Worldradio

Year 12, Issue 2

August 1982 • 80¢

Worldradio DX Editor John Minke III, N6JM, operating on Field Day. John led the N6WR (Newspaper 6 World Radio) phone ops to 415 QSOs. Not bad for a group ranging from 41 to 65 years.

"Look, Ma . . . no hands!" Worldradio Club columnist Norm Brooks, K6FO sends CQ FD de N6WR with the AEA contest keyer. Norm captained his crew to 236 CW QSOs. This was Worldradio's 11th consecutive Field Day.

Field Day 1982

Heard at 2100Z on 27 June: "Darn, it's all over. Have to wait a whole year till we can do it again."

The single operating activity that draws the most amateurs is Field Day. This was the 46th annual event which is sponsored by the American Radio Relay League. And there is no other activity that calls for such teamwork and results in such camaraderie as Field Day.

The purpose behind all the fun is to operate equipment away from normal station locations and minus commercial power. The 27-hour drill is "to meet the challenge of emergency preparedness," according to the ARRL.

Held the last full weekend each June, the Summer Classic pits the amateur and gear against the weather and fatigue. The beating sun and biting bugs, balky generators and "who forgot the fuses?" It all adds up to: a good time was had by all.

Underneath all the camping out or picnic-like atmosphere is a serious foundation. It all dates back to the early '30s. In those days, amateurs hauled bulky equipment to hilltops to communicate with the outside as the valleys were flooded.

Through the years, the amateurs have become the communications "quick reaction force." In practically every emergency the amateurs are called upon by either city, state or federal officials. When other communications facilities have become overcrowded or disabled, the amateurs can always "get the message through."

The ability to do so comes through practice. Pre-planning and the knowledge of how to improvise on the spot are the keys to being able to provide emergency services to government and relief agencies.

The history of Amateur Radio is a shining example of what heights people can reach. Those who volunteer to assist others, at a sacrifice to themselves and with no possible gain to be obtained, are to be admired.

On Sunday afternoon, the pegs were pulled from the ground, the tents folded and masts taken down. Before going home, a search was made for a drugstore to get some sunburn lotion. Thoughts had already begun on "how to do better" next year.

Field Day. It's photographs passed around at the next club meeting, waiting for the results to come out in QST, elation at your score, or saying "We don't go out to win."

It's 2,000 groups of people. It's an outing, excitement, a challenge, a competition — some of the above or all of the above. There's as many attitudes as there are groups, from frantic to laid back.

For most clubs it is indeed the event of the year. And there may be some truth to what the old sage said, "If your club doesn't go on Field Day, you don't have a radio club. □

Heard Island progress report

Mr. Stu Woodward — International DX Foundation life member, past president of the Southeastern DX Club and veteran of many DXpeditions, including the 1979 Spratley Island adventure — announced at the ARRL Southeast Division Convention that the Northern California DX Foundation had agreed to match the $10,000 pledge of the IDXF.

This total of $20,000 will be from *existing funds* in the respective foundation's treasury and, of course, the foundations hope the DX community will help replenish the treasuries so that they can continue their good works. The funds mentioned in a previous release from the Wireless Institute of Australia (WIA) are expected contributions and not from

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Cable TV collides with Amateur Radio

Leslie Leffingwell

Amateur Radio operators from around California, a representative of the Federal Communication Commission (FCC) and cable television executives met in Visalia in late March to discuss the growing incidence of cable television interference with radio broadcasting.

Scott Thompson, KB6CC, a member of the American Radio Relay League (ARRL) which sponsored the three-day conference, said that organization has requested the FCC demand that cable television companies stop using the radio frequency allocated to Amateur Radio operators.

"The ARRL believes that leakage is inevitable wherever cable television exists," he said. The cable television companies are opposed to the radio operators' demands because it is technically easier and more profitable for the companies to share the frequency with the Amateur Radio operators, Thompson added.

The FCC authorized cable TV companies to use the Amateur Radio operators' frequency about 10 years ago. But it hasn't been until recently that cable TV companies began using the frequency and causing noisy interference with Amateur Radio operators' communications.

The problem is that as cable television's cables corrode, Thompson said, the TV company's signal leaks from the cable creating noise on the ham operator's

(please turn to page 4)

China station needs equipment

Thomas Wong, VE7BC

The first Amateur Radio club station in Peking, China — BY1PK — was activated on 29 March 1982, CW only — frequency bottom end of 14 and 21 MHz. No DX-pedition or contest-style operation at this time. Phone operation will be coming soon.

There will be other club stations coming on when completed:

BY7	— approximately Fall of 1982
BY4	— approximately Spring of 1983
Another BY1	— approximately Fall of 1982

This entire project has been an inspiration to people all over the world. Although it took seven years of effort and frustration, it has certainly been worthwhile. Some equipment is still needed. If you feel you would like to help, please write to Tom Wong, VE7BC, 220 N. Grosvenor Ave., Burnaby 2 BC V5B 1J4, CANADA. □

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

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

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

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

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

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

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Second-class postage paid at Sacramento, CA.

'In the Beginning'

Submitted by Bill Willmot, K4TF

Many volumes have been written on the history of radio, and many remain to be written. The editor of **Florida Skip** magazine — Andy Clark, W4IYT — has initiated a project that will provide a tremendous source of information for future historians interested in this important field.

The new project involves collecting standard cassette tapes made by the old-timers and old-old-timers of radio from around the country and around the world. Tapes are therefore being requested from anyone who has a long background in radio — commercial or amateur.

Tapes will be cataloged and kept in a fire-proof safe. They will be available for other old-timers to listen to and return.

Individuals submitting tapes should include their full names, nicknames, call signs, previous calls and current addresses. Other information that is desired includes when you first got interested in radio; the kind and types of equipment you first built or used; any commercial, military or government assignments (including ship, air and shore assignments); and any unusual experiences that you might have experienced. It would also be most useful if the names and calls of other amateurs you knew — active or inactive, alive or Silent Keys — could be included. In other words, a good biographical sketch from your beginning to the present time in your communications lifetime.

Provision has been made to assure that the tapes will be maintained in perpetuity. Is this project worthy of your support? If so, sit down with your standard cassette recorder and make a tape for "In The Beginning" library and mail it to: FLORIDA SKIP OT Library, P.O. Box 501, Miami Springs, FL 33166. Don't delay — do it today. Thanks. □

Swap Net for St. Louis area hams

The Marissa Amateur Radio Club (MARC) of Marissa, Illinois announces that its Monday night Swap Net will soon celebrate its fifth year. All metroplex St. Louis area amateurs are invited to join this net, which meets on 147.81/.21 at 2100 CST.

The central element of the net is the passing of information about the various activities of *all* area clubs and organizations. The main theme is the 'swap 'n shop segment where all kinds of Amateur Radio equipment is bought and sold. This segment obtains even more power as all of the items are recorded on high-quality recording equipment, edited down to about 12 minutes and is available as an Electronic Billboard for *all* licensed radio amateurs.

The Electronic Billboard (EB) has great potential to any and all who desire to get a message of importance to the fraternity. All that is necessary to have an item put on the EB is to check in with the Monday Night Net Control and mention that you have an item for the Billboard. For anyone desiring to recall the Billboard, simply bring up the MARC system on 147.81/.21, announce your call and dial #, 7, 3 on your touch-tone pad. It will run for approximately 10 to 12 minutes. Should you desire to stop the tape at any time, just send the # for one second.

At the close of the Swap Net, MARC presents the Westlink Radio News Service. This terrific, up-to-the-minute news service is about Amateur Radio happenings, worldwide, reported by professional announcers and presented in a most professional manner. Westlink has now purchased the *HR Report* and will be augmenting this news service with the written word. Westlink, produced in Hollywood, is a vital service to many Amateur Radio clubs throughout America, and MARC is proud to sponsor and present it for MARC.

It is only natural for a net of this importance to take place on the MARC system, as with the 250 watts of output power and three remote receiver sites, coupling into the unique intertie system that interlinks several repeaters on 2 meters, 220, and 10-meter FM links, the coverage is at least 200 miles across southwestern Illinois and southeastern Missouri. □

Intra-America Net

Here's a great net for making contacts with countries south of the border. This net meets daily at 1800 GMT on 21.390 MHz. It is ideal for making contacts with countries in South and Central America, Caribbean, and the Pacific. It begins as the Intra-America Net, and as it continues it changes name to Coast Guard, HALO, Maritime Mobile?, Inter-Continental, and in the early a.m. to Pacific and Inter-Pacific. This last one is for the Pacific Islands to interconnect.

Net controls change hourly, but are basically for connecting parties to handle contacts. It is good to have a beam and a good signal to work these stations. It's basically a "meeting net or frequency" for stations. You can hear almost every South American country.

As the net operates, it takes turns with check-ins from each country. If you hear a station call in and you would like to work him, call "Contact." When Net Control gives you the opportunity to identify, do so and QSY to a different frequency. You should monitor awhile to get general operating practice.

It sure is great to see how amateurs help each other in times of need for a common goal. It's nice to listen in. If you ever have a chance, try it — you'll be surprised at the countries you will hear.

— *Genesee Radio Amateurs, Batavia, NY*

Arizona nets

Every day 1900	Arizona Traffic & Emergency Net on 3992 kHz
Every day 2030	AM net on 29.025 MHz AM
Weekdays 1800	Cactus net 3915 kHz
Weekends 1530	Cactus net 3915 kHz
Sundays 0830	SWOT Net on 144.3 MHz USB
Sundays 0845	Tucson/Pima County RACES Net 3995 kHz
Mondays 1900	Tucson Public Service Net 146.34/94
Tuesdays 2030	Swap Net 147.75/.15
Wednesdays 1900	Green Valley Net 146.52
Thursdays 1900	Cochise ARC 146.16/.76
Thursdays 1930	Tucson Repeater Asso. Net 146.22/.82
Saturdays 1300	Tucson/Pima County RACES Net 147.90/.30 MHz

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COLUMNS

Viking ship replica sails to Norway

Vivian Douglas, WA2PUU

Robert Asp worked on making his dream come true and built a replica of the Godstad Viking ship as the beginning.

When the *Hjemkomst* was traveling through the Barge Canal after leaving Minnesota en route to Oslo, Norway, I was scanning the local repeaters and came across a discussion of Viking adventures. After a few minutes, I realized I was listening to "KA0NEX, Jeff" Solum, the Amateur Radio operator on board. Moving along at six knots, the ship was in the Lyons-Clyde area.

As the pileup of amateurs trying to make contact with "Jeff" continued, I waited my turn. Little did I realize how busy that initial contact would keep me for the next 24 hours.

Because of the low bridges and locks along the canal system, it was necessary for the mast to be securely tied down and the *Hjemkomst* to be towed. Radio amateurs all the way from Buffalo (New York) had assisted in communications between towboats and the ship. People in the Winnebago support van, which paralleled the route on land, did the shopping for repair supplies and staples.

The ham support team at the time was working through the Auburn 146.40/147.00 repeater and I was advised that hams in the Syracuse area would be expected to cover the team until it reached the east side of Oneida Lake. There the Rome/Utica repeaters and amateurs would pick up the relay as it sailed toward New York City. Our responsibility was to start at the Baldwinsville locks on Friday at 6:30 a.m.

Reporting at the locks early, I saw the ship arriving and anxiously awaited meeting "Jeff." Many times voices can be deceiving of the image you create in your mind of a person. Having an opportunity to "eyeball" Jeff several times as the ship went through the various locks, I found him to be confident, with a pleasant shyness and a warm smile.

A college student from North Dakota, he first became licensed in March, held his Novice ticket for two weeks and upgraded to General Class. His home QTH is Moorhead, Minnesota and he is the only amateur aboard the crew of 13. He operates a 580 Delta on high frequency running to a dipole and a TR-7400A, 2-meter transceiver on VHF. All of the equipment was donated for the trip.

When I questioned him about other communication aboard, he said Amateur Radio was to handle the entire job. The ship has no commercial gear. He has set up a definite schedule and follows it with seriousness and dedication. He realizes the importance of this once he gets on the high seas.

Operating schedules

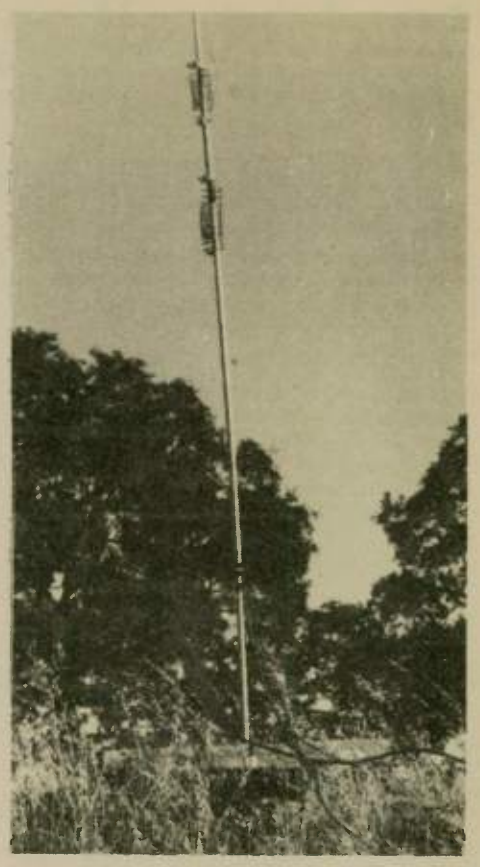
His operating schedules will be at 0100, 1200, 1500, 1700 and 2000 GMT with operating frequencies of 14.285 to 14.313, 14.035 CW, 21.4 and 21.035 CW. When operating on CW, Jeff would appreciate an easy pace just below 15 wpm. He operates on the make-shift bunks, all lined up under a canvas cover in the center of the deck. Every few QSOs, he mentions that if those having contact with him wish QSLs, they should send cards and self-addressed, stamped envelopes to the QSL manager Bill Snyder, W0LHS, 1514 SS. 12th St., Fargo, ND 58103.

lad of 20 years to become an amateur and immediately put his hobby to work by providing the only link between the crew of 13, which includes the three sons and one daughter of the ship's builder, and those waiting around the world to hear of their safe trip to Norway.

According to schedule, they were to sail from the New York harbor sometime in mid-June. After the *Hjemkomst* arrives in Oslo, it will be docked and they expect to return it to its home in Minnesota sometime next summer by reversing the trip.

Give Jeff your support by contacting him during the journey, which will take a minimum of 30 days, although they will have provisions for 90. God speed, Jeff, with your responsibilities to keep contact with the "outer world." ... "CQ — CQ — CQ — KA0NEX DE..."

— Syracuse Herald Journal, NY □



We wonder just how many of the very popular Butternut verticals were in use this Field Day. With four pre-cut radials to be undone, N6WR made first contact at nine minutes into Field Day.

Heard Island

(continued from page 1)

WIA's treasury. The address for the WIA Heard Island Escrow Fund is c/o Wireless Institute of Australia, P.O. Box 10, West Perth 6005, WESTERN AUSTRALIA.

Considerable progress has been made in the arrangements for the expedition. The ship *Anaconda II* has been selected and a contract is being made now. This ship is larger than the one that had been originally selected, which will increase the cost somewhat but will permit a larger operation. She is one of the largest charter vessels presently based in Australia and has had previous Antarctic charters. Already equipped with an ICOM 720 aboard, she is 84 feet LOA.

There will be three radio operators rather than two as previously announced. Also there will be eight mountaineers/photographers/scientists — one of whom may also be an Amateur Radio operator who might operate before and after the attempt to climb "BIG BEN." One scientist from the Australian's Antarctic Division, a captain, and three experienced seamen will complete the crew. With this large crew, the expected stay on the island will be close to four weeks rather than six and will likely be during the month of February 1983. An Australian and an American have already been chosen to go and the IDXF is soliciting its membership for the third operator who, hopefully, will be a medical doctor. The call VK0HI has been reserved for the operation. A landing permit has been applied for and is expected to be issued shortly.

The IDXF has printed a book of 42 pages on Heard Island giving its history, geography, weather, etc. with maps and charts. The book is available from IDXF for $10, $5 for members. □

Stranded mountain climbers rescued

Arthur R. Lee, N6FAD
Submitted by Dave Lynn, AH6BX

On 14 June, Howard Lynn, KH6VAO and Dennis Morisada, KH6NJ were part of a group of backpackers that planned and initiated a three-day, two-night hike across the precarious and rugged Koolau mountain range on the island of Oahu. The hiking party consisted of three women, four men and a 9-year-old boy.

Their course was to take them from Wahiawa in the west to Laie on the northwestern shore. The trip was properly planned and included sufficient maps and permits for entering forest reserves and using government cabins.

The hiking trip went according to plan and was uneventful until the third and final day. The trip was to conclude with a descent from the mountainous rain forests to the seashore at Laie. A band of low clouds had enveloped the hiking party during the previous night and did not lift. Undaunted, they pushed their way through overgrown trails, encountering muddy bogs and a continuous drizzle of light rain. With reduced visibility, they inadvertently veered off the intended trail. By midafternoon, the cloud cover began to lift and by double-checking their position visually and on the map, they realized they were far off course. A rough estimate put them at least eight hours of arduous hiking away from their final destination — a pickup point at sea level.

The hikers had ample supplies and were well equipped with the best of camping gear. While they were in no immediate danger, the razorback mountain ridges they found themselves on were too steep and precarious to set up a suitable camp site for the night. Faced with exhaustion and another night on the mountain, the 2-meter rig they were carrying was put to use. Through the Monakapu repeater (one of the many in the Hawaiian system), they contacted Charles Parker, KH6ME, who informed the Honolulu City and County Fire Department of the plight of the backpackers.

The rescue helicopter unit was alerted, and it offered to take the hikers off the ridge. The offer was accepted.

The rescue helicopter unit was dispatched by Captain Clement Chun of the Hauula fire station's engine company. The helo was launched at about 4:50 p.m., but was unable to locate the party. As the backpackers watched, the copter searched adjacent ridges in the puffy fog.

The 2-meter rig was again put into service and, working through the repeater to a ground relay station, the hiking party was able to get the helo directed to their precise location. The helo then ferried the hikers from Wailele Gulch ridge, by twos, to about 100 yards lower on the slopes, then relayed them again to Kakela Beach Park.

The party was so adequately prepared for the trip that an additional helo lift was needed to take their supplies down from the ridge. □

Seeing double?

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

Students discover learning is FUN

Florine Schroder, KA9BUZ

In the borough of Manhattan, New York, there is an English teacher — Joe Fairclough, WB2JKJ — who seems to have found the answer to many a teacher's dilemma: getting 7th and 8th grade students to truly be interested in not only learning the subject of English, but being enthusiastic about school in general.

For years, Joe tried using the conventional method of teaching English without achieving the results he was looking for. He finally decided to try a new method.

In 1979, he wrote a proposal to the New York City Board of Education. He wanted to try a new approach. His plan was to use the Novice Amateur Radio Handbook as the class textbook for diagramming sentences, examining its parts of speech, etc. Reading assignments would come from those publications, and any other suitable articles which are written primarily for the "hams" of the world. At the beginning of the term, he planned to teach the children Morse code and get them to a point where they would be able to copy their spelling and vocabulary words in CW.

The New York City Board of Education approved his proposal to institute the course called "English Through Ham Radio." They backed their approval with a grant of $600 so Joe could buy equipment and put his theory to the test.

Joe purchased a transceiver and a dipole, and in September 1980, he went on the air from the school with 120 eager students. Attendance in Joe's classes increased dramatically, and the kids began to learn English in a way never before thought possible. Within this framework, they are learning the basic skills of reading, spelling, composition, and some geography thrown in. With the ham equipment, and Joe as the control operator, the youngsters have talked with a great many amateurs all over the country. When a contact is made, they get on the air and ask a lot of questions. Then they study their maps and mark the location of the contact. It adds a completely new dimension to their knowledge.

Joe's plan of teaching, together with an introduction to the world of Amateur Radio, was working for the students both on the academic level and their personal esteem.

Then in May 1981, the radio equipment was stolen from the classroom. The kids were devastated! The school was unable to furnish the money to replace the equipment, and it seemed this successful experiment was coming to a screeching halt. But Joe and his kids began a fund-raising campaign by writing letters to all the stations they had worked, asking for small donations. By September 1981, they had raised almost $600 to replace their equipment. Joe was able to continue the course, as planned, and get back on the air.

But due to cutbacks in the school's budget this year — which seems to be a common malady in a great many educational systems lately — there is no money in the budget to assist Joe in continuing this innovative program of education.

The program is working, the kids are learning and being motivated, but funds are needed by the club to help them cover the costs of maintenance of the equipment, purchase of study materials, Callbooks, headphones, etc.

Joe and his kids are on the air every school day on 21.395 (plus or minus a few). I am quite certain you would enjoy a QSO, not only with Joe, but with possibly Amy, Hector, Jose, Mike, Nelson, Rita or Richie — to name just a few of "Joe's kids."

I have tried, in my small way, to call attention to what this teacher is trying to do to motivate his students. I hope I have succeeded in arousing your interest. If you would like to make a donation, large or small (which is tax deductible), to help Joe maintain this standard of education, it is very simple. All you have to do is make out a check payable to J.H.S. 22 Ham Radio Fund, and mail it to J.H.S. 22 ARC, 111 Columbia St., New York, NY 10002.

Try it. You'll feel good, you will be helping a lot of great kids, and you will possibly be helping to develop a new generation of Amateur Radio operators.

HC1OG returns to South America

Ed Arndorfer
Submitted by Kenneth Tate, WB9OBX

A 20-year-old Ecuadoran is leaving behind warm friendships formed through his association with a local Amateur Radio group.

Ovidia Gabela, HC1OG came here in August 1981 to take a laboratory optician course at Lakeshore Technical Institute. He chose LTI over two other schools in the nation that offer the course.

While familiarizing himself with the city, Gabela spotted a south side house with a large radio antenna attached to it and knocked on the door. The occupant happened to be Kenneth Tate, WB9OBX, president of the Mancorad Club and director of the Manitowoc County Social Services Department.

Tate offered the services of the club so Gabela could communicate with his family in Quito every week while he was attending school.

Ovidio Gabela, HC1OG (left) receives jacket from Kenneth Tate, WB9OBX, president of a Wisconsin Amateur Radio club. Gabela presents Tate with colorful handmade tapestry from his homeland. Gabela used the club's radio facilities to contact his family in Ecuador while he was attending Lakeshore Technical Institute.

Gabela communicated with his father, Augusta — an opthalmologist, and his brother, Gregoria — a licensed physician, both of whom are Amateur Radio operators. Gabela completed the optician course ahead of schedule through extra study and returned to his homeland in late May.

— *Herald-Times-Reporter, Manitowoc-Two Rivers, WI* □

Cable TV

(continued from page 1)

receiver and crowding the Amateur Radio operator's signal out.

But even if cable television companies meticulously maintain their cable systems and plug any source of signal leakage, there still would be a problem because cable television and Amateur Radio operators must share the same frequency, said Rich Helzer, a ham operator from Arroyo Grande.

Since the Valley is just beginning to wire up for cable television reception, the problem of radio interference has not been felt here as in other parts of the country, Thompson said. However, a Fresno-based cable television company is preparing to expand use to Tulare and Visalia and this could eventually create interference problems.

Darrell R. Bye, general manager of Sequoia Cablevision in Tulare County, said that his company has never received a complaint from radio operators experiencing interference. He added that his company takes extra steps to ensure that signal leakage does not occur.

Thompson agreed that Sequoia Cablevision has done an "outstanding" job of maintaining and installing its cable system, and he hopes radio interference will not be a problem in this area.

Bill Harigan, representing Sonic Cable Television in San Luis Obispo, said that if cable television were exceeding the amount of signal leakage allowed by the FCC, the commission would demand that the company cease and desist. To date, his company has received no complaints.

However, a representative of the FCC in San Francisco, Denise Alvarado, said that her office receives from 60 to 70 complaints of interference a week from Northern California, Nevada and Utah. Many of these cases of interference are simply extra powerful CB radios in the neighborhood, a taxi cab, police or fire radio, she said.

Although ham operators are fighting the interference, they claim that cable television signals can also interfere with radio communications between police, fire and other emergency radio users.

Harigan noted that while there are 400,000 licensed Amateur Radio operators in the country, there are 23 million cable television subscribers in the United States.

He added that the FCC wouldn't be serving the public interest if it asks the cable television industry to go to the expense of moving some of its programming to a different frequency simply because a group of Amateur Radio operators want clear reception.

— *Visalia Times - Delta, CA* □

Contact Worldradio for hamfest prizes.

My first love

Wireless telegraphy

M.G. Pawley, K6GO

In the spring of 1914, this young man's fancy turned to wireless telegraphy instead of to the proverbial "love" as the saying goes. A girlfriend was in the habit of passing by on the way to school and I would help carry her books. But one day I didn't show up, and later she accused me of caring more about my wireless than about her. How right she was!

Myron G. Pawley, K6GO (1981).

For Christmas in 1913, my father gave me an "Interstate Wireless Receiving Set" made by the E.I. Company of New York City. It cost $2.98 and consisted of a vertically mounted coil with a slider, a galena "cat-whisker" detector, and an ear 'phone. Not wishing to disfigure the premises, my father required that the aerial be mounted in the attic. He was in the fire insurance business and insisted on having a large ground switch installed by a licensed electrician for lightning protection.

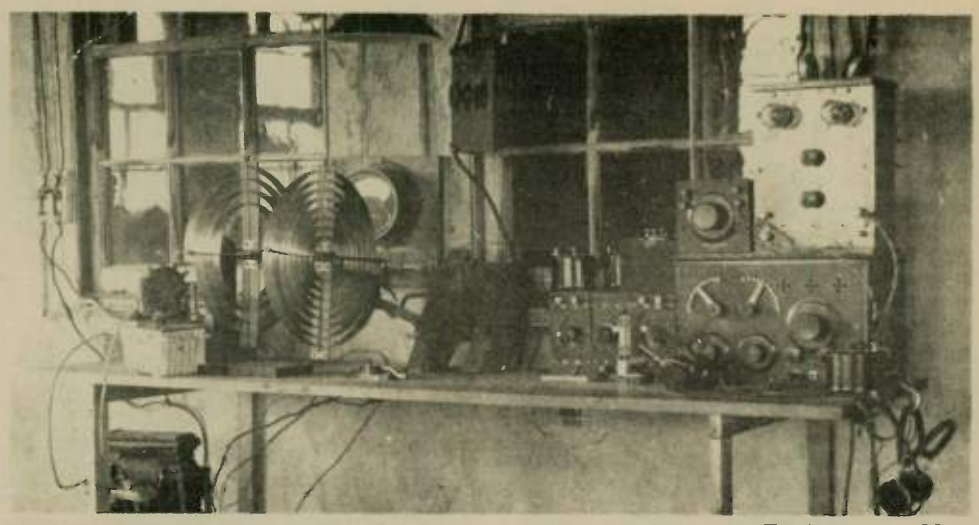
After listening in for weeks, I finally heard a signal which turned out to be 120 cycle AC pickup! I was very excited, but soon got bored with the monotonous signal. Then, one day I heard a loud wireless code signal which I couldn't decipher, but later found out was from an Old Dominion Line coastwise steamer passing by about five miles from my location on the New Jersey coast. This gave me a chance to find a more sensitive adjustment of the critical galena detector and I began to hear a few commerical and naval stations, including NAA in Arlington, Virginia. This station sent time signals every night at 10:00 p.m., followed by press news transmitted at about 15 wpm. It was these transmissions that enabled me to learn the code. I already knew the American Morse Code, which my father taught me when I was 9 years old. I can remember his squeezing my hand with the code!

It wasn't long before I acquired a Ford spark coil and hooked the aerial and ground across the vibrator and a key in the primary. My original log (1914) shows six stations that I worked, all within 10 miles of town and all using their initials for call letters. By manipulating a rubber band on the vibrator, one could play "Yankee-Doodle" with a fairly smooth tone!

By 1916, I had a 3-element vacuum valve housed in a small wooden box with flash batteries in series for power supply. the valve and assembly, manufactured by the DeForest Company as a DeForest Audion, gave much improved signals. These first tubes were very gassy and no two were alike. However, by experimentally mounting a permanent magnet in the best position near the tube, great sensitivity could be attained by the resulting "kink" in the characteristic curve of the detector. With this and a new Armstrong Regenerative Receiver, I began to hear amateur spark stations as far west as Chicago (9ZN).

By late 1916, I had my first license with call 2ARI. It seems strange that they had three-letter calls at that early date. By then, I had a 1kW rotary spark set with a nice musical tone! There was no such thing as selectivity — one separated stations by audio pitch and tone quality. My first QSL card (from 2FS, south shore of Long Island) brought bad news: after polite talk it read "It is about time you reduced your wavelength as it was VERY LONG!"

There is a mystery, unsolved by me, involving fraudulent use of my call letters 2ARI after start of World War I! I began to hear stories from wireless amateur friends in my home town in regard to the Secret Service querying them about my character. An "assistant for information" from Secret Service finally got around to questioning me. I offered to let them borrow my early wireless log, which he accepted and returned after the war. He thanked me for "courtesy and assistance rendered," with no idea what it was all about. I gleaned, however, that there were enemy submarines off the New Jersey coast and that my call letters were used in communication therewith!



Myron G. Pawley's wireless station at Blair Academy in Blairstown, New Jersey. Photo was taken in 1916

In prep school at Blair Academy, Blairstown, New Jersey (1916) the Head Master Dr. John Sharpe, who had been a politician, asked if I could receive election returns on the wireless. I was glad to oblige and invited him to sit up with me while I copied the returns. On 9-10 November 1916 we sat up all night during the re-election of Woodrow Wilson. This "set me up real good" with the boss and I received special privileges to stay up late at night to operate the wireless in the tower of the gymnasium.

When I went to Cornell in 1920, I used to operate the rig which was on the third floor of the Electrical Engineering building with the transmitter in the basement. The "dime" contacts on the keying relay would occasionally stick and I would have to chase down to unstick them!

My early log shows copy of an interesting "first" in amateur wireless-copy of the first transcontinental relay copied from 2ZK, 8YI, and 9XM, 10:30 p.m., 24 February 1917: "To the mayors of Los Angeles, California and Seattle, Washington — on behalf of New York City, I send cordial greetings and best wishes for success of the radio system" signed, John Purroy Mitchell, Mayor of New York City.

My studies at Cornell prevented operation of 8XU, except on occasional Saturdays. But I remember how effective the station was. On one occasion, I worked a wireless operator friend on a ship off Florida who used to tune the ship's transmitter from one of the standard wavelengths (300 meters) down to the supposedly "useless wavelengths below 200 meters."

Early wireless telephony

Imagine my excitement after listening for over a year to 120-cycle AC pickup and spark code stations, to hear my first wireless telephone station (February 1915) — the *S.S. Tyler*, Old Dominion Liner testing with WHB using an arc transmitter with a "crummy" signal. I was pretty sure he was repeating "hello" over and over again! However, later in 1915 and 1916 I frequently heard the Wanamaker stores in New York City and Philadelphia playing records back and forth. They were very distinct on a wavelength of about 2500 meters. This was with the galena detector and ear 'phone.

By spring of 1921, I was operating a Heising-modulated oscillator with four Western Electric VT 2s and a 24 jelly jar chemical rectifier, from 1CBJ, Greenwich, Connecticut. I played records back and forth with my understudy (3PU), still at Blair Academy. Up to the 1930s we were allowed to transmit music only for experimental testing purposes. There was an awful lot of experimental testing going on! The good old wireless spark days were over! □

NOARS chooses 'Ham of the Year'

The Northern Ohio Amateur Radio Society (NOARS) extends a hearty congratulations to Leo Pszenitzki, W8CIJ, who was chosen as 1981's "Ham of the Year." The words on the beautiful plaque Leo received at the NOARS banquet sum up his character as an Amateur Radio operator: "W8CIJ — Leo Pszenitzki — In recognition of your outstanding example of the true amateur spirit and unselfish contribution to NOARS and the amateur community."

Leo was first licensed in February of 1946. He enjoys DXing and ragchewing. He presently has 209 confirmed DX contacts and is working on DXCC-CW. The 58-year-old NOARS member is currently the Field Engineer Manager for the North Royalton Division of NCI. He has had a number of very interesting jobs in the past such as working in the Caribbean on a missile tracking station on the island of St. Lucia. He also worked on the instrumentation for rocket sleds at Highland Air Force Base in New Mexico.

Leo Pszenitzki, W8CIJ was chosen "Ham of the Year" by the Northern Ohio Amateur Radio Society.

Leo is a past president of NOARS and four-time vice president. He was the prime mover in obtaining the site for the NOARS 55/15 repeater and he is involved with providing maintenance on that repeater. He and his wife Kathy live in North Ridgeville and their property has been used on numerous occasions for NOARS club picnics and get-togethers.

Thank you, Leo and congratulations again!
— Northern Ohio ARS, Lorain, OH □

— Fox River Radio League, Aurora, IL

Tapes help amateurs learn Morse code

Dr. Tom Linde, KC0L

Twin Oaks Associates is a partnership of mental health professionals who are amateurs interested in helping others overcome problems related to learning CW. Over the past four years, Twin Oaks has developed three systems of teaching Morse code. These systems represent careful interfacing of clinical psychology and Amateur Radio. The systems are designed to help code students learn to recognize and copy Morse code at a very high speed. The first set of tapes is called System 12©. This is designed for the amateur who may have a Novice or Technician license but just can't get over the "hump" to pass the General exam. System 12 takes students past 15 wpm on five carefully structured successive-demand 60-minute cassettes.

The second training program is System 24©. This assumes that the student is able to copy comfortably at 9 or 10 wpm, but would like to go after the Extra Class license. This training program is on five successive-demand 60-minute cassettes, and carries the student past 30 wpm.

The third teaching system is called System 12 Alphabet Book© and is designed for persons who know absolutely nothing about code. However, it can be used by persons who are not thoroughly comfortable with 5 wpm. It can be used for self or classroom instruction.

The program has been tested across the nation with great success. Each comes with its own carefully written study guide. Systems 12 and 24 cost $30 each, while the System 12 Alphabet Book costs $15.

We look forward to being able to help you achieve your Morse code objectives. Twin Oaks Associates, Route 5, Box 37, Knoxville, IA 50138. □

Book Review

Practical RF Design Manual

by Doug DeMaw
(Prentice Hall, Englewood Cliffs, NJ 07632, 1982)

Peter Onnigian, W6QEU

This latest contribution to RF art is of interest to amateurs and those interested in RF design with transistors and broadband transformers. The hard-cover book with 246 pages is well illustrated using current solid-state devices.

It uses plain language and math only to demonstrate particular designs. Circuits have been checked in the lab. There are no theoretical circuit examples as the book is intended for practical use by both engineers and amateurs.

DeMaw reviews the basic fundamentals of transistors and then goes into their use in practical RF circuits for transmitters and receivers. Small signal as well as power amplifiers are treated very well. His coverage of broadband transformers is excellent and complete unto itself. DeMaw is a prolific contributor to the broadband transformer art using ferrite core material. One chapter is full of useful broadband transformer data.

This book, along with DeMaw's other recent companion book — *Ferromagnetic Core Design and Application Handbook*, should be on the bookshelf of every serious amateur who likes to wind his own for low noise pre-amps to 100-watt 80-10 meter amplifiers! □

Book Review

Archer Engineer's Notebook
Archer Semiconductor Reference Guide

Chuck Clark, K4ZN

Here are two handy books for any amateur who builds or improvises. Despite its title, the *Engineer's Notebook* is not really for engineers, for people who apply higher mathematics to complicated problems. It's a compendium of simple circuits that one can use to put the various integrated circuits sold by Radio Shack to work. It presumes a general background in electronics, but no more than it takes to pass the General Class amateur license examination.

The *Reference Guide*'s 270 pages give the needed specifications for Radio Shack's 11 general-purpose diodes, five zener diodes, nine bridge rectifiers, 35 transistors, 99 integrated circuits, and several other devices, and a tabulation of "over 82,000" substitutions (I didn't count them!) that Radio Shack's semiconductors can replace.

Both books are 8½ x 11 inches, and are priced reasonably. The *Engineer's Notebook* (by Forrest M. Mims III, contributing editor of **Popular Electronics**), catalog number 276-5002, sells for $2.49 and the *Semiconductor Reference Guide*, 276-4005, for $2.99.

It's too bad one can't say the same for Radio Shack's semiconductors. Several mail-order houses undersell the Shack, sometimes 2 to 1 or more. But when you add the cost of sending the order, paying the postage and waiting, you may feel it's worth the extra money to go to the local Radio Shack and buy it over the counter, particularly when you only want a few items. The books, though, are a real bargain and should be particularly helpful to anyone who is designing something to be reproduced by others.

