whiting, Doris Day, Peggy Lee and the 60-musical "Railroad Hours," which

Here's the ticket to getting your ticket



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World Radio History

featured Carmen Dragon's orchestra, Norman Luboff's Choir, Gordon Macrae, Dorothy Kirsten and others. He produced and directed the series.

Dramatic programs were his forte, too. He did the radio series "Father Knows Best" with Robert Young and the filmed "Loretta Young Show." The "Prudential Family Hour of Stars" ran for a radio-year (39 weeks) with names such as Ronald Coleman, Irene Dunne, Jane Wyman and Kirk Douglas heading the bill.

His first brush with live television came around 1948 — television, the unknown monster. Like other amateurs, Murray can't stand not to know about something new. So he agreed to produce and direct Jack Benny's very first video show. "We were all scared silly — but with Jack, of course we couldn't lose."

Another first came a while later, in New York, where he produced the first daytime "soap opera" — "The First Hundred Years." A "walking teleprompter" was devised to assist the actors in remembering so many lines every day. Also, he put on a long series of musical comedies for live TV.

As head of a big agency's busy West Coast activities, he was deeply involved in many successful TV series-on-film: "The Rifleman" (with Chuck Connors), "Robert Taylor's Detectives," "The Joey Bishop" and "The Dick Van Dyke" shows, and on and on and on.

Stars? Danny Thomas, Jimmy Stewart, Andy Griffith, Jim Nabors, Spring Byington, Ann Sothern and Shirley Booth performed in series under his supervisory control. "Mission Impossible," "Barnaby Jones," "Dukes of Hazzard," "Archie Bunker's Place," "Fall Guy" and "White Shadow" are but a few more of the programs he has covered.

Acting and looking far younger than his years, he's still in there, busy with sponsors, networks and shows. He is now with Wells, Rich, Greene, Inc., a top agency headed by Mary Wells. He is in charge of West Coast nighttime network programming.

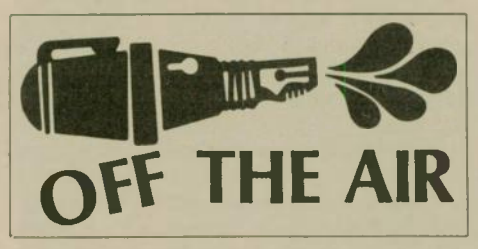
How has he been able to stand the fierce pressures of ratings competition, high budget problems and the infinite details of meeting deadlines all these years?

With Amateur Radio, of course. He'd been an ideal ham. "I loved to build ham gear, especially in the '40s and to the mid-'50s. I even built early TV receivers and many parts for them. And I kept lots of schedules, like the one with K6OQM in Hawaii — my last QSO an hour before Pearl Harbor and my first one after the war."

Today, Murray's as active as ever: he attends the 50 Club regularly and rarely misses a convention. His wife, Fran, is very friendly to the hobby and his brother, Lee, is W6UP.

When he had his own plane, he "fiddled with aeronautical mobile." His car carries low-band as well as 2-meter gear — handy while traveling to their Montana cabin for fishing trips.

Possessing a radiant, enthusiastic personality, Murray Bolen, W6ABR is one of those truly accomplished, friendly individuals we proudly point to as "one of us." □



CFO — where CW reigns

Have you been tuning around the low end (7030) of 40 or 20 meters and heard all that CW racket at seemingly mind-boggling speed? Perhaps you have and decided it must be RTTY or ASCII or some other hybrid communication mode. Nope, it's just plain old CW ragchewing, and if you've never tried it, you are in for a truly exciting surprise. All you need is a little curiosity and a lot of patience.

CFO stands for "Chicken Fat Operators" — a sort of "disorganization," as its founder Jim Ricks, W9TO calls it. It is a rather informal group which was founded about five years ago and now has a "membership" of almost 700. Judging from the general atmosphere within the "organization" (I have been in the "group" for only a short while), I gather a truly amateur spirit of *service, courtesy, friendliness* and *challenge* prevails.

It was news to me that such a group existed — a group founded upon preserving CW as a means of *communication* and *recreation.* (Yes, there is life after the test. HI) If you love challenge and creativity, try Charlie Whiskey QRQ; you will almost feel your license has been reissued the first time you QSO at 40-80 wpm and know CW communication and self-esteem are FB 1.1/1! By the way, speeds of even higher are now being attained by amateurs on the air . . . anyone for 120 wpm?

Membership in CFO is attained by working another CFO station and being nominated by the CFO station (based upon CW proficiency).

73 & CUL,
BARRY YODER, W8SJO
Bradenton, Florida □

Two questions

I enjoyed the article by Myron Pawley, K6GO on wireless telegraphy (August **Worldradio,** page 5). Do any readers remember the cohearer and later, the Meyers valve (audion tube with two filaments)?

Best wishes,
CASIMIR IRVIN, W3FWL
515 Jefferson Avenue
Cheltenham, PA 19012 □

Anyone for starting new museum station?

On this date (3 August), a most interesting museum opens in New York City in the form of the *USS Intrepid.* You will hear much about it in the future. My point in writing is that if Amateur Radio clubs could set up in the radio room, it would be similar to that of the *RMS Queen Mary* at Long Beach, California and would make for many interesting opportunities for amateurs worldwide.

I just throw this out as an idea and have no way of knowing how one would "get the key" for the radio room aboard ship. I think she is permanently berthed at the foot of 46th Street, New York City.

73,
IAN MAC DONALD, W1GMC
Leominster, Massachusetts □

More rules — are they needed?

I feel compelled to respond to the article "Contest interferes with Tonga communications" (July '82, page 3). It seems to have become the rule rather than the exception to run maximum (and frequently more, since it is commercially available to anyone with the bucks) power, regardless of the need or lack thereof. The example of the interference which disrupted the handling of emergency traffic — even though it may have been unintentional — points up a very real problem in the crowded band conditions which now prevail. Contests are great and certainly stimulate a lot of interest, but all too often the need to win overrides the true spirit and intent of Amateur Radio. Deliberate running of mike gains wide open to clear out a path on the frequency is hardly a test of one's operating abilities.

Our club, The Fellowship Amateur Radio Club, has run QRP in the last few Field Days and last year finished first in our division in our category. We really didn't expect to do that well but just went out to test our capabilities and have a good time. We did both and learned an important lesson. It takes more effort, more determination and more imagination, but when the smoke clears you certainly have a better feeling about yourself.

As much as I hate to see more regulation and government interference, it may come to pass that we need to have allocations of frequencies for nets and/or contest participants unless we can all develop a more empathetic and mannerly way of operating.

Sincerely,
F. NORMAN WARD, K4RBR
Hialeah, Florida □

Misspelled words are nothing new

Reference the item on page 2 (July 1982) from Dave Williams, N7ATT. He attempted to make something funny or ridiculous out of a situation that is anything but. Code exams have always had misspelled words or punctuation errors. Anyhow, since 1940 when I took my first test. This is to determine if the operator is actually copying the code or anticipating. Some tests, rather than being plain text, were coded groups of random characters and numbers for this purpose. This is for a good reason. A *radio operator* is just that — an operator. He is to copy and deliver a message as received without editing. If radio operators edited or altered texts of messages, entire meanings of the sender or originator could be changed. You can query the originator, but if he received it as sent, that is the way he was obligated to send the text.

N7ATT's complaint stressed what is missing in a lot of amateurs today: ethics, good operating practices, understanding our public service mission, and striving to be accomplished in Amateur Radio. This all has degenerated into Bash ethics, DX lists/nets, scanty (if any) real technical ability, no-code licenses, a growing CB-type attitude, rudeness and jamming. A lot of this is our own fault. We want growth in Amateur Radio by memory courses, code speed, and rapid upgrade without teaching good operating practices, technical ability, ethics, and a little history of Amateur Radio.

JOE FEAGANS, W9HCI
Tallula, Illinois □

Who sends 5 wpm?

I have just finished reading the article on the no-code license, and perhaps a word from a new Novice might be of some interest. I am just as green at this as my name is red.

First of all, if there is a no-code license, the air on the amateur bands will be just as bad as on CB. If that ever comes about, I am going to pull the plug and it will stay pulled, at least in that area.

Second, it makes no sense to me to have a 5 wpm Novice requirement. Nobody, but nobody, sends at 5 wpm. I have not tried sending as yet and I'll be darned if I am going to get on the air until I can copy at least 11 wpm. Sure, I am trying to learn, but why not admit that 5 wpm is not useful and make the requirement 11 wpm to start with? For a person such as me, that is a jungle out there.

Sincerely yours,
JACK VERMILLION, KA6VGT
Rio Vista, California □

Tribute to an 'Elmer'

I'd like to see my "Elmer" get a little bit of the recognition he deserves, but which is all too often swept under the rug when one becomes a Silent Key.

I was 56 years old when I met "Win" (Winston Du Bois, W1JSX) in 1965. I was referred to him by someone who said he could fix my CB set.

Through his good-natured prodding, my interest in Amateur Radio grew, and he gave me my Novice exam that same year. At my age, I realized that if I wanted to advance in Amateur Radio, I had to get at it and do it! No excuses.

I haunted "Win" for the next three years. It was necessary at that point in time to be a General for two years before being eligible for the Extra. So, on 11 October 1968, *both* "Win" and I went to Boston and took our Advanced and Extra Class (tests) on the same day to save money. (Remember when ham licenses cost money?) We both passed!

He often said that because I was five years older than he was and because he had had his ticket 30 years (±) longer than I had, he was shamed into going with me to be examined for something above General.

He was a member of the Chelmsford Amateur Radio Association. Through his encouragement, two junior members of the association became Science Fair winners, and ultimately were successful in high-technology companies.

Soon after I received my Novice, WA1EMN, "Win" became a civilian wireless operator on the *USS Croatan*, which was making round trips to Viet-Nam with parts and personnel. He worked me regularly on 15 meters (21.138) to help me increase my code speed. A Novice ticket then was dead after one year. We were restricted to crystal control and 75 watts. "Win" had a linear on shipboard.

Whatever stature I have achieved in Amateur Radio is the result of having had a dedicated "Elmer" in the person of Winston E. Du Bois, W1JSX. The passing of this brother ham and Mason leaves a void in the ranks of those dedicated to helping others to achieve. I'm saddened to have lost my "Elmer" and good friend. (W1JSX died 27 June in Peterborough, New Hampshire.)

DURFEE "BUD" HILL, K1PD
Westford, Massachusetts □

World Radio History

American Radio Relay League

J.A. "Doc" Gmelin, W6ZRJ
Past Director, Pacific Division
ARRL Honorary Vice-President

In our most recent series of articles in this column, we have discussed the problems facing the ARRL Board of Directors in determining the League's stand on phone band expansion.

Such phone band expansion does have some problems in that it can, and has over the years, affected the space available for CW and RTTY operation only.

Since voice communication came into common use in Amateur Radio during the late '20s and '30s, there has been something of a battle between those who consider themselves exclusive CW operators and those who feel they are exclusive phone operators. This phone vs. CW battle has in a way, spilled over into the public domain, as citizens who do not have an Amateur Radio license ask why there should be any code operation or code test at all.

Why use code when we now have reliable voice communications? Put a different way, the question is often asked, "Why do I have to learn the code to become a phone-only Amateur Radio operator?"

If one has a Technician license, the question is asked in a slightly different way. "Why do I have to learn 13 wpm instead of 5 wpm in order to obtain the privilege of operating on *the phone bands* between 1.8 and 30 MHz?"

But ask most amateurs and they will tell you that the code requirement should be retained as part of the Amateur Radio license test.

What *should* the code speed be? Well, that depends on what class of license you already hold.

The question of why code should be required to obtain a license to work on the amateur phone bands is not a new one. It was asked by a young man over 35 years ago; the question was, "Why do I have to learn 13 wpm code just to obtain a license to work on *the 10-meter phone band*?"

There was no Novice license in those days just after the end of World War II. And why 10 meters? Because that's where the young man first saw Amateur Radio in action.

Well, fortunately for the young man, he *did* have to learn the code, which eventually opened to him a whole new world of Amateur Radio operation that he probably never would have known except for this requirement.

I know, for I was that young man, and I am thankful that I had to learn the code. I still use code regularly in my own amateur operation. (I also use phone.)

How do today's radio amateurs feel about the code test requirements for an Amateur Radio license?

If the ARRL Board of Directors is any reflection, the amateurs today are 100 percent in favor of the code test, because at its meeting this past spring, the Board unanimously voted in favor of a motion stating that there should continue to be some kind of a code test in at least the basic license. They voted *against* a codeless amateur license.

While it is probable that not all radio amateurs favor a code test, surveys in the past have shown that most do generally feel that a code test, or at least knowledge of the code, should be part of the amateur tests.

In fact, surveys in past years show that while the favored mode of about 60 percent of the radio amateurs is phone, about the same percentage also list CW as being a part of their general Amateur Radio operation.

A majority of radio amateurs want to keep CW, although a similar majority do not like to see what appears to be unused frequencies in some of the bands. So the League's Board of Directors most likely does reflect the feeling of radio amateurs when they opt for expansion of the phone bands in most of the HF bands.

As we have discussed in the last few articles in this series, the problems in phone band expansion have to do more with the fact that many foreign phone operators feel strongly that there is a need for a "special" foreign phone band on the major HF amateur bands.

Since amateurs in most countries do not have restricted phone segments, some of these same amateurs keep moving lower into the CW bands to ensure this special operation. DX operators in the United States are particularly concerned with this type of operation on the part of foreign phone, and some have suggested that the bands in the United States be opened to unrestricted operation by mode, making it impossible for foreign phone DX stations to "escape" U.S. operators.

If that were to happen, what would become of CW operation on the amateur bands? Will unrestricted voice operation destroy CW operation? I suspect this might be so in the long run. And then it *would* be ludicrous to have a code test for a skill that amateurs would probably never use.

That, of course, is now the argument of those who want to eliminate the code requirement for an amateur license. Of course, we could "beef" up the Technical test by perhaps including questions at the level of, say, second- or third-year calculus.

This is not what the "have nots" want either.

I think many people would like to join the ranks of radio amateurs like people join the ranks of sports fishermen — something like, "I think I'll go down to the sports store today, buy a fishing pole and fishing license, and try my hand at fishing."

That's probably good for the economy, and maybe a million fishing poles are purchased each year, used once or twice, then years later thrown away. Experience on the 27 MHz CB band is something like that. Millions of "CB sets" were purchased. How many now sit unused? Of course, then comes the argument that the airways belong to all of us, and we should all be able to use them.

Everyone can use them as amateurs now. All you have to do is pass the code and theory test and you can be an amateur.

Now comes the argument that we amateurs, by insisting on the code test, are depriving our own service of millions of people who will "*contribute*" to Amateur Radio, which is — after all — a radio service. Service to whom? The public in general?

How much do you serve your fellow man by going out and *buying* a commercial amateur transceiver and going on the HF bands *to talk to people*? How much service do you give when you only want to get on the air and talk to people by voice?

Why not go out and talk to your neighbors, which most of us probably don't do now? But we will talk to someone 2,000 miles away . . . by radio. If you go on the air, you may make enemies of all of your neighbors anyway, with TVI problems you can't solve if you don't have the technical skill obtained in learning to pass the Amateur Radio exams.

For those who say, "Well, I want to get on the air just to talk to my wife or a few friends," the answer is there are *already* communications services for this type of communications. There are mobile radio service companies, the phone company, and of course, CB. You say CB doesn't work because of interference? That's because there are too many "idiots" on that band. What do you think will happen to Amateur Radio if just "anyone" can go on the amateur bands?

Enough. I think there *should* be a code requirement for *ALL* classes of amateur license and certainly the present level of Technical test. I think there *should not* be a codeless license.

What do you think? □

Amateur Radio week in Alabama

The week of 9-15 May was named as Amateur Radio Week by the governor of Alabama — Fob James. The first part of the proclamation follows:

WHEREAS, Amateur Radio has provided valuable emergency communications to citizens of the State of Alabama during natural disasters caused by tornadoes, floods, fire and hurricanes; and

WHEREAS, Amateur Radio communications by volunteer operators have provided public service support for walkathons, cancer drives and similar fund-raising activities; and

WHEREAS, Amateur Radio provides worldwide communications for overseas servicemen, missionaries, scientists and other citizens with their friends and loved ones in the State of Alabama; and

WHEREAS, Amateur Radio continues to prove its ability to contribute to the technical advancement of the radio, electronics and television art, and in recognition of its many contributions to every phase of the communications field. □

Hawaii proclamations

On 27 May 1982, the governor of the state of Hawaii — George Ariyoshi — signed a proclamation announcing the week of 20-26 June 1982 as Amateur Radio Week. Five days later, the mayor of the County of Hawaii — Herbert Matayoshi — signed a similar proclamation, announcing the same week as Amateur Radio Week in that county.

In the final paragraph of the state proclamation, Governor Arioyoshi urges "the citizens of the state to express their aloha and appreciation to all Amateur Radio operators who contribute their time and skills so we may maintain the highest degree of communications readiness." □

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World Radio History

Convention

(continued from page 3)

Tom Wong, VE7BC receives the Yaesu FT-707, the major prize during the Sunday morning breakfast. Want to bet that it ends up at one of those future BY stations?

Mary Lewis, W7QGP, Director of the Northwestern Division.

save his block of calls. We were the first, but there have been a few assigned since and I suspect that it will be a permanent group of prefixes for special events replacing the old PJ1 and PJ0 special prefixes.

"The change was such a surprise that it caused no small amount of discussion in our rather tired group of hams. I got the news 120 feet up the 40-meter tower while trying to hold the 402BA still in a 20 mph wind. It was hot and the crew on the ground stopped everything to discuss the relative merits of the new call. It was no use trying to stop the discussion and much more interesting to them than pulling on lines. We actually decided to ask Jose to change it before we found out the whole story, and I'm still not sure whether it helped or hindered the operation. If I had another QSO for every time a big slow-talking Texan stopped my run to ask me about the call and QSL info, we might have made our 15-meter QSO goal.

"Back to the planning, with people strung across the East Coast and me in the West, it took both 20-meter skeds and a lot of landline calls to solidify the layout and operator assignments. Band assignments are a must in a well run operation, and it is impossible to give everybody a hot band. There is always a difficult balance in the ego vs. ability of a diverse group. As a group, all contesters have oversize egos and many have less team spirit then they should. The last thing you need is a guy to get bent out of shape and take home his rig in the middle of a JA run. (This actually happened to some of us at KH6XX in '78). Ed and I decided to cast everything in stone before these guys invested $800 in airplane tickets, and it turned out to be one of our better decisions.

"Setting up a multi-multi station is cheap when you are close to stores. In the case of Curacao, it is very expensive because radio stores don't exist and everything has to be shipped in from the states. We had some aluminium from the year before, but we needed lots more and so much coax that it had to be shipped ahead and held in bond for our arrival. We shipped down 220 feet of aluminium tube, a 5-element 15-meter beam, 1,000 feet of RG8AU and 3,000 feet of RG8X. Add that to auto rental, a 35 percent duty on imported gear, and you can see why we had to ask $150 per person in advance to get on the list.

"Those of you who have been to South America will understand the frustrations of waiting for hours or days to get the documents stamped by all the right people. Four of us arrived a week before the contest, but it was Monday before the customs office opened, so we spent the weekend working with the leftovers from the year before and preparing. First thing Monday morning Ed and I were at the customs shed. Three languages are spoken — Dutch, Papiemento and Spanish. From 8:00 in the morning until 5:00 that night, we moved from officer to officer and tried our best to make English a fourth language. The people are very good about helping over language hurdles and many local businessmen who were also spending the day clearing customs assured us in English that our treatment was standard. As the operation was closing, we finally got our gear, stowed it in the little wagon and headed for St. Marta Bay."

In summarizing, Stu listed some of the significant facts of the contest operation. The score that was calculated was just short of 42 million points. This worked out to be 17,000-plus contacts on six bands. Twenty meters netted 4,837 contacts in 156 countries and 38 zones. On 15 meters, the team worked 39 zones. (All 40 zones were represented during the contest on that band.) Total cost of the operation was around $15,000, which included transportation costs.

The operators included Walt Rakitsky, WA3LRO on 10 meters, and Bill Remington, W3XU on 40 meters. The rest of the bands were handled by Ed Moody, N3ED; Dave Jones, K3JLT; Wally Eckles, W8LRL; Stu Hoar, N7ZZ; Bill Wischmann, KB2XZ; Jeff N8II; Tom Del Presco, AD3V; Frank Booker, 9Y4VU; Freddy PJ2FR; and Hans PJ2AML.

The banquet

The highlight of the Pacific Northwest DX Convention was the Saturday evening banquet, and a good one it was. Those Canadians know how to throw a good banquet. But before one could consume his meal, Earl Dery, VE7IN, president of the Fraser Valley DX Club, was asked to give a devotional to remind us where it is all at.

Upon conclusion of the meal, Henry Thel, VE7WJ — the Convention Chairman — introduced Vic Waters, VE7ALR, the Master of Ceremonies. Vic did a fine job of keeping everyone's attention the rest of the evening. The first thing Vic did was to ask for all those DXers present who had worked the real BY1PK to stand, very appropriate for a DX meeting. A quick count revealed that there were four lucky souls in the room. Wes Veale, VE1LD, was the first Canadian to work BY1PK, and he did it from Nova Scotia.

Al Johnson, W7EKM was scheduled to introduce those amateurs at the head table, but since Al was home recovering from surgery, the duties were assumed by Dick Moen, N7RO.

Master of Ceremonies, Vic Waters, VE7ALR

The winners of the QRZ DX Contest were announced. This was the contest-style "eyeball" type communication mentioned previously. Irene Morgan, WB7WQE — who had over 150 different DXCC countries — was the winner with Al Hickey, VE7BTV very close behind.

The DX Advisory Committee has recently been restructured to have division representatives rather than call area representatives and Bob Hudson, K7LAY was introduced as the Northwestern Division representative. Bob is president of the Western Washington DX Club.

Just prior to introduction of the main speaker, a film run by Bruce Light, VE7BSM was shown for the enjoyment of the group. The film, "Field Day — VE7PX Style," illustrated how they go about dealing with Murphy in British Columbia during a typical Field Day exercise.

Carl Henson, WB4ZNH and his XYL, Martha WN4FVU, were invited to the convention to be the main speakers of the evening and were introduced by Henry VE7WJ.

Wes Veale, VE1LD (left) shows off his BY1PK QSL card, as Bruce Light, VE7BSM shares his good fortune. Wes was the first Canadian to work the Chinese station.

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Carl received his General Class license in 1973, and at about the same time became interested in DX. Carl, who is a member of the Southeast DX Club, was intrigued by the Annobon DXpedition by Martti Laine, OH2BH, and decided that he and Martha must go there. They left Atlanta right after a blinding blizzard and flew to Madrid. There is only one flight a week from Madrid to Malabo, Equatorial Guinea. Hotel accommodations are hard to come by in Malabo, and what would be available is bad. One upgrades as another guest checks out and leaves Malabo. The room in which Carl and Martha stayed had no lock on the door, Carl's bed collapsed during the night, and there was no private bath.

They finally got permission to go on to Annobon. Along with an American archaeologist, Carl and Martha flew from Malabo to Annobon via Libreville. This was considered to be a domestic flight, so no passports were required. This, unfortunately, created some problems at the DXCC desk in Newington, as no passport was stamped to prove that they actually went there. As there were no navigational aids available, this made the flight very interesting, especially when the pilot said, "Help us look for Annobon."

Operating with the call 3C0BC, they were permitted to operate only 16 hours per day, between 8:00 a.m. and midnight, local time. Despite these restrictions, the pair did collect 7,000 contacts — 300 of them with the West Coast. The gasoline generator was left behind when they left and dubbed "Annobon Power and Light," as it will provide the only means of power generation on the island.

At the conclusion of the banquet, the Hensons were presented an Honorary Certificate by the Fraser Valley DX Club for their fine presentation.

Sunday morning breakfast

Bill Blits, VE7DSF was the special guest speaker Sunday morning. Bill talked about his operation as YB7AER in Indonesia. This country was occupied by the Dutch for almost 300 years and by the Japanese for three years during World War II. Population is on the increase and has tripled in the last 50 years.

Bill said that the Indonesian amateur stations you hear using the YC prefixes are not permitted to work amateur stations outside their country. Obviously, many of these stations ignore the restriction. Calls with "A" as the first letter in the three-letter suffix are reciprocal calls, such as Bill's YB7AER call.

The government workers in Indonesia wear official shirts every Wednesday. Sixty percent of the work force in Indonesia works for the government and this includes the banks which are state-owned.

Following the Indonesia slide show, awards were presented. This included the RSGB Senior Rose Bowl winner for 1980, which was won by Lee Sawkins, VE7CC. Henry Thel, VE7WJ received the trophies for the CQ WPX Contests of 1979 and 1980. Henry's station was the top entry in the world in the multi-multi category. Other award winners include Bruce Light, VE7BSM; Earl Dery, VE7IN; Greg Dubord, VE7CML; Dick Moen, N7RO; and Hal Hickey, VE7BTV.

During the remaining minutes of the convention, the prizes were raffled off, among which were subscriptions to Worldradio. The main prize, a Yaesu FT-707, was won by Tom Wong, VE7BC. With that, the meeting was adjourned by Convention Chairman Henry VE7WJ.

See you next year in Seattle, where the 1983 Pacific Northwest DX Convention will be hosted by the Western Washington DX Club. □

World Radio History

DX WORLD

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

Activities Calendar

25-26 September	Scandinavian Activities Contest (SSB)
25-26 September	CAN-AM Contest (CW)
25-26 September	Italian YLRC Contest
02-03 October	VK/ZL Oceania Contest (SSB)
09-10 October	VK/ZL Oceania Contest (CW)
30-31 October	CQ World Wide DX Contest (SSB)
13-14 November	DARC European DX Contest (RTTY)
27-28 November	CQ World Wide DX Contest (CW)

Details on the above events shown elsewhere in this issue. Those not shown can be found in Frank Anzalone's column in CQ or in QST.

W-100-N

This gentleman is all by himself this month as he was the only applicant for the **Worldradio** Worked 100 Nations Award.

185. N2BJ Barry Jay Cohen

Barry resides in Garnerville on the western reaches of Haverstraw in Rockland County, New York.

China (BY)

Tom Wong, VE7BC reports that as a result of his article in **Worldradio** (August 1982, front page), Dentron has offered to contribute toward the development of one of the future stations. In addition, the Northern California DX Foundation has offered to help put another station on, this one with the BY6 prefix. Tom also mentioned that Triex has made an offer.

Tom, who is the managing director for North America Operation of Western Commodities Ltd., has been responsible for the development of Amateur Radio in China. He hopes to eventually have a station in each province and will include all call areas BY1 through BY0. Amateur Radio is not considered a hobby in China, but an incentive to learn electronics. There are five classes of licenses ranging from a basic license to the top grade, which will require being an electronics engineer to pass. Presently, there are 4 million learning solid-state electronics.

To become a licensed amateur in China, one must be loyal to the government and a member of the Communist Party in good standing. No foreigners will be allowed to operate from China. At present, two stations are in operation — BY1PK, the most familiar call, and the new station, BY1BC. A station in Canton province is soon to be activated and will have a BY7 call. Next in line is Hunan province with a BY4 call, which is due next spring. Tom says there are 14 amateurs in Hunan.

Tom manages to get to China two times per year, is able to move about the country without government restrictions, and has established good communications with the correct officials. He has invested much money of his own in developing Amateur Radio there and was responsible for bringing over 28,000 handbooks. Anyone who wishes to further aid in developing additional stations there may contact Tom at 220 N. Grosvenor Avenue, Burnaby, B.C., CANADA. Tom's work phone is (604) 434-3944.

In October there is to be a Fox Hunt between the Chinese amateurs and the Japanese amateurs. This is due to take place on the 9th, but no other details are available.

