WorldRadio

Year 14, Issue 9 March 1985 • 95¢

Pat McCrary, R.N. (left), night supervisor of nurses at Roseville Community Hospital, and Dick Wilkins, WB6EDR, her "shadow" during the hospital's two-hour planned "emergency".

Hospital puts hams to work

Norm Brooks, K6FO

Can a community hospital operate without its telephone PBX for two hours? In this day and age, the answer is no, even when the two hours out of service are from 12:30 to 2:30 a.m., Sunday.

The Roseville (California) Telephone Company needed to replace all of the power supplies on the electronic PBX at Roseville Community Hospital. It looked around for hand-held radios to use during the two-hour planned "emergency" on 02 December.

Keith Crandall, K6QIF, who is one of the leadership members of the Sacramento County Sheriff's SHARP (Sheriff's Amateur Radio Project) group, told them, "I'll do better than furnish the radios — I'll provide the radios *with* operators."

Keith canvassed members of SHARP and the Sierra Foothills Amateur Radio Club. SHARP is a group of 60 amateurs who assist the Sacramento County Sheriff in stake-outs, searches, rescues and the like. Members of the Sierra Foothills Club similarly assist the Placer County sheriff.

In addition, some of the members of both clubs also belong to Army MARS, RACES and VIP. VIP (Volunteers in Prevention) is a forest fire communications assistance group of the California Forest Service.

Eighteen amateurs turned out for the hospital "emergency exercise." Nine were from Sacramento County, nine from Placer County. This was excellent distribution because the hospital is near the line between the two counties.

Two-meter hand-held radios were used, tuned to a simplex frequency. Net control was Mary Ann Simmons, N6HJA, assisted by Marjorie Haviland, KA6PTL. They were located at the PBX operating console in the central part of the hospital. Other amateurs were located at nursing stations and other key locations throughout the building.

The telephone company had put the six PBX central office trunks on POTS (plain old telephones) which were answered by the regular PBX operator.

During the two hours without PBX telephone service, several important calls were relayed via Amateur Radio.

Keith had assigned Dick Wilkins, WB6EDR, to "rove" with the night nursing supervisor. All others had been assigned to locations such as emergency room, pharmacy, nursery, intensive care, pediatrics, central supply, etc.

In the critique which followed the exercise, the group pointed out that it was easy to fall into the rut of assigning an

(please turn to page 3)

Hams win big in Burbank, Illinois

Bill Pasternak, WA6ITF
Editor, Westlink Report

A consent decree, signed before Judge Nicholas J. Bua in the U.S. District Court for the Northern District of Illinois, means total victory for the amateurs who challenged the city's highly restrictive tower and antenna ordinance. The consent decree was the result of a two-year court battle waged by Chicago attorney James C. O'Connell, W9WU.

On 10 September 1982, O'Connell filed a class action suit against Burbank, Illinois on behalf of Roger Borowski, WA9EKA; Dan Burba, AF9C; Rita Burba, KB9ZL; Paul Giffey, KA9MNL; Jim Katocs, KC9U; Dennis Misner, KD9A; Rev. Les Van Essen, N8DRN/9; Dan Weber, WA9MMQ; and Robert O'Keefe and Chick Seaton, both CB operators.

In their pleadings, the plaintiffs argued that Burbank, Illinois Ordinance 9-4-82 violated their rights under the Supremacy Clause and the First and Fourteenth Amendments of the United States Constitution.

The ordinance had imposed a one-year moratorium on the issuance of permits for Amateur Radio antennas, required applicants for the permits to furnish evidence of insurance and post a $50,000 bond. In addition, the law limited radio antennas to a height of no more than 35 feet and imposed annual inspection fees that were unrelated to the cost of doing inspections of the antenna.

In an area obviously in conflict with federal supremacy, the city tried to control on-air activities of the operators by imposing fines as high as $1,000 for the transmission of a signal that was even "alleged" to cause interference to any home entertainment equipment. (A $1,000 levy could also be laid for the violation of any term of the ordinance.) Deciding that this ordinance was totally unacceptable, the personal radio operators of Burbank chose to fight back and retained W9WU as their counsel.

Jim O'Connell told *Westlink* that it was a long, uphill fight — one that was only made possible by the combined work of the radio amateurs who were willing to lend their names to the suit, and by the generosity of the ARRL and various other individuals, clubs and other groups that financially supported the legal effort.

In his suit, O'Connell named the city of Burbank, its mayor, aldermen and city administrator as co-defendants. During the process, the defendants filed a Motion to Dismiss which alleged that the federal government had no jurisdiction in the matter and that the plaintiffs failed to state a claim upon which relief could be granted. That motion was dismissed on 02 June 1983.

On 16 February 1984, the plaintiff's Motion for Class Action Certification was granted. Rather than continue defending against the suit, the city agreed to enter into the negotiations which eventually led to the November 30th consent decree.

Under the terms of the settlement, the city of Burbank has agreed to replace Ordinance 9-4-82 and subsequent revisions with one that not only grandfathers all existing installations, regardless of their height, but also allows new antennas to be installed up to a height of 65 feet upon receipt of a permit from the city. Antennas less than 12 feet above a building used as a support structure require no permit.

In regard to applying for and obtaining a permit, the new ordinance is very specific. The city will provide the necessary forms which the amateur will fill out and attach to a location plan for the proposed antenna, a copy of the manufacturer's technical specifications for the support structure, a copy of the applicant's homeowner or renter's insurance policy, and a permit fee not to exceed $15 for ground-mounted or $10 for roof-mounted antennas.

Like most other cities' regulations, the

(please turn to page 52)

Ham operation from Radio Netherlands

During the third weekend in February (16-17), Radio Netherlands — a commercial shortwave broadcasting station — will connect two amateur transmitters to antennas at their new Flevo site.

One transmitter will be connected to a non-directional antenna, intended for European reception. The other will make full use of the giant curtain arrays at the Flevo shortwave transmitter site. The direction of the beam will follow the pattern of the regular English language broadcasts of Radio Netherlands.

The operation will take place from 0600 UTC, Saturday, 16 February until 1800 UTC, Sunday, 17 February, and will use the call PA6FLD. Signals will be beamed to the East Coast (U.S.) at 0230 UTC, and to the West Coast at 0530 UTC.

A special QSL card will be sent to all those submitting correct reception reports, and amateurs will be able to talk directly to the operators at the station. Operations will be conducted on phone and CW.

Frequencies for the amateur operation will be announced on the Radio Netherlands program "Media Network", which is transmitted on Thursday evenings on 9590 and 6165 kHz for the East Coast of North America, and on 9715 and 6165 kHz at 0530 for the West Coast.

— ARRL Letter

Ham-Hop

The ARRL has compiled a list of amateurs in the USA who are interested in exchanging vacations and/or making travel arrangements with amateurs in other countries. It has also commenced what it calls an "International Travel-Host Exchange," for the promotion of international good will and friendship.

ARRL members interested in meeting and possibly accommodating foreign amateurs visiting the United Kingdom are asked to write to Naoki Akiyama, JH1VRQ/N1CIX, International Programs Manager, ARRL, HQ, 225 Main St., Newington, CT 06111, USA, giving their name, call sign, languages spoken, and whether or not they are able to accommodate visitors. Their names will be added to the list, which will then be sent to participating radio societies overseas.

— Radio Communication

TM

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March 1985 Vol. 14, No. 9

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

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

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

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

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

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

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Second-class postage paid at Sacramento, CA.

VE exams

Arizona

Amateur Radio exams will be held in Flagstaff, Arizona on Saturday, 04 May and Saturday, 28 September, for Novice through Extra. Our first exams were held 17 November 1984, with amateurs from as far away as Phoenix participating.

The contact for future exams is W.G. (Bill) Schuchman, W7YS, VE Liaison Officer. The accredited volunteer examiners in the Coconino County ARC at this time are: Art Phillips, WA7NXL; Karen Nash, KD6XS; Joseph Hobart, W7LUX; Bill Hogin, N7FU; Hugh Phillips, KR7Y; and Bill Schuchman, W7YS.

The deadline for submission of 610 Forms and a check for $4, payable to ARRL/VEC, is 30 days prior to date of exam. Mail to W.G. Schuchman, W7YS, 1400 N. Wakonda St., Flagstaff, AZ 86001. Only the first 25 applications will be accepted. □

California

The Tri-County Amateur Radio Association, in cooperation with the Greater Los Angeles Amateur Radio Group, will conduct Amateur Radio exams in Pomona, California on Saturday, 02 March.

Pre-registration is required. Please send completed FCC Form 610, copy of Amateur Radio license and SASE to TCARA, P.O. Box 142, Pomona, CA 91769. Pre-registration deadline is 16 February 1985.

•

The Sunnyvale VEC Amateur Radio Club will be administering FCC exams — Novice through Extra Class — on the second Saturday of each month, March through September (09 March, 13 April, 11 May, 08 June, 13 July, 10 August and 14 September), 1985.

The exams will start around noon; call (408) 255-9000 for exact time. Location will be Foothill College, Electronic Museum, 12345 El Monte Dr., Los Altos Hills, CA 94022. Maximum number of people per session: 32.

Pre-registration and walk-in. To pre-register, send SASE and check for $4.16 (payable to FCC VEC Program) to Sunnyvale, ARC, P.O. Box 60031, Sunnyvale, CA 94088-0031. Contact person: leave message on the recorder (see phone number above). — *Gordon Girton, W6NLG, VEC* □

New Jersey

The Gloucester County Amateur Radio Club's VE team will be giving exams on 30 March and 27 April (Saturdays), from 9:30 a.m. to 1:00 p.m., at Westby Hall, Glassboro State College, located on Rt. 322, Glassboro, New Jersey. (Westby Hall is the building next to the parking lot with the tribander beam.)

Cost is $4; no pre-registration required. Maps available upon request.

Talk-in on 147.18/78. For more information, call John Fisher, K2JF, at (609) 589-2318. □

Ohio

A group of Clark County and Champaign County (Ohio) volunteer examiners have scheduled an examination for persons wishing to take the test for Technician, General, Advanced or Extra Class license.

The date for this examination is 28 March 1985 and will be held at North High School in Springfield, Ohio at 7:00 p.m.

For more information, contact Frank Knull, W8JS, 402 Lafayette Ave., Urbana, OH 43078, or Vernon Dawson, W8VZE, 4172 Wabash Dr., Springfield, OH 45503. □

Southeast Virginia

Examinations will be given by local Virginia Beach area clubs every 45 days throughout 1985. To register, send FCC Form 610 with photocopy of current license and check for $4 (payable to ARRL/VEC) to the contact representative listed below.

Registrations must be received at least 30 days prior to the exam date. Enclose SASE to facilitate verification being sent to you. Also, put your phone number on the upper right corner margin of the application.

04 May — South Peninsula Amateur Radio Association, Salvation Army Building, Big Bethel Road, Hampton, Virginia. Contact Rep. Lamar Williams, W4OYA, 454 Windmill Point Ln., Hampton, VA 23664.

15 June — Portsmouth Amateur Radio Club, American Red Cross, London and Green Streets, Portsmouth, Virginia. Contact Rep. George Parsons, WB4BAB, 4800 Manor Ave., Portsmouth, VA 23703. □

Pitcairn Island fuel fund

Following are the names of the most recent donors to the Pitcairn Island fuel fund. (Donations were received by Dr. Charles "Mert" Moser, W6HS.)

Leonard O. Eilts, N6FC, Santa Ana, CA
Warren Gilleran, KD6UD, Santa Clara, CA
Marion Kelley, KB6EGL, Fresno, CA
C.J. Casebeer, K6CE, San Carlos, CA
Dale Diehl, K5WUF, Oklahoma City, OK
Dr. John Brandon, KA6DDL, Davis, CA
Gary Lins, KB4J, Norcross, GA
Leonard Mendel, K5OVC, Pearcy, AZ
Dale Marteeny, N6DKZ, Glendora, CA
Steve Demetrescu, WB6MZQ, Danville, CA
Frank Langer, DJ9ZB, WEST GERMANY

Total: $129 □

Engineers Net

There is a Radio Television Engineers Net on 20 meters. The frequency is 14.255 at 2100 UTC. It meets Monday through Friday. It does not meet on weekends. The control station operator is W2CD. — *W. Gregg Tyler* □

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

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FEATURES

COLUMNS

Keith Crandall, K6QIF, who supervised the hospital emergency exercise.

Howard Maxson, K6PGG, at the Intensive Care Unit. (Note the pulses on the upper CRT.)

At the Roseville Community Hospital PBX, left to right: Hospital PBX operator; Marjorie Haviland, KA6PTL; and Mary Ann Simmons, N6HJA, who acted as net control.

Hospital

(continued from page 1)

amateur with a hand-held radio in place of a fixed telephone. Much more efficiency would have been gained if the amateur had been assigned to a key person and roved with that person.

During this exercise, we were able to get the nursing supervisor instantly because she had an amateur assigned to her. We wished we had assigned someone to accompany the pharmacist, as she was busy delivering critical drugs and was not always at the pharmacy.

Those who participated were: Hal Halverson, W6MLN; Mary Ann N6HJA; Marjorie KA6PTL; Dick WB6EDR; Cliff Cottam, N6KMM; Jim Bollinger, W6ETD; Howard Maxson, K6PGG; Jack Drummond, K6HYI; Everett "Ev" Emerson, W6PBC; John Tiernan, KA6LNC; Bob Silva, WA6NEA, and his XYL, Donna; Gary Kramer, WD6CVG; Bob Cloud, W6CFQ; Ken Blue, WA6HLQ; Bill Musladin, N6BTJ; Norm Brooks, K6FO; and Keith Crandall, K6QIF. □

PRB-1 comments

Letters present Amateur Radio's value

26 November 1984

Secretary, FCC
1919 M Street, NW
Washington, D.C. 20554

Reference: PRB-1

The City of Newport News, Virginia, has reviewed the Request for Issuance of Declaratory Ruling filed by the ARRL concerning Federal Preemption of State and Local Regulation of Amateur and other radio station installation and operation.

Historically, the City has relied upon and been supported by Amateur and Civil Air Patrol (CAP) radio operators to provide emergency communications resources which were not within our own capability to provide.

Our geographical location, which exposes us to dangers from hurricanes and nuclear power plants, would normally require us to make substantial expenditures to provide adequate emergency communications. This need has been met by our local Amateur and CAP radio operators — all without the expenditure of a cent of public funds.

Although the City is in a position to control our own local zoning or other restrictions, we have no control of other jurisdictions with whom our radio operators might have to communicate to provide us with emergency services.

In order to provide for the safety and welfare of our residents we request that the Commission issue a Declaratory Ruling prohibiting local zoning and other local and state regulatory restrictions on federally licensed radio facilities, except where such local regulations are clearly necessary in furtherance of the protection of health and safety of the local citizenry.

Your very truly,
Paul K. Reid, Jr.
Director, City of Newport News □

18 December 1984

Secretary, FCC
1919 M Street, NW
Washington, D.C. 20554

In re: PRB-1

The Middle East Region of the Civil Air Patrol (CAP) has reviewed a request filed by the American Radio Relay League entitled "PRB-1".

As you know, CAP — with more than 66,000 members — is the official Auxiliary of the United States Air Force. CAP members fly three of every four Search and Rescue hours on missions which are coordinated by the United States Air Force Rescue Coordination Center, Scott Air Force Base, Illinois.

During the past seven years, CAP volunteers have saved over 500 lives in their performance of Emergency Service activities. CAP operates one of the largest volunteer communication networks in the world. During disasters and Emergency Service operations, CAP communicators are often able to add to the existing communication capability in the stricken area. Many times they provide the only communication capabilities throughout the disaster period.

In order for CAP to maintain this type of communication network in support of the Emergency Services missions, proper antenna systems are necessary. Throughout the country, CAP members in communications have to deal with local restrictions and ordinances that make such installations difficult or impossible.

Therefore, I request that the Federal Communication Commission issue a declaratory ruling prohibiting local zoning and other local and state regulatory restrictions on the federally licensed radio facilities.

Sincerely yours,
Maj. John B. Creel Jr., WB3GXW
Civil Air Patrol
Middle East Region Repeater
Committee, Chairman

VHF/UHF Conference

The Dayton Hamvention's International VHF/UHF Conference will have a new improved format for 1985. The dates this year are 26-28 April. There are no VHF Conference forums scheduled on Friday this year, so attendees are free to explore the giant flea market and exhibits during the day.

The unique *Noise Figure Contest* will be held at Hara Arena beginning at 1800 on Friday. The Arena will be closed to all other Hamvention activities so that the potential RF interference is eliminated. Prizes awarded to winners in the homebrew category for 144-2304 MHz.

Technical Forums begin at 0900 on Saturday with topics covering antennas, propagation, contesting, dynamic range measurements, and much more.

The *Antenna Gain Measurements* begin at 0900 on Sunday behind the Arena. Check the program for the new location of the improved range. Certificates awarded for Highest Gain and Best Figure of Merit, and prizes for winners in the homebrew category. Bands covered are 144, 220, 432 and 1296 MHz.

There are no VHF Conference activities at the Imperial House this year.

For further information, contact Jim Stitt, WA8ONQ, VHF/UHF Conference Moderator, 311 N. Marshall Rd., Middletown, OH 45042. □

Of Radio and horses

Part II

This is the second of a two-part article on the 1984 Purina Race of Champions, an event that took place in Wyoming the last weekend in July. The first part covered the planning and preparation that took place before the event.

Paul Rich, NE7C

Suddenly I awoke with a start. With the flashlight I saw it was 4:35. The race was underway.

In a few minutes I was at the truck cab, dialing up the Cody repeater on '85. I heard a few blurbs so knew traffic was already being passed. Ralph was awake, so I told him I was going to the top of the ridge above camp in order to copy W7PT/R better. "Give me a shout on the portable repeater when you roll out for the day," I told him.

"OK, see you later," he replied.

Off into the darkness I pointed "Old Red". Funny how those rocks I was bouncing over in the darkness seemed to have grown 50 percent overnight. Finally at the ridge top, and there they were. KD7PV at base and K7MBJ at Vet Check #1.

Forty-four horses had left on time, 4:30 on the dot, and were well into the race. What's this I was hearing? "K7MBJ, this is KD7PV with urgent traffic."

"Go ahead, Jerry," Lee snapped.

"We have urgent message for Dr. Ridgway. Please copy. Request vet at base camp for #40. P-60 Hyper Gut type." Popcorn QRN came over the airwaves. Again I heard, "Given Banamine — need E-SE. Break. How copy?"

"Stand by; this is K7MBJ."

"Lee's MARS training sure stands out. He doesn't miss a thing," I said to myself.

"KD7PV this is K7MFJ. Dr. Ridgway is leaving now. He should be there within 45 minutes. QSL."

"QSL and thanks," came Jerry's reply.

The eastern sky began to show red; it looked like a fine day dawning. The race was an hour-and-a-half old. Propagation seemed to be improving, also. Solid copy now. "K7MBJ, this is KD7PV."

"Go ahead Jerry, what's up?" Lee asked.

"I have a message for #26 when they arrive. Please copy."

"Go ahead."

"To #26 from #25. Break for text. #25 pulled because of hurt leg. X is back at base camp X. How copy," Jerry asked.

"QSL," came the reply.

"Break correction."

"Go."

"Correct message to say 'because of hurt rider's leg.' The horse is OK. They just corrected the info here."

"Will do." Again the reply. "Horse must have slipped in the darkness. Glad everyone is OK. Sad, what with all the preparation for such a race and already two horses are out of the running," my thoughts continued.

The handi-talkie on the dash crackled as Ralph informed me he was headed down toward the growing crowd below camp.

Then, over W7PT/R: "First horse in sight." I look at my watch — 12:43Z 06:43 a.m. "2¼ hours — not bad," I said to myself.

13:00Z the report came: "29 horses in, five in sight." The only difficulty I could see was the way the information was fed to Lee and Ray — piecemeal, with a lot of duplication. We needed to correct that before the horses arrive at our checkpoint, Vet Check #2.

"They're using the sheets the race committee furnished us. Too much paperwork and no sequence. That's not good," I thought. "Let's see, six bits of info."

I reached for a straight edge. I took a clean page from my clipboard filled with notebook paper. Six columns. Heading HR# — Horse and rider number; AT — arrival time; P — pulse; R — respiration; IT — intime; OT — outtime. "Just like keeping log. Why didn't we think of this before? One page, both sides, instead of numerous pages and no rhyme or reason. Record each HR# as they come in, in sequence; wait for the other info to be posted; fill the log on the horse; transmit; check off. Great, just great."

I had to tell the fellows I'd be leaving the ridge to head for our checkpoint. Ralph and Dave were all set to go. The horses should be in here by 15:00Z. Less than an hour, my thoughts raced.

Three horses were in sight. A couple of riders had dismounted and were jogging

First across the finish line — #41

Winner of the 1984 Purina Race of Champions — HR #7

alongside their horses to get that pulse rate down before they reached the official line. I moved to the arrival line. Numbers 2, 11 and 7 almost a dead heat.

"Mercy me," I thought, "they're Arabians and this is quarterhorse country. They're noted for endurance. A cow horse needs speed for short distances and 'cow sense'; that's where the quarterhorse shines."

I felt a tap on the shoulder. "Judy G. I didn't see you here until now," I said with a start. "Tom with you?"

"Over there," she pointed. "We're waiting for Tommy; he's #44."

"I saw his name in the listing. What's he riding?" I asked.

"His 9-year-old Appaloosa — the only one we have at home anymore. All the rest are Arabs."

I looked at the program. T.G. Gamblin' Man, 9 years — Gelding — Appaloosa — 1100 pounds — 1565 career miles.

"A lot of miles in this kind of racing. Tom has over 1800 miles for himself. My achin' bones," I thought. I moved a few yards over to where Tom and Judy were. I had built their new home outside of Greybull eight years earlier, and we'd been friends ever since.

Then I heard, "NE7C this KC7NP, copy?" That was Rob, our roving trouble-finder, who was back down the trail several miles.

"Go ahead Rob," I said.

"Paul, #44 just passed, and he wondered if you could find Tom G. and request they have a #2 EZ-boot ready. He's about to lose a shoe. Break."

"Roger," I replied. "I'm standing here with his folks now. They'll be ready."

"Oh oh! Here comes a horse with rider limping alongside," someone exclaimed. Sure enough, the horse's knees were bloody and the young gal was trying to limp along. As she approached the arrival gate, her crew rushed out and took the horse in tow.

"Took the wrong trail and got into some slide rock. Babe went down, and we both got skinned up a little. Nothing bad. Sure, we're going to continue," she replied to a question.

"Just to finish a race like this sets one apart. No wonder she's in the race." I thought. "She's a competitor."

Then, before I knew it, it was over. Thirty-nine horses had come into checkpoint #2. An update indicated 43 had started, two had dropped out before checkpoint #1, and two had pulled themselves at #1. We soon cleared the last horse. A request came for Ralph and Dave to go to Vet Check #6 and set up for later in the evening. 17:30Z — 11:30 a.m. and everyone was leaving.

Kathy, my daughter, and her girlfriend, Timmie, indicated they were going up through Vet Checks #3 and 4 to fish some of the lakes around #4.

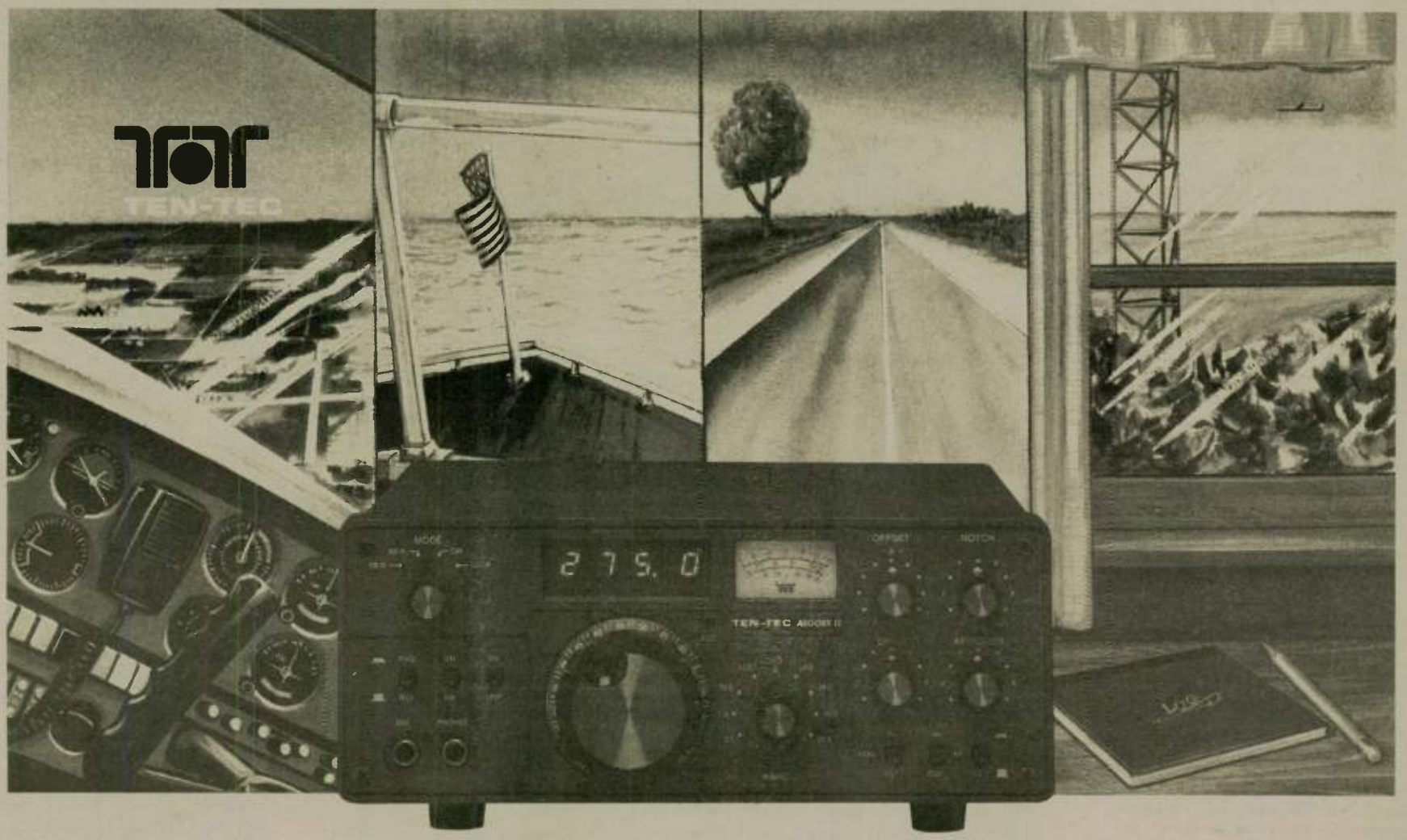
I helped Ralph fold up his tent trailer, we ate a bite of lunch, and suddenly I was alone again.

I called base and told them, "I'm going to spread a tarp on the sunny side of the tent and take a cat nap."

The sun felt great, the wind was light. I dropped into the land of dreams — not for long, though. I awoke with the sound of deer flies and blow flies in my ear. They thought they had found a dead body — mine! What did the original inhabitants

(please turn to page 6)

Pass it on . . . WORLDRADIO



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

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

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

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

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

Horses

(continued from page 4)

of these rolling mountain tops do without a spray can of OFF?

The redman loved this country. If only the hills could talk. Just up the road were the headwaters of the Little Big Horn. Custer and his band could tell you a story or two if the past could talk. A lot of history was made on all sides of these mountains. The Hole-in-the-Wall gang had their hideout cabin to the south of here. The cabin is now in Old Trail Town on the west edge of Cody. So one can relive the past, in his thoughts at least.

It's a shame the way the white man treated the redman. Some don't agree, but that's what makes America great. We can disagree and still live together.

Presently, Vet Check #4 came on 34/94. The first horses were approaching #4. Some hadn't arrived at #3 yet, though.

Vet Check #3 reported HR#20 had pulled herself. "Too bad," as my heart went out to her. "She sure had grit — 74 years old and riding a 20-year-old horse. I'll bet she didn't do much jogging. Too bad. She did cover 56 miles." The traffic is flowing smoothly now. We're in the groove. It took just one Vet Check to work out the bugs.

Vet Check #5 now had horses in sight also, but some still hadn't cleared #3. Base was being swamped with traffic. KD7PV, WB7BVT, K7MBJ and KA7PSJ were all on the line at base. 146.34/94, 3920 kHz, 52 simplex, Vet check to Vet check, all active.

"This is what it's all about," I thought. "I'll bet there are some ears glued on 3920 that are wondering what it's all about. A great bunch of fellows."

"I wondered how Doc McCue, NE7D, was doing at Vet Check #3. He had given me my Novice and then Conditional test some 20 years ago. K7ISG and WA7BPO are no more. Just a year earlier, he and I had made the 1100-mile round trip to Denver for just 40 minutes with the FCC. What a joy to come home with the top prize. All that studying and reams of paper-copying code paid off. We only missed one question between us out of the 100 that day, too. If only Doc hadn't changed one answer! He had it right to begin with.

How one's mind wanders when one is alone. After hesitating for a month or two, we had asked for call sign changes, knowing they were getting close to the NE7' series. My first choice was NE7C; Doc's was NE7B or NE7D. Talk about luck — we had it. It would have been a good day to bet on the horse races. Talk about horse races, we had one of our own now.

Bud KB7JZ, one of the Sheridan bunch at Vet Check #4, came on the air with Ted W7JID. They were requesting a trailer for #24, who had pulled himself from the

Overall view checkpoint #3

Sitting in the race headquarters base (left to right): Jerry Pyle, KD7PV and Doug Troxel, WB7BVT.

race. "Boy, that'll be a bear-cat to get a trailer into that rock pile, "I thought as I tried to follow the conversation and spot my gals returning from their fishing trip.

It was nearly dark and would be 22:30 or 23:00 before anyone could get there. "No, he can't move the horse," came Bud's reply to an inquiry.

Base came back with, "Trailer on the way, KD7PV clear."

My gals drove up the hillside and emerged, tired and dusty. "Any luck?" I asked.

"No," they replied. "They were catching some on worms, but all we had were lures."

"Too bad," I said. "Fresh fish would have tasted good. We'll have to settle for the steaks you brought. I'll start the grill."

KB7JZ was on again, calling base. "#43 just arrived. He's bothered with night blindness and requests his crew meet him at Vet Check #5 with his glasses and flashlight. QSL."

"QSL," base replied.

"Man-alive, I'm sure glad I'm not in his boots. He's got that slab rock to cover after Vet Check #5," as I looked ahead. "By the way, talking about looking ahead, it's after dark, and the first horses should be approaching the finish line. I'll give a shout to base and tell them to let me know when it happens and who the top one is."

"KD7PV. NE7C calling."

"Go ahead," Lee answered.

"Let me know when the winner comes in."

"He's been here already," was Lee's reply.

"What do you mean?"

"Oh, we have eight or 10 in already," Lee continued. "#41 finished first at 18:++ but was disqualified because after the mandatory one-hour delay, the horse's pulse wasn't below 72. #7 ended up first, followed by . . .", as he gave the rundown of the first 10 horses.

"Nearly two days at this, and I missed the finish. It was nearly five hours ago! Well, that's life," I said once again in my muddled thoughts.

23:30 Saturday, almost midnight, and I'm pooped. I tell base, "I'm going to try to wrestle with that sleeping bag again."

"Wish we could," came the reply. "Good night."

But sleep didn't come. Instead, ker-chunk ker-chunk, the portable repeater is trying to talk. The weak signal can't over come the de-sense — just a bit of audio now and again. It was Max N7EQC at #5.

I crawled out of the sleeping bag, stumbled to the truck and called Max. "Do you have trouble?" I asked. Ker-chunk ker-chunk. I couldn't copy his audio.

"Hang on," I replied. "I'll drive up the ridge and should be able to copy you direct, then will relay to base. OK? If so give me one ker-chunk." Ker-chunk. I was off up the slope.

I conversed with base on 34/94. I made the comment. "Amazing how the rocks and boulders look so much bigger when one is half asleep and it's dark." Unbeknown to me, the circus tent at base was packed with race observers. I was told later that everyone had a big laugh at my expense.

Just about the time I topped the ridge, Max made contact with base again. It seemed his 2M linear had gone, as my Daddy used to say, Democratic. Defined as bad, sour, Kaput, anything but right, etc.

Once again, I wasn't needed. I informed base that I was heading back to camp. "Give me a long call if you need me," I said as we made one last exchange before heading for the tent. I zipped up the sleeping bag once again and closed my eyes.

Suddenly daylight was breaking in the eastern sky. A quick glance at my watch confirmed the time of day to be almost 06:00 Sunday.

A check on the 34/94 portable repeater produced nary a reply. "The other fellows must be sleeping in this morning," was my comment as I reentered the tent. "We want to be ready to dismantle camp by 07:30 as it will take us a couple of hours to travel down the ridge to the repeater, dismantle, pack up, then head for the highway," I proclaimed to the now wide-awake gals. By 08:30, camp was safely stowed in my truck.

A quarter mile down to the jeep trail, up the road a mile and a half, then another mile down the north ridge of Bone Creek to the repeater site. Forty-five minutes to cover two and a half miles. Not very speedy, and not really my idea of fun.

One last QRZ as we arrived produced a reply from Jerry KD7PV. A little ribbing from me produced a quick response. "The last horse didn't clear the finish line until 04:15. Just 15 minutes before the deadline. We all finally crashed by 04:30."

Quickly, much more quickly than it went up, everything came down and was packed away. The little repeater in its padded box. Stakes pulled, ropes and coax coiled, masts dismantled and tied on top of the topper, and suddenly I realized it was all over.

A group of some 14 dedicated amateurs had accomplished the task we had set out to do some eight months before. As the old Chev lead the way to the highway with the younger Bronco following, I reflected.

A good many people had had their first contact with Amateur Radio these last 48 hours. Then there were the reporters from **Time, Reader's Digest, Sports Illustrated, Trail Blazer, Western Horseman** — the latter two both horse enthusiast magazines, all taking notes and snapping pictures. Plus the ESTN Sports Network and all the videotape they were using. In that little yellow plane were the Ralston Purina people. They were planning to make a one-hour documentary from the video they took.

Then it dawned on me. What an opportunity to promote the capabilities of Amateur Radio before such a distinguished group! Maybe there were scenes of some of the fellows operating and the "Ham Radio" signs the race committee furnished.

"The highway at last." I sighed. My speedometer said I had traveled 70 miles since I last saw paved road. Soon I was passing Shell Falls and the fire fighting crew. They were mopping up now smouldering timber up near the rimrock. Luckily the fire didn't jump the rims and get into heavy timber. Then the mouth of the canyon, and once again the Davis Ranch.

As I pulled into the ranch lane, three Cody vehicles along with their trailers were waiting to pull out. K7MBJ, WB7BVT and KA7PSJ looked like they had been run over by a herd of horses. "You fellows look tired," I commented as I stopped alongside.

"Tired ain't the word for it," Lee retorted. "We've had less than two hours of sleep since the race began. We're leaving for home. See you later."

"I'll be right behind you. I want to visit with Jerry a few minutes. Take care," I replied as we pulled apart.

Jerry had most of his equipment stowed away and was also looking forward to heading home. I collected a spare rig that had been used at base as he filled in some of the information voids.

"We had another emergency this morning at about 02:30," Jerry continued. "Rider #23 collapsed at one of the checkpoints, and we had to bring up the Greybull simpatch and call an M.D. It turned out she was exhausted and dehydrated. She's OK now.

"The race officials and vets sure had high praise for our part in the race," Jerry said. "Oh yes, Tommy G. came in #11. Thanks to a #2 EZ-boot at checkpoint #2."

"Yes, I know. Sure glad for him," I replied.

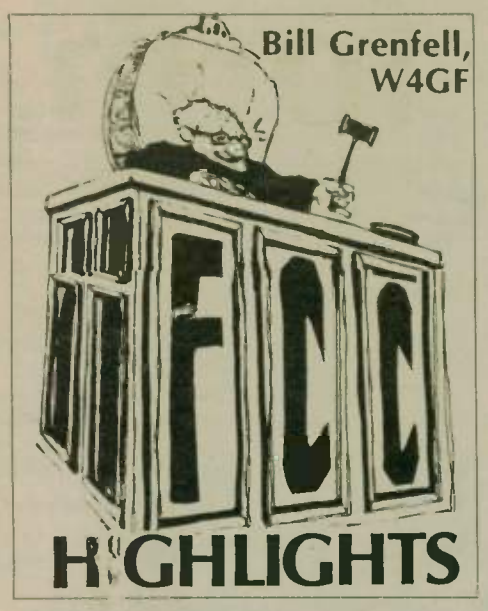
The big checkerboard circus tent was now nearly empty. Campers with tents, camp trailers, motorhomes and truck campers were everywhere along Shell Creek. Horses also — some with numbers I recognized splashed on their rear quarters. All seemed to be relieved it was over.

As I prepared to pull out of base for the last time, Jerry commented, "All the fellows are making suggestions on how they can improve their checkpoint for next year. We'll get together soon and compare notes. Already they have asked us to help them out next year."

"You bet we'll help. Catch you later," and I was underway.

There you have it — 25 hours of horse racing western style, communications from difficult places, 266 formal and 27 informal pieces of traffic handled by base, great publicity for Amateur Radio, and an enjoyable two days in the mountains of northern Wyoming.

We accomplished what we set out to do some eight months before. You bet we'll be back in 1985. Thanks, fellows. 73's, NE7C □



On 03 January, Senator Barry Goldwater, K7UGA, introduced into the 99th Congress resolutions which will urge the FCC to make sure zoning laws and similar local ordinances are not used to frustrate citizen access to satellite supplied services (SR-35), or to prevent effective Amateur Radio communication. The senator also introduced a bill, S-66, dealing with malicious interference to radio communications.

•

The comment period on the RM-4831 petition for "reallocation" of 216-222 MHz for narrow-band operation by "The Private Land Mobile Services" filed several months ago by Sideband Technologies, Inc. (STI), finally ended in January 1985.

Also before the FCC for consideration is the RM-4829 Petition of the Land Mobile Communications Council which included a statement that " . . . the band 220-225 MHz may prove to be valuable for future land mobile operations." The Commission's decision on these petitions was not available when this was written. A copy of Senator Goldwater's letter asking FCC " . . . to keep hands off 220." was included in last month's 'Highlights.'