It's frustrating to find an article that tells how to build something you've needed, only to see some parts listed that are impossible to locate. If you select your parts from these books, that won't happen. □

Silent Key

William P. Green, W6BYS — a legendary hero in the world of Amateur Radio — died on 9 June 1982 at the University of California Medical Center, San Francisco. He had been suffering from emphysema.

Before going to the hospital, he signed off the air with his last "73" on 28 April after communicating with the seagoing *SS President Franklin Pierce, SS President U.S. Grant* and the *USS Meteor*. Earlier this year, he contributed to the rescue of the *SS Pierce* as it wallowed in Arctic waters with a critical bearing problem. W6BYS had patched American President Line officials through his station to the *Pierce*'s engineer when a power failure knocked out the ship's radio. As a result, "a significant mechanical failure" was corrected at sea.

In January, he helped convey vital messages between authorities, relatives and victims of the Marin County flooding. Other humanitarian deeds Bill accomplished during his lifetime included MARS activity during the Vietnam war, and saving the life of a woman who had been stricken at sea. Via Bill's radio, a heart-bypass specialist in San Francisco was able to advise a shipboard surgeon in a successful operation on the woman.

Bill Green had started to write his own death notice:

"To all my friends and especially those whom I worked with in Amateur Radio. I want to thank you for giving me a lifetime of pleasure and the opportunity of serving . . ." His wife, Sally — a former UC Medical Center administrator — finished the task.
— Information from S.F. Examiner, 13 June □

Silent Key

Submitted by Hal Godfrey, N6AN

Dr. James L. Lawson, W2PV (66) — a retired General Electric scientist and manager of research and development who made major contributions to radar, nuclear particle accelerators, electronics and information science — died on 25 May, after a brief illness.

Dr. Lawson was also an avid Amateur Radio operator and cultivated a unique "antenna farm" — with three towers ranging in height from 110 to 180 feet — next to his home. From this "superstation," the tallest in upstate New York, he won Amateur Radio competitions as the top individual operator and as the best station in the United States.

The crew of one of the U.S. Navy's aircraft carriers once presented Dr. Lawson with an award for his help in connecting crew members via "phone patch" with their loved ones. He also received an award of merit from the ARRL for giving aid to a doctor in Madagascar who needed emergency advice and supplies to save the sight of a young boy. Dr. Lawson set up a relay between the distant physician and a specialist at Albany Medical Center.

Canadian provinces awards program

Guy Cadieux, VE3LVN

These awards, sponsored by the Niagara Peninsula DX Group, are available to licensed amateurs. Contacts after 1 January 1979 are valid.

Do not send QSLs. Instead, send log lists showing full details of contacts verified and signed by local club officials or by two licensed amateurs.

Certificates will be endorsed for various bands and modes, as requested, when application for awards is made. The fee for each award is $3.50 worldwide.

Send application to: Guy V. Cadieux, VE3LVN, 98 Townline Road West, St. Catharines, Ontario L2T 1P7 CANADA.

General information

There are 10 provincial awards and one territories award and one worked all Canadian counties award. The worked all Canadian counties award is free after you have all other 11 awards.

Class A — for all counties in each province.
Class B — for half of the counties in each province.

Alberta	20
Newfoundland and Labrador	7
Quebec	75
British Columbia	24
Nova Scotia	19
Saskatchewan	13
Manitoba	13
Ontario	54
North West Territories	4
New Brunswick	15
Prince Edward Island	3
All Canadian Counties	247

A list of all Canadian counties is available for $1 from the Awards Manager.

Important note: When in contact with a station, ask for the county of his QTH. This is very important to you. □

DA1US Special Achievement Award

Dave Mann, DA1BB

Announcing the DA1US Special Achievement Award: DA1US is the Headquarters, United States Army Europe Club Station, located at Patton Barracks, Heidelberg, West Germany. The station presently has a complete Kenwood line, a Heath H8 Computer system, a 19-element log periodic antenna and a 120-foot antenna tower. We operate on 10 through 160 meters on a frequent but random basis, depending upon military duty requirements of the club members.

The DA1US Special Achievement Award is a colorful certificate gained through working DA1US on at least five bands. It will not be easy to obtain, as many operators might think; it will be a real challenge. Special endorsements are available for QRP (10 watts output or less) and for 160-meter contacts. The certificate is free except for postage. Requirements are: send DA1US your QSL card for each claimed band and either $2, 5 IRCs or U.S. postage equivalent, and we will return your certificate within 10 working days. If you somehow manage to work us on all bands, 160 through 10 meters, the certificate is provided postage free; just send the QSL cards from your station.

Address for the DA1US Special Achievement Award is "DA1US Radio Club Station, c/o MARS-Command Radio Station, Patton Barracks, APO New York, NY 09403." The Callbook address is also good. Mark your envelope "ATTN: Special Certificate Manager." Gud lck, gud DX and 73's — see you in the next contest! □

Operating achievement awards

Fast Scan ATV Television Award

"Getting the Amateur Television station operating is an award in itself!" This award certificate recognizes the "first" amateur television two-way contact. Endorsements for DX mileage and color ATV available. Contacts via amateur ATV repeaters are allowed. Award inscriptions are made around the border of the A5 block. Black/white 8 by 10 inches.

Master Scanner A5 SSTV Award

This award certificate recognizes the serious SSTVer. Entry level is 100 two-way SSTV contacts. Endorsements for 500, 1000, 1500, 2000, etc. available. Special endorsement for color SSTV available with verified print copy. A must for every SSTVer! Gold 8 by 10 inches.

Specialized Communications Achievement Award

A5 Magazine recognizes and supports all modes of amateur specialized communications. This award recognizes accomplishments in ATV-MSTV-NBTV-SSTV-FAX-RTTY-EME-microwave and satellites. Entry levels are contacts over 100 miles on ATV, special-event ATV projects, 25 DX country contacts on SSTV, reception of HF MSTV or FAX signals via amateurs, microwave DX, 10 DX foreign countries via EME, 10 two-way contacts on an amateur satellite, 25 DX countries on RTTY with special endorsements available for additional contacts. Certificates are numbered as received. Gold 8 by 10 inches suitable for framing.

Worked-All-States SSTV

A5 ATV Magazine sponsors the annual WAS/SSTV contest in September. Work all 50 states including Hawaii and Alaska with exchange of call sign and signal report in video. A special WAS map is available to color in the states as you get them. This is an ongoing award not limited to only the September contest. Special endorsements available for multi-band WAS.

Worked-All-States RTTY

A5 ATV Magazine sponsors the annual WAS/RTTY contest in January. Work all 50 states including Hawaii and Alaska with log copy verification. This is an ongoing award not limited to the January contest. Special endorsements available for multi-band WAS.

A5 Magazine "Good Image" Award

Awarded at the Dayton hamvention each year, the Good Image Award is presented to the individual or group of individuals who contributed to the advancement of the A5 mode of communication by technical achievement or public awareness. Top of the line award!

All **A5 ATV Magazine** awards require subscription label information date codes. Enclose $1 for the cost of the award certificate and 50 cents postage return mailing (envelope is provided). Allow two to three weeks for verification and mailing. Send all requests to Awards Manager, A5 ATV Magazine, P.O. Box H, Lowden, IA 52255-0408. Winners of awards will be published on a regular basis in **A5 Magazine.** □

Masons on the air

Submitted by Bill Cooney, W8LM

Amateur Radio is alive and well for Freemasonry, reports Bro. Clifford J. Bade, Junior Warden of Olmsted Falls Lodge No. 705, who acts as net control station (W8QV) on 28.6 MHz on Sunday evenings at 8:30 p.m. On Tuesday evenings, NCS is manned by Bro. Robert Redmond, WB8SCB at the 13/73 repeater in the 2-meter band. Bade's personal call sign is W8CJB.

The club welcomes all Masonic Amateur Radio operators into its net and will list them in its directory, which is now being revised. Either Bade or Lewis may be reached by telephone, 235-1122 and 461-4737 respectively, for additional information about club activities and operations.

— *Western Reserve Mason, OH* □

Special Events...

Millersburg Ferry

On 14 August 1982, the Berry's Mountain Amateur Radio Club will venture forth on their first expedition, commemorating the 165th continuous year of operation of the Millersburg Ferry, which was founded in 1817.

The Millersburg Ferry consists of two of the four stern wheel ferryboats (paddles in the rear) left in the United Stated today, and also has the only wooden stern wheel ferries in the United States. On 1 January 1971, it became a Registered Historic Landmark.

A ride on the ferry is a wonderful step into the more relaxed pace of yesteryear. Located 30 miles north of Harrisburg on the Susquehanna River, the ferry connects the town of Millersburg, Pennsylvania wtih an adjacent landing in Perry County about two miles below the town of Liverpool. The service is on a daily basis from dawn to dark, except in winter when the river freezes. Each ferry is capable of handling four vehicles of up to five tons each, plus 60 passengers. The trip across the one-mile-wide Susquehanna averages 20 minutes.

The *Falcon* will carry a 40-meter station, and the *Roaring Bull* will sport a station on 20 meters. Other stations will operate at dockside. Using the call sign W3TS, club members will operate from 1200 until 2400 GMT. The stations will operate on 3.910, 7.045, 7.125, 7.245, 14.045, 14.295 and 147.24/84. We will try to access your repeater from the ferry upon request.

Send your QSL, a business-size SASE, and 25 cents donation for a pictorial commemorative certificate and a full historical survey of this unique and colorful ferry. Send to: Dana Michael, W3TS, R D 1, Box 144, Lykens, PA 17048. □

Crown Point

Schenectady Amateur Radio Association will operate K2AE from the fort at Crown Point, New York to commemorate the first construction of the fort by British and colonial troops in 1759. The station will be in operation 14-15 August 1982 on the lower 10 kHz of the General bands.

Send SASE for special QSL card to P.O. Box 6, Alplaus, NY 12008. □

Smyth County

The Amateur Radio operators of Smyth County, Virginia, in celebration of the county's Sesquicentennial (150 years), will be on the air 21 August 1982 from 0000Z until 2100Z. Frequencies on 15, 40 and 80 meters up 10 kHz from bottom of General phone band and Novice CW band as activity dictates. The call to be used is W4KON.

Please QSL with large SASE for attractive certificate and booklet about the county to: Ken Sturgill, KC4IH, P.O. Box 526, Marion, VA 24354. □

Battle of Lake Erie

The Huron County Amateur Radio Club will celebrate the 169th anniversary of the Battle of Lake Erie by operating from Perry's Victory and International Peace Memorial on South Bass Island in Lake Erie.

The station WA8HUR will be on the air beginning at 1000Z 21 August 1982 until 0000Z 22 August 1982. Operating on SSB the frequencies will be: 3910, 7250, 14280, 21360 and 28550 kHz. The CW station will be found at 40 kHz up from the bottom of each HF band. A Novice station will be found at 3720 kHz and at 7115 kHz. An FM station will be operated on 146.52 MHz.

A special QSL card will be issued to all those making contact who send their QSL and an SASE to ARS KF8O. □

Palmyra DXpedition

The MOTHERS (Marengo Over-The-Hill Electric Radio Society), an informal group of radio amateurs in the north central Illinois area, have been planning a DXpedition for some time. Recently, the destination "Palmyra" was announced.

This came after confirmation of a landing permit and operating permission had been received from local authorities. The fact that this Palmyra is located in south central Wisconsin hasn't dampened the spirits of WB9NKH, K9UA, KF9E, KC9DC or WA9TAH, the expected operators.

The DXpedition will attempt the landing, initial setup and possibly some limited operation on 11 September 1982, with a full-blown multi-transmitter operation expected on 12 September 1982 from approximately 0700 to 2100 CDT. The operating frequencies will be up 30 kHz from the bottom of the CW band edges and also 30 kHz up from the General phone band edges.

Since Wisconsin and Illinois have fully reciprocal licensing agreements, the DXpedition will use the call WA9TAH, with QSLs going to the Callbook address (545 Willow Rd., Marengo, IL 60152). A special QSL/award will be available for an SASE.

This could be your last chance to work Palmyra. □

Old Threshers

The Mount Pleasant Iowa Amateur Radio Club will once again be operating a station at the Midwest Old Threshers Reunion in Mount Pleasant, 1-6 September 1982. Using club call W0MME, they will be on or around 3970 kHz during the event, and will be on the other bands occasionally. A special Old Threshers QSL card is being issued to those who work the station and can be obtained by sending an SASE to Dave Schneider, WD0ENR, 507 Vine, Mount Pleasant, IA 52641.

Amateurs from the Mount Pleasant area will also be handling emergency communications on the grounds and will be providing talk-in on Mount Pleasant's 147.99/.39 repeater W0MME/R and 146.52 simplex for those attending.

A couple hundred amateurs are among the 250,000 people who annually attend this display of memorabilia from America's past. On display — with much of it actually working — are steam engines, electric trolleys, antique cars and tractors, threshing by horsepower, and much more.

Dave Schneider, WD0ENR and Roy Lewis, WA0KLD are in charge of Amateur Radio communications on the grounds. They invite those attending to stop by the ham shack and sign the guest book. □

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Check your license expiration date.

OK Corral, revisited

On Labor Day weekend — 4-6 September 1982 — the famous OK Corral in Tombstone, Cochise County, Arizona (where the Earp brothers and Doc Holliday shot it out with the Clanton brothers) will be the site of Special Event Station KC7MG. This will be in conjunction with the 1st Annual Rendezvous of Gunfighters. Operations will begin at 1500Z, 4 September and continue through 2400Z, 6 September on SSB and CW. SSB frequencies are 28680, 21380, 14280 and 7280. CW frequencies are 21130 and 7.130.

A certificate will be awarded to all who work us as well as SWLs. Please send a large 8½″ × 11″ SASE (40 cents postage) to KC7MG, P.O. Box 1555, Benson, AZ 85602. □

Chiropractic college

The Wood Junior High School Amateur Radio Club will operate WB0MMV from the site of Palmer College of Chiropractics, the first chiropractic college in the world, from 1700Z, 4 September to 1800Z, 5 September. Frequencies will be: Phone — 7.250, 14.325, 21.400, 29.125, 146.52/52; CW — 7.115, 14.075, 21.125, 28.125.

Try phone on odd hours Zulu, CW on even hours. For a special QSL, mail SASE to John Geiger, KA0IFG, 3739 Lorton Ave., Davenport, IA 52807. □

U.S. QSL Service, Inc.

Laryl Berry, KM7Z

This column has been here in **Worldradio** monthly for 1½ years now to tell everyone about USQS (and here it is again!). USQS is a QSL bureau for anyone who has QSLs to send to USA amateurs. USQS is both an *INCOMING* and *OUTGOING* bureau that is located in Mulino, Oregon. You can send all your outgoing (USA) QSLs to one location, thus saving the cost of postage to mail them individually. You can receive your incoming QSLs via USQS by keeping SASEs on file. It's very easy and the best part of all is that *it is free!!* That's right — no charges, no fees. The system is run voluntarily by myself, KM7Z, and the OM Pat KN7B, and with the help of local ham friends when needed.

USQS depends on donations of extra stamps and/or blank envelopes to get unclaimed cards delivered, and cash donations help pay for printing flyers, advertising and also in getting unclaimed cards delivered.

USQS works very simply. To send cards via USQS, sort your outgoing domestic QSLs into the 10 call areas, Ø-9. Then sort each area alphabetically by suffix. Print plainly! Package *securely*, include SASEs for your return QSLs via USQS, and send to USQS. To make the job of preparing SASEs even easier for you, we offer (for sale) SASEs for our files at the rate of four for $1. We need your CALL, name, address and zip code. A good way to give us the address information is to send us a voided QSL or your printed address stickers. It is not a good idea to send cash through the mail. You may make checks payable to USQS or U.S. QSL Service, Inc. or Laryl Berry, KM7Z. Please indicate whether the funds are for SASEs and/or donation, and indicate how many QSLs per SASE you would like returned to you.

I would like to thank all who have printed info about USQS in their club newsletters, and those who have made flyers available at their local hamfairs and who have told friends about the list of calls in **Worldradio**. I am pleased to report again that USQS is growing daily.

The list of calls (following) is only a small portion of the unclaimed cards on file. As you may guess, this is our biggest problem, along with getting more people introduced to the system. The cards come in daily and even though the SASEs are also coming in daily, incoming QSLs often outnumber SASEs. Please help by spreading the word that we would like SASEs from everyone and that we have an operating domestic bureau for all of the USA.

If your call or the call of someone you know is listed below, there are unclaimed cards on file at the time of this writing. Please help by sending SASEs and donations to U.S. QSL Service, Inc. (USQS), P.O. Box 814, Mulino, OR 97042. UPS address: 15871 S. Howards Mill Rd., Mulino, OR 97042. Laryl Berry, KM7Z tel: (503) 829-6797.

NP4A	NX4B	KC4D	KA4EIN
N4AA	N4BAL	W4DFU	N4EJW
WB4ABW	W4BBB	W4DHZ	KA4EQW
KA4AHP	WD4BCB	KD4DJ	K4EXC
W4AI	KA4BDS	KB4DN	KA4F
KE4AI	W4BFB	N4DPU	KR4F
KA4AIT	KA4BFT	KA4DQC	NF4F
KA4ANF	WP4BJB	KA4DQK	KC4FD
N4ANV	WB4BJS	KA4DQR	N4FF
N4AOJ	N4BKX	N4DU	AA4FF
KB4AP	W4BMX	N4DW	KA4FFK
WD4AQK	K4BNT	N4DXJ	N4FFT
N4AR	N4BP	KA4DZV	N4FGF
N4ASF	KD4BU	KT4E	WA4FNA
WB4ASV	KC4BY	NG4E	KA4FOF
WD4AVY	KX4C	NO4E	KA4FTF
N4AWI	NQ4C	NR4E	WN4FVU
K4AWY	NX4C	NV4E	K4FVV
WD4AXM	N4CGR	N4EA	KZ4G
KS4B	N4CI	N4EE	NN4G
NB4B	N4COW	WA4EHS	KE4GB
NF4B	KA4CQJ	N4EIB	KA4GCB

KA4GDQ	NO4J	KA4MNS	KA4OTP
WD4GEA	KE4JO	K4MPP	W4OWT
KD4GG	KA4JRT	KA4MPR	N4PB
KA4GJB	K4JST	KA4MRE	W4PBC
KA4GNN	KM4K	KA4MTK	KA4PCL
WD4GUJ	W4KFC	KA4MVJ	WA4PGM
K4GXJ	WD4KHI	WB4MWU	WA4PSF
AK4H	KG4KK	NJ4N	W4PUR
NV4H	K4KKJ	NU4N	WA4PWF
WA4HII	WB4KRH	KA4NGA	WD4PZN
WB4HIQ	KA4KTX	WD4NHM	NN4Q
KA4HLT	KB4LA	KA4NIJ	W4QAW
K4HML	WB4LDS	WB4NTI	N4QB
WA4HUH	KA4LNW	W4NVN	KB4QC
KD4HZ	WD4LRB	KA4NWF	WA4QMQ
KW4I	WD4LRV	N4NX	N4RA
NQ4I	KA4LTC	K4NYV	WD4RAF
WA4IAX	W4LUI	WA4NZD	KA4RJU
KA4IKH	AG4M	WB4OBE	W4RKC
N4IR	AI4M	KA4ODV	WA4RLQ
KB4IS	KI4M	WA4OET	KA4RLT
KA4ISH	NV4M	WA4OGA	KA4RPO
KA4ITQ	KA4MEB	N4OL	WA4RRC
KA4IXD	AA4MI	KD4OL	KA4RSA
KU4J	W4MM	W4OO	WA4RUW
NA4J	WA4MMO	WD4ORH	N4RV

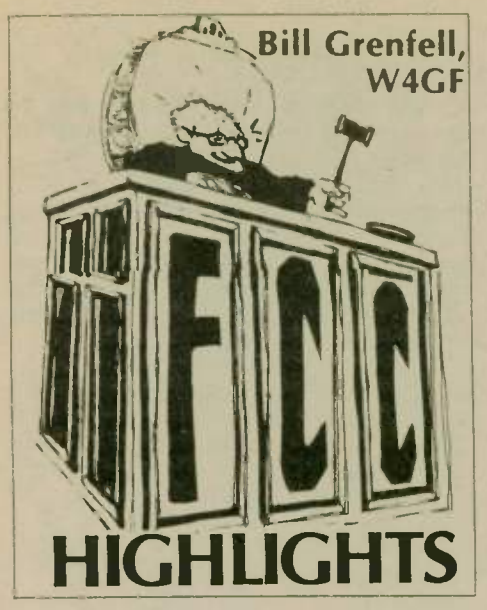
KA4RVA	N4TY	W4WHM	KA4YUI
WA4RXD	N4TZ	W4WIJ	KA4YZN
KA4RYV	AA4U	KA4WJC	N4ZC
AA4S	NI4U	W4WKQ	W4ZC
KM4S	N4UB	W4WWQ	W4ZGB
KA4SDS	N4UF	KD4WY	K4ZGB
KA4SGK	N4UH	AC4X	W4ZM
KA4SGL	KA4UMU	KX4X	WA4ZQF
WB4SKI	KA4UVM	NB4X	N4ZZ
KA4SLD	KA4UVR	W4XD	
N4SO	WA4UWX	K4XG	
KA4STL	W4UYC	KC4XI	
WA4SZG	KC4VA	W4XJ	
NA4T	KA4VAB	N4XM	
KA4TDQ	WB4VMB	K4XP	
KA4TDT	KD4VN	KC4XR	
K4TF	KA4VNE	KN4Y	
N4TL	W4VP	KQ4Y	
WA4TLG	W4VQ	KY4Y	
W4TMR	N4VS	NU4Y	
KD4TQ	K4VUD	K4YF	
K4TS	N4VZ	KA4YFH	
KA4TSG	KT4W	KA4YIP	
W4TSV	NG4W	N4YM	
WN4TTN	NQ4W	KC4YM	
KA4TWC	W4WG	W4YN	

Club reference book

Radio Shack is offering to donate up to five copies of the Archer Semiconductor Reference Guide to electronics hobby clubs and associations, including amateur and computer clubs, in the United States. The 264-page reference book is being offered for use as prizes to stimulate interest in the organizations. It regularly sells for $2.99 at Radio Shack and participating dealer stores.

To request your copies of the book, write Radio Shack Door Prizes, 1300 One Tandy Center, Fort Worth, TX 76102. (Radio Shack is a division of Tandy Corporation.)

— *The Home News, NJ* □



The number of amateur operators licensed by the FCC was 400,816 as of 1 May 1982. By class, the totals are: Novice 84,039; Technician 73,538; General 119,977; Advanced 93,150; Extra 30,112. In addition to the personal station of each operator, the following number of additional stations are licensed: Radio Amateur Civil Emergency Service (RACES) 613; Club 2,989; Military Recreation 232; Secondary 1,387. This adds up to a total amateur station count of 406,037. As they have not been renewable since March of 1978, Secondary stations should all be gone by March 1983.

•

Any possible reissue of the unassigned older type call signs is unlikely for several years. Use of the new computer amateur license application processing program is now barely a year old. Until that program has been in use five years plus the one-year renewal grace period, there is no assurance that the record transferred for use with the new program is free of numerous omissions and errors.

Some time back, it was discovered that the existence of a significant number of valid renewable amateur licenses was missing from the Commission's license records. Thus, the only way to fill in the gaps in the licensed call sign record is to wait for the licensees' renewal applications. In addition to the foregoing, FCC's severe budget reduction for this and the next fiscal year is another factor which makes it quite unlikely that any petition to provide amateurs a choice of call sign letters would be successful.

•

The requirement for RFI proofing of audio and visual (entertainment) equipment was included in H.R. 5008 in May. On 2 June, the bill was reported by the Subcommittee for Telecommunications to the full House Energy and Commerce Committee, and thence sent to "the floor" of the House for the vote. Reconciliation with S. 929 should be easy as H.R. 5008 includes each feature of the Senate bill. A Committee staff member estimated that it had a good chance of "becoming law" by August.

In addition to the RFI clause, the bill provides that: Transmissions from amateur stations are not subject to the secrecy provisions of Section 605 of the Communications Act (of 1934); Station license terms (other than broadcasting) may not exceed 10 years (up from five); Volunteers may be used to conduct monitoring, license examining and preparation of examination questions, for the FCC.

Also, the bill provides that FCC personnel may accept outside reimbursement of travel expense to attend functions, such as conventions, in which they are invited to participate. To forestall any future question of possible state or local government attempts to regulate in the areas covered by H.R. 5008, the Committee indicated its intent that the FCC alone should have regulatory jurisdiction.

•

So-called tests used to jam a repeater were only a test of the other amateur's patience! This opinion was expressed by the FCC judge in denying the application of Gary W. Kerr for renewal of his General Class amateur operator license and his station license, WA6JIY (Docket 81-66; see last month's 'Highlights'). Some of the so-called tests FCC monitored were from 29 minutes to three hours in duration!

•

Alleged repeater jammer — Donald Gilbeau, N6OZ — appealed FCC's revocation and suspension of his amateur station and Extra Class operator licenses. As a result, the licensee, Donald E. Gilbeau, may continue to operate until the FCC's Review Board either sustains or reverses the judge's decision. Gilbeau's excuse was that he was jamming a jammer.

•

Max Sudds, WA6QAG has withdrawn his application for renewal of his amateur licenses. (See 'Highlights' three months ago.) Use of obscene, indecent or profane language (Rule Section 97.119), failure to identify (97.84), unidentified communications (97.123) and willful interference with other communications (97.125) were the violations cited as being committed by Sudds in his operation of his station.

•

Remember to comment on the FCC's Notice and Inquiry, Docket 82-83, regarding expansion of the high frequency amateur phone bands before 16 August. Reply comments are due by 16 September.

FCC specifically proposed to expand the band down to 14*150* - 14350 kHz and raised the question of whether the added 50 kHz for General Class operators should be 14,150-14,200 or 14,225-14,275 kHz. It left out any expansion of the present 75 kHz exclusive Advanced and Extra phone subband. It left open the question of whether to expand the other HF phone bands or not. Send your comments to FCC, Washington, DC. 20554 and be sure to head it with the Docket number.

•

Early use of the 10 MHz band by U.S. amateurs remains uncertain. At the 18 May Senate Foreign Relations Committee hearing on ratification of the World Administrative Radio Conference (WARC-79), State Department, FCC, National Telecommunications and Information Administration (NTIA), Department of Defense and ARRL all favored prompt ratification of the treaty by the United States. However, Senator Schmitt (R-New Mexico) filed a paper suggesting that the Committee delay ratification until after the International Telecommunication Conference this fall, apparently because of his concern about a lack of attention given to overall telecommunication policy by the Executive Branch. ARRL further reported that it was ". . . hopeful that a way can be found to reconcile his views and support for prompt ratification."

•

Use of a personal autopatch facility without a control operator supervising at the base station is not permitted by the amateur rules. FCC Rule Sections 97.79(b) and (d) apply as follows: "(b) Every Amateur Radio station, when in operation, shall have a control operator at an authorized control point. "The control operator shall be on duty, except where the station is operated under automatic control . . ." "(d) The licensee of an Amateur Radio station may permit any third party to participate in Amateur Radio communication from his station, provided that a control operator is present and continuously monitors and supervises the radio communication to insure compliance with the rules."

Appearance of a couple of boxes on the market for such purpose prompted my query of the FCC.

•

The Advanced Class operator and station licenses (KB6TG) of Kenneth L. Gilbert were suspended and revoked. According to the FCC judge, his repeated deliberate interference to other amateurs' communications alone justified the action. In addition, he was using obscene and indecent language. Gilbert was given the usual 50 days in which to file an appeal before the judge's decision became final. In case of an appeal, the case will be referred to FCC's Review Board for a final decision.

•

Ex-amateur operator and station licensee (WB6JAC) Richard A. Burton was arrested and held in jail at Monterey Park, California over a weekend for alleged unlicensed operation. The arrest was made by U.S. Marshals, accompanied by FCC personnel, on 30 April. Burton was freed upon posting bond. His next appearance was scheduled for sometime in June.

He has been indicted by a Federal Grand Jury on seven counts of operating an Amateur Radio station without a license and transmitting obscene, indecent and profane language. His operator and station licenses were suspended and revoked by FCC in 1981. □

What are the odds?

Jim Hoffer, WA8OVC

I would like to respond to the article entitled "Odds Against You," which appeared in the June 1982 issue of your paper (page 17).

On 25 August 1965, I worked WA4OVC on 80 meters. On 18 April 1979, I worked K5OVC on 20 meters. And on 9 December 1979, I worked WA3OVC on 10 meters. All three of these contacts were unscheduled, random QSOs, and I have the QSLs also. Now, what are the odds on this one? □

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 1 May 1982.

Radio District	Group A	Group B	Group C	Group D
0	KS0Z	KC0SC	N0DTW	KA0NXW
1	KJ1L	KB1AZ	N1CCP	KA1IUN
2	KV2E	KC2PO	N2DLV	KA2PGW
3	KJ3D	KC3AT	N3CUV	KA3JFL
4	NZ4D	KE4TS	N4GZD	KB4AJG
5	KY5T	KD5LX	N5ESU	KA5OBV
6	NJ6X	KE6WD	N6GPK	KA6UJI
7	KS7T	KC7UC	N7DYE	KA7NIP
8	KV8F	KC8VI	N8DXS	KA8PPS
9	KN9U	KC9QG	N9DEU	KA9NIR
N. Mariana Is.	AH0A	AH0AA	KH0AD	WH0AAF
Guam	AH2K	AH2AO	KH2AW	WH2ADG
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	NH6U	AH6EF	KH6SH	WH6ATR
American Samoa	AH8B	AH8AB	KH8AC	WH8AAN
Wake Wilkes Peale			KH9AA	WH9AAA
Alaska	WL7O	AL7DZ	KL7UY	WL7AUV
Virgin Is.	KP2H	KP2AM	NP2AP	WP2ACW
Puerto Rico	NP4N	KP4FJ	NP4FH	WP4CHN

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

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'AQYs in contact

Here in Erie (Pennsylvania), we have Bill Mac Ivor, W3AQY and — you guessed it — he has worked W2AQY, W4AQY and VE3AQY, not to forget G3AQY. ☐

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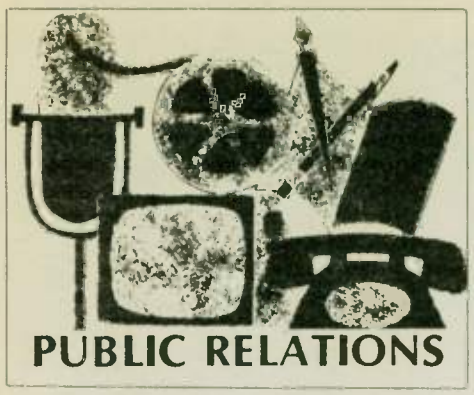

Sonoma County values AG6C

Don Bremer, KB6LO

Amateur of the Year may also be the understatement of the year when the recipient of that award is Betty Bravin, AG6C. Her activities and achievements as an Amateur Radio operator are nothing short of spectacular — at least in the eyes of amateurs in Sonoma County, California.

Betty became WD6CKR in August 1977. Worked All States the first month. September 1977, General Class. June 1978, Advanced as KB6CF and one month later became AG6C Amateur Extra. A remarkable record any time.

She served as secretary/treasurer of the Sonoma County Radio Amateurs for the year 1978 and made thousands of QSOs at the same time. Her first love is CW ragchewing, and she has developed some outstanding friendships. Her Japanese friends fell in love with her and resorted to sending gifts of appreciation. When she failed to show up for a sked, they would resort to long-distance telephone to find out if she was all right. Several foreign amateur friends have visited her when they've come to the States.

When the local radio club held a CW contest, Betty refused to enter, feeling she had an unfair advantage with more time to operate and the fact that her CW was "pretty good." With three weeks gone in a month-long contest, she was finally "Coaxed" into entering. In one week, she not only beat all the rest of the entries (all OMs), but had the QSL cards to prove it. She has earned DXCC on both CW and mixed, and is a regular on the "Elephant Tail" net on 20 meters.

Locally, she is the unofficial 2-meter autopatch and emergency monitor. Any amateur in the area knows Betty is there when they need help with a phone call or any other assistance. She is well acquainted with all the law enforcement agencies and is always available for assistance during the public service events such as March of Dimes, Field Day, etc.

Her Good Samaritan work does not stop there. Betty is an official FCC examiner for the handicapped, and as such, was both instructor and examiner for a blind YL — Terri Pannett, N6CYV who passed her General test on the first attempt without stopping first at Novice. Betty has also administered CW tests for the hard of hearing.

Tired of being one of the few YLs in the county, Betty decided to help a small group of lady-friends get their licenses. In a very short time, there were four new Technician Class YLs in Sonoma County. So successful was that class, there immediately developed a waiting list for the next one. Not wanting anyone to wait and lose their enthusiasm, she tackled three separate classes simultaneously. She formulated her own teaching techniques and provided her students with printed notes which she paid for herself.

Betty Bravin, AG6C sits at her station.

Taking each class to the Novice level, she continued classes and then personally escorted each class to the FCC for their upgrade test. As of this writing, 17 December 1981, her record stands at 18 new amateur YLs in Sonoma County in nine months. Of that 18, two are General Class and 16 are Technicians. To top that, every student passed the written test on their first attempt. Continuing her efforts, she is making plans to hold CW classes after the holidays to help her students get the "big one" — the General Class.

A great deal of credit should be given to Betty's husband and staunchest supporter, Hoppy, WD6CKR. Hoppy, who is understandably proud of his wife's achievements, spent many a cold night out in the workshop while classes were in session.

For her dedication. Betty was presented a silver engraved serving tray and voted Amateur of the Year by the new YL Amateurs of Sonoma County, California.

W6NAZ receives national award

Lenore Jensen, W6NAZ was recently awarded the George Washington Honor Medal of the Freedoms Foundation at Valley Forge. The presentation was made at a meeting of the Pacific Pioneer Broadcasters, of which Art Gilmore, KA6SFM is founding president. Patricia Sigmon, XYL of W6LQ, made the presentation. She is on the advisory committee of the Los Angeles Chapter, Women's Division, Freedoms Foundation.

Also present at the presentation was Frank Pettinato, WB6ELR, officer in the Hollywood Division of the Los Angeles Police Department (LAPD). He is active with the Surveillance Team of the LAPD, which has been busy in Hollywood using Amateur Radio operators.

Lenore's award, which is national, was given for individual achievement as a volunteer. She has worked as a volunteer for the American Cancer Society, LAPD, Recording for the Blind, Inc. and many other organizations. As an amateur, she has handled an enormous number of overseas phone patches for Army MARS.

Receiving the George Washington Honor Medal of the Freedoms Foundation at Valley Forge is Lenore Jensen, W6NAZ (left) shown with Art Gilmore, KA6SFM (second from left); Patricia Sigmon, XYL of W6LQ; and Officer Frank Pettinato, WB6ELR, Hollywood Division, Los Angeles Police Department. ***(Photo by Bob Jensen, W6VGQ)***

Left to right: Joe Cogliano, N2CKQ; Phil Lorito, WB2DHY; Steve Sanders, WB2VJT; John Pomfret, W2AAF; Leonard Rubin, WB2YCH; ARRL President Harry Dannals, W2TUK/W2HD; and Dave Lundquist, WA2UWK. All were at the Ward Melville High School Amateur Radio Club and Electronics Shop. The above group gathered to welcome Harry Dannals to the shop and repeater site, K2TKE/R. ***(photo by Chuck Muether)***

Dannals visits New York high school

John Pomfret, W2AAF

Former ARRL president, Harry Dannals, W2TUK/W2HD — visited the Ward Melville High School Electronics Shop and Amateur Radio Club (Setauket, Long Island, New York) on Friday, 22 January 1982.

Mr. Dannals and the electronics instructor at Ward Melville — John F. Pomfret, W2AAF — ran into each other on jury duty the previous day. Fortunately, while on jury duty, Mr. Dannals had enough time during his lunch break for the visit.

Mr. Pomfret first met Mr. Dannals in 1969 at Harrison Radio while shopping for ARRL logbooks. Harrison Radio was out of stock on the logbooks, but Mr. Dannals had just returned from League Headquarters in Newington, Connecticut and had a fresh supply. Mr. Dannals invited Mr. Pomfret to his home to pick up the new logbooks for the high school Amateur Radio station and to see his Amateur Radio shack.

"I signed Harry's guest book that night," Mr. Pomfret said. "I never thought we would run into each other at jury duty 13 years later and have lunch together. Hams never forget each other. . . ."