Chagos (VQ9)

Out of Diego Garcia comes the big signal of Phil Rainey, VQ9CI. Look for him near 21.293 MHz from 1630 UTC. On 20 meters he has been reported on 14.210 MHz from 1100 UTC. Phil, whose stateside call is WA4UPJ, requests that QSL cards be routed via Frank Williams Jr., KA4UMB.

Other stations reported from this area include VQ9XX, who has been active on 40 meters operating CW. Look for this one at the low end after 0100 UTC. On 20 meters, he has been reported on 14.025 MHz around 1500 UTC and 14.202 MHz at 1400 UTC. Notice that this station operates both modes to please the deserving.

VQ9PG is a third station reported, and he has been found on 14.213 MHz at 1030 UTC. QSL this one via Paul Skidmore Jr., WB4MTE.

Oman (A4X)

Check the Sinbad Net on 21.315 MHz, 1700 to 2000 UTC, Sunday and Monday, for activity from this one. A4XGY has been reported as the MC of this new net, with several stations there with him. There is an Oman Award offered for working at least eight stations from this country. To apply for the award, send your certified list with a fee of 5 IRCs to P.O. Box 981, Muscat, OMAN.

Elsewhere on the bands, A4XJO has been reported operating CW on 21.025 MHz from 1830 UTC and 14.002 MHz from 0300 UTC. This station has been using Anthony McClenny Jr., WB3JRU as his QSL manager. Other stations include A4XGY, A4XIJ, A4XIU and A4XJR; most likely, these stations can be found on the Sinbad Net.

Tristan da Cunha (ZD9)

Lorna ZD9YL continues to be the sole YL representative for this country. She

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World Radio History

has been worked on 20 meters in the 14.210-14.235 MHz slot from 1100 UTC and again on 15 meters at 21.335 MHz from 1800 UTC.

Andy ZD9BV is also active there. He has been reported on 21.297 MHz from 1800 UTC. As Lorna and Andy are presently the only operators there and they have a very close relationship, you can probably get them both in one shot for the asking. Andy reports that he now has low-frequency antennas installed.

Equatorial Guinea (3C1)

That DXpedition to Equatorial Guinea scheduled in August was TR8OIT, who was assigned the call 3C1JA. This was to have been an SSB operation only, as CW was not authorized. If you worked Alain, send your QSL card via Katsuya Kokubun, JA1LFR.

Last month we reported the possibility of operation from Malabo by Joseph Sheppherd, the archaeologist. Carl Henson, WB4ZNH reports that Joseph has run into some problems and probably will not be able to operate. This also includes Annobon.

Kiribati (T3)

Dick Wilson, K6LRN of the Redwood Empire DX Association reports that Vicki Hess, W6OAE will be leaving for Kiribati on or about 1 September for a stay of two years. Vicki, who is involved with the World Health Organization, is looking for an antenna that she could use while on Tarawa in the old Gilbert Islands group. Dick reports the call to be T3AY, but that can't be right as Kiribati is now using the T30, T31 and T32 prefixes. It is hard to keep up with this one as the prefixes keep changing. If you can help with an antenna, contact Dick at 14 St. Bernard Place, Tiburon, CA 94920, or telephone (415) 435-2523.

Western Samoa (5W1)

Pete Billon, K6JG reports that he and his XYL Jesse, WA6OET — along with Jim Robb, W6OUL and Larry Miller, W7CB — plan to operate from Western Samoa during the CQ World Wide DX Contest in October. The calls assigned are 5W1EE, 5W1EF, 5W1EG and 5W1EH, with all QSL cards to be sent via Jim Robb Jr., W6OUL.

Pete says there is the possibility that they may be using the 5W7 during the contest. They will be on all bands 10 through 80 meters, and 160 meters during the contest. For CW contacts, (not during the contest), look for them 25 kHz above the low end of the band.

DX News Sheet

The RSGB (Radio Society of Great Britain) reports that Geoff Watts, founder of the *DX News Sheet*, is unable to continue as editor due to his health. To top it off, his wife is recovering from spinal surgery, requiring Geoff to take over the household chores. In the meantime, the task of editor is being divided between Martin Atherton, G3ZAY and Don Field, G3XTT, and will maintain the same format. Geoff will continue to deal with his IOTA matters (Islands-on-the-Air) and orders for his country/prefix lists.

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Visiting DXer

We were fortunate to have the opportunity recently to meet Tony Ward, ZL1AZV and his lovely wife, Janet, who were passing through Sacramento. Tony, a native New Zealander, is relocating in Canada, where his wife hails from. While in Sacramento, Tony and Janet were visiting Jay and Jan O'Brien, W6GO and K6HHD. They were to continue on to Calgary, Alberta and London, Ontario to visit Janet's family.

Tony has visited many places. The most recent was a DXpedition to Chatham Island last December, where the group was flown in on one of the old Bristol freighters. As they were not pressurized, the comforts of today's modern jet aircraft were lacking.

Operation from Chatham Island was from the local jail. They would have had to go QRT if someone on the island were to have been arrested, says Tony. Presently, there are about five amateurs living on the island.

Other calls Tony has used incude A35TW, 5W1BJ and ZK2TW. As he will now be living in Canada, look for him signing VE3IAT. Tony is a geography teacher.

Countries Needed survey

Every year about this time, Jim Cain, K1TN — editor of *The DX Bulletin* — makes a survey of his subscribers as to what countries are still needed. In April, 2,000 survey sheets were mailed out. For the results, 603 valid returns were tabulated and were ranked from 1 (the most needed) to 73. At the top of this list is China, with Palmyra Island at the bottom of the list. In addition, the listing was compared with that of the years 1980 and 1981, with indications as to how the ranking shifted.

The survey is partially reproduced below and, of course, applies to Jim's readers only. This should be an accurate cross-section of the deserving DXer. Check and see if you have worked any of these needed countries.

Rank	DXCC Country	Prefix	% Needing	Movement +/−
1.	China	BY	85	—
2.	Heard Island	VK0	76	+4
3.	Laccadives	VU7	76	+2
4.	Albania	ZA	76	—
5.	Khmer Republic	XU	73	+3
6.	South Yemen	7O	70	+1
7.	Bouvet Island	3Y	67	+3
8.	Andaman Islands	VU7	67	+4
9.	Burma	XZ	66	−6
10	San Felix Islands	CE0X	66	+1
11.	Malpelo Island	HK0	62	+2
12.	Viet-Nam	XV	59	+2
13.	Yemen	4W	56	+3
14.	Afghanistan	YA	52	+1
15.	Peter and Paul Rocks	PY0	50	+3
16.	Crozet Island	FB8W	48	−7
17.	United Arab Emirates	A6X	48	+2
18.	Chad Republic	TT	46	+4
19.	Laos	XW	45	+2
20.	Kermadec Islands	ZL/K	41	+5
21.	Libya	5A	38	+8
22.	Sao Tome	S9	38	−5
23.	Mellish Reef	VK	38	+5
24.	Bangladesh	S2	37	+6
25.	Spratly Islands	1S	36	+7

The changes in ranking are due to the amount of activity from these countries, whether DXpeditions or very active amateurs popping up. Malawi (7Q) was ranked as 67 in this 1982 listing, a movement of −47, as it was ranked 20 last year. In 1980, this country was ranked 32.

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At a recent dinner party honoring Tony Ward, ZL1AZV on his visit to Sacramento, California. From left to right: John Minke III, N6JM, Norm Brooks, K6FO; Tony Ward, ZL1AZV; Jan O'Brien, K6HHD; Jay O'Brien, W6GO; and Dick Collier, KB6OZ.

The antenna farm in Howick where Tony Ward, ZL1AZV operated. The antennas include a 5-element beam on 10 and 15 meters, a 2-element beam on 40 meters, a 4-element beam on 20 meters and a 2-element vertical on 80 meters with 6,500-foot radials. Everything is homebrew. *(Photo courtesy ZL1AZV)*

DXCC

During 1981 there were 3,329 new DXCC awards processed with 7,159 endorsements. For the more difficult 5-Band DXCC there were 187 applications processed. This processing required the necessity to check 526,359 QSL cards.

In case you may not be aware of it, any contact made in the three new WARC bands (10, 18 and 24 MHz) will not count for DXCC credit.

Nudged by the bicentennial call of AJ3AA in 1976, Dick Spenceley, KV4AA of the American Virgin Islands had been out to set QSO records. In 1976, Dick made 36,480 contacts; 31,700 in 1977; 48,100 in 1978; 28,000 in 1979; 25,000 in 1980; and 25,780 in 1981. This was a six-year total of 195,000 at an average of 88 contacts per day! Contacts were roughly 60 percent CW. It is possible that these reports may be included in a future Guinness "Book of Records."

The above information is from the August 1982 issue of RSGB's Radio Communication, in the DX column by John Allaway, G3FKM. The article went on further to state that as of 6 May 1982, Dick had a total of 8,100 contacts, but expected a total of 20,000 by the end of the year. Unfortunately, this will never happen. The 11 August 1982 issue of *The Long Island DX Bulletin* has Dick listed as a Silent Key. Old-timers will remember Dick as the DX Editor for CQ Magazine for many years. Dick was also Danny Weil's QSL manager of "Yasme" fame. His amateur career dates back many years as he was licensed as K4AAN in 1927. Most likely you have worked Dick at one time or another.

Clubs

The Redwood Empire DX Association (REDXA) elected their new slate of officers for the 1982-1983 season. Elected as president is Paul Hansen, AE6H, with Lyle Meek, N6BLN as vice president, and Chod Harris, WB2CHO as secretary/treasurer. Board Members at Large are Len Geraldi, K6ANP and Dick Wilson, K6LRN.

(please turn to page 24)

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World Radio History

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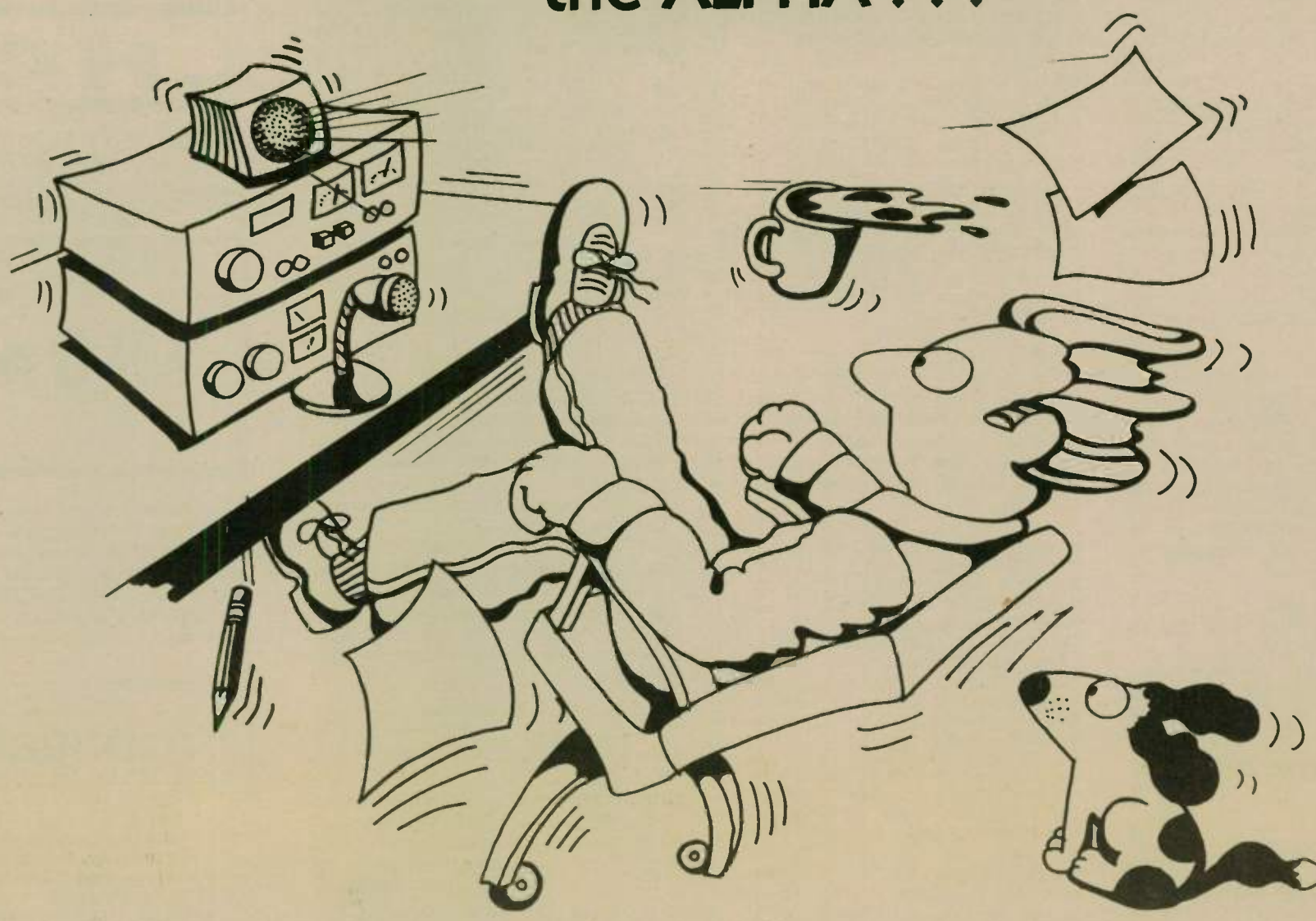

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World Radio History

DX World

(continued from page 22)

The Redwood Empire DX Association is an organization of DX and contest-oriented radio amateurs in Sonoma, Marin and Napa Counties. The club meets monthly at local restaurants. Additional information is available from REDXA at P.O. Box 4881, Santa Rosa, CA 95402.

The Eastern Iowa DX Association was established in 1975 in the Cedar Rapids area and has grown to over 50 members throughout the entire eastern half of Iowa. Membership requirements are as in several DX clubs, where at least 100 countries must have been worked and confirmed. Membership is by written application and must be approved by two-thirds of the membership. There is an Associate Membership available for those who do not meet the requirements above and privileges are restricted. Associate Membership must be upgraded within two years.

Correction

There was an error in the last issue regarding that Tiurai Award. Ross Forbes, WB6GFJ writes that he had a spelling error where he had Tiarai instead of the correct spelling of Tiurai. Tiarai refers to the national flower, where Tiurai refers to the month of the year. Information on this French Polynesian award was printed last month.

From Russia with love

I don't know if this is a trend, but the other day I received a direct QSL card from a Soviet amateur — air mail, no less. It was mailed from Sakhalin Island (UA0FAU) and not from Box 88, Moscow.

I mentioned this to Tom Wong, VE7BC, and he stated that he too has received cards from individual Soviet stations, but these were requests for BY1PK cards. Maybe policies are changing over there.

Speaking of Russia, the Western Washington DX Club reports that many Soviet amateurs have applied for their Totem Award. Not only that, they have been working at many other awards this country has to offer. Almost daily the old "raconteur" of the W7PHO Family Hour exchanges repartee with many UA checkers-in . . . and some of them can match Bill quip for quip!

Oblast hunters who need Oblast 185 should look out for UI8LN. Coming up late October or early November there should be a UA0T active from Oblast 174.

DXPO 82

On 16 and 17 October, DXPO 82 will be held at the Marriott Hotel in Gaithersburg, Maryland, just outside of Washington. This weekend is just two weeks prior to the CQ World Wide DX Contest, so it should have you all fired up for the contest. DXPO 82 is sponsored by the National Capital DX Association and already has confirmed several well-known DXers as speakers. This includes Ted Cohen, N4XX; Bob Schenck, N2OO; Wally Eckles, W8LRL; Don Search, W3AZD; Vince Thompson, K5VT; and Gus Browning, W4BPD.

Everyone who attended DXPO 80 will receive complete information in the mail soon. Anyone who missed that one and wants additional information and reservation forms for DXPO 82 should contact Henry Herman, W3UJ, 11803 Enid Dr., Potomac, MD 20854.

DXAC

The ARRL DX Advisory Committee has been reorganized to include a representative from each ARRL division instead of each call area, as it was previously done. Here is the line-up of DXAC members and their respective divisions.

Edward J. Kuebert, K3KA	Atlantic
Harold E. Parsons, VE3QA	Canadian
Norman E. Meyers, N9MM	Central
Robert G. Parlin, W0SFU	Dakota
Sanford E. Hutson, K5YY	Delta
Dennis M. Burgess, K8DB	Great Lakes
David Beckwith, W2QM	Hudson
James L. Spencer, W0SR	Midwest
George E. Hitz Jr., W1DA	New England
Robert W. Hudson, K7LAY	Northwestern
Robert W. Thompson, K6SSJ	Pacific
John H. Parrott Jr., W4FRU	Roanoke
Ronald J. Stockton, N0RR	Rocky Mountain
Robert R. Beatty III, W4VQ	Southeastern
James T. Rafferty, N6RJ	Southwestern
John P. Shean, K5DB	West Gulf

James Spencer, W0SR is the Chairman, with John C. Kanode, N4MM Vice Director of the Roanoke Division as Board Liaison, and Donald B. Search, W3AZD as ARRL Headquarters Liaison.

You know band conditions are bad when . . .

The last few months have not been the best for DXing. When this happens, DXers can often catch up on their QSL chores, and DX editors dream up things to fill the gaps in their newsletters. This little gem is credited to Lee Buller, K0WA of the Kansas DX Association.

. . . Your wife asks you to mow the lawn and you actually do it.

. . . W3BL can't get a list going in the morning on 20 meters.

. . . Your favorite DX bulletin is only one page long.

. . . You hear a list on 14.205 and discover it's for a VE5.

. . . Your last envelope from the QSL bureau contains just six cards — three from Canada, one from Mexico, and two JAs — all from 1980.

. . . W7PHO moves to 40 meters.

. . . Dust settles on the rig.

. . . You find you're operating more 2 meters than 20 meters. Amateurs in southern Florida can't work Europe.

. . . You start checking the coax because there are no signals on 20.

. . . You realize your last DX log entry was a KP4 over four weeks ago.

. . . You're at work on time and your boss notices.

. . . You start jogging for a pastime.

. . . 15 meters opens at 12 noon and closes at 12:05 p.m.

. . . The Russian woodpecker isn't 30dB over 9.

. . . You can't remember how to load the rig.

. . . You realize your wife is six months pregnant.

. . . Articles like this appear in the *Kansas DX Newsletter!*

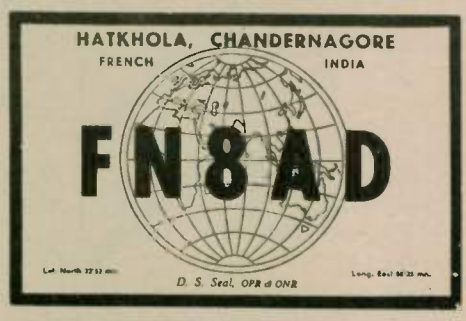
Slide shows

The International DX Foundation has slide shows available which include the ZL4LR/A Campbell Island DXpedition in 1978, 9M6MU in East Malysia in 1980, Brunei with VS5OO, VS5GM and VS5KV in 1980, and the KP2A/D Desecheo DXpedition last year.

They are available from IDXF at P.O. Box 117, Manahawkin, NJ 08050. Please give at least three preferred dates for showing. No rental fees or costs were indicated, but I'm sure a contribution to this fine organization would be appreciated.

Antique QSL Department

Dave Kennedy, N4SU provided this month's QSL cards. They are not really antiques, but then again, that may depend upon your point of view. The LH4C card was one of Gus Browning's DXpeditions in 1962, where he operated from Bouvet Island. The DXpedition was sponsored by the "World Radio Propagation Study Association" with the QSL cards provided by Ack Radio Supply in Birmingham, Alabama.



The second card is for a contact with FN8AD, owned and operated by Deb S. Seal of Hatkhola, Chandernagore, French India. The contact was on 20-meter CW dated 24 September 1949. The receiver at FN8AD was a BC-312, still plentiful in those days following the close of World

Tac Yonemura, JA1BRK, at the operating position of 3X3JA, located in the Hotel de 1 Independance, Conakry in the Republic of Guinea. Along with Key Kato, JA8CDT, the team made 5,143 contacts from 3 May through 9 May, 10 through 80 meters, including the new 30-meter band. ***(Photo courtesy of W6GO)***

Propagation

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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.

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OCTOBER 1982

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	24.1	31.1	34.1	12.4	24.7
0200	18.6	27.6	32.0	13.3	21.4
0300	16.1	22.7	27.3	11.5	19.0
0400	13.9	19.2	23.7	10.6	17.2
0500	12.3	16.5	21.3	9.3	15.9
0600	12.1	14.3	19.6	9.9	15.2
0700	12.5	13.0	18.3	11.7	15.4
0800	12.8	12.5	16.8	12.7	16.3
0900	12.4	12.5	15.2	13.2	16.3
1000	11.2	13.2	14.7	12.6	14.5
1100	9.9	14.0	15.0	11.2	12.3
1200	9.8	12.7	14.3	10.1	12.8
1300	12.4	11.9	12.5	11.4	17.6
1400	17.6	11.7	12.9	15.9	25.0
1500	23.2	14.1	18.7	22.0	31.5
1600	27.4	13.3	22.7	27.3	34.9
1700	30.5	12.2	21.8	23.6	35.3
1800	32.7	12.4	22.5	19.4	34.8
1900	32.4	14.6	24.6	15.4	34.6
2000	33.1	19.1	27.3	12.6	34.7
2100	33.4	24.0	29.1	11.3	34.6
2200	32.4	30.6	29.7	11.9	33.1
2300	30.6	34.5	30.4	11.5	30.4
2400	28.3	35.1	32.2	12.0	28.3

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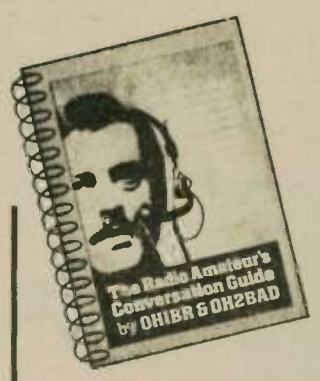

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World Radio History

War II. Dave was operating as W8BRA for both of these contacts.

That old 6OR QSL card that I ran last issue belongs to Wells Chapin, W8GI. I found this buried in my notes and should have had the back of the card so identified. Then I wouldn't have had the problem of not being able to give credit to the rightful owner.

Nostalgia Department

A few issues ago, I made reference to Captain Midnight which has brought back memories to several amateurs. Bob Baird, W9NN writes: "Just spotted the item in the May issue that you were an avid 'Captain Midnight' fan every day at 5:45 p.m. Well, I was the engineer on it along with nine years on 'Little Orphan Annie.' I hope we sold you a lot of Ovaltine! We fed it from WGN to Mutual and they gave it to the Don-Lee Net. We had 585 stations hanging on those programs in the '30s and early '40s. Hope you still have your Decoder Ring! 'Capt' now lives in Palos Hills; name is Ed Prentiss."

I'm afraid I've long lost my Decoder Ring along with all the other super things offered on those early-day radio programs. These programs were 15 minutes each, five days a week, beginning at 4:45 p.m. In the winter of 1944, they ran something like this. They began at 4:45 with Hop Harrigan, which was followed by Terry and the Pirates, Dick Tracy, Jack Armstrong, and at 5:45, Captain Midnight. These were received in the New York City area from the old WJZ, which has since changed call letters.

Then at 7:30 p.m., three nights a week, WJZ carried the Long Ranger, which originated from Station WXYZ in Detroit. I remember that one from the late '30s. When I first heard the complete William Tell Overture, I thought it was a collection of Lone Ranger music, past and present.

Of course, not all the programs in the afternoon were on WJZ. One could tune to WOR and listen to Uncle Don, Chick Carter, Superman and the Adventures of Tom Mix. There was a report that Uncle Don once made a nasty crack about kids, when he *thought* he was off the air.

In the evening, the programs were geared for the older generation with such programs as Ozzie and Harriet, Jack Benny, Great Gildersleeve, Inner Sanctum, Gang Busters, Adventures of the Thin Man, to be followed a couple of years later with The Fat Man (remember the theme with the tuba music?). And don't forget The Shadow every Sunday afternoon at 5:30. Those of you born in the last 30 years missed all these pre-TV affairs. In those days you had to use your imagination.

QSL information

In May, a request for help in obtaining a QSL from W2PCJ/KJ6 was listed in this column, which brought a response from Lenny Mendel, K5OVC, who grew up with the amateur in question. We printed this information in the July issue, stating that W2PCJ was now W2AX. George Oster, K0EDA, who made the initial request, wrote to Larry Amodeo, W2AX and received this reply.

"Boy, your letter sure brought back some real pleasant old memories! The 19 years waiting for a QSL card must be some kind of record! The truth is, the logs are long gone, but I am sure the QSO was legitimate. The QSL card I am sending along was hard to dig up; it is my last W2PCJ card and I was hanging it on my wall along with all the other old call cards I have held over the years. I am not on the low bands any more; my zeal for DX expired when I finally made #1 on the Honor Roll (it took 30 years), so I am now on 2 meters only.

"Say hello to my old buddy, Lenny K5OVC when you speak to him on 20. 73, Larry, W2PCJ/KJ6, W2AX"

Now, there is an amateur with a true spirit which sets off DXers from the rest. Notice it took him 30 years to make Honor Roll. It was much harder to do in those days, as there were not that many DXpeditions. But then, the pileups were not that bad either.

One thing we can be grateful for in the joy of DXing is the dedicated QSL manager who both eases the pressure of QSL requests upon the DX station and the pressure on your pocketbook. If he manages for a very active station, it takes much of his time he could have been spending chasing DX with the rest. Therefore, you can help him in many ways such as making sure you have the right date and time (both UTC), the right band, and by including a self-addressed envelope with the proper postage or IRC. If more than one request is in your envelope, include a separate SASE with each QSL, as often more than one person works on your requests. One SASE is OK, but this will only slow things down and cause delays.

This has been stated over and over in all publications, and you would think one would learn. But no. Now get this! There was a certain WB3 QSL manager in Maryland who handled QSL cards for an A4 in Oman who did not go by the rules. It seemed that he sent requests for the ZK2RU and ZK2ZZ operations, a DXpedition sometime back by a few members of the Northern California DX Club. He sent only one SASE. Not only that, he got one of the bands wrong. As he wasn't getting his ZK2RU and ZK2ZZ cards, he decided to ransom all members of the NCDXC who requested an A4XJO card until he received his cards. This is grossly unfair! It would be unfair even if he had done everything correct. This is very sad indeed, and is a slap in the face to every other QSL manager who gives of his time.

