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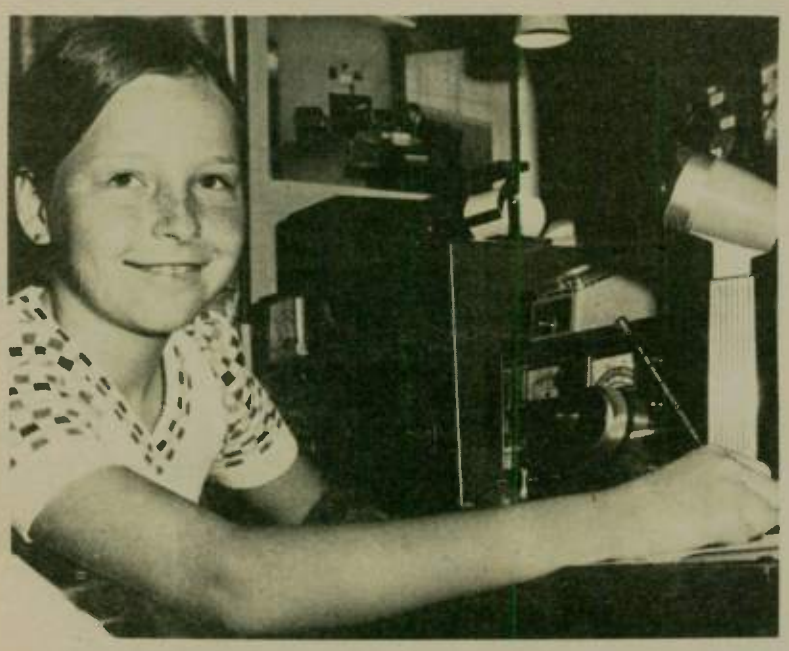
THE WORLDRADIO NEWS

Vol. V, No. 2 Adventure in Amateur Radio August 1975 50¢

FCC Amateur Chief Retires



Ten-year-old girl earns General

Hope Cliver of Joshua Tree, California, age 10, is the youngest General class Amateur Radio Operator in the world. In June she took the Federal Communications Commission examination in Los Angeles.

"The test was pretty easy," Hope said in a serious tone. She plans to work for her Advanced license while she is still 10, and take her Extra class examination when she is 11.

"I can't wait to start talking to hams all over the world," said Hope, who will work 80, 40, 20, 15 and 10 meter phone and CW on her Kenwood transceiver.

An interest in Amateur Radio runs in Hope's family. Her parents are both Amateur Radio Operators and hold General class licenses.

Hope is one of 16 Amateur Radio enthusiasts who obtained their licenses after completing a semester course on the subject at College of the Desert. The course was initiated by the Radio Amaters' Transmitting Society of Palm Desert, headed by Hal Kapp, W6WLU. Bill Ellis drove from Culver City each week to teach the course which will be taught again next fall.

Instructor Ellis was surprised at the interest Hope showed in learning and practicing the code.

Dr. Fern Stout, president of the College of the Desert, spoke of Hope's progress at a recent luncheon of the Desert RATS. Dr. Stout indicated that Hope has considerable promise because of her early start.

Fast action saves man trapped in flaming auto

Vivian E. Douglas, WA2PUU

Recently a QSO was taking place on the Syracuse 31/91 repeater machine when this urgent message came though: "Break, Emergency Traffic."

Quickly the caller was answered with, "Breaker with Emergency Traffic, go ahead." Then followed a request to call the phone number of the Fire Department to report a car burning in Solvay from which an unconscious man had just been removed.

Within seconds three radio operators answered the call. Two mobile operators listening had pulled up at telephone booths with money ready to notify the proper authorities, but a base station monitoring at home quickly broke in with, "Got it. The call has been

(*please turn to page 3*)

Robert L. Drake

Eunice G. Bernon, K8ONA

The death of Robert L. Drake, W8CYE, founder and board chairman of the Robert L. Drake Company, Miamisburg, Ohio, will kindle a personal sense of loss in the hearts of radio amateurs all over the world.

Many DX operators proudly identify their equipment with, "I'm running all Drake gear here." And that includes distant amateurs, King Hussein of Jordan, plus a myriad of Japanese licensees. Matter of fact, one-half of Drake's products are sold abroad.

Drake, 65, became a silent key 28 July after a long illness. Services were held 31 July at St. John's Lutheran Church with Rev. Marlin Gindlesperger officiating.

Harry S. Gantz, W8QMN, Cincinnati, OH said, "It was a simple service, right out of the book. Many friends paid respect; the cars stretched over a mile."

Gantz eulogized, "Drake was a remarkable, modest man with a remarkable sense of humor. He never spoke about his many acts of kindness, nor his accomplishments as an engineer of radio equipment."

Members of the Miamisburg Repeater Association (146.22/82) can attest to it. Their antenna is located on the Drake farm, along with equipment installed by Drake company employees.

Drake's interest in amateur radio and its people was manifested by his generous contributions to the Dayton and other hamfests. His personal design of equipment for the blind is but one known contribution; Drake's modesty prevented friends' awareness of others.

Amateurs have always praised Drake's business ethics. There is a charge for replacement parts, but not for labor. A promise of 24-hour service is a promise kept.

Gantz said, "Drake equipment is well built. I've many pieces eleven year old, under the original '100 series,' in excellent condition."

Drake was licensed in 1933 when he was a student at his hometown University of Cincinnati. Before graduation with a

(*please turn to page 13*)

"I live 25 miles from the FCC and it was all bumper-to-bumper traffic going to work. I wanted to avoid that so I'd get to work about 7:00 a.m., which meant I'd get up at 5:30. You get a little tired of that."

Those were the words of Prose Walker, W4BW, on 31 July, his last day on the job, as he talked on the phone to **Worldradio News**.

Walker, who will be 66 years old on his next birthday, retired from his position with the FCC after four years and three months as Chief, Amateur and Citizens Division. No successor has yet been named.

He had planned on leaving a year ago but, as he put it, "There was always one project more."

He has already had several job offers in private industry, but said he wants to go on a four or five months vacation. The job offers were not a factor in his retiring from the FCC. While he declined to name them, he did say that some were from other radio services who wanted him to work with them in regards to the upcoming World Administrative Radio Conference.

Even though he is at what is considered "retirement age," he said he would like to continue working, but added, "I don't have to."

He mentioned that the FCC had asked him to continue to work on the Amateur Radio position for the WARC, but since they put it on a "gratis" basis he declined their offer.

As to what he felt he had accomplished in office he said he would let the record speak for itself, but did say he felt he was responsible for a greater awareness on the part of Amateur Radio that we don't own our bands forever and that we must justify our use of them. He said there are a great many factors that go into retaining our portions of the radio spectrum. He said that in the past few years he felt that Amateur Radio had "grown up" and that he had had a hand in that.

Walker, an Extra class amateur and life member of the ARRL, brought an extensive background to his position as Chief of the Amateur and Citizens Division.

He graduated from Denison University, Granville, OH, in 1932. Major subjects were physics and education with minors in mathematics and English. He did graduate work in physics at Ohio State Armed Forces. He is a registered Professional Engineer in the District of Columbia and the Commonwealth of Virginia. He was elected a Fellow in the Institute of Electrical and Electronics Engineers (IEEE) in 1964

(*please turn to page 13*)

WA6GF
J Maxwell Lockheed Recreat
Box 473
Redwood Ests, CA 95044

contests

1975 Rocky Mountain QSO party

sponsored by
Rocky Mountain Division ARRL

The states participating in this QSO party are Colorado, New Mexico, Utah, and Wyoming. Each state is having a separate QSO party.

The contest periods are from 2100Z to 2400Z on Oct. 4,0100Z to 0500Z and 1800Z to 2100Z on Oct. 5, 1975.

Frequencies — CW 65 kHz up from the bottom. Phone near the edge between General and Advanced. Novice near the middle of each band. Stations outside the division please refrain from calling CQ Contest near these frequencies.

Exchange — serial number, RST, state, and county for stations in the Rocky Mountain Division, while those outside may omit the county. Stations may be contacted only once per band regardless of mode, except that mobiles may be contacted again if they change counties. Intradivision and intrastate contacts are valid.

Scoring — 1 point per QSO. For Rocky Mountain Division stations the multiplier is the sum of states, VE provinces, countries, and Rocky Mountain Div. counties. For stations outside the division the multiplier is the number of counties worked in the state in whose party he is participating. There will be 4 different multipliers, one for each state, for those that enter all 4 contests.

Appropriate awards will be given.

Full log data, including exchanges should be sent to Bill Wageman, K5MAT, 35 San Juan, Los Alamos, NM 87544 no later than Nov. 1, 1975. Include SASE for awards and/or copies of the results.

North Carolina QSO Party

Start 1 November 1975 at 1900Z. **End** 3 November 1975 at 0100Z.