While at the Ward Melville High School Amateur Radio Club station, Mr. Dannals was linked to a junior high school science classroom in Cruz Bay, St. John, U.S. Virgin Islands via the high school 2-meter repeater and 10-meter remote base. Harry spoke to Bill Lomax, WP2AAP, the science teacher at the Cruz Bay School, while a class of students at each end of the radio circuit listened and looked on. This sort of 10-meter contact was a first for Harry Dannals, even though he has been an active, avid amateur for 40 years. Mr. Dannals spoke to a small group at Ward Melville's electronics shop and answered questions about ARRL, of which he was president for 10 years.

Anyone interested in Amateur Radio is welcome to visit the electronics shop at Ward Melville High School, and Mr. Pomfret will gladly provide demonstrations of the various stations and any additional information desired.

Recognition given to NC amateur

Susan Usher
Submitted by Robert Knapp, W4OMW

During hurricane season he monitors radio forecasts from the National Weather Center in Miami through the night, relaying critical information to appropriate officials.

In times of real or simulated emergencies, he and fellow Amateur Radio operators are sometimes the only certain information link to outside events.

(*please turn to page 14*)

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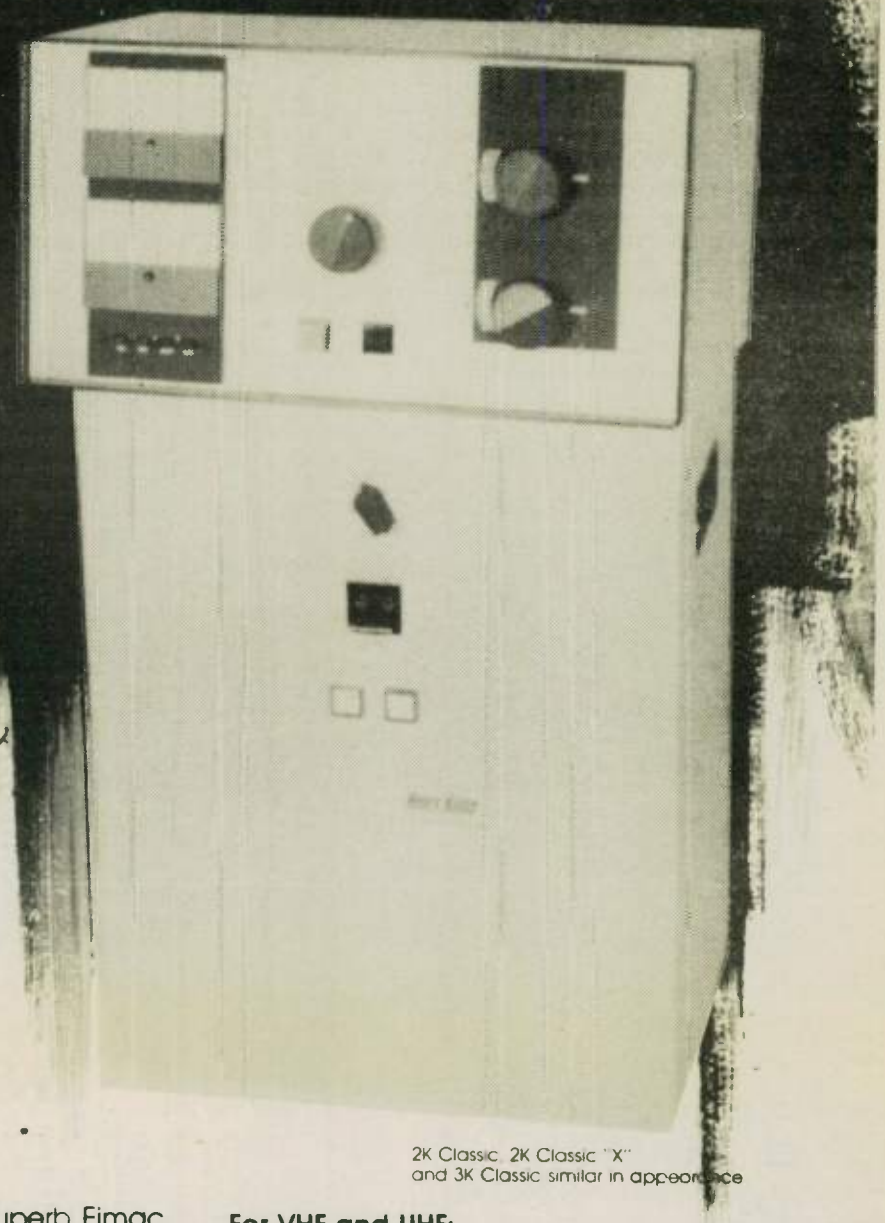

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PUBLIC RELATIONS

(continued from page 12)

Alton Clemmons of Shallotte, and other Brunswick County ham operators are the "unsung heroes in the county's emergency planning efforts," Emergency Management Director Ellis Stanley said recently.

Clemmons, a board member of the Wilmington VHF Radio Club in Wilmington, is the latest recipient of the agency's annual public service award.

The plaque recognizes his long hours of volunteer service to emergency planning.

"Alton has been extremely beneficial to us during hurricane season," explained Stanley. "When we were unable to obtain weather information from any other source, he would tie us in to the National Weather Service headquarters in Miami so we could get accurate and timely reports."

Clemmons is in charge of county emergency communications as a volunteer. In time of drill or actual disaster, he and a crew of 12 to 15 ham operators scattered from Leland to Long Beach to Hickman's Crossroads move into action.

"This is the center of operations right here," he explained. Other operators, equipped with mobile and bay capabilities, station themselves at the county's 12 shelters. These are the 11 public schools plus the Brunswick Technical College annex in Southport. They maintain continuous communication with the outside world, including weather and emergency planning agencies and the county law enforcement communications system they support.

Until recently, countywide communication was dependent upon the use of repeaters. Now, however, a simplex system is available for use.

— Brunswick Beacon, Shallotte, NC □

Equipment donated to high school

"You're 5x9 here in Toronto, Old Man." These and other strange sounds can now be heard emanating from the former storage room on the third floor. Toronto High School (Ohio) has another first. We are now the first high school in the Valley to have an Amateur Radio station.

Joe Plesich, W8DYF (left) — counselor at Toronto High School, Ohio — and Bob Brown, KA8JTU (right) present a THS mug to Bob Bainbridge, KA3EJT in appreciation for the radio equipment he recently donated to THS's new "radio shack."

During the past several years, Toronto High School (THS) has had several students who have been and continue to be interested in Amateur Radio. Mike Williamson, whose call is KK8H, is now studying electrical engineering at Akron University; Ken Gilcrest, KA8FFL is at Jeff Tech; and Guy Moffet, KQ8D is now in radio-communications in the Navy.

Some of the students presently active at THS are: Bob Brown, KA8JTU; Jeff Archer, KA8MJR; Scott Irwin, who is waiting for his call; and Jon Bricker and Bill Burns who are studying for their licenses. They have been encouraged by Mr. Plesich, W8DYF, who has been a licensed Amateur Radio operator for over 27 years.

The equipment the students are using has all been donated. The prime donor has been Mr. Bob Bainbridge, KA3EJT of Weirton, West Virginia. Mr. Bainbridge recently presented the school with a used Heathkit transceiver, a Regency transceiver, and assorted antennas, cables and microphones whose total value is near $500.

Mr. Bainbridge, who is an employee at National Steel's Research and Development Lab and treasurer of the Steubenville-Weirton Amateur Radio Club, said he gave the equipment to THS because he was very impressed with the quality of the THS students who were becoming Amateur Radio operators; he

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wanted to encourage more young people to get into the fascinating hobby of electronics and Amateur Radio.

The students have already talked across the United States from their third floor station. With new antennas now under construction, they hope to talk around the world. Who knows, maybe THS students will someday talk to someone in outer space.

—The Mirror, Toronto High School, OH

•

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

VIP recognition banquet

Dr. Gerhard Schilling, AI6I

The Riverside Ranger Unit of the California Department of Forestry (CDF) honored the Amateur Radio members of its Volunteers-In-Prevention (VIP) program at a recognition dinner in January. CDF Captain Robert Signor, the VIP coordinator, served as master of ceremonies. David Flake, Ranger-In-Charge and County Fire Warden, expressed CDF's appreciation and thanks to all VIP Amateur Radio operators in Riverside County. He stressed that they contributed over 3,400 hours of their time during calendar year 1981. (See **Worldradio** September 1981, page 1, or *CDF Communique*, September 1981, page 9.)

After the dinner — thoroughly enjoyed by the amateurs, their spouses and CDF senior officers — Certificates of Appreciation were awarded to 84 VIP members for their public service during the 1981 fire season. These were accepted jointly by each VIP battalion coordinator and his or her CDF battalion chief for distribution to members in their battalion areas. Two special plaques, recognizing Amateur Radio's contribution during 1981, were handed to John Thomas, WA6QMW, the VIP Amateur Radio group coordinator, and to Hazel Kirk, WD6FEM, VIP battalion coordinator for the desert area of the county. These plaques will be mounted on the boards of honor at the CDF division headquarters in Perris and in Cathedral City.

After some "roasting," a plaque of appreciation and an official CDF hat were given to Gerhard Schilling, AI6I for his efforts in organizing the VIP support program in 1980 and leading it through the long 1980 and 1981 seasons of fires and floods. Gerhard then handed over the responsibilities for VIP Amateur Radio communications support to John WA6QMW for the next year.

Barely one hour later, several dinner participants were assisting with communications during a search for a downed aircraft. The light plane, its ELS still operating, was finally located in rugged mountain terrain around 3:00 a.m., but there were no survivors. And so it goes.

Riverside County is located southeast of Los Angeles and encompasses an area about the size and shape of the state of Massachusetts. The California Department of Forestry and Riverside County Fire Department operate some 68 fire stations and an air attack base. Their units respond throughout the county area to vegetation and structure fires, traffic collisions, medical incidents and any other public emergency or disaster.

Because of the success of the VIP Amateur Radio program in Riverside and adjacent San Diego County, other CDF ranger units in both Northern and Southern California have been encouraged to organize similar programs. This communications support part of CDF's VIP program is a disciplined and integrated effort of amateurs experienced in public service through ARES, RACES and local clubs. It had demonstrated the effectiveness of Amateur Radio to assist a major public service agency in disaster work.

If you are interested in utilizing your communications capabilities for this challenging and appreciated service, inquire at your local ranger headquarters of the California Department of Forestry; or contact Section Communication Manager (SCM) Fried Heyn, WA6WZO; or Joe Brown, W6UBQ, Section Emergency Coordinator (SEC) Orange Section; or Arthur Smith, W6INI, SCM San Diego Section of the ARRL. □

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

OFF THE AIR

Looking for tapes

I have been looking at all magazines for an advertisement for sale of a cassette tape (regular) of questions and answers or theory for General Class license, which I could play while traveling in my automobile.

Any help you could give me would be appreciated.

Cordially yours,
WILLIAM CULP SR., KA3IUT
950 W Water Street
Bellefonte, PA 16823 □

Crystal info needed

Where can I buy a galena crystal for use in an antique cat-whisker detector?

B. FRANK VOGEL, M.D.
208 Chief Street
Cherokee, IA 51012 □

One way to beat QRM

I think we have a real problem on our phone nets. It looks to me as if at least 50 percent of net session time is wasted asking for fills or confirmations because of QRM and sometimes heavy QRN.

An idea came to mind that I think might be of help and may greatly reduce time passing traffic on phone nets. Why wouldn't it be a good idea to place one of your code practice oscillators on your operating area and when the QRM or QRN gets so bad that the receiving operator is having a hard time copying your piece of traffic, why not press key the microphone and place it on the code practice oscillator. Using the code oscillator, you could send the fills or messages in Morse code. At other times — when conditions are favorable — use phone. Code always gets through, whereas voice may not (or may be badly garbled).

KEN HAND, WB2EUF
East Hampton, L.I., New York □

Tips on QSLing

It's surprising how many amateurs do not know how to QSL direct. For this reason, I have made up a list of do's for QSL'ing direct. I have compiled this list with the advice of other amateurs and through my own experiences.

I would like to emphasize the importance of not marking the call signs on the outside of envelopes and not using fancy stamps for postage to certain countries. Envelopes with these features may never get to their destination.

Other advice is not to use IRCs or green stamps when QSLing to the Communist countries, especially Russia. American currency can get these amateurs into trouble with their government.

After working in a pileup, it is best to stick around for the QSL information since many times the QSL list and the Callbook address are inaccurate.

The list that is to follow is not inclusive; however, if the format is followed, your chances of a returned QSL card are significantly increased. If anyone has any suggestions regarding QSLing direct from their own experiences, I would like to hear them.

When QSLing direct, there are certain do's to follow that will practically guarantee a returned card. They are as follows:

Do check with your post office at least once for the proper format of addressing overseas mail.

Do send a self-addressed envelope.

Do include appropriate funds (i.e., green stamps, IRCs etc.).

Do mark the outside of the envelope "Airmail".

Do add USA to your address.

Do use non-transparent envelopes.

Do be careful when marking call signs outside of the envelope to certain countries.

Do make your QSL card personal by writing a small note about the QSO.

Do use Roman numerals for the month when there are no headings for the date.

Do slash your zeros and sevens to distinguish from O's and ones.

Do use stamps that show the value on them.

Do use ordinary stamps on envelopes and not the fancy collector ones.

73's and many happy returns,
GREGG DECKER, KS2A
Woodbridge, New Jersey □

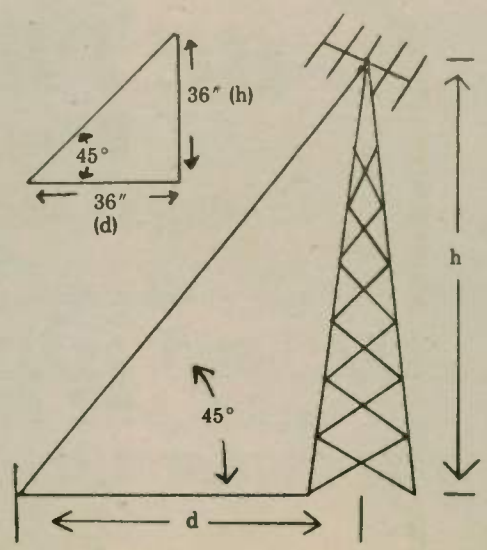
How to measure antenna/tower height

KA6EMR's question "How high is up?" (**Worldradio**, June 1982, p. 14) sparked a recollection of how my dad, W5FYI, measured the height of the trees on his new property. All it takes is a yardstick and a sunny day.

Dad waited to measure the trees until the vertically standing yardstick cast a shadow exactly 36 inches long. He immediately marked the end of the trees' shadows, then used the yardstick to measure the length of the shadows. Thus he obtained the heights without resorting to any complicated math.

Hope this helps other amateurs who want to measure tower/antenna heights.

HOLLY "STEW" STEWART, KD5DL
Midwest City, Oklahoma □



When yardstick h=d, tower h=d

He enjoys challenge of 'building his own'

The first time I saw your publication was when I was "back home" in West Virginia, when my friend Bill Jacobs, WA8YCG gave me one of his copies to occupy my time while I was riding the plane back to Alaska. Well, it got read before I got on the plane, so I ordered a subscription before I left West Virginia.

In the last two years, I've greatly enjoyed **Worldradio** and I have great interest in the 'Construction' column.

Chuck's article on the Command equipment (July '81) really jogged my memories of my college days when that was my receiver. I liked the memory so well that I bought a 6-9 MHz ARC-5 at the Anchorage Amateur Radio Club's yearly flea market. By working one evening (till 3:00 a.m.), I had a power supply built and, believe it or not, the old thing worked the first time!

When I demonstrated the ability of my $10 receiver, I made the small boast that one could have a station on the air for under $25. This was challenged.

Again, my memory had been toying with thoughts brought about by Carl Drumeller of 'Old-Time Radio' (June '81). However, I didn't copy that transmitter, but I plan to make a replica of something later on. My circuit was a modified Pierce oscillator built around a 6AG7. It was built mostly around parts junked out of an old AM boat phone. This time, I didn't have the "worked-first-time" luck. However, with a little help from my friends and some on-the-air reports, I got it going and sounding half respectable!

Of course, then you have to go to the extremes of grinding your crystals instead of spending $3.50. This way, you can take your 6.5 watts of input power and check into the Alaskan See-Saw Net. It takes three tries because it's been awhile for net control since they've had a go at CW.

Between the discarded old AM boat phone and Harold Jenny, KL7BCS's junk box, I had the transmitter and the ARC-5 on the air for under $20. I did break down and order a 7040 crystal so I could go play with the QRPers.

The only problem I have with your publication is that it incites me into doing projects that take me off on tangents away from my other planned projects (i.e., an 813 amplifier, a CW 2-meter transmitter to work satellites with a 2-meter transverter, and a 6-meter preamp for my Swan).

However, all my time spent off on these tangents has been a lot of fun, not to mention the thrill of having one of my very own homebrews work.

Please keep up the good work, so those

of us out on these islands can enjoy your material as well as find ways to amuse ourselves.

Many thanks,
BILL REICH, AL7AH
Sitka, Alaska

P.S. I'd really like to see more projects in the QRP column — both receivers and transmitters, not to mention portable antennas to go along with that stuff. □

Amateur fun in Great Britain

I took my wife to visit England to introduce her to my relatives and show her where I was brought up. I decided to take a rig along, so applied for and received a reciprocal license G5DYW. I am a member of the Royal Signals Amateur Society and they have nets on 80 and 40 meters.

I acquired a TS-130S and a 2AT handheld. I made up a chain bumper mount to fit the rented Escort which I had ordered and fortunately included as a ground strap a 2-foot piece of braid from some old RG8. I had to drill a hole in a web on the inside of the trunk (boot) and attached the ground strap with a nut and bolt. I attached 20 amp battery clips to the power cord, which I clipped directly to the battery of the car. For the antenna I used the "Spider" system for 15, 20 and 40 meters and a Hustler whip for 80 meters. The new 80-meter resonater for the Spider has not yet been designed. I found I had to retune the elements for different locations, but the Spider system is fast to tune.

It was generally about 2000 UTC when I could find time to use the radio, but I made contacts with W1's, W2's, and W4's on 15 and 20 meters, plus many European contacts with 5X9 reports. I made many club contacts on 80 meters and a few 2-meter contacts on simplex, not having the necessary tone to bring up the repeaters.

Sgt. Paul Walker, G4DDY (left) and Fred Barnes, WA8PCT/G5DYW are shown at the Royal Signals Amateur Radio Club Catterick Barracks in England.

We were in a small suburb of Liverpool in my nephew's home when I turned on the 2-meter rig. I received a signal from a GB2?, but I could not make a contact. I rushed outside to the car, and using a ⅝-wave magnetic mount whip and a 10-watt amplifier, I made a firm contact with the special event station GB2NG. Conferring with my nephew who was listening, I found the station was at a local bank picnic. We went over to the location and asked for the operator with whom I had made contact. He turned out to be a 16-year-old Technician and the youngest member of the group — Ian G8WVW — and he was overjoyed when I made out QSLs for him and for the club station, which immediately displayed the QSLs, making Ian's day.

We visited the QTH of Sir Evan Nepean Bt., G5YN, who is a real "old-time ham" of over 50 years, using mostly homebrew equipment and a Hammerlund receiver to a long-wire antenna. Sir Evan made us a tape recording to bring back to my club, the Chippawa Amateur Radio Club, W8BAA at the Veterans Hospital in Brecksville, Ohio, outlining his beginnings and his many activities.

While visiting the Royal Signals Amateur Radio Society club station, the General Secretary, Major Ray Webb, G3EKL arranged for Sgt. Paul Walker, G4DDY to show us around the club station. They have a very good station with HF, VHF and RTTY with a two-element quad antenna for the low bands. Paul G4DDY said a few words into the tape recorder for my club.

(We made a tape of Fr. Moran, 9N1MM when we visited his QTH in Kathmandu, Nepal last year for my club, though I did not have a license to operate that time.)

One operating position on the coast of Scotland caused quite a commotion. I was observed from the windows of a nearby house with binoculars. I always explained what I was doing to my landlady at the "bed & breakfast" accommodations, so I presume all was straightened out the next day. CB is popular although at the time illegal, so any radio activity was being watched carefully by the populace.

All in all, my operating was a very successful and satisfying part of a very enjoyable vacation in the United Kingdom. I operated as G5DYW, GM5DYW and GW5DYW — all mobile.

73,
FRED BARNES, WA8PCT
Parma, Ohio □

Tapes for the blind — more popular than ever

The Columbus (Georgia) Hamfest was held by the Columbus Amateur Radio Association on 27-28 March of this year. A table at the front and to the right of the

public address rostrum was provided for Nancy Hickman, WB4NTW — a blind amateur and manager of the Georgia Traffic Net (daily at noon on 7243), a state section net in the National Traffic System.

George Hickin, W4GH holds copy of *Worldradio*.

Nancy demonstrated how blind amateurs use manual and typed braille to conduct their ham activities. The table was shared by Frank Cromer, KA4SFV of Columbus — also blind — who welcomed fellow Army MARS members. The third amateur at the table was George (Kel) Hickin, W4GH of Macon, Georgia, who demonstrated his **Worldradio** tape service to blind amateurs, as well as the sharp talking clock and calculator.

George Hickin wrote the following about his tape service.

"We — Tom Carten, K1PZU and I — started four years ago with perhaps eight or 10 subscribers. We now have about 220 to 230 on the list and increase by four to 10 each month. We also send a master to Roy Taylor, VK3BTL, who distributes to 20 VKs and to G4MRG, who distributes to 50 blind amateurs in England. Thus, the total readers are about 300.

"The amazing thing to me is that **Worldradio** on tapes has gradually evolved into a *dual* service. Without sacrificing the **Worldradio** reading by K1PZU, we can use a few minutes at the end of each side of the C-90 played at 1-7/8 to provide an adequate info exchange for the blind at 15/16 speed — probably the only thing of that type available to them and one which they greatly prize.

"If Tom uses 80 to 84 minutes for **Worldradio**, that gives us 12 to 20 minutes for this added service. Some of the things we mention are the custom-made CW tapes from W4GH, info on construction of talking VFOs, a new DX QSL service for the blind, requests for special help, news of the monthly QTI (Questions of Technical Interest) received from G4MRB which I send on request. My charges to the blind are all on a non-profit basis.

"This volunteer work for the blind has brought me joy in my retirement, as well as some unsought surprises. Last year, I was awarded the "Amateur of the Year" by the Georgia SSB Association and elected president.

Worldradio is *the* most important magazine for blind amateurs.

Vy 73,
GEORGE (KEL) HICKIN, W4GH
Macon, Georgia" □

How can I help?

In almost any field of endeavor, there are those few souls for whom participation is a one-way quest for personal gain or satisfaction, with little thought of making a contribution themselves. In Amateur Radio, fortunately, they appear to constitute a relatively small minority.

Sometimes I make the mistake of assuming that *everyone* is as enthusiastic about Amateur Radio as I am. Recognizing this to be optimistic, I still believe that most of those who become sufficiently active to experience the rewards of our great avocation also develop a sense of commitment and stewardship regarding its status and future.

It is a simple fact that Amateur Radio would long since have ceased to exist were it not for the collective efforts of the amateurs and the friends of Amateur Radio who, down through the years, have taken it upon themselves to nurture and safeguard its best interests. These efforts have not been confined to espousing our case in international conferences, or before the Federal Communications Commission, as essential as that is. Nor are they the sole province of the leadership in our organizations, at any level.

Rather, they have involved a comparatively high percentage of radio amateurs who have taken it upon themselves to bolster the fortunes and brighten the future of the Amateur Radio Service by providing support and services in a variety of ways.

For example, Amateur Radio wouldn't linger long were it not for the steady influx of bright-eyed newcomers (of all ages). *Someone* has to help them aboard.

It wouldn't last long if it were not regarded by local, state and federal government as a source of social benefit in one form or another. *Someone* has to earn that recognition.

Neither would it survive without a national spokesman, someone to be watchful and to fight for our interests at both national and international levels.

To this, one might ask: "But how can I help?"

The answer is: "You probably are helping." But perhaps you'd like to check *your* contributions against the following guidelines that have been suggested for amateurs who want to put something back into the game:

Educate. Convey the message of the values and public contribution of Amateur Radio to your friends, your coworkers, your public officials. Do this through talks and live demonstrations, news accounts, TV and radio interviews.

Help Amateur Radio grow. Assist worthy newcomers into Amateur Radio by conducting training classes, giving code practice.

Get involved. Join a club, become a club officer, an ARRL appointee, a traffic net member, or run for an ARRL office. Produce or assist in preparing a club or net newsletter. Help run a hamfest.

Raise the quality of our service. Provide instruction and guidance on operating practices and ethics to new amateurs (and see if you can find a way to revitalize some of our older ones!).

Help protect our bands. Become an official observer or an intruder watch volunteer.

Join a traffic net. Help with our emergency preparedness posture.

(*please turn to page 38*)

Antique QSLs

When cleaning my garage recently, I came across my old QSL collection from the '30s and '40s. I am enclosing two QSLs for your information, which show the trends of the times. The first QSL from W7UE shows a station typical of the early '30s. (This QSO was in 1935.) The more stuff you could display made your station more impressive. I believe one could trace this type of station arrangement back to the shipboard "shacks" or shore stations of the 1920s.

An interesting fact about O.T. Pops is that he used to present those he worked frequently with a handwoven belt! I heard a couple of hams on 75 phone (they had to be old-timers) discussing this over the air. So I assume more hams than myself remember him. Be interesting to see how many!

The second QSL, from W6WD — from a QSO in 1947, a decade later — shows what many hams of those days aspired to, but few had. The "commercial" look, patterned after broadcast studios or police transmitting stations. You can find many photos in old radio mags — **QST**, etc. — showing stations arranged like this. I know of one in San Diego that, when entering the shack, one thinks he may be in a time warp!

MICK McDANIEL, W6FGE
San Diego, California □

HAM RADIO CRUISE
October 16 - 29, 1982
QST ALL AMATEURS

Be DX yourself in the luxury of the P&O ship Oriana. . . Sail from Sydney, Australia, to New Zealand, Fiji, New Hebrides, New Caledonia. Prices, starting at $2382 include roundtrip air fare from California with stopover privileges on return. Led by W6DQH and WA6GUA — Gene and Jean Clark, pioneers of the first ham cruise on the Love Boat. Work both HF and VHF while cruising tropical seas. Early reservations advised. For exciting details call 800-423-5355 nationwide, 800-382-3356 California, or write for brochure to: San Antonio Travel, 161 South San Antonio Road, Los Altos, CA 94022.*

*of British registry

American Radio Relay League

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

In this issue we will continue our discussion of the problems and possibilities regarding phone band expansion.

In previous issues, we discussed phone band expansion as related to the actual proposal made in Docket 82/83, as well as what might be done on the 80-meter phone band.

Some years back in this column, we discussed expansion in the 40-meter band when a proposal was made relative to expanding the present phone segment. The action taken by FCC at that time was to not expand the band, and the League withdrew its proposal for expansion of the 40-meter bands.

It is well worth discussing the possible changes and the possible consequences again.

Operation on the phone band on 40 meters brings some unique problems, since all of the present U.S. phone segment is shared with foreign broadcast operation. The reason for this is the fact that we amateurs lost the band pretty much worldwide many years ago.

At ITU (International Telecommunications Union) World Radio Conferences in the 1940s and '50s, there was much pressure by broadcast interests to take over the entire band.

Work by radio amateurs at these conferences saved the segment 7.0 to 7.1 MHz worldwide, but both Regions 1 and 3 of the ITU lost part or all of the rest of the band. In Region 1, the band runs 7.0 to 7.1 MHz, and in Region 3, 7.0 to 7.15 MHz — but only in some countries.

The fact that the band is different in various countries and regions leads to problems in working amateurs in other countries by U.S. amateurs. Phone operation in many countries is below 7.1 MHz. U.S. amateurs are restricted to phone operation between 7.15 and 7.3 MHz, so in any contact with stations in countries not able to work above 7.15, operation must be by "split" frequency.

Several months ago, the League suggested opening a U.S. phone band from 7.075 to 7.1 MHz, thus allowing U.S. phone amateurs to work DX phone stations on "their" frequencies.

After consideration, this idea was withdrawn.

The difficulty with the DX window in this frequency range is that if this were done, DX phone stations would move into the segment 7.05 to 7.075 MHz when they do not want to work U.S. amateurs. This would leave only a 50 kHz segment for CW operation, and since 25 kHz of this is for Extra Class only, the Advanced and General Class U.S. CW operators would be very restricted.

As it is now, there is really only a 75 kHz CW segment available, since many foreign phone stations are already operating between 7.075 and 7.1 MHz. This — together with the RTTY one sometimes finds in this segment — means that CW operation is sometimes restricted.

Of course, one can point out that there is a Novice CW band from 7.1 to 7.15 MHz, but most will admit that this is a special case.

If all classes of license start using this band for regular CW operation, it will restrict use by the Novices. While all classes may operate in this band at present, most of the operation is between Novices or with Novices by other classes of licensees. Regular CW operation on this band would mean that all classes would QSO each other, often leaving the Novices out altogether.

Another difficulty with the present U.S. phone operation on the 40-meter band is the fact that U.S. amateurs have to compete with foreign broadcast stations, and sometimes even with our own overseas broadcast services operating in this country. This is especially true at night when propagation conditions are such that long skip brings in the signals from the high-power stations broadcasting from other ITU regions. For all practical purposes, the 40-meter phone band is almost useless at such times.

It is easy to see why there would be pressure from U.S. amateurs to move at least part of the phone band into the segment which is not shared with other services. And of course, as on other U.S. bands, there is always pressure from members of the DX fraternity to open the bands so that no matter where DX stations go on phone, U.S. amateurs can follow and continue to try and work them.

As I've already pointed out in previous articles, the only way this will happen is by opening the entire band to phone operation. This could cause chaos in the DX world. In most regions where there are no phone subbands, CW bands have been established by "band plan" agreements. And — rightly or wrongly — agreements have been established so that foreign stations have at least some segment away from U.S. phone operation.

A large percentage of amateurs in other countries feel they must have a place to escape from U.S. phone amateurs, both because of the large numbers of U.S. amateurs and because U.S. amateurs generally use higher power transmitters.

Thus, the problem of phone band expansion on 40 meters is more complicated than on any other HF band, due to the different frequency assignment in various ITU Regions and the fact that the band is so limited in most countries.

This, coupled with the pressure from DX stations to force "same frequency" operation on phone with *all* stations, means that the ARRL Board of Directors must take into account many factors in deciding what to do about phone band expansion on 40 meters.

One factor we have not discussed, which should also be taken into consideration, is occupancy of the phone bands by U.S. amateurs. As for 40 meters, there is sometimes QRM, but from what I have observed, there is almost always available space during the day. At night, however, QRM from broadcast stations makes operation nearly impossible. If we move away from this segment with our phone operation, we may find that since we are not using the frequencies, we could eventually lose them.

What about the occupancy on the CW segment? Again, from my own observations, there is much room in the daylight hours, but at night QRM starts to pile up.

Of course, many amateurs do not operate on CW and feel this is an outdated mode of operation. However, in survey after survey, we find that amateurs in the United States feel strongly that the code should be a part of the FCC license requirement. But if we have little or no CW operation, we may find it easier for some interests to eliminate the code requirement. (These same interests want to eliminate *all* testing requirements and open the amateur bands to anyone who wants to buy a rig and get on the air.)

Hopefully, while finding ways to expand the phone bands, we can protect our desire to keep Amateur Radio strong by having both code and technical requirements.

Next month we will discuss phone band expansion on 15 and 10 meters. □

How to save time and money

From time to time, it turns out that the one source for information you want is the ARRL. So you call them at (203) 666-1541 and spend minutes (at your expense) waiting for the operator at their end to locate the proper party. Now there's a way out — the "Yellow Pages" for League Headquarters that gives the proper *extension* to ask for when you call. Such as:

Awards: DXCC-233; WAC — 288/269; WAS — 238. **Beginner & Novice**: Technical Questions — 274/214. **Book Orders** — 233. **Contests** — 232/252. **DXCC** (not awards) — 324/206. **Insurance** (members) — 269/288/241. **Licensing**: Renewal forms — 248/269; Questions — 243/242. **Life membership** — 256.

Net Directory: input — 215; orders — 248. **Net information** — 261/260. **General information** — 261/260. **Repeater directory**: input — 215; orders — 233. **QSL bureaus-managers** — 228. **QST address change** — 253/257/256. **Regulations**: routine questions — 243/242/244/240/267. **Technical information service** — 274/214. — *Daytona Beach Repeater Assn., FL* □

STATION APPEARANCE

The winner of this month's Station Appearance award is David J. Warheit, KN3ZAN of Freeport, Pennsylvania. Dave holds an Advanced Class license and spends about "99 percent of his on-the-air time" on RTTY. He has worked all states and all continents on SSB and RTTY, worked 100 countries on SSB and 96 countries on RTTY.

"As soon as I work 100 on RTTY," writes Dave, "I plan to make use of the Robot 400 in the shack and start again on SSTV. My two former call signs were WN3DAB and WB3DAB.

"I maintain RTTY autostart on 14.085 MHz. I am the DEC (District Emergency Coordinator) for Armstrong County. I am also the radio operator for the RACES (Radio Amateur Civil Emergency Service) organization here in the county."

This award-winning station has the capabilities of SSB, CW, RTTY and SSTV on all the authorized frequencies below 148 MHz. Equipment used includes:

HF — Kenwood TS-180S with digital frequency counter; VFO-180; AT-180; PS-30; SP-180; R-1000; R-100; SM-220; and the TL-922 amplifier using a pair of 3-500Z's. **VHF** — Kenwood TR-7800 and a TR-2400 hand-held. **RTTY/CW** — TRS-80 Model I with 48K of memory, two disc drives, ROM-116 hardware/software interface; IRL FSK-1000 terminal unit and a Centronics 779 line printer for hard copy and computer use. **SSTV** — Robot 400; Motorola S1120C camera; Setchell Carlson 9-inch monitor and cassette recorder. **Antenna** — TET HB33SP at 40 feet; 22 elements on 2 meters at 50 feet; Ringo Ranger at 60 feet; and a ground-mounted vertical.

Dave's XYL, Pat, received her Novice ticket in March of this year. Dave was first licensed in 1963. □

Rotor tips

Joe Fishburn, KØTS

If choosing a rotor is a problem for you, here are a couple of things you may want to consider:

1) Does the wind load rating of your rotor match the antenna? Remember that if you mount the rotor on a mast (rather than inside your tower), the wind load it can handle will be greatly reduced.

2) Does your system have room to grow? A few more dollars now may save headaches later.

Note: There are no industry standards for calculating wind load that a rotor will withstand, so every manufacturer will probably use different measurements.

Now that you have your new rotor on hand and are ready to install it, first bench-check it. Rotors usually work, but it's tough to fix them at the 100-foot level. Don't short the wires or it may damage the rotor. Belden now has a wire (9405) available that is one gauge larger than what has been used in the past. (Costs more too.)

When you install the rotor, hopefully with the antenna pointing in the right direction, seal the connections at the rotor. This will save problems later.

When you start using the rotor, have pity on the brake. Let the antenna coast to a stop before you engage the brake. Also, don't park the rotor at the end of rotation. There is a solid stop, which as the antenna rocks, may be broken along with limit switches, etc.

A nice feature of the new CDE rotors is that they are all shipped with a north and south-centered scale on the meter. If you want the other scale, just reverse the meter scale plate, and there you are!

The rotors don't require periodic maintenance, but we all know nothing works forever. If you notice the rotor is slow in operation, it may be one of two things. The most likely problem would be the motor start capacitor which is located in the control box. If the problem seems to be outside temperature sensitive, the problem could be lubrication. Any good low temperature grease should do.

— Rochester ARC, MN □

Setting up your shack? Read this

Setting Up and Using Your Own Ham Shack, by L.B. Cebik, W4RNL, is now available from TAB BOOKS. Read on for more information.

Every Amateur Radio operator knows it's hard to fully enjoy the hobby without a permanent and practical station setup . . . whether it's located in a spare room, a corner of the rec room, in a garage or shed, or even in a closet! Now this unique handbook is available for every amateur who'd like some help in setting up that home station (a "shack" in ham jargon) and some helpful advice on choosing the equipment and the layout that will provide the most practical and enjoyable long-term use!

Beginning with an intro to ham shacks, there's some basic info on space requirements — from size and shape to power needs to safety and security considerations. Amateurs learn how to assess their operating needs based on the emission codes they intend to use. Equipment specs and features are examined and there are tips on which items amateurs should consider buying, and which they should build themselves. The design and construction of ham gear is thoroughly covered with plenty of interesting homebrew possibilities to consider. Station accessories are discussed and there's full info on mikes, speakers, headphones, filters, computers, telegraph keys and keyers . . . even paper aids like logs and checklists.