QSL routes

A4XGY	—K2RU	HS1ANJ	—W1QUS
A35RF	—VK3VU	IO1XHV	—I1XHV
A35WH	—DJ9KH	IQ5ARI	—I5HCH
C31JX	—DK9FE	IZ1ARI	—I1VEH
C31LOZ	—DL7ABZ	J3AAG	—AF5J
C31XM	—DJ6SI	J87BT	—N4FJL
C31YQ	—DK3CM	KC6DZ	—N5RM
C53CC	—WA4VDE	OA9G	—KB7RG
CE5HYY	—W0WUZ	ON6BC ST4	—ON6BC
CH3ROW	—VE3FRA	PI4NYM	—PA0KHS
CK3LWR	—VE3LWR	T32AB	—N7YL
CR9T	—WA4IKZ	TR8CM	—F6EXQ
CS0RS	—CT1YH	TR8OIT	—JA1LFR
CT2EE	—WA7GXD	V2AZE	—G3EBR
CU6OF	—CT1OF	V3TV	—G3ATK
D68GA	—N6ZV	VK9ZA	—VK6YL
D68XX	—AA6AA	VK0PK	—VK5APK
ER5U	—UB5UAT	VP2MDB	—W2WSE
FB8YJ	—F6APU	VP2VHY	—W6NLG
FG0DZ	—DJ6SI	VP2VHZ	—KB2UC
FK0AF	—FK8DD	VP5IS	—K9DDB
FM0GUI	—NC4U	VP8QE	—ZL1BIL
FM0GUJ	—K4LTA	VQ9AR	—W3RR
FM0GUK	—KR4C	VQ9MB	—WA4YUY
FM0GUL	—NR4S	VS5AM	—JM1FHL
FM0GUN	—WA4CDH	VS6IC	—W2PD
FM0HAS	—F2VX	YB0AET	—PA0RYS
FO0BCC	—K4FE	YJ8DX	—VK3KIH
FP0ET	—W3OHX	ZD9YL	—W4FRU
FP0GXV	—KA1CFC	ZF2FV	—WD8MRF
FR0DZ	—DJ6SI	3C1JA	—JA1LFR (See Note 1)
FY7BY	—F8ZS	5N9GM	—I8XIU
FY0DZ	—DJ6SI	5W1DV	—VK3VU
HC1NWJ	—W5ZPJ	5Z4AD	—W6EDN
HK1AMW	—N2ATX	9H1FBS	—N5APW
HL1ACD	—JM1CAX	9J2TS	—JA2LZB
HP1XBG	—WA4TWS	9L1SL	—N3ADC
HP2XKD	—WA4TWS	9Q5JE	—DJ5TY

TR8IG	—P.O. Box 740, Libreville, GABON
VS5GA	—P.O. Box 1200, Bamdar Seri Begawan, BRUNEI
VS5HG	—P.O. Box 980, Bamdar Seri Begawan, BRUNEI
WA7QAR/SV9	—Robert Applonie, P.O. Box 571, APO New York, NY 09291
5H3FN	—P.O. Box 9112, Dar-es-Salaam, TANZANIA
7P8BO	—P.O. Sehlahla 712, Quthing, LESOTHO
8P6QK	—Sheila, P.O. Box 167, Bridgetown, Barbadoes, WEST INDIES

Note
1. This station is listed as 3C1AJ in another publication. Same QSL manager.

This month's column may be shorter than other months, but with poor band conditions and the summer months, activity is bound to be down. But the true-blue DXer doesn't know when to quit. The deserving DXers who contributed this month include K6JG, W6GO, K6HHD, WB6GFJ, K6LRN, WB6ZUC, WD8MRF, K0EDA, K4SU, ZL1AZV and VE7BC. Our thanks also go to the fine publications *The DX Bulletin*, *DX News Sheet*, *DXpeditions International*, *The Long Island DX Bulletin* and *Radio Communications* (RSGB). Clubs who supported the column this month include the Redwood Empire DX Association, Western Washington DX Club, Eastern Iowa DX Association, National Capital DX Association, Kansas DX Association and the International DX Foundation.

I had the pleasure of attending the Pacific Northwest DX Convention in Vancouver at the end of July and had a chance to meet some of the gang up north. As it was the first time I had been up that way in over 20 years, I had been looking forward to it and made a vacation out of it. Unfortunately, the sun disappeared when I got there, so I wasn't able to get some good color photos of that fine British Columbia scenery. Otherwise, the trip was great — especially the ferry trip from Anacortes through the San Juan Islands to Vancouver Island.

The fall months are here. DX should improve and things will be back to normal. 73, de John, N6JM. □

The 'XL' Operator Club

The name of this fraternity has two meanings: 1) the Latin figure XL stands for "40" and 2) the English pronunciation of XL is "excel" or "excellent."

The membership of this fraternity is based on long-term service and excellent achievements in the field of Amateur Radio. The "XL" operators could claim to belong to the "High Society" of Amateur Radio. The requirements of this fraternity are intensive activity of many years on various amateur bands.

A minimum of 40 points is required for the membership. The points may be earned as follows:

1) 5 points for the first full 10 years the applicant has been duly licensed as a transmitting amateur, *PLUS* 3 points for each full five years thereafter.

2) 5 points for the first 200 DXCC countries confirmed, *PLUS* 3 points for each additional 50 countries confirmed.

3) 5 points for each 100 DXCC countries confirmed on each of the 28, 21 and 14 MHz amateur bands.

4) 3 points for each 50 DXCC countries confirmed on each of the 7 and 3.5 MHz amateur bands.

5) 2 points for each 20 DXCC countries confirmed on each of 1.8 MHz and VHF/UHF. VHF/UHF is considered as one band.

ARRL DXCC rules apply for counting the countries. However, official ARRL DXCC credit is not required. There are no endorsements. The "XL" Club is sponsored by the Award Hunters' Club International.

Count the points, and, if you can claim at least 40, send in your application. Give the following details: your call, name and complete mailing address, plus 1) the date of your first transmitting license (in case there have been interruptions, give the details); 2) the DXCC score confirmed (*OR* credited by the ARRL); 3) the number of confirmed countries separately on each band. Finally, certify personally that the information given in your application is true. No other certification is necessary; we trust the word of "XL" operators. If false information is given, it will spoil the "Ham Spirit."

Enclose sufficient return postage (there is no membership fee), and address the application to the Award Hunters' Club International, c/o John Velamo, OH2YV, Isokaari 4-B-30, Helsinki 20, FINLAND.

Tell your friends about the "XL" Club. This recognition is really worth working for, and no doubt, the "XL" amateurs will be recognized by all amateurs as examples of successful operating and loyalty to Amateur Radio. Remember: *Ham Spirit is our Guide Star.*
— Northern Ohio ARS □

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

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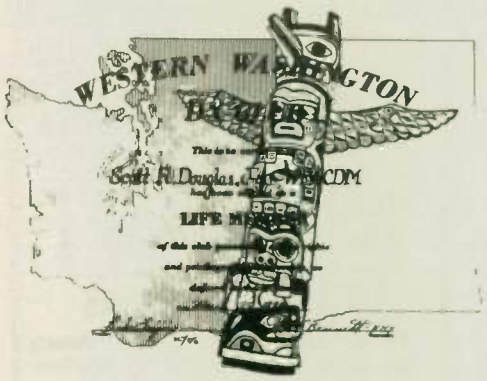
World Radio History

AWARDS

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

Now that vacations are over and we all are returning to work, school or housework, let us start off this month's column with a look at a different type of certificate for your collection. Membership in your local radio club will reward you by placing you in the mainstream of the hobby while providing you with (in most cases) a handsome certificate of membership such as issued by the Western Washington DX Club.



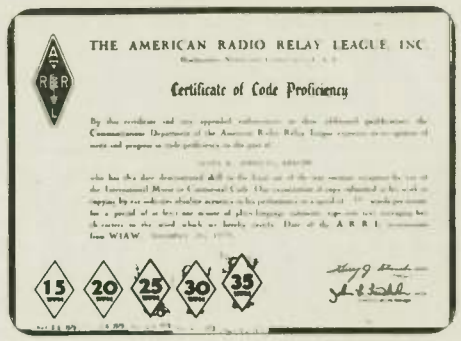
There is also membership in your national Amateur Radio organization, such as the American Radio Relay League (ARRL) in the USA, and international organizations like the International Amateur Radio Society (IARS), which will keep you active with special activities and aware of happenings in your hobby worldwide. It will also provide you with a handsome certificate for your shack.

Now, if you are like many of us who want to put a little back into our hobby, you can get ready to participate in ARES, RACES, MARS and many other service-orientated activities and/or organizations that give Amateur Radio its main reason for being. You will often receive a handsome certificate proving your interest and participation.

There are also many achievement awards for your personal accomplishment offered by organizations worldwide. One is the Certificate of Code Proficiency offered by the ARRL as an incentive to all to perfect their skills in CW.

Yes indeed, it seems there is almost a certificate for everything and anything going on within this fabulous hobby of ours. Another area for the certificate collector which will help hone your skills in Amateur Radio operation are contests. Some contest sponsors offer certificates to all who participate and submit logs, while others just offer them to those who place in the higher point totals. This is an excellent way to improve your operating proficiency.

We have a lot to look forward to and to keep us busy in the fall; it's all fun while we progress in the art of Amateur Radio.



Ten American Districts Award

For those just entering the hobby there are a variety of awards available to chart your progress, one of which is the 10 American Districts Award offered by the Lockheed Amateur Radio Club. Work and confirm all of the U.S. call districts and send your cards along with $1 and an SASE to W6LS. Lockheed ERC Amateur Radio Club, W. Welsh, 2814 Empire Ave., Burbank, CA 91504.

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The WATA is offered to all licensed amateurs who can show confirmation of contacts with at least two different Transkei amateurs on any band or mode. Endorsements are available for SSB, CW,

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TS 520 . . . . . $429
TS 520S $429
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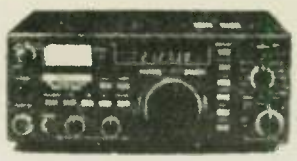
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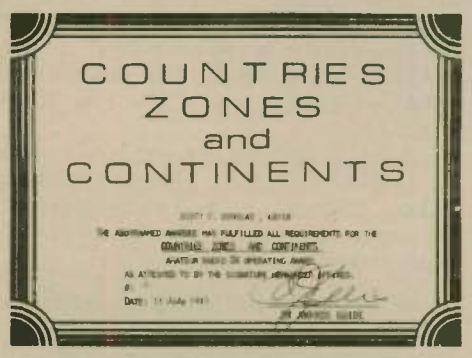
World Radio History

RTTY, etc. Send your verified log extract (GCR) along with $3 to the Transkei Amateur Radio League, P.O. Box 750, UMTATA, Republic of Transkei, SOUTH AFRICA. These stations may not be good for DXCC, but the contacts can still bring you a very nice 8½″ × 11″ certificate.



Countries, Zones, & Continents Award

To acquire this award, the applicant must work and confirm the following: 30 countries as set forth by the DXCC country list; 30 zones as set forth by CQ Magazine's zone listing; and six continents as set forth in the IARU listing of continents, for a combined required total of 66 contacts. The following rules apply to those contacts offered for credit.

1) Only one station per continent or zone, regardless of the band used.

2) No repeater or satellite contacts allowed.

3) No contacts acquired through contest operations will be allowed.

4) All contacts must have been made within a 25-mile radius of your station.

5) Only contacts made after 1 January 1979 will apply to this award. All must be made within a 24-month period of each other.

Send your log extract made out in alphabetical order by prefix and category along with the QSL cards and certification of the above rules being complied with and sufficient funds for the registered mail return of your cards to: DX Awards Guide, 1136 Welch Station, Ames, IA 50010.

Work S.W. Africa Award

This award is available to all licensed amateurs who are able to prove contact with at least five different ZS3 stations in Namibia, South West Africa. Send your log extract (GCR) along with $2 to: SARL, South West Africa Branch, Awards Manager, P.O. Box 1100, Windhoek, Namibia, SOUTH WEST AFRICA.

Romanian Award

Issued for confirmed contact with 30 different "YO" counties and the capital city of Bucharest. All eight YO districts must be represented. Send your log extract (GCR) along with the award fee of 7 IRCs to: Romanian Amateur Radio Federation, P.O. Box 1395, Bucharest 5, ROMANIA.

All Nations Award

This is the IARS award for working and confirming 100 or more countries worldwide as per the AN Country list, which is comprised of the DXCC listing plus the following countries: North Korea HL, H5, S4, S8, T4 and IT. Send your log extract (GCR) listing the confirmations used for credit in alphabetical order by prefix, along with the award fee of $4, to: IARS HQ, P.O. Box IARS, V.V. Station, Glendale, CA 91206-7609.

Islands of the World

This award is available to any applicant who can show proof of contact with at least 100 of the island locations on the IOW Island list, which is available from IARS HQ. Just as with the All Nations Award, both are 11″ × 14″, printed on a parchtone bond, bear gold seals, and endorsement stickers for levels over 100 are applied. Send your log extract (GCR) along with the award fee of $4 to IARS HQ. See address listed above on the All Nations Award.

Well that's it for this month, but if your Amateur Radio club has an award it would like to see appear in this column, just send a sample along with the award rules to the address heading this column. 73s, Scott □

The ART of Contesting

Now that you've had some sleep from 2:00 to 6:00 a.m., shaved, showered and had a nourishing but light breakfast, you're ready to go at it again. If your experience is limited and you don't know on what band to start, you can take a quick listen on the various bands or consult propagation charts. You can find these in QST, CQ, Worldradio and, of course, WWV broadcasts propagation information on a scheduled basis.

Just because a band sounds active, it doesn't mean it's open to your area in particular. Don't wait until contest time to consult propagation charts. If you use this information on a day-to-day basis, you will learn what bands are open to certain parts of the world at certain times; and for Sweepstakes or other continental operating activities, what times of the day or night are best for propagation to certain parts of the United States and Canada. This is important if you want to make a clean sweep by working all sections in the United States and Canada.

A beam heading chart showing the long- and short-path beam headings is a valuable adjunct to your station if you like to work DX. There may be times when the only way you can work certain parts of the world is via long-path (LP). And the LP is not always 180 degrees from the short-path heading. Often it is a skewed path that is between the long and short paths. Certain areas of the world can best be worked long-path around sunrise or sunset. Often, backscatter, meteor bursts and ducting provide short openings, so be alert for these occurrences. The long and short of this is that the serious DXer should be well informed on matters of propagation, and much has been written on this subject.

Before a contest starts, it's a good idea to get warmed up a little. Get on a band you intend to start on and work some stations, getting a feel for conditions. Try to get psyched up a bit by challenging some of your buddies who are getting into the contest, or by getting a couple of small teams organized and having a little friendly competition. Sometimes, an all-out club effort makes for a lot of interest, planning, discussion, etc. Maintaining domestic tranquility during a contest is also very important. Try to get your mate involved, especially the non-amateurs, by bringing in your creature comfort items. Let your family know that you won't be available for family activities ahead of time. Ask their indulgence in tolerating any TVI or RFI while you're operating.

In general, I start a contest on the highest frequency band that is open and work my way down as time wears on. There are times when I'll jump to another band for a short period of time to take advantage of long-path openings, or short-path openings for that matter. For example, at sunset I will get on 40 meters and try to work VU, 4S7 or JT by pointing my beam over the southern tip of South America. As a bonus, I might pick up a few South American or southwest Atlantic (VP8) stations. Around sunrise I might get on 40 meters and point my beam over the South Pole and work Europeans, thus avoiding East Coast QRM which is heavy during the late evening hours when the Europeans are coming through short-path.

So, as a rule of thumb, start on 10 meters and work your way up to 80 meters as the higher frequency bands close. After 80 peters out, go back to 40 and/or 20 if those bands are open, or hit the sack!

See you next time. 73, George K6SG □

Look at those MX's

Can't resist your "coincidence" competition (I guess that's what it is). So here goes.

My call is K9MX. My father's call is N9MX. I have worked W1MX, XE2MX, UA9MX, 6E5MX, K7MX and VE1MX. I have cards from all seven and my brother even has an X in his call — WD9BEX.

(He's an Extra, too, but afraid he'll lose the X if he changes calls.) □

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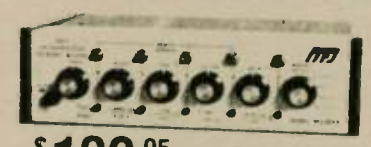

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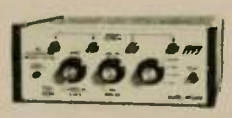
Automatically switches to external batteries if AC is lost. 8x2x6 in. 12-15 VDC or 110 VAC*.



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MFJ-481 "GRANDMASTER". Store two 50 character messages. Message repeat. Speed, function control on front. 8-50 WPM. Volume adjustable from rear. Internal tone control. Memory saver. Solid state keying. 5x2x6 in. 12-15 VDC or 110 VAC*.
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World Radio History

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

10th anniversary of the launch of AMSAT/OSCAR-6 15 October 1972, Vandenberg AFB, CA

Two days before an attempted launch of the Delta 91 rocket was aborted. The winds aloft were too high, and almost at the end of the countdown the mission was scrubbed. So the launch of OSCAR-6, the first AMSAT/U.S. spacecraft was delayed until today. We had been in touch with the blockhouse all through the weekend and finally, at 4:00 a.m., we learned the mission was "GO" and we drove up from Pasadena to watch.

With us were a contingent of Southern Californians who were interested in seeing the launch of this amateur communications satellite which they had helped to test by listening to its transponder and communicating through it earlier in the year, as it was flown up and down the West Coast.

The launch went off without a hitch and we watched the rocket go downrange, its white contrail visible through the small broken clouds. This was the first time I had ever witnessed the launch of one of these big birds. From my vantage point, at ignition, all I could see at first were white clouds with some deep grey coming from the bottom of the rocket. Then, more slowly than I had ever imagined, the big rocket started to rise up over the treetops in my line of vision. It almost seemed to hover until the yellow-orange plume of fire from the motor was visible. It was unbelievably intense. It was practically blinding, despite the fact that it was a bright though somewhat overcast morning. We had experienced rain on the ride up to the base.

After the launch we went to the clubhouse of the Vandenberg AFB Amateur Radio Club, where we awaited the first orbit to pass to the west. The club heard the beacon about an hour and a half after launch and attempted contacts, some of which were successful.

OSCAR-6 operated for nearly five years. Its host spacecraft, the ITOS-D, was shut off after two years. We never did learn what the failure mode was.

UOSAT, the United Kingdom-AMSAT-University of Surrey educational amateur satellite developed an anomaly in which both its 70cm and 2-meter beacons were on simultaneously. It is believed that a coding error in the uplink data stream caused this condition. As a result, the spacecraft would not respond to uplink commands because the beacon transmitters desensed the uplink command receivers. The intended operation was for the 70cm beacon or 2-meter beacon to be on separately, not together.

Amateurs at the Stanford Research Institute (SRI), which operates a huge radio astronomy dish in Northern California, had attempted in July to fire up a high-powered data stream to the spacecraft with the hope that it would accept the commands. The first attempt in the 70cm band was unsuccessful. The system at SRI was being reconfigured as this was being written, to attempt another command with a high-powered RF signal on 2 meters. The theory is that with sufficient power, the desensed receivers would respond to the commands. Should the attempt on 2 meters fail, there has been discussion about seeking time on the very large radio astronomy antenna at Arecibo in Puerto Rico, which has a greater power output capacity than does SRI.

It is a shame that the UOSAT/OSCAR-9 spacecraft is not in operation as it was intended because it would provide so much science information for schools around the world. The few times I have listened to it were thrilling. Hearing its variety of downlink signals, ASCII, RTTY, digital speech, slow scan TV and the various data transmissions is great fun; it would provide so much knowledge of spacecraft operations and data from space environment that kids would enjoy and profit from in their science classes.

Calendar updates

Latest correction factors to the Project OSCAR orbital prediction calendar are given as follows, calculated for 1 August 1982 (please add the following values to the times given in the tables):

AO-8, +116; RS-3, +39; RS-4, +14; RS-5, −68; RS-6, −7, RS-7, +28; RS-8, +27.

All values are time in seconds to be added. UOSAT-OSCAR 9 reference orbit for 1 Aug.: 00:05:47 at 135.6 watts. Differentials are computed based on latest NASA observations.

AMSAT seeks professional manager

The successful launch of AMSAT's first Phase III satellite in early 1983 will bring unprecedented growth to this primarily volunteer-managed organization. Phase III will require transitioning to a full-time professional Executive Director/General Manager. AMSAT is seeking a candidate who will:

- Develop and implement innovative educational programs to bring an awareness and appreciation of space science and technology at the personal level to amateurs and non-amateurs around the world.
- Manage and coordinate the work of hundreds of volunteers who design, build, launch and operate the worldwide amateur space communications system.
- Oversee the day-to-day operations of AMSAT involving membership services, publications, public information and staff management.
- Lead a comprehensive fund-raising activity, both inside and outside the Amateur Radio community.

This position is located in suburban Washington, D.C. and will require some travel and weekend work. Compensation is in the $30,000 per year range, with substantial performance-based incentives. An engineering/technical background is desirable. Active radio amateur interest is mandatory.

Send resumes to: AMSAT Search Committee, P.O. Box 27, Washington, D.C. 20044. Deadline is 1 November 1982.

Project OSCAR meetings

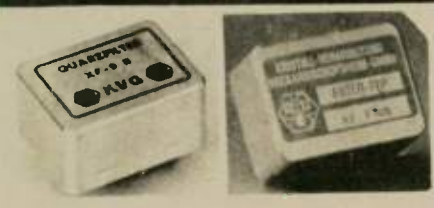
Two Project OSCAR meetings are in the news. First, a report on the meeting held 21 July.

The general meeting of Project OSCAR was held as scheduled at the Electronics Museum of Foothill College, Los Altos, California. President John Pronko, W6XN conducted the meeting. Presenters included John Browning, W6SP; Jim Eagleson, WB6JNN; and Dr. Pronko. A special guest was Dr. Robert Leonard, KD6DG, Director of the Radio Physics Laboratory at SRI International. Bob reported on the progress of UOSAT salvage efforts undertaken at SRI and plans for future tries.

The business portion of the meeting included reports by the president, treasurer and secretary. The election of officers followed. John Browning, W6SP was elected Chairman of the Board of Project OSCAR. W6SP holds the chair in AMSAT as well as providing a unique bridge between the two organizations, perhaps boding still closer ties. The complete slate of nominated Directors was elected. In the technical presentation, Jim Eagleson, WB6JNN reported on progress on the SYNCART project which Project OSCAR has undertaken in league with AMSAT Canada.

A special meeting of Project OSCAR South, located in the Los Angeles region,

State of the art



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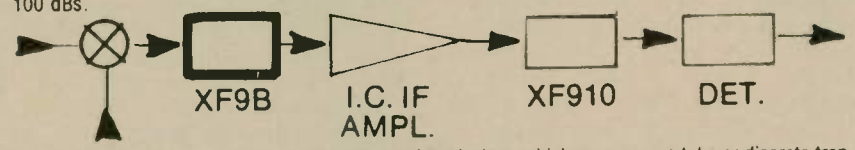
The XF-9B crystal filter is the heart of good, modern receiver (and transceiver) designs. It is used between the mixer stage and the IC IF amplifier stage to suppress adjacent channel interference by over 100 dBs.



The XF-9B can also be used to upgrade older receiver designs which use vacuum tube or discrete transistor IF amplifier stages. PRICE $68.60 plus shipping.

Specification XF-9B			
Centre Frequency	9.0 MHz	Shape Factor 6:60dB	1.8
Bandwidth	2.4 KHz	6:80dB	2.2
Passband Ripple	◄2.0 dB	Ultimate Attenuation	100 dB
Insertion Loss	◄3.5 dB	Terminations:	500 ohms
			30 pF

Export Inquiries Invited

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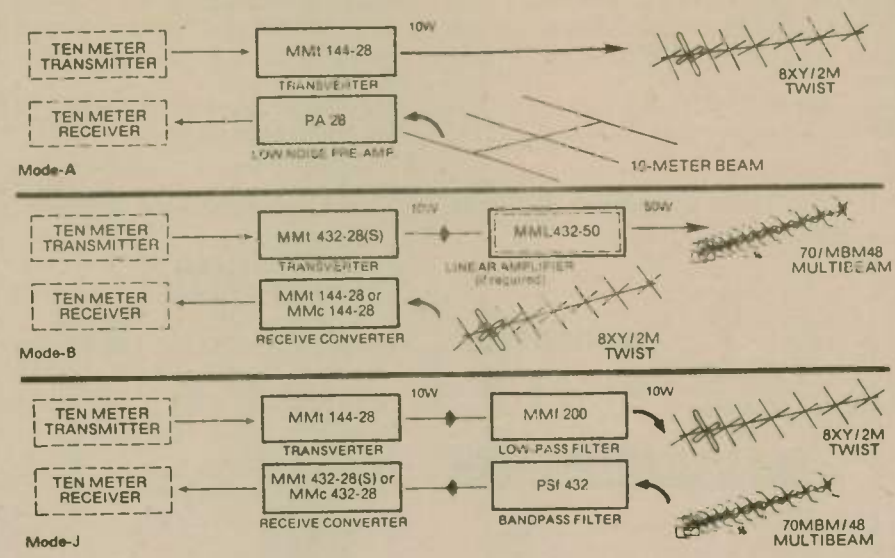
Transverters by Microwave Modules and other manufacturers can convert your existing low band rig to operate on the VHF and UHF bands. Models also available for 2M to 70cm and for ATV operators from Ch2/Ch3 to 70cm. Each transverter contains both a Tx up-converter and a Rx down-converter. Write for details of the largest selection available. Prices start at $199.95 plus $3.50 shipping.

Attention: owners of the original MMt432-28 transverters — update your transverter to operate OSCAR-8 and Phase III by adding the 434 to 436 MHz range. Mod kit including full instructions $26.50 plus $1.50 shipping.



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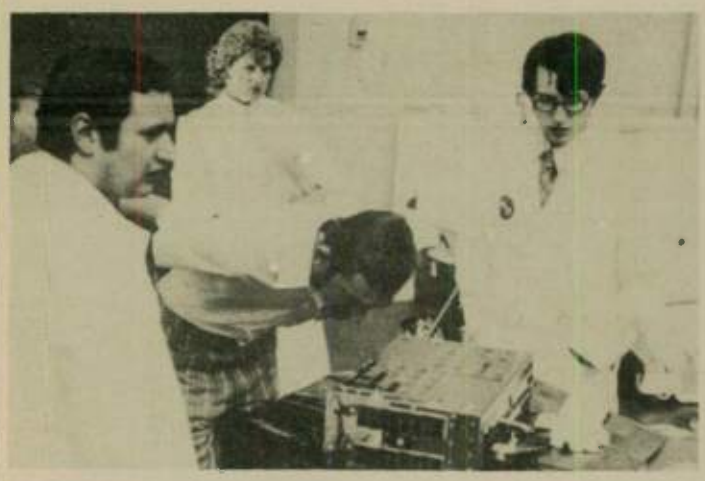
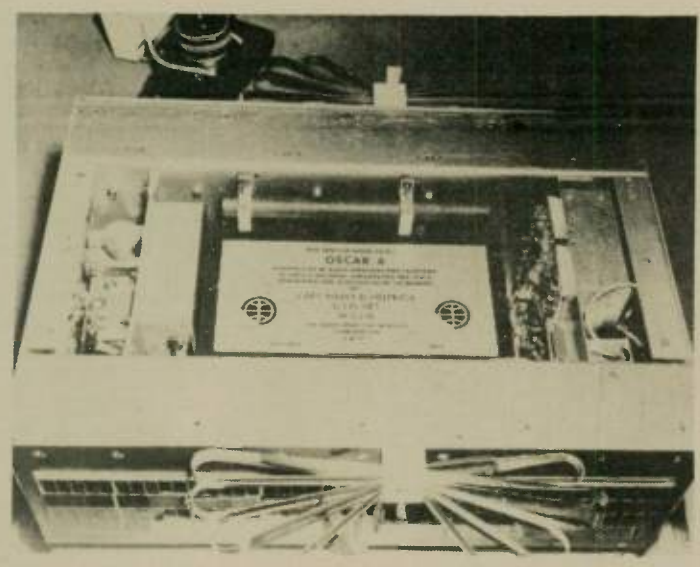
World Radio History



AMSAT-OSCAR-6's planners are shown here. Dr. Perry Klein, W3PK (left) and Jan King, W3GEY (right) stand aside as AMSAT spacecraft technician Marie Marr looks on. The man bending over (a member of the Vandenberg Air Force Base Integration Team) is examining the OSCAR-6 solar cells for any minute debris. ***(K6PGX photo)***



The AMSAT/OSCAR Amateur Radio spacecraft during preparation for launch (September 1972). The plaque is dedicated to Capt. Harry Helfrich, W3ZM, who became a Silent Key just before launch. ***(K6PGX photo)***

was held 14 August at 1300 PDST. W6SP hosted the event. The meeting was held at the Officers' Club, Los Angeles Air Force Station, El Segundo, California. The program included a welcome by W6SP, a report on SYNCART by project leaders WB6JNN (of the RF-North contingent) and John Fail, KL7GRF/6 (of the Digital-South group). Following the SYNCART presentation, special guests Gordon and Molly Hardman, KE3D/ZS1FE and N3CHZ/ZS1KE described progress on the Phase IIIB spacecraft as well as plans for future amateur satellite space missions. Gordon and Molly have been on a leisurely tour across the United States, which took them to the Central States VHF Society Conference in Baton Rouge, Louisiana on the weekend of 31 July-1 August. Later, they stopped to visit with KO5I at his Northern Texas hacienda in Paris, Texas. After their stop in Los Angeles, they drove to San Francisco and then flew home to ZS from there.