Frequencies — CW: 3560, 7060, 14.060, 21.060, 28.060; Novice: 3720, 7120, 21.120, 28.120; SSB: 3900, 7270, 14.290, 21.390, 28.590.

QSO Exchange — Out-of-state stations send signal report and state, province or country. North Carolina stations send standard signal report and NC county.

Scoring — Out-of-state stations count one point for each NC contact. (Same station worked on different band, mode or in different NC county counts as new contact). **Total contacts times total number NC counties worked equals contest score.** NC stations count one point for each contact. **Total contacts times number of states plus number provinces plus number foreign countries equals contest score.** NC mobiles use number of counties operated from for an additional multiplier.

Logs — Please send us your signed log. Logs will not be returned. Logs must clearly indicate signal report, band, mode, GMT, state, province, country or NC county. On a separate sheet list the following: (1) your name, call sign and mailing address; (2) your total score; (3) county, state, province, country from which you were operating; (4) call signs of operators. Mail logs postmarked no later than 12 December 1975 to Alamance Amateur Radio Club, Inc., 2822 Westchester Dr., Burlington, NC 27215 (SASE appreciated).

Awards — Trophies will be awarded to the highest scoring out-of-state station. NC Station Certificates will be issued to the highest scoring station in each: (1) state, province and foreign country; (2) NC county. A certificate will be issued to the highest scoring NC mobile station. The NC counties award certificate will be issued to any station in the QSO party whose log certifies his contacting 30 or more NC counties during the party time period and has not previously been issued such a certificate by AARC, Inc.

73 good luck de K4EG.

MARAC Newsletter

Send a kid to camp — Work a "6"

1975 California QSO Party sponsored by the Northern California Contest Club

The 1975 California QSO Party will begin at 1800 UTC (11:00 a.m. PDST) on Saturday, 4 October, and end at 2400 UTC (5:00 p.m. PDST) on Sunday, 5 October. Of the thirty hour period, the maximum operating time shall not exceed 24 hours. Times on/off must be clearly marked in the log. Each time off shall not be less than 15 minutes.

All amateur bands may be used and stations may be worked once on phone and once on CW on each band. A California station which changes counties (ie, a mobile or portable) is considered to be a new station and may be contacted again on each band and mode.

California stations will transmit consecutive QSO numbers and county. Non-California stations will send consecutive QSO numbers and state, Canadian province, or country. California stations may work each other, but contacts between stations outside of California have no contest value. Each complete QSO shall count two points; no credit is allowed for partial contacts. The multiplier for California stations shall be the number of different states plus Canadian call districts (VE/VO 1-8, maximum of 8). California stations may count the state of California as one multiplier. Also, DX may be worked for QSO points but does not count for multipliers. Non-California stations will use as their multiplier the number of different California counties worked (58 maximum). The final score equals total QSO points times the multiplier.

Suggested frequencies: CW: 1805, 3560, 7060, 14060, 21060, 28060. SSB: 1815, 3895, 7230, 14280, 21355, 28560. Novice: 3725, 7125, 21125, 28125. Try 10-meters on the hour and 15-meters on the half hour between 1800 and 2200 UTC.

Log information should include date, time, band, mode, call signs worked, and exchanges sent and received. Please number each new multiplier as worked. A summary sheet should be included showing your call sign, name, address, number of QSOs on each band and mode, total number of QSOs, total multiplier (maximum of 58), claimed score, and whether the entry is single or multi-operator.

Certificates will be awarded to the highest scoring station in each California county, state, province, and country. Second and third place awards may be made where justified. In addition, certificates also will be awarded to the highest scoring mobile station, portable station, multi-single, and multi-multi entries. A certificate will be awarded to the club submitting the highest aggregate score.

All entries must be sent to the NCCC, c/o John Minke, W6KYA, 6230 Rio Bonito Drive, Carmichael, California 95608, and must be postmarked not later than 31 October 1975. A large, business-size self-addressed stamped envelope is requested with each entry. All comments and suggestions will be appreciated.

Worldradio

The Worldradio News
is published monthly by
Worldradio Associates

Offices at 2509 Donner Way
Sacramento, CA 95818 USA
Telephone: (916) 456-6725

Subscription rates: $5.00 per year, $9.00 for two years, $12.00 for three years, and $50 for life. IRCs and local currency will be accepted from overseas readers.

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

Controlled circulation postage paid at Sacramento, CA, August 1975 issue.

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Craig Rutledge, WB6KTR
Bill Yost, WA6PIU
Judy Yost, WA6RAN

The Worldradio News is an international conversation. You are invited to be a part of the action. This newspaper is written by its readers. Our goal is to be a valuable resource by distributing ideas and experiences.

We want to be beneficial to the Amateur Radio community. We publicize and support those who bring the flame of vitality to their efforts in this avocation. We feel Amateur Radio is of extraordinary significance.

We are positively-oriented and we ask your cooperation in assisting us to help develop the skill, potential and quality of Amateur Radio.

We see our mission as stimulating our audience and in that we ask your support.

The growth and future of Amateur Radio is one of our prime concerns.

Our readers/participants are an alliance of active radio amateurs who are concerned with reality. They use radio as a communication tool.

While we print all the news of this great activity, we particularly desire an input of stories dealing with the dramatic, the personal and the humanitarian uses of radio.

Through **Worldradio** you can make contact with other individuals who share your interests. And, this newspaper will be getting bigger and better.

Surgery by Amateur Radio

(The following story was sent to us by **Walter Davis, WA6ODQ.**)

Isla de Cedros, Baja California. A 30 year old woman was saved from death by surgery through Amateur Radio from Tijuana.

This singular case took place on 4 June early in the morning. Mrs. Victoria Rodriquez was in grave condition with internal hemorrhaging caused by a ruptured ectopic pregnancy.

What is almost incredible is that the poor woman, wife of a fisherman, had to be anesthetized from Tijuana with the help of an amateur radio operator when it was decided to perform surgery on her.

It all started Tuesday night when the woman was taken to a small hospital. Amateur radio operator Jose Gonzalez Mundo installed an 80-meter antenna and his own radio equipment to ask for help from Tijuana.

The communication was made through amateur Aurorita Sambrano of Ensenada, Norberto Iton Aguilar (XE2QW), Elpidio Romo of San Quintin and Salvador Flores Gonzalez. But it was Dr. Clemente Hermosillo, XE2LQ, anesthetist and radio-aficionado, who, with his medical knowledge, was able to make surgery possible when the woman was near death.

The most dramatic moment of this case was when half-way through the operation, with Dr. Hermosillo supervising it over the air, he lost radio communication and had to continue from the home of Heliodoro Flores, XE2MMX.

By 3:30 a.m. Mrs. Rodriquez was out of danger.

La Voz de la Frontera, Baja California.

June tornado

Robert Dixon, W8ERD

At about 6 p.m. on Tuesday, 17 June 1975, EC W8ERD was telephoned by Red Cross Disaster Director Dennis Dittiacur. He said they had reports of tornado touchdowns in Grove City and in a trailer park on Greenlawn Ave. in southern Columbus. He asked that the AREC send mobile units to these areas to provide on-scene damage reports to the Red Cross Headquarters station, K8DDG.

The calling tree was started immediately with AREC Emergency Alert Yellow, and W8ERD opened the AREC Two-Meter Net on 146.46 MHz. Robert Adams, W8BKO, was dispatched to the Greenlawn area and Stephen Moore, WA8LUR, and Terry Douds, WB8CKI, to Grove City. David Lewis, K8MLO, and George Morris, WA8RUT, were sent to Red Cross Headquarters to man K8DDG. The Ohio State University station, W8LT, was manned by Victor Kean, WB8OSC, and John Chapman, WB8INY. They acted as a relay station on 2 meters and as Net Control for the AREC Ten-Meter Net on 29.000 MHz.

Upon arriving at Greenlawn Avenue W8BKO was unable to drive further, so he proceeded on foot with his walkie-talkie and provided a complete description of the damage.

WA8LUR was able to provide a good description of the damage to the Grove City area.

Following these reports Red Cross requested that AREC provide six additional mobile units to assist Red Cross Disaster Survey teams being assembled to enter the disaster areas. These were all obtained and sent to Red Cross Headquarters. A shelter for homeless victims was opened by Red Cross at the Barack Recreation Center and AREC units were stationed there.

An AREC mobile unit accompanied the Red Cross Canteen vehicle to the Greenlawn Avenue disaster scene.

Reports of other tornadoes had been received from adjacent counties also within the Central Ohio AREC jurisdiction so John Campbell, WB8MWI; the OSU station, W8LT; and Robert Keller, W8ETQ; were assigned to monitor the low power FM broadcast stations located in the small affected towns. This provided useful information that could not be obtained in any other way.

As assignments were completed personnel were released, with the operation officially ending at about 10:30 p.m.