For those just getting started, there are hints on correct operating positions and tips on test equipment, incorporating a test bench in the basic shack design, and how-to's for minimizing friction with family and neighbors — by avoiding excessive interference with TV sets, for example. Plus there's advice on routine shack maintenance, and sources for additional info on setting up a shack that will fit the individual operator's present *and* future needs.

Any Amateur Radio operator planning to set up a new home station or refurbish an existing shack will find all the needed help in this comprehensive and invaluable guidebook!

This 308-page book has 194 illustrations and is priced at $10.95. To order, write to TAB BOOKS Inc., Blue Ridge Summit, PA 17214. □

Use a high-pass filter

Steve Gordon, WA6LDV

If your TV set picks up CB or Amateur Radio signals, it is usually the fault of the TV set — in 90 percent of the cases, according to FCC figures. Most manufacturers will furnish you with a high-pass filter for the TV set, upon request, at no cost, for the alleviation of your problem.

When requesting a filter from your manufacturer, you must give the model number and serial number of your set. They are usually found on a plate on the back of the set. *Insist* upon a Drake TV-300-HP (300 ohm system) or a Drake TV-75-HP (75 ohm coaxial system) high-pass filter, as most other filters are not satisfactory. □

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DX WORLD

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

Activities calendar

14-15 August	DARC European DX Contest (CW)
28-29 August	JARL All Asian Contest (CW)
11-12 September	DARC European DX Contest (SSB)
18-19 September	Scandinavian Activities Contest (CW)
25-26 September	Scandinavian Activities Contest (SSB)
02-03 October	VK/ZL Oceania Contest (SSB)
09-10 October	VK/ZL Oceania Contest (CW)
30-31 October	CQ World Wide DX Contest (SSB)
13-14 November	DARC European DX Contest (RTTY)
27-28 November	CQ World Wide DX Contest (CW)

W-100-N

The following amateurs were awarded Worldradio's Worked 100 Nations Award during the early part of June.

178.	WA1SMI	Robert S. Isaacs
179.	W9FNN	William D. Adams
180.	K0REF	James P. Cardin
181.	WA4NEU	Wilbur L. Roberts
182.	WD5HEG	Perry Mannon

Perry WD5HEG reports that he is a part-time DXer and collected the cards over a three-year period. All of his contacts have been on 10-meter SSB.

China (BY1PK)

BY1PK shut down operations on 18 April after 20 days of operation. Tong and two other operators had made 256 contacts, all on CW, which included 130 Japanese stations and 30 nations. No contacts were made with Africa.

At that time, several operators from several of the cities — including Chungking, Nanking, Shanghai and Kwangchow — began a training session in Beijing with Tong, the Chief Operator at BY1PK, leading the class.

No SSB operation is scheduled until early 1983, mainly because the operators know little of the English language. The Chinese government has authorized operation on all the HF amateur bands 80 through 10 meters, and this includes the three new WARC bands.

One of the unfortunate side effects of this operation is the number of pirates that have surfaced and bootlegged the BY1PK call. Sad it is that some poor hapless DXer gets taken in and works him. I sure hope it makes this perverted so-called amateur feel good that he pulled a fast one on his fellow amateur. I doubt that the amateurs in question are reading this, as only the elite subscribe to Worldradio. And the elite have too much class to pull a stunt such as that.

Anyway, no one wants to read about me complaining about the problems with pirates, and no doubt by the time you read this more activity will be coming out of China. In two recent issues of Geoff Watts' *DX News Sheet*, there are reports of activity from BY1PK with a YL operator Jiao working Europeans on 15 meters CW, where ON5NT had worked her on 21.028 MHz at 1435 UTC, and I4EAT had worked her on 21.045 MHz at 0820 UTC.

Brunei (VS5)

Look for VS5AM, often found near 14.040 MHz from 1600 UTC. This is the club station of the Brunei Amateur Radio Club. Also active from this country is VS5GA, who has been reported on 10 and 20 meters on 28.597 MHz from 1645 UTC and 14.228 MHz from 1230 UTC.

Two more stations have been reported, those being VS5DX who has been busy near 14.205 MHz from 1000 UTC, and VS5RB found at 21.171 MHz working Europeans around 1715 UTC.

Papua New Guinea (P29)

Several stations are active from this one, but due to the time they are on, you will have to miss some sleep to get one of them. At least, that is the way it will be on the West Coast.

P29CH has been active on the low end of 20-meter SSB near 14.206 MHz from 0900 UTC, where P29GT has been found higher in the band at 14.295 MHz after 1100 UTC. Still higher in the band is P29JW who has been reported on 14.315 MHz at 1030 UTC.

P29AB has been working the deserving on 40-meter CW at 7.007 MHz from 0100 UTC. At that time, the deserving are definitely not stateside DXers. The same applies with P29NNL, a PNG Novice station, while working Europeans on 21.162 MHz from 1130 UTC. And on 10 meters, P29WT has been reported on 28.607 MHz at 1230 UTC.

If you missed the above, try 20 meters again, where you might land P29DB near 14.239 MHz around 1100 UTC.

Maldive Islands (8Q7)

Mike McGirr, K9AJ had planned a CW operation the early part of June from the Maldive Islands. He did come on for about three days operating on 40 meters with the call 8Q7BQ. He was gone as I was writing this, the 11th of June. Mike will handle his own QSL chores.

If you missed Mike, look for 8Q7AV, who has been reported on 14.215 MHz around 1300 UTC and 21.296 MHz from 1845 UTC. 8Q7BN has been reported on the low end of 20-meter SSB at 14.202 MHz from 1100 UTC.

Faroe Islands (OY)

Not much heard from this one lately, although you might find OY1KH on 14.025 MHz after 0900 UTC, and OY9R who has been reported operating between 7.080 and 7.090 MHz daily at 0800 UTC working Europeans. This station has also been reported on 3.770 MHz from 0600 UTC. Note that this is SSB!

AD1S - N5DLM DXpedition

George Adkins, AD1S and Vicki Allen, N5DLM have firmed up their summer 1982 DXpedition to the Pacific. They have sent their flight schedules and the nights they are staying at the various hotels. They did not list their actual operating times, although suggested times for the best propagation was given. Therefore, this is an approximate schedule with the hopeful dates:

04-07 August	KC6WS	Yap Island, Micronesia
08-10 August	KC6WS	Palau Island, Belau
11-13 August	AD1S/KH0	Saipan, Mariana Islands
14-15 August	KX6OS	Majuro, Marshall Islands

CW frequencies will be transmitting 25 kHz up from the band edge, listening up 3 to 5 kHz. Operation on SSB will be split frequency style on 3.800, 7.090, 14.205, 14.280, 21.305 and 28.605 MHz.

Prefixes

That EJ0RTS which you may have worked in May was an Irish Radio Transmitting Society DXpedition to Aran Island. This was an all-band effort, both CW and SSB. Aran Island counts toward Geoff Watts' Islands-on-the-Air awards program, and is designated as EU-06.

Those IR0 prefixes you may have heard are Sardinian stations that are authorized to use this prefix until mid-June to commemorate the death of Giuseppe Garibaldi.

Right now there is an operation from an Exposition in Japan signing with the call 8J8XPO. You have until 22 August to work this one.

Soviet stations in Kazakh have been using the RX7 prefix to honor 250 years of the Kazakh Republic alliance. We don't know how long this one is to last. RX7BF, RX7MAR and RX7PAL have been on 15 meters, with RX7GAA reported on 20 meters.

That IO prefix is reported to be a new prefix for Italian stations, to be used during contests.

Antarctica

There are several stations active from the Antarctic continent. They can often be found on weekends from 0900 to 1400 UTC. VK0AB and VK0JH are located at Casey Base with VK0DA at Davis Base. VK0DX, VK0LO and VK0RH are located at Mawson Base. If you hear VK0AN, he is located on Marquarie Island, which counts as a separate DXCC country. That DP0LEX is a West German base located at Atka Bay (ITU Zone 67), and can be found near 14.210 MHz on Thursdays at 2000 UTC.

The Soviets have a couple of stations down there also. 4K1A has been reported on 14.205 MHz from 1030 UTC and 4K1D has been found down on 3.514 MHz at 0200 UTC.

VP8ANT is also active — mostly on 40 meters near 7.006 MHz — and has been reported on at 0430, 1000 and 2100 UTC. For those who listen in on the new 30-meter band, he has been reported on 10.108 MHz at 2045 UTC.

Shetlands (GB4)

During the month of June, a DXpedition by T. Robinson, G3WUX and J.R. Browne, G3XZG was scheduled from Foula on the Shetland Islands using the call GB4FIR. This was to be a QRP operation, both SSB and CW, 10 through 80 meters. Foula is a small island west of the main body of the Shetland Islands, north of the Orkney Islands, off the coast of Scotland. The Shetlands count as a separate country for the Work All Europe Award sponsored by the DARC, the national Amateur Radio society of West Germany.

Monaco (3A2)

One active station from Monaco is 3A2EE, who has been reported on 14.290 MHz from 0500 UTC, and at times has been down on 75 meters at 0500 UTC working the deserving on 3.794 MHz. Check 15 meters for 3A2EA on 21.013 MHz after 1800 UTC if you need this country on CW.

3A2ARM is busy on Saturdays between 0900 and 1100 UTC on 20 and 15 meters. No specific frequency was given, so you will have to do some tuning and careful listening.

Dodecanese Islands (SV5)

Look for SV5SW, who operates from Rhodes — part of the Dodecanese Islands group. He has been reported on 21.265 MHz after 2200 UTC, and on CW near 21.009 MHz from 1730 UTC. SV0AA is also expected there folowing the Mount Athos DXpedition.

Iran (EP2)

Toshio "Tom" Yai, EP2TY has been reported on at various times and bands. You might find him on 20 meters on 14.205 MHz around 0200 UTC or on 10 meters on 28.740 MHz after 1200 UTC and again at 1600 UTC near 28.540 MHz.

On 15 meters this station has been reported on 21.190 MHz at 0100 UTC, 21.250 MHz at 1400 UTC and 21.294 MHz at 2300 UTC. QSL cards for EP2TY are handled by Yousy Sugimoto, JR3WRG.

Mellish Reef/Willis Island

The final count for contacts from Mellish Reef was 16,824 with 60 percent of the contacts SSB. Half of the contacts made were with the United States with about 25 percent each from Japan and Europe, and about 5 percent with the rest of the world.

The group continued on to Willis Island where they used the same call, VK9ZR. Of those contacts made there, 80 percent were on CW, which was the purpose of the stop-over.

Now, if you missed this DXpedition, you can still pick up Willis Island by looking for VK9ZH, who has been found on the "Open House" Net on 14.332 MHz around 1000 UTC. He has also been found on 28.505 MHz after 2330 UTC. QSL cards for VK9ZH go to Mrs. G. Weaver, VK6YL. Both VK9ZR operations are handled by D.H. Mead, VK2BJL.

Andorra (C31)

With vacation time upon us, there will be another rash of activity from this little country of Andorra by visiting DXers. This little country is located on the border in the mountains between Spain and France.

Jean Launois, F6ARI should have already been there operating as C31WE. C31YP was the call to be used by Hubert Wagenseil, DJ8IF. These operators will handle their own QSL chores.

The call C30TC was reported on 14.270 MHz at 0515 UTC with QSL cards for this one to be sent via Lluis Casals i Rojas, EA3AOC. As for the C30 prefix, we have no explanation for that one.

Bhutan (A51)

Harvey McCoy, W2IYX, in his *Long Island DX Bulletin*, says that he received a letter from Pradhan A51PN, who reports that he has been off the air since December 1981 and sees little hope of ever operating again. No reason was given. So it looks like this one will be another one of the rare ones and hard to get.

Tristan da Cunha (ZD9)

Andy ZD9BV now has company with him on the air. Lorna ZD9YL, his future wife, are busy with regular schedules near 28.590 MHz from 1730 UTC. They have also been reported on 20 meters, both modes, at 14.003 and 14.220 MHz around 0700 UTC.

They do have antennas for 40 and 80 meters, but, unfortunately, their power goes off at 2300 UTC.

Juan Fernandez (CE0Z)

Juan Carlos, CE0ZAD maintains a regular schedule with his QSL manager on 14.240 MHz at 0100 UTC, or the W7PHO Family Hour on 21.345 MHz at 0100 UTC. He has been reported on at other times on 14.218 MHz at 0630 UTC, or 14.225 MHz at 0300 and 1500 UTC. Send your QSL cards for this one to Joseph Pena, WB6WOD.

Mount Athos (SV/A)

This operation was reported for a date of early June with SV1LA signing SV1LA/A. A later report has it that it was to commence during the latter part of the month.

Often one has to take these DXpeditions with a grain of salt now, as many of these announced DXpeditions never get off the ground. Perhaps it is just wishful thinking on the part of many. As for Mount Athos, one should be aware of the situation of the island and who lives there. With that in mind, DXpeditions from there are not too promising. Keep the faith, though, as there have been operations from there in the past.

Guinea (3X)

3X5DX has been reported on CW around 5 kHz above the band edge on 10, 15 and 20 meters. The station also operates SSB, split-frequency on 14.195, 21.195 and 28.595 MHz from 0700 to 0900 and 1500 to 2200 UTC. Another station, 3X3JA, has been reported with the same schedule handing out contacts for the deserving. These stations are reported to be operated by JA1BRK and JA8CDT. QSL cards for 3X3JA and 3X5DX are handled via Nao Mashita, JA1HGY.

3X1Z was reported on briefly near 14.206 MHz. QSL cards for this one go to John Parrott Jr., W4FRU.

Chatham Island (ZL/C)

If you need Chatham Island, take a listen for ZL4GF/C who frequents 14.010 MHz from 0600 UTC, or later on in the day near 14.025 MHz after 1000 UTC.

Up on SSB on 14.263 MHz, ZL4PO/C has been reported around 0730 UTC. Another good spot to check for this one is the New Zealand Counties Net as Chatham Island counts as one of the 112 New Zealand counties. Be aware that this group will discourage DXing-type contacts and is interested in those after New Zealand counties.

There is a ZL4OY/A that has been active and reported on 7.235 MHz around 1000 UTC. This is not Chatham Island, but either Auckland or Campbell Island — another DXCC country. Actually, this island group is rarer than Chatham Island.

Cocos (Keeling) Island (VK9Y)

Frank VK9NYG, a Novice on Cocos Island, has had over 16,000 contacts on 10 and 15 meters, using SSB. He is busy brushing up on the code so he can go for a "full call." Neil Penfold, VK6NE — his QSL manager — says that if you hear him on CW, don't expect a machine gun 30 wpm reply.

Frank's contract terminates on 20 November 1982, so he will be leaving the island. However, two other stations show up from time to time, these stations being

VK9YB and VK9YC. Also, in the coming CQ World Wide DX Contest this October, there is a possibility of a big effort with VK9YE. Of course, there will be restrictions there due to RFI to the local citizens listening to their BC receivers. That means they will be limited to about 20 watts.

Clubs

The Southern Arizona DX Association has been recently formed with its meetings being held at Sambo's Restaurant, 5460 East Speedway, Tucson. Any DXer or potential DXer is invited to attend their meetings. Meetings are held at 7:30 p.m. the last Wednesday of each month. Their net meets on Tuesdays at 2000 local time on 2 meters, 146.67 MHz input and 146.07 output.

Back on the East Coast — well, almost the East Coast — the Western Pennsylvania DX Association has been formed with headquarters in Pittsburgh. Officers include Harry Houston, N2MA, President; Ed Crowe, W3GPR, Vice President; Wayne Albert, KB3KV, Secretary; and Don McDaniel, K3ZCA, Treasurer.

This club also has a repeater located at 1,300 feet with coverage into parts of Ohio and West Virginia. Input on this repeater is 144.37 MHz and 144.77 MHz output. For membership details, contact the secretary at 1508 Ligonier Street, Latrobe, PA 15650.

Newly elected officers of the Long Island DX Association include Sheldon Weil, K2BS, President; Jules Freundlich, W2JGR; Larry Moreno, K2IJL; and Peggy Arciero, WB2OHD.

DXAC matters

John Kanode, N4MM, Vice Director of the Roanoke Division, has been reappointed to the position of DXAC Liaison to the ARRL Board of Directors. He has previously served on the committee for four years as the 4th call area representative and as DXAC Liaison for about 18 months. John is also a longtime member of the CQ DX Awards Committee.

Awards

The Clyde Valley DX Group, from Strathclyde in Scotland, has formed a DX group and intends mounting a major assault on the four extreme points of Scotland during a three-week period during the month of August.

The four points involved are Mull of Galloway, Ardnamurchan Points, Dunnet Head and Buchan Ness. Each of the four locations will issue a distinctive QSL card for that location and contacts with all four locations will entitle the successful stations to exclusive certificates. A special call of GB4GM has been issued for this event.

Further information is available from Gordon Hunter, GM3ULP, Clyde Valley DX Group, 15 Quarry Road, Law, Carluke, Strathclyde, SCOTLAND. This information has been gleaned from *Amateur Radio*, the official organ of the Wireless Institute of Australia.

The Kansas DX Association offers the Buffalo Award to DX stations as an incentive to seek out Kansas stations. It is printed on parchment-like paper with buffalos appearing faintly in the background and a gold seal with red and blue ribbons.

As for requirements necessary for this award, they are unknown at this time. Most likely, any member of the club will have details on the award. The Northern California DX Club offers a similar type of award for DX stations only for working California stations.

Miscellaneous

Bob Bairds, W9NN sent us a copy of a letter from the Department of Commerce, Radio Division. This was back in 1928, prior to the FCC. The letter was dated 22 June 1928 and was sent to all amateurs. It reads as follows:

"You are herewith advised that amateur call letters are now being assigned preceded by the letter 'W'. This is in accordance with Section 2, paragraph d, of article 14 of the International Radiotelegraph Convention, Washington, 1927, which provides that the letters 'W' and 'K' are assigned to the United States. It has been decided that 'W' will precede all amateur calls for stations within the Continental limits of the United States and the letter 'K' shall precede all such calls for stations in the insular possessions and Alaska.

"The use of the 'W' before your regular call letters, however, is not to begin until 1 October 1928, after which time should be used for *all* transmissions.

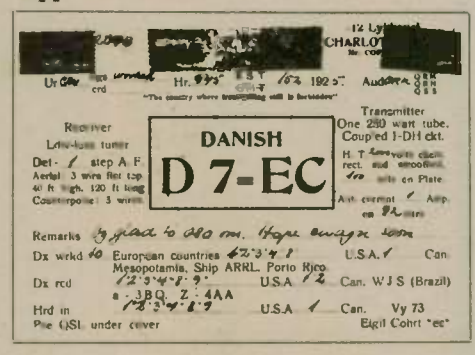
"Amateur station licenses already issued will require no change or amendment. After 1 October 1928, however, all Continental United States amateur stations will make use of the prefix 'W' for both foreign and domestic communications. Example: Whereas, the present practice in calling is, 'nu 6AA 6AA 6AA nu 8AA 8AA 8AA', after 1 October 1928 it will be, 'W6AA W6AA W6AA de W8AA W8AA W8AA'."

The letter was signed by an S.W. Edwards, U.S. Supervisor of Radio.

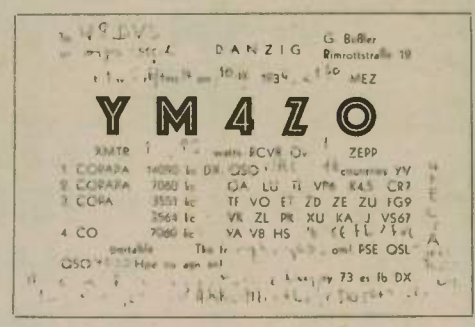
Another letter was received from Jack Sproat, WBØACL, whose stateside call is W4LCL. Jack was pleased to see his call in **Worldradio** as one of the active stations in Indonesia. He says that while it is rather easy to get licensed there (under the reciprocal licensing agreement), it is rather difficult to get gear into the country and there are no radio stores there. Although there are about 6,000 amateurs in the country, you cannot buy a rig "over the counter" anywhere. One reason, perhaps, why there are rather few YBs on the HF bands.

Antique QSL Department

Frank Tukey, KA2EIO submitted this antique card. The year is 1925 for a contact made with D7EC in Denmark. There is a comment on the card which reads: "The country where transmitting still is forbidden." Eigil Cohrt, the operator, requests that his cards be sent under cover. The card is brown with age with the call letters and the word "Danish" in red with the remainder of the card printed in black. Frank — who now lives in Toms River, New Jersey — was signing 2CGB from Ridgefield Park in those days. Frank went QRT a few years ago and returned in 1979 after being off the air for 50 years. He is still trying to figure out what happened.



The other card is submitted by Jules Wenglare, W6YO — a regular to the Antique QSL Department. YM4ZO was the call assigned to G. Bussler in the Danzig Free State and was worked by Jules in 1934, then operating as W8DVS in Ambridge, Pennsylvania. In those days the 8th call area included western Pennsylvania and western New York. Danzig ceased to exist when Hitler's troops marched into Poland in 1939 and had been created after the end of World War I. Readers with good memories will remember that we ran a Danzig card previously in May of 1980 for a card from YM4AS for a 1938 contact.



QSL information

The International DX Foundation reports that all QSL cards for the S21GM Bangladesh-assisted DXpedition have been answered. Cards received with sufficient postage were answered direct. All others were sent through the appropriate QSL bureaus. Their logs are now closed.

Mid-June was the target date set by the IDXF for their KP2A/KP1 operation, with 33,552 contacts to weed through. You should have received your card by now, provided that you included sufficient postage with your request.

Neil Penfield, VK6NE has been receiving some second QSL cards for VK9NYG. They indicate that they had not received answers for their first requests. Neil claims that it appears some of the mail from the United States had not been delivered to him for the period of October and November 1981. Neil requests that those amateurs who have not received their VK9NYG cards as of yet to send another card, without IRCs. I might add, though, if you have not yet sent your initial card, to include the IRCs.

Another letter was received from Jesse "Mac" McCowen, WØCUB, regarding a matter discussed a few issues back. This is the case where a DX station sends a few cards to one amateur with a request that he mail the other cards for him. This particular request came to Mac from DJ5CQ. I received my own card from him, which was sent the same way. This was for his recent VK9NM/LH DXpedition. My feelings are the same as Mac's as I too had provided a green stamp with my card. Therefore, this amateur makes out well by sending the cards to other amateurs

Propagation

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

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

You can get a free *complete* set of these predictions for both high and low angle antennas, Maximum Usable Freqency (MUF) and Frequency of Optimum Transmission (FOT). Requests should be sent to W6LS, 2814 Empire, Burbank, CA 91504. Each request should be accompanied by a self-addressed stamped (28¢) envelope at least 9" × 11½".

SEPTEMBER 1982

UTC	AFRI	ASIA	OCEA	EURO	SOAM
0100	23.4	29.1	33.6	14.1	26.5
0200	20.6	27.7	33.5	12.9	25.5
0300	17.9	25.8	32.7	11.8	22.6
0400	18.0	23.3	30.1	11.7	20.7
0500	16.3	20.5	27.1	13.0	20.2
0600	15.1	18.4	24.8	15.1	20.2
0700	13.8	17.0	23.4	14.8	19.3
0800	12.3	16.2	22.4	13.7	15.7
0900	11.1	15.8	21.5	12.8	16.4
1000	10.6	15.7	20.7	12.4	17.7
1100	11.1	15.2	19.8	12.4	16.4
1200	12.8	14.1	18.0	13.2	16.8
1300	15.6	14.0	16.5	15.6	20.3
1400	18.7	16.1	17.8	19.1	24.8
1500	21.2	17.9	19.8	22.4	27.7
1600	22.6	17.7	18.1	24.2	28.7
1700	23.5	17.7	15.8	25.0	29.4
1800	24.4	18.0	15.1	24.6	31.0
1900	25.0	19.4	17.9	23.2	32.5
2000	25.6	22.9	23.3	21.0	31.4
2100	26.3	27.2	28.7	18.7	30.0
2200	27.2	29.9	31.8	16.8	28.9
2300	27.7	30.2	33.0	15.6	27.6
2400	27.1	30.0	33.3	14.9	26.4

with the hope that they will forward the cards for him at their expense — and after more than sufficient postage had been supplied.

Included with the card was a note from DJ5CQ to purchase a videotape he had of his DXpedition. This is to help pay for his DXpedition, of which he states: "It was no vacation." Although I do not approve of this approach, there may be some of you who wish to purchase this tape. It is of the VHS format and is approximately 75 minutes in length. Cost of this tape is $51, which includes postage. Send your requests to Rudi Mueller, DJ5CQ, Gerh. Hauptmann Ring 7/VI, D 8000 Muenchen 83, WEST GERMANY.

In another matter, Mac informs us that those U.S. postage stamps that were marked "A", "B" and "C" are no good for international postage, which includes Canada. They must have the value indicated on the stamp. The post offices usually have signs up in their offices when these stamps are being issued. Mac says that some U.S. amateurs actually did send to Canada QSL requests with SASEs. U.S. postage is no good in Canada. Some even sent those special stamps without the value on them.

QSL routes

A4XJO	WB3JRU	EX5UKO	UB5UKO	J6LZA	K4LTA	XE1GBM	WD8NKT
A4XYB	G4KII	F6GKD/J28	F6GKD	J20/D	F2GA	XP1AB	WA2TTI
A71AA	DJ9ZB	F0GYM/FC	DL3BK	J28CB	F6HFS	XT2AW	KN1DPS
AH2L	W4PKM	FB8WG	F2CL	J73D	W2OB	YZ9LM	YU2HDE
AH2M	K2PL	FC6FPH	G8KA	J87DU	VE3DUS	ZD8JGN	W9CN
AM3DDP	EA3AOC	FG0DDB/FS7	W3HNK	K4COG/DU1	WA4LQQ	ZD9BV	W4FRU
AM01SE	EA1PJ	FH8CL	VE2FOU	K5BDX/ZB2	K5BDX	ZD9YL	W4FRU
AM30KS	EA3BBD	FK8DV	F6EWK	K5BDX/EA9	K5BDX	ZF2AD	K3MBF
AP2MQ	JA3CMD	FM7CF	WB3AKI	K5NA/KP2	W4JVN	ZF2BN	W4HET
C5AEH	W6JKV	FO8CX	WB6GFJ	K0SD/HR5	WB0MZB	ZF2CD	W3ODJ
C5AT	OH2FQ	FO8HI	WB6GFJ	KA3V/EA9	K5BDX	ZF2FX	K4UEE
C30TC	EA3AOC	FO8HL	WB6GFJ	KC6GM/KX6	WD6BDZ	ZF2GC	W4UY
C6ADC	N4BPO	FP0FSZ	VO1FB	KN8M/SV9	K8CW	ZK1AF	SM3CXS
C31SJ	DL1HH	FR7BP	W0AX	KR4C/J6L	KR4C	ZK1MA	W6KNH
C31SZ	G4HYQ	FR7CE	DF2OU	LX2BQ	*(See Note 2)*	ZK1XG	DL3GU
C31WE	F6ARI	FY7AG	K4DYB	N0ZO/DU2	K0LST	ZK1XP	K8VIR
C31YP	DJ8IF	GB2BA	G2HJT	NC4U/J6L	NC4U	ZK1YL	ZL2BAO
CE9AT	CE2BIO	GB4FIR	G3XZG	NR4S/J6L	NR4S	ZK2JK	W6TI
CE0ZAD	WB6WOD	GJ3XTT	*(See Note 1)*	OA4CJ	WB5JJD	ZK2VU	DL1VU
CK1CJ	VY1AU	GJ3ZAY	*(See Note 1)*	OA4DW	N4DW	ZL4OY/A	ZL1BQD
CN8CU	KJ6E	GJ3ZNU	G3ZNU	OH1TD/4U	OH1TD	ZS6ANL/3D6	ZS6ANL
CN8EJ	OE3ALM	GJ4BNE	G4BNE	P42C	PJ2PP	3A2EE	F9RM
CT2BB	W4PKM	GJ4IFE	PA0KHS	PA0AAX/5N0	PA0AAX	3B8FG	3B8AS
CT2USA	W4PKM	GJ4LUN	*(See Note 1)*	PA0TV/LX	PA0KHS	3B8LH	DL9AEJ
CU5OF	CT1OF	GJ4LVH	*(See Note 1)*	PP2MM	K4MQG	3D2AB	WB8WMS
D68AAB	G4DYO	GJ5DGF	DJ6PL	PQ4SA	PY4SA	3D2BD	ZL1BD
DA2CK/HB0	KA2JFY	GJ5EGI	W0CP	PZ9AB	W1KSZ	3D2EH	K8VIR
DJ6SI/6W8	DJ6SI	GJ6UW	*(See Note 1)*	R1ASP	UK1CAG	3D6AK	G3WPF
DL7AEA/EA6	DL7AEA	GU5BHX	SM2EKM	ST2SS	YU2DX	3X3JA	JA1HGY
DU1DBT	DJ8CV	GU5EHF	K2UO	SV1LA/A	SV1LA	3X5DX	JA1HGV
DX6NRA	DU7EM	HC1BP	W4PKM	TG9XGV	K4CLA	4K1D	UA1AFM
EA7BZN	WA6LGR	HD8GI	W3HNK	TI2WX	K4WVX	4S7AJG	K9AJ
EA7CAD	AK3X	HL9EZ	K5DZE	TL8GE	F6FYD	4S7XS	DL7XS
EA9EU	I8UDB	HP1XBO	W4UHL	TU2JQ	TU2CI	4X6GP	K2VUI
ED5CNC	EA5YU	HP2XSG	WB2DCP	TU2LE	F6ESH	4Z4XK	WB3EGD
EJ3AK	EI3AK	HS1ANJ	W1QUS	TU2LM	WA6RUJ	5B4AI	W3HNK
EJ0RTS	EI7CC	HS1BV	KO2A	TYA11	*(See Note 3)*	5B4IJ	OE8PSK
EL2AU	WA1ZFS	IJ7ET	I7SOZ	VK2EHH/VK8		5N4RLL	WB5ZAM
EL5GI	K3RB	IO2DMK	I2WTU		K8VIR	5N0BDJ	HB9RCJ
EL0AL	EL9A	IO2UIY	I2PJA	VK6ZX/LH	VK6ZX	5T5RR	F1ANH
EL0AP/MM	JH4NPP	IR0WON	IS0WON	VK8RF	KB5PO	5U7AG	W3HNK
EL0AU/MM	VS6GP	IU8ITU	I8MPO	VK9YC	G4MBF	5W1BT	W6TI
EX5UC	UY5UC	IZ4ARI	I4KDJ	VK0AN	VK9NS	5W1DL	W6TI
				VP2VIH	KD3P	5W1DM	W6TI
				VP2VII	W5SJ	5Z4CS	JI1VLV
				VP5UYX	W4UY	5Z4CX	G3ZVK
				VP8AOB	K0JW	8J6JCI	JA1RL
				VQ9PG	WB4MTE	8P6PO	KA1JC
				VQ9SB	WA6IJZ	9H1FBS	N5APW
				VQ9VR	W5TEH	9H3BN	DF3GX
				VQ9WB	WD9GIG	9K2BE	G4GIR
				VS5RB	G4EFE	9L1FD	WA0CAE
				VS6JW	G4LRG	9L2FD	WA0CAE
				VU2FBT	JA7NJN	9L3FD	WA0CAE
				W6YB/3D6	KB7VD	9V1VG	ON5KL
				WB0LQS/DU6	WB7EAE	9Y50NP	W3HNK
				WB8QGQ/KH7	KH6JEB		

CM7OR	P.O. Box 247, Avila, CUBA
CO2GB	P.O. Box 9, Havana, CUBA
FH8CB	P.O. Box 50, Mayotte, Indian Ocean
FM0AL	P.O. Box 32, Trois Ilets, MARTINIQUE
H44DC	P.O. Box 306, Rydalmere 2116, AUSTRALIA
HT1JCC	P.O. Box C-89, Managua, NICARAGUA
KA6NFL/KH0	P.O. Box 209, Saipan, MARIANA ISLANDS 96950
TA1AO	P.O. Box 167, Bakirkoy, Istanbul, TURKEY *(See Note 4)*
TL8CB	P.O. Box 21099, Nairobi, KENYA
VS5GA	P.O. Box 1200, BRUNEI *(See Note 5)*
4S7MX	Rolf T. Salnie, P.O. Box 1072, Colombo, SRI LANKA
5H3AA	P.O. Box 79, N-9372 Gibostad, NORWAY
5H3MO	P.O. Box 1133, Tanga, TANZANIA

Notes:
1. Address for all of these is P.O. Box 146, Cambridge, ENGLAND.
2. Do not send QSL cards via the bureau to LX2BQ. Send direct only!
3. Operation by Joe Bernier, W4LZZ only goes to Robert Mitchell, N5RM. Dates apply for 19 to 21 June 1982.
4. On all QSL cards to Turkey, do not place call letters on envelope.
5. Stations in the United Kingdom may send their QSL cards to G4CCM.

Much of the information in this column is from four DX newsletters: *DXpeditions International* (WA4TWS), *The Long Island DX Bulletin* (W2IYX), *The DX Bulletin* (K1TN), and *DX News Sheet* (Geoff Watts). If you are becoming a serious DXer, I suggest you look into one or more of the above publications.

I would also like to thank the following individuals for this month's support, whose calls include VE2OQ, K9PNG, W6BUY, DJ5CQ, W0CUB, AD1S, N4BPO, VK6NE, W9NN, YB0ACL, WD0EAO, KA2EIO and W6YO.

Various DX club newsletters are also used, such as that of the Southern California DX Club (W6YQ), Redwood Empire DX Association (VP2ML), and the Kansas DX Association (WA0TKJ). Often reference is made to other monthly publications such as *Amateur Radio* from the WIA which includes a 'How's DX' column by Ken McLachlan, VK3AH.

August marks the month for the JARL All Asia Contest and the DARC European DX Contest. Both are CW functions and include much activity. If you are not out on the road fighting the traffic or in the woods battling the bugs, why not try one of these contests? Hope your summer is good and to you Northwest DXers. I will see you in Vancouver. 73 de John, N6JM. □

XZ5A and XZ9A are now accepted

Leo Haijsman, W4KA — Manager for CQ Magazine's Worked All Zones Award — announces that XZ5A and XZ9A will be accepted for Worked All Zones Awards. CQ also announces that Billy Williams — Manager of the CQ DX Program — will give credit for XZ5A and XZ9A, as well. □

The 'Incredible Dept.'

Charles Crockett, W6BCB

I read in the April 1982 issue of Worldradio where it was reported that N2CBU worked N4CBU ("More than incredible," page 17). I would like to follow the incredible series with the contact of W6BCB working W5BCB as "quite incredible."

(No sked involved.) □

ICOM HF

Three Choices—Three Great Radios

IC-720A

Listen to signals from around the world with a 100 KHz — 30 MHz receiver. Talk with a 160 — 10 meter transceiver — ready to go WARC 79 bands, dual VFO's — split operation. ICOM's DFM (Direct Feed Mixer), passband

tuning, speech compressor, 100 watts, SSB, CW, AM, RTTY (FSK), computer compatible tuning, 12 volt operation, all features standard except CW & AM narrow filters. *ICOM system** accessories are available for a complete station.

IC-740

Versatility plus! ICOM's newest addition to HF offers features most asked for by ham operators. 160 — 10 meters, variable noise blanker and AGC with off position, IF shift and passband tuning, automatic SSB mode

selection, notch filter, switchable CW filter, 8 memories, SWR meter, XIT, speech compressor, 100 watts and 12 volt operation. Options are FM, automatic keyer, internal AC power supply and 5 IF filters. *ICOM system** compatible.

IC-730

Go portable/mobile with ICOM's small HF *ICOM system** compatible. 100dB dynamic range, +19.5dBm intercept point receiver utilizing ICOM's DFM, SSB, CW, AM, dual VFO's — split operation, one memory per band. CW/SSB filter

options, 100 watts, 12 volt operation.