For the past 18 months, Gordon has been an AMSAT intern, working with and learning about the AMSAT spacecraft. Molly has been a computer programmer at the Goddard Spaceflight Center. The fact that Gordon knows the AMSAT spacecraft inside and out was evident in his talk at the Project OSCAR meeting. It was brilliant.

Gordon and Molly are citizens of the United Kingdom and are assigned to work in science research in ZS land. □

Patron saint of Amateur Radio?

On 10 October 1982, Blessed Maximilian Kolbe (1894-1941) — Poland's renowned "Martyr of Charity" who died at Auschwitz — will be canonized as a saint by Pope John Paul II in Rome.

Father Kolbe, licensed as SP3RN in Poland, had his first station installed at the monastery, where he lived, on 8 December 1938. At 7:00 that evening, Poland heard a new program on the air: "This is station 3 of Poland, the Knights of the Immaculata."

On 19 September 1939, the Germans invaded the city of Mary in Poland, where Fr. Kolbe had been putting out several widely-circulated publications, including a daily newspaper (230,000 circulation). Fr. Kolbe was sent to a concentration camp at Amtitz. He was transferred to another camp on 17 February 1941, then to Auschwitz on 24 May 1941, where he "ministered to fellow prisoners in both body and spirit."

One custom practiced at the camp involved prisoners who escaped. In such cases, 10 prisoners were chosen at random to be placed in the death bunker to be starved to death. One who was chosen to die in this way exclaimed, "Why me? My wife, my children — I will never see them again." Kolbe, moved with compassion, asked if he could be taken rather than the chosen man. The substitution was made.

He died on 14 August 1941. He was cremated, and on 17 October 1971 he was beatified in Rome.

The life of Blessed Maximilian Kolbe should encourage the amateur fraternity consider him as a patron of the radio media and to ask for his patronage from the Holy Father.

Send your requests and petitions for his patronage of Amateur Radio to: Fr. Michael Jakobek, W0YZH, St. Anne's Church, 200 Hamel Rd., Hamel, MN 55340. □

Experimental repeater in the Northwest

Submitted by Bill Gosney, KE7C

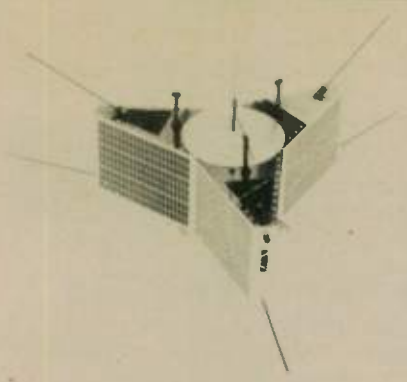
Congratulations to the North Whidbey Island Repeater Association (NWIRA) for being successful in airing the first and only 2-meter to 10-meter FM repeater link in the Pacific Northwest.

Listen for KE7C/R on 146.86 MHz and W7ZFX/R on 29.640 MHz. Coupling the two systems makes "worldwide communications via a hand-held" an absolute reality! The group also sponsors the only 10-FM awards program known to be in existence. When the propagation favors your direction, listen for members of the NWIRA on the 29.64 MHz (Marysville) repeater.

For additional information about the repeater system and the group's 10-FM awards, forward an SASE to The North Whidbey Island Repeater Assn., 2665 N. Busby Road, Oak Harbor, WA 98277. □

AMSAT

Radio Amateur Satellite Corp.
P.O. Box 27, Washington, DC 20044
Telephone: 301-589-6062



Dear Fellow Radio Amateur:

Do you know that the AMSAT Phase III Program is designed to bring you a new worldwide DX/local amateur band via communications satellite? This new band will be scarcely affected by the ionosphere, so that unlike the current hf bands or the three new bands we gained at WARC-79, propagation via this band will be 100 percent predictable. For the first time, the technology used to provide the reliability, predictability and ease of use of a two-meter repeater will be applied to provide worldwide coverage. The AMSAT Phase IIIB satellite will be capable of providing reliable communications among all stations within its range, be they local to you or DX up to half way around the world. There will be no skip zones in this new satellite communications band. At times, stations in New York, New Jersey, London, Paris, Tel Aviv, Moscow and Tokyo will be able to hold a round table QSO. The potential for multi-language bulletin transmissions, RTTY, computer, emergency, and public service communications is tremendous.

You owe it to yourself to be informed about this new band. The new band almost happened in May, 1980 but the launch vehicle malfunctioned and the Phase IIIA satellite did not achieve orbit. Our replacement Phase IIIB satellite is a million dollar undertaking. We are going full steam ahead secure in the knowledge that we can do our part to make the new band happen following the successful launch of Phase IIIB. Why don't you join the AMSAT Team and receive regular news as to the status of the Phase IIIB Program.

73,
The AMSAT Team

Yes, I want to be a member of the AMSAT Team and receive ORBIT Magazine. Enclosed are my dues of $16 ($20 overseas) for 1982 ($400 for Life Membership).

☐ AMSAT Satellite Report (Bi-weekly, $18 in N. America, $26 overseas)
☐New Member ☐Renewal ☐Life Member ☐Donation (tax deductible)

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Burlingame, CA 94010

Jun's Electronics
3919 Sepulveda Blvd.
Culver City, CA 90230

Fontana Electronics
8628 Sierra Avenue
Fontana, CA 92335
(714) 822-7710 or (714) 822-7725

Jun's Electronics
7352 University Ave.
La Mesa, CA 92041

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2050 S. Bundy Dr.
Los Angeles, CA 90025
(213) 820-1234

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Oakland, CA 94609

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2964 Freeport Blvd.
Sacramento, CA 95818
(916) 441-7388

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San Diego, CA 92123

Quement Electronics
1000 S. Bascom Avenue
San Jose, CA 95128

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San Jose, CA 95128
(408) 998-1103

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15460 Union Avenue
San Jose, CA 95124
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25326 S. Crenshaw Blvd.
Torrance, CA 90505
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Ham Radio Outlet
6265 Sepulveda Blvd.
Van Nuys, CA 91401

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819 Keeaumoku Street
Honolulu, HI 96814
(808) 949-5564

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Aureus Electronics Inc.
1415 N. Eagle
Naperville, IL 60540

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TEL-COM Communications
675 Great Road
Littleton, MA 01460
(617) 486-3400 or 486-3040

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Purchase Radio Supply
327 E. Hoover Ave.
Ann Arbor, MI 48104
(313) 668-8696

MISSOURI

Ham Radio Center
8340-42 Olive Blvd./PO Box 28271
St. Louis, MO 63132
(800) 325-3636

Henry Radio
211 N. Main Street
Butler, MO 64730

NEVADA

Jun's Electronics
460 E. Plumb Lane, #107
Reno, NV 89502

NEW YORK

Radio World, Inc.
Oneida Cnty. Airport Terminal Bldg.
Oriskany, NY 13424
(315) 736-0184
(800) 448-9338/out-of-state

OHIO

Universal Amateur Radio, Inc.
1280 Aida Drive
Reynoldsburg (Columbus), OH 43068
(614) 866-4267

TEXAS

Appliance & Equipment Company
2317 Vance Jackson Rd.
San Antonio, TX 78213
(512) 734-7793 or (800) 531-5405 out of state

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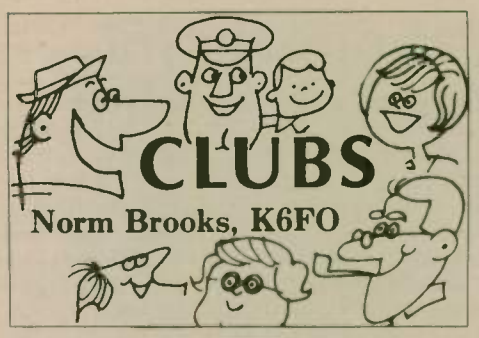

The Club "Widow's Assistance Committee"

It was difficult for me to tell her that the precious box of batteries she showed me was worth very little — if anything at all. Her late husband dutifully collected them, free, by making a once-a-month round of the local chain radio stores. He saved them in a flat box in the dining room, where they were "on display" as though for sale. The facts were the batteries were not kept in the refrigerator, and shelf life alone made most of them useless.

Another amateur and I were the committee from the local radio club and our job was to help the widow dispose of her late husband's radio gear. As you can gather from the battery story, he was a pack rat who saved even the faulty parts he had removed from his equipment. He loved to shop the surplus stores, and if the price was right, would buy two or three of an item.

Can you imagine the nightmare we had in helping with disposal? Multiple pieces of surplus gear, some working and some not. Radio parts all over, but which were good and which faulty?

To make matters worse, he had an inflated idea of the worth of the gear. He once told his wife, "When I go, you can sell all this stuff and buy a car." Too bad. It wouldn't have been much of a car.

In another case, the amateur had a different shortcoming. He'd get enthused about a project he would read about in a radio magazine and rush down to his radio store where he had a charge account. He would buy everything needed for the project, but in many cases never get around to building it.

When I helped his widow organize the gear, I found paper sacks full of resistors, capacitors, chassis, knobs, sockets, etc., along with the charge slips. Disposal in this case was easy. I gathered together all the new parts and took them to the owner of the radio store. Under the circumstances, he was glad to give the widow a check for several hundred dollars for the parts returned.

This amateur was a skilled builder. Those projects he did get around to building sold readily at good prices.

When an amateur passes away, in addition to all the other traumatic experiences, the widow finally learns the true value of her husband's radio station. Some amateurs remember the price they paid for a piece of new equipment, and never reduce it for depreciation. In this same category is the fellow who buys a piece of surplus cheap but remembers what Uncle Sammy paid for it new. In both of these cases, the widow remembers the high value placed on the gear. She is then shocked when no one rushes up to buy it from her at these prices. How can you tell her that most of that valuable gear her husband prized so highly is really junk?

The *fair market value* of an item is the price that would be paid by a knowledgeable buyer if the item is offered by the seller in the open market for a reasonable period of time. FMV is not supposed to be a "distress" price. It also is not a "bargain" price such as you would put on your white elephants in a hamswap. On the other hand, FMV should not include any payment for sentiment. And it *must* take depreciation into account.

Let's take a practical example. What would *you* pay for *your* favorite transceiver (or whatever) if you were to buy it on the used market today in its present condition? I didn't ask what you'd like to get for it. The question was what would *you pay* for it, used, today? Think of all the competing forces. Maybe the store would have three of them on hand, and one of the others was in better condition than yours. Wouldn't yours sell for less than the others? Perhaps there's a newer model available. Shouldn't your price be quite a bit lower than the new model?

Let's face up to what our equipment is really worth. The best way to do this is to make an inventory, now, and put some prices on it. Such an inventory will help you list your equipment in the ARRL or other insurance plan. And it will also help your survivor know the value of your gear if you should leave suddenly. Have a trusted friend look at the price you have established and believe him if he tells you they're too high.

For the inventory, I had 3 × 5 file cards in mind. I suggest the following items be on the card: inventory number; name of item, model number and serial number; source (purchased new, purchased used, traded, constructed by self, MARS issue, or other); original acquisition price; year acquired; recommended disposition — sell for (FMV and year determined), return to MARS, give to family member, give to radio club, or other.

Printed cards with this information systematically arranged would make an excellent club project. There would be considerable savings in having a large quantity printed. I'm sure all you computer types will come up with a program to put all this into your computers.

All that needs be put on the equipment is a tag showing the inventory number. This can be any kind of stick-on, perhaps

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ALASKA

Borealis Amateur Radio Club
Eielson AFB, Alaska 99702
North Pole Jr./Sr. High School
3rd Friday/monthly - 7:00 p.m.

ARIZONA

Metropolitan Amateur Radio Club
J.C. Penny Restaurant, El Con
Tucson, AZ 85726
Call in on 34/94 K7CC/R
Every Saturday morning — 8:00 a.m.

Tucson Repeater Association
P.O. Box 40371, Tucson, AZ 85719
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

ARALB (Assoc. Radio Amateurs of Long Beach)
1708 E Hill St. Signal Hill, CA 90806
Meets: Signal Hill Comm. Center
1st Friday/monthly

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.

Livermore Amateur Radio Klub
2441 Heatherlark Cr., Pleasanton, CA 94566
Meets: Valley Memorial Hospital
Multi-purpose room, Livermore, CA
2nd Friday/monthly - 7:30 p.m.

Mt. Diablo Amateur Radio Club (MDARC)
Grace Presbyterian Church
2100 Tice Valley Road
Walnut Creek, CA 94598
3rd Friday/monthly - 8:00 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 Gabriel Valley ARC
Bowling Green Clubhouse
405 S. Santa Anita Avenue
Arcadia, CA 91006
1st Tuesday/monthly - 7:30 p.m.

Santa Cruz County ARC
PO Box 238, Santa Cruz, CA 95061
Last Friday/monthly — 8:00 p.m.
San Fran. Fed. Savings, 1995 41st Ave., Capitola
K6BJ repeater 146.19/146.79

Satellite ARC, Inc.
Bldg. 21160
Vandenberg AFB, CA 93437
1st Thursday/monthly — 8:00 p.m.

S.C.A.T.S./WB6LRU
S. CA Amateur Transmitting Society
P.O. Box 1770, Covina, CA 91722
Vine School
1st Monday/monthly — 6:30 p.m.

Sierra Foothills ARC
PO Box 3262, Auburn, CA 95604
Office of Education Bldg.
360 Nevada St., Auburn CA 95603
2nd Thursday/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 147.765/165 Simplex 147.48

Silverado Amateur Radio Society - (SARS)
Silverado Jr. High School
1133 Coombsville Rd., Napa, CA 94558
Bill Williams. N6EIH - (707) 255-7600
1st Tuesday/monthly - 7:30 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 — 8 p.m. rpter 146.13/73

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

Ventura County Amateur Radio Club
Oxnard Community Center
Camarillo Room
900 Hobson Way, Oxnard, CA
2nd Friday — 7:30 p.m.

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

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

Greater Titusville Amateur Radio Club
c/o W.R. Young, N4DQT, 3845 Catalina St.
Titusville, FL 32780 • Repeater 146.31/91
3rd Monday/monthly - 7:30 p.m.
Chamber of Commerce Bldg.

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

Sarasota Amateur Radio Assoc., Inc.
Sarasota Junior High School Rm. A-9
Shade Avenue & Hatton Street
President: "O.W." Lander N4FCF
3rd Tuesday/monthly - 8:00 p.m.

GEORGIA

Gwinnett Amateur Radio Society
Red Cross Center
Hi Hope Road, Lawrenceville, GA
147.87/27 for Talkin/Info.
3rd Thursday/monthly — 7:30 p.m.

HAWAII

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

ILLINOIS

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

Fox River Radio League
McCullough Park Dist. Bldg. Rm. 101
Rt. 31 & Illinois Ave., Aurora, IL
(312) 898-2779 for more information
2nd Tuesday/monthly — 7:30 p.m.

Tri-Town Radio Amateur Club
P.O. Box 302, Hazelcrest, IL 60429
Above Hazelcrest Police Station
1st & 3rd Friday/monthly — 8 p.m. (except July & Aug)
Net every Wed. 8 p.m./146.49 MHz

Wheaton Community Radio Amateurs (WCRA)
College of DuPage, Room 2061
Glen Ellyn, IL. 60137
1st Friday/monthly — 7:30 p.m.

SUBSCRIBE TO WORLDRADIO; see page 11

World Radio History

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.

INDIANA

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

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

IOWA

Muscatine Amateur Radio Club
Info: Bruce Dagel, WB0GAG (319) 264-3320
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
Frederick Electronics
Vernon Simmons, KA3CVD
(301) 371-5735 after 1800 except Thur.
2nd Tuesday/monthly — 2000

MASSACHUSETTS

Billerica Amateur Radio Society (BARS)
Honeywell Systems Division
300 Concord Road
Billerica, MA 01821
1st Wednesday / monthly — 7:30 p.m.

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

MICHIGAN

The Eastern Mich. ARC (EMARC)
St. Clair County Comm. College
Student Center Building (Cafeteria)
Port Huron, MI (313) 364-9640
1st Tuesday/monthly — 7:30 p.m.

MISSOURI

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

NEW JERSEY

Gloucester County ARC, W2MMD
PO Box 370, Pitman, NJ 08071
American Legion Post
Delsea Dr., Rt. 47, Clayton, NJ
1st Wednesday/monthly — 8:00 p.m.

Old Bridge Radio Assoc. (OBRA)
Cheesequake Firehouse — Route 34
Old Bridge Township, NJ
Daily 8 p.m. Net on 147.72/.12 MHz
3rd Thursday/alternate (odd) months 8 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.

Genesee Radio Amateurs, Inc. (GRAM)
PO Box 572, Batavia, NY 14020
State Civil Defense Center, Batavia
(behind NYS School for the Blind)
3rd Friday/monthly — 7:30 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: Jerry Kamen, K2QXH, 44 Robin Lane, Levittown, 11756 Net every Mon. 8:30 p.m. 146.25/85
Meets 1st Tues / 8 p.m., H.B. Thompson, JHS, Syosset

NEW HAMPSHIRE

Great Bay Amateur Radio Assoc.
Airex — Tel. 742-3703
Route #16, Dover, NH 03820
2nd Sunday/monthly — 7:00 p.m.

NORTH CAROLINA

Wayne County Amateur Radio Assoc., K4CYP
Morrison's Cafeteria
Berkeley Blvd. — P.O. Box 1578
Goldsboro, NC 27530
3rd Saturday/monthly — 8:00 a.m.

OHIO

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

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

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

OREGON

Clatskanie Amateur Radio Club
Route 2, Box 553
Clatskanie, OR 97016
Clatskanie Grade School Library
2nd Tuesday/monthly — 7:00 p.m.

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.

SOUTH CAROLINA

Keowee-Toxaway A.R.C. (Seneca/Walhalla)
147.87/147.27 WA4JRJ/R
Seneca Police Dept. Bldg.
Call Hum Walker, S/T, KD4WL (803/882-0471)
3rd. Tuesday/monthly — 7:30 p.m.

TENNESSEE

Radio Amateur Club of Knoxville (RACK)
PO Box 124, Knoxville, 37901
Fire Training Center
Prosser Road, Talk in 147.90/30
3rd Thursday/monthly — 7:30 p.m.

TEXAS

Garland Amateur Radio Club (GARC)
146.775/146.175 K5QHD/R (info Net Mon. 7:30 p.m.)
Garland Women's Activity Building
713 Austin Street, Garland
4th Monday/monthly — 7:30 p.m.

Houston Amateur Radio Club, W5DPA
7011 Lozier Street
Houston, TX 77021
(713) 747-5073
Fridays/weekly — 7:30 p.m.

UTAH

Utah Amateur Radio Club (UARC)
Room 161, Murray High Sch., 5300 S. State
Gordon R. Smith, K7HFV
582-2438/talk-in 16/76
1st Thursday/monthly - 7:30 p.m.

VIRGINIA

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

WISCONSIN

Racine Megacycle Club
Red Cross Building
4521 Taylor Avenue
Racine, WI 53405
2nd Monday/monthly — 7:30 p.m.

WEST VIRGINIA

Jackson County Amateur Radio Club, Inc.
First National Bank of Ripley, WV
1st Thursday/monthly — 7:30 p.m.

a piece of self-adhesive label or even dymo tape. It should be put in a standard location out of sight on each item.

Another idea. One deceased member of our club was quite a collector. Not necessarily junk, but a lot of parts of small value. The committee got 30 (in this case) large shopping bags and filled them with parts. When stapled closed, we had 30 "grab bags." We assessed each member at the next club meeting $2 and let him have his pick of the bags. We figured the $60 the widow received for the parts was a fair price.

Some people find discussion of what to do in the event of death distasteful and avoid it. Let's face it, we must all go sooner or later, and if we really love our survivors, we should make the disposition of something as specialized as Amateur Radio equipment as easy for them as possible.

One more thing. I realize I have identified the amateur as male and identified the survivor as a widow. Yes, we do have a lot of lady amateurs, but in every case I know of, the husband or other family member is also an amateur. I don't think a surviving amateur operator would have an equipment disposal problem. □

Organize for recognition

Shirley Wolter, WB6QFU

Amateur Radio Week proclamations are certainly not original ideas, but clubs should consider the idea of approaching their mayors or county supervisors to promote Amateur Radio. The most popular time of the year for proclamations of this nature seems to be the week prior to Field Day in June, but how about the week prior to the ARRL's National Simulated Emergency Test in October?

Public service is the most obvious and visible means of being active in the community, and non-amateurs should be made aware of the time, effort and planning by Amateur Radio operators and clubs to organize for ARES/RACES participation.

The Victor Valley Amateur Radio Club of California has presented a proposal to Mayor Jean DeBlasis of Victorville suggesting a proclamation of Amateur Radio Week from 17-24 October. Most of the Victor Valley communities, other than Victorville, are unincorporated, but that city is the hub of activity in the area and the repeater owned by Lanny Creason, WA6EFW (146.34/94) covers the entire valley.

Local publicity is being prepared for the news media. Pictures will highlight articles on public service, etc. The proclaimed Amateur Radio Week would culminate in a public demonstration and exhibit at one of the large shopping centers.

A message center will be established where folks can send messages to their family and friends "back home," and the messages will become our participation in the SET for our area. Teletype and test equipment will be on display. DX maps, flip-page graphs and satellite information will help show the expanse of Amateur Radio, and a computer may be included.

Operators have volunteered to remain at their base stations to accept traffic and pass it to our District RACES office. We have several Air Force and Navy-Marine Corps MARS members in our club, and with the permission of their superiors, messages can be sent via the MARS system as well.

If the proposed project sounds like a lot of work, do not despair. Our club is small, certainly not affluent, and we are not amply endowed with a large group of members with time to devote, but we feel sure it can be done and *must* be done. Amateur Radio is going to have to become more aggressive in the years to come in order to survive, and an awareness within the community is the best way to accomplish this goal of recognition.

It may be too late to join the Victor Valley ARC in this year's October activity, but it can be done any time and now is the time to start planning and organizing.

First, write a letter to the mayor or the county supervisors. Follow up within two or three weeks to be sure the letter was received, and find out when the matter will be placed on the agenda so you can have a representative in attendance. Be sure you explain the need for advance planning and if the suggested "Week" coincides with another project, emphasize the timing factor and need for tying in your activity with other organizations throughout the county, state and country. Remember . . . you are not asking for anything other than recognition and a signed proclamation; you may need to remind the city officials that your group will handle the publicity.

(*please turn to page 48*)

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World Radio History

This past summer gave me the opportunity to travel extensively along the Pacific and Atlantic seacoasts. I even managed to squeeze in some Gulf Coast cruising, too. For the hundreds of Amateur Radio mariners I visited who read the **Worldradio** 'Maritime Mobile' column, thanks for having me on board!

Do you know that almost everyone seems to have the same kind of questions about maritime mobile Amateur Radio gear? This month, let's take a look at the most popular questions and see what we might dredge up for an answer. Remember, your maritime editor does not profess to be an expert — I just pass on to you ideas that have worked for other Amateur Radio enthusiasts that live aboard a boat.

Tubes or solid-state?

A very common question — which is best, a tube or solid-state rig? Well, folks, at the risk of alienating about half of our readers, I must confess that tube sets are on their way out. Tubes draw more current and usually demand transistorized high voltage power supplies. Tubes also require high voltages, and all this means increased battery consumption.

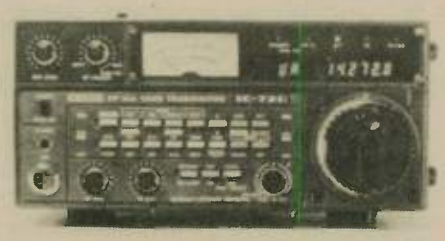
If you have a tube set, consider selling it to someone who may use it ashore. Trade it in. Transistorized sets are far more efficient and quicker to tune up on marine installations.

"Transistors may go up in smoke if not properly matched to a good antenna."

This statement is rarely true any more with all new sets incorporating SWR protection circuits. If your antenna is not properly tuned, the set flat won't put out any more than 10 or 20 watts. You could transmit all day into a mismatch, and the rear heatsinks will barely get warm. Usually, it is heat that will kill output transistors.

Transistorized sets — and I mean transistors in the finals — require no peaking, dipping and loading. Once the antenna is matched, the set will put out the maximum power.

Now comes the argument that a tube set will work into a variety of mismatched antennas. Sure it will — until the tubes begin to arc over, or simply get so hot they reach meltdown. A transistorized set will force you to improve upon your antenna situation aboard until it's matched properly. *Any* type of transceiver requires a good antenna and ground system.



The famous ICOM 720 ham/marine transceiver — all solid-state.

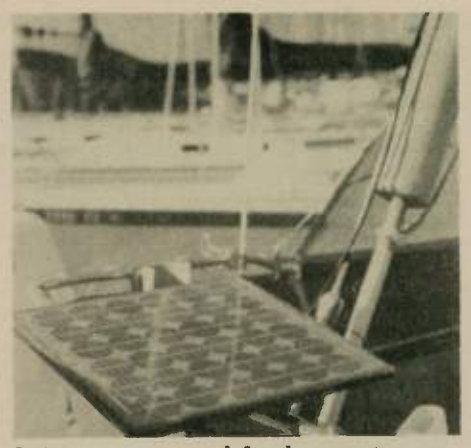
There are some points I might bring up regarding fully solid-state transceivers. Stray RF on the chassis of the radio from a poor ground system can launch your finals. That's right, that stray RF can ruin a set of finals in an instant, even though the antenna system may be matched. Check for a "hot chassis" by transmitting a continuous wave and touching a lead pencil to your radio setup. If you can draw an arc at full power output, chances are you could destroy your transistor finals. Grounding and more grounding is the cure for this common problem.

Digital failures

Many mariners have found that their digital readout will sometimes go crazy when they first turn on their radio. This, again, is quite common in marine installations. You turn on your rig and instead of reading 7100 on the dial, you get a mixture of numbers, letters and periods. You turn your rig on and off several times, but still the incorrect readout remains.

The problem stems from your microprocessor getting confused. Somewhere down the line, a voltage spike upset its memory.

To erase the erroneous readout, you must completely disconnect the transceiver from all input voltages. Turning the set on and off won't do the trick — you still have 12 volts going to the MPU. Disconnect the hot lead from the power source and count to 10. Now reconnect it, turn on your set, and presto — you are back in business. This is a very common problem that is easily solved.



Solar power panel for ham set

Tuner tonic

There are still many questions on how to properly tune up a backstay antenna to a solid-state rig. First of all, only the more expensive antenna tuners will allow you to tune up a backstay antenna. Remember, most backstay antennas must be fed by a single high voltage wire — *NOT COAX*. Not very many inexpensive antenna tuners offer a low impedance single-wire output. Check the back of your tuner and look for a white porcelain insulator with a nut on it for connection to a single wire. Your copper ground foil makes up the other half of your antenna circuit.

Long-wire antenna tuner for backstay antenna

Your best type of wire for feeding your backstay, I have found, is "GTO-15" neon high voltage cable. It features a twin plastic jacket that won't arc over. Remember to run this cable in the clear and never beside any other wiring. This is part of the horizontal run of your antenna circuit, so don't run it next to any metal either.