Others, not mentioned above, who participated were: Robert Anderson, K8BYU; David Kolb, K8IKD; George Brown, WA8EVD; Herbert Mickle, WA8YHN; Jean Mickle, K8RLS; James Bolinger, WB8DEA; Paul Thacker, WB8JGO; Donald Weatherby, WA8EVP; Bruce Charlton, WB8OMQ; Ralph Rickett, W8BTW; Kevin Schreiber, WA8OHI; William Clausen, W8IMI; Rocco Eramo, W8SJQ; Margaret Feazell, WB8SJV; Frederick Yost, K8JGY; Robert Wilkey, W8VMS; Scott Swearengin, WB8DDE; John Richards, WB8NNK and David Kuechenmeister, WB8LRL.

Central Ohio AREC Bulletin

Public service

John Kohler, WB4WBM

Communications for a tri-county Bike-A-Thon sponsored by the American Cancer Society were handled by members of the Gulf Coast Amateur Radio Club.

The Bike-A-Thon route covered a total of some 48 miles in Pasco, Hernando and Citrus Counties along US 19 and SR 50. An estimated total of 400 bike riders started from Bayonet Point, Brooksville and Homosassa Springs and made round trips to Weekiwachee Springs.

Communications were primarily handled on 2M FM (146.40) and 6M AM (50.4), with backup on 40 M SSB (7.235). A net control station was set up at Weekiwachee Springs, with key stations north and south acting as relay stations. Mobile stations were positioned along all routes and hand-held or temporary installations were used for three deputy sheriffs' cars and the cruising bicycle repair truck.

NCS at Weekiwachee was WA4WBM, assisted by Robert Mayer, K4FFM, and Chester Scott, K4INK. Mobiles along the route were Daniel Jenkins, WB4TZR; Walter Cooke, WN4IUG; Edgar Metz, K4FDO; Lyle Dusenbury, W8DIV/4; Irving Sears, W4JCJ; Leo Houghton, WA4MHS; WA4KYG; Robert Hilton, WA4GXX; David Neubauer, K4FRQ; Walter Allard, K4HDQ; John Slack, K4FII; Maurice Peters, W4WDQ; Howard Griswold, K4FMJ; John Maloney, K4KNI; Kenneth Miller, K4KKI; William Shuster, WB4LOA; Roy Mitchell, WB4TVQ; Robert Carlsen, K4ALZ; and Charles Downes, WB4PVD. Sheriffs' cars were manned by William Holmes, W4RDP; George Davis, WB4TGW; and Alfred Friend, WA4BGW of Crystal River. Charles Ramb, WB4IDT, manned the repair truck.

The entire operation went exceptionally well, and the one real emergency that did develop was handled with notable dispatch.

Florida Skip

Alexandria Radio Club

ARC members provided communications for crew races on several Saturdays on the Potomac River under the able leadership of Vince Gambino, WA4QJO. A two-meter base station with a mobile unit at each end of the race course supplied scoring information to the crew race officials and action reports to the audience via a public address system, thanks to the ARC. The mobile units were used from boats.

At the most recent of these events. The club was thanked by AN Indiana Congressman. Frank Love, K4PDA, operated the starting line unit and Vince Gamino was at the base station along with Jim Wilson, K4BAV, who ran the public address system.

Auto

from page 1

completed." Help was on its way.

Quick action by Rich Gillani, WB2AJP, in spotting the fire, pulling the man to safety, and calling for help is credited with saving the man from a fiery death. The two mobiles ready to call for help were WA2AJQ and WA1QAE.

Less than 30 seconds had gone by from the time the Emergency Breaker had asked for help. Monitoring 2-meters can be a Public Service!

Herald American, Syracuse, NY

Send news to Worldradio

AREC net saves two lives

Mark D. McIntyre, WA4FFW

It had been raining off and on for seven days and on the latter two it had been heavy rain. No one needed to be reminded. It was Sunday, 13 June, when Billy Mitchell, WB4SGA, and wife Mary, WB4SGC, decided to do a survey of water levels on some of the creeks in Northern Alamance County, NC.

Billy, WB4SGA, is the Assistant Emergency Coordinator for Alamance County, NC. He was aware that the EC, WA4FFW, had been on vacation and was not expected back until late on Sunday the 13th. He knew Mac (WA4FFW) had always preached preparedness and had stated many times that all AREC members should be alert and aware as to what emergency conditions exist.

Billy had grown up in the Northern part of the county. He had lived there all his life. He was aware that there were numerous creeks in the area that could possibly be out of the banks since approximately eight inches of rain had fallen so far that day.

WB4SGA and his wife, WB4SGC, left home around 2100Z to do a survey of their area, checking each state road that had a bridge for high water. He would make a note as to the level and also the time. He would backtrack and recheck the same bridges, make new readings and compare.

After taking a reading he was stopped by a NC Highway Patrolman who was on duty and also lived in the area. He also was checking roads. He asked WB4SGA if he would help check a few points and was relieved when Billy told the trooper he had been and was glad to help.

It was 2300Z when, after making another round, Billy and Mary found water convering the pavement of several bridges and rising; thus presenting a very hazardous road condition.

Acting on his own Billy decided the situation had become an emergency and called for help. He used his 2-meter mobile rig to place an alert call for members of the Alamance County Amateur Radio Club over WR4AGC, which is owned and operated by Durham FM Repeater association in adjacent Orange County.

Bob Price, WB4VHE, responded. Billy asked Bob to activate the Alamance County AREC group by the telephone tree system. WB4VHE tried but found his phone service was out. Jack Welch, WB4SGB, called in from his mobile. Billy asked him if he could try to call WA4FFW, the EC. WB4SGB stopped and called WA4FFW via telephone. Mac had just retuned from a very wet vacation. He was asked to meet WB4SGA on the 22/82 repeater.

WA4FFW called into the net at 2310Z and was briefed on the situation. Billy had just asked and received permission to use the repeater on an emergency basis. WA4MXA, repeater control station, turned the repeater over to Bill for emergency use.

WA4FFW assumed net control from his home QTH. He then activated the AREC group by calling up the members who had 2-meter equipment and who were in the area that was under water.

Mike Chockley, WB4GSN/M,

(*please turn to page 17*)

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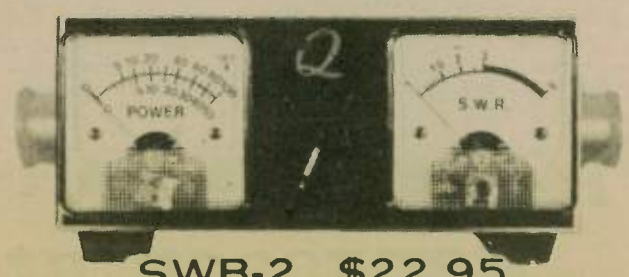

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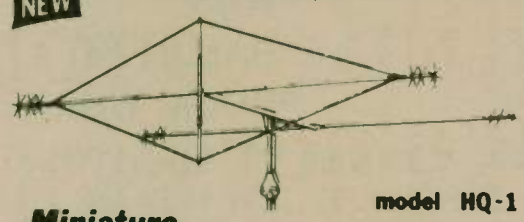

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Field Day

Field Day, Field Day — for many clubs the absolute highlight of the year.

It's fun, a camp out, enjoying the comradeship and team spirit of fellow amateurs, and, of course, there's the serious side, that being the testing of skills that would be needed in an actual emergency.

The amateurs in Utica, NY gathered at the old Smithport Airport. The 4-H building at the county fairgrounds was the site for the ops around Jacksonville, IL.

The ops near St. Charles, MO held their exercise at a barn on a farm. The preparedness of the Pamp Amateur Radio Club (TX) was tested for the 25th consecutive year. They know what "reality" can be, for the members of the club were in action during a tornado in their region on 27 March.

Field Day has been called the world's largest non-commercial emergency preparedness test. The Englewood Amateur Radio Assn. (NJ), on their 16th Field Day, had more than 50 operators who went to Winton White Stadium to "do their thing." They made over 2,000 contacts.

In Iowa, the Mount Pleasant ARC went ot Oakland Mills Park and had a potluck supper with the families of the participants. They also invited the public to visit their site and watch the radio operations.

The 28 and 29 June event saw the Sterling-Rock Falls ARS (IL) use the Whiteside County Civil Defense Communications Trailer on their site at Gartner Park.

The Babcock and Wilcox ARC, with Dave Firis, WB8KVT, as Field Day chairman, operated from the B&W employee activities softball field behind the office building in Barberton, OH.

The Tidelands Amateur Radio Society of Galveston, TX not only tested their emergency capability, but had a weekend campout for the families, capped with a steak fry on Saturday night.

The Thomas A. Edison Amateur Radio Association of Edison, NJ operated their portable stations on the grounds of Middlesex County College.