•

Three petitions to modify the current VEC procedures have been filed with the FCC by the Sunnyvale ARC VEC and Gordon Girton, W6NLG, Sunnyvale, California. Substantial revision of FCC's application Form 610, standardization of the bulletin 1035 question-and-answer pool, provision for more amateur participation in the make-up of the exam pool and a requirement that FCC provide correct answers and reference materials therefore, are some of the changes requested.

•

The two-day hearing of the case of James W. Smith, W6VCE, for failure to identify (97.84(a)), (97.123), broadcasting (97.113), transmitting music (97.115), and interfering (97.125) was concluded on 06 December 1984. The decision was not available when this was written.

The FCC action amending the cable leakage monitoring and restriction rules reported in last month's 'Highlights' was the second Report and Order in Docket No. 21006, released 09 November 1984.

•

The FCC has been petitioned to amend its rules " . . . to permit Amateur Radio operators to officially function in the coordinating and licensing of repeater stations in the frequencies above 29.5 MHz." The petition was filed by former member of the ARRL/QST staff ('League Lines,' etc.), Peter O'Dell, KB1N.

O'Dell asks that "the Commission, taking whatever steps it deems appropriate, appoint one national organization to develop a consistent, fair program of spectrum management for amateur repeater stations operating above 29.5 MHz . . . The Commission would then issue these stations licenses. Repeater operation without the special license would be prohibited." O'Dell stated that he is not officially affiliated with any major Amateur Radio organization or frequency coordination body (from 20 December 1984 *ARRL Letter*).

I have been advised that the FCC is very concerned about the growing number of repeater conflicts that they are asked to resolve, which the amateurs are not able to resolve themselves. I understand the

FCC license totals for September, October and November 1984:

Class	30 September	31 October	30 November
Extra Class	35,624	35,675	35,910
Advanced	97,084	97,167	97,370
General	116,804	116,798	116,887
Technician	79,950	79,914	80,191
Novice	60,461	80,512	80,565
Individual Operators	409,923	410,066	410,923
Club stations		2,353	2,353
Military recreation		178	175
Secondary stations		249	173
RACES		442	442
Total stations		413,288	414,066

Volunteer examiner statistics for November 1984:

Region	VEC	Sessions	Locations	Pass	Elements Administered	Pass Rate
1	W5YI-1	1	1	15	27	56%
	ARRL-1	1	1	11	25	44
2	Metroplex	4	4	86	185	46
3	ARRL-3	2	2	45	77	58
	Laurel	1	1	4	11	36
4	ARRL-4	6	6	76	212	36
	Cen. Ala.	8	7	95	193	49
	W. Carolina	5	5	71	172	41
	Triad	1	1	15	33	45
5	W5YI-5	2	1	33	58	57
	ARRL-5	3	3	23	51	45
	Dallas	2	2	21	39	54
6	GLAARG	5	4	104	225	46
	ARRL-6	3	3	54	91	59
	Sandarc	4	3	32	47	68
	Sunnyvale	1	1	12	23	52
7	Boeing	4	4	42	87	48
	ARRL-7	2	2	22	45	49
	W5YI-7	2	2	14	29	48
8	Dayton	6	6	83	157	57
	ARRL-8	1	1	5	12	42
9	DeVry	16	16	157	298	53
	W5YI-9	1	1	8	21	38
	ARRL-9	2	2	7	18	39
10	PHD	1	1	6	27	22
	ARRL-10	1	1	5	12	42
11	Anchorage	2	2	15	44	34
13	ARRL-13	2	2	11	21	52
	28	89	85	1072	2240	48%

Amateur Radio Call Signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of 01 January 1985.

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

Radio District	Group A	Group B	Group C	Group D
	Am. Extra	Advanced	Tech./Gen.	Novice
0	NJ0B	KD0UP	N0FWY	KA0TWN
1	KX1W	KB1QW	N1DIC	KA1MMF
2	NI2N	KD2KS	N2FHM	KA2WKD
3	KU3Y	KC3QM	N3EEZ	KA3NMX
4	AA4HC	KI4XY	N4LHE	KB4MMI
5	NT5W	KE5UZ	N5HOI	KA5VFP
6	WD6Z	KG6NT	N6LJT	KB6HKW
7	NK7S	KE7CS	N7GUA	KA7UHI
8	NK8P	KD8WC	N8GFF	KA8VTD
9	NC9Y	KD9MX	N9EXP	KA9SYE
N. Mariana Is.	AH0D	AH0AC	KH0AG	WH0AAG
Guam	AH2U	AH2BA	KH2BU	WH2AEZ
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6V	AH6FX	NH6CY	WH6BCA
Kure Is.			KH7AA	
American Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAB
Alaska		AL7GK	NL7FB	WL7BFJ
Virgin Is.	KP2L	KP2AT	NP2BF	WP2AEG
Puerto Rico	WP4F	KP4II	NP4MF	WP4DWS

FCC was already engaged in developing procedures to cover the same problem at the time the O'Dell petition was received.

•

A "Petition for review and clarification of Part 97 of the Commission's rules to provide a caveat so that non-citizen licensees are notified under (Section) 97.95 . . . that the use of their U.S. call sign in other countries is in violation of the conditions of grant" was denied by the FCC on 27 November 1984. The petition was filed by Herbert Schoenbohm, KV4FZ.

In their Memorandum Opinion and Order, FCC quoted Schoenbohm: " . . . there has been an ever-increasing amount of foreign nationals who have . . . a U.S. license . . . used to engage in third-party phone patch communication from outside the United States. This fact is especially evident in foreign yachtsmen on non-U.S. vessels who claim to be on the high seas using the U.S. call sign as an entree into the many amateur traffic nets that exist in this country. Much of this operation does in fact take place from foreign waters . . ."

The FCC stated in part: "The holder of an amateur license issued by the Commission, whether a U.S. citizen or not, is subject to international law . . . An alien amateur licensee on a non-U.S. or U.S. vessel in the territorial waters of a foreign nation is subject to the laws of that nation. That he holds an amateur license issued by the Commission is irrelevant, except in the case of a U.S. vessel where it is required.

" . . . distance never affects our jurisdiction over the licensee, which, as explained above, runs concurrently with that of the foreign country when the licensee is within its boundaries. . . .Thus, no additional rules are needed to regulate our amateur licensees who are using their radios overseas."

•

By 01 January 1985, over 1,200 comments were filed, mostly in support of the PRB-1 " . . . Matter of request for Declaratory Ruling to preempt state and local regulation of Amateur Radio transmitters and antennas."

Among those supporting PRB-1 are a number of City and County emergency and disaster departments as well as many individuals. The American Red Cross has filed supporting comments and, as this was written, the ARRL understood that the Department of Defense or its Defense Communications Agency (DCA) would be filing in support of the concept of PRB-1.

The National League of Cities (NLC) has filed opposing comments. NLC states, in part, that "the Petitioner must do more than assert that local regulations which affect the installation of radio amateur antennae frustrate national communications objectives." See QST, January 1985, pages 48-49 for more details about the NLC filing.

•

The RM-4872 petition for telephony privileges below 7100 kHz for U.S. amateur licensees in Puerto Rico, reported in last month's 'Highlights,' was specifically for 7075-7100 kHz and included other U.S. Caribbean territories.

It was filed by David Novoa, KP4AM, who stated that use of this segment would facilitate contact with South American amateurs, and cited the "local unique situation" that Puerto Rico and the Caribbean territories are the only U.S. possessions not allowed to use phone in this segment (from *ARRL Letter*, 12/06/84). The comment period ended 01/08/85.

•

The ARRL petition for use of F2 emission in the 28 MHz band for repeater identification, reported in last month's 'Highlights,' has been designated as RM-4880.

•

The ARRL and AMSAT have filed a joint petition with the FCC asking for amendment of Part 97 to bring the list of frequencies allocated to the Amateur Satellite Service into line with the new allocations made at the WARC '79 *(ARRL Letter*, 12/06/84). The FCC advises preparation has been underway to issue a Second Notice implementing the WARC

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FCC Highlights

allocations. However, it will be identified by a different Docket number than the previous WARC rule-making proceeding.

•

The ARRL may seek "further clarification" of changes of the WARC emission designators made effective for amateurs by the FCC on 03 January 1985 *(ARRL Letter,* 12/06/85). See last month's 'Highlights' for a list of the old vs. the new designators.

•

The FCC has received a petition asking amendment of Part 97 to permit only A1 between 144.0 and 144.1 MHz, and A1, A2 and A3 only between 144.1 and 144.3 MHz. Petitioner Charles Reichert, KD9JQ, indicates this has a "gentleman's agreement" plan and gives reasons why he believes it should be made formal by incorporation in the FCC's Amateur rules.

•

RM-4879 has been assigned by the FCC to designate the ARRL's petition to allow automatic control of digital communication above 30 MHz. "This . . . would permit the operation of Computer-Based Message Systems (CBMS) on the amateur VHF bands under automatic control. Present FCC Rules require that a control operator be present for CBMS operation (01/85 QST).

See last month's 'Highlights' and QST, January 1985, page 49 for more details. Preparation of the Commission's action on the petition was underway early in January '85.

•

Illegal citizens band equipment has been confiscated and a salesman arrested in a recent joint Customs/FCC action.

"On 30 November and 03 December 1984, engineers from the New York District office of the FCC and U.S. Customs officials seized over 2,700 pieces of electronic equipment, including CB transceivers and walkie-talkies, from Granada Electronics in Brooklyn. The seized items were manufactured in the Far East, and imported into the United States for illegal sale. The transceivers were capable of operating on unauthorized frequencies with excess transmitter power.

"U.S. Customs agents also arrested Lawrence Wallach of L.W. Sales, Lynbrook, New York for unlawful sale of non-type-accepted CB transceivers which were illegally brought into the United States. "Wallach and Granada were the subject of a two-year Commission investigation." (from the *ARRL Letter,* 12/20/85)

A similar seizure of CB gear at Shelby, North Carolina was reported in 'Highlights' three months back, and in the *W5YI Report* of 09/15/84.

•

On 06 December 1984, the FCC released a "housecleaning"-type editorial order amending the amateur rules, Part 97, to delete obsolete terms and references, and to make obvious corrections and editorial improvements.

An example of the obsolete is the reference in current rule section 97.5, a listing of Classes of operators licenses, to "Advanced Class (previously Class A)." That rule wording became effective in the Commission's Docket 9295 on 01 March 1951! Soon thereafter, issuance of new Class A's ceased and renewals were issued as Advanced Class.

Full details of the 12/06/84 Order will appear in QST, according to the 12/20/84 *ARRL Letter.*

•

On 01 January 1985, the maximum allowable reimbursement for out-of-pocket costs for volunteers administering an Amateur Radio operator license examination became $4.16. This is based on the 4 percent rise in the Department of Labor Consumer Price Index for the year ending September 1984.

"ARRL General Manager Dave Sumner, K1ZZ, has already told the FCC that the fee charged by the League, a 13-area VEC, will remain at $4 throughout 1985." (*ARRL Letter,* 12/20/85).

•

The latest version of the FCC's PR Bulletin 1035 "Study Guide for FCC Amateur Radio Operator License Examinations" is dated "December 1984". Copies of this syllabus can be obtained from ARRL Headquarters. FCC forms may be obtained by simply addressing a request specifying the Form or Bulletin number to "FCC, Washington, D.C. 20554".

•

FCC action on the petitions for reduction of the 30-day wait-time for retaking an amateur license exam after a failure was expected in mid-January ('85). As reported in last month's 'Highlights,' the ARRL (RM-4835) asked for 27 days and another petitioner asked for seven.

Project Peace

Jean Chittenden, WA2BGE, has started Project Peace and asks all DX'ers to sign their QSOs with Peace, 73 and their call, on CW, SSB and RTTY. And sign your QSL cards the same — Peace, 73, call.

No one has more contacts with the world at large than amateurs, and what better way to spread good will than by letting our DX contacts *know* we want peace. Peace, 73, WA2BGE. □

SPECIAL EVENTS

Air Traffic Control

A special call sign — J4ATC — has been assigned for use at the Annual Conference of the International Federation of Air Traffic Control Associations, 16-22 March, in Athens, Greece.

Equipment will consist of: Yaesu FT-101 for HF, SB200 linear, RTTY (Netronics), and VHF 144-146 MHz (two repeaters).

Ernie Bracy, W1BFA, and Walter Endlich, PA0GJA, have been licensed to operate the facility. The station will act as net control for the International Air Traffic Control Net on 14.277 MHz between 1000 and 1400 UTC, and otherwise for making as many QSO's as possible. This is a good chance for anyone interested in the new prefix to add it to their list. □

Chinese Water God

The Yuba-Sutter Amateur Radio Club will operate WA6AGD to commemorate the 105th annual parade and festival in honor of BOK KAI, the Chinese Water God.

The operation will last from 1600Z, 23 March, to 0400Z, 24 March (8:00 a.m. to 8:00 p.m., 23 March, PST), using low end of General phone band of 75, 40 and 20 meters. Also 147.450 simplex.

For certificate suitable for framing, send QSL and SASE to Loyd Wilbur, WA6AGD, BOK KAI Chairman, Yuba-Sutter ARC, 1228 Hillcrest Ave., Yuba City, CA 95991. □

Mayflower event

Peter Jackson, G3ADV

Gales and torrential rain in southwest England turned the annual Thanksgiving Day link between Plymouth Plantation, Massachusetts, and Sidmouth in Devon, England, into something of an ordeal for the U.K. team.

The station, GB2UST, was set up at the astronomical observatory high above the holiday resort of Sidmouth, and operation on 20 and 15 meters was maintained for seven hours despite a power failure caused by fallen trees.

Conditions on both bands were poor, but greetings were exchanged with U.S. East Coast stations, and a thoroughly enjoyable (if somewhat wet) day was enjoyed by the Sidmouth team, with a total of 123 contacts to mark the occasion. Only a few hours after closedown, storm-force winds brought the 20-meter quad down.

Special QSL cards will be sent for confirmed contacts and SWL reports, either via ARRL or Peter Jackson, G3ADV, and the Sidmouth boys are already planning an even better station for this international special event in 1985. G3ADV's address is 32 Brown Ave., Parkfield, Nantwich, Cheshire, U.K. □

Stuck with a problem?

Our TE-12P Encoder might be just the solution to pull you out of a sticky situation. Need a different CTCSS tone for each channel in a multi-channel Public Safety System? How about customer access to multiple repeater sites on the same channel? Or use it to generate any of the twelve tones for EMS use. Also, it can be used to access Amateur repeaters or just as a piece of versatile test equipment. Any of the CTCSS tones may be accessed with the TE-12PA, any of the audible frequencies with the TE-12PB. Just set a dip switch, no test equipment is required. As usual, we're a stickler for 1day delivery with a full 1 year warranty.

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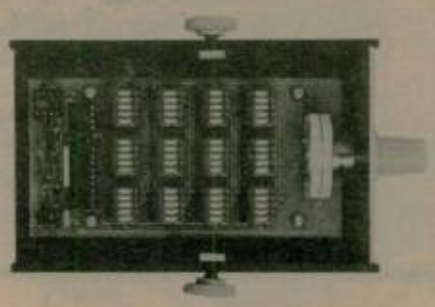

TE-12PA

67.0 XZ	85.4 YA	103.5 1A	127.3 3A	156.7 5A	192.8 7A
71.9 XA	88.5 YB	107.2 1B	131.8 3B	162.2 5B	203.5 M1
74.4 WA	91.5 ZZ	110.9 2Z	136.5 4Z	167.9 6Z	
77.0 XB	94.8 ZA	114.8 2A	141.3 4A	173.8 6A	
79.7 SP	97.4 ZB	118.8 2B	146.2 4B	179.9 6B	
82.5 YZ	100.0 1Z	123.0 3Z	151.4 5Z	186.2 7Z	

- Frequency accuracy, ±.1 Hz maximum −40°C to +85°C
- Frequencies to 250 Hz available on special order.
- Continuous tone

TE-12PB

TEST-TONES:	TOUCH-TONES:		BURST TONES:			
600	697	1209	1600	1850	2150	2400
1000	770	1336	1650	1900	2200	2450
1500	852	1477	1700	1950	2250	2500
2175	941	1633	1750	2000	2300	2550
2805			1800	2100	2350	

- Frequency accuracy, ±1 Hz maximum −40°C to +85°C
- Tone length approximately 300 ms. May be lengthened, shortened or eliminated by changing value of resistor

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VISA

Special Events

(continued from page 10)

Aviation Radioman School reunion

A reunion of the 1943-44 class members of the Aviation Radioman School was the occasion for an open house at Military Club Station W4ODR at Naval Air Station Memphis, Millington, Tennessee on 17 November 1984.

Over 100 Memphis area amateurs participated in the festivities which honored four of these World War II warriors who made the trek to the site of their entrance into radio: John Brischler, W2SGI, Little Ferry, NJ; Robert (Bob) Everding, N0EVQ, Ballwin, MO; Ray Marcaurelle, W1YRO, Gloucester, MA; and Russ Kaiser, KX2X, Rutherford, NJ, earned the Navy rate of ARM (Aviation Radioman) before going overseas during World War II.

Chief Petty Officer (ATC) "Chick" Thompson, N4CUH, was host for the three-day visit that included a tour of the base. "Chick" has been the W4ODR Station Custodian, in addition to his regular duties during his tour of duty at NAS Memphis. The visitors noted many of the changes that have taken place in the over 40 years since they were last at the largest inland U.S. Navy base in the world. With their XYL's, they revisited the Memphis sites and together talked about their experiences as radio operators in the Navy.

During the course of the open house, visitors sipped gallons of rich Navy coffee and munched on slices of giant cake baked and decorated for the event by the Marines at the messhall. The ARMs meet every Sunday on CW at 14.046 about 1930Z. They look forward to meeting other graduates of Navy radio school on the net.

— Jim Moffatt, WD4SMW (SGTMAJ USMCR) □

The Sidmouth (Cornwall) Radio Club special event station, GB2UST, in the astronomical observatory at Sidmouth, ready to go for the annual Thanksgiving link with Plimoth Plantation at Plymouth, Massachusetts. Operators are (seated, left to right): Paul G1EEK and Graham G4NVH. The gang (left to right): Steve; John G6YWX; Mick; Bob Harrisson, G6SMY; Dick Harding, G6BJL; John G6YTL; and John.

Thanksgiving station worked in U.K.

Peter Jackson, G3ADV/GB0UST

We in Britain were ready for Whitman's Thanksgiving station, as there had been extensive publicity in all the Amateur Radio magazines — even a big picture in **Short Wave Magazine** of Mike, Ray, Ed, Jim and Arnie holding up the antenna at the Plantation.

On the day before the event, a special-license station came up on 40 meters and 80 meters, calling GB0UST (that's United States Thanksgiving — what else?) to spread the gospel as far and wide as conditions would permit.

The prefix GB0 is quite new in the United Kingdom (U.K.), and this brought problems as well as attracting attention, which was the object of the exercise. It was intended that GB0UST would give details of frequencies and times of operation of WA1NPO for those in U.K. who couldn't find the right page in the magazines, but the way it worked out was an immediate pile-up of stations wanting to work the new prefix.

Eighty stations were worked, roughly equally between 40 meters and 80 meters, and mostly in Great Britain. The level of interest in WA1NPO was high; about a quarter of the stations contacted had worked into the club in past years at Thanksgiving, but without exception, none had heard of Whitman.

GB0UST was back on the air at 0900 on Thanksgiving Day for the countdown. The event takes place after lunch here, and you must understand that *we* don't celebrate the holiday (if you wonder why not, just look at the origins), so it's just an ordinary Thursday.

80 meters was rough (and 20 meters not much better), so activity was limited to 40 meters and another 43 stations worked, including getting into two large nets: Royal Signals (that's the Army) and the Royal Naval ARS.

Shortly after 1200, Rolf Lasses, SM0FQW, in Stockholm joined GB0UST to QSY to 20 meters and listen for Cliff Drysdale, K1TZC. We found K1TZC right away at 5:00 and 7:00, but there was an inter-Italian QSO at 5:00 and 9:00, right on the frequency. What followed was pure farce; Rolf and I, with six words of Italian between us, tried to QSP a message to Cliff, who was in QSO already anyway. OK, so it didn't work, and SM0FQW and GB0UST went up the band to hear Jim open up with WA1NPO.

We heard the *first* contact, and you might be surprised to hear that the guy rang me on the landline 10 minutes later to say he'd gotten "501" and where does the Mayflower certificate come from?

Rolf and I parted then, both to go back to 40 meters to publicize the event in our own respective countries.

Sure, propagation was shaky and signals were right down, but it could have been worse, and Whitman had quite a pile-up going there. Far more stations called you than you ever stood a chance of hearing. The reason is that most of us on this side have *wire* antennas: dipoles, G5RV's, W3DZZ's — that sort of thing, with the odd vertical perhaps.

Only a very small proportion of G stations have a Yagi, and even then they're often too low to do much good. There are several reasons for this, mostly tied up with the fact that this is a compact little island; we live closer together and there are restrictions on elevated ironmongery. Another thing: there are no kilowatts here. Maximum permitted input is 150 watts DC.

So you were looking at a wall of G calls, plus the Europeans who came to see what the din was about, and many, many of our stations tried and failed to catch you. The standard of operating by Whitman was a model of perfection, but don't tell Big Jim I said so. We heard your commercials for the Plantation very well, and most folk got the QSL information, I reckon.

Meanwhile . . . back at GB0UST, I was on 40 meters with the same old spiel — except that now I was monitoring Whit-

man on 20 meters on an old AR-77 (anyone remember them?) and passing the operating frequency to a great many G stations who called in right through the afternoon. That's not all; my wife Rita was answering the phone steadily, with the same query: "Where's the American Thanksgiving station now?"

We were particularly delighted to have a transatlantic call on the landline from an old friend in Fall River, Massachusetts to say he had gotten publicity for you in his hometown, and was monitoring WA1NPO. I had the odd experience of listening to Jim at the WA1NPO mike on ground-wave to Fall River, the rest by landline.

Like I said, conditions were rough, and it got to be difficult to copy toward the end of the event. It was with great regret that a whole lot of us heard you slowly slip down into the noise.

I reckon it was a great success. I waded out from among the beer cans after 15 hours total of rather repetitious chat, and put the wraps on GB0UST until next year.

Letter of thanks

Peter Jackson, G3ADV/GB0UST
Nantwich, Cheshire, U.K.

Dear Peter,

Thank you for all the help and time that you put into this event to make it so successful.

Also, thanks to the Sidmouth Radio Society for their participation. We are looking forward to many more years of operations with Sidmouth and our many new friends. A special thanks to Dave G4WIQ, who added a special touch to this event with a successful Plymouth-to-Plymouth contact.

The operation itself was truly an international event. We worked some 39 G-stations and a grand total of 310 contacts. With propagation at an all-time low, we were very pleased with the number of contacts.

Ron Folgate, G3KDY, who was holding the frequency for us, was our first contact. GB2UST-G4WIQ-G3ADV-GB0UST started the event off on a positive note.

Me? I had a whale of a time, and I hope you did. You put Whitman on the map in more senses than one; although there were a number of U.S. stations to be heard, very few were stronger than WA1NPO, and there was no other station celebrating Thanksgiving that I could hear. Well done, colonial chaps.

A medal for the operators, cigars for the loggers, and our gratitude from this side for a splendid event that linked the two countries at opposite ends of the *Mayflower* voyage most effectively for over six hours — and here's hoping propagation will be a whole lot better next year!

Finally, the commercial: if any club members and families are planning on reversing the *Mayflower* philosophy and visiting Britain in '85, I will be glad to assist with any information I can. My QTH is available from the editor, Bob Pratt, KA1DZA, or Jim Russell WB1CNM. Addresses: KA1DZA, 239 Walnut St., Abington, MA 02351; WB1CNM, 56 Elm Ave., Brockton, MA 02401. □

Our operations went very smoothly, and we had several nice contacts with Sidmouth. We did have an RFI problem, with 20 meters lighting up the telephone switchboard. At one point, we were cutting off the telephone calls in the gift shop a quarter-mile away. This problem was solved, and the rest of the operation continued without any problems.

A highlight to the event was when Rosemary Carroll and Judy Ingrams both established contact with amateurs and gave a descriptive talk about Plimoth Plantation and the origin of the *Mayflower II*. This was a nice touch, with many hams listening in throughout the world.

So, on behalf of the Whitman Amateur Radio Club and the Plimoth Plantation, we would like to thank all who made this special event possible.

Your truly,
Jim Russell, WB1CNM
Assistant Coordinator
Plimoth Plantation □

Net information

The **AACS (Army Airways Communication System) Alumni National CW Net** has established new times and frequencies for their meetings: 1700Z, Mondays, Wednesdays and Saturdays, on 14.105 MHz. NCS — Gordon Bandow, N7FYD. Net members so far: Robert Gleason, W3KW; Harold Klaiss, W4QN; and James Weeks, W6FNG.

The **AACS Alumni Pacific SSB Net** is still meeting on Mondays, Wednesdays and Fridays at 1800Z on 7.218 MHz with Ron Martin, W6ZF, as NCS. Alternate frequencies are 7.216, 7.223, 7.233 and 7.275 MHz. Members are: Robert Clark, W6SRQ; Julius Wenglare, W6YO; Ivan Farman, K6RG; Eugene Abbett, W6MHZ; Charles Toy, K6EVM; Howard Deller, KE6DZ; Forrest Donkin, AK6S; Mon Webb, W7LRP; W7RFG; Davis Fuller, W7ZOZ; Calvin Creek, W6MCI; and Bill Perac, W6JCG.

The **AACS Alumni National SSB Net** meets every Friday at 2200Z on 14.297 MHz, with an alternate of 14.287 MHz. Clement Roberts, W5ZPJ, is NCS. This net was started some years back by K6RG, W6YO and W6ZF.

The net's 15-meter frequency is 21.397 MHz, but with propagation so poor due to the beginning of the Solar Cycle 21 bottoming-out period, the net has been working on 14.297 MHz. □

Tri-Town RAC HF net

The Tri-Town Radio Amateur Club of Hazelcrest (suburban Chicago), Illinois, proudly announces the formation of a weekly informational HF net. The net will meet each Saturday morning at 1500 hours UTC on 3.925 MHz and will use the Tri-Town club call of W9VT.

The net was the idea of John Sonnenfeld, KA7KZO, and is being sponsored by the Tri-Town Radio Amateur Club in an effort to sharpen operator skills and to prepare for situations where those skills would be of use to the general public.

The Tri-Town Radio Amateur Club also sponsors a weekly 2-meter FM net on 146.49 MHz. That net is primarily concerned with the passing of club traffic as well as news about Amateur Radio. It can be heard on Wednesday evenings at 0200 hours UTC.

Interested parties can communicate with the Tri-Town Radio Amateur Club by checking into either net or by writing us at P.O. Box 302, Hazelcrest, IL 60429. — *Rich Bauer, N9DKO* □

New questions

Test guides help you pass FCC exams

Gordon West, WB6NOA

Volunteer examiners have now taken over the entire Amateur Radio testing program. Whether applicants wish to take their very first entry-level Novice exam, or upgrade all the way to Extra, Amateur Radio volunteer examiners are the ones who will give the test.

The Federal Communications Commission (FCC) now publishes all test questions. The exact wording of each test question must be followed by organizations offering Amateur Radio examinations.

Presently there is only one organization that publishes the test questions, as well as the multiple-choice/right and wrong answers that will appear on the popular ARRL and W5YI-sponsored examinations. Radio School, Inc. publishes *Test Guides* for the Novice license covering 200 questions, the 500 question-and-answer test guide for Technician, a 500 question-and-answer test guide for Advanced, and a 400 question-and-answer test guide for the Extra Class license.

Each 8½″ × 11″ test guide features the exact questions plus the exact distractors (wrong answers) and the exact correct answers listed word for word, as they will be found on the ARRL and W5YI volunteer examinations. They also contain "study notes" and formulas that allow students to understand why the indicated correct answer is indeed correct.

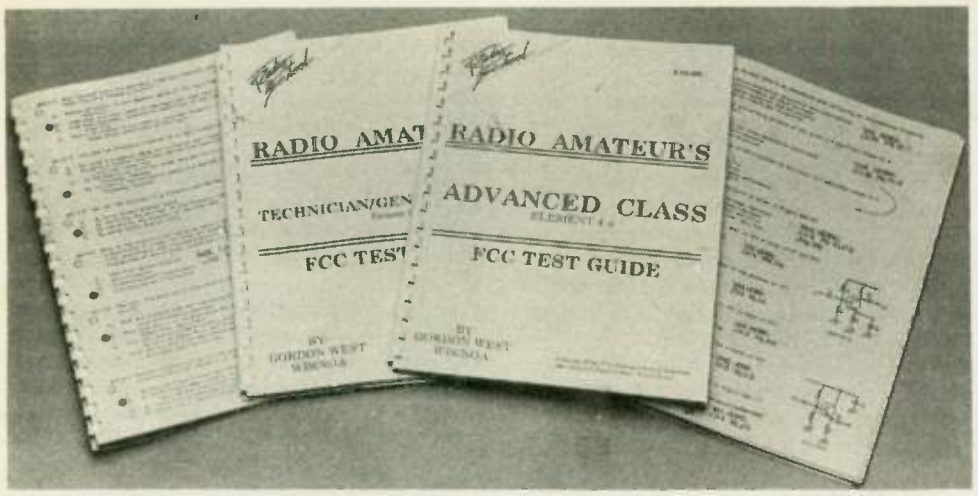
But questions are changing

The FCC has now released a complete new set of Element III Technician Class questions. These new questions reflect new wording, clarification and slight altering of the question format so as to improve the multiple-choice answers.

Examiners will begin using the new questions and new distractors by the time you read this, and they must switch over completely to the new questions and answers by 01 May 1985. New questions and answers that will supercede the original Advanced Class question pool are just surfacing from the Commission, and we expect that new Extra Class questions will appear in June.

Again, volunteer examiners are allowed a six-month "phase-in" period before their exams must reflect only the new revised questions.

If you are planning on taking a volunteer exam to upgrade to Technician/General, Advanced or Extra, check with your examination team to find out whether or not they are using the original questions or the new 1985 questions.



Gordon West's test guides for Novice, Technician, Advanced and Extra.

Radio School "Study Guides" reflect both old questions as well as listings of the new questions

Applicants wishing to upgrade will have the opportunity to study for either the old set of exam questions or the new set. While this may seem confusing, it indeed is! This is one reason why Radio School, Inc. is the *only* publisher of the old and the new FCC test questions in a test guide question-and-answer format.

Once all of the new 1985 revised test questions have been released by the Commission, other publishers will undoubtedly follow in the steps of Radio School and develop multiple-choice question-and-answer format preparation books. The ARRL, Ameco and Bash have all indicated they will come out with study books just as soon as the new questions and answers are finally agreed upon and stabilized by mid-year.

When those regular publishers come out with their new books, Radio School, Inc. will then get back into its regular business of producing the examination study material on study tape cassettes. This allows you to listen to all the questions and answers, and get an oral explanation behind the correct answer, while driving or doing something else other than reading a book.

What to study now?

If you are preparing to upgrade within the next 60 days, the Radio School, Inc. study guides are up to date with both the old and new questions, as well as the ARRL-type answers in multiple-choice form. Each book for each class of license upgrade is $19.95 plus $3 postage and handling from Radio School, Inc., 2414 College Dr., Costa Mesa, CA 92626.

The four-set theory study tapes will be available for Element III Technician/General Class by 01 January 1985. Advanced will be available 01 February 1985; and the Extra Class four-set study tapes will be available by 01 March 1985 — allowing enough time for all FCC new test questions to stabilize, be scrutinized and finalized. Tape sets are $39.95 plus $3 postage and handling. Novice tape sets are now available for $19.95.

Yes, it's extremely confusing in this changeover period. The ARRL is doing their best to meet the challenge of the FCC by coming up with agreed upon right and wrong answers that will give amateurs a fair chance at passing the multiple-choice tests.

Radio School, Inc. is working closely with the League to publish interim test guides to assist applicants in passing the test prior to official ARRL publications for each category of license becoming available in print.

Radio School also offers complete code test preparation materials plus volunteer examination test tapes to accredited volunteer examiner teams. Write Radio School for more information. Address is: Radio School, 2414 College Dr., Costa Mesa, CA 92626. □

A DX vacation

Hamming it up in Great Britain

Christine (NY6E) and Wilson (NY6F) Goddard

Summer is coming and vacation plans are in the making. Did you ever consider a vacation visit to where the DX is local? Two summers ago, my husband, NY6F, and I, NY6E, spent three weeks touring 2,700 miles through England and Scotland with the reciprocal licenses GM4/KA6QDU and GM4/KA6QDV. It was a wonderful experience.

We first became excited with the idea when we looked through the foreign Callbook and saw all those amateurs in the towns we planned to visit or to pass through.

We wrote to the ARRL for information on reciprocal licenses, and they sent us a very helpful package from David Evans, G3OUF, general manager of the Radio Society of Great Britain.

Included in the package was the address of the Home Office in London to which we sent for an application form. We received a prompt reply and found that the application for an Amateur Radio reciprocal license required the following: name, address in United States, address in Great Britain, U.S. call sign, class of license desired, length of stay, passport number and expiration date; plus a copy of our current U.S. licenses and a fee of 12 pounds sterling (which at that time was approximately $20) per license. Both our passports were out of date, and we knew it would take some time to renew them, but we applied with the old ones and added a note promising to send the updated information.

It is a good idea to apply early for a passport because they take from six to eight weeks, longer if there are problems. The passport application form is obtainable from the post office. Having passport photographs taken professionally avoids extra delay. Arranging for car rental at the time we purchased our airline tickets ensured that a car was waiting for us without delays and at the best rate available.

Our licenses arrived in a very short time and comprised a prefix GM4/ followed by our U.S. call signs, which at that time were KA6QDU and KA6QDV. They authorized us to use telephony and Morse code on all U.K. amateur frequency bands. The U.K. stands for United Kingdom and includes Great Britain (Scotland, England and Wales), Northern Ireland, the Isle of Man and the Channel Islands.

Having set the official machinery in motion, we gave a good deal of thought to the radio equipment we would take with us. Things to be considered were size, weight, physical protection from damage, HF and VHF, and 12 volt operation.

Weight and size were a major consideration for aircraft travel particularly, since we wanted to take our radio gear on board the plane with us to minimize the risk of loss or damage. This meant the radio gear must fit in no more than two bags whose dimensions must not exceed 8 × 16 × 21 inches each. We wanted to operate on both HF and VHF and to work out of the car's 12-volt DC system.

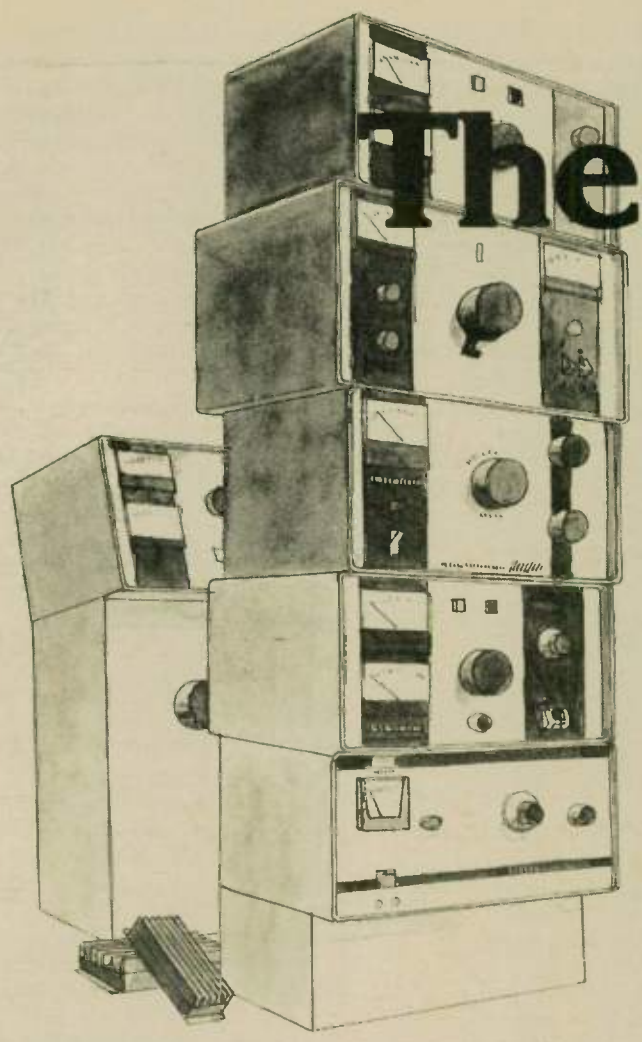
We therefore decided upon our ICOM 25A for 2-meter operation and our HW-8 QRP rig for CW. The antenna chosen for 2-meter operation was a 5/8-wave magmount, since repeaters in Scotland are not very close together.

A 1750 Hz (± 25 Hz) tone burst with a 300 ms duration is required to open U.K. and European repeaters, and in practice it is best to transmit this tone at the start of each transmission, especially in the United Kingdom.

Since ICOM did not make such a unit for ICOM 25A, we purchased a TE-64 toneburst/sub-audible generator and mounted it on top of the IC-25A. A microswitch button was installed on the TE-64

(please turn to page 16)

The HENRY REPORT...



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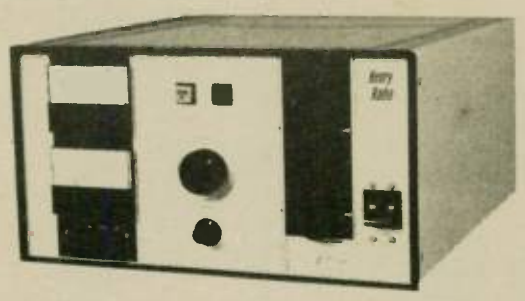

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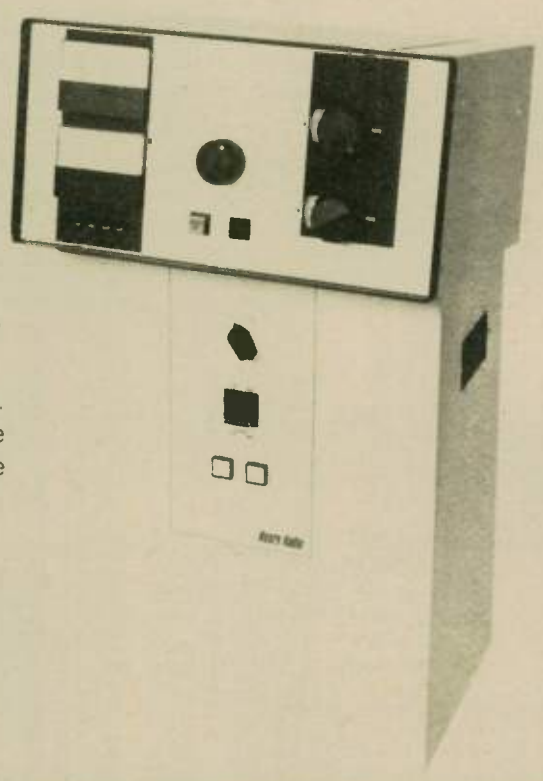

2002-A...a bright new rework of our popular 2002 2 meter amplifier. Uses the new Eimac 3CX800A7. The RF chassis uses a 1/4 wave length strip line design for extreme reliability. It provides 2000 watts input for SSB and 1000 watts input for CW. Because this tube is rated at an unheard of 15dB gain, only about 25 watts drive is required for full output.