ICOM system. *The same accessories work with all three HF transceivers — IC-2KL autobandswitching broadbanded linear amplifier, AT-500 or AT-100 autobandswitching, autotuning antenna tuners, IC-PS15 power supply, BC-10A memory backup, IC-SP3 external speaker, IC-HP1 headphones, IC-AH1 autobandswitching mobile antenna, IC-MB5 mobile mount and IC-SM5 desk microphone (condesenser type).*

ICOM

The World System

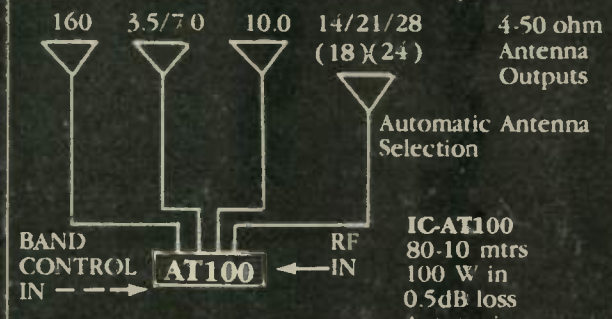
ICOM America, Inc., 2112-116th Ave NE, Bellevue, WA 98004 (206)454-8155/3331 Towerwood Drive, Suite 307, Dallas, TX 75234 (214)620-2780.

The Systems

Custom Complete Your HF Station

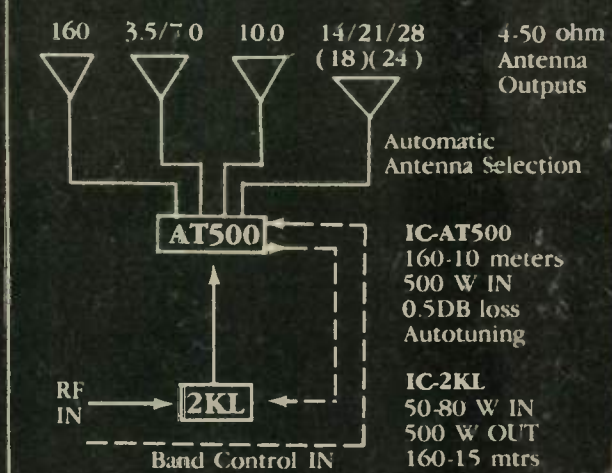
	IC-720A	IC-740	IC-730 w/LDA INSTALLED
FREQ COVERAGE (MHz)	1.8—2.0	1.8—2.0	—
	3.5—4.1	3.5—4.0	3.5—4.0
	6.9—7.5	7.0—7.3	7.0—7.3
	9.9—10.5	10.0—10.5	10.0—10.5
	13.9—14.5	14.0—14.35	14.0—14.35
	17.9—18.5	18.0—18.5	18.0—18.5
	20.9—21.5	21.0—21.45	21.0—21.45
	24.5—25.1	24.5—25.0	24.5—25.0
	28.0—30.0	28.0—29.7	28.0—29.7
GEN. COVERAGE RCVR	100KHz—30MHz	—	—
RCVR SENSITIVITY (10dB QUIETING)	0.3uv	0.15uv (w/PREAMP)	0.15uv (w/PREAMP)
RCVR SELECTIVITY (-6dB SSB/CW) KHz	2.4/0.8 (PBT)	2.4/1.4 (PBT)	2.4 (IF SHIFT)
RCVR SELECTIVITY KHz (-6dB CW NARROW)	0.5	0.270	0.600 (140Hz w/AUDIO FILTER)
PWR SUPPLY VOLTAGE ICOM SUPPLY	12VDC PS15	12VDC PS15 OR OPTIONAL INTERNAL SUPPLY	12VDC PS15
WEIGHT (lbs)	16.5	23.1 (w/ INTERNAL SUPPLY)	14.1
SIZE (mm) HxWxL	111x241x331	111x286x374	94x241x275
FILTER OPTIONS MODEL/FREQ/WIDTH (#) (MHz) (KHz)	FL32—9—0.5 FL34—9—5.2	FL44—0.455—2.4 FL45—9.0—0.5 FL52—0.455—0.5 FL53—0.455—0.25 FL54—9.0—0.27	FL30—9.0—PASSBAND TUNING FL44—0.455—2.4 FL45—9.0—0.5
OTHER OPTIONS	ALL FEATURES STANDARD	MARKER (EX241) FM (EX242) KEYER (EX243) BUILT-IN POWER SUPPLY (EX238)	MARKER (EX195) LDA (EX202) CW AUDIO FILTER (EX203) TRV (TRANSVERTER SWITCHING UNIT) (EX205)

100 WATT STATION



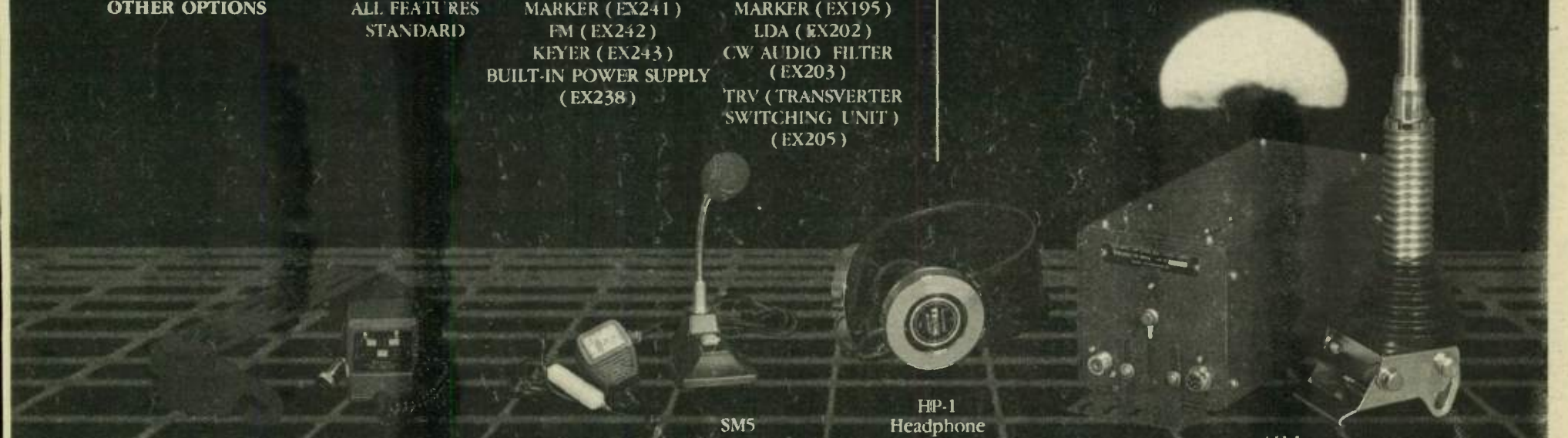
IC-AT100
80-10 mtrs
100 W in
0.5dB loss
Autotuning

500 WATT STATION



IC-AT500
160-10 meters
500 W IN
0.5DB loss
Autotuning

IC-2KL
50-80 W IN
500 W OUT
160-15 mtrs
Broadbanded



MB5
Mobile Mount

HM10
Scanning Mic
(740/730)

BC10A
AC Memory Backup

SM5
Desk Mic

HP-1
Headphone

AH-1
Autobandswitching Mobile Antenna

ICOM

The World System

ICOM America, Inc., 2112-116th Ave NE, Bellevue, WA 98004 (206)454-8155/3331 Towerwood Drive, Suite 307, Dallas, TX 75234 (214)620-2780.

All stated specifications are approximate and subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emissions.

The ART of Contesting

George Leone, K6SG

I'm not a professional contester, nor do I consider myself an "expert" in this field. However, contesting has been one of the more enjoyable aspects of Amateur Radio for me, so I have taken part in contests for a good many years. Maybe I can pass along some ideas. Since contest announcements, rules, etc. are covered in QST, CQ, 73, Worldradio and other publications, I do not intend to address any particular contest. Rather, I'll ramble on with techniques, equipment, station layout, etc. that may be of interest to potential or existing contesters.

You might ask yourself, "Why would I want to get into a contest?" Why, to have fun, of course. Now, some people have a competitive spirit that needs to be fed every now and then, and a lively contest will certainly do that. A fringe benefit of contest operating will be improvement of your operating skill. And if the contest bug bites a little deep, you might wind up orienting your station for contest operations. Now that might just improve your station for better and more efficient day-to-day operating as well. None of these things are really bad for you, you know!

There are a variety of operating activities that provide the benefits mentioned above, some of which are: DX contests, sweepstakes, QSO parties, Field Day, Simulated Emergency Tests (SET), etc. Pick out one (or more) that suits your fancy and get with it.

Study the rules so you know such things as starting and ending times and dates, logging requirements, message exchange, scoring, awards, date by which logs must be submitted, classes of operation (single operator, multi-operator, multi-operator/multi-transmitter, all band, single band, high band, low band, etc.). If logs and check (dupe) sheets are furnished by the sponsoring organization, be sure to send for them in time to have them by the starting date. You may want to make your own logs and check sheets to suit your own needs, but remember that the format should closely follow that prescribed by the sponsor. Some people can't write small so they need larger writing spaces and hence make their own logs and check sheets.

While I'm talking about logs and check sheets, I might give some hints on how to keep them up during a contest. I like to use a thin lead or .5 mil lead pencil with H type lead. It's impossible to write small with a blunt wooden lead pencil, and this will always happen when you're having a good run of JA's. The log must be kept in UTC (Coordinated Universal Time), entering the hour digits once and then only the minute digits until the next hour rolls around. I have found log keeping to be fast and simple if I write in only the information which is variable such as time, call sign, serial number, zone, etc. For example, if the contest exchange requires an RST report and most stations are giving me 599, I enter only those reports other than 599 and fill in the 599 after the contest is over.

In keeping up the check sheet, I have found that writing in two- and three-letter suffixes is all that is needed to avoid duplications. In the case of 2x1 calls, I write in the entire call under the suffix letter heading. It's not likely you will work two or more stations with different prefixes and the same two or three letter suffix. It is very apt to happen with 2x1 calls; thus, enter the full 2x1 calls. Some stations do not keep check sheets during the contest, and some rules do not require check sheets if you have under 200 contacts. Not keeping it results in lost operating time working duplicates which must be found and crossed out later. Some rules exact severe penalties for duplicate entries. Sometimes during a heavy run, I'll let the check sheet go and catch up during a break.

I might add here that it is a great help to be able to read call signs and remember them without having to write them down on scratch paper unless it's absolutely necessary. Every time you write a call sign down on scratch paper, it's that much more work. Write it down in the log as soon as contact is established. Practice reading and remembering call signs in your day-to-day operating so that when it's contest time, you've got it made in spades!

Stay tuned for the next episode. 73 es cul — George K6SG □

T.G. Laubhan, KB6UW (left) of Galt, California enjoyed a visit last fall with Kari Gustafsson, SM5HRP and Kari's YL, Elizabeth — both of Uppsala, Sweden. Kari is a student at the University of Uppsala; Elizabeth is employed in an industrial medical center in Uppsala. The visit was the result of a QSO KB6UW and SM6HRP had earlier last summer.

AWARDS

Scott R. Douglas Jr., KB7SB
P.O. Box 9990
Glendale, CA 91206-0990

To start out this month's column, we again return to the controversy of pile-up DX'ing vs. net and list operation. I believe it is necessary to again rehash, *for the last time* I hope, the subject because if you worked the 3C0 earlier this year you have received yet another letter from Carl Henson, WB4ZNH.

Carl has included with each QSL from this operation the letter printed below — in hopes of *what* I don't know. He waged his war, lost, and it seems to me this is kicking a dead horse. Yes, he has his supporters like my fellow columnist elsewhere in this paper, but the answer is already in and decided and this letter is like crying over spilled milk.

In his letter, he states that "The ARRL has heard from the list-taker and their groupies; it is now time for them to hear from DXers." I thought they already had, and after examination of the facts, letters and technical considerations, decided that Carl's proposal would be both impossible to implement, and was not the will of the majority of DXers and League members.

It appears that Carl, as well as many others, fails to state that there is good and bad in everything and that everyone is not a jerk because he doesn't feel the same way as he. Think about it. If we all were the type of individuals these folks think we should be, then the best solution to world problems would be to *clone* duplicates of only those who they find acceptable and get rid of the rest. I feel Carl, in his letter, does not acknowledge that there is more than one right way or good way to do something, nor is there just one bad way. He fails to bring to the surface the problems caused by some of the participants during pile-up operations.

He states that DX lists do not teach anyone anything. Who said they have to! Many pile-ups, however, have taught me just how discourteous and thoughtless some amateurs can be. But let's stay with the subject. Something can be learned from every experience and Carl has taught me just how totally self-opinionated one can be and how to present a subject showing only that which you want to bring to light.

I believe that it is important for us as amateurs to put things in their proper perspective.

1) DXCC is an award achieved strictly for one's own self-gratification and enjoyment, and is or can be an enjoyable element and avenue of activity when kept in proper perspective.

2) The making of DXCC or Honor Roll will not put food on the table or pay for the children's new shoes.

3) Everyone who works in a pile-up or list operation should not be considered a poor amateur regardless of which side of the fence you happen to be on or if you're in the middle like me.

4) DXCC will never be worth abusing your fellow amateurs for, and everyone has the right to feel as they do, and be respected for it.

5) Learning, achievement and participation in *anything* is only what one makes it and decides to derive from it.

6) Amateur Radio is a hobby in which persons participate strictly for individual reasons — like pile-ups, nets and lists.

Dear Fellow DXers,

Many of you are aware of my ongoing campaign to rid our bands of DX lists. Several months ago, I had 3,000 letters printed for the purpose of focusing attention on the major problem facing legitimate DXers today. The DX list is a degrading and obnoxious blight on Amateur Radio. The only individual that receives any reward from the DX list is the person very erroneously labeled the Master of Ceremonies or the List Master. This amateur has set himself up as the self-appointed controller of the DX which you seek to work. Universally, these people suffer from greatly oversized egos as is readily evident to anyone who might take the time to listen for a few moments.

I have sent approximately 2,400 copies of this letter to various DX clubs throughout the world. I sent copies to several DX bulletins and I am grateful for their help.

The American Radio Relay League has informed me that they have received more comments regarding my proposed rule change than on any other subject they have ever received mail about. 74.7 percent of the letters received are opposed to my proposal! Only 24.3 percent are in favor of the change to Rule 12. Three to one in favor of lists! We cannot blame the ARRL for inaction if we won't take any ourselves. It it very difficult to assess which group they fall into because so many people see *SOME* good in a list. There was a time when I did also. However, the problem has reached such large proportions that I now think that *NO* list is better than *ANY* list.

I tried to reach the amateurs who obviously have more than a passing interest in DXing: those who would subscribe to a DX bulletin or belong to a DX club. I did not try to reach a selective audience, nor did I attempt to create any kind of *on-the-air* spectacle to sway anyone toward my point of view. However, the DX list-takers and so-called DX net controls came out in force, especially at the times when the welfare recipients would be expecting a morsel or two. For days on end they have campaigned against my singular letter and they have succeeded in matching it three for one! They have used other less objective tools also; I received a postcard signed by a European call sign telling me that "several NET CONTROLS" had explained to him I was *jamming* the Afrikaaner Net and the YLISSB Net. I have not been able to find this gentleman in order to set him straight; I wonder how many people will believe the story as it is passed around?

During our recent DXpedition to Annobon Island, Martha and I both experienced these disgruntled individuals coming to our transmit frequency, whenever we would take a break to fuel the generator, to use the pile-up we created as a platform to discredit us. Martha actually caught one list-taker telling lies about our operating, claiming that we were working just Number 4's. Of course, this was a total fabrication; we refuse to operate by call district except that we did on occasion stand-by for 6's, 7's and 0's. We had absolutely no long path propagation to the West Coast and I felt it only fair to give some attention to that part of the country.

The ARRL has heard from the list-takers and their groupies; it is now time for them to hear from the DXers. If *you* do not take action, then you will be relegated to always having to listen for those infamous words. "When last heard . . .," ". . . make your call," and "Good contact."

The DX list doesn't teach anyone anything. The excuse is always that the poor fellow doesn't have any experience handling a pile-up or he doesn't understand English. Well, being spoon-fed contacts isn't going to teach him how to operate. It will only make him a cripple who must rely on an emotionally deficient DX hog for guidance. The people who work DX on a list can't learn any more about operating than what the owner's manual for their radio can tell them.

Some people have taken lists and still take lists with the highest of motives. They are in a small minority. If they would study the ARRL antenna handbook or some other good reference on "angles of radiation," they would understand why they are doing DXers such a disservice. Invariably, the DXer that can get on the list can barely hear the DX, and the one who hears the DX so well can't get on the list.

I propose the ARRL modify DXCC Rule 12 by adding a new paragraph (d). I suggest appropriate wording should be: "for (a) and (b) above, the taking of 'lists' and the solicitation of DX stations to operate from a 'list' or 'DX net' is poor operating ethics."

The ARRL Awards Committee could do the same thing now under the present Rule 12. However, they would be hard pressed to do anything definitive because the situation has gone unchecked for so long. My suggested change would put list-takers on notice that list-taking is not considered to be good sportsmanship. DX net controls coercing DX stations to come to "their" frequency would fall into the same category. Enforcement would be left up to the ARRL Awards Committee and would be identical to the present enforcement of Rule 12. The only action they could take would be to deny membership in DXCC to violators. To do any less would be to take *NO* action; to do any more would be over-stepping the League's right to influence the way we operate.

Please don't be apathetic! Your opinion *IS* important and you *DO* have a voice at League headquarters. If you are not presently a member of the ARRL, I would urge you to join. While we may not always agree with the League policies, it is the only organization we have in the United States and change can only occur from within. Please write today!

Very 73,
CARL HENSON, WB4ZNH
Jonesboro, Georgia

Well, now that you have read Carl's letter, make up your own mind, but please keep in mind that there is much *direct benefit* derived from net, list and pile-up operation and acknowledge and respect the right of another to disagree with you. It is not necessary to browbeat, and run the others into the ground.

To Carl, I say: You have all the right in the world to present your case as you see it, but you have an obligation to those who disagree with you in your future treatment of this subject — *BE FAIR!* Some of your best friends have worked and still work in DX nets and lists.

Worked the World's Fair

WA4KFS is a working special event station located at the World's Fair in Tennessee. It operates daily from 1400 UTC to 0200 UTC during the open hours at the fair. On CW, look 20-30 kHz above the lower band edges, and on SSB look 15 kHz above and below the division between General and Advanced sections and 28.585-28.615 kHz. The station also operates RTTY and SSTV on the usual frequencies.

The Tennessee Wireless Association, sponsor of the station, offers the "Worked the World's Fair" certificate to any amateur meeting the requirements listed below.

Confirm WA4KFS and 10 other stations in the state of Tennessee regardless of band or mode and send your "GCR" log extract along with $2 to Awards Manager, Sarah Hickey, N4EFA, 10712 Mercury Dr., Concord, TN 37720.

Worked Trumbull County

This 8½″×11″ certificate is offered by the Warren Amateur Radio Association for contacts with amateurs in Trumbull County as follows. Trumbull County applicants require 20 other Trumbull County contacts; all other USA-VE stations require 10 while DX applicants require only five.

Send your log extract "GCR" along with $1 to: WARA Awards Manager, Don Lovett, K8BXT, P.O. Box 809, Warren, OH 44482.

XYL Award

Issued by the Florida Skip Radio Amateurs Publication, this award is their way of giving credit to YLs who labor anonymously in the background. Contact Andrew Clark, W4IYT at P.O. Box 501, Miami Springs, FL 33166 for details. Till next month, 73s and Good Hunting, Scott. □

AMSAT OSCAR

Dr. Norman L. Chalfin, K6PGX

Phase IIIB communications opportunities

With the upcoming Phase IIIB AMSAT/OSCAR spacecraft, a number of discussions have been in progress concerning how and when to best make use of the various communications capabilities the new spacecraft will provide for amateurs. Particular interest has been centered on the bulletin transmissions to be propagated from the Phase IIIB bird. The Phase IIIB satellite will not have a sun synchronous orbit as does OSCAR-8 and its predecessors and as do the Russian RS amateur satellites. The Phase IIIB bird will not be in view of any location at the same time locally each day. Thus, when nets through the bird's transponders are to be held, a flexible and variable schedule will be required.

AMSAT is anxious to have the spacecraft users, and other amateurs who are potential users, contribute to the planning by making suggestions on appropriate bulletin transmission items, times, and so on. Also, it is hoped amateurs will write to AMSAT with these and other suggestions for appropriate net times. Should they be fixed each day, or should they vary as to day of the week and time?

Your suggestions and comments should be sent to AMSAT, attention one of the following: Rich Zwirko, K1HTV, AMSAT VP Operations, P.O. Box 27, Washington, D.C. 20044; or Vern Riportella, WA2LQQ, AMSAT Exec. VP; or Wray Dudley, W8GQW, AMSAT Net Manager.

Additional net managers needed for AMSAT nets

With the retirement of WA2LQQ from regular net duty on Sundays, Net Manager W8GQW makes the following announcement.

"The AMSAT International Sunday net operations team is seeking two additional members to assist wtih this popular membership service on 20 and 15 meters. As AMSAT President, Tom Clark stated in his 1981 year-end report to the members, "AMSAT's HF nets serve as our primary communications element in the field organization."

Bob Nickels, KE0T; Doug Loughmiller, KO5I; and W8GQW — now handling the Sunday nets on a rotating basis — would particularly like to have two more members on the team who are not now involved in serving AMSAT in an active role. In other words, if you have been "standing by," here is an opportunity to play an important part for the organization on a once-a-month duty. You will find this activity to be most interesting, educational and personally satisfying, while at the same time serving your fellow members. A super-station is not required. A reasonable power input to an amplifier and a good tri-band beam will do the job nicely.

From a geographical location standpoint, you probably should live in the Eastern one-third of the United States or Canada. This will enable most consistent signals to our associates overseas on 15 meters and excellent coverage of the Western two-thirds of the United States and Canada on 15 and 20 meters. So those of you in VE1, VE2, VE3 land and members in the U.S. 1, 2, 3 and 4 call areas are prime possibilities.

Phase IIIB launch again delayed

Latest information from AMSAT indicates that the launch of the Phase IIIB AMSAT/OSCAR spacecraft may not occur before the first quarter of 1983.

The L band transponder module and the mode B transponder module will be returned to Germany, as this is being written, for further work to improve operation of the units over the temperature cycle. Tests have indicated that the L-band unit did not remain stable over the vacuum temperature range desired. The mode B unit's output dropped during the hot phase of the cycle. When the rework has been completed, a new thermal vacuum test will be run.

The L-band unit will have an input frequency in the 1269 MHz range and an output in the 435 MHz range. The mode B unit will be the same as the late OSCAR/7's range with an input in the 70cm band and an output in the 2-meter band.

At launch, the Phase IIIB spacecraft will enter a low perigee, high apogee orbit at an inclination of 7° from which it will be boosted to a 63° orbit inclination after the perigee is established, and at the same time the perigee will be increased from an initial 200 miles to about 1,000 miles while the apogee will remain at about 22,000 miles. The choice of the 63° orbit is designed to achieve a maximum period of years during which the apogee will continue to rise above the Northern Hemisphere.

The high looping elliptical orbit very slowly progresses about the earth in such a manner as to, over a period of years, bring the apogee from its initial Northern Hemisphere position ultimately to be at its maximum over the Southern Hemisphere of the earth.

Before this happens, however — all other things remaining normal — there will be years of communication for Northern Hemisphere users over 11-12 hours daily. It should be possible with enough power to simply point your antenna at the approximate apogee position for continuous use of the transponders with only an occasional adjustment. This will be much more simply accomplished than the current tracking requirements for the OSCAR-8 and the RS satellites.

Pioneer 10

The *Pioneer 10* spacecraft has been in space 10 years as of 2 March 1982. It has traveled 3½ billion miles since its launch. It was the first man-made vehicle to cross the asteroid belt. It was first to encounter

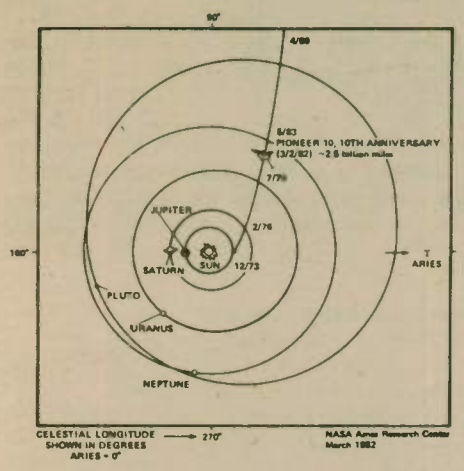


***Figure 1* — Map of Pioneer 10 leaving solar system. Pluto's orbit is so elongated that the "outermost planet" will be inside Neptune's orbit for the next 17 years. NASA officials have, therefore, selected October 1986 (when *Pioneer* crosses the mean orbit of Pluto) as the official date for the first spacecraft's leaving the solar system. *Pioneer* will cross the farthest extension of Pluto's orbit in April 1989.**

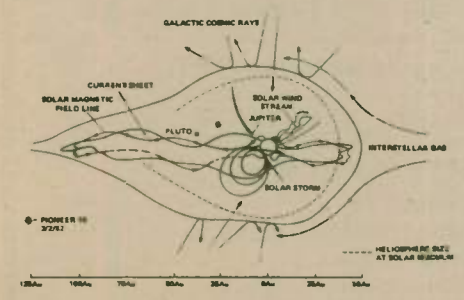


Figure 2 — Heliosphere at solar maximum. The heliosphere (created by the million-mile-an-hour solar wind, blowing out from the sun in all directions) appears to be a tear-shaped magnetic bubble. The bubble is "streamlined" by the motion of the solar system through the interstellar gas. *(Diagrams from NASA/Ames Research Center's "The Ames Astrogram.")*

Jupiter. From its data, it was learned that Jupiter is a "liquid" planet, that it has a huge pulsating magnetosphere and tremendously powerful radiation belts. *Pioneer 10* made the first mass and density measurements of Jupiter's planet-sized moons, the first imaging of the great red spot and the belts and zones later detailed by Voyagers I and II, and the proof of origin of the gegenschein and the zodiacal light.

At the present time, the *Pioneer 10* is more than 2½ billion miles from Earth *(Figure 1)*. It is expected that the NASA/Ames team will be able to track the *Pioneer 10* spacecraft out to 5 billion miles. That is, if the Reagan Administration can be persuaded to cease its whittling away space exploration funding. It would be a tragedy of the greatest magnitude if the very tiny expenditure necessary to continue monitoring *Pioneer* should not be approved. There is the possibility that a tenth planet may be discovered. Such a far out member of our solar system is conjectured to exist.

Pioneer 10 is traveling down the tail of the sun's heliosphere teardrop. It is seeking the skin of the heliospheric bubble *(see Figure 2)* — the boundary between the atmosphere of our sun and true interstellar space. Scientists believe that this may lie between 5 and 10 billion miles from the sun. □

Space Center ARS operates WB4ICJ *only*

The Space Center Amateur Radio Society (SCARS) operates station WB4ICJ, *only*, at the Kennedy Space Center. *All correspondence for Amateur Radio stations other than WB4ICJ will be returned to the sender.*

Our club station endeavours to be operational during all manned space launches and QSLs for contacts *only* with WB4ICJ via P.O. Box 21073, Kennedy Space Center, FL 32815.

All mail may not be answered because our club is small and has a limited membership, which in most cases is launching the vehicle. □

Hanging on the wall in the background are photos taken by Norm Chalfin, K6PGX, which were sent to West Germany for the AMSAT portion of an exhibition, which is shown here. Among the pictures are posters of the first OSCARS. Photo was sent by Heinz-Juergen Wehle, DB5ER.

More on Salyut-7

As a follow-up to the information printed about Salyut-7 Soviet space station astronauts, July issue, page 31, Dave Scott, W6DFS sends us this:

In other satellite deployment operations, the Soviet cosmonauts on board Salyut-7 recently deployed a small 62-lb. spacecraft through the same airlock that is used routinely on Salyut missions to dump refuse.

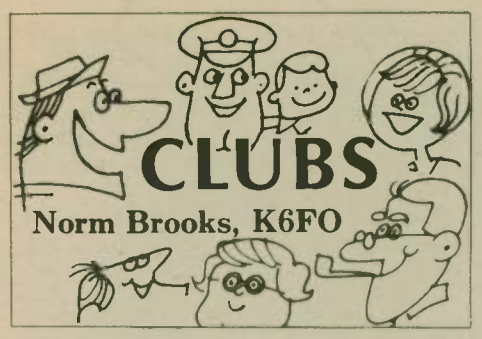
The *Iskara 2* spacecraft is an Amateur Radio relay satellite built by the student design office of Moscow's Ordzhonikidze Aviation Institute. It will be used by Amateur Radio operators in Soviet bloc countries to relay transmissions to each other.

The *Iskara 2* is the twin of an initial spacecraft in the series launched earlier as a piggyback spacecraft that was carried into orbit on a larger Soviet satellite.

The *Iskara* is being controlled from two ground stations — one in Moscow and another at Kaluga. Its 335 × 343 km. (208 × 213 mi.) orbit is nearly identical to that of the Salyut-7 space station.

—Aviation Week & Space Technology, 24 May 1982 □

Share your knowledge with your fellow amateur and Worldradio reader . . .



Those call signs and W5YI

It seems I stirred up a hornet's nest when I talked about the new 2×1 call signs in my June 1982 column. Several amateurs have written to tell about upgrading only after being able to predict the call signs they would get.

I told you how Fred Maia, W5YI predicted call signs and he, too, received a lot of mail. However, for some reason, his zip code came out wrong. Fred writes that it appears much correspondence was lost because of this. If you have written to Fred and have not received a reply, write again. He has answered all correspondence received. Here is his address, including the correct zip code: Fred Maia, W5YI Report, P.O. Box 10101, Dallas, TX 75207.

New clubs

New clubs are popping up here and there, and we are especially glad to hear from them. Here's a recent example:

"Our club is the Chehaw Amateur Radio Society, named after the Chehaw Wild Animal Park. It is a relatively new club, chartered in January 1982, with affiliation granted by the ARRL in March 1982.

"At the present time we have 35 members, with all members primarily interested in DX, RTTY contesting, netting, and all other aspects of low-band operations. Presently, our prime concern is the up-and-coming Field Day and obtaining the highest score possible.

"Also, in addition to having fun with our hobby, we aid and assist the community in its various activities. On 24 April 1982, we set up a station at our local Boy Scout Fair; this station consisting of a low-band, 2-meter, and computer setup. Some 200 contacts were made by the boys, ranging from local, stateside, and several DX. All contacts were confirmed on a computerized QSL card.

"On 15 May, of this year we gave communications for some 11 hours during a local bike ride; the course being from Albany, Georgia to Fort Gaines, Georgia and back again — a distance of 100 miles.

"Norm, we thought you might like to know there are new clubs being formed, and in addition to having a good time with a hobby, there are still clubs who try to fulfill the purposes of "Amateur Radio."

ROBERT B. McHUGH, KB4AJ
Chehaw Amateur Radio Society, President
3006 Winterwood Drive
Albany, GA 31707

Thanks for your letter, Robert. It sounds like the Chehaw Club is off to a good start. Good luck to you all, and if you publish a newsletter, put us on your mailing list.

Newsletters

We get over 200 Amateur Radio club newsletters here at **Worldradio**, and we read them twice! First, our editorial staff looks for material that might be of value to be republished in **Worldradio**. Then, they come to me for another scan for items of value to other clubs.

Now, a little arithmetic will tell you that if I read every club paper completely, I wouldn't have time for anything else. So I have to scan them and it would be easy to overlook something worthwhile.

I'm asking for your help. If you have something reported in your newsletter that you think might be of interest to the rest of the world, point it out to us. Encircle it with bright colored pen, or pin a note on it saying "look" or something. We'll appreciate your help in giving your club the publicity it deserves.

What the clubs are doing

Albany Amateur Radio Club, Albany, GA — Program — "The Art and Technique of Negotiating" by Chuck Nobes, K8UTY; **Virginia Beach Amateur Radio Club,** Virginia Beach, VA, — put on an Amateur Radio demonstration at the Kempsville Recreation Center. Al W4SYF demonstrated a complete 2-meter solar-powered station; Carl Kent, WD4MIZ and his Apple Computer kept the kids busy; Pat Kuykendall, WB4SFY set up a complete RTTY amateur station. **The Lee DeForest Radio Club** of Hemet and San Jacinto, CA — Program — Ed O'Hara, N6DFO gave a talk and pictures of his two years in the Peace Corps in Africa, setting up electronic schools. **Wood County Amateur Radio Club,** Bowling Green, OH — Program — a guest speaker from the weather service. Several county officials were invited to the meeting to remind them of the value of Amateur Radio in storm weather reporting. **Fox River Radio League,** Aurora, IL — Program — Bob Roehrig, K9EUI discussed basic radioteletype. **Marissa Amateur Radio Club,** Marissa, IL — Field trip to the Wicks Pipe Organ factory.

The Bill Gremillion Memorial Radio Club, Newnan, GA — Morris Sandlin, WD4PAH and Mike Dombrowski, WD4PAG recently presented a program about Amateur Radio to the Science Club at O.P. Evans Junior High School. **The Amateur Radio Association of the Tonawandas,** North Tonawanda, NY — Program — a demonstration by Angelo Zino, WA2UJR, of radio-controlled airplanes. **The Pittsburgh Repeater Organization,** Pittsburgh, KS meets at the KOAM-TV Studios. **The Tri-City Amateur Radio Club,** Groton, CT is putting on a Library Demonstration, along with a CB to 10-meter conversion workshop. (What's being converted, the CB operator or the equipment?)

The Frederick Amateur Radio Club, Frederick, MD is considering setting up a Widow's Assistance Committee to help survivors of deceased amateurs in appraising and disposing of Amateur Radio equipment. **The Amateur Communications Association, Inc.,** of Leonia, NJ — also known as MetroPlex — had a special guest speaker, Bernard Reportela, WA2LQQ, ex-VP of AMSAT, speak on "Talking through Amateur Satellites." **The Swift Creek Amateur Radio Society,** Colonial Heights, VA — Program — Earl Bishop, N4EXQ, "Insurance for Amateur Radio Operator's Equipment" with comparisons of ARRL's versus homeowner's policies.

The Genesee Radio Amateurs, Batavia, NY — Program — Richard Brossard, WA2BQL spoke on beam construction for the beginner, including some details on towers and their construction.

The Mitre Bedford Amateur Radio Club, Bedford, MA auctions off the club-owned Callbooks to the membership when it gets new ones. **The San Lorenzo Valley Repeater Club,** Felton, CA holds meetings in the California Division of Forestry building. Speaker Herman Baker, N6ARP discussed the early decades of communications starting with Marconi. **The Boeing Employees Amateur Radio Society,** Seventh District, sponsors an Explorer Scout Post.

There will be no toothaches at the **Long Island Mobile Amateur Radio Club,** Syosset, Long Island, NY. Dr. Murray Comassar, WB2DXD and Dr. Vincent

(*please turn to page 42*)

YOUR LOCAL RADIO CLUB

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.

ALASKA

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

ARIZONA

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

Tucson Repeater Association
P.O. Box 40371, Tucson, AZ 85719
2nd Sat/monthly — 7:30 p.m., Pima Co. Bldg.
Net Thurs 7:30 p.m. 146.22/82 (146.28/88 & 147.69/09)
(602) 747-8903 or 899-4776

CALIFORNIA

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

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

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

Mt. Diablo Amateur Radio Club (MDARC)
Grace Presbyterian Church
2100 Tice Valley Road
Walnut Creek, CA 94598
3rd Friday/monthly - 8:00 p.m.

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

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

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

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

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

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

Sonoma County Radio Amateurs, Inc.
Box 116, Santa Rosa, CA 95402
Hank Davis, W6DTV (707) 823-7885
County Office of Emergency Service
1st Wednesday/monthly — 8 p.m. rpter 146.13/73

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

Tri-County Amateur Radio Association
Pomona First Federal Savings and Loan
399 N. Garey Ave., Pomona
Talk-in 146.625/025 For info. call (714) 985-8184
2nd Monday/monthly — 7:30 p.m.

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

CONNECTICUT

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

FLORIDA

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

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

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

GEORGIA

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

HAWAII

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

ILLINOIS

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

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

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

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

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

INDIANA

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

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

IOWA

Muscatine Amateur Radio Club
Info: Bruce Dagel, WB0GAG (319) 264-3320
Meets: Basement Meet. Rm., Public Safety Bldg.
Muscatine, IA
1st Monday/monthly — 7:30 p.m.

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

MARYLAND

Frederick Amateur Radio Club
Frederick Electronics
Vernon Simmons, KA3CVD
(301) 371-5735 after 1800 except Thur.
2nd Tuesday/monthly — 2000

MASSACHUSETTS

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

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

MICHIGAN

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

MISSOURI

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

NEW JERSEY

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

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

NEW YORK

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

Genesee Radio Amateurs, Inc. (GRAM)
PO Box 572, Batavia, NY 14020
State Civil Defense Center, Batavia
(behind NYS School for the Blind)
3rd Friday/monthly — 7:30 p.m.