Members of the Leavenworth Pilot Know ARC (KS) used the Civil Defense generator and set up near the MARS station so they could use the rest rooms there.

A group made up of amateurs from many Latin American countries, The International Society of Amateur Radio Operators, held their test at Loyola School in Miama, FL.

Members of the Schenectady (NY) ARA were joined by members of the Saratoga Emergency RC. The operation was conducted behind radio station WMHT.

The Egyptian Radio Club of Granite City, IL has two emergency coordinators, Charles Hartman, K9IIT, and Richard Brobst, K9EOC. They set up at the Madison County Civil Defense Emergency Headquarters. This was not the first time at that location for the area amateurs. They were at that location "for real" during the flood that hit the area a few years ago.

Amateurs of Hammond, IN, known as the Radio Amateur Technical Society, went to the highest hill in their area, the Pines Ski Lodge; however, they did stay in tents. They used their club's own generator, batteries and a bicycle powered generator.

The Utah ARC went to Unita National Forest and operated from Mill Hollow.

The Lincoln ARC (NE) saw their Field Day as a dress rehearsal for natural disasters such as the tornado which hit nearby Omaha.

Visitors were invited to view the combined operation of the Kalamazoo (MI) ARC and Civil Defense Radio Amateur Civil Emergency Service.

The New York City Repeater Assoc. went the highest point in the borough, and made nearly 500 contacts.

Amateurs from Lake County (IL) gathered at the county fairgrounds. They know how important this all is because three years ago, while on Field Day, they had to abandon the exercise to provide real emergency communications for rescue operations during Hurricane Agnes.

The Charlotte ARS (FL) went on Field Day for the first time. At Ponce De Leon Park in Punta Gorda, not only did they invite the public but they also encouraged them to operate the equipment (under the direct supervision of a licensed amateur).

The guys in Flint, MI know how to keep cool during a warm July outing. The Genessee Radio Club held their Field Day at Bluebell Beach.

Operating from the Municipal Water Works grounds at Little Rock, AR were some friendly amateurs. They are even known as the Friendly Amateur Radio Transmitting Society.

The Amateur Radio Club of Caltech's Jet Propulsion Laboratory were on top of Mt. Wilson. They only operated during daylight hours as their power source was a 25-watt solar panel array designed by JPL engineers.

The Richardson Wireless Klub (TX) stepped up their competitive drive this year. Last Field Day they missed second place in their category by only four contacts. Also, this year they ate 110 hamburgers.

Too often many groups go on Field Day to a site so remote that no one else can see the operation. Not the Walla Walla (WA) Valley RAC, they set up at the Walla Walla City-County Airport.

The "North Ridgeville, Elyria, Colombia Station, Bay Village, mudslinging, creek stomping, operator drowning, tree-climbing, high school radio club and assorted alumni made about 2500 contacts from Ohio. Five transmitters and antennas up 80 ft. did it for them.

The Erie Amateur Radio Assoc. (OH) knows what it's all about. Their members helped during the Willard tornado, Vermillion floods and handled a lot of traffic out of Xenia after the tornado. Their Field Day Site was behind the Perkins Township Fire Station No. 3.

Running only on batteries and no more than ten watts, the Massillon (OH) ARC made about 600 contacts, mostly on CW. Wives provided the food for the event which was held within the city limits for the first time.

A parking lot in front of the Piqua Steel Co. was the site for the Piqua (OH) RC. Members of the club were on hand to show visitors the equipment and explain the public service role the club plays in the community.

Members of the Indian Hill RC (OH) had their station at the Indian Hill Middle School. The ten members worked in shifts and some stayed up all night, good for 1,000 contacts.

One of the operators with the Fresno (CA) ARC was 12-year old General class John Phillips, WB6WFQ.

The Hamden (CT) ARA held its exercise in conjunction with New Haven Civil Defense.

The Hattiesburg (MS) ARC had their supplies such as tents, generators and gasoline furnished by Jones County Civil Defense.

If you went with the Qyannapowitt RA (MA) you could have gotten in a little exercise when it wasn't your turn at the rig. They set up at the Mount Hood Golf Course.

The Genessee Radio Amateurs (NY) operated in the Emergency Communications Van of the 10 county Western District of New York State Office of Disaster preparedness. Genessee County Civil Defense loaned the group the generator and the City Council of Batavia and the County Legislature had a joint declaration proclaiming Amateur Radio Week.

Bay Path High School's parking lot was the site for the Quinebaug Valley (MA) RC Field Day.

While many groups go to hill tops, one did the opposite. They went into the Glacier Sand and Gravel Pits on Maury Island. It was the Western Washington DX Club, and they know what they're doing.

The Rockford (IL) ARA, which was first in their transmitter classification last year, operated from a classroom at Rock Valley College this year. Last year they were literally blown from their hilltop operating position. Since the first of this year the Rockford ARA has served local authorities by providing 1,400 hours of communications during the spring floods and searches for missing persons.

Amateurs in the area around Aspen, CO went on Field Day knowing that just two weeks earlier Amateur Radio was used in their vicinity. Emergency traffic came out of Redstone when tornado winds whipped through the Crystal River Valley.

The Old Natchez (MS) ARC has come in third place, several seconds and a first place in their category. They know what it's about. In 1951 an ice storm struck Natchez, destroying power lines and leaving the city shut off from the outside world except for amateur communications. For four days, the amateurs manned their units relaying for Western Union, newspaper wire reports, weather reports and importantly obtaining supplies of bread, milk and candles. Natchez amateurs helped after the recent McComb tornado. Amateurs on this Field Day, such as Garland Kahl, went to Bay St. Louis is the aftermath of Camille. Kahl says the first priority at that time was getting medical supplies and doctors. They spent a week on the effort as law enforcement and National Guard communications had been knocked out.

Amateurs of Calhoun County WV were located in Mt. Zion Park.

They were well aware that the training they were undertaking was maintaining the type of skills that were used when amateurs responded during the Buffalo Creek disaster in southern West Virginia.

The Indian River ARC set up at the Cocoa Beach (FL) High School athletic field. The phone operation was in the press box and the CW group was in the men's room of the concession stand.

Clever. The Lake Area RC (SD) set up their equipment at the baseball field in Clear Lake. Stations were located in the dugout. They made 1,200 contacts using the 80 ft. light towers on which to put their beam.

In Oklahoma City four radio clubs made the event a combined effort with around 100 operators taking part.

The Livingston (NJ) ARC set up in tents at the picnic grounds of the Essex County Hospital center in Cedar Grove.

Good PR. Amateurs in Harrison, AR set up their stations right in the middle of town so people could learn about Amateur Radio. They report it was a successful idea and they had visitors all hours of the day and night.

Participants at the Broward (FL) ARC ranged in age from 10 to 72 and included blind and wheelchair-bound.

Field Headquarters of the Dept. of Natural Resources in Oshkosh, WI was the site for the Oshkosh ARC. They made 740 contacts and along the way worked Switzerland.

Sangamon Valley (IL) RC used generators provided by the Illinois National Guard. They also had a bicycle powered generator to power a contact through a hand-held 2-meter rig. Club president Richard Osland manned the radio while his wife Judy faithfully pedaled the bike in spite of 90 degree heat. (Editor's Note: Well, it sounds like the guys in Illinois have got things working just right. —W6AJY) (Associate Editor's Note. Booooo. Don't give my OM, WB6KTR, any more crazy ideas. —Linda)

The Massasoit ARA (MA) went on Field Day as their next activity after furnishing communications for a recent March of Dimes Walkathon.

The Kokomo (IN) ARC set up in a city park and got their generator from the county civil defense agency.

Members of the Hoosier Lakes RC (IN) still remember the April 1973 tornadoes. The group on Field Day has just started in a new program in conjunction with the local civil defense organization. The amateurs are a part of a new early warning network to warn the public in Kosciusko County of approaching tornadoes or severe weather.

The Marshall (MN) ARC had 18 ops out on Field Day. They recently were on the air for 50 non-stop hours contacting relatives after the Omaha, NE tornado.

Members of the Kaw Valley (KS) ARC used a generator on loan from the National Guard. The group is active in severe weather watches and was active when the tornado hit Emporia.

David Bemmels, who went on Field Day with Chippewa ARC (Ottawa, KS) still recalls the 1951 flood that hit Ottawa. Amateur Radio Operators set up emergency communications centers at Ottawa University and other places in the area. He also mentioned that during last summer's storm that damaged the Garnett and Williamsburgh areas the local amateurs assisted with communications.

Members of the Orange County (CA) ARC gathered at the Marine Air Station (Helicopter) in Santa Ana.

The Hocking Valley (OH) ARA made 800 contacts using some equipment loaned from the Ohio National Guard and Hocking Technical College.

Hats off to the Hattiesburg and Laurel Radio Clubs (MS). A good turn our of Jones County spectators formed continuous stream through the operations area.