2004-A is identical to the 2002A except that it is set up for the 430 to 450 MHz band. This amplifier uses a 1/2 wave strip line and offers all of the same specifications as the 2002A.

1002-A A rack mount 2 meter amplifier with the same design as the 2002A, except using one 8874 tube for 1/2 power specifications. Rated at 600 watts PEP output and 300 watts continuous carrier output. It employs the same strip line design as the 2002A.

1004-A...a rack mount half-power version of the 2004A. Covers the 430 to 450 MHz band using a 1/2 wave strip line design.

Henry amateur amplifiers are available from select dealers throughout the U.S. and are being exported to amateurs all over the world. In addition to our broad line of commercial FCC type accepted amplifiers we offer special RF power generators for industrial and scientific users. Call or write Ted Shannon or Mary Silva for full information.

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Great Britain

(continued from page 14)

for toneburst initiation. We found that this worked very well and have subsequently made use of the sub-audible tones for accessing many of the San Francisco Bay area repeaters.

The HW-8 is very small and even with the 50 watt RF bilinear amplifier took up little space. We built in a 9-volt power supply for the Curtis keyer and installed an extra earphone jack so we could both listen.

A roll-up inverted Vee antenna system cut for mid-point in the 80, 40, 20 and 15-meter CW sub-bands was made from 22 gauge speaker zip wire taped to a nylon string for added strength. The appropriate length in feet (468 divided by the frequency in MHz) was cut for each band, laid along the nylon line, and all were taped together. A 30-foot length of RG-58/U coax was used for the feedline which ran from the antenna to a small MFJ tuner and SWR bridge.

The antenna tuner and SWR bridge are not essential except that each time we set up, the inverted Vee was at a different height near old fences, and antenna tuning was required for optimum SWR.

The U.K. regulations required that the licensee be able to verify that his/her transmissions are within the authorized frequency band, and in practice, they recommend a crystal calibrator. We purchased a 7.000 kHz and a 7.250 kHz crystal from Jan Crystals and installed them in the MFJ-40T QRP transmitter. This provided the necessary calibration frequencies for the HW-8, and we felt better taking it along, but no one ever checked our equipment or inquired whether we had one.

We also took along a tiny Curtis electronic keyer, a Ham-Key I set of paddles and two sets of headphones. A low-pass filter, a volt-ohmmeter, a 12-volt soldering iron, a few screwdrivers, a wire cutter and alignment probes made up the complement of our DX travel radio gear. A light nylon string was included for hoisting the inverted Vee. We put our licenses in a thin binder along with all the operating information we had collected and took two stenographer pads for copying CW and maintaining a log, which is required.

The rigs were packed into a rigid case, originally designed for a large portable typewriter, which we lined with 1-inch thick foam covered with red velvet cloth.

The HW-8, Curtis keyer and Ham-Key I paddles were set up inside the car.

The multiband antenna was rolled up flat in another hand case. The stainless steel whip was slipped into a piece of rigid ½-inch PVC plastic pipe with the ends closed by pipe end-caps and laid horizontally at our feet on the plane. The other cases slipped under the seats in front of us.

We were all set to go, secure in the knowledge that Robert Thomsen, WD6BIY, would be caretaking our cattle ranch while we were gone. Incidentally, Bob took advantage of this opportunity to make many contacts across the country from our mountain location, running his rigs on our water-wheel-powered 12-volt system. We were able to talk to him directly from Scotland when he used a 2-meter rig to access his 145.09 MHz autopatch and put in a long-distance telephone call via the satellite.

There was no problem taking the radio equipment through customs. Our luggage was x-rayed at Oakland, California and Baltimore, Maryland on the way over. We walked through the "nothing to declare" gate at Gatwick, England and nothing was checked. On the way back, we were asked once to open the radio case, to state what each piece of equipment was and, since we were taking it on board the plane as hand luggage, whether the radios were operable, which they were not.

Awaiting us at Gatwick Airport was the pre-arranged car, a brand new Ford Escort 1.3 liter four-door hatchback. There was plenty of room for the ICOM 25A on the floor on the left, off-driver side, and the rest of the luggage and radio gear fitted nicely in the large trunk area.

Leaving the airport at about 2:00 in the afternoon, we headed west on the country roads, avoiding the motorways until we had a feel for the right-hand drive and the left-hand roads. We traveled through some very beautiful country, past unique houses and farm buildings and could have spent the entire vacation right there only a few miles from London. But relatives were expecting us in Falmouth, which is almost as far west as you can go (only 30 miles from Land's End), so after a few hours, we moved onto the main coast road, finally stopping at Ivybridge in Devon at about 11:00 p.m. having covered about 250 miles.

The next day we set up the 2-meter rig and tuned in to the calling frequency — 145.50 MHz. Our first contact, G4NDL, thought he was hearing a DX Scottish station because we used GM4/KA6QDV as stated on Wilson's license, but we finally got it sorted out that GM is used only when in Scotland and that when in England we should use the prefix "G".

He gave us the frequencies of the local repeaters, and we were able to have some interesting conversations, learning about the countryside we traveled through and gaining useful traffic information and directions from G6JN, G6KKX, G6KSB, G6HHS, G6CUJ and G6SMH.

We were informed by W. Aitchison, G6CZX, that there was to be an Electronics and Technology Exhibition in Falmouth the next day, and we arranged to meet him there. M. Hollebon, G4HOL, was already there setting up an HF station. At that exhibition we also met W. Maynard, G8UBY, and his wife G6LUO, who were visiting from the east of England.

The amateurs there provided us with a full list of repeater frequencies and a copy of the Cornish Radio Amateur Club Magazine, as well as a map directing us to places of interest locally.

We drove down to The Lizard (the southernmost point in Britain) through wonderful scenery over twisting, winding roads. Sometimes the trees closed right over our heads until we were driving through a tunnel of vegetation. In places the road level was four feet below the level of the fields on either side through continuous use over the centuries. In the evening we had the pleasure of visiting G6CZX, his charming wife and family at their home, and since he is a transposed Scot, he was able to advise us on a route to Scotland.

Some of the things we learned or had confirmed during our visit to Cornwall and Devon were that amateurs in the United Kingdom do not need Morse code to get their first license. The Morse code may then become a major hurdle when they want to upgrade. They are also required to send with a straight key to pass the code exam. Third-party traffic is not permitted, and no one else may transmit on a station except the licensee.

The next day we set out for Scotland, having picked up my aunt. We were on our way to visit my mother who had not seen us in five years and who had not seen her sister in 20 years.

We had left at 6:00 a.m. and arrived at 5:00 p.m., having driven 625 miles. We were accompanied along the way by G6WWY and G6TUR in England and GM3HOQ, GM3VBB, GM3FIZ and GM3EDL in Scotland. We could have made many more contacts, but our hands were full chatting with my aunt, whom I had only met once before, coping with the high speeds on the motorways (80 mph cruising and 100 mph passing) and the left-hand drive, and trying to take in all the beautiful scenery with its remarkable regional diversity over very short distances.

Once we were at Rosyth, we were able to relax a little and shared our time between visiting with family and friends, seeing the sights and operating the radios. Our first move was to call on Flight-Lieutenant E. George Morgan, GM3DPL, who welcomed us with the comment that he often had visits from foreign amateurs. We had a wonderful visit and enjoyed seeing his station.

George's mother, Agnes Morgan, told us he had only that year been awarded the British Empire Medal for his meritorious work during the war in the Falkland Islands.

The Morgan family is able to keep in touch through Amateur Radio because George's brother, Gordon, is also a ham — G3FNO. We discussed our plans to set up the HW-8 in the area, and it looked like there would be no problem.

We finally decided on a nearby playing field as a suitable place to put up the multiband inverted Vee, since it was lined with trees suitable for suspending the antenna, and there was a place to park just off the access road. We attached a rock to a light nylon string and threw the rock over a branch. The other end of the nylon string was attached to the center of the inverted Vee. Each end of the inverted Vee was unrolled, the antenna was lifted up, and one end was tied to a small tree and the other to a fence post. The coax came down by the car and in at the window. The whole antenna was virtually invisible, as we found out when the photographs were developed!

The driver's seat was laid back flat and the HW-8, keyer and other equipment set up on the seat. We had considered setting up on a table outside the car, but since the weather was variable and we often operated after dark, it proved more suitable to be inside the car. The keyer could be operated from either the front passenger seat or the back seat. The HW-8 was powered through the car cigarette lighter which was standard size.

When we had finished operating, we untied the ends of the antenna, lowered it to the ground and left the light nylon string

over the tree limb with the ends secured. (We came back to operate at the same spot nearly every day for more than two weeks, and no one moved the string.) Then we rolled up the antenna and put it back in the trunk with the rest of the gear. The whole setting-up and dismantling process took only a few minutes.

We had many interesting QSO's on CW on the 15, 20, 40 and 80-meter bands and made many contacts throughout Europe and the USSR. Most of the CW was at about 25 wpm, and the contacts were friendly but professional. All of the stations conversed in English, but we enjoyed throwing in a farewell phrase in the appropriate language, with the help of the *Radio Amateur's Conversation Guide* by Jukka (OH1BR) and Miika (OH2BAD) Heikinheimo.

Most of our CW contacts were made in the early morning or in the evening and during the day when we were mobile we operated on 2 meters. Stations we worked in many areas of Scotland include GM6RNW, GM6KWG, GM6SYF, GM6PCO, GM6JXY, GM6WPO and GM3CVJ. They were reached through repeaters in the Rosyth and Edinburgh area and through other repeaters during a trip we took up through the impressive scenery of the Scottish Highlands.

We traveled up the west coast through Glencoe and Fort William to the Kyle of Lochalsh, which is the stepping off point for the celebrated Isle of Skye, east through the heart of the Highlands to Dingwall and Inverness where we were impressed by the size and quality of the cattle and sheep at the auctions. (Other people visit art galleries; we cattle ranchers visit livestock auctions.) Finally we moved south again through Perth where we visited two more auction yards as well as the famous Caithness Glass works.

Looking back on the trip, we were very satisfied with our plans, the performance of the radio equipment and the car. The only changes we would have made are minor ones: itemized logbooks instead of notebooks; QSL cards and a foreign Callbook along with us so we could complete QSL cards while our memories were still fresh; and a stick-up LCD clock to keep visible on Zulu time when we were having QSO's.

Wherever we went, we found that the amateurs were courteous, friendly and informative, and we only wish we had had more time and energy. We have already started planning our next DX vacation! □

Warning about condos

Armond Brattland, K6EA

If you plan on indoor and "trick" condo-type antennas to get you on the air in the same manner as you operated from your former home big beam, prepare for a shock. When you move into a restricted condo and realize what you had and now at an advanced age, what you gave up, prepare to "get sick and be miserable!"

Bill Bonnell, W5TI, an eminent traffic man at Fort Worth, Texas had given ready access to many nets, both NTS and independent handlers, for a great many years. The lure of gaining more time for hobbies in a condo took Bill away from his big antennas and big booming signal across the nation. Now into a condo, and advised that he cannot have access to the roof, our good friend on the traffic nets is miserable!

Many of us can now share his misery, when we tune up to some favorite traffic spot and find him missing, or even if he does manage to come up with some compromise "sky hook", find him too weak to copy or be of much help, per his glorious past.

The day after Christmas, I called W5TI on the LL (landline) from a station while our son was taking on gas. Bill sounded so miserable, I'm afraid it was "contagious." Now I've let a few days go by and gained a few constructive thoughts. If such are too late for Bill, perhaps it might be possible to help others. So here are a few:

1) Take nothing for granted. 2) If you feel *you just must buy into a condo,* let the salesman/woman know you *must see the roof.* 3) Insist that you must be given a contract to use the roof for certain agreed antennas, accessible to your chosen apartment, which you choose to best suit coax to the roof. Sound too big? Not at all!

Gladys and I tried it out on seven prospective condominiums. Three eventually turned us down, but several of the four were willing to go quite a way on contracts that would bind the board of directors. However, all but two balked on big beams or quads. One would contract for anything, but high-power lines were close by on such roof!

It does get "sticky" trying to talk to some board members. Find yourself a lawyer; perhaps if he is also a ham, he will *(please turn to page 25)*

Ohm-Brew

Ken Sakamoto, AH6FJ, of Wahiawa, Hawaii, takes the prize this month in our Ohm-Brew contest. Stumped? Turn to page 52 for the answer.

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

PUBLIC SERVICE

'Santa therapy'

Jill Peterson

Not all operations at St. Jude Hospital and Rehabilitation Center in Fullerton, California, are surgical. Through Operation Santa Claus, sponsored by the St. Jude Amateur Radio Club, Santa made his rounds on Wednesday, 19 December, directly from the North Pole.

Originated by April Moell, WA6OPS, director of occupational therapy, the program — which enables patients to talk to Santa by short-wave radio, has been in existence for nine years.

Not only can patients talk to Santa, they can see him through Santa Vision. Via the hospital's small television studio, which transmits to TV sets in patients' rooms, Santa's workshop — complete with toys, stuffed reindeer and sound effects — is recreated.

"Our program is unique," Moell said. She added that an important part of Operation Santa Claus is personalization. Through his elves, nurses and volunteers, Santa knows a little bit about each patient.

According to Moell, most of the children at St. Jude have "profound" injuries. She added that it's very important to try to do something special for them at Christmas. "Santa Claus is symbolic of all of the good cheer and good things in life."

Because Santa knows some people may have trouble expressing themselves, Moell said he often motivates the patients' therapy. For some patients, it is an extension of their speech therapy. For all patients, by talking to Santa through the radio, their imaginations get going.

One of Santa's elves, physical therapy director Winkie Sonnefield, has worked on Operation Santa Claus since 1980. She volunteered after hearing so many positive reactions to the program.

"It's hard to see the kids in the hospital at this time, but their reactions (to Santa) are so emotionally intense," she said.

She recalled one 11-year-old boy who didn't want to talk to Santa, just listened and stared at the TV. When he finally whispered what he wanted for Christmas, and Santa responded, "We're working on it right now," the boy's whole face lit up. "I've never seen such a dramatic turnaround," Sonnefield said.

The "elves" are very important to the entire program, since they are the people who fill Santa's book with all the information about every patient. Moell added that sometimes the patients' rooms change and then, even Santa makes mistakes.

Tri-Town Santa

Rich Bauer, N9DKO

The holiday season was made a little brighter for youngsters in four area hospitals recently due to the efforts of members of the Tri-Town Radio Amateur Club. In cooperation with the pediatrics staff at South Suburban Hospital, Hazelcrest; St. James Hospital, Chicago Heights; Ingalls Hospital, Harvey; and Olympia Fields Osteopathic Medical Center, Olympia Fields — all in Illinois, members of the radio club visited the pediatrics wards, and through the magic of radio each child was put in touch with Santa Claus.

This is the fourth year for Tri-Town's "Operation Santa" which is designed to bring a little holiday cheer into the lives of these children and their parents. The program was well received by all involved and could not have been a success without the active participation of the staff at each hospital.

In addition to speaking to Santa Claus, each child was provided with a small greeting card and candy cane. The visits to the hospital took place between 16 and 19 December 1984 by the following Tri-Town members: Jerry Bette, N9BMT; Mel Wahlert, W9NJC; Marion Wilcox, K9AOA; Martin Monahan, WD9JGG; Bob Gibson, WD9IFS; John Sonnenfeld, KA7KZO; and Rich Bauer, N9DKO. □

Shown here is the staff at Ingalls Hospital who assisted in this project. They are, from left to right *(standing)*: Mel Wahlert, W9NJC; Tri-Town Radio Amateur Club; Sharon Moody, Unit Coordinator; Mary Anne Fischer, R.N.; Christina Caplinger, R.N.; Marion Wilcox, K9AOA, Tri-Town Radio Amateur Club. *(Kneeling)*: Bonnie Anker, Nurse's Aide; Wanda Bishop, Nurses's Aide; Jo Brandenburg, Nurse's Aide. *(N9DKO photo)*

To help remember the thrill of the program, buttons reading "I talked to Santa" are passed out to all the participants.

The program is not only for children. "It's just as miraculous for adult patients as it is for the children," said the director. The adults tend to cry and it's harder for volunteers to deal with this, she added.

She told of one stroke patient who was unable to talk. While his family, including his grandchildren, were in the room, Santa wished them a Merry Christmas. The patient's family was overjoyed and really felt the spirit of Christmas. Although the patient couldn't give a material gift, he gave his family the gift of love and happiness.

On a personal basis, Moell said that any Christmas present she might receive is just "icing on the cake" in comparison with the holiday program. "Operation Santa Claus is very much Christmas to me."

Just because coma patients can't talk doesn't mean they are not aware of what is going on, said Moell, who claims that every year there is a "miracle."

She remembers bringing her radio and tuning in Santa Vision while visiting a young boy in the intensive care unit. He was running a high fever, she said, and was semi-comatose, so he showed no response. However, the next day his fever broke.

"I can't say Santa had something to do with it, but I'd like to think so," the occupational therapist said.

Parents are very excited about the program, she added. "It makes the parents' Christmas to see the joy on their children's faces when they talk to Santa."

One incident involved a comatose 10-year-old boy whose parents asked if Santa would talk to their son while they videotaped. Santa talked to the boy, but he didn't respond. Later, when their son came out of the coma, they showed the videotape to their son. The boy was overjoyed because Santa had talked to him. Moell said that the happiness the parents and their son have shared is irreplaceable.

None of the patients know who Santa is, and they wonder how he knows so much about them. Santa has his big red book in front of him and knows about everybody, Moell explained, although they don't let Santa know too much about every patient because he gets too emotionally involved.

Operation Santa Claus, also conducted by short-wave at Children's Hospital of Orange County, is Christmas in so many ways, Moell said. Not only does the program spread joy, but it also makes people know what Christmas is all about. As the director said, "If we can talk all over the country by short wave, we can certainly talk to the North Pole."

— Fullerton Daily News Tribune, CA; submitted by Joe Moell, KØOV □

AWARDS

Elmer of the Year

The Northern New Jersey Chapter of the Quarter Century Wireless Association has awarded its "Elmer-of-the-Year" award to William Rawson, K2AX. The presentation was made at the 10th Anniversary Meeting by the past "Elmer-of-the-Year" recipients, Frank Leonard, W2NPT (1982), and Windy Tietsworth, W2SUE (1983).

Licensed for over 50 years, K2AX has — over the years — taught code and theory, and helped set up stations for the newly licensed. He has climbed countless trees and spent countless hours aiding amateurs with rig or antenna problems. A master teacher, he enjoys sharing his knowledge with others. He has written numerous articles and a column on Amateur Radio. He is an inspiration to many radio amateur operators. *—John Brischler, W2SGI* □

Special Service Award

John Kanode, N4MM, of Boyce, Virginia, has been awarded the prestigious ARRL Roanoke Division Special Service Award for 1984. This award is given to one amateur in the Roanoke Division each year for outstanding service to Amateur Radio spanning many years.

John, an Extra Class licensee who has been active in Amateur Radio for 33 years, has been involved in many phases of Amateur Radio. He is presently a National Director of QCWA, ARRL Vice Director, ARRL Board DXAC Liaison, and

has served on several ARRL committees. He is a life member of ARRL, QCWA, AMSAT and IARC and has been president of several well-known Amateur Radio clubs. He is active on all bands from 160 to 2 meters and holds over 400 "on-the-air" operating achievement awards.

The ARRL Roanoke Division Special Service Award was created by past ARRL President Vic Clark, W4KFC, and the candidates are selected by the previous winners of the award. The award plaque will be presented to N4MM at the famous Old-Timer's Dinner in Gaithersburg, Maryland, on 23 March 1985 by ARRL Director Gay Milius Jr., W4UG. □

East Bay ARC honors N6DRT with award

Donald Simon, NI6A

At the 1984 Christmas party of the East Bay Amateur Radio Club (EBARC), Dave Tyler, N6DRT, was presented with a Certificate of Merit for his service to Amateur Radio. Dave's service to our fraternity is truly extraordinary.

Before being elected president of the EBARC in 1981 and 1982, Dave served as vice president and treasurer. He started the West Contra Costa ARES group and became its first Emergency Coordinator. Dave began the proud EBARC tradition of public service communications for the community charities, parades, and civic/athletic groups such as the American Cancer Society, March for Dimes, Local Jogging Associations, California Department of Forestry, etc. At every public event, Dave was there personally, and was the man who performed the preplanning and interface. Where there was positive public relations for the hobby and publicity, it was always Dave who did it.

Dave maintained the EBARC mailbox, answered the correspondence, produced and edited the club newsletter, and served actively on numerous club committees for many years such as the Club Station Committee (W6CUS), the Field Day Committee, Public Service Activities Committee, Education Committee, Awards Committee, the Public Relations Committee, etc.

Dave served for over five years on the Board of Directors. As West County Emergency Coordinator, Dave broke virgin ground with hospital administrators, Red Cross officials, Salvation Army leaders, county and city disaster officials, blood bank officials, etc.

Very few members of the EBARC knew that beyond this local activity, Dave was expending tremendous work on statewide RACES planning, Western Operations Task Forces for the American Red Cross, ARRL Convention Programs, Senate Disaster Subcommittees, etc. Dave has been serving as the Chairman of the Communications Advisory Committee for the Western Operations Headquarters of the American Red Cross for the past few years. It was Dave Tyler who spent many hours arranging for the expert testimony on behalf of Amateur Radio at State Senator Campbell's Senate Subcommittee hearings on "Amateur Radio Disaster Communications" in 1983. Dave organized the Emergency Communications Forums at recent Pacific Division Conventions and has traveled from Reno to Santa Barbara, Bishop to Santa Cruz, Sacramento and elsewhere on behalf of Amateur Radio without any monetary compensation.

I am sure this list is far from complete. We are certain that this simple piece of paper honoring Dave and his work cannot be adequate to express our deep appreciation we have for his quality achievements and selfless dedication.

Dave is currently the Chief RACES official for Contra Costa County and resides in Albany with his wife, two children and a growing antenna farm. We can think of no other amateur in northern California that has done so much for their hobby and community through Amateur Radio. It's an honor for the EBARC to be associated with a ham like Dave Tyler, N6DRT. □

New generation

Norm Tramba, WA0HWH

Recently I had the opportunity to host a third grade class at my ham shack. We looked at QSL cards; talked about the "Ham in Space" and how he talked to amateurs all over the world with just a walkie-talkie; demonstrated how a computer could send and receive Morse code, and how I could or could not start World War III with my computer, like in the movies.

Finally, in the last few minutes of our allotted time, we managed to sit down at the rig to make a contact where each student had the opportunity to say "Hi" to someone over Amateur Radio. Later I heard that when the class returned to school, the favorite topic of discussion was how they had talked to Mel in Michigan.

Maybe the youth of today are not impressed with racks of equipment, but they are most certainly interested in computers and space. Utilizing these interests, we should be able to keep Amateur Radio alive and well forever.

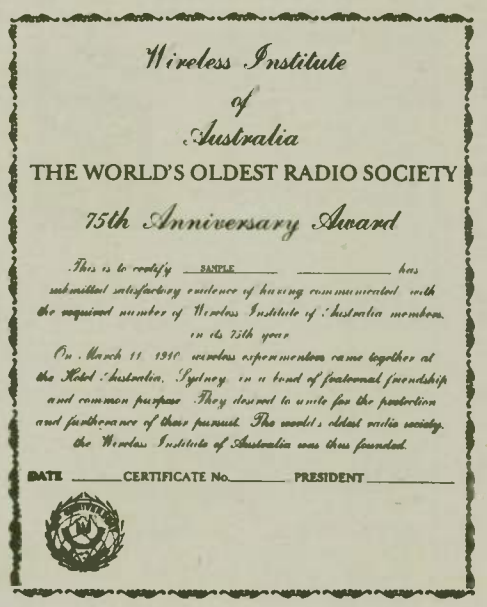
— *Wichita ARC, KS* □

WIA 75 Award

The world's first and oldest radio society, Wireless Institute of Australia (WIA) celebrates its 75th anniversary during 1985. One of the many planned activities is the WIA 75 Award which will be available during the period 01 March to 31 December 1985.

To qualify, radio amateurs (and shortwave listeners) need to contact (log) 75 members of the Wireless Institute of Australia. A contact will only be valid if the WIA member's individual membership number is logged. No more than 30 WIA members may be logged in any one call sign area.

Claims should include a log extract of the 75 WIA members contacted, $2 (Aust.) to cover certificate, handling and postage costs, and be sent to: WIA 75 Award Manager, Wireless Institute of Australia, 412 Brunswick Street, Fitzroy 3065, Victoria, AUSTRALIA. □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ATTN: DX'ers

I would like to get in touch with any DX stations that would be willing to participate in a propagation study during the low portion of the sunspot cycle by operating a CW beacon on 10, 21 or 28 MHz.

JOHN MAHAGAN, WB4JHS
P.O. Box 3282
Thomasville, GA 31799 □

VR6TC needs transformer

I wonder if you would do Tom Christian, VR6TC, a favor. Last month, the plate transformer in his old Hallicrafter HT-41, burned up. I realize these transformers are very scarce now, but maybe someone could find one. He is also looking for a spare 7094 tube or two.

Anyone who could help can get in touch with me any Saturday or Sunday, at (805) 725-8707, about cost and shipping.

JULES WENGLARE, W6YO
1416-7th Avenue
Delano, CA 93215 □

Kenwood service bulletins

I have heard that in addition to their service manuals, Trio-Kenwood also prints service bulletins which update their service manuals. I've written to Kenwood for these bulletins or information on same, with no results.

Does any reader know a source for Kenwood service bulletins for the TS-530S transceiver and R-1000 general coverage receiver? Either originals or photocopies.

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

Keyer problem solved

I recently assembled a Bel-Tek CMOS keyer kit, and you answered my question as to whether or not I could place a switch across the output for tuning. Thanks, it works fine.

However, I did have a problem with the keyer. With the carrier tuned up to a normal level on my TS-530S, when I touched the key or turned on the tuning switch, it put the transmitter in a steady "on" mode. I cured this by installing a Radio Shack 12VDC relay Cat. No. 275-233 between the keyer output and the transmitter.

It works fine, and I thought this could be of interest to other amateurs who might encounter the same problem.

FOREST PHELPS, WA8ZED
Lake Placid, Florida □

Free, from AT&T!

Several weeks ago I contacted AT&T about a new brochure on international telephone rates. I received the new brochure, an international telephone guide, a booklet *Getting Around Overseas,* and a beautiful colored "International Dial Wall Map" with all the time zones marked on the map. I had requested six brochures to give to some friends, and received six of everything! The wall map is a real nice addition to the ham shack.

These can be obtained free of charge by calling (1-800) 874-4000. I think ham clubs and amateurs could find good use for these items, especially the wall map for their ham shacks.

DAVID LAUER, KB0MU
Seneca, Kansas □

Give Novices a chance

OK, people. You had to learn code, and you have upgraded. So why are you now working the Novice bands, at 20 or more wpm?

I have two friends who just received their Novice Class licenses. They tried to work 80 meters and 40 meters Novice band. Well, I went on 3700-3750 with them, and there were only a very few hams working 5-15 wpm.

If we are going to work in the Novice bands, I think we should make it a practice of sending slower. I know that if you or I CQ out at a fast rate of speed, someone is going to come back to us at that speed, and more times than not, it isn't a Novice.

So people, please let's give the Novice a chance.

ED SCALLON, KA1JSN
Providence, Rhode Island □

Fire department patches wanted

I am looking for other amateurs who are associated with a fire department, and am interested in collecting one of their department patches.

DARRELL PARHAM, WB7BBH
6365 SW 209th
Aloha, OR 97007 □

Book was older than he thought

Gentlemen, a *pox* upon all of you for the book report on "The UHF Compendium," Parts 1 & 2 by Karl Weiner, DJ6HO. I was much impressed by the comments by your reviewer John Henry, KB7CH, such that I did prevail upon my XYL to present me with a copy for Christmas. *(ED: The reviewer's name was misprinted, and should read John Hanny, KB7CH.)*

The pox, however, is for the failure of the reviewer to indicate the publication data. I did expect to have at hand a copy of recent work. However, as I have been reviewing the journals, and in particular **Ham Radio,** I did find that this book had been published in early 1983, if not in 1982.

Needless to say, I do have a copy and do appreciate the excellent data contained therein. However, I was much taken aback to find when recommending same to a few friends that this was old-hat. A slight embarrassment not necessary to the fulfillment of one's ego . . . enough said.

Item of possible interest to replace or supplement "weather boots." The Dow Corning Corporation of Midland, Michigan now has on the market a liquid, paintable silicon rubber roof cement. Only one color (black), but guaranteed to last 20 years.

To use for permanent sealing against moisture, use directly. However, if one wants to take the seal apart, I suggest that one tapes, leaving a half-inch fold on end of tape. Seal with the rubber silicon cement. To remove, pull the tab after a little cutting to open the joint. The silicon rubber comes only in 1-quart cans.

For roof mounts, this seal compound has the ability to withstand multiple flexing, and the joint will last 20 years . . . enough said?

ADAM PAUL BANNER, WB8TQR
Ann Arbor, Michigan □

•••••••

Check your license expiration date.

Warning on PRB-1

As I understand it, the ARRL filed a PRB-1 on 16 July 1984, requesting the FCC to exercise federal preemptive authority over state and local zoning regulations which affect transmitters and antennas used by Amateur Radio operators. This appears to be an absurd proposal.

If one considers the inability of the FCC today, to test and license amateur operators, enforce amateur regulations, and establish standards to protect people from RF exposure, it is absurd to believe that the FCC (or any federal agency) could get involved with antenna structures (or any other structures) which are the responsibility of local ordinances enacted by local people to suit the needs and desires of their particular communities.

We created the FCC in 1934 to tell us how to broadcast; not what, when, why or who. This was to establish technical standards and operator competency so that we didn't interfere with each other. The FCC is now failing. It has concentrated on the who, when, what and why of broadcasting and has not kept up adequately with the technical aspects. Presently, it is relying on industry to provide technical adequacy of equipment and the people who operate and maintain it.

Whether this is good or bad is a separate subject. The point here is that the FCC could not possibly perform well enough in the area of local antenna regulation to be useful. When we consider the problem of antenna laws there are three basic areas of concern:

1) Aesthetic acceptance in the community.
2) Structural adequacy for the protection of adjacent property.
3) Radiation safety.

Aesthetic acceptance

While it is true that beauty is in the eye of the beholder, let's be realistic. If you were not an amateur and moved into a new housing tract with all power, telephone and cable TV lines underground, would you like to see your neighbor install a 100-foot tower with a 40-meter beam in his yard? Of course not. It's ugly. I have installed hundreds of antennas and they are all ugly. Antennas are necessary but they are ugly.

The aesthetic problem of antennas has been handled fairly in my area. The use of restrictive covenants as part of the property deeds protects all the residents from each other. For older communities with no restrictions, other reasonable agreements must be worked out.

Structural adequacy

Do antenna towers ever fall over? You bet they do. Some amateur antenna towers are accidents waiting to happen. We have attempted to protect ourselves from inadequate installations by local construction regulations. This is a good idea, and local construction permits and inspections for antenna installations (like any other structures) can help to assure safety from falling objects.

Once an antenna is designed and installed correctly, adequate maintenance must be performed. I have never seen in local ordinances, which control construction permits, any requirements on the maintenance of antennas. You ought to see what happens to many metals when they are exposed to the weather for a few months along the California coast where I live. Local governments must not use overpriced construction permits or other annoyances to curtail antenna installation when they are really against antennas for other reasons.

Radiation safety

Here is an area that people talk little about. If I install an 80-meter ground-mounted quarter-wave vertical antenna near the side of my house, it will be approximately 10 feet from the bedroom of my neighbor's house. Do I have the right to radiate 1500 watts of RF energy when he is sleeping in my primary magnetic field? I am morally constrained not to do this to him, but no law prevails. I have been questioning for years, how much RF energy at HF is unhealthy.

I get no answers because the FCC has only worked the problem for microwave ovens. Are you aware of how much RF energy is passing through your head right now? Turn on a radio receiver and you may be surprised. Radio is new in the total history of man. We don't yet know the full effects of man-made RF radiation. Whether I believe it is safe or not, I must tell my neighbor what I am doing. I believe he has a right to know he is in my RF field.

I was unpopular with many of my fellow amateurs about 30 years ago when I supported a petition to limit Amateur Radio power to 100 watts. The more power an amateur radiates, the more responsible he must be with that radiation.

So, fellow radio rabbits, be wary of calling in the lions to get rid of the local mice. Lions have been known to ignore the mice and eat the rabbits.

DAVID WRIGHT, W7LYE
Santa Maria, California □

SPREAD THE WORD ABOUT AMATEUR RADIO!!!

A big 'NO' to the iambic keyer

In re: "Old dogs can learn new tricks"

Reading Edward Spasek's item in the January issue of **Worldradio** (page 17) convinced me that the proponents of the iambic-squeeze system of CW keying have done almost as good a selling job on us amateurs as the home computer manufacturers are now doing on our kids.

I'll have to say, though, that Ed's presentation of the problems associated with squeezing-the-paddle were fair enough, but the selling job was completely one-sided, which is the prerogative of any salesman.

Well, here's one Old Dog who isn't buying. Amateur Radio is supposed to be fun, not a mind-boggling ordeal that compares to the back-breaking efforts demanded by football's toughest coach of all times — Lombardi.

By contrast, the teachers of touch-typing found out a long time ago that a typewriter could be mastered most easily by cultivation of the operator's instinct. It's like riding a bicycle or driving a car. When you come to a turn, you don't stop and think "to make a right turn, I will have to turn the wheel clockwise." You just do it automatically by habit.

With a squeeze paddle and an iambic keyer, to send the letter "L", you push and hold the dot paddle closed; and then as soon as one dot is made, you push and hold the dash paddle for one dash and then release it; and then you release the dot paddle after two dots are made . . . or something like that.

Imagine memorizing and executing this exercise for seven of the letters in the alphabet (all different) while using the regular non-iambic system for the other 19 letters. Your chances of ever doing all of that instinctively or by-habit are pretty slim.

Once in awhile I get into a QSO with a guy who makes more than the average number of mistakes, and then makes a lot more mistakes while trying to correct the ones he has already made. You may not want to believe this, but when I ask him what kind of keyer he is using, he tells me about his wonderful iambic squeeze paddle and keyer, actually trying to sell me on the idea. Misery sure loves company.

Speaking from experience, when I went from a bug to a fully automatic dot-dash keyer, I had my lumps with those inevitable extra dashes. Then one day I met a guy who had already made the bug-to-keyer transition, so I asked him how he did it. "Well," he said, "I just use the keyer like I did my old bug. I make my dashes individually with the dash paddle, and the dots by holding down the dot paddle."

So I tried it, and it worked. Then I sold this idea to one of my ham friends who was going through the transition, and in a few days he was comfortable with his new toy, sending better CW than ever before. Not too long after that, he was letting the keyer make multiple dashes and laughing at his start-up problems.

Specifically, what are the advantages of a non-iambic keyer over a bug? With the keyer you get self-starting and self-completing dots and dashes. Which means you get a perfect dot or dash every time, with just a touch of the paddle contact. No more of those ("dirty contact") characters with their scratchy starts and stops. You adjust the speed simply by turning a knob; never again will you have to make short dashes to speed up, or extra-long dashes to slow down.

The only negative factor in using a non-memory keyer which makes self-completing dashes is that you can't key in a new dot following a dash until that dash has been completed. Makes sense.

By the way, I got my First Class Commercial ticket back in 1929, Serial number 3421. Having been in both worlds, I will say that sending written messages is easier than carrying on a QSO in Amateur Radio.

It takes a lot of mental gymnastics to do many things at once — like remembering what the other fellow said, planning your word-by-word reply and spelling each word correctly, listening to the dots and dashes on your side-tone, and telling your thumbs and fingers the number and sequence of dots and dashes for each letter. Wow!

So if you have already developed a feel or habit or instinct for sending a certain way, you are looking for trouble in going to another system. Just consider the fact that the dominant makers of iambic paddles and mechanical bugs are now offering single-paddle non-iambic machines.

Finally, I would like to take exception to the comparison of keyboards with teletype. The latter can be copied only by other teletypes, and in my opinion, if it ever came to a vote of the ham fraternity, the teletypes would be outlawed.

On the other hand, the keyboards can be read by CW operators; in fact, most operators can read keyboards at about twice the speed they can read ordinary fists. The keyboards set a standard of excellence in CW for all of us brass-pounders to shoot at.

Furthermore, I have found the keyboarders willing to slow down to the other fellow's speed, . . . only asking that the other fellow, in turn, send good, clean CW which reads out on their computer monitor screens.

JIM OWENS, W5JQE
Flint, Texas □

Old-timer remembers DeForest

Frank Berberich, W7JZC, wrote a very interesting piece in the January issue ("Early-day hams", page 51).

First, we have the oldest licensed amateur on Staten Island, licensed 1912, call W2JF — Anton Frey, who will be 90 in June. A gentleman in the truest sense of the word.

The station at Wanamaker's two stores, one in New York City and the other in Philadelphia, were Federal arc transmitters. Store business was carried on between New York and Pennsylvania via radio.

I first got infected by the radio germ in 1912, and got a job at Dr. DeForest's factory at Highbridge during my summer vacation from school. I was the commander-in-chief of a broom, and when I was resting, I was cutting wire to size with an old paper cutter. I was 12 when I got that job in 1915.

My first piece of radio apparatus was a fixed capacitor, which I took apart to see how it was made, and cost 25 cents. That money came from five empty bottles I sold to a liquor store. One could buy good snake bite medicine in quantity, if you brought your own container.