It must be run by itself! Don't run it next to any wiring, and never even consider trying to use coaxial cable for this antenna lead-in run.

Now to tune up this entire setup with an antenna tuner designed for a single-wire output. First, set the outside twin knobs at the 12:00 position. These outside knobs usually are referred to as "transceiver matching" and "antenna matching." They are variable capacitors.

While listening to background noise on your favorite band, such as 14.313, rotate the middle inductance band switch knob for maximum noise. Do this rapidly. Quickly flick through all possible settings, and find the one where the noise rapidly increases and rapidly decreases on each side of the setting. Some tuners actually give you an inductance frequency readout. Double-check this for maximum noise.

Now rapidly rotate the outside knobs for maximum noise. Small changes make it hard to hear whether the noise is increasing or decreasing. Rapidly twist the outer knobs and look for maximum noise on your transceiver's S meter.

Check for a clear frequency for some transmitter tests. Put your set in the CW or FSK position, and reduce the power output to about 30 or 40 watts. If you have a CW key installed in the jack, you will need to depress the key in order to get power output. If there is no CW key in the jack, place your set in transmit and you will immediately notice power output.

If your tuner has a built-in SWR meter, adjust the outside knobs for maximum forward power and minimum reflected power. You will find that you should be very close to the optimum setting from your original noise adjustments. The SWR meter should rapidly dip when at resonance.

If your tuner does not have an SWR meter, watch the power output meter on your rig and on the tuner. Maximum power output is delivered when SWR is at a minimum, in most cases.

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World Radio History

Once again, the trick to finding the proper setting on your antenna tuner for each band is starting out looking for maximum noise on your receiver. This gets you in the ball park before tying up the airwaves needlessly for transmitter adjustments.

Which antenna is best?

This is by far the most popular question asked of me throughout the country. As I have said before, your antenna performance is greatly affected by the type of ground that you have, rigging, and feedline runs to the antenna system.

If you are looking for an antenna that will work every time, try hoisting up an inverted Vee antenna. Be sure and use a balun for maximum even transfer of energy from the coax to your inverted Vee. You calculate the length of an inverted Vee the same way you would a dipole antenna. Cut each leg about 6 inches longer, and prune for minimum SWR.

Whip antennas and multiple band mobile antennas on the stern work well if copper foil is run to their base. The copper foil is the groundplane, and the copper foil needs to terminate at your keel bolt.

I have recently had outstanding success with slopers that use the mast as the groundplane source, and the backstay as the radiator. You feed a sloper with coax up the mast. This puts your feedpoint way up in the clear, and a 40-foot backstay does a nice job on all bands. Yes, you will need a 50 ohm tuner to make this system work.

Ground foil to keel bolt.

Finally, the backstay fed with single wire works well if you are using a keel bolt as ground. With a proper ground source, any form of backstay antenna will generally outperform conventional mobile antennas or dipoles. Remember, this holds true only if you have monumental amounts of ground in order to launch the signal from the insulated backstay.

Next month, more on installations and some tips on installing Amateur Radio equipment aboard.

And for all you Technician Class operators out there, remember, the only thing that stands between you and your HF worldwide General license is a simple 13 wpm code test at the FCC. I have a set of tapes expressly designed for mariners who wish to increase their code speed from forgotten-words-per-minute to 13 wpm. Write me for details!

Good cruising. □

Let Worldradio know what you do in Amateur Radio; many others will be interested in your experiences.

New products

220 MHz PA: KLM is now selling the MA 25 BCL for 220 MHz. This unit has a built-in receiver preamp, and an output of 25 watts (all mode). Designed to be used with a 220 MHz HT, input power can be as low as .1 watt or as high as 4 watts. Very compact for under dash use. Price $130. 17025 Laurel Road, Morgan Hill, CA 95037.

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— Mt. Airy VHF Radio Club, PA □

Net members visit historic site

Everett Harrington, W1VMH

On the weekend of 15 May the Northeast RV Net (3963, 8:00 a.m. Sunday) of the Amateur Radio Club of the Wally Byam Caravan Club assembled at the QTH of W1VMH, in Shrewsbury, Massachusetts. Fun and fellowship and renewing of friendships were the order of the day.

A visit was made to the homestead of General Artemas Ward, well furnished with items of his day. He was the man in charge of the patriots' cause in the American Revolution from the time "the shot was heard round the world" till Washington arrived and assumed command.

From there the group proceeded to Macomber Farm of the Massachusetts Society for the Prevention of Cruelty to Animals, where they saw demonstrations of the correct way to care for farm animals. Also at this place they saw the 100-year-old barn, moved there to preserve its antiquity. It is furnished with the tools, wagons, sleighs, plows, etc., from this same farm where W1VMH's ancestors settled in 1737. □

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Try 40 meters

If you can't sleep some night and want to find some diversion on your radio, try 40 meters.

One of the fixtures on 40 is the Triple-H Net, which opens every day at 0830Z on 7.235 MHz. Founder of the net was Alfred A. (Hank) Greenberg, W2LTP, of Cranford by way of Elizabeth. Hank is still active, but has enlisted the aid of net controls in many other areas. You'll find DX stations checking in and if you're still after WAS, 40 is a good place to find the missing states.

By the way, the Triple-H stands for "Hank's Helping Hand."

— The Home News, NJ □

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World Radio History

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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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Computers and amateurs

I resisted the growing computer craze among Amateur Radio operators for a long time. Last Christmas, we rationalized many so-called "facts" and somehow managed to end up with an Apple II plus. So far, I have been able to make it through the year without becoming overly addicted — partially because of the heavy schedule of volunteer work we do. I have played very few games and have been attempting to use it in areas of real need. (My 10-year-old son, Hartley, is a veritable expert on some of the games.)

There is an abundant supply of bookkeeping, business and word processing systems available. There are even some very nice public domain programs available for Amateur Radio. These include electronic formula capabilities. radio club member and mailing programs, QSL programs, station logging capabilities and even one called Robot that can actually CQ — make the contact two-way — sign off and log everything.

However, for those of us who are "hams and pilots," I found virtually nothing to use in conjunction with our "piloting and yakking." A few months ago, I wrote in **Worldradio** that we would like to discover and share information on flying-related programs. A few have responded already.

Computer flight log program

We received the "Flite Pak-80" program and literature from Phil Salisbury of Skylark Flight in Newport Beach, California. It is available for the TRS-80 and the Apple.

Janie fell while doing some volunteer work and broke her kneecap, so it was a couple of weeks until I could sit down and try the new program. Usually, one of the least pleasurable and hardest parts of a new program to a novice computer owner is reading the documentation. I did not have this problem with Phil's program. The book is spiral-bound for easy opening and control while reading. The pages are all printed on card stock instead of paper and the information is quickly and interestingly presented. This is partially possible because the program is so easy to follow on the screen (assuming you are a pilot or have knowledge of flight planning). Actual printouts of each screen display are presented; the final printout is perfect and contains more detail for safe flight info than I have ever seen.

Flite Pak-80 is designed to provide pilots with a flight log that can be used during flight. It will also provide a printout of all the information needed for the FAA Flight Plan form. This information is automatically taken from other information entered.

The program will ask the pilot for his departure point, aircraft identification, aircraft type, cruising altitude, true airspeed, wind direction and velocity, amount of fuel on board and fuel consumption.

Information for each leg is also prompted by the program by asking the route, course and distance to each point along the pilot's route of flight. I used "Sky Prints," which shows the distance and magnetic course between almost all of the VORs in the United States, for enroute entry information. At the completion of the leg information, the computer will present on the screen the fuel used on that leg, and the time of fuel remaining until fuel reserve. This is only part of the results that will be printed later.

The pilot may choose to save the routing that he has just entered on disk for use on a future flight. Flight routings may be entered separately and saved on disk. I plan to pre-enter all of my regular flight routes so that all I have to do is feed in wind and times, and I will get printouts that match current conditions.

After all the flight information has been provided, the computer will print a flight log giving the fix, distance, route, magnetic course, magnetic heading, altitude, fuel remaining, groundspeed, leg time and total time for the flight. Total distance and required fuel (including reserve) is also provided.

If desired, the pilot will then be prompted to provide additional items necessary for the FAA flight plan form, and in the proper order. All items are then printed, including complete route of flight and the proposed departure time.

I am really happy with this program. It is a real bargain in price (same category as most games of quality), compared to the over $100 prices of so many business programs. I assume this program is only available from the author (1711 Skylark Lane, Newport Beach, CA 92660). I found this to be true on many of the specialty programs that were reported to me. Phil also sent me some beautiful pictures of various planes that he also has available. He is obviously an avid flyer.

One of the interesting things about Phil is that he provided information at the end of his instruction book on how to go back into the program to change perameters. I thought this was unique and very neat. One can customize a backup copy for some specific differences. I do not yet understand programming, but when I go to Los Angeles to visit Dr. Cook for my (hopefully) final physical examination, I plan to visit with him for better explanation. I hope to find out how to make it print the information about the plane the same each time. We own a Cessna 182/A (transponder/DME code), N21DF, white/yellow/brown. This information would be constant for us. Janie and I are both pilots so we would not wish to put the pilot's name as a constant.

In order to keep entry simple, Phil arranged the program to assume you would fly at one cruise altitude, at one speed, and that each tankful of fuel would place you in a weather environment that would require only the use of one value for wind direction and velocity. I found this works well in practice. The program allows a total of 20 legs as it arrives, but can be expanded to any amount by the modifications he describes.

More DF technical information

Somehow, we need to get more people who are interested in the technical

Search and Rescue operations are greatly aided due to the hard work and farsightedness of Major Bob Fields (CAP). He personally did all the work of installing a VHF CAP radio, RTTY converter, auto-start and everything into this wheeled Teletype. He constructed a special platform that connects to brackets on the floor of his CAP van. The one-piece unit is rolled in and the ramp rotates up. At the search base, it is rolled down and is ready for either voice or RTTY by plugging in and attaching an antenna.

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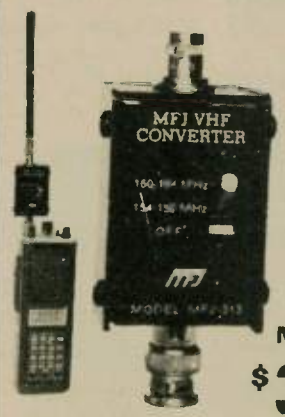

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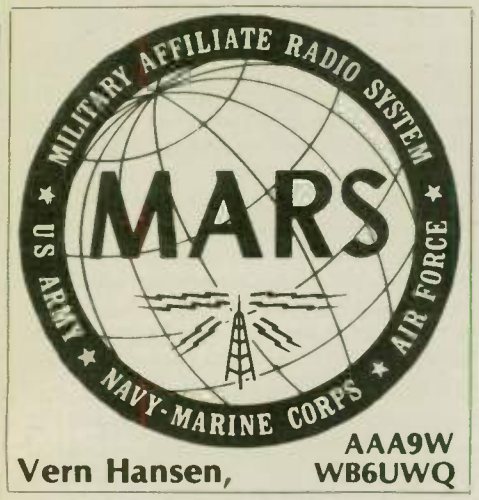
World Radio History



Vern Hansen, AAA9W WB6UWQ

The following article outlines a series of communications exercises, conducted by the National Communications System (NCS), using MARS and ARRL national networks.

During 1982, the National Communications System (NCS) — with headquarters in Arlington, Virginia — is conducting a series of four communications exercises. The purpose of these tests is to initiate action on Presidential Directive (PD-53) using survivable HF resources, and to demonstrate the feasibility of using existing MARS and ARRL national networks for emergency communications.

The first test was conducted 5-6 June, and included seven MARS/ARRL participants in Montana, Nebraska, Kansas, Colorado, California, Texas and Florida. During the test, two messages were transmitted each day between 0900-1500 (local time). The duty officer at the NCS HQ (Arlington, VA) served as the test action officer for message receipt.

The second test, entitled "Exercise Night Mail," was conducted 19-22 July. The NCS HQ sponsored this nationwide test to demonstrate the capabilities of MARS and ARRL networks in providing communications connectivity between military bases in the continental United States. In addition, this test included simulation of a progressively degraded communications environment. Simulated "critical message traffic" was relayed between government officials at military bases, and national authorities in a post attack situation.

Assigned Western Area Army MARS participants during the June and July tests were: Ruth Lewis, KA6QMU/AAT9PG, Riverside, California; John Harris, WA6APG/AAR9PH, Sacramento, California; and Nollie Clark, WA7IPG/AAR0FW, Spokane, Washington. Also, the Western Area Army HF/MARS Gateway Station, W6USA/AAA9USA, Presidio of San Francisco, and MARS affiliates, assisted in the relay of exercise messages.

The final two NCS tests have been tentatively planned for September and October. The September test was to be similar to the July test, but expanded to 20 MARS/ARRL stations. The October test will be scheduled to interface with the annual ARRL Simulated Emergency Test (SET). □

Add seven to that list

Tom Penney, W1AIO

After reading your "Incredible Dept." in the last two issues, I believe I qualify also. I have QSO'd the following stations and have QLSs in my possession: K4AIO, KP4AIO, DM2AIO (have QSO'd twice), PY7AIO, SM5AIO and EA5AIO. Also worked G3AIO, but no QSL. □

HAPPY FLYERS

(continued from page 36)

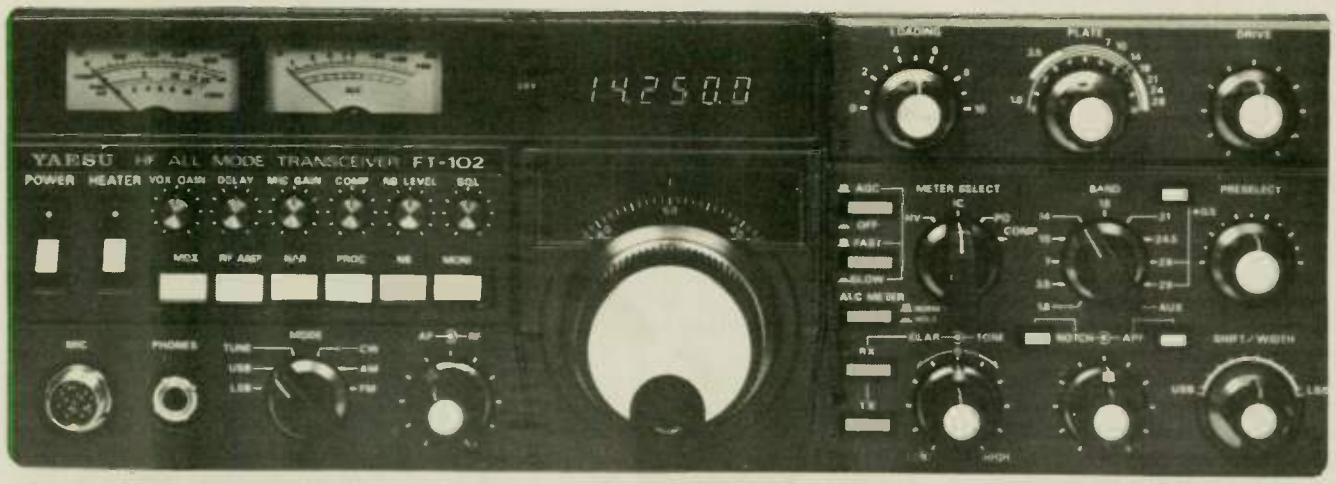
aspects of DF to communicate with each other for the common good. We are continually finding misinformation being printed with DF kits. Remember, no DF ever designed is able to change the truth of RF propagation facts at a given frequency — no matter what it costs.

Next month, we will try to share some of the more obvious errors we are receiving from others. We have no product to sell, and by the time this reaches you, will probably have no more DF boards. Our only interest is location of downed aircraft and jammer apprehension. We all need to work together. □

Seeing double?

If you should receive duplicate issues some month, and one of them has only your name, call and address, and no computer number, you have been selected to pass the extra copy on to a ham who may be interested in seeing the paper. Pass it on.

New Yaesu FT-102 Series
Transceiver of Champions!



The long-awaited new generation of Yaesu HF technology has arrived! New research in improved receiver filtering and spectral purity is brought to bear in the competition-bred FT-102, the HF transceiver designed for active Amateurs on today's intensely active bands!

Unique Cascaded Filter System
The FT-102 utilizes an advanced 8.2 MHz and 455 kHz IF system, capable of accepting as many as three filters in cascade. Optional filters of 2.9 kHz,1.8 kHz, 600 Hz, and 300 Hz may be combined with the two stock 2.9 kHz filters for operating flexibility you've never seen in an HF transceiver before now!

All New Receiver Front End
Utilizing husky junction field-effect transistors in a 24 volt, high-current design, the FT-102 front end features a low-distortion RF preamplifier that may be bypassed via a front panel switch when not needed.

IF Notch and Audio Peak Filter
A highly effective 455 kHz IF Notch Filter provides superb rejection of heterodynes, carriers, and other annoying interference appearing within the IF passband. On CW, the Audio Peak Filter may be switched in during extremely tight pile-up conditions for post-detection signal enhancement.

Variable IF Bandwidth with IF Shift
The FT-102's double conversion receiver features Yaesu's time-proven Variable Bandwidth System, which utilizes the cascaded IF filters to provide intermediate bandwidths such as 2.1 kHz, 1.5 kHz, or 800 Hz simply by twisting a dial. The Variable Bandwidth System is used in conjunction with the IF Shift control, which allows the operator to center the IF passband frequency response without varying the incoming signal pitch.

Wide/Narrow Filter Selection
Depending on the exact combination of optional filters you choose, a variety of wide/narrow operating modes may be selected. For example, you may set up 2.9 kHz in SSB/WIDE, 1.8 kHz in SSB/NARROW, then select 1.8 kHz for CW/WIDE, and 600 Hz or 300 Hz for CW/NARROW. Or use the Variable Bandwidth to set your SSB bandwidth, and use 600 Hz for CW/WIDE and 300 Hz for CW/NARROW! No other manufacturer gives you so much flexibility in selecting filter responses!

Variable Pulse Width Noise Blanker
Ignition noise, the "Woodpecker," and power line noise are modern-day enemies of effective Amateur operation. The FT-102 Noise Blanker offers improved blanking action on today's man-made noise sources (though no blanker can eliminate all forms of band noise) for more solid copy under adverse conditions.

Low Distortion Audio/IF Stage Design
Now that dynamic range, stability, and AGC problems have been largely eliminated thanks to improved technology, Yaesu's engineers have put particular attention on maximizing intelligence recovery in the receiver. While elementary filter cascading schemes often degrade performance, the FT-102's unique blend of crystal and ceramic IF filters plus audio tone control provides very low phase delay, reduced passband ripple, and hence increased recovery of information.

Heavy Duty Three-Tube Final Amplifier
The FT-102 final amplifier uses three 6146B tubes for more consistent power output and improved reliability. Using up to 10 dB of RF negative feedback, the FT-102 transmitter third-order distortion products are typically 40 dB down, giving you a studio quality output signal.

Dual Metering System
Adopted from the new FT-ONE transceiver, the Dual Metering System provides simultaneous display of ALC voltage on one meter along with metering of plate voltage, cathode current, relative power output, or clipping level on the other. This system greatly simplifies proper adjustment of the transmitter.

Microphone Amplifier Tone Control
Recognizing the differences in voice characteristics of Amateur operators, Yaesu's engineers have incorporated an ingenious microphone amplifier tone control circuit, which allows you to tailor the treble and bass response of the FT-102 transmitter for best fidelity on *your* speech pattern.

RF Speech Processor
The built-in RF Speech Processor uses true RF clipping, for improved talk power under difficult conditions. The clipping type speech processor provides cleaner, more effective "punch" for your signal than simpler circuits used in other transmitters.

VOX with Front Panel Controls
The FT-102 standard package includes VOX for hands-free operation. Both the VOX Gain and VOX Delay controls are located on the front panel, for maximum operator convenience.

IF Monitor Circuit
For easy adjustment of the RF Speech Processor or for recording both sides of a conversation, an IF monitor circuit is provided in the transmiter section. When the optional AM/FM unit is installed, the IF monitor may be used for proper setting of the FM deviation and AM mic gain.

WARC Bands Factory Installed
The FT-102 is factory equipped for operation on all present and proposed Amateur bands, so you won't have to worry about retrofitting capability on your transceiver. An extra AUX band position is available on the bandswitch for special applications.

Full Line Of Accessories
For maximum operating flexibility, see your Authorized Dealer for details of the complete line of FT-102 accessories. Coming soon are the FV-102DM Synthesized VFO, SP-102 Speaker/Audio Filter, a full line of optional filters and microphones, and the AM/FM Unit.

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World Radio History

During the past few months, I have received about 30 letters from you, the readers of this column. In your letters, you have asked me to comment or report on various things, and I have done so. In every letter I have received, you have commented or expressed concern about various areas of SSTV. In addition to your letters, I have talked at length with many of you either on the phone, in person, or on the air, and all of you have commented on the same subjects as those who wrote letters. I think it is very significant that so many of you are truly concerned about what is going on in SSTV today. The following will summarize your letters and comments that I have received through 1 August.

Big disappointment

The use of the TRS-80 Color Computer (C.C.) as a stand-alone SSTV system has been the single biggest disappointment, according to your letters. The four grey level shades that you can see are far less than the 16 grey level shades the Robot 400 provides. You also comment that the C.C. pictures look much more digitalized than those of the Robot 400. Intermittent problems with some of the hardware being used, combined with some of the quirks in the software program, cause you to miss or lose parts of pictures from time to time. Except for graphics, the C.C. proved almost useless as an inexpensive way to get into color SSTV. Virtually all RGB color pictures, except graphics, were unrecognizable.

Clay Abrams, K6AEP has written several SSTV programs for the C.C., but nowhere in his literature can I find any misleading statements. Yet, perhaps hundreds have purchased the C.C. for SSTV use with great expectations and high hopes. Most of this may have been based on claims made by others or on second-hand information. Many of you were very disappointed when you finally saw the quality of the picture. There are currently four companies selling SSTV hardware for the C.C. to use with Clay's program. Despite improvements and higher costs of one over another, none of them can provide a system to equal the Robot 400.

The C.C. works quite well when used in conjunction with a Robot 400, but as a stand-alone SSTV system, it still leaves quite a bit to be desired. Many of you with the C.C. and no scan converter have given up on SSTV and are using your computer for other things. I'm afraid I don't have any good news for you either. The formerly promised higher resolution B&W/color SSTV system for the C.C. using the 7220 IC, which was to be available about now, has been scrapped. Prices of components did not come down as expected, and the 7220 IC has not become available.

Clay has informed me that he has begun work on a new system, using a different approach. If anything comes of this, it probably won't be until next year.

Modded out?

Many of you in your letters and comments had thoughts about the various mods and systems developed over the past year or so.

There has been a steady stream of mods for the Robot 400, with many of them useful only on three-memory systems. The first sync mod and graphics overlay mod are beneficial to all in everyday SSTV use. However, the other mods fall into the category of tricks or special effects which are used only occasionally in QSOs. You have made it very clear that you don't care for the secret and selective way in which these mods were made available. You also feel that many of these mods and some SSTV systems are being pushed on you, over the air, in an effort to get you to "keep up" or "out mod" the other guy. Instead, you are just about "modded out" and wonder how many more mods you'll be asked to put into your Robot 400?

In the past year, developments in SSTV have been coming at a rapid rate. Many of them are unproven and still experimental, while others — like the SSTV systems for the C.C. — you feel are already failures.

Also, times are certainly tough economically, yet everyone is after your SSTV $$$. Each new development costs just a bit more money (or a lot more!). You feel things are moving too fast and are moving in too many different directions. You think people are out there to make a buck from their SSTV products and that they don't care what happens to the unity and compatibility of SSTV as long as their product sells. So, most of you will be hanging onto the money you have and waiting to see who wins the "battle of the systems" to see which direction SSTV will go.

On-the-air antics

By far, the largest number of comments I received from you had to do with what is happening on the air.

Many of you are annoyed that certain groups seem to monopolize the SSTV frequencies at various times, especially 14.230. You feel that when the computer people get on, they don't send any video. When the color SSTV people get on, they ignore the B&W SSTVers. I guess this is an accurate observation on your part, but I must interject my comments here because I have mentioned this before.

Whoever is using a frequency can talk about or do just about anything they please. Everyone in SSTV cannot expect to operate right on 14.230 or any other frequency whenever they want. There are other frequencies and several bands. If the group on a particular frequency is not sending video or not sending your kind of video, move off 2-3 kHz and send out your CQ tape.

When more than five or six are in a group on a frequency, it really does get unwieldy, and you have to wait a long time for your "turn." I believe that most everyone has become aware of this, and they do their best to "pass it around." There are still a few guys who break into a group, and rather than be acknowledged and wait their turn, they start right in like they own the frequency. It is these guys that turn you off to SSTV. If it is too long until your turn comes around, maybe you should move off 2-3 kHz and start a new group.

Finally, in your letters and comments to me, many of you questioned the "on-the-air antics" of a few SSTVers. Several people have come up with new SSTV developments and systems. They have been on the air demonstrating their product in an effort to create interest. The conduct of these people, who are pushing products on the air in which they have a financial interest, really disgusts many of you. This is a very sensitive area. If there were any violations, you would think the FCC would have acted by now. The conduct of one person in particular who seems to be on night and day, pushing his system, is keeping you off the air.

Even though there are no FCC violations, you feel that anyone with a financial interest in a product or system should keep their promotions off the air. They should pay to advertise their products in ham magazines or show them at hamfests. Radio amateurs, who have *NO* financial interest in a product, have the unique ability amongst themselves to discuss, compare, analyze and evaluate the merits of any ham product. If the product is good, hams will find out and they will seek out the seller.

Your letters and comments over the past months have told me a lot about what you want and what you think of SSTV today. I publish them in this column so that others can comment and so those whose actions offend you can take note. Unfortunately, you send me more negative comments than positive, but that is what is on your mind.

What we need is less discontent and more unity in the SSTV community. Next month I'll comment on what to expect in the future and where we can go from here.

●●●

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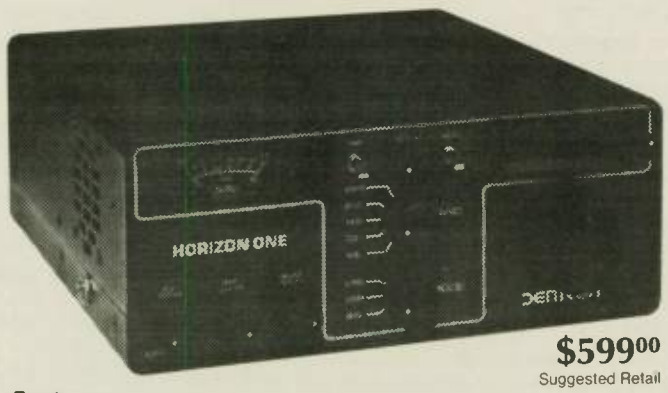

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World Radio History

Word gets around

Word about the HANDI-HAM System has been getting around quite a bit lately. Members from all over the world have sent clippings to HQ about the HANDI-HAM System that have been published in several languages.

Masashi Kamada, JH2ENE of Nishinomiya, Japan sent in such a clipping from the July 1981 issue of *CQ Ham Radio* that took a little longer to translate than some of the others.

ゴールテン・バレーの丘陵地に美しいビルが建ち，その上にそびえたつのはモスレーＴＡ33．さっそく案内された地階の無線室の机の上にはコリンズ，トレークの各ラインが堂堂と並んでいます．

この Courage Center では，社会福祉プログラムの一環としてアマチュア無線をとり上げ，Courage Center HANDI HAM System が，障害者の社会参加のために力を注いでいます．ＱＳＴにも紹介されて，全米で名を知られるようになりました．

According to his letter, there is a club similar to the HANDI-HAM System in Japan. It is made up of Amateur Radio operators with and without disabilities, and its name translates roughly to "Japan Abilities Skyfriend Club."
— *HANDI-HAM World* □

One-handed soldering iron

A one-handed soldering iron now on the market may make construction and repair of Amateur Radio equipment easier for people with restricted use of an arm or hand.