So more of the public could see amateur operation, the Central Massachusetts ARC set up at David Prouty Regional High School right on Main St. in Spencer.

Ak-Sar-Ben RC members on Field Day, operating on Signal Hill (Omaha, NE), were the same who handled traffic for the National

(*please turn to page 7*)

Field Day safety

Fred Linn, W9NZF/NNNØBUQ

The radio amateur is usually a master in the art of "jerry-rigging," and his field day activities are no exception. Auxiliary power supplies such as batteries, automobile generators, gas-driven alternators, and/or anything else that produces volts will probably be pressed into service. While generating power for the radio station these lashed-up arrangements may also generate mischief for the operator, depending upon his concern for safety rules.

The most obvious source of fire and explosion is the fuel for the gasoline engine with its ever-present danger of fumes, spillage, and electrical arcs, or matches and cigarettes. The burning cigarette coal reaches about 1000° F - increasing to about 1175° F when air is pulled through it - and is plenty hot enough to ignite a fuel vapor and air mixture.

Loose connections in fuel lines, leaks in storage containers, dirt in solenoids, and faulty filters are all potential trouble makers. Use extreme caution when filling the tank — stop the engine if spilled fuel will run down over hot engine parts.

The best accident preventer is **time.** The time necessary to check out the equipment and its accessories is well spent. Don't wait until the last minute to inspect the power equipment and start a crash program to beat a noontime operating deadline.

Next on the danger list is the lead-acid storage battery, not because of its output voltage but because of its tremendous current capability. Also it should be treated as a very capable **hydrogen** generator, as a storage battery in service will gas (bubbles in the liquid) and this gas is explosive when mixed with air. If the battery is located in a confined area with poor ventilation, an explosive mixture collects; all that is necessary is an arc or flame to ignite it.

Lead-acid batteries under charge should have their caps loosened, and the charger should always be fused. The charging area should be well-ventilated and should be kept free of arcs and sparks. In addition to the danger of explosion, sulfuric acid spray is formed due to bursting gas bubbles at the liquid surface. (Leave the caps over the openings, not screwed in.)

When connecting storage batteries into power circuits observe polarities carefully. Make certain that all connectors are clean and tight, that all power switches are open, and that the ground connection is made last. Remember that a storage battery can deliver 2000 amperes instantaneously to a shorted load. The arc can be spectacular, the battery cells can explode (spraying the area with sulfuric acid), and molten copper can be dangerous to the skin and eyes (wear glasses or goggles.)

A final note on battery care: a battery is best maintained by following three simple rules: (1) keep it clean, (2) keep it full, (3) keep it charged.

When preparing electrolyte (acid) for a storage battery, always follow the Triple A Rule: Always Add Acid to the distilled water.

If water is added to concentrated sulfuric acid interesting developments always follow. The added water is rapidly heated, bubbling occurs, and the water will boil and splash. The amateur-chemist usually winds up getting burned! Always wear glasses or goggles, and protect yourself and clothing with a rubber apron and gloves.

A wise field day provision is an ABC-rated fire extinguisher. Make certain that any extinguisher provided is suitable for use on electrical fires. The National Fire Protection Association (NFPA) classifies fires under four headings:

Class A: Paper, cloth, wood, upholstery, etc.

Class B: Flammable materials, gasoline, oil, grease, etc.

Class C: Electrical equipment (wiring, insulation, varnish, rubber, plastic, etc.)

Class D: Combustible metals (magnesium, etc.)

The fires which will normally be encountered by the amateur will be in the A, B and C categories. One rated fire extinguisher should be provided in the **immediate vicinity,** located so as to be available **after the fire starts.** As with any piece of emergency equipment, the extinguisher needs to be inspected and maintained periodically.

'Wisconsin Navy — Marine Corps MARS Bulletin

Field Day check list

(for next year)

I. **Station equipment**

TRANSMITTER
Power Supply
VFO
Crystal/s
Linear (transistor rigs)
Microphone
Key
Key-click Filter
Antenna Switch
SWR Bridge
Dummy Load
Wattmeter
CW Monitor
Monitor Scope
Extra Tubes
Extra Transistors
Extra Transistors
Extra Mike, Key, etc.
RECEIVER
Q Multiplier
Converter
Converter Pre-amp
Speaker
Headphones
100 kHz Calibrator
Extra Tubes/Transistors
Extra Phones/Speaker

II. **Antenna equipment**
Beam
Balun Coil
Rotor
Rotor Cable
Rotor Indicator
Vertical
Dipole
Inverted 'V'
Long Wire
Match-box
Coaxial Cable
Mast
Poles
Egg Insulators
Guy Wire
Guy Wire Stakes
Ground Rods
YOUR LICENSE!
(Original)
CLUB LICENSE!!

III. **Other equip.**
Tent
Tent Stakes
Sleeping Bag
Ground Cover
Pillow
Trailer
Camper
Table
Chair/s
Heavy Coat
Hat
Head Cover
Sun Glasses
Sun-tan Lotion
Electric Heater

IV. **Tools**
Hammer (large)
Axe
Knife
Pliers
Dykes
Screwdrivers
Wire Strippers
Electrical Tape
Soldering Gun
Soldering Iron
Solder

V. **Test equip.**
VTVM
VOM
GDO
FS Meter

VI. **Books**
Radio Amateur HB
Antenna Handbook
Manuals:
  Transmitter
  Receiver

VII. **MISC.**
Clock
Watch
Table Lamp
Flashlight
Extension Cords (several)
Compass
Hook-up Wire
Clip Leads
Spare Fuses:
  Transmitter
  Receiver
Extra Resistors
Extra Capacitors
Small Parts, etc.
Coax Connectors
Plugs, Jacks, etc.
Cigarettes
Cigars
Pipe/Tobacco
Matches
Lighter
Lighter Fluid
Ash Tray
Ice Chest
Ice
Cold 807's
Church Key

DON'T FORGET...
Pencils w/Erasers
  (Plenty)
Scratch Paper (Plenty)

Chewed Rag

Field Day *from page 6*

Guard and thousands of health and welfare inquiries after the Omaha tornado.

The Greater Norwalk (CT) ARC operated in conjunction with both Norwalk and Westport Civil Defense. Site was an abandoned Nike missile site.

The Yellow Thunder ARC (WI) made 665 contacts, with 100 of those coming from the Novice CW position.

The Triple States (OH-WV-PA) RAC took along Amateur Radio class students from the Belmont County Joint Vocational School to participate as log-keepers and learn actual in-the-field operations.

Busy, busy are the members of the Wheaton (IL) Community Radio Amateurs. After Field Day they provided communications for the Glen Ellyn Fourth of July parade, and their communications van itself was in the parade. Then they set up a station near the boat house at Lake Ellyn to demonstrate Amateur Radio to the public during the Fourth of July lakeside activities. Members of the club explained the equipment and how to obtain a license.

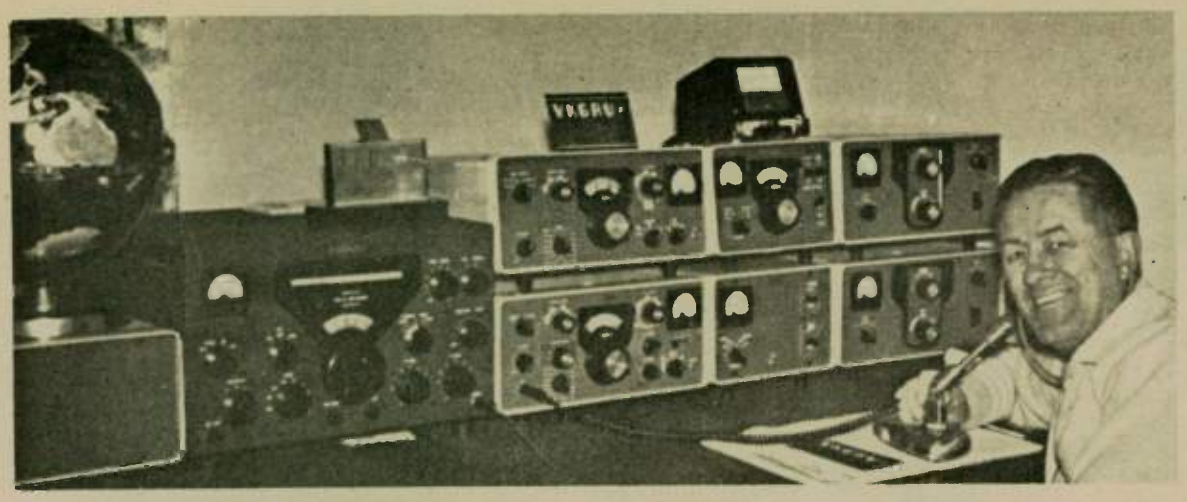
Another gung-ho group is the Baton Rouge (LA) ARC. They observed radio week by presenting a set of publications of the ARRL to the library. They serve as the major source of communications for Civil Defense and they split the club into two competing groups for Field Day, each group attempting to make the largest number of contacts.