Another famous radio station was WHD, New York Times. It was the first Collins rig, the signal was ICW, tone-modulated CW, and the night operator was the late Charlie Murphy, who used a straight key to transmit news to ships at sea and to anyone far away from home. Some of us used to visit him around midnight and listen to the musical tone of the signal.

By the way, DeForest's engineer designed many types of vacuum tubes. Eighteen phone stations were built for China, and set up by Mr. Gowan. His name in Chinese was Gow Hen.

In those days, the best code practice came from NAH, the Brooklyn Navy yard.

DeForest was allowed to transmit only after 11:00 p.m., and no more than 27 miles — which was just the distance between the factory and his engineer's home.

73 to all, from an old goat going on to age 82.

MARTIN HELLMAN, K2TAJ
Staten Island, New York □

'Saga' stirs memories

First, I would like to praise you people for the excellent editions of **Worldradio.** They are absolutely superb, and my wife and myself enjoy them from cover to cover. Your latest edition, February 1985, containing the article written by Dave Atkins, W6VX, page 18, "South Seas saga", was excellent.

Since I participated in the Saga with Fred Roebuck, being at sea on President Steamships of the Dollar SS Company, carrying my own short-wave transmitter and receiver aboard for nine trips around the world between 1925 and 1928, the article brought back some very fond memories.

In those days, short-wave was experimental, although it was illegal to carry a short-wave transmitter-receiver aboard. Nevertheless, the radio inspectors used to "look the other way" because they knew that what came out of this experimentation would probably be beneficial, and *it was!*

I worked KFUH, the *Kaimiloa*, nightly and "FD" and myself became very close friends for life. It was he in 1928 who, in keeping our nightly schedules on high frequencies (I signed "RM" as a call), one evening when the *President Garfield*, KDTC, was steaming northward along the coast of Mexico off of Mazatlan, asked

if I wanted a job at KUP as 2nd operator. I would be arriving in San Fran on 01 August . . . hence my start at KUP.

Four months later, Fred or "FD" went back to sea on the *President Polk*, KDOZ, one of my old ships, to pioneer short-wave communications for the Dollar SS Line. Then I became chief op. Six months later, I became superintendent and instigated 24-hour press service from KUP for ships at sea with a monthly fee of $15 for four press-scheduled transmissions daily, with various other schedules thrown in for good measure.

In working KDOZ daily around the world from KUP, except for three days in mid-Indian Ocean, daily reports were telephoned to Ralph Heintz of Heintz and Kaufman Ltd., in South San Francisco. They also ran 6XBB daily to work KDOZ from their shops. Thus, the forerunner of Globe Wireless was instigated through this experimentation.

The nightly contacts were very successful. "FD" endeared himself to many many old-timers in communications because of his expertise in being a most excellent operator.

The picture of 6HM's rig in 1928 was the forerunner of the transmitter built for KUP in August 1928. DeForest built the 204A tubes for me, and believe it or not, the KUP transmitter carried 2½kW input at 2500 volts of 240 cycle supply very well. The best we could do with other manufacturers of 204A (250 watters) was about 900 watts. The DeForest tubes were extremely ruggedly built internally.

In 1924, 6AYC built a tuned plate tuned grid self-rectified transmitter using two UV-203A 50 watt tubes. The secret I discovered in the operation of this transmitter was the employing of 35mmf or pfd variable capacitors as blocking condensers in the plates and grid circuits. By balancing these the note rendered with self-rectification became a miracle signal. The transmitter became very famous and was copied widely.

Just before going to sea in 1925 I tore the old transmitter down, stored the parts carefully in a box, sealed it and carried it with me wherever we moved. In early 1983 I unpacked that old box, carefully removed the parts, examined them and thus decided on PROJECT 1925 to rebuild that old transmitter for lecture purposes. It is nearly done today.

The power supply still has the old Acme power transformer that I paid $17 for back in 1924! And the same old 203A tubes which were $35 each! Have a pair of later 203A's which was donated to me for the PROJECT by Art Soule, W7CX, in Reno. When the PROJECT is completed, I will send you folks a picture.

My old call 6AYC made history with the TPTG I mentioned above during the Dole Air Race to Hawaii back in 1927. I took one trip off going to sea in between ships and it occurred right at the time of the Dole Race. So the **Post-Enquirer** newspaper of Oakland asked me to take my transmitter to the Oakland Airport — a cow pasture at that time, and establish communications with Hawaii.

Since I knew Tad Fullaway, HU6CFQ, — now a retired Coast Guard Captain — I radioed him to set up at Honolulu for scheduling and arrange for contact with the Honolulu **Star-Advertiser**. The race began and we had a regular solid point-to-point circuit between him and myself 24 hours a day!

The **Post-Enquirer** has an 8′ × 10′ shack moved out on the field back from what was supposed to be a runway. They also put up a 60-foot telephone pole with a 14-foot cross arm at the top. We strung a 40-meter antenna vertically from the top of one side of the arm and on the other side a 20-meter antenna, both terminating in the shack on my transmitter. 6RJ furnished a Grebe CR-5 receiver, and we were in solid business!

The operators were 6RJ, 6NO, 6ZA and several others, whose calls I cannot remember. Those days were reminiscent of the days I operated on high speed press circuits, both landline and international. The use of Phillips Code was prominent in those days!

RON MARTIN, W6ZF
Colonel, USAF (Ret.)
Napa, California □

Warning

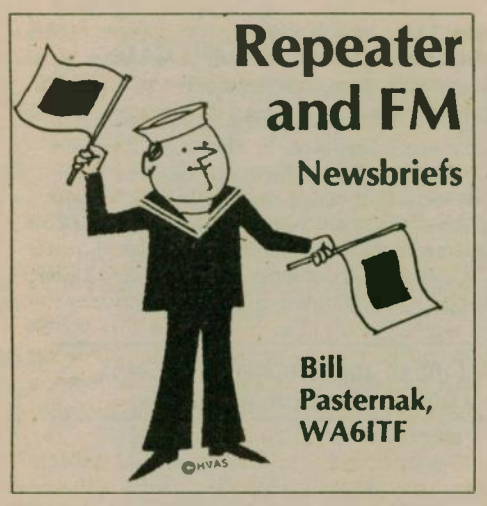
(continued from page 17)
have a better understanding of your problem, and if that means a lower fee, FB!

If you finally decide to keep your house or make a deal, add your age to the payments, for the older you are, the more you will suffer! Good luck and a Happy New Year! And good luck to you too, Bill. If a letter attesting to how your good services will be missed, signed by a flock of traffic handlers, might help you in any way, let's have at it! □

CQ Awards Program

The Southern California DX Club wishes to inform **Worldradio** readers that if any are interested in the "CQ Awards Program" and need forms or to have their cards checked, they may contact Chris Williams, KG6AR, with an SASE at P.O. Box 812, Temple City, CA 91780. Chris has been appointed by **CQ Magazine** as an official Check Point Station. □

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



This month, Worldradio introduces a new feature called 'Repeater and FM Newsbriefs'. The feature is dedicated to serving the needs of a great many hams whose primary interest is that of VHF/UHF FM and repeater communication.

The column features up-to-the-minute news and information about this "fun mode" of operation, garnered from sources worldwide, utilizing the combined resources of the Westlink Report Newsletter and the Westlink Radio Network news services.

It is written and edited by Bill Pasternak, WA6ITF, editor of Westlink Report, author of the book The Practical Handbook of Amateur Radio FM and Repeaters.

This feature will appear on an as-needed basis, when the news pertaining to repeater and FM operation warrants.

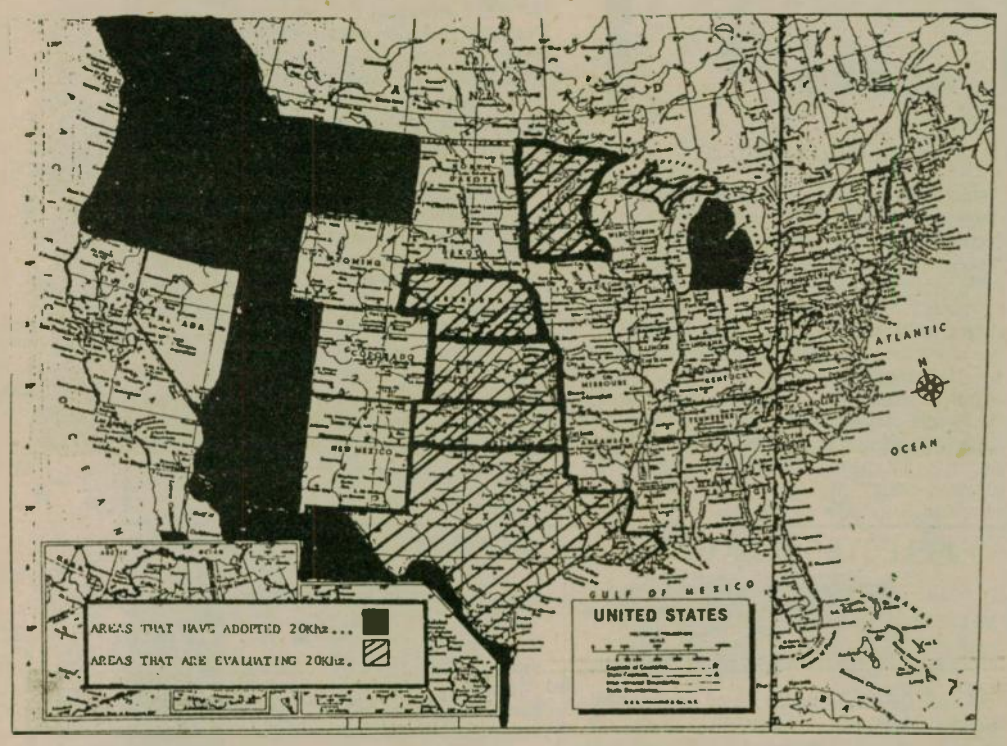
The 20 kHz genie is out of its bottle

Michigan is the first state east of the "Continental Divide" to adopt the Pacific Northwest 2-meter bandplan for the 146-148 MHz repeater subband. On Sunday, 09 December, the Michigan Area Repeater Council voted overwhelmingly to abandon both upright and inverted 15 kHz tertiary splits in favor of a uniform upright 20 kHz plan.

Under the MARC directive, all future 15 kHz frequency requests have been put on hold until June 1985. At that time, a detailed list of delegated repeater "moves" will be released with all systems conforming to the 20 kHz bandplan no later than May 1986. The Michigan 20 kHz move will eventually impact strongly on surrounding states, with Ohio, Illinois, Wisconsin and Indiana directly affected. Unlike in the West, where terrain separation permits 20 kHz and 15 kHz systems to coexist in various states, the Midwest and East Coast do not have that luxury.

On a line-of-sight basis, the two systems are totally incompatible. The move to 20 kHz by Michigan could cause a ripple effect felt all the way east into the heavily congested Boston-New York-Washington RF Corridor. It is also expected to sway votes in an upcoming election in Texas to see if that state retains its current 15 kHz inverted plan, or opts to go 20 kHz.

Currently, the Pacific Northwest bandplan covers 25-30 percent of the geographic United States, but until now has been confined to the more sparsely populated Western states. The plan was originated by the Western Washington (state) Amateur Relay Association in 1978, and is now viewed as a viable alternative to any form of 15 kHz allocation in areas faced with implementation of the same.



The above map indicates areas (in black) that have adopted the Pacific Northwest 20 kHz 2-meter bandplan, and those states now considering a changeover to it. Note that the Canadian province of British Columbia and all of Mexico are using 20 kHz, making it a truly "internationally accepted" standard of frequency coordination. Expect the southern half of California to be on the "evaluating" list shortly, as that area's 2-meter coordination council will soon begin its "evaluation" of 20 kHz. Map was supplied by Clay Freinwald Sr., K7CR, and updated prior to publication by this news service.

A national coordinator, please

While the FCC cannot come right out and say it, the "unofficial" word out of Washington is that the FCC wants some group, somewhere, to take the initiative and begin the formulation of a National Repeater and FM Advisory/Policy Board, now.

Recent regulatory interpretations dealing with the removal of "uncoordinated" repeaters from the air which were interfering with coordinated systems have left the Commission in a rather awkward position. Before they can act on a complaint, the FCC must be sure the individual or group filing the complaint is a "bonafide" frequency coordinator or council. The Commission has used the ARRL Repeater Directory listing of frequency coordinators as its guide, but now the League has informed Washington that it cannot be held responsible for the accuracy of the data.

It is well known that many of the sparsely populated states never had coordinators or council, and in other instances, some councils simply "folded their tents" after the great coordination "boom" of the '70s.

Since no known and accurate "database" exists, and the Commission is continuing to receive requests for enforcement action, they hope some group will take the initiative in this regard before they find themselves in the unenviable position of having to reevaluate the current regulations regarding repeater operation, and who can own and operate one.

The FCC does not want to get into the "frequency coordination business" in any service, and that includes Amateur Radio. They appear disappointed that the ARRL is reluctant to get involved in the formation of such an organization, as was indicated by the vote of their Directors last November.

Mandatory coordination and the "Supercoordinator" rules request

Former ARRL Public Information Officer (PIO) Peter O'Dell, KB1N, has filed a Request for Rule Making aimed at establishing uniform national repeater coordination standards and mandatory repeater coordination.

In his request, the former League PIO noted that the FCC may have already and inadvertently set up existing local voluntary frequency coordinators and coordination councils as "defacto" FCC licensing agents. This as the result of recent regulatory "interpretations" used by the FCC to remove uncoordinated repeaters from the air after the Commission received complaints from coordination councils about the "pirate system" activities interfering with repeaters holding valid regional sanction.

O'Dell notes a definite lack of consistency in coordination practices from one geographic region to another, and requests that the Commission take what he terms "appropriate steps to develop fair and consistent spectrum management procedures" for the coordination of amateur relay systems. KB1N also asks that this "agency" or "Supercoordinator" be required to formalize a list or data-base of all coordinated systems, and have this information furnished to the FCC on a regular basis. From it, the Commission would issue "Repeater Operating Permits", which would have to be renewed on a regular basis. The KB1N Petition would also make it a regulatory offense to install and operate a repeater on any band without first obtaining an FCC Repeater Permit.

Private Boxes Have Rights Too Dept.

Private and closed repeaters have just as much right to exist as do "open" or public repeaters. This was the gist of a 1978 FCC regulatory interpretation used in answer to a Texas amateur who had filed a Petition for Rule Making that was aimed at making private and closed repeaters into "outlaws".

The petition was denied, and one of the reasons cited for the denial was the Commission's feeling that individual amateurs or groups of amateurs did have the right to deny access to a given relay system if that individual or group decided to do so. While the individual or group did not "own" the frequency pair, it did have the right to decide who would and who would not be repeated over the system "hardware". With this in mind, we offer the following.

Our news service recently learned that a well-known frequency coordination council was in the throes of political unrest. It appears that one of its factions

conceived the "brilliant" idea that the council should simply pull the sanctions of all "Private and Closed" repeaters, and then file a complaint with the FCC that these repeaters were operating without council authorization. Once the "privates" were gone, the frequencies were to be recoordinated to new "open" systems. It has not happened, and probably won't.

When we heard about this "gimmick" we ran it past the FCC. After we both stopped laughing, the particular person at the FCC told me the FCC was not that naive. In fact, if a coordinator or council was dumb enough to try such a stunt, the coordinator and not the private repeaters might be the one out of business. In other words, the FCC will not stand for this type of trickery, and has no intention to let itself be used by anyone. Don't try it. You will only get what you deserve, and that's something you won't like.

OST 220 fast one

Our friends at the FCC's Office of Science and Technology (OST) have done it again. In what can only be classified by this reporter as a real "beaut", the petition from Sideband Technology Incorporated aimed at acquiring 220-222 MHz for narrow-band technology Land Mobile services has been reinstated. The way in which the matter was handled was so sneaky that it gave no time for amateurs to file any last-minute comments on the request which was designated RM-4831.

As you may remember, the American Commercial Barge Line Company had challenged the petition based upon what they termed a conflict of interest on the part of Sideband Technology's Washington legal counsel. As a result, RM-4831 was put "on hold" until further notice.

Then, quietly on 05 December, American Barge withdrew its challenge to RM-4831, and the pleading cycle was resumed. A December 19 commentary cutoff date was set, with reply comments due before 03 January 1985. However, notification of the resumed pleading cycle was not made public until it appeared in the 11 December 1984 FCC Daily Digest. Now, it takes about three to four days for the U.S. mail to deliver these documents, and by the time they arrived at the various Amateur Radio news outlets, there was no physical way to get the word out to anyone. I guess that's the way the OST says "Merry Christmas" to the U.S. Amateur community.

North American Coordinators Newsletter

If you are a member of a voluntary frequency coordination council or serve as an individually appointed area frequency coordinator, you should subscribe to a new two-way interactive publication called the North American Frequency Coordinators Newsletter. It's the product of the mind of John Hackman, WB4VVA, of the Michigan Area Repeater Council.

The newsletter is filled with matters that are of definite importance in the voluntary frequency coordination process, but not "newsworthy" enough to appear elsewhere. John has done an excellent job at putting together a printed tabloid that serves the needs of a very small but important sub-group within the Amateur Radio community.

For more information, drop a note to John Hackman, WB4VVA, North American Frequency Coordinators Newsletter, P.O. Box 194, Mt. Pleasant, MI 48858.

If only this were the U.K.

This final item comes from Westlink U.K. (United Kingdom) reporter Kris Partridge, G8AUU. The amateurs in England do not have to worry about losing some of their VHF bands because of a need for more frequencies by the land mobile boys.

The United Kingdom has a better solution. Effective 01 January, all remaining VHF television stations in Great Britain are being taken off the air, and a good chunk of that spectrum is being made available for various commercial uses.

It should be noted that the system now being eliminated is their old 405-line, low-resolution monochrome system. In recent years it has had very few viewers, since all color television is broadcast strictly on the UHF television band. As an added bonus, U.K. and European amateurs could get themselves a 6-meter allocation in a few years, once the remainder of VHF-TV is phased out in the rest of Europe. □

STATION APPEARANCE

Jacob S. Kovalchek Jr., AK2I, of Cherry Hill, New Jersey, wins the Station Appearance award for March. With the conveniently arranged shelves, AK2I has everything at his fingertips when operating.

Kovalchek lists his equipment as follows:

TS-430S with phone patch and AT250 antenna tuner; FT-902DM Yaesu with FTV 901R transverter for 2 and 430 MHz; IC25A for 2-meter FM; Commodore 64 computer with disk drive and the MPS-801 printer, coupled with the Microlog Corp AIR-1 for RTTY and ASCII. Also, a Globe Scout Model 40A transmitter still in good operating condition.

The antenna is a KT34A KLM triander on a 60-foot EZ-way tower with a Unique Tripole antenna for 160, 80 and 40 meters.

AK2I says he uses **Worldradio** for his weekly 2-meter repeater bulletin session for the Phil-Mont Mobile Radio Club, serving the Greater Delaware Valley with a coverage of over 5,000 square miles. □

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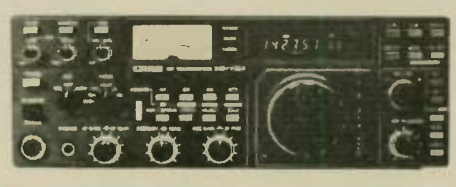

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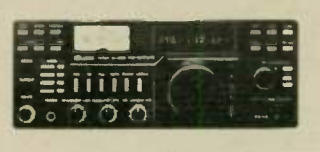

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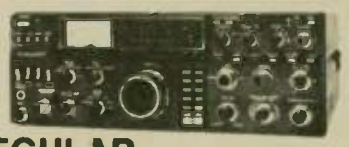

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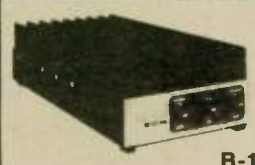

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B1016	2M	Yes	10W	160W	20A	$249
B3016	2M	Yes	30W	160W	17A	$199
C22A	220	Yes	2W	20W	5A	$89
C106	220	Yes	10W	60W	10A	$179
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Activities Calendar

16 - 17 February	ARRL International DX Contest (CW)
22 - 24 February	CQ World Wide DX 160-Meter Contest (SSB)
23 - 24 March	REF French Contest (SSB)
02 - 03 March	ARRL International DX Contest (SSB)
16 - 17 March	Bermuda Contest
30 - 31 March	CQ World Wide WPX Contest (SSB)

Mount Athos (SV/A)

According to *QRZ DX*, another attempt to activate Mount Athos was in the workings. It was to be a DXpedition of Italian DX'ers scheduled to operate 29 December through 04 January and signing I0SNY/SV/A. The team was to consist of I0SNY, I2AOX, I0VVQ and IN3ZTF.

Two weeks later, in another issue of the publication, the team claimed they were still going, but their December 29th starting date was delayed because an entry permit was not received in time (this was several days later). Bob Winn, W5KNE, *QRZ DX* Editor comments, "If this operation is real, it is a well-kept secret . . . at least in Europe."

Peter I Island (3Y0)

Nothing more on this one except that *The DX Bulletin* comments that if there is a landing the operators will be on the air for only a few hours. The operation will more than likely favor list operation. There is also a rumor floating around they are talking about taking the list with them — a list made up ahead of time. Jim remarks, "Get out your checkbook."

Well, if that is what it appears to be, it would be a good chance that it would fail for DXCC credit. A pre-paid QSO criteria is worse than the list system itself.

No sense worrying about this now as the 1985 trip most likely will not even materialize. Look for 1986.

U.A.E. (A61)

The latest report we have seen concerning A61AA is that R. Brown, G3LQP, who is the QSL manager for that station, and operated by D. Shepherd, G3LCS, has a copy of the license and an English translation with a letter authorizing G3LCS to operate the station. These are reported as being sent to the DXCC desk at ARRL headquarters.

Jim Cain's *The DX Bulletin* has been following this closely. The current A61AA was formerly A6ASS, an initial call assigned to Ahmed Siddique S. The station is located at a Royal Palace in Abu Dhabi, one of the 14 emirates. There is a possibility that a valid license from one emirate might not be valid for the entire U.A.E. (United Arab Emirates), which still has a ban on Amateur Radio. But if you hear A61AA, by all means work him and worry about it later.

Bouvet Island (3Y)

That Norwegian Bouvet DXpedition for the early part of this year never materialized. Although all the necessary permissions had been granted for the operation, the obstacle was finding a way to get to the island.

The only expedition to pass the island before the end of the Antarctic summer season was the South African one. For political and practical reasons, it has not proved feasible to establish the necessary cooperation for transportation with the expedition.

The above information is from the LA-DX Group via *QRZ DX*. The Norwegian DX'ers will continue to search for future possibilities for the long-overdue DXpedition to Bouvet Island.

Revilla Gigedo (XF4)

QRZ DX reports a DXpedition to Revilla Gigedo, off the coast of Mexico, most likely during late February or early March. The sponsor of this one is the Mexico DX Club (XE1MDX), with the operators rumored to be Victor Keller, XE1VIC; Elicio Munoz, XE1OX; V3ZZ; Pete Warren, W5MQA; and perhaps two French operators.

As was reported last month, the Clipperton Island DXpedition is also scheduled to stop there to and from Clipperton. No new reports on this, but the time slot for that one is late March to mid-April.

We don't remember when the last DXpedition to Revilla Gigedo was, but Carolos Levy, XE1YK, was there in October 1973 signing XF4YK. He operated from Benito Juarez Island, one of the four islands that make up the Rivilla Gigedo archipelago. The other three islands are Clarion, San Benedicto and Roca Partida. Benito Juarez is 7 miles running east and west and 10 miles running north and south. Mount Everman, an extinct volcano, is the most elevated point on the island at 3,600 feet.

I was fortunate in 1973 to work Carlos on five bands: 20, 75, 40, 10 and 15 meters, in that order, using my former call of W6KYA. Now all I need to do is work this one on CW — any band will do.

Cocos Island (TI9)

Two amateurs, Sigurd van Patten, TI2SK, and Javier Prada, TI2FPE, plan to operate on Cocos Island 11-15 February, using the call TI9TTY. Don't get too excited on this one as the group will be operating exclusively on RTTY and possible AMTOR. Unless you are involved with RTTY you can forget this one. QSL cards for this one go via Jim Sladek, WB4UBD, 1601 Melrose Pkwy., Norfolk, VA 23508.

Pitcairn (VR6)

Ralph Cabanillas, W6IL, sent us a letter dated 14 December, filling us in on the latest on Pitcairn. He writes:

> Two days ago, Betty Christian — XYL of Tom, who has wanted for a long time to obtain a ham license, even though she has been a commercial operator at ZBP, the station on Pitcairn, for quite a few years — was granted the license in Auckland with the call VR6YL.
>
> Betty and her four girls had to go to Auckland, New Zealand, for operations. The four girls all had appendectomies. The first two were accompanied by Betty, who also had her own woman operation, and the second two were accompanied by Betty's father. All are fully recovered and are waiting for transportation back to Pitcairn, possibly beginning of the new year.
>
> The ham population on Pitcairn will consist of the following: Tom VR6TC; his nephew, Nig VR6KB; Kari VR6KY; Betty VR6YL, and in a week, Betty Reich, WD9GQV, will arrive at the island to stay for an extended time and operate as VR6BR (QSL manager KA9W).
>
> In early November, a husband and wife operated on Pitcairn for about 10 days: Leona Wallace, WA6OHB, as VR6HB, and Carl Wallace, K6YEO, as VR6EO.

Betty VR6BR wasted no time getting on the air as the reports of her activity showed several contacts on 15 meters. She was reported on 21.307 MHz around the end of December. Look for her near that frequency between 1900 and 2300 UTC. Novice operators be alert as Betty plans to spend some time operating in the Novice sub-bands.

Tom, VR6TC, still manages to get on the air as he was reported early in December on 14.178 MHz around 0300 UTC. With VK6YL, a new ham in the family, we wonder what will become of Tom's operating habits.

Macquarie Island (VK0)

Graham VK0GC has been rewarding many a deserving DX'er with a 75-meter SSB QSO. Look for him on 3.795 MHz between 1200 and 1300 UTC, or up on 20 meters with Jim Smith, P29JS, on 14.216 MHz, ala list operation. QSL cards for Graham go via VK3RK, or if the Smith List, then via P29JS.

On 40 meters, VK0YL has been reported on 7.085 MHz around 0800 UTC. QSL cards for Denise should be sent to VK3AH. Also on the same frequency an hour or so later was Graham.

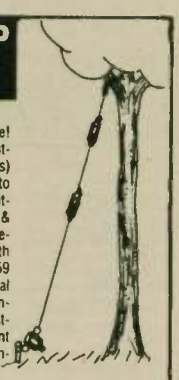
The Long Island DX Bulletin reports that all four Macquarie stations are appearing on the Jim Smith (P29JS) Net on 14.220 MHz at 0700 UTC. In addition to Graham and Denise, there is VK0CK and VK0AH, both going by the name of Dave.

160 meters

Scanning the DX newsletters this past month indicates a shift in operating patterns of true-blue DX'ers. Where there were once many reports of good ones on 20 and 15 meters, the bulk of the activity is now on 75 meters. The amount of reports for that band now far exceeds that of 20 — the old standby.

And, with much activity on 75 meters, there is also a lot of DX'ing on the top band. A list of what is available on 160 meters follows, although much more is there to be worked. As usual, all frequencies are in kHz and times are UTC. The stations may be near the frequencies specified and somewhere in that time slot. There are 78 DXCC countries represented here.

CE3DPD	1835	0300-0600
CM2AS	1835	0500-0530
CT4BD	1835	0430-0600
CX8DT	1834	0200-0300
CY0SAB	1835	2330-0030
D44BC	1838	0600-0730
DL1YD	1850	0530-0730
EA3VY	1850	0530-0730
EA8QO	1836	0600-0800
EI8H	1848	2300-2345
F9YZ	1834	0530-0600
FG7AM	1827	0200-0430
FP0AA	1832	0300-0400
FY0GA	1832	0300-0400
G3SZA	1845	0630-0745
GD4BEG	1826	0600-0700
GI3OQR	1832	0345-0400



GJ3YHU	1826	0530-0700
GW3YDX	1833	0700-0800
HB9AMO	1842	0430-0700
HC1BI	1832	0600-0700
HH7PV	1830	0300-0600
HI8LC	1825	0100-0200
HK1AMW	1826	0100-0200
HK0HEU	1845	0330-0700
HP3FL	1850	0545-0615
HV2VO	1834	0300-0600
HZ1AB	1827	0230-0330
I3MAU	1842	0530-0600
IS0FPH	1840	0400-0500
JA3ONB	1907	1145-1230
JW0EQ	1840	0145-0230
KH6AT	1845	0600-0800
KL7GKY	1829	0900-1100
KV4FZ	1830	0330-0430
LU2DL	1850	0400-0430
LZ1KDP	1822	0400-0530
N6JM	1824	0300-0600
OD5LX	1823	0400-0500
OE5KE	1835	0500-0700
OH3VV	1835	0500-0600
OK2PGU	1830	0500-0530
OX3KP	1833	0500-0600
OZ1LO	1848	0500-0600
PA0HIP	1833	0230-0400
PY1RO	1825	0300-0400
PZ1AP	1826	0100-0330
SM6EHY	1838	0200-0500
SP5IQN	1844	0200-0500
SV0AA	1832	0500-0600
T77V	1846	0430-0600
TG9NX	1835	0400-0700
TK5VN	1835	0630-0800
UA1DZ	1849	0600-0700
UA2FF	1851	0500-0630
UA0ZCQ	1892	1300-1400
UB5WF	1849	0500-0600
UD6DC	1830	0300-0400
UG6GAW	1849	0245-0500
UH8DC	1849	0300-0400
UO5GQ	1848	0500-0600
UP1BZZ	1855	0600-0700
UQ2PQ	1849	0500-0600
UR1RWX	1846	0500-0600
VS6DO	1909	1400-1430
VY1CW	1860	0600-0700
XE1HHA	1845	0500-0700
Y39XO	1838	0600-0700
YU1EXY	1833	0400-0430
YV1OB	1822	0200-0300
ZF2AG	1829	0200-0300
ZL2BT	1846	0600-0700
ZS4PB	1840	0230-0300
3X4EX	1828	0500-0700
4U1ITU	1826	0230-0330
4X4NJ	1827	0100-0300
8P6KY	1822	0100-0300
9Y4XX	1827	0600-0630

Only one call per country has been listed. The total number of DX stations reported this past period on the top band is about twice that of above, and most likely, a lot more not reported at all. See you on 160!

160-meter beacons

There are a few beacons on this band worth checking. Thanks to *QRZ DX* for the following:

OA36	Peru	1805
DHJ	West Germany	1830
OSN	Belgium	1831
TL31	Central African Republic	1834
ZA01	Albania	1837
OY12	Faeroe Islands	1837
MPG	United Kingdom	1865.5
JD18	Japan	1870

All signals are CW.

Senegal (6W1)

Alan 6W1HZ has been showing most days near 21.300 MHz from 1900 UTC and about two hours earlier on weekends. QSL cards for Alan should be routed to Joseph Johnston, W0ZUZ. Keeping Alan company on the 15-meter band are several others such as 6W1BG reported on 21.345 MHz at 1700 UTC, 6W1CK on 21.221 MHz at 1500 UTC, 6W1HF near 21.310 MHz from 1600 UTC, and 6W1KI on 21.350 MHz after 1400 UTC.

On 20 meters we have 6W1AH reported near 14.012 MHz around 2245 UTC, keeping the CW ops happy with 6W1KP on 14.169 MHz around 2200 UTC with the other mode. A station signing 6W1AE on 20-meter CW has been busy near 14.004 MHz and has been reported between 1400 and 2100 UTC.

On 75 meters, 6W1DY has made an appearance near 3.778 MHz between 0700 and 0800 UTC. He has been found as high as 3.800 MHz. Further down the band, 6W2EX has been worked on 3.505 MHz between 2300 and 0030 UTC.

Two reciprocal stations have also been reported. F6HIX/6W7 has been reported near 7.003 MHz between 2330 and 0030 UTC, 14.025 MHz at 2230 UTC, and near 21.335 MHz from 1700 UTC. The other is DL7AGD/6W1 found on 21.211 MHz at 1400 UTC.

Sri Lanka (4S7)

From Sri Lanka, 4S7EA has been worked often on 20 meters SSB. Look for this one between 14.200 and 14.220 MHz after 1300 UTC.

Two other stations were reported this month with 4S7PVR on 14.219 MHz at 1530 UTC and 4S7ZHR on 14.172 MHz from 1400 UTC.

Prefixes

That call you heard or worked signing ZX0ECF is in the South Shetland Islands. *QRZ DX* reports that they are part of the first Brazilian scientific expedition to Antarctica, and is active from King George Island. The operators are reported to be PY1AFP and PY1AFQ and do not speak English. Check 14.170 MHz around 0400 UTC for this one.

If you worked any stations with the prefix of CG4, they were stations in Manitoba in celebration of the birth of explorer Pierre Gaultier de la Verendrye.

Don McDaniel, KJ3Q (left), receives the Western Pennsylvania DX Association's outstanding DX'er award for 1984, from Wayne Albert, KB3KV, secretary. Don is an active member of the club and has made many valuable announcements on the club's spotting repeater. Don also received a new DX Callbook as part of the award.

WCC — World Contest Championship

The International Radiosport Association has come up with another idea in contests. No, it is not another contest; it is a total of many contests. This year it is the four major DX contests sponsored by CQ. I suggest if you are interested to contact the IRSA at P.O. Box 65, Don Mills, ON, CANADA M3C 2R6, or phone (416) 438-6313.

Kalawao County (KH6)

If you worked AH6FG during the period of 14-17 December, you worked the rare county of Kalawao, on the island of Molokai. This is the former famous leper colony, a peninsula that juts out from the north coast of the island. The only way to get there is via boat, plane or a steep trail down the side of the mountain. There is a section of the county that extends to the top where the operation took place. The remainder of Molokai is part of Maui County.

DXCC notes

The ARRL DX Advisory Committee has voted to recommend separate DXCC country status for the British military bases on Cyprus. Now it is up to the Awards Committee to approve this.

The DXAC will also be re-evaluating their position on 4U1VIC, the United Nations station in Vienna. Harvey McCoy, W2IYX, editor of *The Long Island DX Bulletin* remarks, "Don't give up yet on a Baker/Howland decision." Nope! We won't, you can be sure of that.

Clubs

The Carolina DX Association an-

nounces their choice of officers for 1985. Serving for this year is Ted Goldthorpe, WA4VCC, president; Robert Denton, KF4NO, vice president; Gary Bader, KD4RH, secretary/treasurer; and Murphy Ratteree, W4WMQ, bulletin editor. Jack Lennox, WB4GCP, has been selected as net manager.

The Carolina DX Association holds quarterly meetings in the Charlotte, North Carolina area. Visitors are welcome on the CDXA 2-meter repeater, (147.78 input/147.18 output). There is a DX Information Exchange at 0130 UTC every Wednesday on their machine. Further information regarding membership or other correspondence should be directed to Gary Bader, KD4RH, 2326 Marett Blvd., Rock Hill, SC 29730.

In November, the Kansas City DX Club elected their slate of officers for 1985 to include John Chass, WØJLC, as president; Larry Wilson, KØRWL, as vice president; Steve Gecewicz, KØCS, as secretary; and Tom Bishop, KØTLM, as treasurer. This club is an active DX group in the Kansas City area. Interested local DX'ers may contact Steve KØCS at 761-3274.

The Western Pennsylvania DX Association is centered in the Pittsburgh area. This club, as well as many other clubs such as the Northern and Southern California DX Clubs, offers such an award to a member of its club each year. If your club doesn't have such an award, perhaps such a subject should be discussed at your next meeting.

Larry Wilson, KØRWL, was elected DX'er of the Year by the Kansas City DX Club. This club, mentioned a few paragraphs back, is actively involved with the Dayton Hamvention each year.

The California Award

The California Award is sponsored by the Northern California DX Club and is not available to stateside amateurs. The award is free of charge and the applicant must show proof of contact with 220 California DX'ers, of which at least 20 must be members of NCDXC.

Prepare a list of contacts, and have it certified by an officer of any recognized Amateur Radio society or club that you have the necessary cards in your possession. Send your application to NCDXC, P.O. Box 608, Menlo Park, CA 94025 USA. If you choose to send your cards, please send enough funds for return postage.

As of 31 December, the number of awards issued is 437. Award number 435, issued to Anne-Grette Eriksen, OZ1GLN, operator of OX3AE, is the third YL operator to have received this award. She was the first Greenland station to receive this award. Other firsts include #427 to PYØZSC (St. Peter and St. Paul Rocks), operated by Allen Fischer, K8CW, #430 to JW2CF, operated by Sigurd Solheim, LA2CF, #432 to VP2MBA, operated by Charlie Clayton, W7FP, #434 to UD6CN, operated by Shukyur Yusufov, and #437 to OA4AWD operated by Bob St. Germain, VE2AQS/W6.

WWSA results

Included in the November/December bulletin of Grupo Argentino de CW were the results of the World Wide South American CW Contest. The contest is sponsored by Electronica Popular, a Brazilian Amateur Radio magazine, and is coordinated by GACW (Grupo Argentina de CW) and PPC (Grupo Pica Pau Carioca of Rio de Janeiro).

As expected, there were many Brazilian entries and several from Europe. For North America there were only 14 entries, which we will list:

Call	Band	Contacts	Multipliers	Score
K1ZM	160	4	2	8
VE4MF	20	18	9	162
VE1BNN	15	54	17	918
NN3SI	15	22	10	220
N6FVJ	15	2	1	2
K8CW	M	124	48	5952
W5WG	M	120	44	5280
HP1AC	M	102	38	3876
NC2V	M	100	38	3800
W3ARK	M	102	34	3468
K1BV	M	90	30	2700
W7LGG	M	48	20	960
W5PWG	M	38	17	646
W1OPJ	M	4	2	8

Mexican Weather Net

Jim McCook, W6YA, writes in the *Bulletin*, the official newsletter of the Southern California DX Club, concerning the interference problems on the low end of 40 meters by the Mexican Weather Net. He writes:

There exists a massive QRM problem on 40-meter CW which originates from a SSB net of Mexican amateurs. It is a weather net that meets daily around 1300 to 1430 UTC on about 7003 kHz LSB! It is driving 40-meter CW DX-'ers in the western half of the USA nuts!

I have written XE1SR, LMRE President, to request these hams take their SSB above 7050 kHz where they belong, (LMRE guidelines say SSB above 7050). Bruce Kampe, WA1POI, at ARRL arranged a letter to also be sent to XE1SR which referred to their own guidelines.