The "One-Hand Soldering Shop" is a pistol grip soldering iron with a thumb-controlled solder feed wheel that allows a person to heat the work and apply solder with one hand using one tool. Solder is held on a spool in the handle of the iron and fed through a guide tube with the thumb. The tube directs the solder to the soldering iron tip, eliminating the need for a second, steady hand to hold the solder.

The "One-Hand Solder Shop" comes in a kit which includes a tip support stand, one flat and one pointed tip, six soldering tools, paste, three types of solder, carrying case and complete instructions. It is available from DRI Industries, 11100 Hampshire Avenue South, Bloomington, MN 55438.
— *HANDI-HAM World* □

Handbooks on tape

Recordings for the Blind now has the big ARRL Handbook, the 1981 *License Manual* and six good current antenna books on cassette tapes. All materials are indexed and come with raised line diagrams. They are free to people who are blind or are disabled, who cannot hold a book for reading.

The Braille Book Bank has the Bash *General* and *Advanced* books in braille and the Library of Congress has the *Amateur Handbook* (condensed version) and *So You'd Like to Become a Ham* on cassette.
— *HANDI-HAM World* □

Kosher hams

Alon Travor, 4Z4ZB of Jerusalem, Israel is working with the HANDI-HAM System in bringing the hobby of Amateur Radio to young people at the Alyn Rehabilitation Centre for Handicapped Children in Jerusalem, where he works twice a week.

Travor became an amateur at age 10 in his native Uxbridge, near London. He became disabled in 1975 when he stepped on a missile buried in the sand in the Sinai. The missile exploded and he lost an eye and a leg and his other leg was badly injured.

His radio hobby, he says, was an inestimable boon in helping him through the trauma and the ordeal of recovery and rehabilitation. He is now sharing the hobby with five to six students in his Amateur Radio group at Alyn and has programmed an Apple computer to make Morse code classes more interesting for his students.
— *HANDI-HAM World* □

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World Radio History

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Morse NOT dead

Our August column told of the demise of the railroad telegrapher. Richard Bonomo, WB2WXH tells me I'm premature. He writes: "Last March I took a short train trip from Columbus, Wisconsin to Minneapolis/Saint Paul, Minnesota. While purchasing the ticket at the Columbus station, what do you suppose I heard coming from the agent's office? The clickety click of a telegraph sounder!" Good to know that the art isn't lost yet.

No-code license

Wherever amateurs get together these days, it's not long before talk gets around to the FCC's forthcoming proposal for a no-code grade of amateur license. And just about everybody seems to be against it. The ARRL Board of Directors at its March meeting adopted unanimously a resolution in opposition, and it seems that in this the Board had the nearly unanimous support of its constituents.

Mail I have received shows the same trend. Here is a sample, excerpted from a letter of Bob Miller, KB9SU:

"I, for one, stayed out of Amateur Radio for many many years just because I thought that I could not master all those dits and dahs, so I went into CB radio in the early '60s and dropped a bundle for radios, etc. Three times I was driven out of the CB program because of the trash on the air, but the desire for radio always brought me back to CB. The last time I figured it would never clean up, so I quit trying.

"By chance I happened to listen to a QSO between Don Penny, K6CZR and some others, and I was so impressed with the gentlemanly conduct of these amateurs that I wrote to K6CZR and told him of my feelings toward his conduct on the air. As a result, I knew that if I wished to become a part of such a group of men I would have to pay my dues and take the tests.

"I feel that learning CW was one of the hardest things I have ever done, but I also am proud that I did it. I paid my dues and I'm not about to do anything that might cause me to lose the privilege: I worked too long and hard to earn my ticket.

"CW is part of you. You can buy most anything or hire somebody to do it for you, but learning CW is done by yourself. The harder it is to learn, the harder it will be to put your license in jeopardy. I say that if a person isn't willing to give some of him/herself to join the ham fraternity, stay out. Most every ham I've ever met is willing to give of him/herself for the hobby. Remember, if you can't afford the price, don't try to steal it; the owners might get mad! Anything worthwhile is worth paying for!"

It could be good for Amateur Radio

Those who have read this column for some time may have noted that it has voiced some limited support for the idea of a no-code license, but not the "All amateur privileges above 50 MHz," that the report says the FCC will propose. That would indeed be a disaster.

How could it be good? Nearly every amateur has known dozens of people who have said, "I'd like to get me an amateur license too, but I can't learn the code." I think it would be a very safe bet to say that within one year of the FCC's adoption of a no-code license — any type and any bands — there would be over 100,000 applicants. Fifty thousand youngsters attended computer camps last summer and will be looking for ways to communicate with one another. It would be a shame to let that talent go to waste. Once they get started, many would want to go on and learn the code so that they could operate on the HF bands and join the rest of us.

Would this crowd our bands too much? As the report has it — everything above 50 MHz — it certainly would. We just couldn't absorb newcomers on our VHF bands at that rate, and the FCC would have opened for itself a can of worms that could be worse than 11 meters. But if such licensees were restricted to the microwave bands, above 1 GHz, they would bother nobody, would put those bands to use, would be in a frequency range where they would not be likely to cause RFI, and in the process would encourage manufacturers to develop mass-produced gear for those bands.

Amateur Radio would also develop its technical know-how for those frequencies, and could well make the kind of contributions to the art that it has made on lower frequencies.

Don't anybody tell me that such contributions can't be made by amateurs any more, that they are made by big companies and big laboratories. Actually, big companies and big laboratories make no new discoveries; it is only the people who work there that make the discoveries. And many of these people can point to their background in Amateur Radio as part of the reason why they are able to do such research. Furthermore, such people are restricted in their research by the fact that their employer expects their experiments to be successful. Amateurs are free to try the long-shot experiment, losing little if the experiment fails, but possibly making a more significant contribution if it succeeds.

It's obvious that some people in the FCC feel quite strongly that the proposal should be adopted. Should we amateurs simply oppose it? First, would our opposition be effective? Do we have the clout to make it work? Our clout seems to have been increasing recently, so we might be able to defeat the proposal. One thing to remember, though, is that the FCC is required by law to ask for comments before adopting new regulations, but it is not obliged to follow any comments it receives. Even if every amateur in the country files formal comments in opposition, the FCC could still adopt its proposal.

Personally, I don't like the idea of using political leverage. Issues should be judged on their merits. And I do believe this one has merit, if operation by the no-code licensees is restricted to microwave bands. It might be wise for us to include such a suggestion in our comments — at least to say we wouldn't oppose it quite so vehemently, to leave the door open for compromise if we can't get the proposal quashed completely.

We CW operators are really enjoying the novelty of people who haven't touched a key in years coming out of the woodwork to sing the praises of CW!

Packet radio

What has this discussion to do with traffic? Just as in the early days of spark, amateurs operating on these frequencies would generally be limited to distances of 100 miles or so, and as a result would have to relay their communications to cover greater distances.

While relaying could be and probably will be accomplished manually, as is done now on the lower-frequency amateur bands, it is automatic relaying which will probably be the more common method. Just as amateurs now build VHF repeaters for extended local communication, with potential for linking repeaters for wider coverage, clubs will be building relay stations, computer-controlled, that will accept messages in digital format and retransmit them in accordance with their addresses, either to another relay station or to the addressee if within the station's service area. It will be a kind of electronic mailbox, eventually giving coast-to-coast message service in a matter of minutes 24 hours a day.

The technology is all here. All the needed equipment is available on the open market, and is not expensive; a relay station would cost about the same as a 2-meter repeater. All we need is the interest to do it. And a no-code license would soon provide hundreds of thousands of people with that interest.

Microwave Associates, you had better start planning to make Gunnplexers like Johnson used to make CB's!

Writing to FCC

The no-code license is still only a proposal being discussed within the FCC offices. No formal Notice of Proposed Rule Making has been issued at this writing, and may not have been issued even when this appears in print. When it does appear, it will contain a notice that anyone who wishes may submit written comments and will specify a closing date for filing comments. That is the time

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write FCC with your comments. Not before the publication of the Notice of Proposed Rule Making, nor after the closing date.

If you file at the proper time, your comments are made part of the proceedings and are read by the staffers working on it, and they may have some influence on the Commission's final Report and Order. As noted above, however, the Commission has no obligation beyond that of accepting and filing your comments; it can do whatever it wishes, regardless of the comments it receives.

Actually, in a case like this, the comments of amateurs will be studied, and any constructive suggestions will be given due consideration. The FCC staffers know that they don't have a monopoly on brain power, and are almost certain to find in the mass of written comments discussion of aspects of the proposal that were not considered when they were preparing it in the FCC offices. So, if you have an opinion, it's "speak now, or forever hold your peace."

Except when the FCC invites comment in matters like this, however, writing the FCC is generally to be discouraged. This is particularly true in the matter of asking for rulings on what is permissible by the FCC regulations. Chris Imlay, N3AKD, ARRL's Counsel, says as much on page 60 of August QST. In fact, the example he cites, "Supposing my car breaks down where there is no telephone available; can I use the autopatch to order towing services?" is a good illustration of what can happen.

Ten years ago, when the third-party rules (97.114) were adopted, the FCC specifically said that a breakdown on the highway could be considered an emergency, and so one could use the autopatch to call a tow truck. But that was not a formal ruling, so it is possible that not everyone working for the FCC knows of it. Hence, as Chris says in QST, the staffer will simply apply the rules and say no.

I still go by the earlier decision: *any* breakdown on the highway endangers life and property and justifies immediate action — even if nobody is hurt and the car is pushed off on to the shoulder. Someone told me of a motorist in Detroit who had engine trouble on the expressway. He was able to stop on the shoulder, then got out and looked under the hood. Two minutes later he felt the rear end being jacked up and looked to see two men removing the wheels. They told him, "It's OK. You can have anything under the hood. All we want is the wheels."

Put yourself in the place of the FCC or its staffer. All government agencies are under pressure to trim their budgets. To give a formal ruling by the full Commission would cost thousands of dollars. So such questions will be given to the lowest person in the organization who can give the answer, and even then it will cost at least $5 or $10, so an attempt will be made to discourage further questions. The staffer has three options: yes, noncommittal or no. Yes is a dangerous answer. If someone higher in the organization decides that the answer should have been no, the staffer is in trouble.

A non-committal answer, simply citing the pertinent sections of the rules and making no statement as to whether or not the proposed action conforms to them, is safe, and in the past has often been the line taken by FCC staffers. Of late, however, the answer has tended to be no — also a safe reply. Subordinates generally don't have to fear serious criticism because they are a little too strict. In addition, if the word gets around that you're likely to receive no for an answer, maybe amateurs won't ask so many questions and the FCC can save some money.

Who should you ask? In most cases, why ask at all? Look it up in the FCC regulations. Even though they are still in legal language, even though the "plain language" rewrite project has been abandoned, the regulations are generally not that hard to understand. Or ask an experienced amateur, particularly one who has been active in the field in which your question lies. You can also write to ARRL (enclose an SASE) membership services. In many cases, if you ask around you'll get so many different answers that you'll still have to make up your own mind, but you may have more facts on which to base your decision.

In short, the less Amateur Radio comes to the attention of the FCC uninvited by that body, the better it will be for Amateur Radio. We have a tradition of keeping our own house in order at a minimal cost to the government. Let's keep it that way. □

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Please see page 11.

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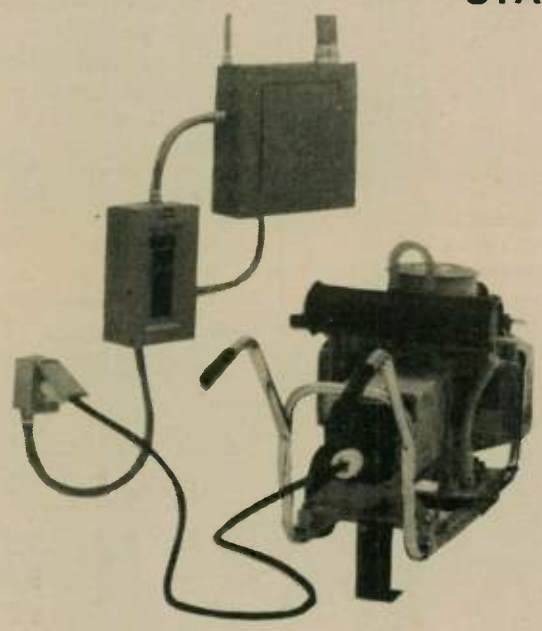

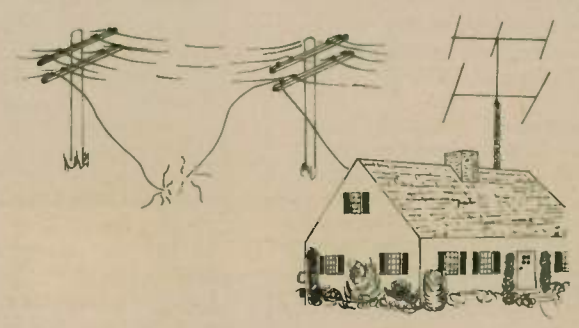

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World Radio History

Lil Paddle

Kurt Sterba is a male chauvinist clod! I had intended to tell you that he is not really the Little Abner he sounds like. I was going to tell you he is truly a charming, urbane and erudite person. But I'm not.

For in his return column, in which he talked about working so hard, there was not one word about me, his wife, who was also working the same hours. Plus, I had to cook the meals while he curled up on the couch with his precious copy of Kraus.

Shortly after his first column in Worldradio appeared, I wrote and asked if they would like something better — which they accepted.

A few months later, at work, I started to suspect that a certain party was indeed Kurt N. Sterba. Confronting him with my reasons, he said he had suspected that I was Lil Paddle. While we don't work in the very same room we would chat at coffee breaks and lunch in the cafeteria.

One thing led to another and in May we were married. Yes, there is life in the Geritol generation. We went on our honeymoon and I thought we would just mobile down life's highway. Then we both were inundated with work and had to stop writing, and then took some time to recover.

Kurt is a nice guy except when he sits around in his undershirt and tries to be funny. He loves to sing to that tune from "The Sound of Music" — "The hills are alive with the sound of mortar fire." A little of that goes a long way.

We have moved into my beautiful home. His place? You've heard of the elephant graveyard? His backyard looked like the aluminium junque-yard.

If you want better answers I suggest you address your enquiries to me. That will ensure that you receive proper advice.

I'm rather distressed that in all his ramblings about verticals he has never brought out the following thoughts.

The best vertical for 10 and 15 metres is the "sleeve" vertical. That is, the structure is a half-wave long and is made of coax. The top quarter-wave is coax with the shield removed. Then, for the bottom half, connect the braid where it was cut off to a cylinder (made of aluminium, Reynolds Wrap, etc.) encasing the remaining coax, to the length of a quarter-wave.

What you now have is truly a half-wave vertical dipole. Instead of being fed in the center — as is the case with the regular dipole — and the feedline being perpendicular, the dipole is now being fed in the center, with the feedline coming up through half of the dipole.

With this, you do get a low angle of radiation — and you can forget all about radials. This will have a lower angle of radiation than the "J" antenna.

Speaking of half-wave antennas, I must tell you one thing being chattered about regarding antennas that is not true. Some people say the lowest angle of radiation from a vertical antenna occurs when it is five-eighths long. Sorry, wrong! The 5/8 figure, or .625 WL, is in error. The actual and correct figure is .618 of a WL.

The figures mentioned for a 20-metre 5/8-wave antenna are 5-9/16 inches too long. And if you don't believe me, just ask Gary Miller.

There is a better way of transferring energy to the ether than the quarter-wave vertical, and that is a vertical that is longer.

First, a brief review to put things into perspective. The radiation resistance of the quarter-wave vertical is 36 ohms. (Yes, exactly half that of the dipole, of which a quarter-wave vertical is half.) At this point, the SWR would be about 1.4 to 1, which — fanatacism aside — is nothing to develop insomnia over.

At the quarter-wave point, the reactance is zero (as it is again at the half-wave length).

Lengthening the antenna from .25 WL to about .29 WL will now perfectly match 50-ohm line, but we have also changed the reactance to about 125 ohms inductive. Such reactance can be tuned out with a capacitor.

Now, if you even further lengthened the antenna to .33 of a WL, the resistance would be 100 ohms (cured with a 2:1 balun) and the reactance would be about 225 ohms.

What does all this accomplish? First, lengthening the vertical lowers the angle of radiation (better for DX) until you get to .618 WL, beyond which the angle starts to rise.

Lengthening also moves the high current point farther up the antenna, getting it away from the ground (which enjoys absorbing RF).

Always, the high current point will exist a quarter-wave from the top of the vertical. Thusly, the longer the vertical, the higher off the ground is the maximum current point, and so, the less dependent on a mass of ground radials to have a decent signal.

In the ARRL Antenna Anthology book is a diagram for matching the 5/8-wave antenna with the stub method. The diagram is for the 20-metre band, but it can be scaled up or down to work on the band of your choice.

Speaking of bands, you'll notice that the land of my birth has allowed its amateurs the use of the 10 MHz band while the Yanks are still bickering among themselves. That should be something for Maggie to needle Ronnie about at their next meeting!

It would behoove you to make the vertical with as large a diameter as possible. You could do that with aluminium, or it would be interesting to make a cage of wires. The greater cross-section lowers the reactance and you get greater bandwidth.

Now, here is what Bubba should have told you about verticals and never did. If you want to put up full-size quarter-wave verticals (non-loaded), say at 33 or 66 feet (40 and 80) or longer, and the physical problems (keeping them up, guying space, whatever) seem insurmountable, just go up as far as you can and then run a horizontal wire out to something the rest of the way. Works fine.

What we have looks, from the side, like the letter "L" turned upside down. You can add another wire of the same length and make it, looking at the side, a letter "T". Add some more if you wish, and you can, so that from the top the horizontal wires look like an "X". As an example, instead of a quarter-antenna vertical, you now have a 1/8-antenna vertical and a 1/8-antenna horizontal. There are many ways to skin a cat.

(Worldradio is pleased to once again have the writings of what has become Amateur Radio's "odd couple." Correspondence to them will be forwarded. As this union may strangle itself in a jumble of wire, both ask that, in lieu of wedding presents, donations be made to the OSCAR fund.) □

Marconi Antenna

Dave Schroeder, AH6K

I would like to describe a simple antenna that is very effective for local work on 40, 80 and 160 meters.

The design dates back to the early days of radio and gets its name from Marconi himself who was fond of saying, "I, too, am only an amateur." The Marconi Antenna is a quarter-wave horizontal wire that is regaining popularity as a "half-sloper." Materials are readily available and installation presents almost no challenge.

Start with a length of wire cut to slightly longer than a quarter-wavelength. Find some convenient grounded metal structure that will serve as a support and counterpoise. If you have a tower, you are half finished already. If no tower is available, then you could stand up a length of pipe, use a metal rain gutter, a junked car, or whatever else is convenient. The counterpoise should be at least a quarter-wavelength long for good efficiency.

Attach an insulator and the shield of a length of 50 or 75 ohm coax to the counterpoise. To the free end of the insulator, connect the coax center conductor and the end of the wire. Make a good solder joint or use a Servitt connector here and wrap the connection with a good grade of electrical tape. Run the free end of the wire to a tree or any suitable support, keeping the wire at least 8 feet above ground, just enough to prevent entangling the unwary. Of course, the higher you can get the wire, the better for long-range use, but we are concerned with local operation and a low antenna will emphasize high-angle radiation and greatly reduce noise and interference when receiving.

Now connect the free end of the coax to your transmitter and SWR bridge and prune for a 1:1 match. If you cannot get a satisfactory match, try changing the grounding point. I have installed a number of Marconi's and have never failed to achieve a proper match by experimenting with wire length and various grounding points. One exception: sheet metal roofs don't seem to work very well.

I keep a 40-meter version rolled up for emegency use in case my other antennas are brought down by a windstorm.

— Big Island ARC, Hilo, HI □

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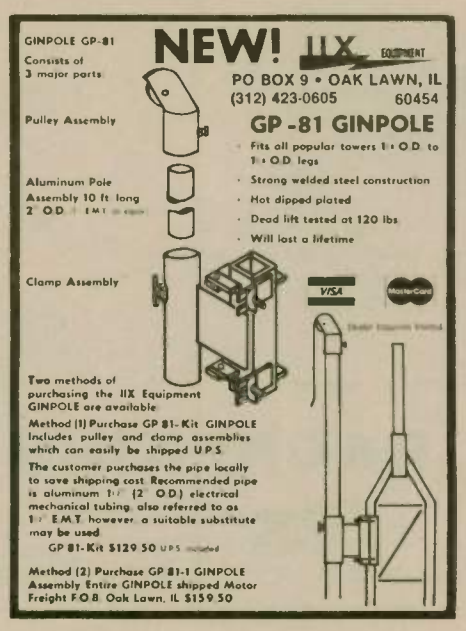

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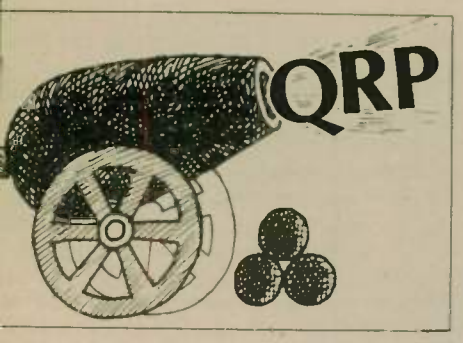
World Radio History



EDITOR'S NOTE: Shortly after his introductory piece on QRP appeared in the May issue of **Worldradio,** *the author received a letter from an amateur in Oregon complaining, among other things, that it was wrong to tout low-power operating to Novices. The following is offered as a prime example of what a dedicated Novice can do with a couple of watts.)*

Fred Bonavita, W5QJM

The way John MacKenzie tells it, his wife, Mary, gets the blame — or credit — for the whole thing. She forced him to take up mobile operating at low power and, as a result, he earned the first mobile WAS/QRP certificate issued by QRP Amateur Radio Club International.

And he did it while still a Novice.

John and Mary were licensed as novices in the summer of 1979 as KA7FEE and KA7FEF, respectively. And they began operating from their Portland, Oregon home with a Kenwood transceiver on a shared-use basis. But Mary proved as enthusiastic about Amateur Radio as John, if not more so, and her share soon was larger than his.

John MacKenzie, KA7FEE is shown sitting in the business end of his QRP mobile station.

"I quickly became aware that if I wanted any air time, I'd have to have a rig of my own with me in my work truck," John recalls. "Mary hogged the TS520S at home."

Since finances ruled out purchase of a second high-powered transceiver, John opted for a Ten-Tec 509 Argonaut "with some misgivings." The idea of operating QRP in the Novice bands and while mobile seemed a formidable challenge for one licensed only a short while, despite John's service as a radio operator in World War II.

"But after a week or 10 days of fumbling around and building my confidence, the QSOs began rolling in," John says. "It took me about that long to get over the psychological problems of not getting an immediate response to my calls. Now I'm hooked (on QRP mobile) and, as you can see, very enthusiastic."

About midway through a contact, John casually slips in the fact he is running about 2 watts output and operating mobile, and that disclosure usually dominates the exchange for the balance of the QSO.

"Once I got a comment from a WD9 of, 'I don't believe you.' But for the most part, comments are favorable," John says.

The MacKenzies help each other on some contacts. John has ridden Mary's skirttails into a QSO, and Mary has used John's shirttails for them.

Says John: "When Mary had a QSO with KH3AB on Johnston Island, I came in right after her with a contact. And I have beaten her 100 watts and better antenna (with my QRP and mobile). For example, she had a schedule with Jurgen (Dudahl-Lasson), OZ1CRL, but only after I picked him up QRP mobile did she get him."

It was another DX station — Colin Stevenson, VK2VVA — who alerted the MacKenzies to the various awards available to QRPers. He suggested Mary apply for QRP ARCI's KM/W Award — the thousand-miles-per-watt certificate — on the basis of their Oregon-to-Australia exchange. While reviewing the club's other awards, John found he had enough confirmed contacts to qualify for WAS/QRP.

"I was surprised when the certificate came back endorsed 'First Mobile,'" he says.

An independent building contractor, John mounted his Argonaut in his work vehicle on a shelf over the engine cover in the cab. He has enough room for the transceiver, his straight key, a speaker, a pad and a pencil. Power comes from a separate 12-volt battery under the passenger's seat. That arrangement minimizes noise pickup from the van's ignition system. The battery is charged about every 10 days.

"I use a straight key exclusively," John continues. "It gives me better control in traffic and over rough roads. I tried a (mechanical bug), but there were too many volunteer sounds. An electronic keyer should work fine, too, if that's what an operator is used to."

As for antennas, John uses a Hustler mobile antenna with the ball mount about 5 feet above ground level on the side of his van and with no coil spring on the fold-over mast. A light nylon stay stabilizes the whole thing.

"The biggest problem with mobile antennas is getting a good ground for the braid side of coax," he says. "I found it necessary to run additional wire from the ground terminal on the ball mount to a sheet metal screw in the body channel of the truck. An antenna won't work worth a damn without a good ground."

Antenna tuners proved unnecessary with his system, says John. And he shuns earphones in favor of a speaker for copying code while in motion. After more than 1,300 contacts, he no longer writes down each word but records only the vital portions of the exchange.

"All this works fine for me, but everyone has to work out his own salvation," he observes.

The WAS/QRP was earned entirely on CW with 99 percent of his contacts on 10 and 15 meters during the day and the balance at night on 40 or 80 meters. Even though he now holds a General Class license, John finds Novices are more tolerant of QSB and other problems associated with low power and mobile operations.

When asked his secrets, John replies: "I think it's 99 percent operating ability and desire. Operate as if you were a good QRO operator; answer all CQs, no matter how faint; be a little pugnacious and insistent; and be patient — very patient." □

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World Radio History

CONSTRUCTION

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Simple transmitter

Last month, this column described an amplifier for QRP CW rigs, using the VN67AF VMOS field-effect transistor. The same transistor can also be used in a transmitter, and the result is a miniature rig that will handle a surprising amount of power; it's a simple rig requiring only about a dozen parts, most of them available from your local Radio Shack.

The key to keeping the parts count so low is the oscillator circuit which uses three gates of an SN7400 integrated circuit. For the economy-minded, the IC used in the prototype costs only 2 cents; it was selected out of a bargain assortment and had only three good gates, but three was all that was needed.

This oscillator circuit has proved itself a reliable one, starting promptly with just about any crystal I've tried. The output is a square wave, varying from near zero to near 5 volts. For full output from the VN67AF, a wider voltage swing is required, hence two transistors are employed. The VN10KM, also available from Radio Shack at half the price of the VN67AF, could probably be used with equally good results. I didn't have one on hand, however, so I can't say for certain.

The third gate (U1C) is used as an inverter, providing the needed 5-volt level at pin 5 when the key is closed, and the ground level when the key is open. R1 and R2 form a voltage divider, causing gates U1A and U1B to float between zero and 5 volts, where they act as linear circuits. The addition of feedback through the crystal causes these gates to oscillate.

When the key is open, pin 6 of U1B is high, allowing Q1 to conduct, effectively grounding the gate of Q2 and keeping the latter shut off. Hence, the only current that is drawn when the key is open is the quiescent current of U1, about 12 milliamperes, and the current drawn through R3. If you use a zener diode in the power supply (CR1, see below), there will be the additional current drawn by the diode. For greater savings in energy, you can put the key in the positive or negative power-supply lead and interrupt the entire flow of power when the key is open. The key will have to break the full current of the transmitter, however, so should have suitable contacts.