Long Island Mobile Amateur Radio Club (LIMARC)
146.25/85, 147.975/375, 223.22/.224/.82, 444.125/449.125
Membership: Jerry Kamen, K2QXH, 44 Robin Lane, Levittown, 11756 Net every Mon. 8:30 p.m. 146.25/85
Meets 1st Tues / 8 p.m., H.B. Thompson, JHS, Syosset

NEW HAMPSHIRE

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

NORTH CAROLINA

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

OHIO

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

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

Champaign-Logan A.R.C., W8EBG/R
Joe Palmer, KS8M, President
2 Meter Net, 147.60-100, Tuesdays, 8:30 p.m.
Dinner Meeting, 1st Thursday / monthly
Dajolees Restaurant, West Liberty, OH, 7 p.m.

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

NOARS (Northern Ohio ARS, Inc.)
P.O. Box 354, Lorain, OH 44052
K8US (216) 988-2345/near OH T.P. Exit 8
3rd Monday/monthly — 7:30 p.m.
K8KRG/R 146.10/70 -144.55/145.15-449.8/444.8

OREGON

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

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

SOUTH CAROLINA

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

TENNESSEE

Lakeway Amateur Radio Club
Roy A. Zeigler, Activities Mgr.
Rt. 11 Box 61, Morristown, TN 37814
State Area Vocational School
Last Thursday/monthly — 7:30 p.m.

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

TEXAS

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

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

UTAH

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

VIRGINIA

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

WISCONSIN

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

WEST VIRGINIA

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

Ultra-sensitive field strength meter

There are many field strength meters available commercially, but few are sufficiently sensitive to be used in the recently popular QRP operations, especially to determine a beam's characteristics.

Additionally, the type of sensitive FS meter which is described here can be used to detect RF wherever it may be. This would apply to neutralization of a transmitter, to determine if the oscillator of a receiver is working; ditto the same in a transmitter, and a host of other uses where you wish to determine if RF is present.

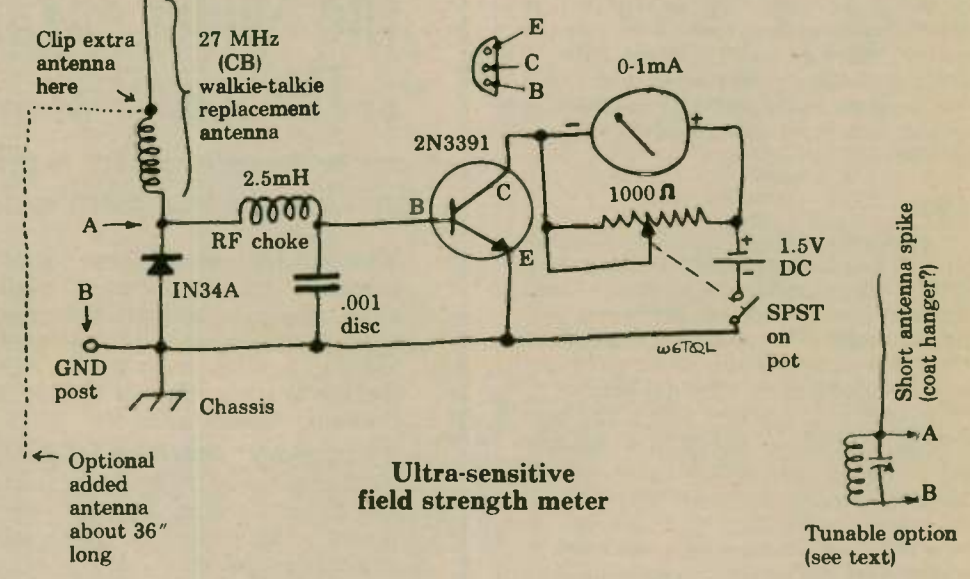
antenna) will provide sufficient pickup for the FS to work.

Almost any diode can be used in place of the 1N34A which, however, worked the best. But the 2N3391 cannot be replaced with any of the common substitutes. General Electric makes the 2N3391, and it is available from Hamilton Electronic Sales, 10912 W. Washington Blvd., Van Nuys, CA 90230 for about 49 cents each.

The RF choke can be a miniature, such as the Miller 70F253A1. The 0.001uF capacitor can be any good disc with a rating of about 100V. The antenna and coil come as a unit, which is a replacement for CB handi-talkies. It contains the coil and has a spike antenna. It is mounted on a binding post, which is probably the easiest way to do it.

A single "D" cell powers the unit and the battery will last its normal shelf life, since the draw is very minute. However, to be safe and to keep the drain at its lowest, a switch is used as a part of the 1 kilo-ohm pot. Construction is straightforward and should present no difficulties. Our unit is enclosed in a mini-box, which makes it handy to carry and to use.

By removing the CB antenna coil and spike, and substituting a small coil of proper size shunted by a small variable capacitor between the antenna post and



Ultra-sensitive field strength meter

Tunable option (see text)

The meter shows relative RF strength only, and is not linear at all. So while it may show a reading of, say, 0.5mA for an RF carrier, it will run off scale with AM modulation and also, perhaps, with SSB.

However, it is sensitive. So sensitive, in fact, that it will show TV and radio signals in the air surrounding your home when used with the added antenna. This is made by straightening out a wire hanger and soldering a needle-nosed clip to one end which is bent at right angles for about 3 inches. Clipping this antenna to the uppermost end of the antenna coil (in the CB handi-talkie replacement ground post, a tunable-sensitive FS meter is created. The coil and capacitor should cover the desired frequencies. A small antenna can then be used and clipped on the coil at the hot end.

Disposing of the antenna entirely and substituting a short piece of wire will make the meter into a sensitive "sniffer" which is handy to use around the shack. The length of the sniffing wire must be kept as short as possible while still working, so as not to read extraneous RF fields. — W6TQL
— Ham Hum □

QRP Gold Pan 1981 winner

An impressive ceremony was held in honor of the 1981 Gold Pan presentation to Matsuyoshi Nakajima, JL1GUL by chairman of the award and 1979 winner of the QRP Gold Pan Award — Asob Mori, JF2BBF. Matsuyoshi scored a total of 99 points during the contest.

JL1GUL (nickname is "Mark") has been a flight engineer with Japan Air Lines for 16 years. His wife is Noriko, son is Shigeru and his daughter is Yuko.

Also present at the ceremony were John Trent, KL7DG, QCWA Northern Lights founder; Jerome George, KL7PU, Chairman of QCWA Chapter 92; Alfred Pacheco, KL7EKZ; and Gerald Ganopole, WL7AME.

Second place winner in the contest was Yasuo "Yasu" Mikashima, JR6LDE (70 points) and third place winner was Shigeru Matsui, JF2LAW (45 points). They were each awarded small models of Alaskan totem poles.

John Trent, who started this contest in 1979, writes us, "I doubt if I'll launch a third QRP Gold Pan Award in 1983 after 1979 and 1981. Anyone else is welcome to pick up the torch! The thrust has been to better world understanding through QRP CW into all sectors of the globe. 'Light a lantern of peace and understanding throughout the world by Amateur Radio.'
(Northern Lights QCWA Chapter 92 maxim) □

SUBSCRIBE TO WORLDRADIO; see page 11

There is one thing certain that you can always say about a high frequency Amateur Radio maritime mobile installation: You must try it to see how it's going to work. That's right, sometimes maritime mobile installations will play some fancy tricks with you after everything is installed.

After 25 pre-summer installations, let's share some notes about typical SSB Amateur Radio installations aboard power and sailboats.

Getting 12 volts DC to the set is straightforward. Just make sure that the #8 or #6 wires go directly to the battery. Running the DC power input wires to a fuse panel generally spells RF feedback in the end. Run those power leads directly to the battery.

Grounds

It is imperative that you use only copper foil for grounding your equipment. Small wires — even battery cables — tend to negate good ground results, where copper foil tends to enhance the groundplane effect. The copper foil should go to any large area for a good seawater ground.

For sailboats, the keel bolt is the best ground. If that is impossible, running quarter-wavelength ground radials made of this copper foil below the waterline will help considerably.

For powerboats, a good ground will also consist of these quarter-wavelength radials below the waterline. Good grounds would also include metal water tanks, through hulls, copper pipes, engines, and any other good mass of metal below the waterline.

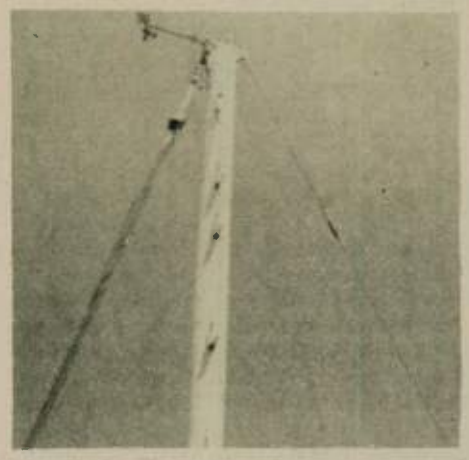
A good test of your ground system is simple. Tune up your set and antenna system for maximum power output at resonance. Now go to the RTTY mode and key down for 10 seconds for maximum power output. Take a regular lead pencil and touch it to any metal section of your transceiver or tuner. If you detect a small spark or arc, you do not have enough ground. Your equipment is "hot" and additional grounding is necessary. You should never be able to pull a spark from your equipment while sending out a continuous wave.

Antennas

After all of these installations, may I say that trying to predict the efficiency of an SSB ham antenna is almost impossible. Usually, the longer the antenna with a good ground source, the better it will radiate. Usually.

In many sailboat installations, a backstay or an inverted Vee antenna transmits and receives much better than mobile whips on the stern.

Now and then, we find that mobile whips on the stern out-perform an inverted Vee or backstay! Why? Beats me! Possibly, the other rigging may be cancelling out signals that should be going to the backstay or inverted Vee. All I know is that several sailboats with good ground systems up to the stern mobile mounted whip exhibit better signals on both transmit and receive than on a backstay.



Inverted Vee — always a good performer

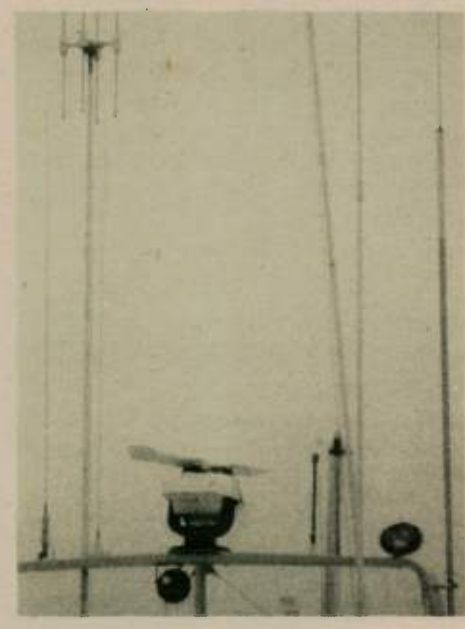
It's easy to tell whether or not an antenna system is working up to par. Simply tune the 20-meter band during daylight hours, or scan the 40-meter band at night. If the signals are not peaking above S-9, something's wrong — and it probably isn't band conditions.

Try this simple test — 20 meters during the day, or 40 meters at night. Is your S meter constantly below S-5? If so, you need a different type of antenna system.

Which one is best? Generally, the longer the better. Some powerboat operators have chosen the 23-foot Morad pre-tuned ham antenna. Manufactured in Seattle, Washington by Morad, Incorporated, this antenna works well if it has a good grounplane beneath it. It needs to see a 50 ohm match.

Mobile whip antennas for both power and sailboats work out well *ONLY* if they have a good groundplane beneath them. A whip off the stern with just a small ground wire won't tune up at all. If you have a mobile whip that won't tune, try this simple test:

Take a roll of aluminum foil and attach it to a ground post at the base of your stern-mounted non-tunable mobile whip. Let the foil go into the drink. Now try tuning up the whip. Presto, it resonates right in the center of the band, and small tip adjustments can be made. Now take off the aluminum foil. Bam, it won't tune up at all.

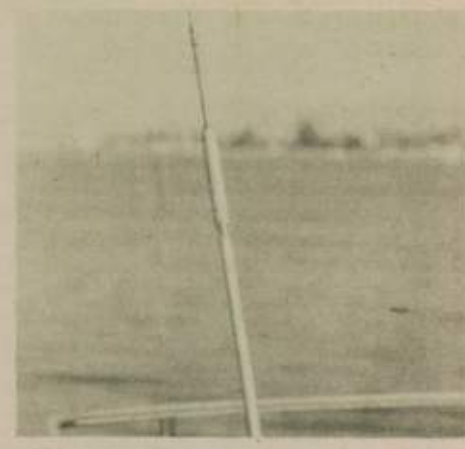


Power Morad antenna on right

Now, see the importance of a good groundplane beneath the whip? What do you do now? Try running copper foil below decks, underneath the whip. Ground the rail. Glass in copper screen below the deck that the whip is mounted on.

We are trying to create a 50 ohm feedpoint, and all this copper foil and screen will help.

No amount of adjustments on the whip will easily compensate for an incorrect feedpoint resistance.



Whips for HF set-ups work well.

Traditional backstay antenna

Experiment

Whatever you do, approach this antenna and ground subject in a positive manner. Do some experimenting. Try a whip

and then a dipole. Now try an inverted Vee and a longwire. Try tuning up an insulated stay. Try tuning up a piece of wire back aft, and then forward. Try — try — try.

By experimenting with antennas aboard your boat, you will find one that will work super.

In my notes, I have found that I have discovered super signal strengths from the following marine-type antennas: an insulated steel stack; a wire run around the cabin top; an insulated backstay; an inverted Vee; a sloper; a dipole hoisted aloft; an insulated toe rail; and a mobile whip.

In other words, there is no telling what might be the best combination for your particular boat. One thing for sure — you will need a good ground. After that, try experimenting.

You won't even need to transmit — just take a look at your signal strength meter for an S-9 plus signal on 20 or 40.

One final note — if you have ignition noise in your system, there is a new interference checklist manual now available, free of charge, by writing Marine Technology, 2722 Temple Avenue, Long Beach, CA 90806.

In their manual, they call out different types of noises, and name which types of filters are necessary to cure that noise in your ham set.

More next month on noise. Good cruising! □

4-land mobile Spider antenna

Maritime mobile in the Caribbean

Brian Eddy, VE3KXF

The first thing any amateur thinks about when he is going away is what kind of radio contacts he will be able to make while on his holidays.

Our cruise ship, The Holland American Lines *Statendam*, left Miami on 23 March. The first thing I did was contact the captain and radio officer to ask permission to operate my Tempo S1 on board ship. They immediately gave me permission and after being at sea for two days, I got up at 6:00 a.m. as we were approaching the island of Haiti and was able to access the repeater on 146.94/34.

I made my first contact while about 50 or 60 miles out to sea with Daniel Craan, HH2MC.

The next port of call was the Island of Curacao and here I contacted Harold PJ2PE while the ship was some distance from the island.

The next two days we spent at sea, and there was not too much opportunity for operating the radio until we arrived at the port of La Guaira in Venezuela. Here I was able to contact one of my satellite friends Antonio YV5APF. This was a prearranged contact on one of the repeaters on 146.97. I also had the opportunity to talk to Jose Lucena, YV5AIZ and to mobile Pedro Villaren, YV5DUK.

There seems to be a lot of activity in Caracas with several repeaters all having extended range from the tops of the mountains. I was able to talk to Antonio while leaving port and going out to sea. I would estimate that we were close to 100 miles out to sea before I lost the repeater.

The following morning we stopped at beautiful Martinique, where I was able to talk direct on 146.52 to Gerard FM7BY and his friend Gilles Jeannet, FM7AD.

The next port of call was St. Thomas in the Virgin Islands, and here I contacted Herb Schoenbohm, KV4FZ, who lives on the island. He gave us a rundown on the local repeaters. While in St. Thomas, I talked to two amateurs living aboard yachts. Arnold Baird, VE7CJN has been in the islands for two years, living aboard a 40-foot sailing vessel. Les Scott, KV4EY has traveled extensively through the Caribbean aboard a 50-footer.

I should also mention that while aboard ship, I was able to visit the radio room to see the extensive radio equipment and the antenna system which I found very interesting.

I strongly recommend that any amateur traveling on a cruise or abroad have a small hand-held radio with him. I can say without reservation that having my radio with me added greatly to the holiday enjoyment.

—Toronto Skywide RC, CANADA □

A free cruise

"The MARS station is now open for phone patches to the States." This familiar announcement over the public address system on board the Norfolk-based *USS Saipan* (LHA-2), is usually a welcome sound to Saipan sailors. The announcement means it's time to talk to the family and friends, but how is this done from the middle of the Atlantic Ocean?

The Military Affiliated Radio Service (MARS) is a Marine Corps/Navy organization operated by FCC licensed Amateur Radio operators and volunteers aboard U.S. Navy vessels. An operator on board a deployed Navy ship can contact a ham operator, and in turn the ham operator phones the local telephone operator who makes the connection with the caller's wife, parents or friend. The MARS operators provide this service as a hobby with the only charge being that of a collect local or long distance phone call from the shore-MARS station.

Recently, while *Saipan* was in Port Rota, Spain making preparations to return to the United States after a six-month deployment, a new crew member checked on board. Harry C. "Hap" Hansen, WA3YYR/NNN0YPD of Lutherville, Maryland made the trip to Spain to join *Saipan* for a ride back to the States. Hap was invited to ride *Saipan* by a "radio friend," Rick Grotkier, FTG2. Grotkier, one of *Saipan's* MARS operators, came in contact with Hap over the "airwaves" in August 1979 while *Saipan* was off the coast of Nicaragua for contingency operations during that country's escalating civil war.

Hap started with MARS doing regional and local nets but enjoyed the "afloat program" much more.

The "afloat program" deals with long distance message traffic from ship to shore. Hap's hobby has been most beneficial to *Saipan* as he has processed over 3,000 calls for *Saipan* crew members alone. Communications with family and friends is a basic need, for all of us. A deployment of half a year's time makes that need realized all the more. A lot of Hap's time is devoted to the "afloat program," as well as to his full-time job back in Lutherville, but Hap says, "The afloat program makes it all worthwhile."

Saipan sailors made Hap very welcome aboard and enjoyed his visit as much as he did. But this is far from Hap's first time at sea. A member of the Merchant Marine between 1941 and 1947, Hap has a few sea stories of his own. While most *Saipan* sailors were looking forward to getting back to the States and home to families and friends, Hap saw it as the end of a unique experience, and a most enjoyable one at that.

The officers and men of *Saipan* appreciate and thank the men and women at home who are giving their time to do this vital job to preserve morale and keep an open link to family and friends at home. To those folks like Harry C. "Hap" Hansen, thank you!

— Public Affairs Office of the USS Saipan (LHA-2) □

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

Happy Flyers

HAMS & PILOTS

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

INTERNATIONAL COMMANDER, **Hart Postlethwaite, WB6CQW**
1811 Hillman Ave., Belmont, California 94002 (415) 341-4000
International Vice Commander, Paul Hower, WA6GDC
Box 2323, La Mesa, California 92041 - (714) 465-5288

DF seminars continue

We have conducted two major DF seminars since last month's column. The first was for the San Mateo Sheriff's office. As a part of their regular training program for emergency preparedness, a special Saturday call-up by telephone was conducted. All portions of the volunteer Search and Rescue (SAR) units were "called up." This included Mounted Patrol, Mountain Rescue, scuba divers, dog teams, communications teams and the Air Squadron. Each division put on a display of their various capabilities.

It was interesting and informative to see what great skills are combined by the various volunteer organizations in order to save lives. The rigging skills of the mountain rescue workers were amazing. In a very short time they had rigged pulleys between two trees and were hauling people up and down the hillside. The dog teams had such rapport between handler and dog that one almost felt they communicated by some unseen methods.

The sheriff's communications van was a work of art. It was put together with volunteer work by local Amateur Radio operators who provided both communications capabilities and extra law enforcement volunteers. All had completed POST (Police Officers Standard Training) and invested much time and money to be able to provide this valuable service. Mike Bach, WA6FFC; Arnold Vavken, WB6RAY; and Steve Ladas, WA6LLQ are among the amateurs responsible for the finished product. The van has beautiful wood-grained panels with custom-mounted installations for both Amateur Radio and public service frequencies. They have an additional feature that may be unique for this type of emergency vehicle. They have a fully functional TV transmitter and receiver arrangement in the amateur band. Needless to say, everyone was very impressed.

My job was to answer questions about the emergency locator transmitter (ELT) that is used for downed aircraft. It is amazing how little many people understand about this very important, life-saving 80mW AM transmitter (that is automatically activated on impact). They have been in use for over eight years now and are mandatory for all U.S. piston-powered planes and many international planes. It has proved to be one of the most effective means of finding a downed plane in remote areas which has survived the crash. Interestingly, if it survives, there is a good chance that an occupant may be alive and needing help. Sadly enough though, there are still not enough volunteers active in SAR (with an understanding of RF and DF), to properly take advantage of the ELT and DF.

Protection for law enforcement in a hostage situation is provided by portable remote TV camera equipment, shown here by Arnold Vavken, WB6RAY, of the sheriff's reserve communications unit.

One of the portions of my seminar that seemed to surprise law enforcement officials was the relative ease with which one can locate the source of a signal (when one knows what one is doing). Part of my law enforcement work has been to find other types of transmitters. We have been able to identify the exact house containing an activated transmitter (from my airplane). The policeman with me was amazed. Many had no idea that we can track a moving car from a plane that is very high in the sky.

We find it amazing that after all this time, three- to five-day searches for these ELTs continue. Another fact that points out the need for improvement is that the national ability to locate ELTs by airborne DF (direction-finding) is so poor that very few SAR teams use their airplane DFs to locate ground crews in the mountains and help direct them to the crash sites. *We need more skilled amateurs to become involved in Search and Rescue DF.*

CAP Wing Conference

Two weeks after the sheriff's exercises, California held its Wing Conference in the San Francisco Bay area. Volunteers came from all over the state at their own expense to learn and improve their skills. My part was to teach the realities of VHF RF propagation as it relates to locating AM signals at 121.5 megs. Just because a volunteer is a pilot and can talk on the airplane radio, does not make them DF capable at VHF. The greatest operator problem appears to be expecting the VHF DF to work like the low frequency ADF (automatic direction-finder) in their plane.

After nearly six years of being involved in SAR, and speaking to thousands all over the world, the greatest single problem I find is that of non-working DF installations. I cannot overstress the value of adequate test flights on known targets — and from various altitudes and compass directions. This should help even the non-technical to see if their DF seems to be working. If you cannot find a known target, how can one expect to find a hidden transmitter or jammer?

Hart Postlethwaite, WB6CQW — of the sheriff's air squadron — shows the devices he has perfected to speed searches for downed pilots.

New DF information

Another new DF kit has become available in the Los Angeles area. It is called the Super DF and is the work of Russ Andrews, K6BMG. I have only seen his book, and he has done a fine job there. I found a number of interesting comments in it. I suspect he has read much of my material. Of great importance is his statement not to believe any DF bearing taken when not moving. This is very important to the use of the electronically rotating DF units. Due to the technical methods used in providing digital and LED displays, multipath can give you completely erroneous bearings. He later reminds the DFer again about this fact when speaking of hilltop bearing plots.

DF and receiver alignment

We mentioned in an article awhile back that it appears one of the problems people are having with DF units has to do with receiver alignment. Most new methods use informatiom from some type of antenna switching. This must come down the RF/IF strip. If it is off to one side, it can affect your DF display. K6BMG has a nice section in his book on how it has been proven to affect his DF kit.

My health has improved and Dr. Cook's operation was a success. I am looking for work and would appreciate you passing it on if you know of anyone who might be interested. Thank you. □

Search for downed aircraft

Paul Turkheimer, WA6NKL

On 23 March, an F-4 aircraft crashed 70 miles from Nellis Air Force Base, Nevada near the town of Rachel. Forty minutes after receiving the call, Ken Johnson, AFA6LM and Robert Geske, AFF6NV were on their way to the crash site in the emergency response vehicle. This was approximately 70 minutes after the crash was reported. Both HF and VHF communications were used from the rugged mountain terrain back to Nellis. Later, the crash site personnel was instructed in the use of the communications system and the activity was turned over to AF personnel.

In addition to Messrs. Geske and Johnson, Ken Mulkey, AFB6HA; John Parker, AFA6SQ; and Jim Olsen, AFB6EH monitored the net for over a week while the crash site crew went about its task. This is a typical demonstration of the speed with which a well-trained, experienced MARS crew can respond and then modestly fade into the background till the all-too-often next time. □

Vern Hansen, AAA9W WB6UWQ

The following article outlines the Correspondence Course Programs for Army MARS, Navy-Marine Corps MARS, and Air Force MARS.

Army MARS members are eligible to enroll in the U.S. Army Communications-Electronics Correspondence Course program. The correspondence course program is administered by the U.S. Army Training Center in Newport News, Virginia. Excerpts from their catalog (1978 edition) are as follows: the Army Correspondence Course Program (ACCP) meets a broad group of individual training needs.

A graduate of a correspondence course is considered equivalent to a person graduating from a parallel resident program. Enrollment in ACCP courses is free of charge. No fee is charged for instructional material used according to directions. Certain specific items must be returned upon completion of some subcourses. Loss of credit and payment for abused material may be necessary in unusual cases. Mailing costs will be paid by the school. The subcourse is the basic ACCP instructional unit and is usually made up of one to nine lessons, plus an examination.

Examples of a few of the courses (and subcourses) available are: Basic Electricity Course (basic mathematics, algebra, electrical fundamentals — DC and AC, etc.), and Basic Electronics Course (electron tubes and applications, semi-conductor devices and applications, power transistors, etc).

If you are interested in taking one of these very worthwhile courses, contact your state director, and an enrollment application and catalog will be sent to you.

A Navy-Marine Corps MARS member may be designated as a NAVMARCORMARS operator upon meeting the requirements for the class operator listed below. Before a member attains the higher class NAVMARCORMARS operator, he must first meet the requirements and have been designated to those of the lower classes. It should be clearly understood that the rating of NAVMARCORMARS operator is strictly a means of recognition and does not carry any specific responsibility or authority in the NAVMARCORMARS organization.

The courses noted above are required for attainment of NAVMARCORMARS operator; however, they are very valuable to the Novice amateur to increase his knowledge and skills as an operator and technician. The corresponence courses cover — in great detail — procedural and technical details which enhance the member's understanding of military communications, and therefore enables him to have the basic knowledge required to interface with Navy-Marine communications should the occasion arise.

One step in the attainment of NAVMARCORMARS operator is the completion of various applicable Naval correspondence courses, such as, 'Naval Electronics Part IA', 'Radioman 3 and 2', 'Naval Electronics, Part IB', 'Electronic Technical 3 and 2', etc. These correspondence courses are made available to the Navy-Marine Corps MARS member through application via their area coordinator and regional director, who in turn submits the appropriate paperwork to the Naval Education and Training Support Command located in Orlando, Florida.

Air Force MARS members who are interested in obtaining information pertaining to their correspondence course program should write to: Chief, USAF MARS, ATTN: HQ, AFCC/XOPRM, Scott AFB, Illinois. □

Off the Air

(*continued from page 18*)

Handle traffic and worthy phone patches; make friends for Amateur Radio.

Guard your prerogatives in local zoning and tower construction matters, but steer clear of neighborhood flaps over towers and RFI. Solve these problems yourself, out of court; thousands of amateurs are finding this possible.

Experiment. Try new modes, frequencies and equipment; write an article; help raise the level of our technical contribution and image.

Fix your repeater so it will work through power failures; educate the users to the importance of making a public service contribution, then demonstrate it and offer your services to city or county officials for public event purposes and as a backup in case of emergencies.

Be an ambassador of good will. Make your international contacts count for something more than just DXCC. Make friends, earn their respect and find ways to help our overseas colleagues.

If you travel, visit foreign amateurs and get to know them in person. Applaud their accomplishments; ask yourself whether you would have done as well in their circumstances; assist them with their equipment problems.

If you take part in a DXpedition, try to involve native amateurs if there are any; show them, as well as local citizens and officials, that you appreciate and respect the privilege of operating in their country. Don't show off or press for privileges not normally granted to locals; obey their laws to the letter.

And, finally . . . observe the "Three Bs" of Amateur Radio:

Belong. Support with your membership your local Amateur Radio club and your national society.

Be active. Operate and help demonstrate an active occupancy of our valuable frequencies.

Behave. Set a good example on the air. Need it be said? Non-amateurs, including those who will influence our future, may be listening. Free speech doesn't equate to irresponsible speech. Can you suggest others?

73,
VIC CLARK, W4KFC

Comments on the foregoing editorial are invited. They should be directed to Vic Clark, W4KFC, 12927 Popes Head Road, Clifton, VA 22024.
— *Auto-Call* □

Speaking out on '20-meter stretch'

Here is a letter one amateur wrote, voicing his opinions on Docket No. 82/83 (see "20-meter stretch," page 1, April issue).

To the FCC and ARRL
Re: Your proposal to increase the SSB frequencies 14200 to 14150 kHz

The SSB expansion is a very good idea, but the full 50 kc should be opened to Extra *and* Advanced, the same as the balance of 20-meter phone. All of our bands are so complex it takes a Philadelphia lawyer to keep them straight. A suggestion for expansion of 20 meters some years ago, giving all the expansion to Extra, was killed as it should have been.

I wonder if the late-comers in ARRL and FCC know the history of the phone bands. For many years, back to the mid-1930s, Class A (now Advanced) was the top phone license. A really stiff exam qualified users. A Class B band was used (now General) mostly on CW and one phone band — 160 meters — was allowed. Those wanting to use 80, 40, 20 meters (15 was not used yet) had to obtain the Class A license for phone.

Then a few years ago, the powers that be ruled that Class B (Generals) could operate on 80, 40 and 20 phone. *A loss to the Advanced* because of greatly increased band congestion.

Now comes upgrading. The new Extra license took more of our frequencies — 25 choice frequencies on all bands. Foreign countries in demand here always work the low end of bands. *A loss for Advanced.*

Then the Extra got a nice slice of all the choice phone bands except 10 meters (must have been an oversight!). *A loss for the Advanced.* Now look back and count the losses. Discrimination?

FCC has always maintained they never took away any licensee privileges.

I am 80 years old. Many Advanced operators like myself cannot copy CW at

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20 words per minute, but ARRL has always pushed CW. Listen to the bands. On 20 meters especially, SSB signals are always crowded, but unless there is a contest on the CW section, there are large gaps between stations. 20 meters does need help, and it is our most dependable band — especially in future years. I cannot even write 20 wpm, and I am sure that thousands of operators are like me. I have practiced CW hundreds of hours in the years past to no avail. Sure, I can copy code, but not at 20 wpm. That is the silly requirement of the Extra exam. If you want CW for the Extra privileges, kill the 20 wpm and make CW an optional endorsement. These high speed boys can easily get it.

The present Advanced ham, like myself, could attain the phone privileges of the present Extra, who do not care for talking with their hands. This has been needed since the inception of the Extra license and will make thousands of Advanced operators happy. I believe it would help incentive licensing and for the first time, Extras would be ahead of the Advanced at the next count! Please help the Advanced Ops!

Respectfully,
H. FRANK JORDAN, W5EDX
San Antonio, Texas □

Police hams honored

Lenore Jensen, W6NAZ

Three Amateur Radio operators have been commended by the Los Angeles Police Department (LAPD) for "outstanding attention to duty, perseverance and observation skills," bringing about swift action which ended a three-month crime spree in Hollywood.

LAPD Officer Frank Pettinato, WB6ELR; Reserve Officer Al Westersen, NB6K; and Specialist Reserve Officer Bob Burns, N6ZH have been coordinating an on-going surveillance team effort of more than 60 volunteer amateurs for the Hollywood Division. In this case, they had been concentrating on a situation affecting coin-operated car washes.

Twenty-nine thefts from autos had occurred. A pair of suspects had been in the habit of driving into the car washes, pretending to vacuum their own car but actually seeking lone women who may have left purses on the front seats of vehicles as the ladies worked on the far side of the cars. The thieves would snatch the purses or wallets and leave in a hurry.

Descriptions had been obtained and turned over to the surveillance groups who would "stake out" at suitable observation posts.

On 30 October, Frank and Bob were in place while Al loitered in the area, dressed as a bum drinking out of a supposed bottle in a paper bag. (Actually containing his hand-held!)

Two ham volunteers — Don Rubin, KA6QOV and Lee Craner, WB6SSW, were watching from another spot. They suddenly noticed a man and woman drive in who resembled the descriptions. By Amateur Radio, they advised Frank who asked for the license number. He called it in by police radio, receiving back the information the car was stolen.

He called for a backup and took the suspects into custody. Later it was learned from the female of the two that indeed they had done other similar robberies. Earlier victims identified them positively and the pair awaits trial, unable to make bail.

The three officers accepted the commendations on behalf of the large group of volunteer amateurs who regularly provide assistance to the Hollywood Division with additional "eyes and ears." They are stationed at a wide variety of locations, night as well as day, wherever needed.

Captain Keith Bushey, KA6KJS was in charge. □

AFA6PO welcomed

Paul Turkheimer, WA6NKL

Kirtland Air Force Base welcomes Captain Harvey Sandal, AFA6PO. He arrived late last year from Hawaii where he was an active member of the Base Support Team at AGA8HI. Shortly after his arrival at AGA6KI, he met with the New Mexico State MARS Director, Bill Farley, AFF6NM, to lay plans for an Albuquerque MARS repeater.

More recently, a mobility package was developed at Kirtland which fields two KWM2-A transceiver systems in a 4-wheel drive camper. The system had several "shakedown" tests and is now ready for operation. Captain Sandal is now looking for qualified members to join the team. □

TRAFFIC

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

New blood

Several years ago, Kurt Meyers, W8IQ added up the totals of various nets as reported in QST to determine what percentage of traffic goes by voice and what by CW. At that time, CW was the winner hands down. I don't know of any recent study and so won't venture an opinion. If I did, it would no doubt be biased, more indicative of my own operating preferences than of the objective fact.

I have, however, made several studies of the number of stations reporting their monthly totals to the Section Communications Manager (SCM), as published in QST, and the total is usually somewhere between 1,000 and 1,500. Even making generous allowance for amateurs who handle traffic and do not report, it looks like less than 1 percent of the amateurs in the United States and Canada handle traffic. It might be interesting sometime to send a questionnaire to a random sampling from the Callbook, something like this:

Do you handle traffic regularly? If so, which modes — CW, RTTY, SSB, VHF, other?

Which modes do you prefer? Is your traffic formal, informal, phone patch, other (specify)?

If you do not handle traffic regularly, have you ever handled traffic?

What on-the-air activities other than traffic are you interested in?

How long have you been licensed? What is your license class? What is your code speed? Finally, what is your opinion of traffic handling as an amateur activity, and of traffic nets?

I'll bet that many of us traffic handlers, who pride ourselves on our contributions to public service and on being the principal people involved in justifying Amateur Radio to the powers that be, would be surprised and taken aback by some of the responses we would receive in reply to the last question.

"There ought to be a law against them!" "They hog the band from the rest of us and think they have a right to do it." "Why can't they just work DX (or chew the rag or compete in contests or play chess, etc.) like the rest of us?" And quite possibly we'd get other replies that would be unprintable.

A thousand questionnaires would probably turn up a half dozen amateurs who handle traffic even occasionally. Is that too pessimistic? The usual monthly total of traffic reported to the SCMs is somewhere around 120,000. I'm writing this in June, and June QST lists 40 calls in the Brass Pounders' League, and these people were responsible for over 25,000 pieces of traffic — one-fifth of the total. So maybe we had better drop the idea of a questionnaire; it would be too humiliating.

Lest this be merely an airing of gripes, however, something should be said about remedies for this situation, about how to encourage more amateurs to participate in traffic handling activities, about how to transfuse new blood into the system.

Get 'em young

The most important item on the list is to encourage beginners in Amateur Radio to take an interest in this activity, or at least to make sure they know of its existence.

Does your club have a class to help prospective amateurs prepare for their license examinations? Any class that limits itself to the examinations is neglecting its duty to the students. Such a class should not only teach them what they need to know to get their license, it should also teach them what they can do with it when they get it. Traffic handlers should do their utmost to see to it that prospective amateurs learn something about handling traffic; otherwise, who will be around to replace us when we go?