As might be expected, *NO RESPONSE*.

I'm writing several DX Bulletins about this to try to rally DX'ers to write XE1SR and/or any Mexican ham that might help. My goal is to completely embarrass XE hams over this and get them up above 7050 where they belong.

This blatant disregard for other amateurs is *intolerable*, and any CW enthusiast who has heard this SSB near 7003 should express himself and complain.

Northern California DX Foundation

Those of you who are members of NCDXF, I would like to remind you that it is membership donation time again. A donation of $25 will keep your membership active and informed with the regular newsletters.

The total membership as of the end of October was 2,950, a gain of 450 members during the 10 months of 1984. As can be expected, California held the lead with 573 members, which works out to be about 3 percent of the combined Advanced and Amateur Extra Class license holders. That figure of 573 is far short of the total amount of active DX'ers in California. New York comes in second with 123 members and Texas with 104 members is third. To the north of us is Washington with 47 and Oregon is not listed at all.

There are 918 overseas NCDXF members, with Finland in the lead with 142 members — about 3.7 percent of the ham population. West Germany is not far behind with 123 members. Even the USSR is represented with nine members. Up across the border in Canada there are 39 members — 0.2 percent of the ham population.

With the huge pileups on every rare and not-so-rare country, it is hard to believe that DX'ers are not a larger percentage of licensees. The NCDXF believes the figures reflect that a lot of DX'ers are not NCDXF members. It won't take a very large increase in membership percentages

Propagation

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

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

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

APRIL 1985

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	19.6	23.2	29.6	10.7	25.6
0200	15.2	23.2	29.7	10.1	22.6
0300	13.3	22.6	29.6	9.7	19.1
0400	15.4	21.0	27.2	9.9	16.5
0500	13.7	18.6	23.4	10.8	15.5
0600	12.4	16.6	20.2	12.1	15.5
0700	11.2	15.6	18.7	11.4	14.9
0800	10.2	15.2	18.2	10.9	11.1
0900	9.6	14.6	17.9	10.3	11.6
1000	9.5	13.9	17.1	10.7	14.5
1100	10.3	13.0	16.5	10.2	13.6
1200	12.0	12.3	14.9	12.1	13.9
1300	14.1	12.3	13.7	14.0	16.2
1400	15.9	13.7	14.7	16.2	19.1
1500	17.1	15.5	16.9	17.9	20.7
1600	17.6	15.3	16.5	18.5	21.3
1700	17.9	15.2	14.9	18.8	22.4
1800	18.6	15.2	13.4	19.4	24.6
1900	19.3	16.1	14.6	19.0	27.0
2000	19.8	18.6	18.6	17.8	28.6
2100	20.0	21.8	23.3	16.2	29.2
2200	20.3	23.9	26.6	14.3	29.1
2300	21.0	23.6	28.3	12.9	27.2
2400	21.6	23.3	29.2	12.0	25.7

to significantly raise the number of members in each country.

If you are an active DX'er and do not belong to NCDXF, you should. Many of those DXpeditions you have worked were supported in part by the foundation. You don't want to be called a "freeloader", do you? Send your donation of $25 or more, (or less if you can't afford it), to NCDXF, P.O. Box 2368, Stanford, CA 94305 USA. Don't let the name Northern California give you the excuse to not join. Of course, if you are a member of another DX foundation, such as the International DX Foundation, the comments are not directed at you. But you are more than welcome to belong to NCDXF, too!

In the latest NCDXF newsletter, Martti Laine, OH2BH, the European representative, makes these two points concerning DXpeditions:

1. Making a DXpedition to any ham-populated country amounts to an expression of no-confidence against the local hams. Why a DXpedition if there are active hams in that country? Go to an uninhabited island — that's the place for a DXpedition.

2. In many of these semi-rare countries, the locals have a set of regulations — or at least expectations of decent behavior. The DX show moves into town with 2kW amplifiers and knocks out all TV sets and stereo systems for seven days before anyone even knows what it is all about. And then they leave. Why should the local hams pay the bill and lose all the good things they have done for Amateur Radio in their community, just because of a "one-shot DXpedition"?

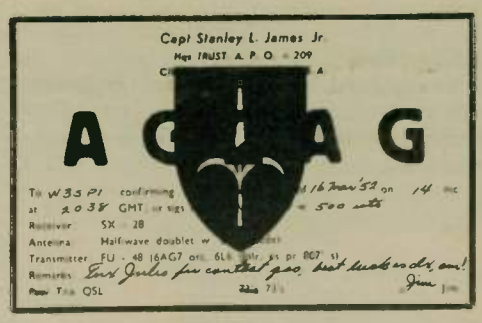
Antique QSL Department

The term used here for "Antique" QSL cards doesn't necessarily mean from the spark gap era. A QSL card dated 1950 would hardly be an antique. But to the majority of DX'ers today, year date predates their amateur career — and to some, their birth! Therefore, in this case the card would be considered an antique.

The Soviet card of UA1AA was submitted by Art Bauernfeind, W9MCJ, of South Bend, Indiana. The contact was made on 12 March 1950 and 10 meters, with a report given to Art as 489100, indicating it was probably during the ARRL DX test. Art was signing W8SWG at that time.

The time of the contact was indicated as 1852 MSK. The Soviets in those days — and even more recent — used MSK (Moscow Time) instead of the normal GMT everyone else used.

Jules Wenglare, W6YO, sent in these interesting cards from the same era. The call AG2AG was used by Captain Stanley L. James, Jr., while stationed in Trieste. The contact was made on 20 meters at 2038 GMT on 16 March 1952. Jules was



operating as W3SPI at Andrews Air Force Base, outside of Washington, D.C. No stateside call was indicated for Jim.

Portuguese Timor has long been deleted from the DXCC countries list, and the prefix here even longer. The contact made with CR10AA was on 11 August 1957 for a 20-meter contact Jules made while operating as KP4AIO at Ramey Air Force Base in Puerto Rico. It would be safe to assume that Jules is retired from the Air Force.

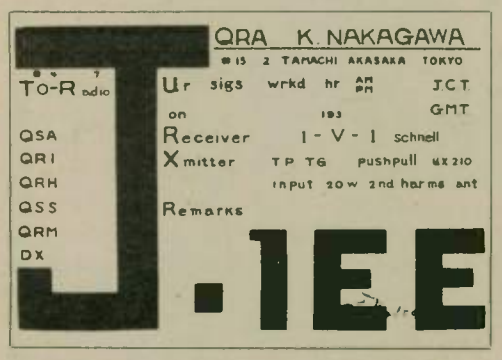
Mick McDaniel, W6FGE, the gentleman who submitted the AL7A Boy Scout SWL card that was in the January issue, writes the following:

As a youth in Oregon during the early 1930's, I became interested in ham radio. In those days, the best and most available way of learning was to visit local ham shacks, look at the homebrew equipment and ask lots of questions. There were three good ways of locating hams — ask the local radio repairman, ask the postal clerks and look for ham antennas. No beams then; we looked for Zepps, off center-fed Hz and counterpoise installations! Once a ham station was located, a knock on the door and an explanation *always* resulted in an invitation to visit the shack, a new acquaintance, (a few of which I still have today), and a souvenir QSL card! One

of these early "eyeball" cards is what this letter is all about.

During the late winter months of 1945, I was a member of the U.S. Occupation forces stationed in Japan. One day, while on liberty, I was sightseeing in Kamakura, a type of resort town near Tokyo. Passing a photographer's shop, I noticed a QSL card in the window display. Old habits die hard! Although the shop was not open for business, persistent knocking on the shop door finally produced results. A middle-aged Japanese man opened the door and said something in Japanese, which I would like to believe was "what can I do for you?" At least I hoped so — the "big one" had only been over a few months!

I pointed to the QSL and then to myself saying "W7FGE"! Big silver smile! Instant international communication! He had a bit of English — enough to invite me to "visit the shack"! Shoes off and inside to the second story of the shop where he proudly showed me the remains of his ham station. It was a breadboard rig with copper tubing tank coil and Zepp antenna. No receiver at all! He explained that during the war, the "officials" had cut his transmitter tank coil in two and removed the feeder from the rig to the Zepp. I can't recall if he explained the lack of a receiver.



True to form, he presented me with a QSL at the end of the visit. I still have that card and because it is an interesting design, I am enclosing a copy for your information. The card stock is buff, the call letters are red and the station description is black. The card has no borders — the red call letters are along the bottom edge except for the J which extends from the top edge to the bottom edge of the card. Note the pre-printed 193(0) date line. Also the description of the receiver. Mr. Nakagawa had apparently relocated to Kamakura from Tokyo. The handwritten address of the back side of the card is 372 Yakinoshita, Kamakura, JAPAN.

I have often wondered if he is still around, but until now haven't thought about inquiring.

Since 1945, improvements in air transportation have made overseas travel almost commonplace for many hams. Eyeball QSO's with foreign hams have become routine for traveling hams. Not so in 1945! An eyeball QSO with a foreign ham was an event to remember then!

I wonder if any of your readers may have similar experiences in getting DX QSL's the hard way — in person?

Perhaps one of our Japanese readers can help Mick with J1EE. Did he return to the bands in 1952 when the Japanese amateurs were allowed to again operate? If so, what is his call? That was 40 years ago, and if he was middle-aged this would have him up in years.

We have often wondered what happened to a lot of pre-war DX'ers that we have seen cards for. Chances are, being that they were radio operators they were pressed into service of their country during the war.

QSL information

Bob Truhlar, W9LNQ, comments anyone having trouble obtaining QSL cards from YV0AA should try requesting another via YV5DFI. Bob also reports that LU8DPM is QSL manager for the following stations:

CE1FGT	CE7DOM	ZP5JCZ
CE3FIP	CE8ABF	ZP5JCY
CE5SG	CX2DC	ZP0JCY
CE6EDZ	ZP5LHY	
CE6CGU	ZP5LOY	

Jim Coleman, KA6A, is looking for a QSL route for D2CCC and FY0GA. The W6GO/K6HHD List gives John Mumaw, NU6X/WB6UOE, as QSL manager for FY0GA. NU6X's address is 801 N. Fairview St., Burbank, CA 91505.

The QSL cards for the recent San Felix DXpedition (CE0AA) are due to be in the mails the end of January. If you worked CE0AA and haven't sent for your QSL send yours via P.O. Box 700, Santiago, CHILE. Be sure to include an SAE and sufficient funds for postage or donation.

QRZ DX reports that the QSL manager for AZ5ZA says to now QSL via Goros tiaga 2320, Buenos Aires 1426, ARGENTINA. Ron's mail is being intercepted by a postal worker. I'm sorry, but this makes me wonder what is really going on. I have sent three requests. If he were sincere, he should get a stateside manager, which would eliminate the problems with the postal worker.

QSL routes

A4XJW	—N4WF	VK0AK	—VK2DEJ
A92EB	—K0LST	VP2VFL	—N6CW
AH3AC/TF	—KB2RV	VP9JT	—W4EV
AH8A	—K6EDV	VQ9YR	—KA4SPA
AH8B	—NE4S	VR6BR	—KA9W
C53J	—DL7AH	VR6EO	—K6YEO
CE9AJ	—CE3AA	VR6HB	—WA6OHB
CO7RG	—CM7RG	W3BTX/PJ7	—W3BTX
CT2DL	—KE4OC	WA2HZR/V9	—WA2HZR
DL7AH/C56	—DARC	XE1VIC	—KV8U
EC9FS	—EA9IB	YB0ARA	—K6DLV
FM5DK	—F6EQN	YN1CC	—YN1JCC
FM5WS	—F2BS	YS1UL	—WA0JYJ
FO8BQ	—W7CCB	Z21AO	—VE3HK
H5AJQ	—ZS6BWD	ZD8SB	—G4KIV
HH2VP	—W1FJ	ZF2AQ	—WA3YTA
HI0A	—HI8LC *(See Note 1)*	ZF2FK	—K9QVB
HV2VO	—I2BBJ	ZF2IK	—K5WA
IQ1RAI	—I1XA	ZK1XS	—PA2DXY
J73RM	—VE3DFD	ZK1XV	—PA2DXY
JW0EQ	—LA5NM	1A0KM	—I0MGM
JY4MP	—WA4HNL	3D6AN	—WK4Y
K3VW/FS7	—K3VW	4K1ADE	—UY5DJ *(See Note 2)*
K4YT/DU9	—KE3A	4K1CEY	—UY5DJ *(See Note 2)*
KC4AAC	—W6MAB	4K1F	—UQ2GAG
NE5E/C5	—W3GXK	5H3BH	—SM0EAI
NP2AB	—K8OHC	5H3QM	—VE7QM
P29YT	—KE3A	5L8M	—EL8M
PY0FF	—PY2AJK	5T5CS	—F6FNU
PY0FJ	—PY2AJK	5X5GK	—JA1HGY
PY0TE	—PT7WA	5Z4BF	—N4IPT
SV7NW	—AK3F	6W1HF	—W0ZUZ
SV0AC/SV9	—WB4GCP	6W1ZF	—DL1HH
T30AT	—G4GED	7P8DC	—DJ9SH
TR8AHO	—DK1PO	8P6JQ	—N8DCJ
TR8SDP	—F8BC	9L1FC	—WA0CAE
V2AZL	—W2HWS		
V2AZM	—WB8SSR		
V3ZZ	—KE5KK		
V9ADC	—WA2HZR		

DX1A	—P.O. Box 426, Manila, REPUBLIC OF PHILIPPINES
GU4XEA	—P.O. Box 200, Guernsey Island, UNITED KINGDOM
HH9E	—Eric, P.O. Box 243, Fort Liberte, HAITI
HP1XZB	—P.O. Box 112, Balboa, REPUBLIC OF PANAMA
HP3FL	—P.O. Box 76, David, REPUBLIC OF PANAMA
J5U91	—Mario, P.O. Box 105, GUINEA-BISSAU
KD4VX/HC1	—John, P.O. Box 36, Santa Domingo, ECUADOR
S83W	—P.O. Box 814, Umtata, REPUBLIC OF TRANSKEI
YB3KK	—Anto, P.O. Box 59, Surabaja, INDONESIA
YS1TG	—P.O. Box 1476, San Salvador, EL SALVADOR
ZS6BBH	—59 King Street, Irene 1675, REPUBLIC OF SOUTH AFRICA
9L1CI	—P.O. Box 10, Freetown, SIERRA LEONE

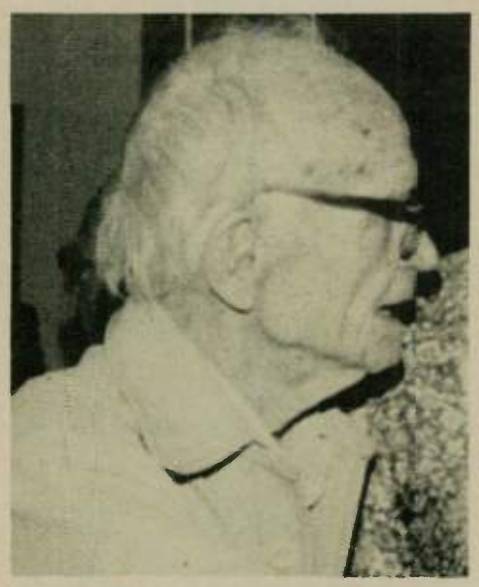
Notes
1. Contacts with this station apply to CQ World Wide DX Contest only.
2. QSL contacts with these stations via UY5DJ to standard route in Moscow, or via V.A. Skrypnik, P.O. Box 435, 310084 Kharkov, Ukraine, USSR.

Contributors this month include WA2BGE, KA6A, W6FGE, W6IL, KA6OTV, W6YO, KA7FEE, KA7FEF, W9LNQ, W9NN, the Carolina DX Association, Kansas City DX Club, Western Pennsylvania DX Association, Southern California DX Club, Northern California DX Club, Grupo Argentino de CW, Northern California DX Foundation, *Radiosporting, The DX Bulletin, The Long Island DX Bulletin* and *QRZ DX*.

Jean Chittenden, WA2BGE, who is president of SAYLARC (Second Area Young Ladies Amateur Radio Club), has initiated "Project Peace". Jean suggests that all DX'ers sign their DX contacts with "Peace, 73" and include it on their QSL cards. I would like to comment that as DX'ers, that was what we were doing in the first place — even though we never said "Peace" in our communications.

Another little item may be of interest. Frank Cuevas, W6AOA, of the Southern California DX Club, is getting married early this year. I wonder if her name is Brandy? Ask anyone who attended the Sunday breakfast at the International DX Convention in Fresno the spring of 1973 and they will explain that one for you. Clue: She likes big cakes! 73 es GL DX, de John, N6JM □

Vern Hansen, AAA9W KD6UI



Archie Waring, AAR9LX/W6ACN

The following article appeared in the December 1984 edition of the 7th Signal Command Western Area Army MARS Bulletin. The article was prepared by Jim Haley, AAR9HN/W6NH.

Archie Waring — Silent Key

Central California Army MARS has lost its oldest member, Archie Waring, AAR9LX/W6ACN, of Castro Valley, who passed away on 01 July 1984. Archie was over 95 years old, having been born on 28 May 1889. All of us in CeCal MARS will miss the irrepressible Old Archie.

Busy on the MARS nets and the amateur bands right up to the end, Archie would say he stayed young by talking on Amateur Radio regularly. He made it a practice to get on the air at least twice each week.

Waring's working days spanned almost half a century. His first job was as a Western Union messenger boy back in 1903. Up until 1950, when he was seriously injured in an automobile accident which took the life of his wife, Archie was an active building contractor specializing in alterations and remodeling. Although retired for many years he continued to hold a valid California state contractor's license.

During his later years, Archie lived in the home of his daughter in Castro Valley. His room was crammed with radio gear including, in addition to his receivers and transmitters, two teletype machines, an array of test equipment and numerous spare parts.

Archie first became active in radio as a hobby in 1919 when he started out building BCL galena-crystal sets using Quaker Oats boxes for coil forms. He never stopped developing his proficiency as a radio amateur — he qualified for his Advanced Class FCC license when he was 81 years old. He did not go for the Extra Class license because his old hands could not write at the rate of 20 wpm, even though he could handle that code speed in his head.

Archie was an effective politician. Although he never ran for public office, he was active in California Republican politics over most of his life. He was, for example, a mainspring in the effort to obtain the legislation which made possible the special call-sign license plates which we California amateurs are privileged nowadays to obtain from the DMV. His efforts in this endeavor were recognized and rewarded when, back in January 1954, Governor Goodwin J. Knight presented Archie the first set of such plates, which bore his call sign — W6ACN.

In a real sense, Archie has memorialized his contributions to Amateur Radio through the success of the California amateur call license program through which so many of us have obtained the personalized ham plates we prize so highly. □

Region Communications Manager honored

The conference, hosted by the Norton Air Force Base Support Team was held 28-29 September at the Red Lion Inn, Ontario, California. Senior Master Sergeant Aron Van Sharp, acting MARS Director, represented USAF MARS Headquarters and addressed the group during the well-attended Friday night banquet, which concluded with the presentation of awards and included certificates, special MARS cups and plaques.

A very special citation and plaque was presented to Tom Moore, AFC6C / W7FCQ, Region Communications Manager, which read as follows:

> "On behalf of the 1957th Communications Group, this plaque is presented to you (Tom Moore) with our deepest appreciation for the outstanding services you provided which contributed to the morale and welfare of servicemen and their families throughout the Western Pacific area. We at Hickam, MARS especially, appreciate your efforts. Your dedication enables us to rapidly and economically deliver morale and welfare messages. Without your assistance, our jobs would have been more difficult. Your cooperation and positive attitude have made working with you a distinct pleasure."

This citation was signed by Colonel Richard A. Hamilton, Commander of the 1957th Communications Group, Hickam AFB, Hawaii.

More specifically, Tom has personally handled over 11,000 individual pieces of traffic since January 1983, when AFA6BG / K7UGA, the Barry Goldwater station, retired as the official Pacific Area Traffic Station.

On the following day, technical and management meetings were held, providing the group with an overview of future AF MARS objectives. Renewed emphasis was placed on the USAF MARS role in participation in Air Force wide emergency communications activities.

The Conference Chairman, Bob Weber, AFA6ZD / AA6BW, is to be congratulated for a job well done. Region 6 covers the states of Arizona, California, Nevada and New Mexico — *Paul Turkheimer, WA6NKL* □

Proper procedure vs. Babel

Dick AAR4PP

A U.S. Navy Ensign in flight training recently reported to us from Pensacola that he had knocked off the unusual grade of "Excellent" in "UHF Communications," meaning communication between a naval aviator and other flyers and with ground facilities. The flight instructor's report said, "Student responded properly to 100 percent of radio calls and exercised proper format and discipline."

Responded properly to 100 percent of radio calls? On his second flight? While involved in all the other operations associated with moving safely from Point X to Point C without banging into Point B on the way? This means he was able to communicate almost automatically, always giving primary attention to something else which outranked communication in priority. How come?

"It was that year or two with Army MARS back in my high school days," he said. "The Army MARS gang brought my procedure up to the point where it was practically second nature back then, and I can call it back up any time I want, like a program waiting in a computer's memory — will be able to do it for the rest of my life."

High school years are the years when most of us discover our individuality, our uniqueness. If, at that time, it can be learned that communicating according to someone else's rules in no way compromises our individuality, an important maturation takes place: the discovery that, "I can talk your way and think my way at the same time."

The other route leads to inarticulateness, stunted vocabulary and imprisonment within an inexpressive jargon. Show me a person who begins every third sentence with, "You know," or, "Okay," and I'll show you a person wearing an invisible gag.

So, if you know a young ham with hopes of a military career — or any other career where success can depend on getting one's thoughts across clearly and succinctly and fast, have him check out Army MARS. It will free him forever from the work gangs employed by Babel Construction Contractors, Inc.
— *Florida Skip* □

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

JAS-1, Japan's first Amateur Radio satellite

The following report was written by Moriyashi Ohara, JK1VXJ, and translated by Haruo "Harry" Yoneda, JA1NG/N3AMW. Harry credits Mikiyasu "Miki" Nakayama, JR1SWB, with "technical assistance". Your correspondent has used an editorial prerogative in putting the material together.

JAS-1's Mission

JAS-1 is an Amateur Radio Communications Satellite to be launched next year into a circular Earth orbit of about 1500km altitude and an inclination of about 50 degrees. The launch vehicle will be the Japanese Space Agency's (NASDA) H-1.

Two missions are to be performed by JAS-1. One is to provide the Amateur space communications enthusiasts with a "JA" (Mode J Analog) transponder much like the one carried on AMSAT/ARRL/JAMSAT OSCAR-8. It will be a linear 2-meter uplink and 70cm downlink translator.

The second is to provide a "JD" transponder, a Mode-J digital store-and-forward transponder which will utilize packet radio technology. The JD transponder will provide an electronic mail service to amateurs throughout the world.

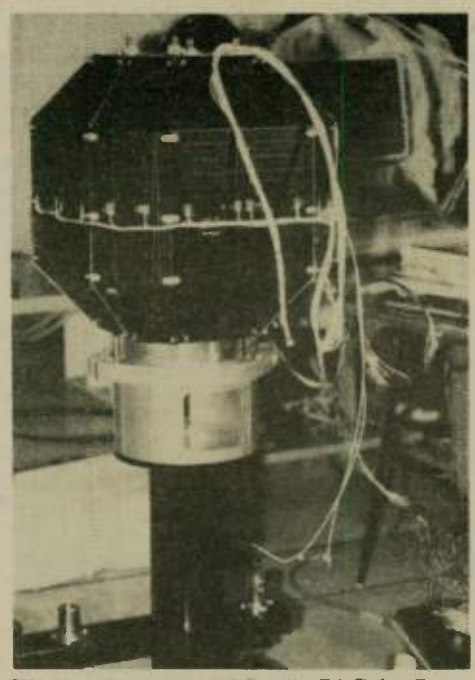
The frequency planned for the Mode-J beacon is 435.795 MHz. It will send Morse code telemetry with the same format that was used on AMSAT/OSCAR-7, as follows:

HI HI 1xx 1xx 1xx 1xx
2xx 2xx 2xx 2xx
... ...
etc. HI HI

Twelve analog data channels and 33 status points will be available. PSK transmissions will provide code-stored messages and bulletins. CW will also be used for the messages. Telemetry will be transmitted using data stored in JAS-1's onboard computer.

The data will provide spacecraft controllers with information on the status of the satellite while it was out of view of Japan. A maximum of 29 channels of analog data and 33 status points will be monitored.

The Mode-JD Transponder will uplink four channels: 145.85 MHz, 145.87 MHz, 145.89 MHz and 145.91 MHz. There will be one downlink channel on 435.91 MHz. Uplink coding is Manchester code/FM (1200 baud). Downlink coding is NRZI/PSK (1200 baud).



Thermal-test model of JAS-1 (June 1984)

Protocol: Current planning calls for AX.25.

Communications: A CPU (NSC-800) — with 1 megabyte of memory and HDLC control logic will be carried by JAS-1. Electronic Mail messages sent by the ground user will be stored and forwarded by the JAS-1 and delivered to the addresses in packets on ground command.

Amateurs who have had experience operating through A/O-8 are familiar with the Mode-J operation and should have no difficulty in working through JAS-1. The same JAMSAT hardware group that designed and put together the Mode-J A/O-8 hardware is currently putting the finishing touches to the JAS-1 transponder. These same JAMSAT people are also putting together the JD-Digital transponders.

Mode-JD

The JAS-1 digital system is designed to operate with ground stations using TAPR TNC's. Although a high-level protocol terminal would be desirable, JAS-1's digital system is designed to accommodate ground users who only have "dumb" terminals at their disposal.

DCM (Digital Communications Modules)

There will be two DCM's identified as DCM-A and DCM-B.

DCM-A will include 15 PBC's 15cm × 15cm each, containing the command decoder, CW Morse telemetry generator, PCM telemetry generator, power switching, the I/O, CPU and memory banks. There are 327 IC's and LSI chips on DCM-A.

DCM-B will include three PCB's 15cm × 20cm, each containing the 4-channel HDLC for receiving, and a mono-channel HDLC controller for transmitting. There are 144 IC's and LSI chips on DCM-B.

There are about 500 solid-state devices in the JAS-1. The NSC-800 CPU is run by a 1.7 MHz clock. There are 48 NMOS 256 KByte dynamic RAM's. 12 RAM's make up a 256 KByte memory bank with 1 bit per byte error correction. There will be four of these memory banks in the DCM-A. By command, a conversation can be addressed to enable a change from physical bank addressing to logical bank addressing.

Each memory bank can be switched on and off individually, with control of the power going to each bank. Even if three of the four memory banks should fail, the computer can still deliver minimal performance. Should onboard power conservation be required, shutting off power to the memory banks will suffice. This is an example of the flexibility of this spacecraft.

The two telemetry channels are, respectively, a PCM and a CW channel. The CW telemetry system runs without software assistance, so can operate without the computer. The PCM telemetry system does require the computer, which provides analog data and status information that is converted to packets for transmission.

The transmission speed of the PCM telemetry is 1200 baud. The software can be changed so that the data format can be modified, such as putting one of the channels in the dwell mode. The PCM telemetry provides up to 29 analog telemetry channels and 33 status points.

Real time command control can be maintained when the satellite is in sight of Japan. Programmed command can be accomplished with the housekeeping program.

Receive flag detection (HDLC), CRC checking and "Phase" deletion generate an interrupt signal for the CPU for each byte. In transmit mode, the HDLC sends the flag, calculates the CRC, "Phase" in-

sertion, and generation of the interrupt signal per 1 byte of the CPU.

Only RAM memories are used. There will be no ROMs. Power consumption will be 2.5 watts with computer on with all four memory banks for the DCM-A. The DCM-B will consume only .005 watts. □

TORRA communications

Everything comes up roses

If you haven't heard of TORRA, let me tell you about it. TORRA is the acronym for the Tournament of Roses Radio Association. Although the group has been in existence for more than 10 years, it was only recently that they decided to give themselves a name. They are the volunteer Amateur Radio and ATV operators who have been providing the communications network for the Annual Tournament of Roses Parade, the New Year's Day event that precedes the Rose Bowl football classic in Pasadena, California.

This year, 163 amateurs participated in the communications system that provides the Rose Parade Committee with direct information about the status of the various parade units along the five-and-a-half mile line of march.

In addition to hand-held and mobile audio units strategically located along the line of march, there were a total of seven ATV units. Two were located at corners where the floats must turn. There were three at high points along the line of march, and two ATV units at street level.

In addition, there were two mobile units on motorbikes and an airborne ATV unit in a helicopter. All were commanded from a central location.

Planning for the Amateur Radio Rose Parade operation starts at the beginning of the year almost as soon as the group has rested up from the previous Rose Parade activity.

Individual amateurs are assigned specific locations along the route, taking into account the equipment they have. Hand-held units are dispersed at about two-block intervals. Several automobile mobile units are located at intersections, and there is a control trailer near the Rose Parade Headquarters at which reports are received from the various units along the parade route. Requests for information from individual units are made from the command unit.

An example of the kinds of information sought might be to have the operator at a particular location determine why the parade line is being delayed. A disabled float may require towing. There are a large number of AAA tow trucks along the route for this service.

At one location I visited, a parade participant had "dropped out" and transportation was required. At another location, transportation was needed for an amateur to return to the command trailer.

Your correspondent was provided transportation from one of the parade turn corners to one of the buildings where a TV unit was installed on the rear seat of a motorbike, one of those with a TV camera installed on its handlebars. This was to make it possible to get the pictures that accompany this report.

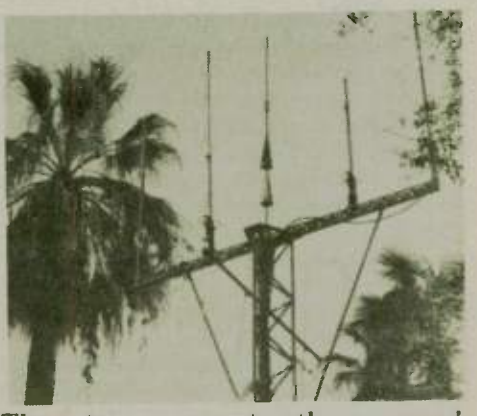
The amateur communications activity begins during the day before the parade with the installation of the various repeaters at their respective locations and the interfacing and control equipment in the command trailer. Amateur operators are assigned to the several float construction barns to report their progress as the floats are driven or towed to their assembly area locations at the parade beginning.

Some of the amateurs are assigned to transport vehicles that are made available to the parade operations, so as to act as communicators for these vehicles which

(please turn to page 48)

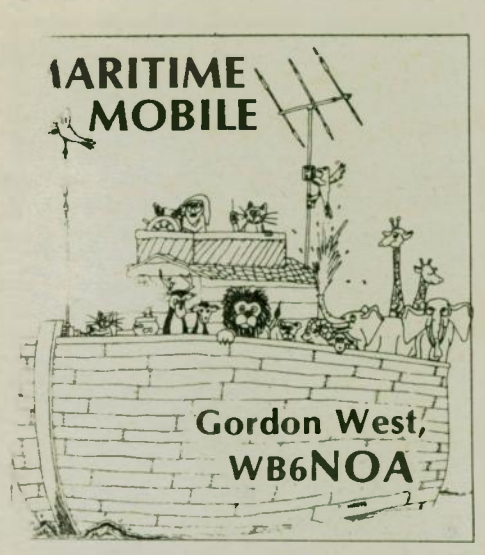
Fred Edmunds, WB6OJK (left), and Bud Boulton, WA6AAD, chief honchos for the TORRA Rose Parade amateur volunteer activity discuss plans at the pre-parade meeting in December 1984.

Dave Jensen, at the console in the command trailer. Four repeaters were accessible through the console so that any hand-held or mobile unit could contact the command center at any time.



The antenna array atop the command trailer (for the 1985 Rose Parade operations of TORRA). *(K6PGX photos)*

The ATV logo, which appeared on ham ATV screens during breaks in the parade activity during the 1985 Rose Parade.



A sideband with two jobs

A marine, synthesized, FCC-legal, marine single-sideband set that would cover from 2 to 22 MHz would ordinarily be a $5,000 proposition, including antenna tuner. It's no wonder that many mariners who possess a General Class or higher ham license would be tempted to modify their Kenwood, Yaesu or ICOM ham sets to cover the marine channels for transceive. However, the FCC is quick to point out that using a non-type-accepted ham set on marine frequencies is specifically illegal.

An authorized, type-accepted, marine SSB set must meet stringent FCC type-acceptance specifications. Frequency tolerance must be closer than 20 Hz (FCC Rule # 83.131). The bandwidth for single-sideband shall be 3.0 kHz (83.133), and transmitter power may go all the way up to a kilowatt.

The type-accepted marine transceiver will meet and exceed rigid receiver radiating specifications as well as transmitter harmonic and spurious radiation limits. Further, the FCC has additional technical requirements that the set must meet, such as operation on low voltage with a clean signal, purity of emissions with varying antenna impedances, and a host of other temperature-sensitive questions that the very finest of marine SSB sets might fail.

Simply stated, most ham sets altered for marine transmit and receive won't meet the stringent FCC Part 83 requirements, so they cannot be used legally aboard a boat as a marine radiotelephone. For Amateur Radio use aboard a boat, they are fine.

It's also an extremely expensive proposition for a manufacturer to go through the type-acceptance process to TA a regular marine set. Besides legal fees, technical fees, engineering fees and numerous trips back to the FCC's TA facility in Laurel Springs, Maryland, one has to analyze whether or not it's really worth it for the limited marine single-sideband market.

I am happy to say that Amateur Radio operators now have a set from ICOM America, Inc. that is not only a type-accepted marine transceiver, but an excellent operating ham set, too. It's called the ICOM M-700, and it's a real workhorse.

When sold by the dealer, the M-700 has been factory-programmed for 48 marine ship-to-ship and ship-to-shore single-sideband frequencies. Programming is accomplished via the front keyboard by simply entering marine receive and transmit frequencies. It's just as easy to change the marine frequencies to ham frequencies by simply programming over the original marine channels.

The set is pre-programmed for West Coast and East Coast operation. A plastic card indicates marine operation for Coast Guard, ship-to-ship, ship-to-shore, and ship-to-marine telephone operators on both coasts. I usually memory-write over the telephone channels used on the opposite coast and substitute ham frequencies in their place.

ICOM's IC-M700

Before entering ham frequencies, the Amateur Radio transmit portion of the radio must be "unlocked" to keep out unauthorized users. Double-check any ham frequency to make sure the factory hasn't already done this for a prospective Amateur Radio operator before you tear into the insides. Program a ham receive and transmit channel, and then try transmitting. If the set blanks out, you will need to make the modification. However, if the set indeed transmits, chances are the marine dealer or the factory has already made the modification for you.

To enable all-band transmit (any frequency between 1 MHz and 23.999 MHz), locate jumper wire W1037 on the logic unit. The logic unit may simply note it as W37. If the jumper is connected, cut it. If the jumper is cut, solder it. There seems to be some confusion back in Japan as to which way they were going to leave the jumper, so if your transmitter is locked out, cut or solder and you will now be on the air!

The M-700 will give you well over 125 watts PEP output on any ham or marine frequency. A front panel mode switch is normally left in the A-3J mode, which is upper sideband, fully suppressed carrier. (No longer do telephone marine operators require a pilot carrier.) This mode switch also has a secret additional function not noted on the front panel. When switched to the left of A-3J, it instantly jumps to lower sideband for weather facsimile reception, and Amateur Radio 40, 80 and 160-meter operation. No modifications are necessary!

Before operating this set on marine frequencies, make sure your present marine radiotelephone license (the one you use for marine VHF) has indeed been endorsed for 2,000 kHz to 23,000 kHz SSB operation. If all your license shows is 156-158 MHz, you will need to fill out an FCC Form 506 to amend your present license.

You can operate with your existing call letters on your new SSB frequencies the same day you drop Form 506 in the mail. Indicate on the form that this is for additional frequencies to be added, and be sure to check Item #13, Box V (for VHF), T and U (for your new single-sideband), as well as R (for radar) and E (for an EPIRB, even though you might not already have the equipment onboard). The FCC *will* allow you to request added frequencies even though you might not already possess the equipment. Yes, the FCC will normally let you keep your same call letters, providing your license is current.

Operating the ICOM M-700 on marine frequencies is straightforward using your marine call letters — not your ham call letters. Probably the very best service available for not only placing phone calls, but also distress calls, is through the high seas AT&T marine operator.

Their three stations throughout the country offer phenomenal communications to distant ships on the 4, 6, 8, 12, 16 and 22 MHz bands. Each station sports huge rhombic antennas that will zap a signal into your marine cruising area. You have never heard a signal pound in like the KMI, WOO and WOM marine operators!

By the way, you can write AT&T for three huge, colorful maps (charts?) that depict their rhombic antenna patterns suitable for hanging on your wall at the ham shack. Write for these three maps, free of charge, to AT&T Communications, Manager — High Seas Services, Room 220, 201 Littleton Rd., Morris Plains, NJ 07950, Attention: Antenna Coverage Maps. Or you can even call collect for these maps by dialing (201) 631-4165.

Amateur Radio operation on the M-700 is easily accomplished by simply writing over the marine channels with your ham channels. First keyboard enter the receive, and then the transmit frequency for each channel. Since all ham frequencies are selected by the front channel selectors, I recommend bracketing your most important maritime net frequency 1 kHz above and 1 kHz below where you actually wish to operate.

In other words, in memory channels C-4, -5, -6 and -7, enter frequencies 14.311, 14.312, 14.313 and 14.314. This way you can click up or down if the net is slightly off frequency. There's probably a way to modify the clarifier control so it works on transmit, too, and I'll let you know as soon as I have that modification.

The only drawback to this rig for ham operation is that you can't simply *slide* up or down the band looking for a distant CQ. You must pre-enter the ham frequencies and click up and down the band! There is probably a way to come up with a push button to frequency-hop in 1 kHz increments up and down the band, but I'm still working on that, and I'll let you know as soon as I know!

When you're on the air on ham bands with the M-700, you will receive glowing reports for high-level modulation that sounds crisp and clear as well as speech-processed. The squelch circuit and noise blanker circuits work nicely, and the squelch circuit is automatic and will follow the background noise level without any further adjustment necessary other than turning it on. It will only react to voices, so your set will stay absolutely silent in the absence of a real signal.

The M-700 requires a 50 ohm impedance antenna system, so the MFJ-941D $100 manual antenna tuner works nicely. This same antenna tuner will also work nicely on the marine channels. Simply write down the antenna settings ahead of time, and you will be able to instantly change and tune up when you change bands or make large frequency jumps.