The event of the year in Amateur Radio.

•

MMRA Auction

The Minute Man Radio Assoc. (M.M.R.A.) will hold their annual auction on Sunday, Oct. 12, 1975 at Stoughton High School, Stoughton, Mass. at 12:30 P.M. This is rapidly becoming the largest auction in the Northeast. Three competent auctioneers will preside. Many prizes — talk-in — quality food and snacks. All welcome.



Jim Rumble, VK6RU

At age 11, in 1928, I started this hobby with a school friend. In the "teen" years it gradually took shape with the help of the old Subiaco Radio Society and many of the older call signs of the thirties.

Was licensed in early 1938 and was very active on CW for this mode's probationary period of those days. After some six months or so was passed for "fone" by an authorized member of the PMG's Vigilance Committee of the day.

Most of the work remained with CW due to learning a lot more about it since passing the "ticket," and up until the war "20" had been worked to death for a WAC (the only pre-war award in Western Australia) and 80-odd countries confirmed. The gear in those days was a T55 triode final running at 50 watts input from an 807 driver and xtal controlled exciter. The antennas were a dipole for 40 and an 8JK wire flat-top for 20 and 10 meters.

War intervened in September 1939, the year I was married. Joined the services and finished up with a commission as EME Telecom Field with an AEME Workshop (A.I.F.) in the South West Pacific.

January 1946 saw our call signs and what gear had been "impounded" in 1939 now returned, so the game started to get back on the air. Ten meters was the only DX band available and fortunately propagation seemed kind to us. The race opened horizons in the DX field — DXCC, WAC, WBE, BERTA and other awards all beckoned this operator. Much sleep was lost as other bands became available in those first five years or so.

Gear had been renewed entirely after the war. Three rigs (AM and CW types) and two receivers had been built from then in the ten years to 1956. Surplus gear from services sources helped considerably and VHF links from an old SCR522 were the order of the day for the local intercom, so necessary then for DX hunting! Art Collins soon appeared in my spare time reading and that first 75A-4 of his breed is still my choice of receiver after twenty years.

It was not long before AM became a vintage mode and again old Art was called upon for a 32S-1 exciter in 1959. This unit is still used consistently. Other items of Collins gear were periodically added and since 1967 the facilities of two separate S-line systems have been maintained. Contest operation in those days needed two bands being worked on almost simultaneously.

Antennas progressed in the late forties and early fifties to three monoband three-element beams stacked from 40 to 50 feet as a ten over fifteen over twenty array, whilst dipoles were in use for forty and eighty. These helped with contest working in the later fifties when the award bug bit with CHC applications going everywhere. The second sunspot cycle post-war was thus exploited pretty well. DXCC had passed the 300 mark by this mid-cycle.

In 1965, for one reason or another, a new, higher and better QTH was sought west of Perth at City Beach on the highest hill available. Field tests were conducted, the property purchased and house built. The gain in moving QTH is now estimated at over 10 dB on all bands!

By 1970 about 60,000 different contacts had been amassed over the 25 years since the war. The urge to get away and meet a lot of them for an "eyeball QSO" was tops on my list. Over three months in U.S.A. with an FCC permit to use VK6RU portable and other reciprocal licenses intensified activities and made the "eyeball QSOs" much easier. I attended 23 DX club meetings, including Dayton as a guest speaker on the DX Forum, did a lot of mobile work on the DX bands, had my first taste of and studied their FM repeater operation, met over 800 amateurs, most of whom had been QSO'd at sometime or another, some even pre-war. Countries confirmed then for "eyeball QSO's" were ZL, KH6, VE, W, VP7, KP4, 6Y5, G, F, DL, HB9, PAØ, KL7, JA, VS6, HS and 9V1.

Interest has also extended keenly into WIA activities. Have managed the VK6 QSL Bureau since January 1946 for which an honour of Life Membership of the WIA was awarded me in 1974. Have spent many years on Council of the W.A. Division, two of which as President and numerous other offices in the organization. A number of years as a member of the Amateur Advisory Committee of the P.M.G. together with QSL and Contest Committee duties has kept one abreast with most of the newer membership of the Division, a most important factor in one's Amateur Radio career.

In amongst all this is my wife who now sees in Amateur Radio a new relationship to travel and its benefits we have both experienced; our three boys, the two elder of whom are now married. The younger is still at home studying to complete a five year course (no, not radio!) at our Institute of Technology.

Yes, Amateur Radio has indeed been a rewarding hobby to VK6RU. The travelling to add to the countries confirmed for "eyeball QSOs" is on again in late 1975.

[*VK6RU will be visiting the USA during October and November this year.*]

A letter from . . .

Orve Owen, W6BSL
"Carrier" Mt. Diablo ARC

The second week that we were in Brest I was able to contact one of the local operators, Jean Le Corvoisier, F9TL. He took me to the radio club meeting and I had a very good time. There are about 25 amateurs in the club and they have all kinds of activities. The VHF activity is going strong in France but it is almost all on SSB & AM. Repeaters are not allowed and there is no FM activity in this area. RTTY and Slow Scan TV are both in use and on 420 there are three stations using fast scan TV - lots of Heathkit and Yaesu gear here. Most of the amateurs are 2-meter mobile and 50% of them have HF gear in their cars.

Yesterday (22 June, Sunday) Elaine and I were invited to the annual outing of the amateur radio operators of Finnister. Finnister covers western Brittany. The amateurs from Brest all went in a group to a town called Playben, approximately 40 miles from Brest. There about 70 amateurs met and had lunch (3½ hours of eating), talked radio, complained about their national amateur organization, drank, etc. . . after which there was a transmitter hunt. It sure was funny watching everyone (including us) drive around the mountains and valleys (mountains — 1000 ft.) hunting for the "fox." Just like the U.S.

After the "Fox Hunt" the ops converged on the highest point in Brittany for a demonstration of radio controlled gliders. The gliders were about 4 feet long, with a wing span of 6 feet. These guys sure can fly the gliders. After the glider flying everyone sat on the mountain top and had QSOs all over Europe. Short skip on 20 meters — heard no U.S. stations at all.

My French ticket has not arrived but I still have hopes. I have been using F9TL's station, but during Field Day I will use Andre Saluan's, F2US - big beam, high power, etc...

Tuesday evening we will see a French amateur at the hotel. He just wants to talk radio.

Everyone in France has been just wonderful. When people find out that you don't speak Franch, most of them speak English. Everyone speaks a little English so it is very easy to get along. If you try to speak French, then people will break their backs to help you . . . What fun!

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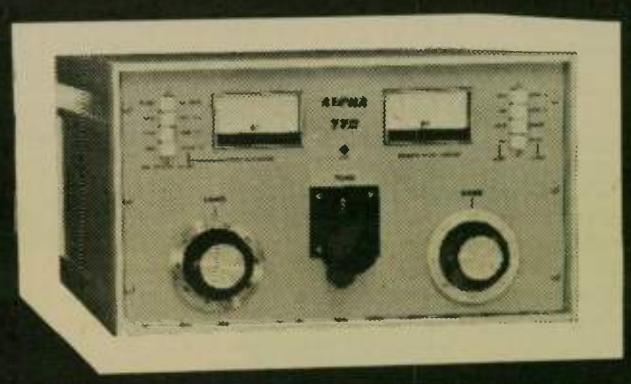

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Stanford Amateur Radio Club, W6YX, celebrates 50 years on campus

Then . . .

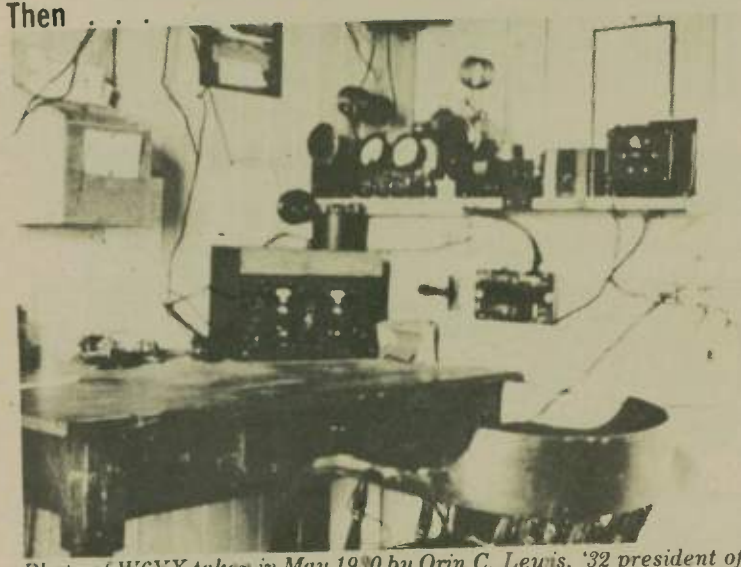


Photo of W6YX taken in May 1930 by Orin C. Lewis, '32 president of the club.