The ideal way to build a rig like this would be to use CMOS integrated circuits. Their power drain is substantially lower, and their output swing is great enough to make Q1 unnecessary; the output could feed directly to the final stage. The only problem is that most CMOS devices will work satisfactorily only up to the 80-meter amateur band.

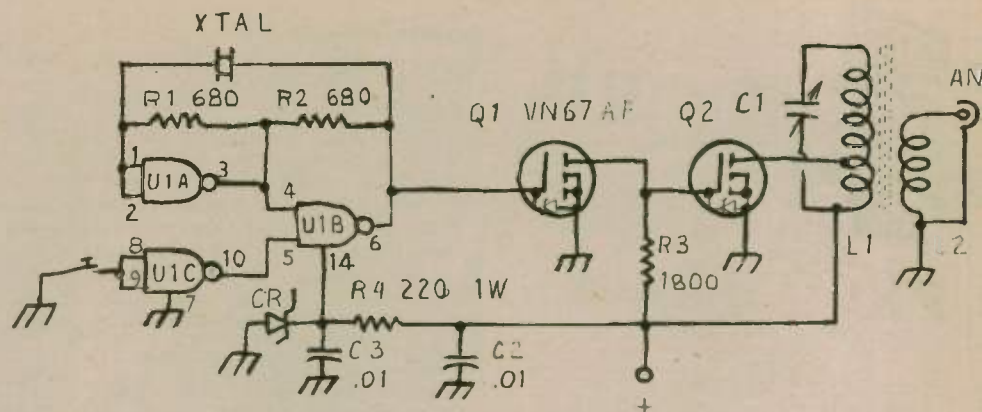
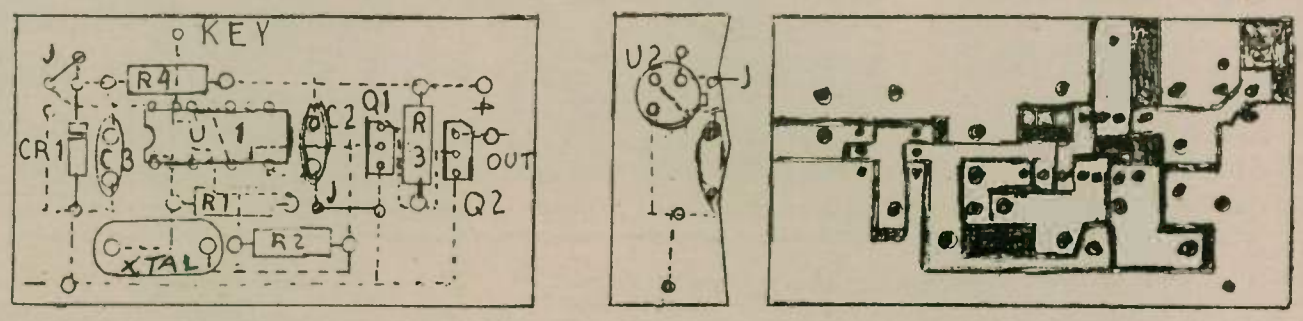


Figure 1



Device side Alt Foil side

Figure 2

TTL devices, however, will work at nearly any frequency for which fundamental-mode crystals are available. The penalties for using TTL are the heavier power drain and the need for a regulated supply, usually specified as 5 volts, ±0.25 volt. The circuit shown in *Figure 1* uses a 5-volt zener diode, CR1, as the means of regulation. R4 and CR1 can be replaced by an integrated-circuit voltage regulator, giving better regulation, lower power dissipation, and a measure of protection against malfunctions.

The output coil is the same as was used on the amplifier described here last month. L1 consists of 50 turns on a T-80-2 toroid form, with a tap three turns from the cold end. L2 is nine turns wound over the top of L1. C1 is approximately 40 picofarads to resonate at 7 MHz.

The prototype was built up on one of Radio Shack's breadboarding sockets. For any who would wish to etch a circuit board, a layout is shown in *Figure 2*. There is provision for using either an IC voltage regulator or a zener diode. The sketch at the left in *Figure 2* shows the layout if a zener diode is used. Note the jumper in the upper left-hand corner. If an IC voltage regulator is used, insert it in the upper left-hand corner of the board as shown in *Alt, Figure 2*, using a jumper to replace R4. This circuit-board layout has not actually been constructed, so it may have some bugs.

Higher power

This need not be limited to QRP operation. You could parallel several VMOS transistors at Q2, operating them at voltages of 24 or so, and use power of 100 watts or more. If you do, you will have to take precautions to heatsink the output transistors. And you may have trouble with feedback if you don't sufficiently isolate the oscillator from the output. It would probably be best to put the oscillator in a shielded cabinet, with all leads bypassed and the output brought to the gate of the VMOS transistor in coaxial cable.

The only penalty you pay for the simplicity of this transistor is the fact that you're limited to frequencies for which you have crystals. But you can do something about that, too — not much, but at least something. Insert a variable capacitor of about 50 picofarads in series with the crystal, and you can slide off frequency several kilohertz.

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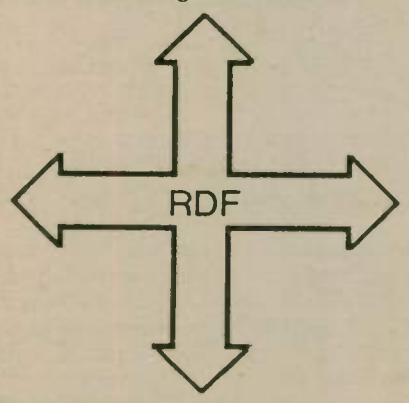
Radio direction-finder

BMG Engineering announces a new type of radio direction-finder — the SuperDF. Amateurs can use the system for sport transmitter hunts, finding stuck microphones and hunting jammers. Commercial groups can find stuck transmitters. Search and rescue teams can use it to triangulate on boats at sea or downed aircraft, and in air and ground searches.



This easy-to-use unit connects to any unmodified NBFM receiver (such as a scanner, hand-held or transceiver) at the antenna input and external speaker jack. It will direction-find on any frequency between 50 and 260 MHz with one antenna, and between 100 and 550 MHz with another antenna. The system cannot be overloaded, and neither an "S" meter nor attenuator is required. Signals from below the noise level to immediately in front of the transmitting antenna can be hunted. One control unit can be used with any antenna unit, base station, mobile or hand-held. When used Mobile-In-Motion. the electronics do an excellent job of averaging out reflections from nearby objects, allowing stable, accurate bearings to be taken. Not having to stop to take bearings cuts down the time required to reach the transmitter. Additionally, kerchunkers are easily hunted.

The SuperDF is available in kit form. Included are circuit boards, parts, drilled box, drilled antenna boom and antenna elements. The documentation includes building instructions, figures, diagrams, theory of operation, operating instructions, check-out and trouble-shooting section, and extensive hints on hunting with the system. Construction and adjustment requires only simple hand tools, epoxy glue and a VTVM.

Kit prices range from about $125 to $150. For more information, send an SASE to: BMG Engineering, 9935 Garibaldi Ave., Temple City, CA 91780. □

Tri-band vertical

Hustler, Inc. has announced the addition of a new three-band vertical antenna for 10-15 and 20-meter operation.

A unique two-in-one trap design allows for excellent bandwidth while maintaining an overall height of only 12 feet. Designated 3-BTV, the antenna is designed for permanent ground-mounting with radials or for portable use on travel trailers, condo balcony railings, or anywhere exhibiting a sufficient groundplane.

Construction is of high-quality aluminum with stainless steel hardware and is supplied with heavy-duty bracket for pipe or bulkhead mounting.

For additional information on the 3-BTV or other Hustler amateur products, contact your dealer or write Hustler, Inc., 3275 North B Ave., Kissimmee, FL 32741. □

Morse, RTTY attachments

VIC MORSE

Allows your VIC-20 computer to become a Morse terminal for your Amateur Radio station. It is capable of sending and receiving Morse code at speeds of up to 25 wpm. Includes multiple 255-character message buffers, special function keys, type-ahead keyboard buffering, and automatic speed control on receive. Requires the VIC-20, C2N cassette recorder and at least the 3K memory expander for full capabilities.

Software written in BASIC for ease of modification by the user. Requires construction of two-transistor, one IC interface (schematic and instructions included). Connection is made through the I/O User Port on the VIC-20. Package includes software on cassette, complete I/O documentation, interface schematic, and required I/O connector; price is $19.95.

VIC RTTY

Turn your VIC-20 into a RTTY terminal. Features include split-screen operation (compose your replay in a special text buffer while receiving), four 255-character user-defined messages, 60, 66, 75 and 100 wpm BAUDOT speeds, Morse code ID, RTTY ID (his call and yours), RTTY CQ message, special UNSHIFT ON SPACE option — 15 different functions and controls in all!

Manual includes instructions on how to modify software for your call and special "permanent" messages. Hardware manual included with various interface designs (RS-232, TTL, current loop, etc.) as well as info on homebrew and commercial RTTY modulator/demodulators.

VIC RTTY requires VIC-20 computer with 8K memory expansion, recorder, and VIC-to-radio interface (RTTY terminal unit and interface). Interface requires some construction ranging from simple 1 IC TTL interface to multi-IC modulator/demodulator (for completely homebrew terminal). Connection to VIC is through the USER I/O PORT.

Package includes software on cassette, software and hardware manuals, and I/O edge connector; price is $24.95. A VIC MORSE and VIC RTTY package is $39.95. All orders require $2 for shipping and handling fee, except with certified funds. COD's accepted. Complete catalog of software available free.

For information, write to RAK Electronics, P.O. Box 1585, Orange Park, FL 32073. □

6-meter antennas

With the renewed interest in 6-meter amateur operation, Hustler has added three new models to fulfill most antenna requirements.

The 6-MB3 3-element Yagi features 6dB forward gain while maintaining a superior front-to-back ratio of 28dB. Bandwidth is 2 MHz under 2:1, with resonance centered at 50.1 MHz under 1.2:1.

Model G-3754 is a vertical end-fed collinear, omni-direcional antenna for fixed station use and is an ideal antenna for repeater applications. Bandwidth is 1 MHz under 2:1. Gain is 3.4dB developed from a .64 wavelength radiator. VSWR is 1.2:1 at resonance. The G-3754 and 6-MB3 are constructed of high grade seamless aluminum tubing and stainless steel hardware for durability and long life expectancy.

For mobile use, the new BBL-4554 base-loaded antenna features 48 inches overall height and shunt-fed design for optimized performance on any mode FM, AM or SSB. Supplied complete with stainless steel impact spring, ¾-inch hole mount and 17-foot RG-58/U coaxial cable with PL-259 connector installed.

For further information on these or other Hustler Amateur antennas, contact your dealer or write: Hustler, Inc., 3275 North B Ave., Kissimmee, FL 32741. □

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FT-102 transceiver

Yaesu Electronics Corporation is pleased to announce the availability of the new FT-102 Line of HF equipment.

The FT-103 transceiver utilizes an all-new transmitter section, featuring three 6146B final tubes for extremely low distortion. In addition to VOX and an RF clipping-type speech processor, the FT-102 transmit audio may be adjusted for optimum response to the operator's voice.

The FT-102 receiver uses husky JFET components in the front end for wide dynamic range. A number of filter options are available, with wide/narrow filter selection independent of the mode switch. Audio peak filtering for CW, audio shaping for all modes, and an IF notch filter provide outstanding intelligence recovery. The noise blanker is highly effective against the "Woodpecker" and pulse noises.

Equipped for SSB and CW operation, the FT-102 option list includes an AM/FM module for activating those modes. Other accessories for the FT-102 are the FV-102DM synthesized VFO, the SP-102 speaker with audio filter, the SP-102P speaker/patch, and the FC-102 1.2kW antenna tuner with optional remote antenna selector.

For further details, contact: Yaesu Electronics Corp., P.O. Box 49, Paramount, CA 90723. □

Shortwave/longwave tuner

A new 100 kHz-30 MHz frequency-selective tuner has been announced by Grove Enterprises, famous for their accessories and publications for shortwave and scanner listeners.

Dubbed the MINI-TUNER, the compact TUN-3 is designed for use with popular general coverage receivers like those from Kenwood, Yaesu, Radio Shack, Sony and Panasonic.

The MINI-TUNER is particularly suitable for reducing interference from intermodulation, images and front-end overload — so common with consumer receivers. No power supply is required for this passive preselector.

Installation and operation are simple. A standard coax connector is provided on the back to attach the antenna lead, and a coaxial interconnect cable is attached to the receiver. A banana plug is included for single-wire lead-in.

The listener merely selects the frequency range of interest, then rotates the tuning control for best reception.

A bypass feature allows the unit to be disabled without disconnecting it physically from the antenna circuit, and a ground position provides protection from nearby lightning strokes when the receiver is left unattended.

The TUN-3 MINI-TUNER replaces the earlier TUN-2 Signa Match, providing improved performance at lower cost. $54.95 plus $2 UPS shipping.

TUN-3 may be ordered by calling toll-free 1-800-438-8155 (continental U.S.); North Carolina residents call collect 1-704-837-2216. For further information write Grove Enterprises, 140 Dog Branch Rd., Brasstown, NC 28902. □

World Radio History

Electronic parts merchandising

Dentron Radio Company of Stow, Ohio has introduced a new Skin-Pak parts and accessories program for the retail electronics industry. Capacitors, chokes, coils, diodes, switches, fans, transformers, cabinets and much, much more are available on attractive red cards. Aimed at hobbyists and professionals alike, this program is for the dealer wanting to take advantage of the fast-growing electronics aftermarket businesss.

A free header for pegboard displays is supplied with each initial order. Reordering and restocking is fast, simple, and geared to a dealer's specific needs. New dealers are welcome. For more information, contact Tim Neill at Dentron Radio Co., 1605 Commerce Drive, Stow, OH 44224. (216) 688-4973. □

Five-band transceiver

Dentron Radio Company of Stow, Ohio is beginning production on a new 200 watt, CW, SSB solid-state transceiver named the Horizon One. Economically priced at $559 suggested retail, the Horizon One covers 80-15 meters plus any 500 kHz segment of 10 meters. Its sensitivity is .35uV for 10db signal-to-noise ratio, with selectivity of 2.4 kHz at 6dB points, G-60dB factor of 1.7:1.

Performing with the latest MOSFET and ballasted emitter semi-conductors, the Horizon One also has a pinpoint digital frequency readout using LSI technology. Input power is 200W PEP with an output of 100W PEP nominal and 80W PEP on 10 meters. Power requirements are 12.6-14.5V DC regulated at 2.0 amps maximum, and 12.6-14.0V DC regulated or unregulated at 18 amps peak.

Perfect for both base and mobile use, the Horizon One has a built-in VOX, noise blanker, plus a hand mike as standard equipment. Optional accessories include an AC power supply, matching antenna tuner, linear amplifier and mobile mount.

For more information on the Horizon One transceiver, contact Tim Neill, Technical Sales Representative, Dentron Radio Company, Inc., 1605 Commerce Drive, Stow, OH 44224; 216-688-4973. □

Monoband transceiver

The Dentron Radio Company of Stow, Ohio has put big fun in a little package with their new mini-sized, monoband transceiver. Titled the MLX Mini, it operates at 25W PEP and 20W CW with an LED frequency readout of ± 100Hz accuracy.

Available in models from 160-6 meters, the MLX Mini has selectivity of 2.1 Hz with sensitivity better than .35uV for 10dB signal-to-noise ratio. Receiver design is the single conversion super heterodyne type with total power requirements of 12V-14V DC. Small enough for your hip, lunch box or camper, the new MLX Mini has an amazingly low suggested retail of $229.50.

For more information contact Tim Neill, Technical Sales Representative, Dentron Radio Company, Inc., 1605 Commerce Drive, Stow, OH 44224; 216-688-4973. □

Simplex/duplex autopatch model

Current Development Corporation (formerly R.W.D. Inc.) announces the introduction of their "Novax II Mobile Connection" for interfacing to DTMF (touch-tone) and rotary dial telephones.

The Novax II, in addition to the standard features of Novax I, offers: 4-digit access code, LED display, toll restrict, repeater use, and interfaces to rotary dial systems (for rotary dial telephones). Both units use high-speed switching technique, eliminating voice-activated switching problems.

For more information, write Current Development Corporation, Box 162, Tudman Rd., Westmoreland, NY 13490; or call 315-829-2785. □

TORRESTRONICS, INC.

UNIVERSAL DIGITAL FREQUENCY READOUT

WHY BUY A NEW DIGITAL RECEIVER OR TRANSCEIVER WHEN YOU CAN UPDATE YOUR PRESENT SYSTEM AT A LOWER COST?

FEATURES:

DIRECTLY COMPATIBLE WITH DRAKE, HEATHKIT, KENWOOD RECEIVERS AND TRANSCEIVERS; CAN BE CONNECTED TO OLD NATIONALS, ATLAS, SWAN, HALLICRAFTERS, HAMMARLUND, COLLINS AND TEN-TEC UNITS.

COUNTS UP OR DOWN ANY IF OR OSCILLATOR BETWEEN 100 KHZ. AND 50 MHZ.

VERY STABLE READING...NO FLICKERING; NO LAGGING WHILE TUNING ACROSS THE BAND.

BUILT-IN HEAVY DUTY 120 VAC, 60 HZ. POWER SUPPLY. OPTIONAL 240 VAC, 50 HZ. POWER SUPPLY AVAILABLE.

MULTICOLOR LED DISPLAYS(RED AND GREEN).

TIME BASE: CRYSTAL AT 2.4576 MHZ., NO BIRDIES IN THE HAM BANDS.

SENSITIVITY: 5 mV-RMS AT 5 MHZ.
25 mV-RMS AT 50 MHZ.

ACCURACY: 10 HZ. AT 14 MHZ. TYPICAL.

DISPLAY MODE: DIRECT READOUT NOT MUX. i.e. LOW NOISE.

WEIGHT: 2.6 lbs. (1.18 Kilos).

DIMENSIONS: 6" WIDE, 2" HIGH, 5.75" DEEP.

MODELS AVAILABLE:

WTK-1: FULLY WIRED AND TESTED UNIT; 12 MONTHS WARRANTY.

TK-1: COMPLETE KIT OF PARTS AND CABINET FOR THE DIGITAL READOUT. KIT INCLUDES EVERYTHING NEEDED TO ASSEMBLE THE READOUT(TOOLS AND SOLDER NOT PROVIDED). DETAILED ASSEMBLY MANUAL WITH TIMING CKTS AND TROUBLESHOOTING CHART.

PTK-1: PARTIAL KIT FOR THE READOUT. HARD TO FIND COMPONENTS WHICH INCLUDE PRINTED CIRCUIT BOARDS, ENCLOSURE, CRYSTAL, WINDOW, L-TYPE CONNECTORS, AND ASSEMBLY MANUAL. NICE FOR THOSE HAVING A SUPPLY OF TTL PARTS.

PARTS: INDIVIDUAL PARTS AVAILABLE FOR CUSTOM ASSEMBLIES INTO EXISTING RECEIVERS OR TRANSCEIVERS. FOR MORE INFORMATION, SEE JANUARY 1980 QST MAGAZINE.

PRICES:

WTK-1: $135.00
TK-1 : $100.00
PTK-1: $ 37.00

ALL PRICES INCLUDE DELIVERY WITHIN CONTINENTAL USA; CANADIANS ADD $7. FOR DELIVERY. OHIO RESIDENTS ADD SALES TAX OF 6%.

DIGITAL READOUTS SINCE 1978

TORRESTRONICS
4850 HOLLYWREATH COURT
DAYTON, OHIO, USA 45424
(513) 236-2534

GIFTS FOR THE HAM

Rusprint

"ON AIR" Sign

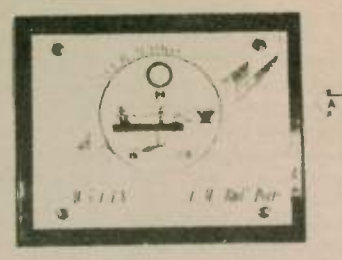
On Air Sign—Designed to be mounted on wall or stand on table or equipment. Sign is lighted with ON AIR in red letters on white glass. Frame is made of solid walnut and the workmanship is guaranteed to be of the highest quality. 110 volts off and on switch.

Order No. 818 . . . . . $34.50 each

4" wide x 13" long x 5" high

(A) Station Identification Plaque — This is a plaque that every amateur radio operator will be proud to display in his shack. Large 8" x 10" solid walnut base with hanger. Operator's name and call are printed on high quality parchment featuring key and mike design. The key and mike design is printed in blue and brown with the name and call in black. Parchment is placed under plexiglass and mounted on the walnut plaque.

Order No. 506 .... $24.95 each



(B) 1st QSO-QSL Card Holder — Display and preserve your first contact! This beautifully designed solid walnut base and holder protect your first QSL card confirming your first radio contact. The card fits between two pieces of glass for easy viewing from both sides. Embedded in the base is a bronze "Commemorative Medallion" and the words "First QSO" Can also be used to display your own QSL Card.

Order No. 812 .... $14.50 each

(C) A/R License Holder — Protect and display your amateur radio license. This custom designed solid walnut base and holder protect your license. The license fits between two pieces of glass for easy viewing from both sides.

Order No. 814 ..... $14.50 each

Mail Check or Money Order To:

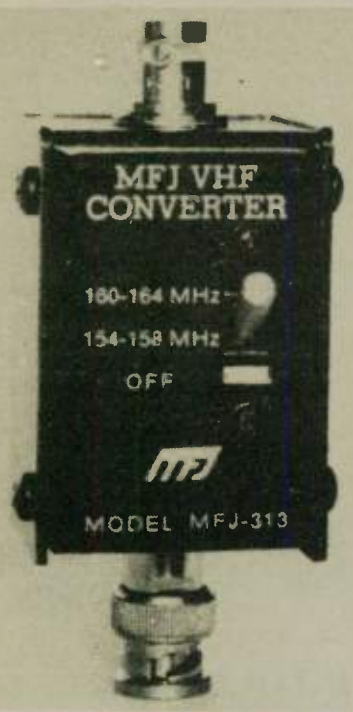
RUSPRINT — P. O. Box 7575
North Kansas City, Missouri 64116 (816) 531-7373

master charge VISA

World Radio History

Police/fire/weather band converter

MFJ introduces its new compact VHF police/fire/weather band converter for 2-meter hand-helds. It turns your synthesized 144-148 MHz hand-held into a police/fire receiver



(154-158 MHz) and gives you direct frequency readout on your hand-held. A programmable scanning hand-held becomes a sensitive programmable police/fire scanner. You can also receive weather, maritime coastal and more on the 160-164 MHz band.

Feedthrough allows simultaneous scanning of both 2 meters and 160-164 MHz band.

A highpass input filter and a 2.5 GHz transistor gives very high uniform sensitivity over both 154-158 MHz and 160-164 MHz bands. Each band is crystal-controlled for excellent stability.

A bypass/off position allows transmitting through the converter. It is protected against burnout if you transmit (up to 5 watts) with the converter on. Short, direct signal paths give low-insertion SWR.

This compact converter (made in the USA) measures only 2¼" × 1½" × 1½" and weighs 4 ounces. A single AAA battery (not included) gives you months of operation. The cabinet is black and is made of rugged, lightweight aluminum for years of hard use. BNC connectors mount the converter directly between your handi-talkie and antenna without cables.

MFJ provides a 30-day trial period. If you are not satisfied, you may return it within 30 days for a full refund (less shipping). MFJ also provides a one-year unconditional guarantee.

The MFJ-313 is available from MFJ Enterprises, Inc. for $39.95 plus $4 for shipping and handling.

To order, call toll free 800-647-1800 and charge it to your VISA or Master Charge account or mail your order to MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762. □

Please
send NEWS and PICTURES to
Worldradio

New Hamtronics® kits

Continuing in their tradition of constantly offering new models advancing with the state-of-the-art, Hamtronics, Inc. has announced several new products recently developed in their communications lab.

The R76 VHF FM Receiver Kit is a new improved version of the popular R75 Receiver for 10M, 6M, 2M, 220 MHz, or the adjacent commercial bands. It features a very low-noise front-end, pump-resistant squelch with hysteresis to lock onto fading signals, on-board volume and squelch controls for easy wiring, and fixed DF filters for easy alignment. It has also been reduced in size — now only 3¼ by 4 inches. It is available in two selectivity options, starting at $84.95.

A new UHF receiver kit has also been introduced. The model R451 includes the features listed above plus automatic frequency control to lock onto drifting transmit signals. Kits are available with various options starting at $94.95. One interesting option is a proportional controlled crystal oven — great for building UHF repeaters.

With the advent of very-low-noise transistors for satellite TV receivers, Hamtronics® has an interesting new line of low-noise amplifiers. In appearance, they resemble the popular P30 and P432 Receiver Preamps, but the circuit is new. The new LNA 28, LNA 50, LNA 144, LNA 220 and LNA 432 units are optimized for lowest noise figure at the ham bands, but they can also be used on adjacent commercial bands. The LNA 432 also provides very good gain and noise figure for UHF TV signals and the new 800 MHz commercial band. Noise figures typically run 0.5dB at 28 and 50 MHz, 0.6dB at 144 MHz, 0.7dB at 220 MHz, and 0.95dB at 432 MHz. Gain runs from 33db at 28 and 50 MHz to 17dB at 432 MHz. Best of all, the price is only $39.95 for the VHF units and $44.95 for the UHF unit — all wired and tested.

With the frequent launching of the space shuttle, many have asked for a special version of the Hamtronics® R110-450 UHF AM Aircraft Receiver to listen to the shuttle. Exceptionally good results have been reported using simple UHF antennas. Most of the interesting conversations occur with the shuttle over the United States, so this is fast becoming a fascinating amateur sideline activity. The special Shuttle Receiver Kit is now available off the shelf at only $94.95. Call for details on this unit.

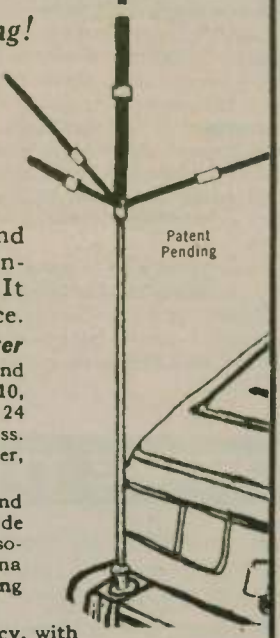
For further information on their entire line, write to Hamtronics, Inc.; 65-V Moul Rd.; Hilton, NY 14468-9535 or call 716-392-9430. A complete catalog will be mailed on request. (For overseas mailing, please enclose $1 or 3 IRCs.)

When you're operating mobile, DON'T STOP to change antenna coils when you change bands—

The Spider™ Antenna or The Spider™ Adapter

give you the choice of 4 bands while you're driving!

The modern multi-band mobile antenna for today's all solid state transceivers. Switch to 10, 15, 20 or 40 meters without changing resonators. Just switch bands—the antenna takes care of itself!



The Spider* Adapter converts any mono-band antenna with a ½" mast into a modern four-band antenna with all the features of the regular Spider. It gives you the latest convenience at a modest price.

Features of the Spider* Antenna and Spider* Adapter

- The 4-Band Spider* Antenna is six feet high — the 3-Band five feet. The mast is made of ½" aluminum. The radial 10, 15 and 20 meter resonators project out from the mast 11 to 24 inches, and are ½" in diameter. They are wound on fiber glass. The vertical 40 meter resonator is 20" high and ¾" in diameter, and is wound on Lexan® polycarbonate.
- Each resonator is tuned to the desired portion of the band by a tuning sleeve which slides from end to end over the outside of the resonator. Use an SWR bridge to tune to the chosen resonant frequency, tuning for minimum SWR. If desired an antenna noise bridge may be used for tuning. Each resonator has a logging scale to provide resetability.
- SWR is approximately 1:1 at the selected resonant frequency, with generous band widths before the SWR exceeds 1.5:1. The typical band widths are about 500 kHz on 10 meters, 200 kHz on 15 and 20 meters, 60 kHz on 40 meters.
- ***Base impedance is approximately 50 ohms on all four bands, requiring no matching network.***
- All resonators have a dielectric covering which helps to reduce atmospheric noise.
- Slim profile, low height and light weight offer little wind resistance, eliminating the need for a spring mount and annoying QSB.
- Ideal for use in mobile home parks, apartments and condominiums. Also on motor homes, travel trailers, vans and campers.
- Spider*Antennas are not made on an assembly line; they are virtually custom built.