Of course, you can also get the totally automatic Hull antenna tuner for $1,200 that will tune itself up with just a push of the M-700 tune button. More about the automatic antenna tuners in upcoming articles.

The M-700 is also type-accepted for marine base station use. If ever you wish to hear the M-700 on the air, give me a call Monday through Friday on 14.340 MHz at 1800Z, and I'll be more than happy to give you a demo! It's a super set, and is a legal alternative to using a regular ham set on marine channels. □

Vince Luciani, K2VJ

In a previous issue, this column described the wide range of occupations held by CARI (Chess & Amateur Radio International) members. In this issue I'm going to talk about the chess-playing CARI members who do our artwork.

It isn't accurate to say our drawings are done by artists. A few readers have asked who KB6DZU is, the one whose drawings have accompanied most of our articles to date.

KB6DZU is Steve Tower of Santa Rosa, California. We play postal chess (Steve is a new radio amateur), and therefore correspond a lot. His letters often have more incidental artwork to them than is sometimes found deliberately placed in some galleries. I don't know how we got started with his masterful cartoons, as he is not a commercial artist nor at any time in our correspondence do I recall mention of art as one of his many talents.

But one day it happened that he sent along a few cartoons with his letter. They were great! One of them was eventually adopted as our logo, shown at the head of this column. Another became a radiochess classic.

I responded with my undisguised praise and was rewarded with several more gems. I'd like to say we have a few hundred of them, but it isn't so, which is why we play them out one per month, as we do in our newsletter, *CARI News*.

Another of our members who has shown talent at art is ole (young) "Quick Draw" Gary Freeman, WA0ZSU. Gary earned that title for his ability to extract at least a draw in chess games with the most formidable of opponents.

In real life, Gary is a banker. We suggest that if he is as careful with depositor funds as he is with his pieces on a chess board, there's one bank that'll never go under.

Then there's CARI member Ed (Edwurd, he likes to spell it) Galloway, N2BYR. As with a few others in CARI with whom I correspond, I have set up special folders in my filing cabinet to retain their letters.

Ed's theme is Ben the Scot, and his watercolor artistry on the letter (sometimes on the envelope!) is always worth preserving.

The only CARI artist-member who draws for pay, that we know of, is Stan Obritski Jr., WB2TTY. Stan lives less than two hours from my QTH, which made it feasible to drop in on him one night, and mighty glad we did. Although we did not get to see the artist at work, we did see several of his works and they were all quite impressive.

Stan, you see, is handicapped and oil-paints with a brush clamped between his teeth. How good is he? Well, the governor of New Jersey personally handed our pal the New Jersey annual award for handicapped artist of the year. Stan is also in contention for the national title.

Stan Obritski Jr., WB2TTY, CARI Member No. 007, in action.

Amateur Radio, chess and art. Some people call these spare-time hobbies. I think they are each full-time purposes to one's life.

If you would like additional information on CARI, please send SASE to: CARI, P.O. Box 682, Cologne, NJ 08213. □

"Flower Arrangement", from an original mouthpainting by Stan Obritski J . WB2TTY.

Please
send **NEWS** and **PICTURES** to
Worldradio

Sample of Ed Galloway, N2BYR's art

TEACHER

Alan Kline, KB1DJ
P.O. Box 54
West Lynn, MA 01905

VE program, Part II

Last month, I wrote about how the exam session was announced in the media, receiving of the 610 forms and the importance of putting notes on the forms as you receive them. This column is about how we should all try to standardize our submittal of the new 610 forms to the examining body.

610 standardization

Now that I've seen the new style 610 form and like the improvements, here's some suggestions for potential applicants in preparing their paperwork to apply for an appointment to upgrade under the new VE (volunteer examiner) system. These suggestions are for both the VE's and the applicants, whether they are applying to take the exams at a small club-sponsored event or a large hamfest session.

A proper 610 form has a copy of your current license attached to it. Before you make a plain bond copy of your license, make sure you signed your original license. If you have recently upgraded or have a code credit certificate, please attach those also.

If you wish to upgrade two or more levels, say Novice to Advanced or Extra, don't submit two separate 610 forms; one will do. Just check off the highest class of license you want to try for that day. The VE team will schedule you according to the time you need to take all the elements.

If you are taking the test through the ARRL VE program, the charge is only $4, whether you are taking code only or every element from Novice to Extra. Make sure you sign your check. If you are a minor, put your name and call sign on your parent's check. If you are a family taking many tests, write out different checks for each 610 form submitted. If you pay by money order, postal money order or bank check, please put your name and call sign on the document.

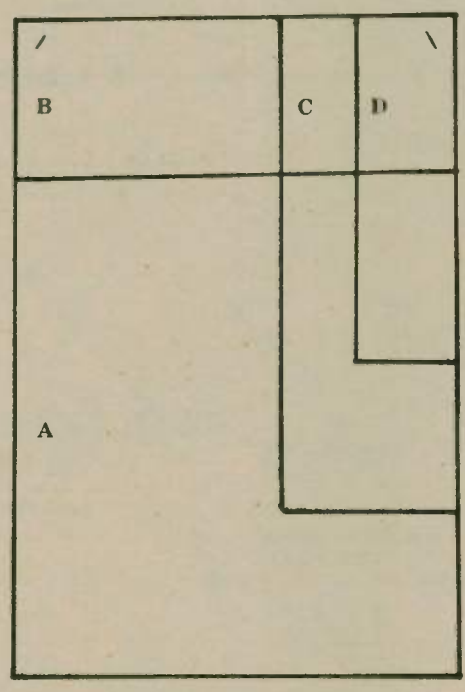
Double-check with the VE's giving the exam. I found out it was easier to have the checks made out to me or my ham club than the ARRL/VEC. The VE's might put some thought into this problem. What happens when you send 200 or so checks to the ARRL by mail? Sending one check from your ham club is much simpler and safer. As I mentioned last month, not a single check bounced during my session — a rare occurrence.

Now, let's return to standardizing the submittals of the 610's. Please enclose a business-sized (#10) SASE. Don't scribble your name and address on it; print or type clearly. Once the VE team schedules your exam time, I'm sure you will want to know what time it is. So if you scribble your name on it and the post office can't deliver it, you may never know if the VE team received your exam request or not.

If the VE team is having a large hamfest session, you might let them know what day you prefer. But make your reason a good one. One YL complained to me about a 9:00 a.m. Sunday appointment — not because she had to go to church, but because she knew she was going to party all night long at the hamfest. If you have a legitimate (work-related or personal) reason for the preference of a certain day and time, let the VE's know. Maybe they will accommodate you.

Put your phone number somewhere on the border of the 610 form. This is to facilitate the solving of paperwork problems. I did not want to leave any paperwork problems for the day of our exams, since the VE's would have enough to do. During the week before the exams, we called a number of amateurs to get some last minute info.

Now, to make the processing of paperwork as easy as possible, I am suggesting a standardized way you should submit your 610 forms in to the VE's. Below is a drawing of how you might try to submit your paperwork:



A) This is the correctly filled out, new style 610 form.

B) This is a copy of your current license, plus any upgrade or code certificates.

C) This is a #10 SASE.

D) This is the check for the amount of money requested by the VE team.

All these documents are stapled to the upper corner of the 610 form. Now, don't bother to fold this package. Put it in a large 9½" × 12½" manila envelope and send it off to the designated VE team amateur who is collecting forms. They will surely appreciate your thoroughness, neatness and help.

In Part III, I will talk about how to schedule the actual exams to benefit all those involved. □

VISIT YOUR LOCAL RADIO CLUB.

ALASKA

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

ARIZONA

Arizona Repeater Assoc., Inc. (ARA)
P.O. Box 5291
Phoenix, AZ 85010
4th Thursday/monthly except July/Dec. 7:30 p.m.
4250 E. Camelback Rd., Suite 475-K

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

CALIFORNIA

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

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

East Bay Amateur Radio Club
Salvation Army Center
Rheem Ave. & 36th Street
Richmond, CA 94804
2nd Friday/monthly — 8:00 p.m.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Valley of The Moon Amateur Radio Club
Darrel Jones, WD6BOR (707) 938-8086 for info.
358 Patten St., Sonoma, CA 95476 • Meets: Sonoma Police Station, 175 West 1st St., Sonoma • 3rd Wed./monthly
7:30 p.m. Simplex net 147.47 MHz Wed. 7:30 p.m.

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

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

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

CONNECTICUT

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

FLORIDA

Dade Radio Club, Inc.
Museum of Science
3280 South Miami Ave.
Miami, FL 33133
1st and 3rd Tuesdays/monthly — 8:00 p.m.

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

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.

Vero Beach Amateur Radio Club W4OT
Charles Heichlinger, W4NPS, President
Meets second Thursday/monthly — 8:00 p.m.
American Red Cross Bldg.
2506 17th Ave. • Vero Beach, FL 32960

HAWAII

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

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

ILLINOIS

Bolingbrook Amateur Radio Society
532 Sheffield Rd.
Naperville, IL 60565
(312) 369-0747 / call in 147.93/33
3rd Monday/monthly — 7:00 p.m.

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.

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

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

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

INDIANA

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

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

IOWA

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

MARYLAND

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

MASSACHUSETTS

Quannapowitt Radio Assn. (QRA)
United Methodist Church
Vernon St.
Wakefield, MA 01880
4th Friday, September-May at 8:00 p.m.

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

MICHIGAN

South Eastern Michigan A.R.A.
Meets: 1st Fri./monthly 7:30 p.m. K8FC Rptr. 147.75/15
Grosse Pointe North High School
Building C, Cafeteria Commons
Info. Contact WB5YOK (313) 774-2531

MISSOURI

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

NEW HAMPSHIRE

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

NEW JERSEY

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

NEW YORK

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

Staten Island Amateur Radio Assn. (SIARA)
P.O. Box 495
Staten Island, New York 10314
Third Friday/monthly — 8:00 p.m.
Rm. B-118, College of S.I. — Sunnyvale

Westchester Amateur Radio Association (WARA)
Scarsdale Village Hall
Scarsdale, New York 10583
Bernard Dubbs, President, WA2FSR
1st Wednesday/monthly — 8:00 p.m.

OHIO

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

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

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

OREGON

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

SOUTH CAROLINA

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

TEXAS

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

VIRGINIA

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

Southern Peninsula Amateur Radio Klub (SPARK)
Repeater 146.13/146.73 - K4DHO (804) 851-5573
Salvation Army Community Center (Big Bethel Rd.)
P.O. Box 4128, Hampton, VA 23664
1st and 3rd Tuesday/monthly — 7:30 p.m.

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

WEST VIRGINIA

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

Esther Given, W6BDE

The Quarter Century Wireless Association has established a building fund on the recommendation of its Long Range Planning Committee. The association's Board of Directors authorized the establishment of an account to accept contributions for this purpose with the full expectation that QCWA will continue to grow and need larger and more permanent headquarters.

By initiating the fund now, accepting contributions and bequeaths over the next few years and investing wisely, QCWA will be in a favorable financial position to consider permanent QCWA-owned headquarters when the need arises.

The new building fund is not in competition with QCWA's Memorial Scholarship Fund for which continued support is encouraged.

Contributions to the building fund will enjoy the same tax considerations as those to the scholarship program. All such contributions should be sent directly to QCWA Headquarters, 1409 Cooper Dr., Irving, TX 75061-5527.

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It is with great sadness that QCWA reports the loss of its Assistant General Manager, Rollie Terrill, W5RC. Rollie served the organization with conscientious devotion. He was a perfectionist who ran a tight ship, but his performance and integrity were of the highest caliber and always in the best interests of QCWA.

Rollie suffered a stroke, followed by major surgery last summer, and made sufficient recovery to be able to partially resume his QCWA job which he conducted from a wheelchair in his home. He became a Silent Key on 17 December 1984 as a result of another stroke.

The loss of this important staff member may cause a slight disruption of office functions at headquarters. However, Ted Heithecker, W5EJ, General Manager, and Nadine Wells, W5ZUT, Office Secretary, are making every effort to keep abreast of the correspondence and procedures which were handled by Rollie with such outstanding competence.

QCWA has lost not only a dedicated staff employee but a devoted member of the association.

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Two new QCWA chapters received their charters in time for a holiday celebration.

Royal Palms Chapter #152 — operating out of Naples, Florida — was officially chartered 18 December 1984. This is the 21st chapter organized in Florida and will serve QCWA members in the southwest area of the state.

Crater Lake Chapter #153, chartered 20 December 1984, will embrace southern Oregon, making it possible for QCWA members in that area to meet together. The headquarters for this chapter will be in the Medford, Oregon area.

The QCWA chapter is a most important extension of the association and serves as the geographic magnet that brings QCWA members together for greater comradeship. QCWA can proudly boast that 144 of its 153 chapters formed over the past 34 years are actively operating with meetings, annual election of officers and carrying out the aims and goals of the organization.

QCWA chapters may be formed when 10 or more QCWA members in a given geographical area petition QCWA Headquarters for a charter. All chapter members must be members in good standing in QCWA Inc.

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The German Chapter #106 of QCWA has initiated a certificate entitled "QCWA 106". The certificate serves as a memorial to the chapter's first chairman. Hans Schleifenbaum, DL1YA. It is available to anyone making 15 contacts with members of chapter 106.

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An important change has been announced by Piedmont Chapter #126 of QCWA. Both the location and date of the 1985 QCWA Convention which that chapter will host have been rescheduled. The new dates are 26-29 September 1985 and the new location is the Winston-Salem Hyatt House in downtown Winston-Salem, North Carolina. The new location is on Interstate I-40 within 25 minutes of Winston-Salem's Highpoint Regional Airport, which is served by all major airlines.

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The QCWA Spring QSO Party dates of 09-10 February for CW and 09-10 March for phone should be on the current calendar for all QCWA members. Participants are reminded that logs and score sheets must be postmarked by 25 March 1985. Certificates may be earned by working members in each of the 50 states, working members of 60 different chapters or working 100 or 500 QCWA members. □

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**Hope we can serve you.
Your comments
and suggestions
are welcome.**

Chris Wilson

WITH THE HANDI-HAMS

Maureen Pranghofer, KFØI

It is the 2nd of January here — the first day back at work after the holidays. Days of gorging oneself on Christmas goodies, giving and receiving gifts, and of starting things over again and renewing hopes.

You know the kind of things that take place at the beginning of every new year. Everyone makes goals, resolutions and has big plans of how to make the new year somehow different and a bit better than the one preceding . . . and so it is at HANDI-HAM Headquarters.

Here are some of the goals of the HANDI-HAM System for this upcoming year and how you can assist us in meeting these.

Increased membership

We get phone calls from folks all the time who say, "Hi, this is John." I pause a minute trying to think of which John it is, and then they say, "You know — the one in Denver." Usually I have figured out who it is by then and things are fine, but occasionally I have to ask again.

I am not at all trying to convey the idea that HANDI-HAMs has grown so large we don't know who we have in the System. On the contrary — we try to keep things on as personal a level as possible (more about this later). What I am saying is that people don't often realize how large the System is. Currently we have over 5,000 members. And we would be delighted to increase that number so that more persons can make use of our services.

So sign up if you haven't. We have many non-handicapped volunteers who simply help folks out. If you know of a handicapped person, spread the word, and if you know of someone who isn't a ham and would like to contribute to the System in any way, let them know too, because we have many non-hams who just have an interest and help out and are also part of the System.

Find one-to-ones for each student

This is kind of an ongoing item that never stops. In fact, it is the bulk of my job. Getting new folks started by making sure they have someone to assist them in their local area and by getting them the proper study materials and equipment when needed.

If you are a HANDI-HAM member and you live in the area from which a student applies, you may get a phone call or a letter asking you to assist that student. Sadly enough, we have some very fine members who do not live in areas where we have students. Therefore, we are trying to better involve members by suggesting they write to students like pen pals, and recruit students in their areas.

I have addressed this many times in this column and so do not really need to repeat it other than to say that in every area, there are probably folks who would really enjoy Amateur Radio if they knew about it. Since the matching of HANDI-HAM members does not always coincide with where our members live, I also use the services of the geographical index. So some of you might get a random call asking if you can assist a HANDI-HAM student or if you know of someone in your area who could. Between these two systems, almost all of our students have one-to-ones. There are some places where it is difficult to find help for students, and that will be addressed in a later column.

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

Decreasing the amount of time people have to wait for loaned equipment

When a student is ready to make use of a transceiver (that is, when he has passed his exam and sent us a copy of his license), or when he is ready for a receiver (when we feel his knowledge of code is proficient enough so he can make good use of the receiver), we loan one out to that individual with the understanding that he/she will make plans to purchase a rig when that becomes possible.

We put no time limit on people, but just remind them that we hope they are trying to put a few pennies away so they can eventually do this. Students who can pay it are asked to submit a small fee to cover our cost of shipping the equipment. Sometimes, in fact usually, students have a little wait until a rig can be sent to them after it is requested because we only have so much equipment to go around. We are always trying to decrease this period of time.

So if you know of someone who is contemplating having a back-up rig that will never be used or is thinking about selling a rig, they may want to consider making a donation to the HANDI-HAM System. Any rig which is donated to us and is appropriate for student use gets lots of use, believe me, because it is continually recycled from student to student. Of course, between stops we check it out and keep it in good working order.

Rigs which are most appropriate for students are those which are small, solid-state or easily tuned without the twirling of too many knobs, and those that have knobs which have pointers or click in some way, or which can easily be marked. In particular, we would welcome and would buy anyone's Century 21 or analog Argosy, as these have proven the best and are in short supply. However, we will try and use whatever people so generously donate, and don't feel limited to these areas.

Reorganize

By reorganize I mean just that. No big deal, just that HANDI-HAMs will be undergoing a slight change this year. The HANDI-HAM System is just one of the programs at Courage Center, a comprehensive rehabilitation facility which provides the majority of its services (i.e., therapy, recreation, residential, camping) to persons in the greater metropolitan (Minneapolis/St. Paul) area.

The HANDI-HAM System and the Courage Residence (a temporary transition residence for young adult handicapped persons) are the only services which are national and international in scope. Now the HANDI-HAM System, which has been a department in and of itself, is combining with two other departments — the department of rehabilitation engineering and the independent living home — to become the department of rehabilitation technology. This is very exciting.

Basically, it means that because some of the innovative ideas were adapted to make hamming easier for the handicapped, have added to and come from the knowledge of the rehabilitation engineering department which assist handicapped people by designing things which technically will make their quality of life easier. For example, designing a computerized board controlled by a light sensor which can allow a severely spastic man to communicate via synthesized speech for the first time. Now these innovative ideas will be pooled together so that when a handicapped person comes to us who has a problem which can be met by technology, we can be better organized to assist that individual.

This will in no way affect the services of HANDI-HAMs or change the organization's goal of assisting handicapped persons to become amateurs. It will simply allow people who have not up to this time ordinarily pooled their technical knowledge to better work together.

One change I'm happy to announce, however, is that Bruce Humphrys, the director of the HANDI-HAM System since 1974, is now the director of this new department. He is also still the HANDI-HAM director, he just has a *LOT* more to do.

Make more use of the computer

The records of HANDI-HAM participants have been entered into the mainframe computer at Courage Center, and this makes things much simpler. However, this is still in process, and if any of you have ever just started trying to use a computer you know what can happen. So, for the most part, you can expect that things will go fine, but there is always the possibility that when you join HANDI-HAMs, if you haven't already, you may get two newsletters or some such thing. hi-hi Actually, it is all very exciting to be entering the computer age.

Personalized services

This too is not a new goal — just a reminder to everyone involved with HANDI-HAMs or who is just starting, to ask questions. We try to be as personable as possible.

Every handicapped person is different, even though some may have the same handicap; every volunteer is different having different needs and questions, and every interested person has different questions and different ways of being interested. The staff of the Courage HANDI-HAM System has prided itself in looking at every participant as a unique person. This goal will surely continue.

Well, now that these New Year's resolutions or goals are down on paper, I feel pretty good about them. Most New Year's resolutions are soon lost, but I'm sure the HANDI-HAM ones will continue. It is not the staff which continues them, but you the amateur community with your exceedingly generous spirit and concern for others. After all, it is this spirit which makes Amateur Radio possible. □

QRP'ers and others using batteries for energy storage in conjunction with photovoltaic (PV) panels and/or wind machines should look to the golf-cart battery for the best storage performance, according to a lengthy study just released.

Solar Powered Energy Communications Systems, Inc. (SPECS) — a California-based, non-profit organization providing an outlet for photovoltaic and other alternate-energy products — says a three-year study of battery performance showed those designed for golf carts to be far superior to the traditional automobile battery or even the marine battery.

"The best type of battery for energy storage is still the lead-acid, lead-antimony grid, deep-discharge, golf-cart battery," says the study which was released in SPECS' Fall 1984 newsletter.

The report, made available by Phil Chapman, W6HCS, an official of the organization, goes on to say that the best of the golf-cart batteries are the 6-volt models rated at about 220 ampere-hours at a 20-ampere rate. This means they can produce 11 amperes continuously for 20 hours from full charge.

"And they can do this 300 to 400 times, but you don't want to do this very often during their life cycle," the report warns. "These batteries are designed for medium current requirements over extended periods of time."

The study continues: "The SLI (starter-lights-ignition) batteries for automotive use are the least desirable batteries for our applications. They are designed for large current requirements over a short period of time (i.e., cranking an engine) and cannot be deep-discharged without being damaged."

The marine battery, says SPECS, is a compromise between the others. They are designed to start an engine and provide medium amounts of current for extended periods. SLI automotive batteries are designed to start engines and provide small amounts of current at a steady rate, say the findings. But golf-cart batteries must not be used to crank engines.

Since a golf-cart battery's life is a function of how deeply it is discharged, it should not be discharged more than 33 percent very often before being recharged. Following this rule will extend the life of the battery pack by several years, says the report.

And, the study adds, the warmer the electrolyte (up to about 110 degrees F), the better the performance.

SPECS' study was based on the use of deep-discharge, lead-antimony grid batteries ("Not the no-good, low-maintenance calcium grids," it says) that had been through very high temperature tests at Jet Propulsion Laboratory. They were considered worn out, which is what SPECS wanted for its three-year study about charge rates through use of PV panels.

These batteries were used in light communications work during the recharge experiments. They were discharged up to 60 percent of their full charge in an attempt to learn more about the characteristics of worn-out batteries and when they should be replaced.

"The answer is that batteries can still give reasonably good performance even when they are worn out, provided you have enough panel current to keep them charged," the report says.

Some of the findings in the report include:

- A new, fully charged, golf-cart type, 6-volt battery requires 0.3 to 0.5 of an ampere to maintain it at a float voltage of 14.1 volts. This is based on two such batteries in series to provide a system voltage of 12 volts.
- As the battery pack aged, the current requirement had to be increased to 2 amperes to maintain 14.1 volts in the string.
- The batteries had to be watered more often with age, with the pack requiring almost twice as much water at the end of the three-year test than it needed at the start.
- Less water is required in winter if batteries are kept outside, where they should be.
- Batteries in series and/or parallel will not accept a charge at an identical rate, nor will the cells within batteries.
- Measuring the specific gravity or the cell or battery voltage is not a good indicator of the state of charge, but no one has come up with a practical, state-of-the-art "fuel gauge" to check it. The only way to know the state of charge is to know the amp-hours in and out of the battery pack.

Just how successful is a storage system of this nature? Well, if it is of any measure, Phil Chapman reports his QRO system (200 watts input) has operated from solar power for more than three years "for a total cost of $1.47."

Additional information about SPECS and solar-powered systems can be had by sending $3 to Phil Chapman, W6HCS, Box 155, Montrose, CA 91020. □

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

VHF for traffic

Ken Hand, WB2EUF, wrote to say that they sometimes find Long Island a bit too long to cover adequately with their traffic net, and said maybe they ought to have a CW repeater to help with the job. Good idea, if you could get enough people to use it.

Actually, I believe that most of us amateurs fail to realize the true potential of CW on the VHF bands. Most ARRL sections could be covered by a CW net without a repeater and with much greater reliability on VHF than on the present HF traffic bands. But how many of us have CW rigs that can operate on VHF? In fact, how many of us would know where to get one?

But VHF is being used more for traffic all the time, and in most places one almost needs to have a 2-meter rig for handling traffic locally. Furthermore, traffic is often passed by relay on VHF over surprising distances. This is mainly voice, FM, but Teletypes and computers handle their share too, and watch for that share to increase dramatically in the next few years as more amateurs get computers and they become linked together in packet-switching networks.

Will CW traffic handling become a lost art? We hope not. It's good to have it as a standby for communicating when the high-tech gear develops bugs. And in particular it would be wise for those installing packet-switching terminals to make it possible to access them using CW. It would be a valuable asset in time of emergency; simple gear could be used anywhere to enter the system and move traffic.

Another mode of VHF operation that has not been widely used for traffic handling, but will probably see more use, is satellite communication.

With the earlier OSCARs, it wasn't very practical to handle traffic when the satellite was in range only for a few minutes a day. But the present generation offers openings for hours at a time, and soon we hope to have several geo-synchronous satellites in orbit — apparently stationary as viewed from the ground, so that you can aim your antenna at a spot 23,000 miles above the equator and forget about it. With three such satellites in orbit, we'll have worldwide coverage 24 hours a day with no skip zones. CW could be used here, but probably packet switching will be the preferred mode. And it won't be necessary for every amateur to have a ground terminal, either. Traffic can be relayed to the nearest ground station to put it on the satellite uplink.

CW forever?

Every few years the ARRL Board of Directors considers a proposal to open more frequencies to voice operation. They never speak of it as cutting down the CW bands, however! Well, they would tell us, they are not cutting down the bands open to CW operation — merely expanding those open to phone, for all amateur frequencies are open to CW without exception. And that's true, in a way. But try to copy a signal that's covered over with sideband splatter sometime.

We're experiencing a lot of that on 40 meters now, and it will get worse. But open part of the bottom 100 kHz of the band to U.S. phones, and the DX will cover the rest of the band.

It wouldn't be so bad if they gave the SSB gang 50 kHz in the band, say 7050 to 7100, and at the same time closed 50 kHz elsewhere in the band, say 7250 to 7300, to voice. True, we'd have the international broadcasters proclaiming the glories of their respective fatherlands, but we have that to some extent in our present CW assignment.

It would help, too, now that we are so squeezed, if the FCC would remove the restriction on the bottom 25 kHz and let General and Advanced licensees use it.

Our real trump card, however, will be coherent CW if it ever becomes popular. It will equivalently widen our bands by a factor of as high as 10 or more, and will enable us to communicate as effectively with a ten-fold reduction in power.

And we'll get our revenge! While one CW station doesn't disrupt SSB communication very much, particularly if the phone stations have notch filters in their receivers, a pileup of coherent CW stations a few Hz apart will be as effective as splatter from an over-driven sideband station.

Night Tango exercises

The National Communications System (NCS) has for the past several months been conducting tests of various emergency communication systems (Amateur Radio, MARS, Civil Air Patrol) to see how effective they would be in the event of a major disaster — in particular, of a nuclear attack.

The tests have involved relatively few of us, and have consisted of test messages between various officials. NCS is evaluating the systems as to accuracy and speed of handling, message routing, procedures, interfacing between systems, reliability.

Results have been generally quite satisfactory: the fact that the tests are continuing shows this. If any Night Tango traffic comes your way, handle it as priority traffic. Officials like to see their traffic delivered within an hour.

Alerting a net

Amateur Radio has great emergency communication capability, but it won't be realized if stations aren't on the air when needed. And how are we to know we're needed?

Sometimes we will know because we hear of the emergency by a news broadcast or from a severe weather warning. But some emergencies don't make the news.

An alert Emergency Coordinator will have developed a telephone fan-out procedure so that each station will have a calling list. When a need arises, stations will call people on their lists, and these in turn will call the ones on their lists, and so on until all are notified.

That's fine, if it's only a question of local calls, but one's phone bill could rise alarmingly if long-distance calls are involved. Some amateurs use "smoke signals" in this case — dial the number, let the phone ring once, then hang up. The operators instruct their families not to answer the phone unless it rings at least twice.

Of course, if an amateur is involved in several nets that use smoke signals, there would be no way to tell which one is calling. In that case, the best thing to do is to get on the air and check them all. It will probably be immediately evident which net is calling when you listen.

Swap nets

We traffic handlers tend to think of nets only in terms of handling traffic. But amateurs have nets for other purposes, too: technical discussion, chess, recipe swapping, chasing DX, for example. One type of net that some of us sometimes question is the swap net, where amateurs get together to negotiate sale and barter of amateur equipment. Ken Hand, WB2EUF, in the letter mentioned in the first paragraph, asked about its legitimacy, and in particular about the legality of third-party traffic concerning such swapping and shopping.

As far as third-party traffic is concerned, the rules are the same as for direct contact between the two amateurs. Whether it's done by informal conversation or by formal radiogram makes no difference. The only difference when a formal radiogram is sent is that it is risky. The risk is that some over-zealous amateur along the way will decide it's illegal and spike it, and maybe not even have the courtesy to send a service message to say it has been cancelled.

Section 97.3 (bb) of the FCC regulations defines business traffic as "any transmission or communications the purpose of which is to facilitate the regular business or commercial affairs of any party." Note the word *regular.* If anyone involved is a dealer in Amateur Radio gear, such communication is indeed business communication. But if it is a question of amateurs making deals concerning equipment for their stations, it is within the law.

The questions might be asked about the executor of an amateur's will. It would seem to be legitimate if the executor is working on a voluntary basis, but not if it is a question of a professional who is being compensated for services rendered.

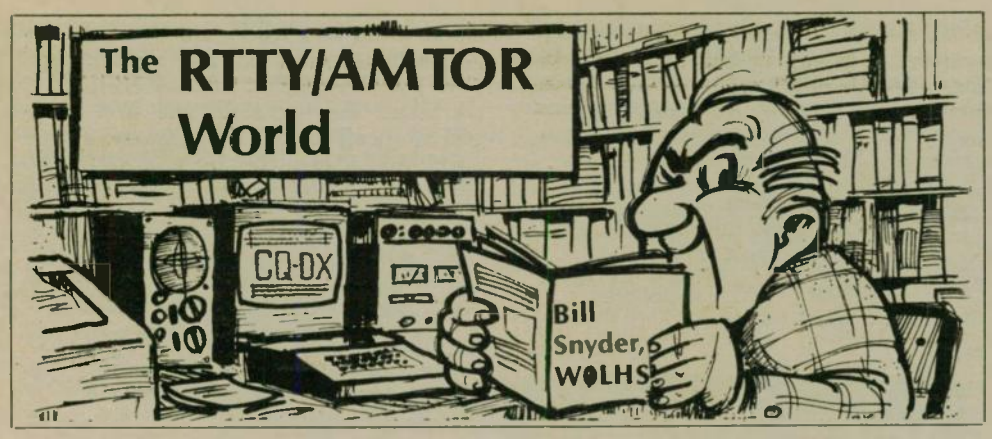
This business communication has caused no end of questions since the FCC stuck us with the rule a decade or so ago. It was much simpler in the good old days when you could handle anything as long as you didn't charge someone for handling it. But that's not the way it is today. That's progress for you! □

Packet radio in Utah

The Utah Packet Radio Association (UPRA) came into being on 05 January 1985, in Salt Lake City, Utah.

UPRA was formed to meet several needs of the growing packet radio community in Utah, the most important of which is the development of packet radio in the state of Utah. Other needs are the creation of a packet network between Salt Lake City and Denver, to be followed later by links toward the Pacific Northwest and southern California.

The organization was born at a meeting of 20 local amateurs interested in packet radio, four of whom are already active on packet. Ron Todd, K3FR, the ARRL Utah Section Manager, was one of those in attendance, and is also one of the charter members. □



If you are a beginner in the wonderful world of digital communications, you no doubt have many questions to ask about interfaces, tuning units, computers and the like. The equipment advertisements do very little to educate the newcomer in the mysteries of RTTY/AMTOR/packet radio. Most advertisements feature a dramatic picture of the black box and/or the circuit board coupled with a block or two of hard-sell copy about the advantages of the system. If the beginner is at all curious, he may have a hard time determining which equipment to buy. There has not been a common source of that system information until now.

The source is a new book: *RTTY Today, Modern Guide to Amateur Radioteletype* by Dave Ingram, K4TWJ. Dave has done the RTTY/AMTOR group a real service by writing this paperback. In 112 pages he covers most of the current equipment being offered for sale; the basics of RTTY and AMTOR transmission; and, as a bonus, a list of the press stations you can copy with your RTTY layout. The book, as Dave says, "is a layman's guide to modern RTTY." I agree with that statement.

The book includes chapters on dedicated terminals, mini-systems, home computers, RTTY converters you can build and the basic concepts of the mode. If you are at all interested in going on RTTY, I suggest you get this book prior to choosing your equipment. The diagrams of how to hook up the various pieces of gear are clear and complete. The mysteries of the codes are well explained. So, all in all, it is worth the modest price.

It is published by Universal Electronics, Inc. of Columbus, Ohio and should be available through your local equipment dealers or direct from the publisher at 4555 Groves Road, Suite 3, Columbus, OH 43232.

If you wish to use an old Teletype (TM) machine as a printer, I suggest you consider another book: *The Beginners RTTY Handbook* published by the *RTTY Journal*. This publication is a collection of articles which previously appeared in the *Journal*, and many of them deal with mechanical RTTY gear that has been with us since the 1950's.

Some of the old TTY machines make excellent printers if you can interface them to your tuning unit. And the price of these old machines can be from zero to extra cheap, so they are very cost effective. I had a Model 28 RO (receive only) hooked to my Robot 800 until I was able to update by adding an RS-232 output to the computer.

Now the Robot is driving a Decwriter II, which will print all RTTY speeds plus ASCII 110. My model 28 was only a one-speed machine, but it did the job. The Decwriter had been on my venerable old SOL computer since 1978. It would be there to this day if I hadn't changed to a letter-quality Spinwriter.

Gone but not forgotten, the Model 28 is now doing yeoman service in the shack of Merle Hazeldahl, W0PCI. Old Teletype machines never die, they just need new grease.

DX mailbag

With the decline of the solar flux, I have been cut off from my usual sources of DX information; however, I still get mail from some of my overseas friends. A recent letter from Bo Stjernberg, SM6ASD, contained some interesting information. Bo, who has been very active in the Scandinavian Radio Teletype Group (SARTG), is now the vice chairman of the Swedish Amateur Association and the editor of the SARTG newsletter.

Bo's letter bemoaned the sad condition on the DX frequency bands during the Canadian Amateur Radio Teletype Group's 1984 contest. "We had one of the most magnificent auroras I have seen here in many years which wiped out 20 meters and shorter wavelengths. Only a few USA stations on the East Coast were workable . . . The same conditions prevailed during the WAEDC contest. The disturbance was less severe then as I could hear Mediterranean stations happily working across the Atlantic, but the curtain was down for us most of the time."

After my comments in last month's column about aurora, I really enjoyed reading the January QST article on the phenomonon. It is one of the best articles I have seen on the subject and all DX'ers, as well as VHF'ers, should study it. When I looked at the maps in the article, I could see why North Dakota DX'ers have problems with those beautiful northern lights and why the VHF crowd jumps for joy.

Another good friend, Jorgen OZ1CRL, is the new contest manager for the SARTG. Jorgen will preside over the SARTG contest which is held annually in August. It is one of the best contests of the year. Plan now to enter this delightful event.

Max de Henseler, HB9RS/W2, inquires if I was with the Gatti-Hallicrafters African Expedition in 1947-48. The answer is yes. Bob Leo, W7LR, and I were the two ham operators during the expedition's travels in Kenya, Tanganyika and Uganda. Bob later went to Saudi Arabia and operated for a while from there.

Max is a collector of Hallicrafters equipment and memorabilia, and in his spare time is president of the United Nations Amateur Radio Club, which operates 4U1UN in New York.

Operating tip of the month

When you finish your RTTY transmission and just before you switch back to receive, send two CARRIAGE RETURN/LINE FEEDS. This procedure will move the cursor and/or printer back to the left side of the screen/paper and not leave the cursor/print head stranded out in the middle of the line.

Eavesdropping

"GOT ON RTTY WHEN I RETIRED, SHOULD HAVE BEEN HERE YEARS AGO." . . . "IT TOOK TWO MONTHS TO GET MY TRANSCEIVER BACK AFTER THE LIGHTNING STRIKE!" . . . "IF SOMEONE COULD BUILD A JOHN THAT WOULD WORK IN OUTER SPACE, THEN MAYBE WE COULD MAKE STAR WARS WORK." . . . " YOU CAN SKIP THE CANNED BRAG TAPE, YOU ARE A NEW COUNTRY, WOW!" . . . "COST ME 50 SKINS FOR 35 AMPS" . . . "RIG IS A GLOBE KINK" . . . "HE THOUGHT A 4CX250 WAS A NEW DXCC COUNTRY" . . . "IF ALL ELSE FAILS, THROW THE C-64 AWAY AND GET ANOTHER!" . . . "I'VE BEEN PLAYING WITH THE CLOCK AND THE CLOCK HAS BEEN PLAYING HAVOC WITH ME." . . . "I DON'T LIKE CLIQUES OR CLICKS ON OUR HAM BANDS!" . . . "MY WIFE GAVE ME THIS RTTY GEAR FOR XMAS — SHE'S ONE FB GIRL!" . . . "I'M SUFFERING FROM VERY STIFF FINGERS OPERATED BY A VERY SLOW BRAIN . . ." . . . "SORRY ABOUT THE SLOW TYPING; I'VE GOT SLOW HOMEBREW SOFTWARE." . . . "I TYPE WITH TEN FINGERS — SIX ON ONE HAND AND FOUR ON THE OTHER." . . . "BOUGHT AN EXCITING NEW GAME CALLED 'WORM WIGGLE!' " . . . "THE NICE THING ABOUT HAM RADIO AS A HOBBY IS THE ABILITY TO SHIFT INTERESTS — WITH THE ACCOMPANYING SHIFT IN CAPITAL." . . . "I RETIRED TO SPAIN, I'M A SENOR CITIZEN." . . . "WELL, PACKET RADIO WITH QRM, QRN AND QSB WOULD BE UNACCEPTABLE, BUT USING A SATELLITE OR LINKED DIGIPEATERS WOULD BE JUST WONDERFUL!" . . . "I HAVE TWO LOVELY SLAVE GIRLS WAVING PALM LEAVES OVER THE FINAL AMPLIFIER!" . . . "RETURNING TO THE STATION THAT SAID PLEASE." . . . "WHEN I RUN MY LINEAR THE TOASTER WON'T MAKE TOAST."