Now . . .

Trustee Oswald Villard, Jr., W6QYT; President George Flammer III, WB6RAL; Secretary-Treasurer Tarrek Elass, WB9FUV.

Orin Levis, W6DZK

Apparently caught up in the spirit of the bicentennial nostalgia, a group of radio club officers at Stanford set out to compile a "cumulative membership directory," going all the way back to the start of the club in 1924-25.

Early-day records are fragmentary — a log book circa 1932-33, a photo of the station taken in 1930 and, of course, the memories of some of the old grads. In spite of this, a very respectable number of returns was obtained on a questionnaire — no doubt aided by the alumni files.

Sponsored by a private donation, these dedicated club officers proceeded to edit, print and mail out a handsome 20-page, 8½ x 11 inch, loose-leaf book for use by present and past members only.

The cover proudly displays the W6YX QSL card and a photo of the very modern station now on the air. On page two, for contrast, is a photo of W6YX in 1930. It was a single 852 self-excited TPTG transmitter and some sort of a "regenerative detector plus audio amplifier" receiver. CW was the only mode.

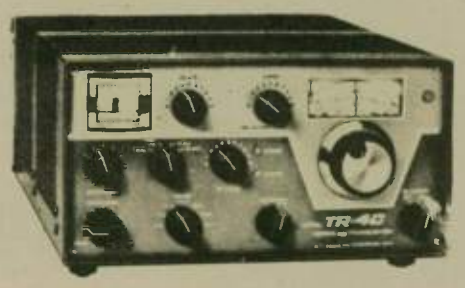
The Directory is dedicated to Dr. Frederick Emmons Terman, Vice Provost Emeritus, and former head of the EE department at Stanford. Dr. Terman always has been a staunch supporter of the radio club, and was instrumental in seeing to it that proper quarters and equipment were available. He has been an amateur himself, being ex-6FT, 6AE, 6WH and operated spark before formal licensing started. His Radio Engineering books have been standard references all over the world, and many an amateur or engineer has "gone to Terman" for the solution of a sticky design problem.

(*please turn to page 25*)

YAESU is terrific we've got them - for you

drop in, call, or write for your new YAESU also contact us for DRAKE

New ATLAS 210



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Earthquakes ... Floods ... Hurricanes

Bill Shannon, W6VK

"Antibiotics being flown in . . . two army medivac helicopter teams are being sent from Fort Carson . . . a medical team is coming from Houston!"

Such are the types of messages that could be heard by an Amateur Radio Operator on the 20-meter amateur band following a flood in the Rapid City, South Dakota area which left over 200 dead and 400 missing!

My name is Bill Shannon and I myself am an Amateur Radio Operator, W6VK. This story is not about myself, but about another amateur who is now embarking on one of the most thrilling endeavors of his life. An author, he is in the process of writing a book entitled, **International Stories of the Heroism of Amateur Radio.** The writer, Paul Jerome Stack, WA6IPF, has been an active radio amateur for many years and has participated in many such emergencies himself.

He presently resides in Vista, California, where he does his writing, along with his wife Helen, daughter Vicki, 2 horses, 2 dogs, and numerous other farm animals, Paul's full-time writing takes up much of his time but he does manage to find a few hours to indulge in his favorite activity . . . Amateur Radio.

Paul's book will be based on and include acts of heroism and the participation of radio amateurs in most or all countries of the world, stories of outstanding deeds performed by gallant operators.

It was a thrilling experience for me, reading stories of emergencies and disasters in which amateurs were directly responsible for the saving of many, many hundreds of lives. Paul's desk is piled high with letters from all over the world relating tales and experiences of earthquakes, floods, sea rescues, hurricanes, and even a life and death story where the life of a small boy in South America was saved when a radio operator was directly responsible for the serum arriving in time.

Each year thousands of disasters and potential distress incidents take place and the initial report of trouble is by way of Amateur Radio. Many times it is the amateur operator that maintains the only contact with the outside world.

Such is the story entitled, "Liberian Epidemic," and for

Paul Jerome Stack, WA6IPF

David Urfer, WA7ROJ, it was truly a case of being in the right place at the right time that resulted in his handling emergency communications for 86 consecutive hours by himself.

David had been an amateur for less than a year and was a maintenance supervisor for a Lutheran hospital in Zorzor, Liberia when Lassa fever struck in epidemic proportion. (Three years earlier the virus first struck in Lassa, Nigeria . . . thus the name, Lassa Fever.)

The date was 12 April 1972 when David was on his radio with a group called the African Net, talking to Walcott "Ben" Benjamin EL2BA. During the round table discussion David mentioned that there was an outbreak of some sort in Zorzor and that Drs. Paul Merten and Joe Baum were not quite sure what it was. A letter had been sent to the Minister of Health and Welfare, but a call by radio from Ben, EL2BA, proved to be most time saving. After the authorities were notified, doctors and specialists were immediately brought in. The Lassa fever epidemic struck nine people in Zorzor and killed four of them. Of the five survivors, two became deaf.

One of those who died was an American nurse, Miss Ester Bacon of Hauarden, Iowa. David had the highest praise for her, saying she was as close to being a saint as anyone he had ever known. Ester gave 30 years of her life for humanity.

As a result of David Urfer's effort, Mrs. Mai Padmore, Minister of Health and Welfare, on behalf of President Tolbert and the government of Liberia, conferred upon him the distinction of "Knight in the Humane Order of African Redemption" for the outstanding and humanitarian role he played in bringing the Lassa Fever epidemic under control. Yes . . . an Amateur Radio Operator received knighthood for a heroic role!

Incidentally, I read this story from a news clipping that had been sent to Paul from Liberia. I know that there are many more stories that should be told to the world of similar acts, so if there is anyone who reads this article and knows of any such stories . . . why not send them to Paul. **Note:** The request for such stories about amateurs is very important as some foreign countries, who will be present at the next International Telecommunication Conference in 1979, firmly believe that Amateur Radio frequencies are not justified.

The **International Stories of the Heroism of Radio Amateurs** will be presented to the conference with definite proof that amateurs all over the world do, in times of emergency, save lives and that the frequencies allotted to them are more than justified. ●

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Norm Brooks, K6FO

Drake *from page 1*

degree in electrical engineering, Drake and the late R. H. Tedford (W8ALW) made quartz crystals.

Drake was formerly affiliated with Bendix Aviation, Radio Products Company and Lear Radio. In 1942 he founded the company which bears his name. He was a registered professional engineer and an ARRL member.

Drake was, essentially, a two-meter FM operator. Contacts usually embarassed him because they too frequently reverted to commercial references.

Drake's inimitable humor was best exemplified when the Drake TR-22C was installed at his bedside in Maumee Valley hospital. "This equipment is pretty good. I should go into the business," he said.

Drake spent the last three days of his life operating on two meters, day and night. Ironically, his son, Robert L. Jr., was hospitalized on the same floor. Their contacts will never be forgotten.

Drake is survived by his wife, Bernice; Mother; a daughter, Nancy; sons, Peter, Robert L., Jr., Dr. Thomas; two brothers; a sister and five grandchildren.

Donations may be made to the Radiation Department at Miami Valley Hospital, c/o Dr. Dick Lyle.

Walker *from page 1*

for his "contributions to international standards in the utilization of the radio spectrum."

Following seven years as professor of science and mathematics, he was with the Federal Communications Commission for 13 years. His service with the Commission covered the area of radio intelligence and direction-finding during World War II. Beginning in 1946 he was engaged in engineering work with the Broadcast Bureau on AM, FM and TV. Until the first "freeze" on TV applications the latter work included mathematical verification of transmitted spectral characteristics of color television systems, engineering reports on applications and serving as Chief of the TV allocations Branch. In preparation for the 1947 Atlantic City World Administrative Radio Conference, he prepared propagation analyses of F2 layer HF transmissions over numerous paths throughout the world. Following the 1947 conference, he attended all the High Frequency Broadcast Conferences as a member of the United States delegations.

From 1953-1961 Walker was the Manager of Engineering, National Association of Broadcasters. In this position he directed all the engineering activities of the NAB which included engineering services to member stations; petitions to the FCC on remote control of high-power and directional-antenna AM stations; appearance before the FCC as a witness in the general allocation hearings; direction of the annual Engineering Conference of the NAB; and numerous other engineering activities. He is the Editor-in-Chief of the **NAB Engineering Handbook** (McGraw-Hill, 1960), the standard reference work of the broadcast industry.