Are there Novice nets operating in your area? Do you support them? Novice nets are not for Novices only. Experienced traffic handlers can render valuable assistance here by showing how it is done, if they can stand slowing down to 10 or 12 wpm, and even worse, if they can stand the delays resulting from the Novices' inexperience.

One method of soliciting participation that several amateurs have used is to work Novices in regular amateur QSOs, and then to send the Novices formal radiograms later via regular circuits, inviting them to participate. As such radiograms will usually be delivered by a regular traffic handler, the Novice will have someone who can answer questions, inform the Novice as to time and frequency of the Novice net, and add a word of personal encouragement.

Edith McDade, WA4SRD wrote me that she is glad she became involved in a Novice net early in her amateur career and that she always has a soft spot in her heart for it. She adds, "Not many people feel CW is of any importance and with Bash's books available, everyone seems to be sold on having Extra licenses (received by hook or crook, so it doesn't mean much any more), so they can work phone bands only. Many clubs do practically nothing to encourage people to join Novice nets; they all just want to be able to talk on the repeater!"

I personally have nothing against the Bash books if they are used as a review in preparation for a test. But simply to learn the answers without understanding anything really makes the whole thing absurd. One could just as well grease the examiner's palm as they do in some other countries.

If your club isn't doing anything along this line, why not start something? Actually, clubs don't do anything — it's the members who have to do it.

American Morse

Many amateurs who operate phone only say that CW is a museum piece, that the FCC keeps the rule requiring code tests for amateurs just to preserve the art. That's a bit exaggerated, but there are groups of amateurs around the country who are trying to preserve a lost art, using the American Morse Code. Until a generation ago, hence for over 100 years, it was the code used on landlines throughout the United States, particularly by the railroads. Long after Western Union had gone to Teletype for its telegrams, railroad telegraphers continued to pound brass and wiggle bugs in the American Morse Code. Train orders would be sent from the dispatcher to the next railroad station ahead of a particular train. The agent would copy the message, clip it to a

especially shaped hoop with a long handle, and hold it aloft beside the track so that the engineer or fireman could catch it as the train sped past — sometimes as fast as 95 miles per hour (and that was in the days of steam engines, too).

But after World War II, VHF radio became available for the railroads, and the dispatcher now calls the trainmen in the comfort of their cab directly from the comfort of his office, and railroad telegraphers are no more. The trainmen also now carry hand-held rigs instead of lanterns to signal the engineer. That can be handy for a long freight train where most of its length is out of sight around a curve. Instead of the potential misunderstanding of a wave of the lantern, the trainman can give clear instructions in English. "OK, go ahead and back up now." "Make up your mind, do you want me to go ahead or back up?"

The demise of the railroad telegrapher also meant the demise of the American Morse Code. It was once used by American radio operators in the early days of radio, but the international nature of radio communication soon made it necessary for all to adopt the International code, except for some continued use on domestic point-to-point circuits before World War II. In fact, on some of these circuits operators often used a mixture of both codes.

Really, only the American code should be called the Morse code, as it is the one that Samuel F.B. Morse devised for his telegraph. His first instruments were recording instruments, marking down the dots and dashes on strips of paper, to be deciphered by the operator by eye. Enterprising operators discovered, however, that they could read the code by listening to the clicks made by the apparatus, and could thereby deliver hard copy sooner. So it was not long before the recorder became obsolete, and the receiving instrument — the sounder — was designed to give clicks as readable as possible. And many an operator added an amplifier in the form of a Prince Albert tobacco can to enable it to be heard while the operator was sitting outside where it was cooler.

In the American Morse Code, about half the letters are the same as the International code, and most of the numbers are different as are the punctuation marks. In addition, some of the letters include spaces. *O*, for example, was two dits separated by a small space. The spaced letters could cause a problem. *See, so* and *si* differ only in the space left between the dits. As a result, operators who copied several words behind were at an advantage over those who copied it down letter by letter; by the time the former were ready to write it down, they could decide from the context how to interpret the spaced letter.

There are several clubs and nets around the country who are dedicated to preserving American Morse. You can identify most of them by their names; if *Morse* is included, such as The Morse Telegraph Society, it is probably such a group.

Code practice

Many amateurs, however, find the international code more than they can handle. They learn enough to pass the test, then forget it. That is to be regretted, for they do all the drudgery, and then when it's almost ready to become fun, they abandon it. To pass 13 wpm, you have to be able to do at least 15 or so when you are not under pressure, and if you can do that, a small additional effort will bring your speed up to 20 or 25 where CW becomes a language and you can think of what you are saying instead of concentrating on the mechanics of copying.

The additional effort consists in using CW on the air (participating in traffic handling is one of the best ways) and in copying practice material. Most readers will know of W1AW's schedules. An SASE sent to ARRL headquarters requesting a list of stations sending code practice material will bring you others that in some cases may be more convenient than W1AW. A general-coverage receiver will make it possible to copy CW outside the amateur bands, although there isn't nearly as much of this as there was a generation ago. The U.S. military has begun to emphasize CW again, however, and you can hear WAR and AIR sending CW on various frequencies — one of which is just below the 40-meter band.

No-code licenses?

In several recent actions of the FCC, the staffers who prepared them have made no secret of their opinion that a no-code amateur license is desirable — a license requiring an examination to test the applicant's knowledge of theory and law, but not of the code. And amateurs in general seem to be against it. The ARRL Board, at its meeting in March of this year, went on record (number 110) as "strongly opposing" such a license, passed unanimously. Directors have told me that they personally remain open to the quest, but voted as they did because constituents seemed to strongly support the position.

One question that keeps coming to my mind, however, is how many of those who want to keep the code test actually operate CW. Or is it rather a case of, "I had to do it, so why can't they?" Or perhaps merely a means of keeping the amateur population from growing too rapidly and making it impossible to work anyone because of the crowd. Like the Planned Parenthood people who promote the myth of overpopulation, when really what is meant is too many people besides ourselves. Such amateurs would be those

(*please turn to page 42*)

Mr. Dale Martin of the Johnson Space Center Amateur Radio Club in Houston, Texas has announced that SSTV coverage and pictures of the space shuttle *Columbia's* STS-5 mission in early November, will be provided by the club. Live black-and-white (B&W) and color SSTV pictures will be transmitted on SSTV frequencies using equipment provided by Sam Mormino, WA7WOD. We can expect to see pictures of the cabin and crew, the payload area and shuttle itself from remote cameras, and shots of the Earth and moon. The club's call is W5RRR. More details later.

Colorscan 403

As mentioned in last month's column, Syd Horne, VE3EGO introduced at Dayton his new color SSTV conversion for the Robot 400, called Colorscan 403. Colorscan 403 is a kit designed to enable the Robot 400 to transmit and receive color SSTV pictures using a standard B&W camera and any unmodified color TV. Syd designed this kit to provide easy conversion with minimal soldering, ease of operation and service, and high-quality color SSTV pictures.

The heart of this kit is the additional memory color board which comes completely wired and tested. It mounts above the 400 board, between 2½-inch high front and rear panel extenders, which mount atop the front and rear panels of the 400. A new higher cover for the modified 400 is included in the kit.

The new memory board simply plugs into the rear extender panel. Connections to the 400 board are made by unplugging ICs and plugging in DIP connectors or IC connector assemblies. Only two wires need be soldered to the 400 board. Additional switches are mounted on the front extender panel and all new outputs are mounted on the rear extender panel.

The kit includes a new separate power supply which must be mounted in the base of the 400. The color encoder kit is housed in an aluminum box and mounted in the base of the 400. It combines the outputs of the scan converter and provides a NTSC video signal to the antenna terminals of your color TV to either channel 2 or 3. A unique color bar generator built into the system provides for alignment of the color encoder as well as distinguishing the R, G and B frames when transmitted.

Also included in the kit is an Auto Filter Servo Control system, consisting of a filter disc assembly which holds three matched color filters, plus motor and mounting hardware to be attached to your B&W camera. The Servo control circuits are located on the color board. The unit automatically positions the correct color filter in front of your camera lens when snatching a picture.

Syd has spent a great deal of time in developing a quality kit which the average do-it-yourselfer can install with no difficulty. The fact that there is minimal wiring makes it even more attractive. It is fully compatible with existing RGB color SSTV systems. I have seen the system in operation, and it is easy to operate and gives excellent color reproduction. Colorscan 403 gives you another fine choice if you are thinking of getting into color SSTV. Cost of the kit is $550 U.S. For more information, write Syd at Sycel Communications, P.O. Box 893, Belleville, Ontario, CANADA K8N 2G6.

The SC422A Scan Converter

Volker Wraase, DL2RZ, Electronics of Germany designed the SC422A scan converter. He also manufactures the converter. It is distributed here in the States by KW Control Systems of Middletown, New York. The SC422A scan converter with three memories sells for $1,485. The CE-1101 color encoder to enable hookup to your color TV is also required and costs $289. Total costs for this system, not including a video camera and color TV monitor, is therefore $1,774. An optional KB-422A keyboard is available for $345 and LP-422A light pen is also available for $120.

Originally sold as the SC422, a two-memory scan converter, a third plug in memory upgrades the unit to the three-memory SC422A. 4,116 RAMs are used in the memory circuitry. Some of the features of the SC422A include black/white reversal, transmission cursor, built-in grey scale, and built-in LED tuning aid.

With the optional $345 keyboard, you can title pictures or superimpose graphics over pictures in memory. This is the same as having the graphics overlay mod in the Robot 400. The SC422A can transmit and receive half-speed 16-second B&W pictures or a sequence of 16-second RGB pictures to make one color picture. This is compatible with a Robot 400, which has the simple half-speed mod installed. With built-in switching, the SC422A will display animated motion on your monitor by switching back and forth between two of its memories. The above three features are available as mods to the Robot 400 and were described in my June column in Worldradio. Other standard features of the Robot 400 are included in the SC422A scan converter, making a compact unit measuring about 12″ × 4″ × 7″ deep.

The single thing that impressed me most about the SC422A was the confusing and complex layout and labeling of switches and controls on the front panel. There are 14 separate controls or switches to operate, and they are labeled in such a way as to make normal SSTV QSO operation very difficult. Upon examining the owner's manual to determine normal operational procedures, you find that the setting of many switches is interdependent on the settings of one or more other switches. Ease of operation was not in mind when this unit was designed. Many SC422A owners I have worked have lost pictures either in receiving or setting up to transmit and have expressed difficulties in operating the unit due to the complex switching.

I mentioned in last month's column the color SSTV test tape which I took to Dayton, and the problems the SC422A had with it. Of the five systems I ran the test tape through, the SC422A was the only one that had problems. I am not sure what in the SC422A's tunable sync circuitry causes it to have problems finding and accepting a standard 1200 Hz sync pulse. I believe there are problems with uniform alignment of units by service personnel. Several SC422A owners have had problems both in sending and receiving B&W and color pictures with new units supposedly ready to go on the air.

Volker Wraase, DL2RZ told me personally at Dayton that only six of these units have been sold in the United States. The SC422A has been on the market for about a year, and there has been extensive advertising for it. Part of its lack of success has to be due to its price and today's economy. I am sorry I cannot recommend the SC422A. Its problems are well documented and known throughout the amateur SSTV community.

Next month — Your letters and some thoughts about them. 73s, Ron Flynn, KB8LU; Rt. 2, Box 204; Bangor, MI 49013. □

Experiences with indoor dipoles

Bill Stoddard, KA1DNZ

For a couple of years, I had a roof-mounted trap vertical antenna. After some time, I became very frustrated with the low-power radiation that my little Hallicrafters HT-40 was producing (20 to 30 watts out). There was also a noticeable difference in performance in respect to rainy vs. fair weather, and there was the problem of the antenna icing up in the winter, which shorted it out. It further occurred to me that the traps were soaking up some of the energy (what a waste!).

So, armed with a glaring lack of scientific measuring devices and years of experience, I bought about 100 feet of ordinary lamp cord and proceeded to create an antenna mini-farm in my attic. First, I separated the two conductors of the lamp cord, thereby doubling the size of my future farm with the slash of a knife.

Next, I measured out a 40-meter dipole centered on 7.050 MHz (I'm a CW nut), using the $\frac{468}{\text{MHz}}$ = Length formula. I ran some RG-58 coax out the attic window to my radio shack in the kitchen, draped the attic end of the coax over a nail which just happened to be there and attached the ends of the two dipole halves to the cable (no soldering). The dipole itself I draped according to the contours of the debris in the attic, keeping the two halves as widely separated as possible.

As long as I was in the attic, I also cut two more pieces of lamp cord for 14.050 MHz. These ends I attached to the same coax, so that two dipoles sprouted from the same coax. Would it work? I read somewhere that it would.

So as not to keep you in suspense, I'll answer the question immediately. I tuned up for the CW portion of the 20-meter band. Not only did the output of my little rockbound HT-40 zoom to 50 watts, but I also made some QSO. It worked! When I tuned up for the CW portion of the 40-meter band, the results were disappointing. I couldn't squeeze more than 20 watts out. After mulling the problem over for a few days, I thought that maybe $\frac{468}{\text{MHz}}$ = L isn't infallible, so for no special reason, I shortened each side of the 40-meter dipole by one foot. Result? 40 watts out and more QSOs! What made the difference? Who knows? Maybe the presence of electrical wiring in the attic. Anyway, it works — and as a bonus, this hodgepodge also works on 15 meters. I'll let you know how it works on 10 meters when the band opens up in the fall.

Have fun! □

TRAFFIC

(*continued from page 41*)

who, before they were licensed, thought the need to pass a code test was stupid as they planned to operate voice anyway, but now want to keep the code test and think it's great, for its keeps others off the air.

Personally, I think a no-code license authorizing frequencies above 1 GHz would be good for Amateur Radio, as it would put those frequencies to work and also bring in more amateurs (100,000 a year I would estimate) and so increase our clout. But I've said that here several times before and nothing has happened, so maybe I'd better just keep quiet. □

CLUBS

(*continued from page 32*)

Ferragamo, WA2KRM enlightened members on the procedures necessary to preserve dental health. **The Worthington Amateur Radio Club,** Worthington, MN had a demonstration of Amateur Radio set up at the Northland Mall.

The Jackson County Amateur Radio Club, Ripley, WV gives the JCARC Amateur of the Year Award. **The Marin Amateur Radio Club,** San Rafael, CA had a demonstration and film on CPR (cardiopulmonary resuscitation). **The Middlesex Amateur Radio Club,** Brighton, MA hosted Mike Adlerstein, K1FB who talked on SWR, transmission lines and Smith Charts. □

CONSTRUCTION

Chuck Clark, K4ZN
Assistant Director
Roanoke Division, ARRL

Keying monitors

Most rigs these days are sideband transceivers with CW added as an afterthought. Some have partial provision for break-in, some have none at all. Only a few have full break-in. Some do not provide keying monitors, at least as standard equipment, and if you buy a second-hand rig you may discover that the keying monitor accessory is no longer available from the manufacturer.

A monitor is not absolutely necessary if you use a straight key or sideswiper. Since you form the entire letter manually with keys of this type, your sense of touch feeds back enough information to your brain to enable you to send correct code. But even here a monitor is helpful. When you use a bug or electronic keyer, however, you almost have to have a monitor to enable you to hear what you are sending and to control it. Fortunately, monitors are not costly or difficult to build. Here are a few ways to do it.

Tube rigs

Grid-block keying is standard for tube-type sideband rigs, whether transceivers or separate transmitters — if, of course, any provision for keying them is made at all. You can see what was in the designer's mind when you note that in most cases the microphone jack is on the front panel where it's visible and accessible, while the key jack is hidden away somewhere on the back.

Old-time CW rigs may be keyed in other ways. You might even encounter one from the early days of radio that had the key in the positive high-voltage lead, requiring the operator to be careful not to touch any part of the key that might be 1,000 volts or more above ground! If so, you had better use a relay if you want to enjoy Amateur Radio for any length of time.

Grid-block keying involves putting a negative grid bias on a tube or on several tubes in the transmitter, enough to cut off the plate current in the tubes even when the grids are driven full power. The key shorts this bias voltage to ground, allowing the signal to pass through the tube and be amplified normally. It is possible to use the voltage drop that appears across a resistor in the keying circuit to power a very simple monitor.

The circuit is shown in *Figure 1*. It is the one I installed in a Swan 350 (which I am now using regularly) and can easily be adapted to similar rigs. It requires one neon bulb, two diodes (ordinary rectifier types are fine), a resistor and a capacitor. The modified wiring is shown by heavy lines. In this unit, a negative bias on the transmitter mixer keeps this stage cut off until the key is closed, shorting the grid to ground for DC, with the bias voltage now appearing across R207 (the part designation on the Swan 350's schematic). This voltage is used to power the monitor oscillator. Current flows through R1, charging C1, until the voltage across C1 reaches the breakdown potential of the neon bulb — somewhere near 70 volts. C1 then discharges through the bulb until the extinction voltage is reached, breaking the circuit; then the cycle repeats.

The charging and discharging current also flows through R1202, causing the voltage on the audio output amplifier tube to vary, giving an audible tone. When switched to transmit, this particular transceiver disables the receiver audio stages by applying negative bias. To enable the output stage to function, the bias is removed by grounding the connection between R1202 and R1204 when the key is closed. Diodes CR3 and CR4 are needed to allow the audio stage to be disabled normally when operating voice. These details may or may not be needed in another make of transceiver; check the schematic to see exactly what happens when the rig is switched to transmit and when the key is closed.

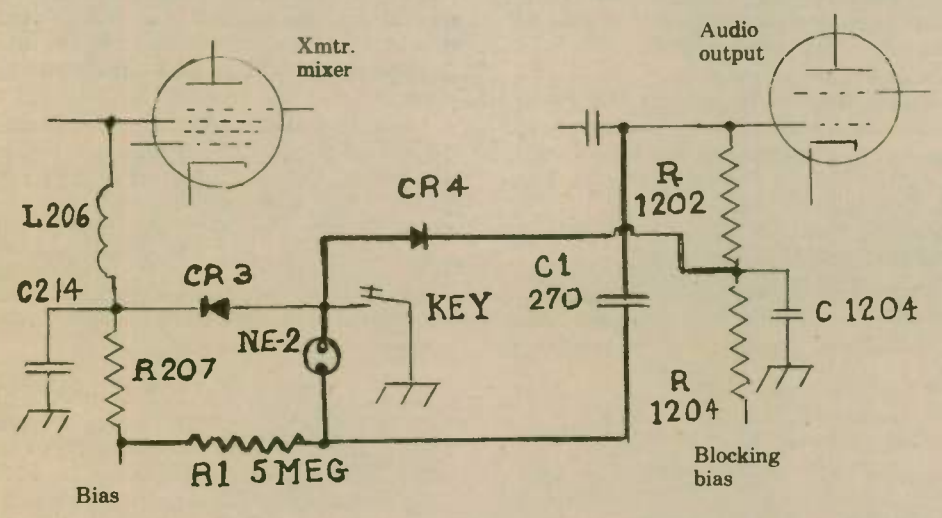


Figure 1

RF-powered monitor

You can take a few milliwatts from the transmission line to the antenna to power a simple monitor like that shown in *Figure 2*. T1 is a current transformer that couples a small amount of energy from the transmission line. One I built uses a secondary of 28 turns on a T-75-2 powdered iron toroid core; the primary is simply the center conductor of the coax passing through the hole in the core, with the shield connected around the outside. CR1 and CR2 are high-frequency type diodes, and form a voltage doubler in conjunction with C4 and C5. Q2 is any audio-frequency transistor. NPN is shown. If a PNP transistor is used, reverse CR1 and CR2. T2 is a center-tapped transistor audio output transformer, such as Radio Shack's 273-1380, 1000 ohms primary to 8 ohms secondary.

If you also operate voice, you may want to put a switch somewhere in the circuit to disable the monitor to keep it from peeping like a sparrow on voice peaks. The most effective way way to do it is to short the secondary of T1, because doing this reduces the loading effect of T1 on the antenna circuit.

You may wish to experiment with other values of R2, C2, C3 to give you the tone you like best. Similarly, you may wish to experiment with R1 and C1 in the circuit of *Figure 1*. The neon oscillator gives a sawtooth wave form, and the circuit of *Figure 2* tends to generate a square wave. If you want a purer sine wave, you will have to add audio filtering, although modifying the components of the circuit can improve the waveform considerably.

Your transceiver has to shift frequency when going from receive to transmit. It's best to adjust the pitch of the monitor to correspond with the frequency offset, so that when you match the audible signal heard from the other station to the pitch of the monitor, you are on frequency with the other station.

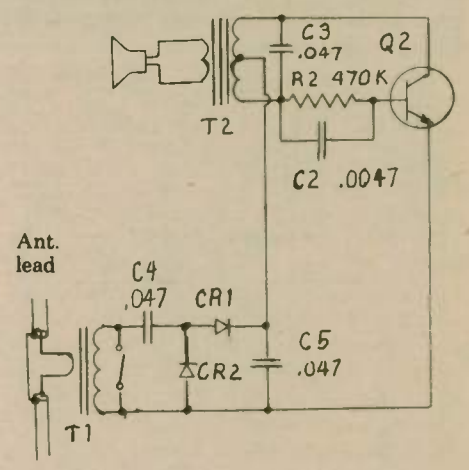


Figure 2

The circuit of *Figure 2* has one additional advantage. The voltage available to operate the monitor depends on the current in the transmission line, so it will vary as the current in the line varies. You can use the tone in the monitor as an aid to tuning the transmitter — something of particular importance to those with visual problems. And if your antenna breaks, or you forget to tune up, you will hear about it the moment you press the key.

Keyed monitor

You can also use a monitor like that shown in *Figure 2* with its own power supply, either batteries or derived from the station power supply. Simply put the keying circuit for the monitor in parallel with that of the transmitter. It may be necessary to use diodes as shown in *Figure 3* to prevent unwanted current flow between the units when the key is open; it will depend on the circuits of both the transmitter and the monitor.

As shown, the diodes are connected for negative ground. Reverse them if the keying circuit has its positive side grounded, as is the case where grid-block keying is used. (See circuit in *Figure 1*.) □

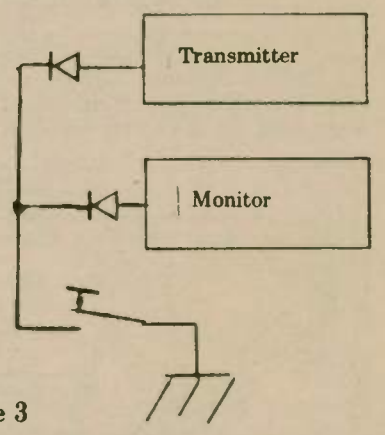


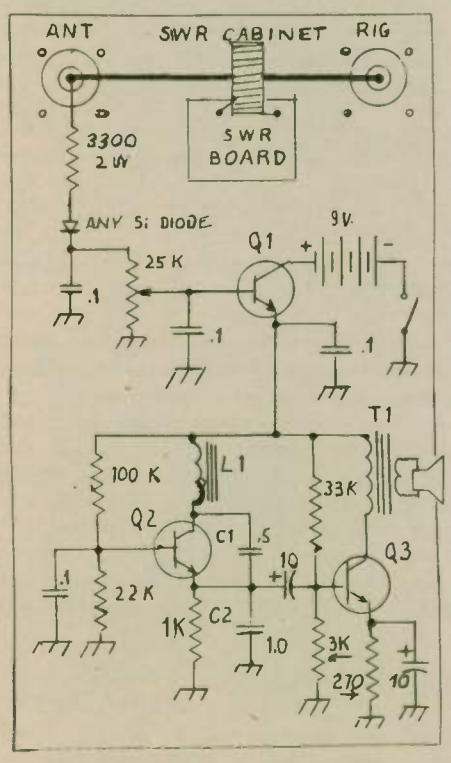
Figure 3

CW monitor/tune-up indicator

Paul Garrotto, N6PG

Owners of older transceivers which do not have provision for monitoring keying may find this unit just what they need. Besides providing a sidetone for monitoring keying, it can serve as a tune-up indicator as its tone changes and as the transmitter and antenna circuits are brought into resonance.

The unit was built to fit inside the cabinet of my SWR indicator. The parts can be mounted on a piece of perfboard, or you can etch a circuit board if you are ambitious.



Three transistors are used — all 2N2222. Q1 serves as a signal-operated switch to control Q2, a Colpitts oscillator which gives a 500 to 1000 hertz tone to Q3, the output amplifier. The Colpitts oscillator, using L1 — a small choke or primary of a transformer similar to T1, and C2 and C3 in series to control the frequency, generates a cleaner and more stable note than that produced by oscillators controlled by resistance and capacitance only. The exact frequency will depend on the inductance of L1, and may be adjusted by changing the value of C2 and C3.

It's a simple device, and it makes sending CW much easier. Just remember to turn the battery switch off when you work SSB, or the thing will talk back to you! □

Interested in the Delta Loop?

Alan Hoffmaster, WA3EKL

Well here it is, all you wanted to know about Delta Loops. First, a Delta Loop is an equilateral triangle whose total perimeter is one wavelength long. The formula for the total length of wire used is 1,005 divided by the frequency in megaHertz equals the length in feet.

Since the Delta is a closed loop, it has a rather broad bandwidth, meaning the SWR is quite low over a good portion of the band — provided you match its impedance properly! What factors affect its bandwidth? Answer: The shape of the triangle and how well you match it to your transmitter; so, let's talk about distorting the triangle from an equilateral triangle and why you might have to do it.

The best example is a 75-meter Delta tuned for 3.8 MHz. You would need an 87-foot support point to get the base of the triangle 10 feet off the ground. How many of you have an 87-foot tower or tree in your yard? Just as I thought . . . the solution to this problem is obvious; we have to distort the Delta triangle into an isosceles triangle. (An isosceles triangle is a triangle where two of the sides are equal and the remaining side is longer than either of the other sides, or, the BASE of your triangle is longer than the two SIDES going up to your support point. You lower the top point of the triangle and pull out the bottom two points until the crazy thing fits the support point in your yard and the base is about 10 feet off the ground. The more you distort this triangle, the more you decrease the effective bandwidth.

Before I go any farther, the antenna could be turned upside down if you have two support points to hang it from but we are back to the old 87-foot towers to get the bottom point 10 feet off the ground. There is a way out of this situation. If the towers are far enough apart, you can distort the triangle into an upside-down isosceles triangle. The reason I mention the upside-down triangle is because it does have some advantages which you will see later.

Now that you know what a Delta Loop is and how to put one up, WHY PUT ONE UP? It's the only antenna I've found, other than a vertical, that will produce some real good low-angle radiation and does not have to be some ridiculous height in the air, or have half a million radials buried under it to make it work well.

Here is what you need in terms of radiation angle and polarization. DX on 75 — low angle, vertically polarized. U.S. on 75 — high angle horizontal wave. DX on 40 — low angle, vertical or horizontal, but vertical wave preferred. U.S. on 40 — high angle horizontal wave. For those of you who have read this far and are not particularly interested in DX work, surprise . . . there is something here for you.

The following data comes from charts made by G3AQC, and experiments done by G6LX, G3AQO, W8GCO, WA3KCY, WA3BDF and WA3EKL, to mention a few. Examples:

1) Standard triangle fed on bottom corner produces a very large vertical lobe at 25° and a very small horizontal lobe about 90°.

2) Standard triangle fed at top support point produces a very small vertical lobe 40° and very large horizontal lobe 80°.

3) Standard triangle fed center of base produces small vertical lobe 30° and very large horizontal lobe 80°.

4) Upside-down triangle fed top corner produces very large vertical lobe 20° and very small horizontal lobe 90°.

5) Upside-down triangle fed bottom point produces medium vertical lobe 20° and large horizontal lobe 90°.

As you can see, for strictly DX you are going to have to feed it on a corner, example 1 or 4. For those of you who want to work the United States, examples 2 and 3. Example 5 leads to some very interesting ideas. It could produce some good DX and U.S. contacts.

I am going to throw this in for those of you with a small backyard and perhaps a tree or a pole at the end of it. Use the house, the tree, and example 4. You only need about 35 to 40 feet of support points for 40 meters — and look out DX. Or, perhaps a combination of examples 1 and 3 . . . a couple of relays to switch the feedpoint for U.S. or DX contacts! Then there is example 5 with no need of relays. OK, enough side line.

How do you feed the antenna, with what, and what is the impedance at the feedpoint? Examples 2, 3 and 5 are balanced feedpoints and about 150 ohms (for an equilateral triangle but higher for an isosceles triangle).

I have not tried examples 2, 3 and 5. However, examples 1 and 4 have been tried by WA3KCY, W8GIO, WA3BDF and myself. Most sources indicate the feedpoint impedance of examples 1 and 4 to be about 60 ohms. Forget it. The previously mentioned amateurs have erected various loops at various locations on 20, 40 and 75 meters and the impedance is not 60 ohms nor is it a balanced feedpoint.

We all agree on one thing . . . Place a piece of 75 ohm, quarter-wavelength coax between your 52 ohm feed line and the antenna; it should give you a perfect match. The formula for the quarter-wave matching section is 246 times the velocity factor of the line divided by the frequency in megaHertz equaling the length in feet. The braid of the 75 ohm coax goes to the base of the triangle, or the top horizontal wire in the case of the upside down triangle. The center conductor goes to the leg of the triangle at the same feedpoint.

Most sources say the base of the triangle should be about 6 to 15 feet above the ground. This is very true for 75 meters but very wrong for 40 meters. WA3KCY erected a 40-meter triangle in his trees, and I mean IN THE TREES. About 80 percent of the wire was in the trees. The base of the triangle was about 7 feet above the ground and fed by the previously described method. He got into Europe like it was two blocks down the road.

I put up a Delta Loop whose base was 18 feet off the ground, figuring the higher the better. **I couldn't get out of my backyard.** After lowering the antenna, the closer it got to earth the louder the signals became until I reached about 7 feet, where they became the loudest. At that height I was getting out quite well.

W8GIC and WA3KCY erected an upside-down Delta loop for 75 meters at W8GIO's location. The loop was almost a perfect equilateral triangle. They fed the loop 15 feet down one of the sides from a top corner with a 72 ohm quarter-wave matching section. The braid went to the upper 15 feet and the center conductor went to the other part of the leg. They got out unbelievably well. Then they decided to use a match box and feed it on 40 meters. The results were fantastic, one of the best 40-meter antennas they ever put up.

Well, there you have it . . . the elusive Delta Loop. Good luck and DX.

— Modulator, Baltimore ARC, MD □

OLD TIME RADIO

W5JJ
Carl C. Drumeller

More signal, less noise

Utopia? No. The answer to the radio operator's dream? Well, not fully, but nearly enough to make a very small construction project well worth your while.

It's only fair to state in advance that this project is one mostly for the radiotelegraph operator; the radiotelephone operator will derive a lesser benefit.

Here's the problem and the partial solution. All radio receivers pass on an appreciable amount of noise to their audio outputs, either speaker or headphone. Some of this noise comes in with the desired signal, some is generated within the receiver itself. In all instances, the operator would like to delete as much as possible of the non-signal output.

There are several approaches to a solution. One involves the receiver's passband. The more narrow the passband, the less the undesired noise. Unfortunately, the more narrow the passband, the more costly the receiver! Another partial solution — one less costly and almost (but not fully) as effective — is the processing of audio output so as to attenuate all frequencies but that of the signal itself. There are filters galore for this application. Some are passive, involving inductors and capacitors. Some are active, involving ICs or discrete transistors. Either type is effective, but both types cost a bit of money — the amount ranging from moderate price to quite expensive indeed.

So, what's the solution for the chap who wants signal improvement but at low dollars? One possibility starts out at the flea market, that haven of goodies. It's not uncommon to run across low-pass filters of several makes at flea markets. I've bought two types — both at very reasonable cost.

The better of these is made by Karkar Electronics, Inc. It's their model #5171, which has a sharp cutoff at 2450 Hz. It'll handle +10dBm, which is a lot more than you're likely to put into it.

The other is made by ADC (whoever that may be) and has a band-pass of 200 Hz to 3000 Hz with a maximum signal of +3dBm — an adequate level. Both types have 600-ohm unbalanced inputs and 600-ohm unbalanced outputs. Like nearly all filters, they require moderately close matching of these impedances.

Transformers for matching 8 ohms to 600 ohms are available, but it's much easier to come by transformers that have secondaries matching a wide range of impedances, covering from 4 to 600 ohms. Forget the primary and use the secondary as an autotransformer. Two of these autotransformers plus a low-pass filter and a few additional parts from your junkbox (or, failing that, Radio Shack's around-the-corner store) will put you into business with a filter that'll work quite well.

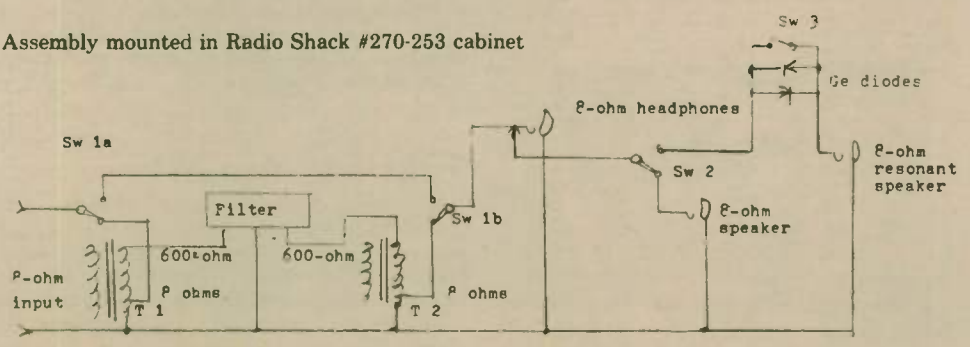
My station uses a Kenwood TS-130S, and I leave my low-pass filter in the output circuit at all times, both for voice and for telegraphy.

For telegraphy, though, it falls short of what I'd like to have, and thereby hangs the tale making the second half of this story.

Unlike the first step, the second does not require a wide search of flea markets. All you need is the tiniest, tinniest, crummiest 8-ohm speaker discarded from a cheap BC radio receiver. The worse it sounds, the better it'll work! Most of these go dead at about 300 Hz, so one will do an excellent job of making your low-pass filter into a band-pass filter. But that's only one of the two desirable effects derived.

The other hinges upon the fact that these speakers almost invariably have a pronounced resonance point. With a little encouragement from a suitable baffle, you can put that resonance point at a frequency you favor for copying telegraphy.

Assembly mounted in Radio Shack #270-253 cabinet



T1 and T2 8 ohm to 600 ohm transformers or autotransformers

Sw 1 DPDT toggle switch

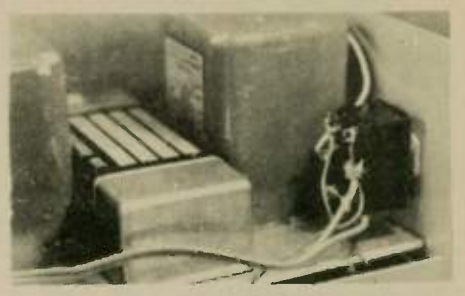
Sw 2 SPDT toggle switch

Sw 3 SPST toggle switch

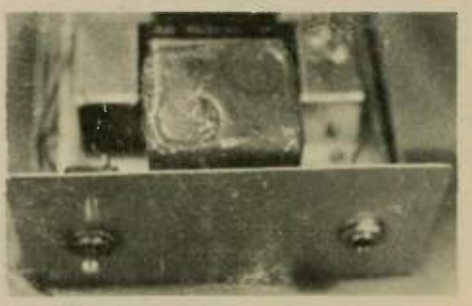
Experiment with cardboard or other material until you come up with a baffle that'll complement your ear. My speaker-plus-ear requirements were met with a box measuring 24 × 14 × 18cm (9″ × 4½″ × 7″) closed at the rear. As both the speaker and the box came from the junkheap, their no-cost status enhanced their desirability.

The behavior of this resonant speaker is quite remarkable. Before connecting it to my transceiver, I made a frequency run with my H-P audio signal generator. This showed a somewhat broad increased-audibility hump. This did not prepare me for the much better signal-enhancement displayed when the speaker was attached to the TS-130S's output. The point of resonance is so sharp that it's best approached by use of the transceiver's RIT control. Once hit, the signal jumps out at you!

Of course, on voice the quality is horrible. Because of this, I've provided a switching circuit for using a decent speaker for voice reception and the resonant one solely for radiotelegraphy.



But that's not the whole story. With another low-cost (or no-cost) step, you can still further reduce noise — this time the background noise that's always present. Presume that the background noise, be it atmospherics or be it strays from man-made sources, is somewhat below signal level but still loud enough to be annoying. What is needed is a "floor" for the audio output signal. This can be easily provided by placing two diodes, connected parallel back-to-back, in series with the 8-ohm output lead to a speaker. In my unit, it affected only the resonant speaker, as the principle is applicable only to radiotelegraphic reception. A simple SPST switch is provided for shorting out the diodes to delete the "floor."