There is a RTTY net that meets on 14093 at 1700Z which might be of interest

(please turn to page 49)

Aerials

Bruce A. Ray

This month's column is devoted entirely to your letters, which I appreciate very much. It brings out topics that, hopefully, are of interest to many of you. Be sure to include an SASE with your questions, otherwise your letter may go unanswered.

Ken Niles, N6JCV, asks if 4-inch wide copper strap is better than wire for radials. Ken, one wide copper strap is only as good as one thin wire radial! Copper, of course, corrodes when in the soil, and since the RF current flows on the outside there is some RF current loss. But the primary purpose of radials is to collect RF currents. They are not put in to provide a good 60 cycle ground connections, although when buried they will also do just that!

It's better to lay the RF radial above ground by a few inches or, if in the way, six feet above ground so you can walk under it. Ken also asks if any radial not touching the earth can be termed a counterpoise. The IEEE standard dictionary defines counterpoise as "a system of wires or other conductors elevated above and insulated from the ground, forming the lower system of conductors of an antenna."

With a five-band vertical, Ken asks how much does using just one radial affect signal strength in a particular direction? Quite a bit. If you can imagine a half-wave dipole with a quarter-wave in a vertical position, you have the picture. The signal will be stronger toward the direction of the single ground radial.

Here's the zinger! Ken wants to place a five-band vertical on his flat house roof, it being 20 square feet. That's a little over 4 × 4 feet. Not much of a radial system, which is supposed to replace the other half of his antenna!

You've got to get some space for at least four long radials, Ken. Run them out to the gutters. Also, tie the gutters into your radial system. You can't get too many radials, and they should be at least a quarter-wave long on the lowest frequency for greatest efficiency. Insulated wire is better than bare when used in the soil, but makes very little difference when on a roof.

C.J. Casebeer, K6CE, agrees with our December '84 column about radials and says its the only way to go. How do you shunt feed a grounded vertical, he asks. Well, the formula is very complicated, C.J. It takes into consideration the height, width of the "vertical" (be it a wire or a tower), its electrical diameter, and the ground radial system, together with frequency. Then the shunt feed wire diameter, its length and distance from the vertical, is also required. Since a lot of guesswork goes into this, why don't we solve it empirically, as we used to say in school? It's faster and certainly more convenient.

The latest series of ARRL Handbooks had a page on the physically short vertical antenna, such as a normal grounded tower, usually supporting a tribander. Unfortunately, the Radio Handbook and the ARRL Antenna Handbook are without any useful information about this subject. There have been some excellent articles in some of the ham magazines from time to time, and that may be a good source.

Connect a variable capacitor to cancel the inductive reactance in series with this feed wire, the other end of the capacitor going to the inner conductor of either 50 or 75 ohm coax. The shield should be connected to the tower base and the radial system. The capacitor size should produce at least 25 ohms at the operating frequency. During its adjustment, if the capacity needs to be increased, raise the tap point up the tower. By using as much capacity as possible, the VSWR bandwidth for, say 1.5 to 1, will be increased. It also reduces the possibility of capacitor arc over with RF power. Don't be afraid to try different tap heights and distance from the tower. A good starting point for 75M and 40M is 3-foot spacing.

Lad Kucera, N9AEG, says our November column by Lil Paddle about using odd and even multiples of a quarter-wave wire is excellent. He has been using a 39/2-wavelength dipole on 2 meters in the Chicago area and it works just fine, thank you! In practice it's quite directional, but happens to be pointed at mid-town from the suburbs!

Our last question comes from N9AEG, who says, "I thought the matching network (ATU) provides the transmitter with a non-reactive load. Who is fooling who?" It's not 01 April yet. No one is fooling. You are partially correct.

We are going to repeat this definition of an antenna tuning unit (also known as ATU, antenna matcher, etc.) until everyone understands. It's always difficult to wipe out a false understanding.

The matching network does two things. First, it cancels the reactance presented to it (if any), and secondly, it transforms the remaining resistance to that of the ATU input, thereby attaining a match condition — or, as we say, a 1:1 VSWR.

●●●

The 'Aerials' column of **Worldradio** is so fortunate to have several highly qualified contributors who have the educational as well as the technical expertise to answer questions and contribute their knowledge here. We pick and choose topics, some from your letters and some from on-the-air discussions.

We were pleased that another monthly amateur publication gave this column a rave review recently. They were talking about antenna tuners and agreed with this column completely. Then they went into the VSWR subject matter, and brought out a point that we would like to elaborate.

The transmitter-antenna interface (a new term) means the device placed between the transmitter and the transmission line to the antenna. This is usually an ATU (antenna tuning unit), which — as we know — does not tune the antenna but cancels the reactance presented by the antenna and line at the interface point.

The ATU also transforms the radiation (plus the loss resistance) to that of the transmitter, usually 50 ohms. There, we have told you once again the workings of the ATU, also known as an antenna tuner, antenna matcher, tuning unit, etc. We're going to repeat this until everyone understands it!

Our friend in the other magazine brings out this point. He does not like high VSWR on a transmission line because that results in high voltages and, he believes, causes problems with coax line connectors and relays. He is afraid of high voltage arc overs.

I agree with him, but think the greater problem is current and not the high voltage resulting from high VSWR. Let's examine this for a moment. Shown below are the resulting RMS voltages from a 3:1 VSWR on a transmission line on any point which has this VSWR, with a power of 2kW CW:

Trans. Line Z	Max. RF voltage	Max. current
50 ohms	548 volts	10.95 amps
75	671	8.94
300	1,342	4.47
450	1,643	3.65

With a barometric pressure of 28 inches of mercury and a temperature of 113 degrees F, it will take 66,700 RF volts to start a RF plume or arc. On relatively flat surfaces or between round surfaces such as capacitor plates, the RF voltage breakdown for frequencies between 1 and 30 MHz is shown below.

Spacing (inches)	RF voltage breakdown
1/32	2,084
1/16	4,168
1/8	8,337
3/16	12,506
1/4	16,675

Commercial practice is to use 80 percent of these voltages as a safe working value. Thus a spacing of 1/32nd of an inch would be satisfactory in a 450 ohm circuit with a VSWR of 3:1.

The current, however, could be much more of a problem as shown. This may be the result of inverse impedance. That is, the impedance could be one-third of our transmission line value. For example in a 75 line, a 3:1 VSWR could be the result of either an impedance of 225 ohms or 25 ohms. VSWR is the same whether the ratio is voltage, current or impedance.

So what does all this mean? You need not worry about voltage breakdowns using conventional everyday coax line, twin lead, or 450 ohm open line at VSWR values up to 3:1. The real problem is not high voltage at these VSWR levels, but current through antenna switching relays found in many imported transceivers. With a 50-ohm system, the maximum current may be as great as 11 amperes. This may be a bit much for small relay contacts.

All this is not a big problem, but it is brought to your attention so you may know what can happen when your VSWR goes up and why your relays start acting up.

Receiving ATU

Some transceivers with built-in ATU's bypass them when in the receiving mode. This is unfortunate, as the use of a tuner will normally improve reception due to their harmonic suppression and impedance-matching qualities.

There are some exceptions to this statement. Nearly all modern-day transceivers will respond best if the received signal source is matched to 50 or 75 ohms, if that is the impedance of the antenna input as stated on the unit at the frequency of interest. □

PCB's for grounding

I have noticed that over the years, you have published a number of articles about station grounding systems. The topic must be a popular one!

Here is a method of installing a low-impedance ground bus on operating table, which almost rivals a solid copper tabletop, such as those used in RF laboratories. The method — use single- or double-sided PCB material!

In the case of those living near PCB shops, the cut-off ends are frequently available free for the picking from trash barrels. They are available in various widths and lengths. If double-sided, bond the two sides together. For a lengthwise run, solder the ends together.

I have the back edge of 6-foot-long operating table covered with 6-inch-wide sections. (Only four sections from the scrap barrel were required.)

To connect the equipment to the bus, use a shield braid jumper made from an old RG8 shield. Keep it short! I would think this method could also be extended to mobiles and marines.

MICKEY McDANIEL, W6FGE
San Diego, California □

Please send **NEWS** and **PICTURES** to *Worldradio*

Reinforce connections

Sometimes soldered connections on antennas aren't any too good because of wind swaying, etc. In some cases, connections may be reinforced by drilling a hole in a pair of copper pennies and using these as washers for through bolts. — *George Burnley, WA6DZD* □

That old spark set

Joe Rice, W4RHZ

This writing was sparked by my reading one of the best articles on old-time radio which appeared on page 51 of the October 1984 issue of **Worldradio**. It was written by Carl C. Drumeller, W5JJ. He tells all about the nostalgia of the early wireless days and how wire and parts were obtained from the old telephones and from the ubiquitous Model-T Ford by Henry Ford.

Old Henry had a few ideas which he adhered to as long as he was alive and would not let any of his engineers change things. He believed in the mechanical braking system as opposed to the modern fluid brake because he feared there would be leakage in the fluid lines — hence, no brakes. He also did not believe in a door on the body on the driver's side which opened into the street. He just stamped the old body with an outline of a door so as to add to the appearance, but it did not open. He thought the gas tank should be under the driver's seat, but due to the fact that the early gas feed system relied on gravity for feed, it would not feed gas going uphill! A driver had to turn around and back up to get the engine to run.

He used four separate spark coils mounted inside the car in a black metal box which could operate on a magneto built into the flywheel which supplied voltage to the coils through a roller wheel which made and broke the contacts to each of the four coils. These coils became the ingredient which "sparked" (no pun intended) the early wireless or radio aspirant.

The erudite writing of Drumeller is necessary to fully understand what I'm about to say at this writing. I've never seen a more complete or well-written article on old-time radio before. I highly recommend it for reference to all concerned.

An "open-gap" spark set

Many Amateur Radio operators got their start with an old Model-T ignition coil, home-made helix coil, condenser made by shellacking tin foil to both sides of a Mason jar or the glass plates used for early photography, and batteries discarded by the telephone company or by the local streetcar company. The batteries used were the old faithful doorbell Nr 6 cells at 1½ volts each.

This set was capable of sending about two or three miles, providing the other station had a good receiving antenna and a sensitive detector.

In the beginning of wireless, as radio was known, there were rotary gaps, sync sets, quenched gaps and open-gaps such as the one shown in the *Figure 1* diagram.

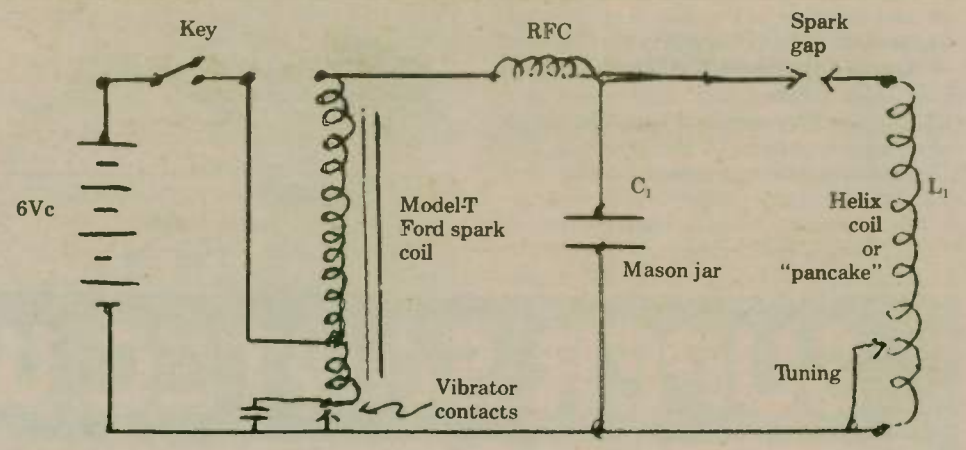


Figure 1

Referring to *Figure 1*, we find two separate circuits necessary to produce a damped signal. The primary circuit is composed of the 6-volt battery, key and auto-transformer which — of course — is the famous Model-T Ford coil. This produces a high voltage pulse of low frequency when the self-contained vibrator contacts open.

In a coil such as used on all gas engines, the spark is produced on the break, not on the make. This pulse is passed through the radio frequency choke (RFC) and charges the capacitor C1. When the voltage is high enough in the condenser, it ionizes the air gap causing electrons to flow across the gap. This lowers the resistance, and an oscillation is set up with C1 and L1 as the resonant circuit. This continues until the charge is diminished. Each succeeding wave pulse will be less than the one preceding it because of the internal resistance in the circuit.

This RF wave is called a "damped" wave because each succeeding wave in the train is less than the first wave, as I stated. As the wave diminishes, it reaches a value somewhere around one-quarter of its original amplitude. The number of waves that are figured in a formula contained in the period of one second, during this interval, is called the "decrement". In reality, the damping of the wave produces a shift in frequency which makes the signal very broad.

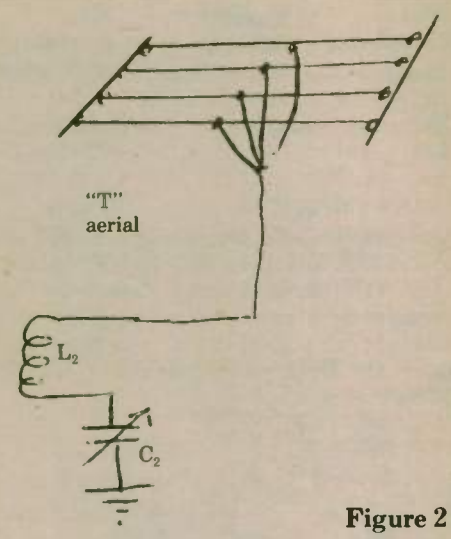


Figure 2

If there were more than 24 waves in each period, the wave would be far too broad, and conversely, if not enough waves were produced, the signal would be cut off and this produced a broadness also due to modulation of the outgoing signal. A person would have to do some judicious juggling of the vibrating contacts, spark gap width and aerial coupling. A good note could be obtained if Murphy's Law did not set in!

There is a formula for decrement using the wavelength of the resonant circuit of C1 and L1 and the number of waves during the one-second interval from the first pulse until the 24th wave had reduced to one-fourth of the original pulse. The Commerce Department, working with the Bureau of Standards and the U.S. Navy Department, set the optimum value of the decrement at 0.2, and this could be measured on a homemade decrement meter.

There were only two kinds of aerial used in the early days. The one shown here, using multiple wires (usually five) as the horizontal and with the single lead-in wire, is called a "T" antenna. If only one end is fed, it was called an "L" aerial or antenna. See *Figure 2* for details.

The aerial in series with L2 and C2 comprised a series resonant circuit coupled to L1 and C1, and affected not only how much current was in the antenna but shifted the frequency and the decrement. Another item to contend with! Nevertheless, many amateurs succeeded in making contacts. □

TORRA

(continued from page 37)

carry the amateurs or parade personnel from one location to another during the parade and pre- and post-parade periods.

At the end of the parade route, the floats are brought to a park area at which they may be viewed by the public for several days after the parade has ended. Amateurs are assigned to the "post-parade" area to advise the command trailer of the arrival of the floats at their destinations and at the parade end call for transportation for the amateur and other participants who must return to the parking areas in a nearby city which had been set aside for the amateur participants.

It never ceases to amaze me how such a massive undertaking operates with such precision. All of the support activity by both the amateurs and the white-suited

Rose Parade Personnel is on a voluntary basis. Many technical personnel are involved to maintain the floats and their prime movers. They are on call during the night and early morning hours before the parade. The amateur bands are full of calls for their services.

The parade always gets off precisely at the planned time. Even when there has been rain all through the night before the parade, there is always sunshine at the start of the parade in the morning.

In the early days of the Rose Parades, telephone wires were strung along the parade route to telephone units on poles. To get to these phones, the parade spotters would have to climb over spectators to reach the phones when a float broke down or any other emergency came up. Naturally, this was done with considerable resentment from the spectators unfortunate enough to be near one of those temporary emergency phones.

The TORRA operation has relieved the police of all aspects of the parade not related to public safety and has provided remote eyes and ears to the Tournament of Roses Parade management. Each year, additional tasks are assigned to Amateur Radio and TV volunteers so that the number of volunteers must be augmented from year to year.

The photographs accompanying this article illustrate some of the facets of this gigantic volunteer Amateur Radio and TV activity.

Twenty-three of the 163 amateurs who assisted in the TORRA support operation for communications are listed below.

Net control operators: Dave Jensen, WA6HXF; Jack (WB6NQD) and Susan (WB6YFY) Swank; Ray Grace, WA6OWM; Dan (N6FTT) and Shelley (N6KAG) Patz; Dave Buhler, WB6ZGF; Don Root, WB6UCK; and Smith Russell, WB6IPY.

Tournament committee chairman operators: Joe Steiner, NO6N; Noel Robertson, N6CIF; Jim Fortney, K6IYK; Ray Cannon, WA6EDI; Bob Vanderwall, WB6YJJ; Steve Tivey, WD6AND; Annette Thompson, KD6E; Harry Horton, N6BWE; Patty Thompson, WB6BWH; Skip Reymann, W6PAJ; Leon (NM6M) and Lee (KB6CIT) Emerson; Pete Hoover, W6ZH; and Ben Narmore, WA6FZH. □

RTTY/AMTOR

(continued from page 45)

to some readers. It is the FMCA net. I watched it a number of times before I discovered the initials stand for the Family Motor Coach Association. I'm not sure of the days it meets, so you'll have to check in to find out.

AMTOR operating tip

I would like to suggest to all AMTOR operators that you liberally apply LINE FEED grease to your QSO's. I use a Commodore 64 in my chirping setup, and the text lines on the CRT screen are very close together. By double spacing now and then, I am able to produce a more readable screen. I always start loading the print buffer with two CR/LF characters, then add two just before I turn it over to the other person. In addition, I always identify each turn like this: JA1DSI DE W0LHS. This lets the eavesdroppers know who's who.

AMTOR maildrops

There is a growing number of AMTOR maildrops on the 20-meter band. Now, don't get me wrong. I am not against maildrops if they are confined to one frequency and do not make random CQ calls soliciting automated contacts. Perhaps we need a national maildrop frequency; so, if you wish to leave a message for a friend, you can tune to that QRG and give him a very short ARQ call. If you have propagation, you will no doubt make contact and can quickly leave your message.

If you have opinions on the way RTTY and AMTOR are being operated, please feel free to write me. I hope to make this column a sounding board for our part of the great hobby. In order to achieve this, I need your input. Good luck and 73. Bill Snyder, W0LHS, 1514 So. 12th, Fargo, ND 58103. DIT DIT. □

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

Computer package for contest logging

The Apple II Contest Logging and Checking Package is an advanced program collection designed to simplify logging and duping of Amateur Radio contests.

Included are several programs which perform realtime logging and/or duping of any contest. CONTEST LOGGER is a general purpose logging/checking program which handles most contest exchange formats. It checks for dupes prior to each contact, prints complete exchanges (sent and received) and stores the call signs of worked stations on disk. Optionally, the DUPESHEET program may be used alone if the operator prefers to log by hand. DUPESHEET may also be used for log checking and dupe sheet preparation after the contest.

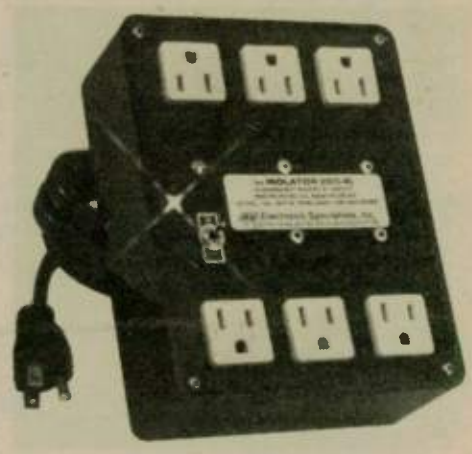
Also included is a SWEEPSTAKES LOGGER, which features automatic recognition of exchange elements. You may type in the check, section, call sign, etc. in any order, and the program will put each in its proper position. Data may be changed after entry by simply typing in the correction. Call signs may be entered at any time to check for a dupe. As with CONTEST LOGGER, it prints each exchange (in perfect ARRL SS logsheet format) and stores the call on disk.

The calls which were saved on disk with the logging or the duping programs may be sorted either by the numeral in the prefix or by the first letter in the call. This permits logical ordering for either domestic or DX contests. After sorting, the alphabetized list is stored back onto disk as a separate file.

The PRINTER PROGRAM sets the printing parameters to suit your particular system. It reads either the alphabetized or original order call sign list and sends them to the printer.

The Apple II Contest Logging and Checking Package works on Apple II series computers with at least 48K of memory and a single-disk drive. The package comes with complete documentation and may be copied or modified. The cost is $25 postpaid.

For additional information, contact: Analog Technology, P.O. Box 8964, Fort Collins, CO 80525. (Apply II is a registered trademark of Apple Computer Company.) □



Power Fail Interrupt

Electronic Specialists has developed POWER FAIL INTERRUPT computer equipment protection. Available as an option on their complete line of Power Conditioning and Protection apparatus, this unit interrupts protected computer equipment AC power for even a momentary power line disruption. Power is restored via a front panel manual Reset Switch.

The POWER FAIL INTERRUPT option is available from stock and can be ordered as an adjunct to Surge Suppressors, Isolators or Kleen-Line Conditioners. Option price is $85 installed.

Electronic Specialists, Inc., 171 S. Main St., P.O. Box 389, Natick, MA 01760; phone (800) 225-4876. □

QSO logbook program

COMPUTERSTUFF is pleased to announce "SPEEDLOG", a high-speed Amateur Radio QSO logbook program for the COMMODORE 64 designed to supplement written logs.

SPEEDLOG allows entry, retrieval and editing of up to 8,500 log entries per disk. Each log entry includes day, date, year, call sign, mode, band, QSL status and "INFO". The "INFO" field may be configured by the user to store up to four characters of special information such as portable ID, county #, member #, etc.

Written in compiled code for FAST access, SPEEDLOG will search a full (8,500 entry) disk and report all matching entries by call sign in just 45 seconds. This high-speed search capability makes SPEEDLOG ideal for large contest "dupe checking" (a disk with 2,500 entries is searched in less than 15 seconds).

SPEEDLOG was designed expressly for the COMMODORE 64 computer with one 1541 disk drive. SPEEDLOG also supports the use of multiple disk drives, parallel drives, and printers. The software is completely "menu driven", and allows complete entry editing, and selectable auto-entry of any or all fields. SPEEDLOG also allows global search of any fields other than, or in addition to call sign with a sacrifice in search speed.

SPEEDLOG was developed by Lawler Microsystems and is distributed exclusively by COMPUTERSTUFF, 308½ Green St., Yankton, SD 57078; (605) 665-2833. Suggested retail for the SPEEDLOG software and user guide is $29.95 (U.S.). A version of SPEEDLOG for MS-DOS computers will be available in the first quarter of 1985. □

802E Multitester

The Central 802E Multitester features five DC volt ranges (5V/25V/100V/500V/1000V at 20,000 ohms/volts), four AC volt ranges (10V/50V/250V/1000V at 10,000 ohms/volts), four DC current ranges (50uA/5MA/50MA/500MA), four resistance ranges (6K/600K/6MEG/60MEG), dB range (-20dB to +62dB) and 1.5V DC battery test.

The unit is complete with *Price:* 1PC — $23.95; 3PC — $21.95; 10PC — $19.95.

World Distributors, Inc., 709 North Memorial Pkwy., Huntsville, AL 35801; (205) 539-0441 / (800) 341-4468.

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

CONTESTS

Worked All Morton

The contest period for the Worked All Morton Contest will be from 0001Z, 01 March, to 2400Z, 31 March — an extended period to help those who have trouble finding those Morton amateurs.

Morton stations will be working all bands, phone and CW, about 5 kHz apart up from the bottom edge of the General portion of each band, and the Novice bands.

Contest exchange: Send and receive RS(T) and state, province or country.

Certificates will be issued to all HF stations working five or more Morton amateurs or members of Morton ARC. Send log information and large SASE or 3 IRCs to Jim Jones, WD9AEU, 701 Columbus Ave., Morton, IL 61550. □

West Coast 160 Bulletin CW Contest

The West Coast 160 Bulletin CW Contest will be held from 0000 GMT, 09 March, to 2359 GMT, 10 March, single-operator only.

Exchange: RST, QTH

Class: Subscribers, non-subscribers

Sub-Class: 3kW, 2kW, 1kW, 250 watts, QRP. Power is measured with peak meter.

Scoring: 10 pts. per QSO

Multipliers: States, VE province, country

Penalties: Any dupes, deduct 3 QSOs.

Awards: *(Subscribers)* Plaque to overall winner and class winner. Certificate to each state, VE and country winner. *(Non-subscribers)* Plaque to overall winner. Certificate to class winners, and state, VE and country winners.

Logs: Date, time, RST/RST, QTH. Enclose a statement of declaring your power rating. Those who falsify their power rating will be banned for three years. (Example: To find your PEP rating, take Power out × 2, 1500 watts × 2 = 3,000 watts PEP class.)

Scoring: 300 QSOs × 10 = 3000, 35 states, 5 VE's, 10 countries = 50, 3000 × 50 = 150,000 pts. FINAL SCORE.

Send logs to: Robert Koziomkowski, KA1SR, 5 Watson Dr., Portsmouth, RI 02871. Logs must be postmarked before 30 April 1985. □

Wisconsin QSO Party

The Wisconsin QSO Party, sponsored by the West Allis Radio Amateur Club, will be held from 1800Z, 10 March to 0100Z, 11 March.

Modes: CW and Phone. Stations may be worked once per mode on each band. Mobiles may be worked once per mode per county that they operate from. *No repeater QSOs allowed.*

Classification: Single operator — single transmitter; Multi-operator — single transmitter; Multi-operator — multi-transmitter; Single operator Novice/Technician.

Exchange: Wisconsin stations send RS/T and county. Non-Wisconsin stations send RS/T and state/province.

Frequencies (suggested): *CW* — 3550, 3725, 7050, 7125, 14050, 21150. (Other bands may be used.) *Phone* — 3890, 7290, 14290.

Scoring: Phone contacts count 1 QSO point; CW contacts count 2 QSO points. *Wisconsin stations* — Multiply the sum of QSO points by the sum of Wisconsin counties plus states plus provinces. Note: DX countries count for QSO points but not as multipliers. *Non-Wisconsin stations* — Multiply the sum of QSO points by the number of Wisconsin counties (maximum 72).

Bonus: *Wisconsin mobiles/portables* — Add 500 bonus points for each county that you operate from, outside your home county, with a minimum of 15 QSOs per county to qualify.

Logs: Entries must contain a log consisting of: time (GMT), call, RS/T, state/province, Wisconsin county, mode and a complete score summary including *your* name, address and call. Circle new multipliers as worked. Logs containing more than 100 QSOs must be accompanied by a dupe sheet (separate dupe sheet for each mode).

Mobile entries must indicate county changes in log and submit a separate dupe sheet for each county.

Entries must be postmarked by 15 April 1985 and sent to: Wisconsin QSO Party, c/o West Allis Radio Amateur Club P.O. Box 1072, Milwaukee, WI 53201.

Awards: *Non-Wisconsin* — Awards will be presented to the highest scores in each state/province. *Wisconsin* — Awards will be presented to the following: a) 10 highest single-operator entries; b) Highest multi-operator single-transmitter entry; c) Highest multi-operator multi-transmitter entry; d) Highest Novice/Technician entry; e) Highest aggregate club score (club member stations to be located within 50 miles of the club except for mobiles).

Wisconsin counties

Adams	Marathon
Ashland	Marinette
Barron	Marquette
Bayfield	Menominee
Brown	Milwaukee
Buffalo	Monroe
Burnett	Oconto
Calumet	Oneida
Chippewa	Outagamie
Clark	Ozaukee
Columbia	Pepin
Crawford	Pierce
Dane	Polk
Dodge	Portage
Door	Price
Douglas	Racine
Dunn	Richland
Eau Claire	Rock
Florence	Rusk
Fond du Lac	Sauk
Forest	Sawyer
Grant	Shawano
Green	Sheboygan
Green Lake	St. Croix
Iowa	Taylor
Iron	Trempealeau
Jackson	Vernon
Jefferson	Vilas
Juneau	Walworth
Kenosha	Washburn
Kewaunee	Washington
La Crosse	Waukesha
Lafayette	Waupaca
Langlade	Waushara
Lincoln	Winnebago
Manitowoc	Wood

States

Alabama	New Jersey
Alaska	New Mexico
Arizona	New York
Arkansas	North Carolina
California	North Dakota
Colorado	Ohio
Connecticut	Oklahoma
Delaware	Oregon
Florida	Pennsylvania
Georgia	Rhode Island
Hawaii	South Carolina
Iowa	South Dakota
Idaho	Tennessee
Illinois	Texas
Indiana	Utah
Kansas	Vermont
Kentucky	Virginia
Louisiana	Washington
Maryland (D.C.)	West Virginia
Massachusetts	Wisconsin
Maine	Wyoming
Michigan	
Minnesota	**Provinces**
Mississippi	Alberta
Missouri	British Columbia
Montana	Manitoba
Nebraska	Maritime/VO1/VO2
Nevada	Ontario
New Hampshire	Quebec
	Saskatchewan
	Yukon Territory

BARTG Spring RTTY Contest 1985

The British Amateur Radio Teleprinter Group's Spring RTTY Contest 1985 will be held from 0200 GMT, Saturday, 23 March until 0200 GMT, Monday, 25 March.

The total contest period is 48 hours but not more than 30 hours of operation is permitted. Time spent as listening periods counts as operating time. The 18 hours of non-operating time can be taken at any time during the contest period, but off periods may not be less than three hours at a time. Times *on* the air must be summarized on the summary sheet.

There will be separate categories for single operator, multi-operator and shortwave listener stations.

Bands: 3.5, 7.0, 14.0, 21.0 and 28 MHz Amateur bands

Stations: Stations may not be contacted more than once on any one band, but additional contacts may be made with the same station if a different band is used.

Countries: The ARRL DX Countries List will be used, and in addition, each W/K, VE/VO and VK call area will be counted as a separate country. *NOTE* — W/K, VE/VO and VK count once each only for QCA purposes.

Messages: Messages will consist of:

a) Time GMT. This must consist of a full four-figure group; the use of the expression "same" or "same as yours" will not be acceptable.

b) RST and message number. The number must consist of a three-figure group and start with 001 for the first contact made.

Points: Points can be claimed as follows:

a) *All* two-way RTTY contacts with other stations within one's own country will earn 2 pts.

b) *All* two-way RTTY contacts with other stations outside one's own country will earn 10 pts.

c) *All* stations can claim a bonus of 200 pts. for each country worked, including their own. Note that any one country may be counted again if worked on a different band, but continents are counted once only.

NOTE — Proof of contact will be required in cases where the station worked does not appear in any other contest log received or the station worked does not submit a check log.

Scoring:

a) Two-way contact points times the total of countries worked.

b) Total country points times 200 times the number of continents worked (max. 6).

c) Add (a) and (b) together to obtain the final score. Sample calculation:

Exchange points (302) × countries (10) =3020
Country points (10) × 200 × continents (3) =6000
(a) and (b) added together to give a score 9020

Log and score sheets: Use a separate sheet for each band and indicate all times on the air. Logs to contain date, time GMT, call sign of each station worked, RST and message number sent, time, RST and message number received and the points claimed.

RF TRANSISTORS, MICROWAVE TRANSISTORS

TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE
2N1561	$25.00	2N4416	2.25	2N5920	$ 70.00	181-3	15.00	40608 RCA	$ 2.48	A2X1698	POR	BFY90	$ 1.50	EFJ4017	24.00
2N1562	25.00	2N4427	1.25	2N5921	80.00	210-2	10.00	40673 RCA	2.50	A3-12	14.45	BLW60C5	15.00	EFJ4021	24.00
2N1692	25.00	2N4428	1.85	2N5922	10.00	269-1	18.00	40894 RCA	1.00	A50-12	24.00	BLX67	12.25	EFJ4026	35.00
2N2857	1.55	2N4430	11.80	2N5923	25.00	281-1	15.00	60247 RCA	25.00	A209	10.00	BLX67C3	12.25	EN15745	20.00
2N2857JAN	4.10	2N4927	3.90	2N5941	23.00	282-1	30.00	61206 RCA	100.00	A283	6.00	BLX93C3	22.21	FJ9540	16.00
2N2857JANTX	4.50	2N4957	3.45	2N5942	40.00	482	7.50	62800A RCA	60.00	A283B	6.00	BLY87A	7.50	FSX52WF	58.00
2N2876	13.50	2N4959	2.30	2N5944	10.35	564-1	25.00	62803 RCA	100.00	A1610	19.00	BLY88C3	13.08	G65739	25.00
2N2947	18.35	2N5016	18.40	2N5945	10.00	698-3	15.00	430414/3990RCA	50.00	AF102	2.50	BLY89C	13.00	G65386	25.00
2N2948	13.00	2N5026	15.00	2N5946	12.00	703-1	15.00	3457159 RCA	20.00	AFY12	2.50	BLY90	45.00	GM0290A	2.50
2N2949	15.50	2N5070	18.40	2N5947	9.20	704	4.00	3729685-2 RCA	75.00	AR7115	20.00	BLY92	13.30	HEP76	4.00
2N3118	5.00	2N5090	13.80	2N6080	6.00	709-2	11.00	3729701-2 RCA	50.00	AT41435-5	6.35	BLY94C	45.00	HEPS3002	11.40
2N3119	4.00	2N5108	3.45	2N6081	7.00	711	4.00	3753883 RCA	50.00	B2-8Z	10.70	BLY351	10.00	HEPS3003	30.00
2N3134	1.15	2N5109	1.70	2N6082	9.00	733-2	15.00	615467-902	25.00	B3-12	10.85	BLY568C/CF	30.00	HEPS3005	10.00
2N3287	4.90	2N5160	3.45	2N6083	9.50	798-2	25.00	615467-903	40.00	B12-12	15.70	C2M70-28R	92.70	HEPS3006	19.90
2N3288	4.40	2N5177	21.62	2N6084	12.00	3421	28.00	2SC568	2.50	BAL0204125	152.95	C25-28	57.00	HEPS3007	25.00
2N3309	4.85	2N5179	1.04	2N6094	11.00	3683P1	15.00	2SC703	36.00	BF25-35	56.25	C4005	2.50	HEPS3010	11.34
2N3375	17.10	2N5216	56.00	2N6095	12.00	3992	25.00	2SC756A	7.50	B40-12	19.25	CD1659	20.00	HF8003	10.00
2N3478	2.13	2N5470	75.00	2N6096	16.10	4164P1	15.00	2SC781	2.80	B70-12	55.00	CD1899	20.00	HFET2204	112.00
2N3553	1.55	2N5583	3.45	2N6097	20.70	4243P1	28.00	2SC1018	1.00	BF272A	2.50	CD1920	10.00	HP35821	38.00
2N3553JAN	2.90	2N5589	9.77	2N6105	21.00	4340P3	18.00	2SC1042	24.00	BFQ85	2.50	CD2188	18.00	HP35826B	32.00
2N3632	15.50	2N5590	10.92	2N6136	21.85	4387P1	27.50	2SC1070	2.50	BFR21	2.50	CD2545	24.00	HP35826E	32.00
2N3733	11.00	2N5591	13.80	2N6166	40.24	7104-1	28.00	2SC1216	2.50	BFR90	1.00	CD2664A	16.00	HP35831E	30.00
2N3818	5.00	2N5596	99.00	2N6267	142.00	7249-2	10.50	2SC1239	2.50	BFR91	1.65	CD3167	92.70	HP35832E	50.00
2N3866	1.30	2N5636	12.00	2N6304	1.50	7283-1	37.50	2SC1251	24.00	BFR99	2.50	CD3353	95.00	HP35833E	50.00
2N3866JAN	2.20	2N5637	15.50	2N6368	30.00	7536-1	30.00	2SC1306	2.90	BFT12	2.50	CD3435	26.30	HP35859E	75.00
2N3866JANTX	3.80	2N5641	12.42	2N6439	55.31	7794-1	10.50	2SC1307	5.50	BFW16A	2.50	CD3900	152.95	HP35866E	44.00
2N3866JANTXV	4.70	2N5642	14.03	2N6459	18.00	7795	15.00	2SC1424	2.80	BFW17	2.50	CM25-12	20.00	HXTR2101	44.00
2N3866AJANTXV	5.30	2N5643	25.50	2N6567	10.06	7795-1	15.00	2SC1600	5.00	BFW92	1.50	CM40-12	27.90	HXTR3101	7.00
2N3924	3.35	2N5645	13.80	2N6603	13.50	7796-1	24.00	2SC1678	2.00	BFX44	2.50	CM40-28	56.90	HXTR5101	31.00
2N3926	16.10	2N5646	20.70	2N6604	13.50	7797-1	36.00	2SC1729	32.40	BFX48	2.50	CME50-12	30.00	HXTR6104	68.00
2N3927	17.25	2N5651	11.05	2N6679	44.00	40081 RCA	5.00	2SC1760	1.50	BFX65	2.50	CTC2001	42.00	HXTR6105	31.00
2N3948	1.75	2N5691	18.00	2N6680	80.00	40279 RCA	10.00	2SC1909	4.00	BFX84	2.50	CTC2005	55.00	HXTR6106	33.00
2N3950	25.00	2N5764	27.00	021-1	15.00	40280 RCA	4.62	2SC1945	10.00	BFX85	2.50	CTC3005	70.00	J310	1.00
2N3959	3.85	2N5836	3.45	01-80703T4	65.00	40281 RCA	10.00	2SC1946	40.00	BFX86	2.50	CTC3460	20.00	J02000	10.00
2N4012	11.00	2N5842	8.45	35C05	15.00	40282 RCA	20.00	2SC1947	10.00	BFX89	1.00	DV2820S	25.00	J02001	25.00
2N4037	2.00	2N5847	19.90	102-1	28.00	40290 RCA	2.80	2SC1970	2.50	BFY11	2.50	DXL1003P70	22.00	J04045	24.00
2N4041	14.00	2N5849	20.00	103-1	28.00	40292 RCA	13.05	2SC1974	4.00	BFY18	2.50	DXL2001P70	19.00	KD5522	25.00
2N4072	1.80	2N5913	3.25	103-2	28.00	40294 RCA	2.50	2SC2166	5.50	BFY19	2.50	DXL2002P70	14.00	KJ5522	25.00
2N4080	4.53	2N5916	36.00	104P1	18.00	40341 RCA	21.00	2SC2237	32.00	BFY39	2.50	DXL3501AP100F	47.00	M1106	13.75
2N4127	21.00			163P1	10.00			2SC2695	47.00			EFJ4015	12.00		