The Spider* 4-Band Antenna
Four foot aluminum mast and 10, 15, 20 and 40 meter resonators. Weight 2 lbs.

The Spider* Adapter
Mounting collar to fit ½" round mast and 10, 15 and 20 meter resonators. Wt. ¾ lb.

The Spider* Maritimer* Antenna
Four foot non-magnetic stainless steel mast with nickel-chrome plated fittings. and 10, 15, 20 and 40 meter resonators. Weight 2¾ lbs.

The Spider* Maritimer* Adapter
Nickel-chrome bronze mounting collar, 10, 15, 20 meter resonators. Weight 1 lb.

LEN—W6FHU *For further information and prices write or call* FRED—K6AQI

MULTI-BAND ANTENNAS

7131 OWENSMOUTH AVENUE, SUITE 163C, CANOGA PARK, CALIF. 91303

*Trade Mark TELEPHONE: (213) 341-5460

11th JLRS Party Contest

The Japan Ladies Radio Service (JLRS) will be sponsoring the 11th Annual JLRS Party Contest on 25-26 September and 2-3 October, in order to promote the activity of women Amateur Radio operators and to further cooperation among them.

The schedule is as follows: **Phone** — Saturday, 25 September, 0300 GMT to Sunday, 26 September, 0300 GMT. **CW** — Saturday, 2 October, 0300 GMT to Sunday, 3 October, 0300 GMT.

Eligibility: All licensed men and women operators throughout the world are invited to participate.

Operation: All bands and all modes may be used in accordance with operator and station licenses. Crossband operation is not permitted. All contacts must be made from the same location. Net contacts and contacts with mobile stations or club stations will not count.

Procedure: OMs — "CQ YL" YLs — "CQ CONTEST" CW — "CQ Test"

Exchange: OMs — RS or RST and QSO number starting with 001; YLs — RS or RST and QSO number starting with 2001; JLRS members — RS or RST and QSO number starting with 5001. Separate consecutive QSO numbers must be used in Phone and CW contest.

Entry: Entry in each contest is limited to one of the following two classes: A) more than four bands; B) less than three bands.

Scoring: 1) Phone and CW will be scored as separate contests. Submit separate logs for each contest. 2) Each contact with the same station on different bands will be counted. 3) OMs: Score 1 point for each contact with YL and 5 points for each contact with a member of JLRS. YLs: Score 1 point for each contact with OM and 5 points for each contact with YL. 4) Multiply the number of contact points by the total number of different prefixes worked in each band.

Logs: Copies of all phone and CW logs must show claimed scores, band, mode, RST, call signs worked and power transmitted, be signed by the operator, and be postmarked not later than 20 October 1982. Be sure your log is legible. Please *print* or *type*. Send logs to The Contest Custodian, Kuni Kan, JA1YL, 4-5-38-406 Hyakunincho, Shinjuku-ku, Tokyo 160, JAPAN.

Awards: The first prize certificate (for DX participants only) will be awarded in each entry to the highest score phone and CW winners of OMs and YLs in each continent. All participants will receive a list of the result of the contest in December 1982.

Suggested contest frequencies: Phone: 14.160, 14.280, 21.280 and 28.600 MHz; CW: 14.080, 21.080 and 28.050 MHz.

Further information will be available with SASE from the Contest Custodian.

Minnesota QSO Party

The Minnesota QSO Party, sponsored by the Paul Bunyan Wireless Association, will last from 1700Z, 16 October until 2259Z 17 October. Single transmitter only, no crossband contacts. Phone and CW. No net QSOs. Exchange signal report and QTH (county for Minnesota stations, ARRL section or country for others). Suggested frequencies: Phone — 3.933, 7.233, 14.300, 21.433, 28.633; CW — 33 kHz up from lower band edge; Novice — 33 kHz up from band edge. Count 1 point per phone QSO, 2 points per CW QSO. Minnesota stations multiply by number of sections and DXCC countries worked; others multiply by number of Minnesota counties worked.

Mail logs by 20 November (include large SASE for results) to: Steven Scott, KC0UJ, 801-6th St. North, Staples, MN 56479.

World Radio History

RTTY DX 'Big Smoke' Sweepstakes

The Canadian Amateur Radio Teletype Group (VE3RTT) announces the 22nd Annual RTTY DX "Big Smoke" Sweepstakes, to be held 16-18 October 1982. Operating hours will be Saturday, 16 October, 0200 GMT to Monday, 18 October, 0200 GMT. Not more than 30 hours of operating are permitted for single-operator stations. Non-operating periods can be taken at any time during the contest. Multi-operator stations may operate the entire 48-hour contest period. A summary of operating times must be submitted with each score.

Bands: Use all bands 3.5, 7, 14, 21 and 28 MHz.

Classifications: a) Single operator, b) Single operator ASCII, c) SWL printer and d) Multi-operator (one transmitter).

Message: To consist of RST, time GMT and zone.

Exchange points: All two-way RTTY QSOs with one's own zone counts 2 points. All other contacts will receive points listed on CARTG Zone Chart.

Multipliers: Country status as on ARRL Countries List; KL7, KH6, W/K, VE/VO and VK Districts counted as separate countries. Stations not to be counted more than once on any one band. Additional contacts counted on different bands. One's own country counts as a multiplier.

Scoring: Total exchange points × number of countries contacted × number of continents (maximum of six). 200 bonus points for each Canadian contact made on **all** bands added to final score.

Logs: Logs to contain band, date, time GMT, RST, call signs, exchanges sent and received. Use separate log sheet for each band. Multi-operator logs must be signed by each operator. ASCII operation logs must be plainly marked and submitted separately. Send SASE or IRCs to CARTG for log sheets and zone charts.

Logs must be received before 1 January 1983 to qualify. Send logs, time summary and scores to: Canadian Amateur Radio Teletype Group, VE3RTT, 85 Fifeshire Rd., Willowdale, Ontario, CANADA M2L 2G9.

Awards: The top 10 scores will receive engraved plaques donated by the *RTTY Journal* and the CARTG. □

YL Anniversary Party

The CW portion of the YL Anniversary Party begins Wednesday, 20 October, 1800 UTC and ends Thursday, 21 October, 1800 UTC. The phone portion of the contest begins Wednesday, 3 November, 1800 UTC and ends Thursday, 4 November, 1800 UTC.

All licensed women operators throughout the world are invited to participate. YLRL members also are eligible for the cup awards. Non-members will receive certificates. Only YLRL members are eligible for the Corcoran and Hager Awards.

Procedure: Call "CQ YL."

Operation: All bands may be used. No cross-band operation. Net contacts, repeater contacts, and contacts with OMs do not count. A station may be counted only once in each contest for credit.

Exchange: Station worked, QSO number, RS or RST, ARRL section or country. Entries in log must also show time, band, date and transmitter power. (Please know your ARRL Section. Section list is available for SASE sent to YLRL vice president.)

Scoring:

A) CW and phone will be scored as separate contests. Submit separate logs for each contest.

B) All YLs within an ARRL Section; score 1 point for each QSO with another station located within an ARRL Section. Score 2 points for each contact with a station not located within an ARRL Section (i.e. DX). Definition of DX: All stations not located within an ARRL Section. DX YLs shall score 2 points for each contact with a station located in an ARRL Section and score 1 point for each contact with another DX station. Multiply the number of contact points by the total number of different ARRL Sections and countries worked.

C) Contestants running 150 watts or less on CW and 300 watts PEP or less on SSB, at all times, may multiply the results of (B) by 1.25 (low-power multiplier).

Logs: All logs must show ARRL Section or country to qualify for awards. Do not send carbon copies of logs. Please print or type. *Logs must be signed by the operator,* and no logs will be returned. Remember to file separate logs for each contest. Logs must show claimed score and be postmarked by 14 November 1982, and received no later than 15 December 1982, or they will be disqualified.

Please send logs to Sandi Heyn, WA6WZN, 962 Cheyenne St., Costa Mesa, CA 92626.

Duplicates: For each duplicate contact that is removed from the log by the vice president, a penalty of 3 additional and equal contacts will be exacted.

Awards:

A) Highest CW score — Gold Cup YLRL member. Highest phone score — Gold Cup YLRL member. First, second and third place CW and phone score (not combined) will receive a certificate. Highest CW log and highest phone log in each U.S. and VE call district and country will receive a certificate.

B) **Corcoran Award**: A plaque given for the highest combined CW and phone score *from YLRL members only, within an ARRL Section.*

C) **Hager Award**: *For DX YLRL members only.* A plaque given for the highest combined CW and phone score from North and Central America, including the Greater and Lesser Antilles. Highest combined CW and phone score from any other part of the world will receive a duplicate plaque. (YLRL members only) □

QRP ARCI CW QSO Party

The QRP Amateur Radio Club International (ARCI) announces its annual CW QSO party, to be held 16-18 October 1982. The contest starts Saturday, 16 October, 1200 UTC, and ends Sunday, 17 October, 2400 UTC. Participants may operate a maximum of 24 hours.

Exchanges: Members give RST, state/province/country and QRP number. Non-members give RST, state/province/country and power output. Novices and/or Technicians give /N or /T after QRP number or power output.

Stations may be worked once per band for QSO and multiplier credits. Each member contact counts 5 points regardless of location. Each non-member U.S. or Canadian contact counts 2 points. Non-member Novice and Technician contacts count 3 points. Non-member stations other than W/VE count 4 points.

Multipliers: 4 to 5 watts output × 2; 3 to 4 watts output × 4; 2 to 3 watts output × 6; 1 to 2 watts output × 8; less than 1 watt output × 10. Entries from stations running more than 5 watts output will count as check logs only.

Bonus multipliers: If 100 percent natural power (solar, wind, etc.) with no storage, × 2. If 100 percent battery power, × 1.5.

Scoring: QSO points (total of all bands) × total number of states/provinces/countries (the same state/province/country may be counted on more than one band) × power multiplier × bonus multiplier (if any) equals claimed score. Send large SASE to contest chair for scoring summary sheet in advance of contest.

Suggested frequencies: 1810, 3560, 7040, 14060, 21060, 28060 and/or 50360 kHz. Novice/Technician: 3710, 7110, 21110 and 28110 kHz. All plus or minus to clear interference. VHF/UHF contacts must be direct and not through a repeater.

Calling method: CQ CQ QRP DE (call sign).

Awards: Certificates to highest scoring station in each state/province/country with two or more entries. Certificates also for highest scoring Novice and Technician overall. Entries automatically considered for annual Triple Crowns of QRP Award.

Logs: Separate log sheets are suggested for each band for ease in scoring. Send full log data plus separate worksheet showing details and time(s) off air. No log copies will be returned. All entrants desiring results and scores please include a No. 10 envelope with enough U.S. postage for one ounce or an IRC. It is a condition of entry that the decision of the contest chairman of QRP ARCI is final in case of dispute. Logs must be received by 20 November 1982. Logs received after that date or missing information will be used as check logs.

Send logs and scoring information to: QRP ARCI Contest Chairman William W. Dickerson, WA2JOC, 352 Crampton Dr., Monroe, MI 48161. □

WHEN PURCHASING GOODS,
SAY YOU SAW IT ADVERTISED
IN **WORLDRADIO.**

DUAL DRIVE TRIBANDERS

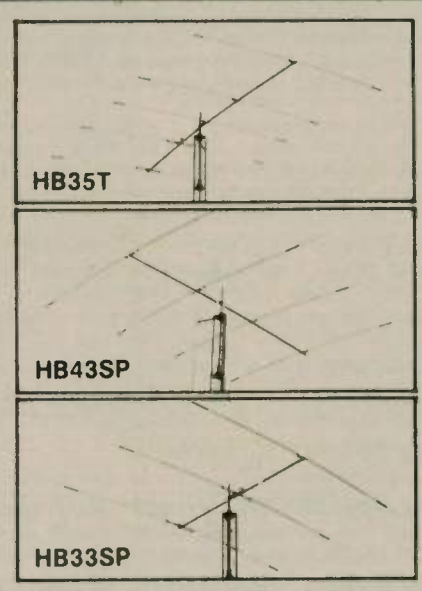
• 20, 15 and 10 meters • Wideband Low SWR No tuner needed • Exclusive phased dual drive gives higher gain • Exclusive coaxial capacitors have lower losses, higher Q • Transmitter power is radiated not lost in the traps • Full power low loss balun. Gives improved beam pattern

TET Antenna Systems presents three full size trap multiband beams to meet every amateur need. 5 element, 4 element, and 3 element models all with the exclusive TET dual phased drive. This famous drive system originated with HB9CV and was perfected by JA3MP. When you buy TET dual drive you know you have the best. It has more gain - just like adding another parasitic element. And wide bandwidth so you can use your solid-state transceiver on both phone and CW without a tuner.

Only the highest quality materials are used throughout. All aluminum tubing is 6061-T6 alloy. Stainless steel fasteners are provided for all electrical connections. Tubing is cut and predrilled to precision tolerances for easy one afternoon assembly. Light weight and low wind area designs permit use of simpler support structures.

All models feature full 3 Kw PEP power handling, VSWR typical 1.5 or less across *all* of 20, 15 and, on 10 meters, from 28.0 to 29.2 MHz. Drive impedance is 50 ohms and maximum element length 27'. They accomodate masts from 1½ to 2" diameter, withstand winds to 100 mph and are furnished complete with a low loss balun that easily withstands full rated power. For gain and front-to-back ratio specifications write or call the factory.

	HB35T	HB43SP	HB33SP
Boom Length:	24' 7"	19' 8"	13' 2"
Turn Radius:	18' 10"	16' 9"	15'
Wind Area Ft^2:	7.9	6.6	4.7
Wind load lbs. @ 80 mph:	160	132	102
Boom Dia.:	2"	2"	1-5/8"
Weight, lbs.	50	38	27
Price:	$329.95	$239.95	$174.75
	+ shipping	+ shipping	+ shipping



Send for free catalog describing these dual drive beams, our VHF Swiss quads, roof-mount towers, elevation rotators and more.

Don't wait any longer to start working rare DX. Order your dual-drive beam today!

BY MAIL:
TET Antenna Systems
1924-E W. Mission Road
Escondido, CA 92025

BY PHONE: 714-743-7025

TET ANTENNA SYSTEMS

Organize

(*continued from page 33*)

A sample proclamation should be sent along with the initial letter. We followed an example which appeared in **Worldradio** in June 1980, from the state of South Carolina, adapting it to fit our purpose. This may be an adaptation of the sample provided by the ARRL, or the mayor may have a format used for all general purposes. Write to the ARRL for their publicity packet, available pamphlets list and any tips they may have to offer.

The Victor Valley ARC then approached a shopping center or two to see who to contact for permission to use an area in the parking lot. Each city may have their own ideas about location, but the most important factor is visibility — whether it is foot traffic, vehicle traffic or both.

Line up your volunteers to help the public prepare simple messages, under 25 words, preferably using the ARRL numbered messages. YLs who are non-amateurs, family members and Novices are great for this. Have members available to explain the equipment on display, whether it is RTTY, CW, handhelds, test gear or computers. It is also important that you plan for security, having a couple of members merely milling about and watching the exhibit, not involved in distracting conversations — for obvious reasons.

Order material from ARRL, notify your Section Communications Manager and Section Emergency Coordinator so they can help with ideas and assist in getting materials for you, and invite them to participate. Gather photos and all the free publicity aids you can find from within your club and the ARRL.

Actually, the Victor Valley ARC would have liked to have begun organizing this Amateur Radio Week earlier in the year, with the idea of having it a proclamation by the governor for the entire state of California. Even though it may be too late for 1982, perhaps we can start working on that goal for 1983. □

"It's not that our good deeds are performed for thanks, but our survival may depend on letting the world know about them."

Lenore Jensen, W6NAZ

World Radio History

Connecticut

The SOUTHCENTRAL CONNECTICUT AMATEUR RADIO ASSOCIATION's (SCARA's) 3rd Annual Electronics Flea Market will be held on Sunday, 7 November 1982, indoors at the North Haven Recreation Center on Linsley Street in North Haven, Connecticut. Admission is $1.25, free for children under 12 with an adult. Sellers' spaces are $6. Best spaces will be assigned first.

A limited number of free tables will be provided to the first reservations received. When those tables are gone, space will be available for selling from the floor or your own table. Food will be available. Sellers may set up at 8:00 am., and walk-ins will be admitted from 9:00 a.m. till 3:00 p.m.

For reservations, send check or money order payable to "SCARA" to Ed Goldberg, WA1ZZO, 433 Ellsworth Avenue, New Haven, CT 06511. Include SASE for confirmation.

Indiana

The HOOSIER HILLS HAM CLUB will have its 21st Annual Hoosier Hills Hamfest on Sunday, 10 October 1982, at the Lawrence County 4-H fairgrounds, four miles southwest, on U.S. Hwy. 50, Bedford, Indiana. Registration (or admission) is $3 per person; swap shop $2. Bring your own tables.

Free fish fry, campfire, entertainment, coffee, and overnight camping on Saturday night, 9 October. The gate will be open 10:00 a.m. Saturday, 9 October for campers and flea market set-up (registration required). There will be registration prizes, ladies free bingo and a raffle prize of a Hitachi videotape system.

Talk-in on 146.13-73; set-up on 3910 kHz.

For further information, contact Dick Reister, KA9JTZ, Hoosier Hills Ham Club, Box 891, Bedford, IN 47421.

•

The MADISON COUNTY AMATEUR RADIO CLUB of Anderson, Indiana is having a hidden transmitter hunt on 17 October 1982. The starting point will be the Mounds State Park near Anderson. Prizes will be awarded.

For more information contact: Frank Dick, 921 Isabelle Dr., Anderson, IN 46013; phone 317-642-1237.

Louisiana

Radio amateurs and computer hobbyists from the Central Gulf Coast will meet 16-17 October 1982 at AMACOM '82, the New Orleans hamfest-computerfest, at a new location — Delgado Community College near City Park. The new site will provide more space for parking, meetings and technical forums, exhibitors and flea market, and convenience to New Orleans' attractions.

Amateur Radio tests will be given Saturday morning by the FCC's New Orleans staff.

International broadcasting will be discussed by Joseph M. Costello III, WA5HSI, owner of WRNO-Worldwide — the nation's only commercial shortwave radio station.

Radio amateurs may use the club's repeaters, W5GAD/R, 147.285-.885 MHz, linked with 449.0-444.0 MHz, for directions and Amacom information. Admission will be $3 for those over 12.

Host hotel will be Holiday Inn — Fat City, at Interstate Highway 10 and North Causeway Boulevard, Metairie, Louisiana.

Reservations for FCC tests and other information may be obtained by writing or calling W.D. "Bill" Bushnell, WA5MJM, Amacom chairman, c/o Jefferson Amateur Radio Club, P.O. Box 73665, Metairie, LA 70033; 504-887-5022.

Michigan

The BLOSSOMLAND AMATEUR RADIO ASSOCIATION is sponsoring its annual hamfest at Lake Michigan College near Benton Harbor, Michigan on 3 October 1982, from 8:30 a.m. until 3:00 p.m. (EST). Tickets are $2 in advance and $3 at the door. Tables (6-foot) are $5 each — no table limit. Lots of space and free parking. Children under 12 *FREE* when accompanied by an adult.

Talk-in on 146.22-82 and 52 simplex.

For more information or advanced sales write: BARA, P.O. Box 175, St. Joseph, MI 49085.

New Jersey

The HUDSON AMATEUR RADIO COUNCIL, INC. has announced that all plans have been finalized for the 1982 ARRL Hudson Division Convention, to be held 30-31 October. Due to overwhelming response from the previous year's attendees, the convention will again be held at the lavish Great Gorge, New Jersey resort, recently purchased from Playboy by Americana. This will enable attendees to enjoy gourmet dining, indoor swimming, whirlpool, riding, live Broadway entertainment, sauna, tennis, golf and the facility's exciting, three-level game room, as well as the many Amateur Radio-oriented activities planned for the convention.

League officials and other notables will be present at the various forums, seminars and programs, and plans for the banquet night include many exciting surprises — possibly even a midnight Wouff Hong ceremony.

Details and registration forms may be obtained by sending an SASE to HARC Convention, P.O. Box 528, Englewood, NJ 07631.

Tennessee

HAMFEST CHATTANOOGA 1982 and the TENNESSEE STATE ARRL CONVENTION will be held 23-24 October 1982 at Chattanooga State Technical Community College on Amnicola Highway in Chattanooga, Tennessee. Admission is free to Hamfest Chattanooga; door prize tickets will be sold for our hourly and main prizes.

Features will include Saturday and Sunday main prizes, forums, ladies' activities, children's activities, a large dealer area, and indoor and outdoor flea markets. A cafeteria will be open both days, on the premises, serving breakfast and lunch. We will also have a hospitality party and Wouff Hong Ceremony.

A variety of motels and camping areas are located at the interchange of I-75 and U.S. 41 (East Ridge exit), which is approximately 15 minutes from the hamfest site.

Talk-in on 146.19/79.

For dealer information, write Hamfest Chattanooga, P.O. Box 3377, Chattanooga, TN 37404, or contact Maxine Barrett, N4ECA (404) 398-3358. For indoor flea market spaces, contact Dave Roberts, KA4BNY (615) 899-9043.

Washington D.C.

The one and only DXPO 82 will be held in the Washington, DC area on Saturday, 16 October and Sunday, 17 October. Location will be Marriott Hotel, Gaithersburg, Maryland (special ham rates).

Already the confirmed speakers list reads like a "Who's Who" of DX: Ted Cohen, N4XX, propagation forecaster for the DXers and CQ's Washington Editor; Bob Schenck, N2OO, of the IDXF and veteran of many DXpeditions and contests; Wally Eckles, W8LRL, of 160-meter DX and contest fame; Don Search, W3AZD, Chief of the ARRL DXCC Desk and well-known DXer and contester; Vince Thompson, K5VT, DXpeditioner extraordinaire; Gus Browning, W5BPD, an everlasting DXpedition pioneer; and more. We'll be announcing additional speakers during the coming weeks.

Everyone who attended DXPO 80 will receive complete information in the mail soon. Anyone who missed that one is urged to write to Henry Herman, W3UJ at 11803 Enid Dr., Potomac, MD 20854 for complete DXPO 82 information and reservation forms.

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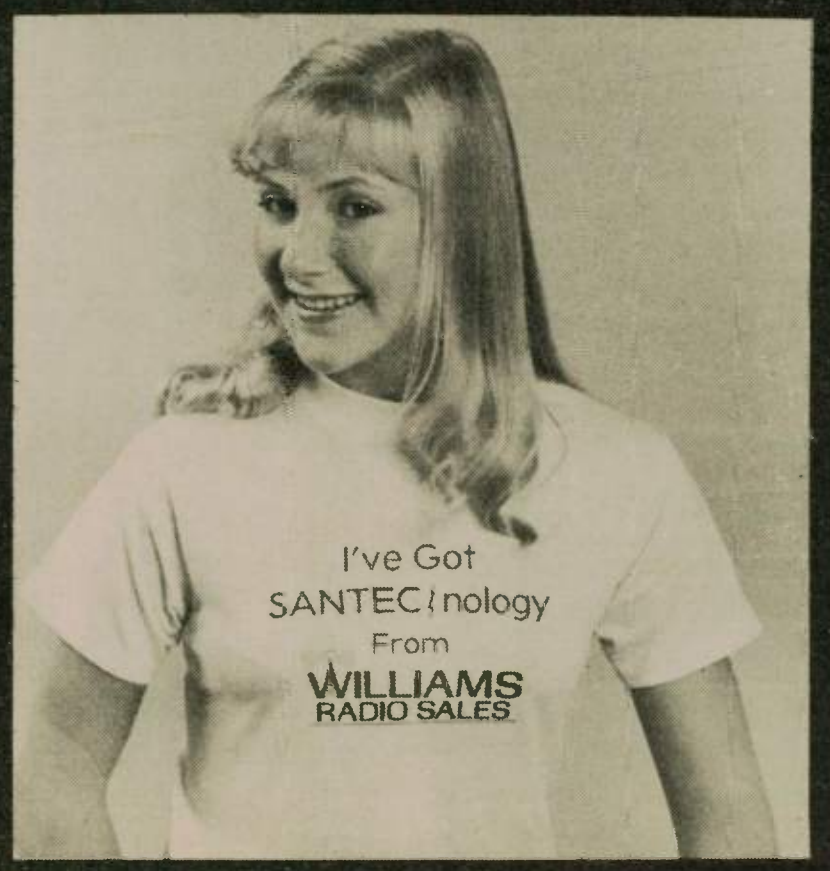

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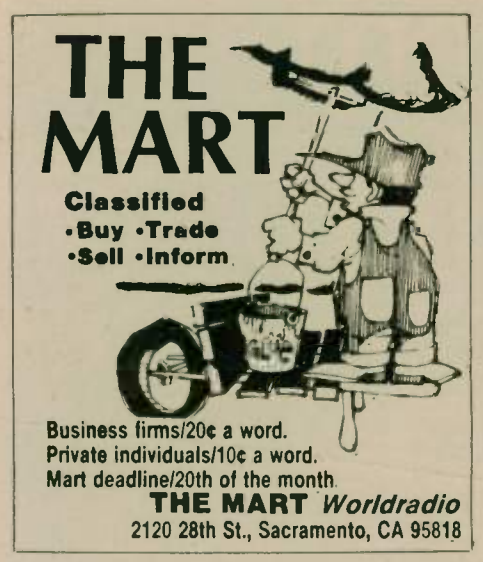

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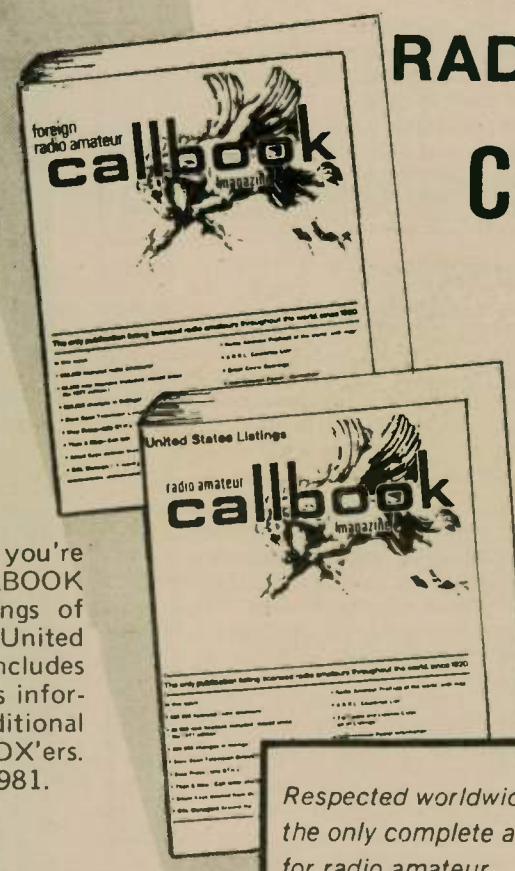

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DRAKE TWINS STATION FOR SALE: R4C rcvr, T4XC xmtr, L4B linear amp, MN 2700 matching network; pwr supplies, xtls, filters incl. All excellent condition. (415) 457-6298 or PO Box 3562, San Rafael, CA 94912. Best offer or can be negotiated.

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