To get the full benefit of this circuit, one needs to do a bit of adjusting to both RF and AF gain controls. The audio level must be high enough to ensure overriding the barrier voltage level of the diodes, about 0.4V.

Even if a low-pass filter is not available, it's well worth one's time to construct the resonant speaker and "flooring" diodes portion for a significant reduction in noise affecting radiotelegraph reception. The work is simple, the cost is near zero, and the results are satisfying. □

Speaker-mike tips

Bob McGarvey, WB2EVF

If you're not happy with the sound from your speaker-mike, here are a couple of tips for monitoring with your IC2A, 3A or 4A.

You can try putting the speaker-mike in a glass or plastic bowl or pitcher. That trick dates back to my days with Brandes headphones and crystal sets.

Even better, if you happen to have an 8-ohm Kriket external speaker around the house, its plug fits the speaker jack on your hand-held.

The speaker-mike is a real convenience if you're mobile or walking, to be sure. But although the mike has plenty of oomph, the speaker doesn't keep up with it.

— The Home News NJ □

HF transceiver

ICOM is pleased to present the IC-740 HF transceiver to complement the existing line of IC-730 and IC-720A HF equipment.

The IC-740 is an extremely versatile transceiver, having the most asked-for features in an HF base station. Front panel or top controls allow access to all operating functions. The IC-740 gives complete control for the most demanding and discerning operator.

Adjustable receiver parameters are: RF preamp, RF gain, noise blanker (width and level) IF shift, passband tuning, crystal filter in/out, notch filter, AGC (time constant and on/off), squelch, tone, and audio gain. Transmitter controls are mic gain, VOX, compressor and power (10-100W). The IC-740 includes capability of operating in the increasingly popular FM mode.

The frequency synthesis network includes dual VFOs with three tuning rates, split operation and memory. Analog control of frequency with the incremental tuning on either TX, RX or both. Full metering of receive signal strength, transmit relative RF output, compressor level, ALC and collector current plus a built-in SWR meter.

A large selection of options allows tailoring the IC-740 to your needs: a frequency marker, FM module, built-in electronic keyer, two 9 MHz IF CW filters, three 455 kHz IF CW filters, and optional internal power supply.

All of our standard HF accessory items are compatible with the IC-740, including the popular AT-500/100 automatic antenna tuner, as well as the IC-2KL solid-state linear.

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

Antenna catalog

The Antenna Specialists Co. has just released a new, full-line professional catalog of base and mobile antennas and accessories for the land mobile industry. More than 300 products are described, covering the entire spectrum from low band to 800 MHz; it's the broadest antenna selection by far available, according to Bob Treanor, Director of Marketing. Major new products include the company's revolutionary DURA-FLEX™ elastomer shock mount antenna line and the newly acquired line of Avanti no-groundplane, on-glass antennas.

A wealth of special technical data and charts make this an invaluable tool for anyone serving the land mobile market. The catalog is written in an easty-to-follow, cross-reference format to simplify selection for precise applications.

Dealers and distributors can obtain this catalog by contacting: Marketing Department, The Antenna Specialists Co., 12435 Euclid Ave., Cleveland, OH 44106. □

220 MHz hand-held

ICOM is very excited to announce a "second cousin" to the popular IC-2A series — the IC-3AT for coverage of the 220 MHz band. The IC-3AT is essentially identical in appearance, size and operational features as the popular IC-2A series.

Most importantly, all accessories — including battery packs, chargers, microphone, etc. — are completely compatible for the IC-2AT and IC-3A series, so anyone who has already invested in an IC-2A system with accessories can use those same accessories on the IC-3AT.

The IC-3AT also includes a 16-button touchtone® pad. It covers the entire 220 MHz band from 220 MHz to 224.99 MHz and is set up for both duplex and simplex operation. The power output is nominally 1.5W with the standard IC-BP3. The IC-3A system comes complete with IC-BP3 NiCd battery pack wall charger, belt clip, "rubber duckie" and wrist strap.

Price is $299 for the IC-3AT and $269 for the IC-3A. For more information, write to ICOM America, 2112-116th Ave. NE, Bellevue, WA 98004. □

Base station antenna

Ringo Ranger II is the newest addition to the Cushcraft line of Proline base station antennas.

This improved model Ranger II has 5.5dB gain with an additional 5/8-wave section and decoupling radials for a low angle of radiation.

All Ringo Ranger II antennas are broadband and easily field-tuned for quick installation. They are made from the highest quality aluminum, with stainless steel hardware.

There are models covering the frequency range from 146-512 MHz. For complete information on these high performance, attractively priced antennas, contact: Cushcraft Corporation, P.O. Box 4680, Manchester, NH 03108; Tel: 1-800-258-3860. □

Outdoor active receiving antenna

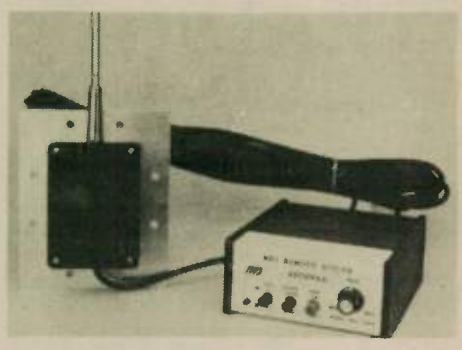
MFJ introduces its new active outdoor receiving antenna with outdoor whip that gives excellent reception of 50 kHz to 30 MHz signals. At lower frequencies it is equivalent to an outside wire antenna hundreds of meters long. At high frequencies, it has high-gain amplifying action. It can be used with any shortwave or Amateur Radio receiver.

A high dynamic range RF amplifier is mounted at the antenna for maximum signal to noise ratio. A 20dB attenuator switch on the control unit prevents receiver overload.

The unit also has an auxiliary antenna switch to let you use an auxiliary antenna when the unit is off. A receiver switch (to select between two receivers), a gain control and a "power on" LED indicator.

The control unit measures 6 × 2½ × 5 inches and the remote unit, 3 × 2 × 4 inches. The telescoping whip is 4½ feet long when extended. It operates on 12VDC or 110VAC with optional adapter, MFJ-1312, $9.95.

The new active outdoor antenna comes complete with a 50-foot coax cable with connector, ready to use.



MFJ provides a 30-day trial period. If you are not satisfied, you may return it within 30 days for a full refund (less shipping). MFJ also provides a one-year unconditional guarantee.

The MFJ-1024 Active Outdoor Antenna (made in the USA) is available from MFJ Enterprises, Inc. for $129.95 plus $4 for shipping and handling.

To order, call toll free 800-647-1800 and charge it to your VISA or Master Charge account or mail your order to MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762. □

10M FM on 2M

In response to popular demand, Hamtronics® has added new models of their widely accepted transmitting and receiving converters to cover 10-meter FM. Of course, they have long offered converters for almost all other combinations of VHF and UHF bands, so this should come as no surprise.

The XV2-10 Transmitting Converter provides 2 watts output on 10 meters with as little as 1mW of 2-meter drive. This kit is priced at only $79.95. For more power, simply specify the XV2-10/LPA 2-15 combination at $149.95 for up to 20 watts. These transmitting converters allow you to do anything on 10 meters your transceiver will do on 2 meters. You can operate FM or SSB, CW, etc., with VOX, synthesizer, and other features your transceiver may have.

The companion receiving converter is the model CA28, priced at $39.95. The oscillator can be linked to the transmitting converter for full transceive operation.

Other combinations of transmitting and receiving converters are available to convert 10-meter, 6-meter and 2-meter rigs for operation on any of the VHF and UHF bands, including OSCAR combinations. Separate transmit and receive converters allow complete flexibility.

For further information, call 716-392-9430 or write to Hamtronics, Inc.; 65 Moul Rd.; Hilton, NY 14468-9535. A complete catalog will be mailed on request. (For overseas mailing, please enclose $1 or 3 IRCs.) □

TERMINALL

MACROTRONICS, Inc., has announced the introduction of TERMINALL, an integrated hardware and software system which converts the Apple II or Apple II plus into a state-of-the-art communications terminal.

TERMINALL includes all the necessary computer interfacing, audio demodulating, afsk tone generating and transmitter keying hardware integrated in one cabinet. This reduces equipment interconnection to a minimum and allows the operator to be on the air receiving and transmitting Morse or RTTY or ASCII in minutes. Plug it into the receiver headphone jack and copy Morse code, Baudot or ASCII. Plug it into the CW key jack and send Morse code. Attach a microphone connector and send Baudot or ASCII using audio tones (afsk).

The software is loaded into the computer from cassette or disk. Enter your call sign and the time to initiate the program. You begin receiving immediately. No settings or adjustments are necessary to receive Morse code — it's fully automatic. Press ESC-Q to transmit, or return back to receive. Text may be typed while receiving or transmitting.

Some of the features of TERMINALL are:

• Multi-Level Displays: Edit window on top to enter transmit text or program messages. Status window displays mode, operating

parameters, prompts and error messages. Dialogue window displays received and transmitted text in chronological order. Transient Review window allows examining and editing of historical text while receiving or transmitting.

• Excellent Morse reception: Six-stage active filter demodulator. Auto adaptive Morse algorithm. Keyboard selectable noise threshold. Received code speed displayed on status line.

• Highly accurate hardware clock. Maintains correct time during all operations, including Disk I/O.

• ASCII capabilities: Select even/odd or no parity, select 6, 7 or 8 data bits, select 75 or 110 baud.

• Multiple user-defined WRU: For each of four WRU functions, the operator can select any combination of: 1) Initiate sequence; 2) Terminate sequence (including none or timeout); 3) What to transmit back (if anything — including ID in any mode, any message, any serial number, and time/date); and 4) whether to save on disk or not. WRU functions work in all modes (Morse, Baudot, ASCII).

• Buffered ASCII parallel printer output: Select edited historic text, all text, or WRU activated ("AUTO START") test.

• Word mode editing, fast/slow/no diddle, ignore carriage returns on receive, word-wrapping (won't split words), user programmable end-of-line sequence, user programmable serial number insertion, adjustable carriage width, Transmit delay (fixed, none or auto adaptive), Break mode.

• Messages and received text may be saved to disk.

• TERMINALL T2 requires an Apple II or Apple II plus, 48K RAM and disk drive. Software provided on disk in DOS 3.2 format (MUFFIN to 3.3). Latched and buffered cable plugs into any card slot (1 through 7).

TERMINALL comes complete with software on disk, assembled and tested hardware, and an extensive instruction manual. List price is $499. For complete ordering information or name of dealer closest to you, contact: Macrotronics, Inc., 1125 N. Golden State Blvd., Turlock, CA 95380; (209) 667-2888. To order and for service call (209) 634-8888/667-2888.

** Apple is a recognized trademark of Apple Computer, Inc.* □

Electronic keyer

Palomar Engineers has announced the new IC Keyer MK V. It features a 1-amp silver contact relay output that will key all ham rigs and most shipboard transmitters. It keys either polarity without change of jumpers.

The keyer features the fully adjustable Ham-Key paddle and Curtis IC. It is available with either standard operation or type "B" action.

Attractively packaged with a burnished aluminum panel and textured black cover, the keyer has a sidetone oscillator, speaker, volume and speed controls, mode switch, and an internal pitch control. This keyer operates from a clip-on 9-volt battery for complete portability or uses a 9- or 12-volt DC power supply.

The MK V sells for $132.50 plus $4 shipping/handling. Palomar Engineers, 1924-F West Mission Road, Escondido, CA 92025. □

Shortwave Frequency Directory

The most exhaustive directory of agencies and frequencies using the HF spectrum ever published has been announced by Grove Enterprises.

Thousands of listings — 218 pages — worldwide in this 8½" × 11" spiral-bound book. The listings include:

U.S. Air Force (SAC, TAC, MAC, NORAD, MAG, ARRS, Command Control, CAP); U.S. Navy (nuclear subs, missile ranges, tactical call signs, AUTEC, Rescue); U.S. Coast Guard (Ice Patrol, air to ground, ship to shore, emergency); U.S. Army (National Guard, Reserves, Corps of Enginers); foreign military (Canada, Great Britain, New Zealand, Australia, Cuba); Department of Energy (nuclear transport, nuclear storage); Federal Emergency Management Administration; U.S. State Department and Embassies; Federal Communications Commission; Department of Interior (Alaska health, wildlife, Pacific trusts).

Spy numbers schedules (the most complete list ever published; drug smuggling networks; mysterious beacons; pirate and clandestine broadcasters; International Red Cross; aircraft (international enroute, foreign, flight testing, ARINC); point-to-point telephone; Federal Aviation Administration (emergency, service nets, weather); NASA (Cape Kennedy, White Sands Edwards AFB, shuttle nets, tracking); marine (ocean vessels, coastal stations, Great Lakes, inland rivers, weather); radioteletype frequencies; facsimile frequencies; international assignments; call signs.

An extraordinary collection of agencies and their frequencies — many never before published. Only $12.95 plus $1.50 UPS shipping or $1 bookrate USPS. Call toll free to place your order 1-800-438-8155 (continental U.S.); North Carolina residents call collect 1-704-837-2216. For further information, write Grove Enterprises, 140 Dog Branch Road, Brasstown, NC 28902. □

Scanner converters

With a history of supplying fine quality receiving converters for Amateur Radio, Hamtronics, Inc. has turned its research lab loose to develop an equivalent line of converters to allow scanner users to receive the exciting new VHF and UHF bands put into use recently. These new and scattered frequency ranges generally are not yet available on scanners; but don't despair — Hamtronics® converters allow you to add desired bands at only $79.95, complete with cables to plug directly into programmable or crystal-controlled scanner receivers.

These compact little units, in attractive wood-grain finished cabinets, convert out-of-band signals to frequencies covered on the VHF or UHF range of your scanner. The following models are available.

Model	Freq. range (MHz)	Listen to
CVR-72	72-76	Radio Control & Low Power Industrial
CVR-135	135-144	Weather & Geophysical Research Satellites
CVR-240	240-270	Navy/Air Force Fleet Satellites
CVR-400	400-420	Federal Government & FBI
CVR-806	806-894	New Metropolitan Land Mobile Band

In addition to the above standard models, Hamtronics has also agreed to try to custom engineer special units for other frequencies, recognizing that only the imagination limits applications for converters such as this. Special units may be ordered at $119.95.

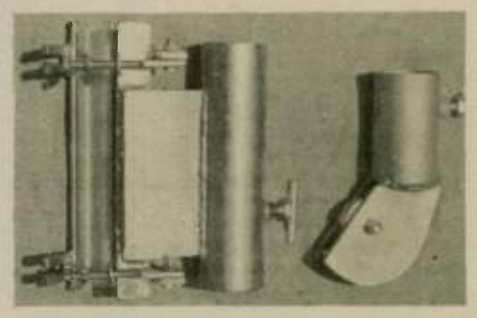
A similar related product made available recently is the model R110-296 UHF Aircraft Receiver for listening to transmissions from the space shuttle. This unit is priced at a modest $94.95 in kit form or $164.95 for the wired and tested receiver module.

For further information on these new products and their entire line of VHF and UHF receivers, transmitters, converters, preamps and related products, write to Hamtronics, Inc.; 65-V Moul Rd.; Hilton, NY 14468-9535; or call 716-392-9430. A complete catalog will be mailed on request. (For overseas mailing, please enclose $1 or 3 IRCs.) □

Ginpole

The GP-81 Ginpole from IIX Equipment features heavy-duty welded steel construction, full zinc plating, and will fit all the popular tower sizes. A kit version (buyer buys the pipe locally) costs $129.50 and readily ships UPS.

For more information on this product and other tower accessories, contact IIX Equipment, P.O. Box 9, Oaklawn, IL 60454; (312) 423-0605. □



Alabama

The Huntsville Hamfest will be held on Saturday and Sunday, 21-22 August 1982 at the Von Braun Civic Center (VBCC) in Huntsville, Alabama. There is no admission charge. There will be prizes, exhibits, forums, an air-conditioned indoor flea market, and non-ham activities. Tours of the Alabama Space & Rocket Center are available for the family. A limited number of camping sites with hookups are available at the VBCC on a first-come first-served basis. Flea market tables are available for $4/day.

Talk-in on 3.965 and 34/94.

For more information, write: Huntsville Hamfest, P.O. Box 4563, Huntsville, AL 35802. □

California

The Valley of the Moon Amateur Radio Club proudly presents its 3rd annual "ham" breakfast and swapmeet Sunday, 8 August from 9:00 a.m. to 4:00 p.m. at the Sonoma Community Center, 276 East Napa Street, Sonoma, California.

Breakfast will be served from 9:00 a.m. to 12 noon, and will feature sausage, eggs, pancakes, orange juice and coffee or tea for the same inflation-fighting low price of $3.50 a head for adults and $1.75 each for children under 12. Waitresses will be on hand to serve those people manning their swap tables.

A repeat of last year's hit, Sonoma Sausage Company sausages and Sonoma French Bakery rolls will be served, a la barbecued hot dog, for lunch.

Swap tables can be set up from 8:00 a.m. on with swap spaces renting for $5. There will be room for up to 100 spaces, but only 30 tables available on a first-come basis, so try planning on bringing your own table. Admission, including a raffle ticket, is a paltry $1, with tykes, YLs and XYLs free.

There will be an open auction at 2:00 p.m., a raffle at 3:30, computer display and demonstrations, a 10-meter FM station operating, a Sonoma Valley Quilters table and an amateur television display.

Talk-in will be on 147.47 simplex, and the local 146.13/73 repeater will be monitored.

For further information call Darrel Jones, WD6BOR, at 707-938-8086. For swap space reservations, write (enclosing $5) to VOMARC, 358 Patten Street, Sonoma, CA 95476. □

California

The 4th Annual WR6ACV Swapmeet will be held Saturday, 21 August 1982, at Louis Park in Stockton. The 'meet begins at 9:00 a.m. If you're going south on I-5, take the Mt. Diablo exit and turn right onto Mt. Diablo; if you're going north on I-5, take Mt. Diablo exit and turn left onto Mt. Diablo. Follow Mt. Diablo to Louis Park, about one-half mile from I-5. Watch for large parking lot just beyond the ball diamond — we'll be on south edge of the parking lot.

Bring your own tables and sell your amateur gear and components. No charge for selling.

For more information, contact Frances Keenan, WD6BFJ, 92-24221 South Chrisman, Tracy, CA 95376. □

Illinois

The Shawnee Amateur Radio Association invites all amateurs to its 26th annual SARAfest on 12 September 1982. The 'fest will be held on the beautiful campus of John A. Logan College, just west of Carterville and east of Carbondale on Illinois State Route 13, near Crab Orchard Lake. The hamfest will be held in the gymnasium in air-conditioned comfort, where plenty of tables and electricity will be available. The first three tables will be of no charge to dealers.

Admission is $2 advance, $3 at the door. Features of the 'fest will include prizes, auction, flea markets (inside and outside), club photos, forums, computer activities and ladies activities. There will also be a special event station on the air.

Talk-in on 146.25/.85 MHz, 146.52 MHz simplex, and 3.925 MHz (SARA Sunday Net frequency).

For information, contact William May, KB9QY, 800 Hilldale Ave., Herrin, IL 62948 or any SARA member. □

Indiana

The 3rd annual Grant County (Indiana) Amateur Radio Club Hamfest will be held 11 September 1982. The location will be McCarthy Hall, St. Paul's Church, 1031 Kem Road, Marion, Indiana. There will be free parking, good refreshments and hourly prizes. Flea market tables are available on request for a modest fee.

Gates will open for sellers at 6:00 a.m. and for the public from 8:00 a.m. until 4:30 p.m. Donation is $2 advance, $3 at the gate.

Talk-in frequencies: 146.19/79 or 146.52 simplex.

For further information send SASE to: Beecher Waters, WB9YHF, R.R. #1 Box 357, Converse, IN 46919. □

Iowa

The Iowa 75-Meter Net will hold a picnic and swapfest on Sunday, 15 August 1982 at River Valley Park in Ames, Iowa. A potluck meal will start at 12:00 noon and a program to follow with prizes.

Talk-in on 16-76.

For further information, contact Net Secretary Lovelle Pedersen, WB0JFF, 2327 W. Reinbeck, Hudson, IA 50643. □

Iowa

The Des Moines Amateur Radio Association (DMRAA) will hold its annual Hawkeye Ham and Computerfest on 22 August 1982, from 9:00 a.m. to 5:00 p.m. at the air-conditioned Veterans Memorial Auditorium off I-235 in downtown Des Moines.

Admission in advance $3; at the door, $3.50. Ample parking available around the auditorium. Amateur and microcomputer dealers. Large indoor flea market area. DMRAA consignment table available with 10 percent of sale price to DMRAA. Enter the

(continued on next page)

European DX Contest

The Deutscher Amateur Radio Club invites amateurs all over the world to participate in the annual European DX Contest. The contest periods are as follows. CW: 14-15 August 1982; Phone: 11-12 September 1982; RTTY: 13-14 November 1982. Operation for all three contest sections begins at 0000 GMT Saturday and ends at 2400 GMT Sunday.

Bands: 3.5 — 7 — 14 — 21 — 28 MHz.

Classifications: Single Operator — all band; Multi-Operator — single transmitter. Multi-Operator — single transmitter. Stations are only allowed to change band one time within a period of 15 minutes. A quick band change and return for working new multipliers is allowed.

Rest period: Only 36 hours of operation out of the 48 hours are permitted for single-operator stations. The *12 hours of non-operation* may be taken in one, but no more than three periods at any time during the contest and have to be marked in the log.

Exchange: A contest QSO can only be established between a non-European and a European station. Exchange the usual five or six digit serial number RTS/RS report plus a progressive QSO number starting with 001. W/K-stations in addition give their state (e.g. 599011 MA)

Points: Each QSO counts 1 point. A station may be worked once per band. Each confirmed QTC — given or received — counts 1 point. (See below.)

Multipliers: The multiplier for non-European stations is determined by the number of European countries worked on each band. Europeans will use the last ARRL countries list. In addition each call area in the following countries will be considered a multiplier: JA, PY, VE, VO, VK, ZL, ZS, UA9Ø. (See special regulations for RTTY.) Each W/K-state will be considered a multiplier.

The multiplier on *3.5 MHz* may be multiplied by *four*.
The multiplier on *7 MHz* may be multiplied by *three*.
The multiplier on *14/21/28 MHz* may be multiplied by *two*.

Scoring: The final score is the total QSO points plus QTC points multiplied by the sum total multipliers from all bands.

QTC-Traffic: Additional point credit can be realized by making use of the QTC traffic feature. A QTC is a report of a confirmed QSO that has taken place earlier in the contest and later sent back to a European station. It can only be sent from a non-European station to a European station. The general idea being that after a number of European stations have been worked, a list of these stations can be reported back during a QSO with another station. An additional 1 point credit can be claimed for each station reported. (Note special regulation for RTTY.)

a) A QTC contains the time, call and QSO number of the station being reported; ie.: 1300/DA1AA/134. This means that at 1300 GMT you worked DA1AA and received number 134.

b) A QSO can be reported only once and not back to the originating station.

c) *Only a maximum of 10 QTCs to a station is permitted.* You may work the same station several times to complete this quota. Only the original contact, however, has QSO point value.

d) Keep a uniform list of QTCs sent, QTC 3/7 indicates that this is the third series of QTCs sent and that seven QSOs are reported.

Europeans may keep the list of the received QTCs on a separate sheet if they clearly indicate the station that sent the QTCs.

Contest awards: Certificates to highest scorer in each classification in each country, reasonable score provided. Continental leaders will be honored. Certificates will also be given to stations wtih at least half the score of the continental leader.

Disqualification: Violation of the rules of this contest, or unsportsmanlike conduct, or taking credit for excessive duplicate contacts will be deemed sufficient cause for disqualification. The decisions of the Contest Committee are final.

Logs: It is suggested to use the log sheets of the DARC or equivalent. Send large size SASE to get the wanted number of log and summary sheets (40 QSOs or QTCs per sheet). Use a separate sheet for each band. All entrants are required to submit cross-check (dupe) sheets for each band on which they worked more than 200 QSOs. For each duplicate contact that is removed from a log by the checker, a penalty of three additional contacts will be crossed out.

Special regulations for RTTY: In the RTTY-Section of the European DX Contest, contacts between all continents and also one's own continent are permitted. Multipliers will be counted according to the European and ARRL countries list. Contacts within the same continent count a multiplier of *one* per band (*including 80 and 40M*). QSO as well as QTC traffic with one's own country (district) is NOT allowed. SWLs apply to the rules accordingly.

Deadline: *CW:* 15 September; **Phone:** 15 October; *RTTY:* 15 December

European country list

C31 — CT1 — CT2 — DL — EA — EA6 — EI — F — FC — G — GD — GI — GJ — GM Shetland — GU — GW — HA — HB9 — HBØ — HV — I — IS — IT — JW Bear — JW — JX — LA — LX — LZ — M1 — OE — OH — OHØ — OJØ — OK — ON — OY — OZ — PA — SM — SP — SV — SV Crete — SV Rhodes — SV Athos — TA1 — TF — UA1346 — UA2 — UA Franz Josef Land — UB5 — UC2 — UN1 — UO5 — UP2 — UQ2 — UR2 — Y2 — YO — YU — ZA — ZB2 — 1AØ — 3A — 4U1 — 9H1.

Criteria for the awarding of certificates and trophies in the WAEDC

Minimal requirements for a certificate or a trophy are 100 QSOs or 10,000 points. In addition, at least one of the following conditions must be fulfilled:

Certificates

a) Top score in a country resp. district.

b) In countries or districts with high participation, an additional certificate will be given for each full block of 10 participants.

c) Members of the Top Ten or Top Six (multi op.) lists.

d) Continental winners.

e) Stations with at least half the score of their continental winner.

f) Participants with at least 250,000 points.

Trophies

a) Continental winners in the single-operator category are awarded a plaque.

b) Continental winners in the multi-operator category will be awarded a plaque if they have at least 100,000 points or at least the score of the winner in the single operator category in their continent.

HAMFESTS

(*continued from page 48*)

homebrew contest. Door prizes throughout the day.

Talk-in on 146.34-146.94 and 146.22-146.82.

For tickets, motel reservations or additional information write DMRAA, Box 88, Des Moines, IA 50301. □

Kansas

The Wichita Amateur Radio Club announces its annual hamfest, to be held Sunday, 12 September 1982, 8:00 a.m. to 3:00 p.m., at Salvation Army Camp Hiawatha, 53rd St. North and Meridian, Wichita, Kansas.

Advance registration is $4 per person, $4.50 at the gate. Programs will include: DX review, Antique Radio collections, computer ASCII for VHF, and several others. Door prizes and a grand prize will be given away.

For more information (and advance registration), contact Kelly Walker, WBØOCK, 3501 E. 55th S., Derby, KS 67037. □

Missouri

The St. Charles Amateur Radio Club, Inc. invites your attendance at HAMFEST '82 on 22 August 1982, at the Wentzville, Missouri Community Club. There will be prizes, contests, flea market, food and fun for all. And now, air-conditioned exhibition buildings. Admission is just $1 per car. Tickets in advance are $1 each/four for $3. At the door the tickets will sell for $1.50 each or four for $5.

For tickets, motel and camping information, prize lists, dealer reservations, etc., write SCARC HAMFEST '82, c/o Mike McCrann, WDØGSY, 25 Elm St., St. Peters, MO 63376. □

New Jersey

The Sussex County Amateur Radio Club is holding its 4th annual hamfest, SCARC '82, at the Sussex County Farm and Horse Show grounds on Plains Road, off U.S. Highway 206 in Augusta, New Jersey, just north of Newton. Acres of free parking and outdoor flea market. Sellers, $4 preregistered, $5 at gate. Huge building for indoor sellers: $5 preregistered, $6 at gate. Registration: $2. Door prizes.

For information or registration: Sussex County Amateur Radio Club, P.O. Box 11, Newton, NJ 07860, or Lloyd Buchholtz, WA2LHX, 10 Black Oak Drive, Vernon, NJ 07462.

Talk-in on 147.90/30 and 146.52. □

Ohio

The Union County Amateur Radio Club proudly presents the Marysville Hamfest to be held Saturday afternoon and all day Sunday, 21-22 August 1982 at the fairground in Marysville, Ohio (near Columbus).

Talk-in station KA8ETD will be on 146.52 MHz and the club repeater 147.99/.39 MHz. Free overnight camping is available. Free square dance with live band on Saturday night, door prizes, ladies programs, ARRL-FCC-MARS meetings on Sunday. Admission is $2 advance or $3 at the gate. A charge of $1 for flea market space this year.

For full information, write UCARC 13613 U.S. 36, Marysville, Ohio 43040 or call 513-644-0468. □

Ohio

The Cleveland Hamfest Association will present the 8th Annual Cleveland Hamfest on Sunday, 26 September, 1982 at the Cuyahoga County Fairgrounds in Berea, Ohio, from 0800 to 1700 hours.

Activities will include indoor exhibits, forums, ladies program and outdoor flea market with separate parking. Food services will include both breakfast and lunch. Three main prizes and a mobile check-in prize.

Talk-in will be on 146.52 MHz with W8QV.

Advance tickets $2.50 prior to 31 August and $3 at the door. Contact the Cleveland Hamfest Association, P.O. Box 27211, Cleveland, OH 44127. □

Pennsylvania

The Central Pennsylvania Repeater Association's 9th annual hamfest/computerfest will be held 5 September at the Harrisburg Farm Show parking lot, off U.S. Route 81, Cameron St. exit. Follow the signs to the Farm Show Building. Gates open at 8:00 a.m. 66,000 square feet of indoor space available for those wishing to sell, for $5 per 10-foot space. Registration $3, tailgating $1.

Talk-in on 144.87/5.47, 146.16/.76, and .52 MHz.

For more information or a map, contact Irvin Sanders, K3IUY, RD #3, Box FA53, Harrisburg, PA 17112 (717-469-2185). □

Pennsylvania

The Uniontown Amateur Radio Club (W3PIE) is having its 33rd Annual Gabfest on Saturday, 11 September 1982. It will be held on the club grounds, located on the old Pittsburgh Road, just off Route 51 & 119 bypass in Uniontown, Pennsylvania, about 40 miles south of Pittsburgh.

The swap & shop set-up is free with registration. Preregistration fee is $2 each, or three for $5. Demonstrations (computer and OSCAR), prizes, refreshments, free coffee and free parking will be offered.

Talk-in on 147.045-645, 144.57-145.17 and 146.52-52.

For more information, contact UARC Gabfest Committee, c/o John T. Cermak, WB3DOD, P.O. Box 433, Republic, PA 15475; (412) 246-2870. □

c) A station may receive a plaque in the same category only once within a three-year period.

d) Special plaques will be presented to all members of the Top Ten/Six if they have been in this list for at least five times.

e) The WAEDC-Committee reserves the right to honour outstanding achievements in the contest by additional plaques.

For more information, write to: WAEDC Committee, P.O. Box 1328, D-895 Kaufbeuren, GERMANY. □

Alabama QSO Party

The Alabama QSO Party, sponsored by the Chattahoochee Valley Amateur Radio Club, will begin at 0000Z, Saturday, 28 August and end at 0400Z Sunday, 29 August. The same station may be worked once on each band and mode and mobiles on each county change. Alabama-to-Alabama contacts permitted.

Exchange: RS(T) and QTH. County for Alabama stations. State, province or country for others.

Scoring: One point per QSO. Alabama stations multiply by total states, provinces and countries worked. All others multiply by number of Alabama counties worked.

Frequencies: *CW* — 3565, 7065, 14065, 21065, 28065 *Phone:* — 3965, 7265, 14285, 21365, 28565 *Novice:* — 3725, 7125, 21125, 28125

Awards: Certificates to top three scorers in Alabama and to top scorers in each state, VE province and DX country. Also, top Novice/Technician in Alabama and out-of-state. Plaques will be awarded to top Alabama score and top out-of-state score.

Mailing deadline is 30 September. Include large SASE for copy of results. Mail to: Johnny Royster, WA4VEK, P.O. Box 494, Fairfax, AL 36854. □

Occupation Contest

The Radio Association of Erie is sponsoring the 2nd Annual Occupation Contest. The purpose of the contest is to make contacts with other amateurs in which their occupations are exchanged.

Scoring: One point for each QSO. Multipliers will be determined by the amount of similar occupations. One multiplier for every three similar occupations, which is a change from last year's contest. Please try to keep occupations in general fields (example: engineer, technician, machinist, salesman, etc.).

Exchange: RS(T), occupation, state or province or country.

Awards: A plaque is given to the top scorer and certificates will be given to top scorers in each state, province and country.

Frequencies: CW — 50 kHz from the bottom of the ham bands. Phone — 50 kHz from the top of the ham bands. Repeater contacts are not permitted.

Date and time: 28-29 August 1800 GMT Saturday, 28 August to 2400 GMT Sunday, 29 August.

Deadline for logs is 1 October 1982 and sent to: Chris Robson, KB3A, 6950 Kreider Rd., Fairview, PA 16415. □

4-land QSO Party

Date and times: — Begins 1800 GMT Saturday, 4 September until 0600 GMT, Sunday 5 September. 1300 GMT Sunday, 5 September until 0100 GMT, Monday, 6 September.

Annual QSO Party: — Sponsored by the Brightleaf Amateur Radio Club of Greenville, North Carolina to make the many counties in the eight 4th district states available to the county hunters.

The same station may be worked on each band and mode, fixed, and again if operated portable or mobile. 4th district stations may work other in-district stations. The mobiles may be worked again when changing counties.

Exchange: — RS(T) and QTH. County and state for 4th district stations; state, province or country for others.

Scoring: — For 4th district, 1 point per QSO multiplied by number of states and provinces and countries worked. Contacts with BARC club station W4AMC counts for 5 points.

All others: — Count 2 points per QSO and multiply by number of 4th district states plus 4th district counties. *Count* states and counties *once only.* QSOs with BARC club station W4AMC count for 5 points.

Frequencies: CW — 3575, 7055, 14070, 21070 and 28090. **Phone** — 3940, 7260, 14340, 21360 and 28600 — all frequencies ± 10 kHz. **Novices** — 3710, 7110, 21110 and 28110 kHz.

Awards: — Certificates to top scorers in each state, VE province, country with second and third place awards when warranted. Also county awards to 4th district states and special awards to Novices.

Mailing deadline: Thirty days after end of the contest. Send to Contest Chairman, Bob Knapp, W4OMW, 105 Dupont Circle, Greenville, NC 27834. SASE for results. □

HOWDY DAYS

HOWDY DAYS begins Wednesday, 8 September at 1800 UTC and ends Friday, 10 September at 1800 UTC.

This is HOWDY DAYS' 20th anniversary! HOWDY DAYS is primarily to start the fall season by chatting with old friends and finding new ones. Extend an invitation to join YLRL if they do not belong. Acquaint them with YL nets and other YLRL activities. Be sure to encourage non-YLRL members to send in their logs. *PARTICIPATE!*

Eligibility: All licensed women operators throughout the world are invited to participate.

Procedure: Call "CQ YL."

Operation: All bands and modes of emission may be used. No cross-band operation. A station may be counted only once for credit.

Exchange: YLRL member or non-YLRL member. Entries in log must also show date, time, band and call of station worked.

Scoring: Score 2 points for each YLRL member worked and 1 point for each non-YLRL member worked. *NO* multipliers.

Logs: All logs must show if operator is YLRL member or non-YLRL member to be eligible for awards. *Do not* send carbon copies of logs. Please print or type. *Logs must be signed by the operator* and no logs will be returned. Logs must show claimed score and be received by 11 October 1982.

Please send log to: Sandi Heyn, WA6WZN, 962 Cheyenne St., Costa Mesa, CA 92626. For each duplicate contact that is removed from the log by the vice president, a penalty of three additional and equal contacts will be exacted.

Awards: Top scoring YLRL member will receive her choice of a YLRL pin, charm or stationery. Top scoring non-YLRL member will receive a one-year membership in YLRL. □

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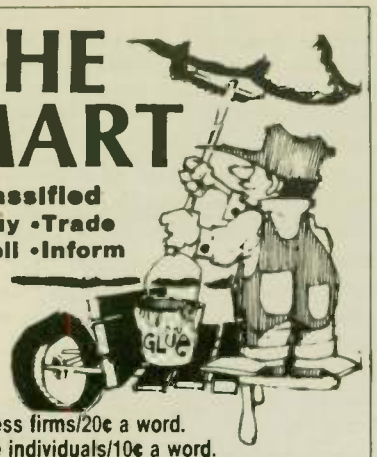

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