* R F TRANSISTORS *

TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE
M1107	$16.75	MRF221	10.00	MRF525	3.45	MSC82001	33.00	PT4642	20.00	SD1007-4	15.00	SD1088-8	22.00	SD1220	8.00
M1131	5.15	MRF223	13.00	MRF559	1.76	MSC82014	33.00	PT5632	4.70	SD1007-5	15.00	SD1089-5	15.00	SD1220-1	9.50
M1132	7.25	MRF224	13.50	MRF587	11.00	MSC82020M	130.00	PT5749	25.00	SD1009	$15.00	SD1090	15.00	SD1220-9	8.00
M1134	13.40	MRF227	3.45	MRF605	20.00	MSC82030	33.00	PT6612	25.00	SD1009-2	15.00	SD1094	15.00	SD1222-8	16.00
M9116	29.10	MRF230	2.00	MRF618	25.00	MSC83001	40.00	PT6619	20.00	SD1012	10.00	SD1095	15.00	SD1222-11	7.50
M9579	6.00	MRF231	10.00	MRF626	12.00	MSC83003	82.00	PT6708	25.00	SD1012-3	10.00	SD1098-1	30.00	SD1224-10	18.00
M9580	7.95	MRF232	12.07	MRF628	8.65	MSC83005	70.00	PT6709	25.00	SD1012-5	10.00	SD1100	5.00	SD1225	18.00
M9587	7.00	MRF237	3.15	MRF629	3.45	MSC83026	POR	PT6720	25.00	SD1013	10.00	SD1109	18.00	SD1225-1	15.00
M9588	5.20	MRF238	13.80	MRF641	25.30	MSC83303	POR	PT8510	15.00	SD1013-3	10.00	SD1115-2	7.50	SD1229-7	10.95
M9622	5.95	MRF239	17.25	MRF644	27.60	MSC84900	60.00	PT8524	25.00	SD1013-7	10.00	SD1115-3	7.50	SD1229-16	10.95
M9623	7.95	MRF245	35.65	MRF646	29.90	MT4150	14.40	PT8609	25.00	SD1016	15.00	SD1115-7	2.10	SD1232	4.00
M9624	9.95	MRF247	31.00	MRF648	33.35	MT5126	25.00	PT8633	25.00	SD1016-5	15.00	SD1116	5.00	SD1240-8	15.00
M9625	15.95	MRF304	36.00	MRF816	15.00	MT5596(2N)	99.00	PT8639	25.00	SD1018-4	13.00	SD1118	22.00	SD1244-1	14.00
M9630	14.00	MRF306	50.00	MRF823	20.00	MT5768(2N)	95.00	PT8659	25.00	SD1018-6	13.00	SD1119	5.00	SD1244H12	25.00
M9740	27.90	MRF313	11.15	MRF846	44.85	MT8762	25.00	PT8679	25.00	SD1018-7	13.00	SD1124	50.00	SD1262	15.00
M9741	27.90	MRF314	29.21	MRF892	35.50	NE02136	2.00	PT8708	20.00	SD1018-15	13.00	SD1132-1	15.00	SD1263	15.00
M9755	16.00	MRF315	28.86	MRF894	46.00	NE02160ER	$100.00	PT8709	20.00	SD1020-5	10.00	SD1132-4	12.00	SD1263-1	15.00
M9780	5.50	MRF316	55.43	MRF901 3 Lead	1.00	NE021350	5.30	PT8727	29.00	SD1028	15.00	SD1133	9.50	SD1272	10.95
M9827	11.00	MRF317	63.94	MRF901 4 Lead	2.00	NE13783	61.00	PT8731	25.00	SD1030	12.00	SD1133-1	10.00	SD1272-1	10.95
M9848	35.00	MRF412	18.00	MRF902/2N6603JAN	15.00	NE21889	43.00	PT8742	19.10	SD1030-2	12.00	SD1134-1	2.50	SD1272-2	10.95
M9850	13.50	MRF420	20.12	MRF902B	18.40	NE57835	5.70	PT8787	25.00	SD1040	5.00	SD1134-4	12.00	SD1272-4	10.95
M9851	20.00	MRF421	25.00	MRF904	2.30	NE64360ER-A	100.00	PT8828	25.00	SD1040-2	20.00	SD1134-17	12.00	SD1278	13.75
M9860	8.25	MRF422	38.00	MRF905	2.55	NE64480 (B)	94.00	PT9700	25.00	SD1040-4	10.00	SD1135	10.25	SD1278-1	13.75
M9887	2.80	MRF427	17.25	MRF911	2.50	NE73436	2.50	PT9702	25.00	SD1040-6	5.00	SD1135-3	12.00	SD1278-5	13.75
M9908	6.95	MRF428	63.00	MRF965	2.55	NE77362ER	100.00	PT9783	16.50	SD1043	12.00	SD1136	12.50	SD1279-1	18.00
M9965	12.00	MRF433	12.07	MRF966	3.55	NE98260ER	100.00	PT9784	32.70	SD1043-1	10.00	SD1136-2	12.50	SD1279-3	18.00
MM1500	25.00	MRF449/A	12.65	MRF1000MA	32.77	PRT8637	25.00	PT9790	56.00	SD1045	3.75	SD1143-1	10.00	SD1281-2	8.00
MM1550	10.00	MRF450/A	14.37	MRF1004M	31.05	PT3127A	5.00	PT31083	20.00	SD1049-1	2.00	SD1143-3	17.00	SD1283	10.00
MM1552	50.00	MRF452/A	17.00	MRF2001	41.74	PT3127B	5.00	PT31962	20.00	SD1053	4.00	SD1144	4.00	SD1283-2	10.60
MM1553	50.00	MRF453/A	18.40	MRF2005	54.97	PT3127C	20.00	PTX6680	20.00	SD1057	10.00	SD1145-5	15.00	SD1283-3	10.00
MM1607	8.45	MRF454/A	20.12	MRF5176	24.00	PT3127D	20.00	RE3754	25.00	SD1065	4.75	SD1146	15.00	SD1283-4	10.00
MM1614	10.00	MRF455/A	16.00	MRF8004	2.10	PT3127E	20.00	RE3789	25.00	SD1068	15.00	SD1147	15.00	SD1289-1	15.00
MM1810	15.00	MRF458	$20.70	MSC1720-12	225.00	PT3190	20.00	RF35	16.00	SD1074-2	18.00	SD1188	10.00	SD1290-4	15.00
MM1810	15.00	MRF464	25.30	MSC1821-3	125.00	PT3194	20.00	RF85	17.50	SD1074-4	28.00	SD1189	24.00	SD1290-7	15.00
MM1943	1.80	MRF466	18.97	MSC1821-10	225.00	PT3195	20.00	RF110	21.00	SD1074-5	28.00	SD1200	1.50	SD1300	1.25
MM2608	5.00	MRF472	1.50	MSC2001	30.00	PT3537	7.80	S50-12	23.80	SD1076	18.50	SD1201-2	15.00	SD1301-7	3.00
MM3375A	17.10	MRF475	3.10	MSC2010	93.00	PT4166E	20.00	S3006	15.00	SD1077	4.00	SD1202	$10.00	SD1304-8	$ 2.50
MM4429	10.00	MRF476	3.16	MSC2223-10	245.00	PT4176D	25.00	S3007	10.00	SD1077-4	4.00	SD1212-8	4.95	SD1305	3.00
MM8000	1.15	MRF477	20.00	MSC2302	POR	PT4186B	5.00	S3031	22.00	SD1077-6	4.00	SD1212-11	4.95	SD1307	3.00
MM8006	2.30	MRF479	8.05	MSC3000	35.00	PT4209	25.00	SCA3522	5.00	SD1078-6	24.00	SD1212-16	4.95	SD1308	3.00
MM8011	25.00	MRF492	23.00	MSC3001	38.00	PT4209C/5645	25.00	SCA3523	5.00	SD1080-7	7.50	SD1214-7	5.00	SD1311	1.00
MPSU31	1.01	MRF502	1.04	MSC72002	POR	PT4556	24.60	SD345	5.00	SD1080-8	6.00	SD1214-11	5.00	SD1317	8.00
MRA2023-1.5	42.50	MRF503	6.00	MSC73001	POR	PT4570	7.50	SD445	5.00	SD1080-9	3.00	SD1216	12.00	SD1319	2.50
MRF134	10.50	MRF504	7.00	MSC80064	35.00	PT4577	20.00	SD1004	15.00	SD1084	8.00	SD1219-4	15.00	SD1345-6	5.00
MRF136	16.00	MRF509	5.00	MSC80091	10.00	PT4590	5.00	SD1007	15.00	SD1087	15.00	SD1219-5	15.00	SD1347-1	1.00
MRF171	35.00	MRF511	10.69	MSC80099	3.00	PT4612	20.00	SD1007-2	15.00	SD1088	22.00	SD1219-8	15.00	SD1365-1	2.50
MRF208	11.50	MRF515	2.00	MSC80593	POR	PT4628	20.00								
MRF212	16.10	MRF517	2.00	MSC80758	POR	PT4640	20.00								

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DELIVERY: Orders are usually shipped the same day they are placed or the next business day, unless we are out of stock on an item. The customer will be notified by post card if we are going to backorder the item. Our normal shipping method is UPS or U.S. Mail depending on size or the weight of the package. Test Equipment is shipped only by air and is freight collect, unless prior arrangements have been made and approved.

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NOTE — Logs received from shortwave listeners must contain call sign of station heard, report sent by that station and call sign of the station being worked. Also, date and time (GMT) the QSO was logged. Incomplete loggings are not eligible for scoring and will be classified as check logs.

The summary sheet should show the full scoring, the times on the air, address for correspondence, and in the case of multi-operator stations, the names and call signs of all operators involved with the operation of the station during the contest.

All logs must be received by 31 May 1985 in order to qualify.

Summary and log sheets: Available from the contest manager at the address shown below. In the United Kingdom on receipt of a large (A4) stamped addressed envelope. All other countries outside the United Kingdom require no envelope but will need 3 IRC's to cover the cost of postage.

Send your contest or check log to: Peter Adams, G6LZB 464 Whippendell Road, Watford, Herts, ENGLAND WD1 7PT.

The judge's decision will be final and no correspondence can be entered into in respect of incorrect or late entries and all logs submitted shall remain the property of the British Amateur Radio Teleprinter Group.

Certificates will be awarded to the leading stations in each of the three groups, the top station in each continent and to the top station in each W/K, VE/VO and VK call area.

Additional notes: If a contestant manages to contact 25 or more different countries on two-way RTTY during the contest, a claim may be made for the Quarter Century Award (QCA) issued by the British Amateur Radio Teleprinter Group, and for which a charge of $3 U.S. or 15 IRC's is made. Holders of existing QCA awards should indicate and list any new countries to be added to their existing records. Make your claim at the same time you send in your log.

However, in view of the high volume of work which the contest manager will have to deal with, it will not be possible to prepare and dispatch any new awards or to update any existing records until the final results of the contest have been evaluated and published.

Additionally, if any contestant manages to contact stations on two-way RTTY within each of the six continents and the BARTG contest manager receives either a contest log or a check log from each of the six stations concerned, a claim may be made for the WAC Award issued by the American *RTTY Journal*.

The necessary information will be sent to the *Journal* after the contest results have been evaluated and dispatched, and the *Journal* will issue the WAC award free of charge, direct to the operator concerned. □

California

A flea market and FCC exams will be held every second Saturday, March through September, at Foothill College, Los Altos Hills, California. For exam information, call (408) 255-9000. □

Georgia

The COLUMBUS (Georgia) ARC Hamfest will be held at the Columbus Municipal Auditorium on Saturday, 30 March, from 9:00 a.m. to 5:00 p.m. (EST), and Sunday, 31 March, from 9:00 a.m. to 3:30 p.m.

Ticket donations: 13 for $10; six for $5; one for $1. ARES and MARS Forum. Open air flea market. Free coffee and chocolate. Free parking for self-contained RV's (no hookups). Indoor tables are $6.50 per day. FCC exams Saturday morning.

Talk-in on 146.01/.61.

For more information, contact George Reitz, N4AGO, RR2, Box 22D, Seale, AL 36875; (205) 855-2204. □

Illinois

The LIBERTYVILLE & MUNDELEIN AMATEUR RADIO SOCIETY (LAMARS) will be sponsoring LAMARSFEST 1985 on Sunday, 31 March, at the Lake County Fairgrounds, Grayslake, Illinois.

Doors open at 8:00 a.m. Setup at 6:00 a.m. Admission is $2 in advance, $3 at the door. Large indoor electronic and radio swapfest, commercial exhibits, code speed efficiency testing. Free parking. Public cafeteria.

Talk-in on 146.94 simplex, 147.63-03 Waukegan repeater.

For more information and/or reservations, contact LAMARS, Box 751, Libertyville, IL 60048; (312) 255-8717. □

●

The 19th Annual ROCK RIVER ARC Hamfest will be held on Sunday, 31 March, at the Lee County 4-H Center, one mile east of junction 52 and 30.

Camping space available at nominal charge. Tables available (8-foot) at $5; inside space available for flea market, $3. Advance ticket donation, $2; at the gate, $3. Lots of prizes. Lunch will be served. Doors open at 8:00 a.m. for the general public. Main drawing at 3:00 p.m. Advance tickets available until 15 March 1985.

Talk-in on 146.37/97 and 444.700/449.700.

For information or advance tickets, tables or spaces, write to or call Shirley Webb, KA9HGZ, 618 Orchard St., Dixon, IL 61021; phone (815) 284-3811. □

Indiana

The Indiana Hamfest, formerly the Martinsville Hamfest, will be held on 10 March. Sponsored by the MORGAN COUNTY REPEATER ASSOCIATION CLUB, it will be held indoors at the Indiana State Fairgrounds Pavilion Building in Indianapolis.

Admission: $5 at the door. Premium table $40; flea market table $8; flea market space without table $3. All tables must be reserved in advance. Setup for reserved tables will be available Saturday, 09 March, 3:00-9:00 p.m. Space setup will be Sunday, 10 March, 6:00 to 8:00 a.m. No cars inside after 8:00 a.m., Sunday. Free paved parking.

Talk-in on 145.25.

For table reservations or information, send SASE before 01 March to Aileen Scales, KC9YA, 3142 Market Place, Bloomington, IN 47401; (812) 339-4446. □

Michigan

The SOUTHEASTERN MICHIGAN AMATEUR RADIO ASSOCIATION (SEMARA) Annual Swap and Shop will be held at the Grosse Pointe North High School, 707 Vernier Road, from 8:00 a.m. to 3:00 p.m.

Donation at door $3. Reserved tables $8.

Talk-in on 147.150 repeater and 146.52.

Reserve tables with George Berg, KB8SS, at (313) 446-1804, or write to P.O. Box 646, St. Clair Shores, MI 48080. □

New Jersey

The DELAWARE VALLEY RADIO ASSOCIATION will hold its 13th annual flea market of Amateur Radio and computer equipment on Sunday, 17 March, from 8:00 a.m. to 4:00 p.m., at the New Jersey National Guard 112th Field Artillery Armory, Eggerts Crossing Road, Lawrence Township, Trenton, New Jersey.

Advance registration $2.50, or $3 at the door. Indoor and outdoor flea market area, commercial dealers, door prizes and refreshments. Sellers are asked to provide their own tables.

Talk-in on 146.52 and 146.07-.67 repeater.

For advanced tickets and space reservations write: KB2ZY, Box 441B, RD #1, Stockton, NJ 08559 (SASE please). □

Contact Worldradio for hamfest prizes.

Burbank

(continued from page 1)

new Burbank ordinance will be specific regarding construction requirements in the interest of public safety. The specifications, however, are well within the specs of most, if not all, commercially available antennas and towers, and within the cost capability of those who choose to construct their own. Proper grounding is essential, and covered in the new ordinance.

In addition to the preceding, the city of Burbank is under court order to repeal the original and amended ordinances, along with any and all other ordinances or city codes which may be in conflict with the provisions of the new ordinances as outlined above.

In addition, the city must promptly process applications within 10 working days of their receipt. Any applications denied must be turned down in writing along with a specific list of reasons for the denial. Copies of written denials must also be sent to attorney O'Connell for the next two months.

The city must also furnish W9WU with 60 days written pre-notification of any proposed ordinance, amendment or proposed building or electrical code which might be in conflict with the new ordinance as set forth in the consent decree.

In essence, Jim O'Connell and the clients he represented in what has become known as the "Burbank Tower Case," have won a more than livable model ordinance under which all hams can erect antennas and operate, without fear of being hauled into court for being the source of a public nuisance, or having to worry that the city can stop them from putting up new and better antenna systems within the terms of the signed consent decree. This is the biggest single victory on the "amateur antenna ordinance front" to occur in years, and will hopefully become a model for other cities to emulate.

Westlink Report will make copies of the complete documentation available to any amateur or club involved in a community dispute over towers and antennas, or to their counsel on request. All requests must be accompanied by an 8½″ × 11″ envelope with $1.40 postage affixed, and $2 to offset duplication costs. (Please do *NOT* use postage meters; the post office gets very upset when dates on the printed cancellation are not accurate.)

Mail your request for copies to the editorial office at *Westlink Report*, 28197 Robin Ave., Saugus, CA 91350. □

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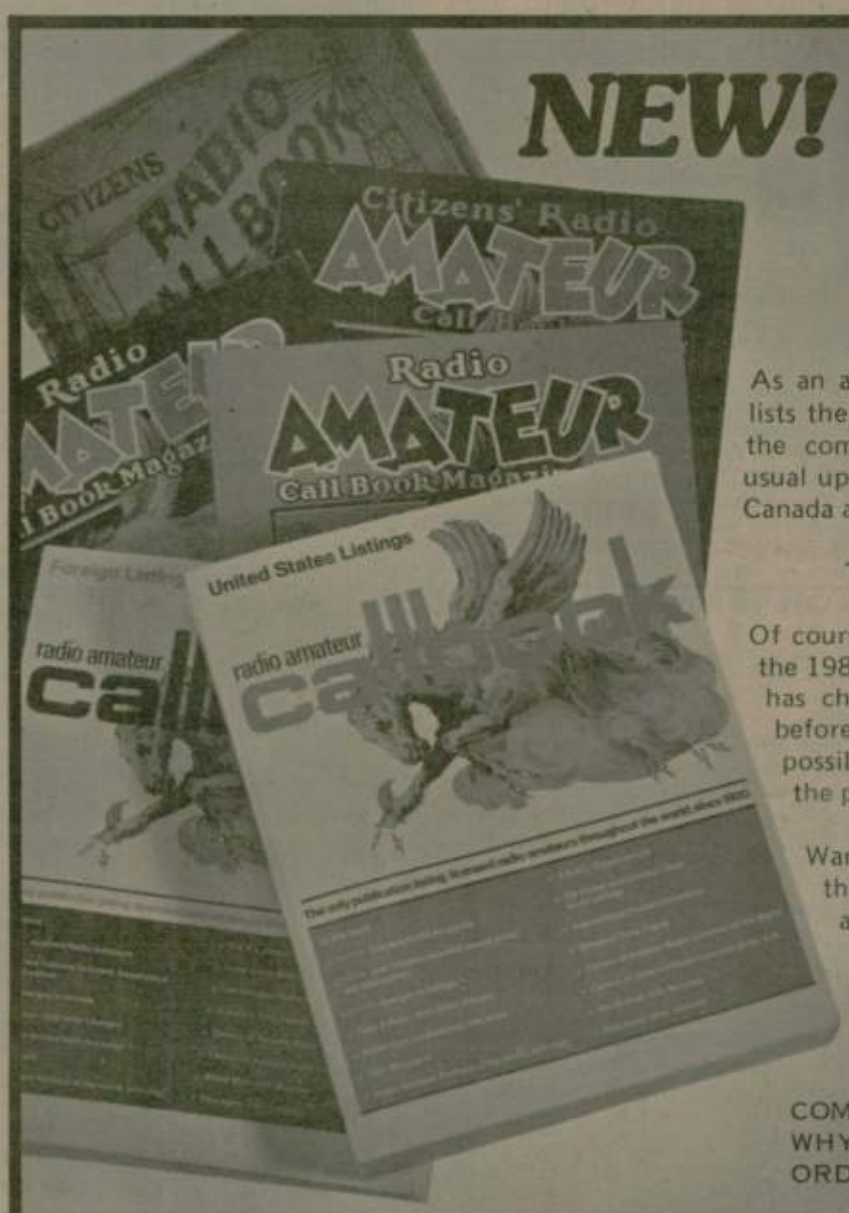

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FOR SALE: Kenwood TS-930S with CW filter, manual, original cartons. FB condition. I ship. $900. DR. MARTIN, 98-427 Kilihea Way, Aiea, HI 96701.

SELL KENWOOD TS820S. CW filter, new finals, factory aligned, mint condx. - $500.00, Ship UPS. Sell Heathkit HW 101 with power supply. Added speaker inside, fan, added bells and whistles, mint condx - $275.00. (714) 985-3388, 1570 Albright, Upland, CA 91786.

QSL SAMPLES — 25¢. SAMCARDS, 48 Monte Carlo Dr., Pittsburgh, PA 15239.

NOVICE CRYSTALS 7.1-7.15 MHz 3/$5 and 7/$10. 30-meters (5.050-5.075 MHz) 3/$10. (double). FT-243 types ONLY. Our selection of frequency. E. TAYLOR, W7BYF, 2921 Loyola Dr., Davis, CA 95616.

MILITARY RADIOS: R-390A, premier communications receiver, .5-30 MHz, 4 mechanical filters, meters sealed (Government removed) operation unaffected: complete/checked $175, complete/unchecked $115, spare parts unit (80% complete, missing PTO/power supply) $65. R-390A Manual reprint $5. CPRC-26 Manpack Radio, compact, transceives 46-54 MHz FM, 6 channels, with battery box, antenna, crystal, handset: $22.50 apiece, $42.50/pair. PRC-510 Backpack Radio (Canadian version of American PRC-10—, transceives 38-55 MHz FM continuous tuning, with battery box, headset, antenna: $39.50 apiece, $77.50/pair. ARC-27 Guard Receiver, single channel 220-250 MHz AM: $12.50. R-108 Vehicular/Field Receiver, 20-28 MHz FM: $27.50. 45 day replacement guarantee. Ad $9.50 shipping-handling (except R-390A, shipped actual charges collect). BAYTRONICS, Dept. W, Box 591, Sandusky, OH 44870.

SPECIALS — 5¼" SS/DD discs, 100% certified (can be used both sides) 10-$19.50, 50-$85.00, 100-$155.00. Surge suppressors, over voltage protected, $39.95 and $59.00. Printer paper, pin feed, 9½ × 11 15 pound white Bond, 1500 sheets per box $27.95. Free shipping on all items. No CODs. Quick delivery. We have been serving your needs since 1973. NARWID ELECTRONICS, 61 Bellot Road, Ringwood, NJ 07456.

HOSS-TRADER ED says "Shop around for the best price then telephone the HOSS last for the best deal!" New display Kenwood 430-S transceiver $639.00. New Display ICOM IC-2AT $195.00. Display Azden PCS-4000 $259.00. New display ICOM-730 transceiver regularly $829.00, cash $529.00. New Display KDK-2033 $249.00. New Display ICOM-751 transceiver regularly $1379.00, cash $1119.00. New display ICOM-745 transceiver regularly $999.00, cash $689.00. New ICOM 02-AT regularly $349.00, cash $277.00. New display Kenwood 530-SP transceiver $589.00. 3kW Nye Viking MB-V antenna tuner regularly $535.00, cash $415.00. 2500 Watt AMP supply linear with tubes, Hypersil transformer regularly $1127.00, cash $899.00. VISA/MasterCard accepted!!! MOORY ELECTRONICS CO., P.O. Box 506, DeWitt, AR 72042, Tele: (501) 946-2820.

I NEED VOLUME 9 of the CREI (Capitol Radio Engineering Institute) Advanced Electronic Engineering Technology home study course, published early 60's. CLEM SMALL, 26530 Parkside Drive, Hayward, CA 94542.

IBM RTTY/CW — split screen, buffers, and features beaucoup. SASE to: E. ALLINE, NE5S, 773 Rosa Ave., Metairie, LA 70005.

DX-BOOK WITH PERSONALIZED BEAM HEADINGS. New. Record QSO's QSL's for DXCC credit. Over 400 countries. 9 bands: 160m thru 10m, including WARC. Send name, call, address and $12.50 (US) or $14.00 (outside US). K4KH, 4513 Keswick Dr., Raleigh, NC 27609.

FOR SALE — DATONG FL-2 audio filter — $100.00. KB8LH, 216/875-8703.

How old must one be to get an Amateur Radio license? These boys are proof that it can be done at an early age. The three youngest started third grade this fall, and the oldest started fifth grade. They and three of their parents got their Novice tickets in June. From left to right, they are Ted Schwendemann, KAØTDX; Todd Schwendemann, KAØTDY; Brian David, KAØTEA; and Jess Blair, KAØTEC. ***(Humboldt (Iowa) Independent photo)***

Ron Hodgson, G3DUW, of Knaresborough, North Yorks (left), on holiday enjoying crossband QSO on 20 meters with Ken Miller, K6IR, on 2 meters at the home of G3DUW's son, Richard Hodgson, G4KBH/W6, in Agoura, California.

A big "hello" to our *Worldradio* readers from Managing Editor Chris Wilson, KA6TAL.

Instant DX! These signs are posted about 45 miles northwest of Portland, Maine. (*Photo sent by Bob Wilson, K1GVA*)

SELL NEW COILS AND VARIABLE CAPACITORS. B & W type 3035 coils, 198uH, $9.50 each. Miller type 2152 variable capacitors, 40-1,000pF, rated at 1,500 volts, $32 each. Groth type TC-3S turn counters with spin dials, for ¼ inch shafts, $13 each. All items brand new, in original boxes, shipped prepaid by UPS. Send check to Peter Onnigian, W6QEU, 1236 40th Ave., Sacramento, CA 95822. (916) 392-8964.

CERTIFICATE FOR PROVEN TWO-WAY RADIO CONTACTS with amateurs in all 10 USA call areas. Award suitable to frame and proven achievements added on request. Send $2 (USA) or $3 (DX) to cover certificate cost. W6LS, 2814 Empire Ave., Burbank, CA 91504.

ELECTRONIC PARTS BY MAIL since 1954. Free flyer. BIGELOW ELECTRONICS, P.O. Box 125, Bluffton, OH 45817.

JAMES MILLEN COMPONENTS — Many types available. Inquire SASE. Ralph, KA1FAA, 16 Hansom Road, Andover, MA 01810.

AMATEUR RADIO REPAIR — experienced, licensed, reasonable. ROBERT HALL ELECTRONICS, W6BSH, P.O. Box 8363, San Francisco, CA 94128. (408) 729-8200.

MAGNETIC CALL SIGNS, 2" × 8". Great gift idea! Easy transfer from one car to another! Your call letters or repeater frequency available in the following colors (on white background): Black, blue, green or red. $6.00 each sign ppd. SIGN-ON, 1923 Edward Lane, Merrick, NY 11566.

"DEUTSCH FUER AMATEURFUNK" — German for Amateur Radio. 90-min. audio cassette and text. $8.95 ppd. DANRICK/SOUNDEVENTS, 213 Dayton Ave., Clifton, NJ 07011.

HAVE TO TRADE electronic digit cash register Unitrex 2000 for Atlas 210 mobile 10/80 meters. Also (2) calculators, (1) 12-digit electronic business print display, other elect. adding machine, also Bright frequency counter, A-500, Heathkit phone patch #HD-15. Sell or trade for 2-meter KDK or synthesizer 25W. STRETCH, WB2MSD, NY, after 6:00 pm. (914) 373-8243.

REPLACE RUSTED ANTENNA BOLTS with stainless steel. Small quantities, free catalog. ELWICK, Dept. 535, 230 Woods Lane, Somerdale, NJ 08083.

1.3 GHz PRE-SCALER KIT. Upgrade counter: read 10-1300 MHz, divide by 4, $24.95, postage paid, M/C-VISA-COD. Guaranteed, DIGITAL INSTRUMENTS, 636W Sheridan Dr., Tonawanda, NY 14150.

1.3 GHz FREQUENCY COUNTER — Reads 1296 MHz, freq-10Hz to 1.3GHz, sensitivity 10mv. 1 GHz, RF shielding metal case 8, .4" digits, M/C-VISA-COD. Guaranteed, $249.95. DIGITAL INSTRUMENTS, 636W Sheridan Dr., Tonawanda, NY 14150.

WHITE ELEPHANT SALE: Model 33 & 32 teleprinters, Kleinschmidt printers, reperfs, transformers, cabinets, old test equipment, etc. Swan Cygnet 270B, exc. cond. — $200/offer. Swan 350 w/power supply — $250/offer. Contact MARIN AMATEUR RADIO CLUB, Box 1231, San Rafael, CA 94913. (415) 897-8950.

IS YOUR QSL A BIG, BAD, BEAUTY? Well, our QSL OF THE WEEK AWARD is. Send your super card now to WB2JKJ and the Crew at Junior High School 22.

FOR SALE: TS-520SE, DG5 digital display, CW filter, BS-5 pan-adaptor. MC 50 mike. $425. Will ship UPS — N6EGY, 4604 Via Gennita, Santa Barbara, CA 93111. (805) 964-5154.

R390 BALLAST TUBE REPLACEMENT solid-state, $18.75. R390 SSB adapter. Excellent SSB RTTY. No receiver modification needed. Solid-state, $25.00 G.B. COMMUNICATIONS, 963 Birch Bay Lynden Rd., Lynden, WA 98264.

APPLE COMPUTER OWNERS: The computerized AMATEUR RADIO LOG is here. Enter contacts, view log, change entry, delete entry, sort entries, search for entries, print QSL and print log. Send personal check or money order for $39.95 + $2.00 shipping and handling to: KENNETH MILLMAN, K1ZKM, 12227 Buckskin Trail, Poway, CA 92064-6005. California residents add 6% sales tax. Orders outside U.S. and Canada add $10.00 for shipping and handling. Send SASE for further details.

APPLE OWNERS — Five-band DXCC, WAS, WAZ scorecard programs. Simplify your record keeping! CRT/Printer reports. Requires Apple II+/e/c, disk, 80 columns. Includes disk with 3 programs, doc, and postage. KB8VV, 1226 Winghaven, Maumee, OH 43537.

REPAIR, alignment, calibration. Collins written estimates, $25; non-Collins, $50. K1MAN, (207) 495-2215.

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

$$$ SUPER SAVINGS radio computer electronic parts; accessories, supplies. SASE for catalog. BCD Electro, P.O. Box 830119 Richardson, TX 75083.

WANTED — old radio transcription discs. Any size, speed, subject. Send full details & price. W7FIZ, Box 724, Redmond, WA 98052-0724.

WANTED: OLD TELEGRAPH KEYS for my collection. Also want WWII keys, miniature keys, sounders, and call boxes. LARRY NUTTING, 5957 Yerba Buena, Santa Rosa, CA 95405.

TWO MACROTRONICS INTERFACES, CW, RTTY, ASCII, for TRS-80 Model One. MBL, RITTY RITER, M80, M800, M8000. Hardware, software, cables, instructions. $300. RICH - AC2P (516) 643-5956.

GROUND RADIALS WORK — Solve your vertical antenna radial problems with the fantastic ground plane one (GP-1). A 10" diameter, 24-point cast aluminum buss that fits any 2" diameter or smaller mast. Radial problems solved for only $24.95. Send an SASE for photos and brochure. Lance Johnson Engineering, P.O. Box 7363, Kansas City, MO, 64116.

KB3XS QSL's — twelve card colors, ten inks. Stamps bring samples. KB3XS, 322 Wilmot Street, Duquesne, PA 15110.

WRIGHTAPES: (Since 1976) Unconditionally guaranteed Morse Code Practice on 60 min. cassette tapes. Beginners 2-tape set 5 wpm $7.90. Also 3, 4, 5, 6-8, 10, 9-11, 12-14, 14, 16-20, 22, 24-28 wpm. Specify Plain Language or Code Groups. Also plain lang. only 30-35, 35-40, 45-60. FCC type tests: 5-6, 11-12, 11-17, 13-14, 20-24 wpm. Call signs: 12-15, 20-24. Nos.: 5-22, 13-18, 18-24. Check, M/C, VISA, $3.95 ea. PPD 1st Class USA, Mex., Can., (Elsewhere add $2 per tape). Instant service. Ph: (517) 484-9794. WRIGHTAPES, 235 E. Jackson T-2, Lansing, MI 48906.

WOW! NEW MFJ 1224 CW/RTTY/ASCII terminal units and software. Full featured. Popular software packages for VIC, C64, Atari, TRS 80I-IV, IBM, Timex, Apple, TRS-80C, TI99/4A in stock! VISA/MC, check, C.O.D. AMATEUR ACCESSORIES, 6 Harvest Ct, RD 7, Flemington NJ 08822, (201) 782-1551 after 7:00 p.m. Eastern.

WANTED: CENTRAL ELECTRONICS 200, VFO tuning mechanism: three pulley-type wheels, three screw-type shafts, and knob. Either new parts forgotten about, or, used from disabled unit. VE2OU, 2785 Valcourt St., Ste Foy, Quebec, Canada G1W 1W2.

WANTED: OLD RADIOS, parts, tubes pre-1939 for my collection. KC5PC, 2825 6th Avenue, Ft. Worth, TX 76110.

NOTICE: I WISH TO PURCHASE Public Domain Software on disk for Commodore 64. Try my diversified BBS it has Ham Radio, Computers, Video etc. 300 Baud online 0900-2330EST. (201) 962-4956 Full details for an SASE, ED NARWID, WA2OAF, 61 Bellot Rd., Ringwood, NJ 07456.

WANTED REPLY COUPONS of all types, IRCs & others. Buy, sell, trade. JIM NOLL, P.O. Box 3410, Escondido, CA 92025.

KENWOOD 430S OWNERS ONLY! Stop Scan . . . when the squelch breaks, the scan stops! Adjustable resume scan delay. No modifications! Kit $25, assembled $35. JABCO, R1, Box 386, Alexandria, IN 46001.

Be first to know precisely when and where to work all the choice DX. Bi-weekly LI DX BULLETIN has: Hot DX news — time and frequency of each goodie — QSL info — propagation forecast — and more . . . Send business size SASE for free sample or $12.50 for 1-year domestic subscription to:

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RADIOCHESS? Write CARI, Box 682 Cologne, NJ 08213.

JENNINGS UCSL-1000 VACUUM VARIABLE CAPACITORS, 10 thru 1000 mmfd at 5000V, with gear drive train and mounting bracket, perfect for that linear amplifier or antenna tuner. These are brand new $59.50, plus $3.00 UPS. B & K precision model E-200-C signal generator 88 kHz thru 440 MHz, perfect for general RF alignment for AM/FM and TV applications. Also has built-in sine wave audio oscillator for audio frequency tests, brand new $75.00, plus $5.00 UPS. We accept M/C, VISA or check. Write or phone Bill Slep (704) 524-7519, SLEP ELECTRONICS, Highway 441, Otto, NC 28763.

ROHN TOWERS — Wholesale direct to users. 23% to 34% discount from dealer price. All products available. Write or call for price list. Also we are wholesale distributor for Heliax antenna cable. HILL RADIO, 2503 G.E. Road. P.O. Box 1405, Bloomington, IL 61701-0887, (309) 663-2141.

FREE SHIPPING CONTINENTAL USA Mini-Quads — $139.95. Butternut HF6Vs — $106.50, Amp-Supply LA1000As — $379.95. Stamp for flyer. Don, HART EASTERN COMMUNICATIONS, 1444 Darlington Drive, Derby, NY 14047, (716) 947-4840.

574th. 565th. SIGNAL AIRCRAFT WARNING BNS. will hold its 3rd reunion in Dayton, Ohio July, 1985. Radio, scope operators, cooks, radio-radar maintenance men, truck drivers and others who are ex-members, meet some of your buddies there. For details write to: ANGEL M. ZARAGOZA, W6ZPR, 1571 9th St., San Bernardino, CA 92411.

W6BHV ESTATE SALE — Complete station — Swan 500/117XC pwr. supply/14X DC module with manual. Gonset G66B mobile receiver. Gonset Commander TX. Shure hand mike 404C, Electro voice mike/stand - 7097, Astatic mike D104/stand, Shure mike T-17-B, also meters, old keys. SASE for list. FRED SCHNELL, 97 Blue Sky Lake, Oceanside, CA 92056.

NEW CODE COURSE from KA4ETI. New and informative. Includes Morse Code and actual QSO's on tape plus instructions and tips on sending and receiving. Send SASE to G.P. MILLER, 3528 Kirby Lane, Louisville, KY 40299.

SUPER SAVINGS: ICOM ICR-71A — $659.50; Kenwood R-2000 — $495.50, R-1000 — $409.50; Sony 2002 — $219.50, DX-1000 — $489.50; Regency HX-1000 — $239.50, MX-5000 — $385.50, HX-2000, MX-4000, in stock!! Bearcat BC-300 — $359.50, BC-250 — $255.50; Yaesu FRG-8800, RF-3100 — $266.50. Panasonics, MFJ, antennas, coax, CB's, CW/RTTY decoders, much, much more!! Free UPS shipping & insurance to 48 states. 25-page picture catalog — $1.00 (refundable). GALAXY ELECTRONICS, Box 1202, 67 Eber Ave., Akron, OH 44309. (216) 376-2402. 9-5pm EST.

HEATH TRANSCEIVER HW-7 — $60.00. Knight 50-watt CW transmitter — $45.00. Microphones — Kenwood MC-50 or ElectroVoice #641, with desk stand, $35.00 each. All mint, UPS paid. JOSEPH LEWALSKI, 3512 Moraga Blvd., Apt. 4102, Lafayette, CA 94549.

SELL SONY ICF 2002 digital key touch receiver, like new 153-29995 MHz, FM 76-108 MHz. Liquid crystal display (LCD), manual, AC adaptor included. AM and SSB/CW. Shipped UPS prepaid. $199. JIM HALL, P.O. Box 97, New Hope, VA 24469.

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ADVERTISER'S INDEX

IC-02AT

ICOM 2-Meter Handhelds

If you want a 2-meter handheld with exceptional features, quality built to last and a wide variety of interchangeable accessories, take a look at the ICOM IC-02AT and IC-2AT handhelds.

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