In 1961 Walker joined Collins Radio Company as Assistant Director of Development responsible for broadcast and amateur radio equipment development. This was followed by Assistant to the Vice President, Cedar Rapids Division; Director, Broadcast Communication Division, and Manager of Broadcast and General Communications in Washington, DC.

During 1968-69 Walker was a partner in the consulting firm of Kear and Kennedy, Washington, DC. This work included such technical matters as computation of system parameters, antenna characteristics and performance, effective radiated power at pertinent horizontal and vertical azimuths, interference computations involving protection ratios, and required field strengths for prescribed service areas.

During the 1969-71 period he operated his own consulting engineering firm. From April 1971 to 31 July 1975 Walker held the position of Chief, Amateur and Citizens Division, Federal Communications Commission, directing the regulatory and licensing functions of over one million licensees of the FCC.

From 1953 through the XIIIth Plenary Assembly of the CCIR, held during July 1974, Walker served as International Chairman of CCIR Study Group 10 on aural broadcasting, which also included recording and reproducing standards on disc, tape and film for both aural and visual information. In the United States he headed the domestic CCIR preparatory work for radio and television broadcasting for many years, and served as a member of the CCIR National Committee of the Department of State. Since 1947 he has been a member of United States delegations to 20 international conferences on telecommunications, and Head of two such delegations. The most recent conference was the XIIIth Plenary Assembly of the CCIR, July 1974, at which he tendered his resignation as Chairman, Study Group 10 after 21 years in that position.

Walker has been a member of numerous industry-government committees such as the National Defense Executive Reserve (FCC); Vice Chairman, National Industry Advisory Committee; Chairman, Field Test Panel, National Stereophonic Radio Committee; Chairman, NAB Disc Recording/Reproducing Committee; Television Allocation Study Organization (TASO), etc. He is an Associate Member of the Association of Federal Communications Consulting Engineers. He has written many articles for technical journals and has lectured widely throughout the world. ●

The American Radio Relay League

J. A. "Doc" Gmelin, W6ZRJ
Director, Pacific Division, ARRL

continued from last month

George Hart, Communications Manager for the American Radio Relay League, first started at Headquarters as an operator at W1AW. When he started working for the League, Headquarters was located in West Hartford, Connecticut, some five miles from Newington where W1AW is located.

Often when George was operating the station and in contact with an amateur station somewhere in the U.S., the individual would ask for information from someone at Headquarters and then standby to wait for an answer as though the staff members were in the same room as W1AW.

Of course with Headquarters five miles away, and since the questions were often asked at night when the staff was at home (Headquarters works a normal 8 to 5 day), it was impossible to get a quick answer while the amateur was waiting on stand-by.

This illustrates the fact that many amateurs and League members do not know or understand how large and complex the Headquarters is. Producing a magazine with a circulation as large as **QST**, publishing a number of other technical and operation books and pamphlets, and servicing a membership of 118,000 does involve a large staff and a large facility. The operation is certainly not carried on in one or two rooms along with the W1AW station.

As we have discussed thus far in this series, the Headquarters involves many departments and many types of operation to give the services that members require and request. While the Headquarters building is on the same property as W1AW now, it is still difficult to get answers from such a large staff on a five-minute notice.

Another misconception on the part of members is that they view Headquarters as just a "printing house." While it is true that much of the business of the League involves publications, very little printing of any kind is done at Headquarters and certainly not the major printing of **QST** and other similar publications.

QST as example is printed in New Hampshire, although it is now possible that in the future it may be printed somewhere in the midwest U.S.

The setting up of the printing type is in effect done at Headquarters, although while the entire staff is often involved in writing copy at one time or other, even this production is a small part of the entire Headquarters operations.

To better understand how **QST** is produced let's look at the various departments involved in this operation. As mentioned above, the entire Headquarters might be considered a part of the staff, but certain members are involved directly with production.

The Editor of **QST** is Dick Baldwin, W1RU, who is also the General Manager of the League and in overall charge of the operations of Headquarters. Baldwin, however, does not do the actual production work but sets the general editorial policy.

The Managing Editor actually runs the production department. He is William Dunkerly, Jr. WA2INB. The production department is located in two small rooms in the back of the Headquarters building and includes the layout and pasteup areas and desks and the various electronic "typesetting" equipment. Most of the actual layout work is done by technicians in this department.

The electronic equipment sets up the copy in the proper type face and in column form, that is with justified columns, straight on both sides of the column. This equipment takes the place of the old linotype lead casting equipment once used in printing plants.

The material produced by the typesetter is given to the layout artists who paste up the pages in proper format and form. The format is pretty well set by tradition and includes the various standard columns such as "How's DX," "The World Above 50 MHz," etc. If this format changes the changes are made by the Editor, not the Managing Editor.

All proofreading is done in the production department as well as by the various other departments. Since many of the articles published in **QST** are of a technical nature, and since they involve schematic diagrams, great care is taken to assure that everything is correct. Both the copy and the final pasteups are checked and read by many individuals in order to give a greater chance for someone to find a mistake overlooked by others.

Even with such care, at times mistakes are slipped through, but not because the staff doesn't try to find and correct errors.

The finished pages in proper form are sent to the printers who photograph each page with the proper printing screens. Then the "litho" plates are made that are used on the press. The magazine is printed by the "offset or litho" reproduction process, now the most common type of magazine printing. This process is far less costly than "letter press," the old traditional process of printing.

After the press run is made and the magazine is "collated" together, it is placed in the mailing packages and put into the mails.

Since the magazines are mailed by 2nd class mail from New England, there is a time delay in delivery caused by the mailing time. The magazines are mailed as early as the 18th of the month, which causes many editorial problems. As an example, any news in the magazine is at least two weeks old by the time the magazines are received around the first of the month.

It is hoped that changes being made in production this fall will help the delivery problem with **QST** since the magazines will be shipped from a location in the midwest.

Two other departments at Headquarters involved with the production and delivery of **QST** are the advertising and the circulation departments.

Of course ads do constitute a major portion of the magazine and in effect pay much of the bill for the members.

Advertising Manager is Laird Campbell, W1CUT, who is in charge of the overall sale of ads and the layouts. Layout work is done by clerical assistants under the direction of Laird and his Assistant Advertising Manager, Linda McLaughlin. Linda does some of this work herself.

Advertising is at competitive rates, followed in general by all of the magazines in the Amateur Radio field. The members of the Advertising Department visit commercial shows and exhibits, conventions where commercial exhibits are made and conduct various types of advertising campaigns.

Of prime importance to the delivery of your copy of **QST** each month is the Circulation Department, headed by Joe Moskey, W1JMY.

The Circulation Department at ARRL headquarters is somewhat different from that of a commercial publications house. Individuals do not subscribe to **QST** as with other magazines, but rather receive a copy each month as a part of their membership. Thus the Circulation Department is the department that keeps your membership records. This is now done by computer which gives periodic printouts of the membership and prints the mailing labels used each month.

Since there is some delay between input time for new memberships and renewals and the printout, and because of the mailing delays explained above, there are problems that result in keeping memberships up to date when renewals are made at a very late date. The Headquarters staff is hard at work to find ways to improve on the time delays.

Assisting Moskey is John Nelson, W1GNG, Assistant Circulation Manager. Most of the detailed work is done by 15 girls who are file clerks, computer typists, stenos, and supervisors. These girls actually make out the membership certificates and cards and keep the records straight.

As mentioned above, changes are being planned for the printing of **QST**. The major change will be one of size, from the present 6½ x 9½ inches to 8¼ x 11 inches.

The size of **QST** was determined many years ago when the magazine was first started. The 6½ x 9½ is no longer standard in the industry, both for finding printers on a competitive basis and for finding paper to fit the press without waste.

By going to the new size the printing job can be put out for competitive bidding. Many of the companies that do this larger type and size of printing are located in the midwest. Since they do many of these types of publications they can offer a much better rate for the printing.

As an added attraction, mailing from the midpoint of the nation instead of from one coast may help overcome our mailing delays.

The major gain from the change will be that since paper need not be wasted and other production advantages can be realized, the League stands to save from a minimum of $123,000 to a possible total savings of $156,000 per year.

The League membership is proud of the quality of **QST** and Headquarters will continue to strive for top publication excellence.

Next month we will look at another facet of the Headquarters operations.

continued next month.

•

Note to TR-4 owners

I have just completed construction of a remote VFO for use with the TR-4 using a surplus ARC-5.

Anyone who wishes to duplicate it may have a copy by sending a stamped addressed envelope to Bill Johnson, W9ERI, 502 W. Kenicott, Carbondale, Illinois, 62901.

•

NJ Hamfest

On Sunday, 7 September the South Jersey Radio Association will hold its **Twenty-Seventh Annual Hamfest** at Molia Farms, Malaga, New Jersey. Amateurs from all over New Jersey, Pennsylvania and Delaware attend.

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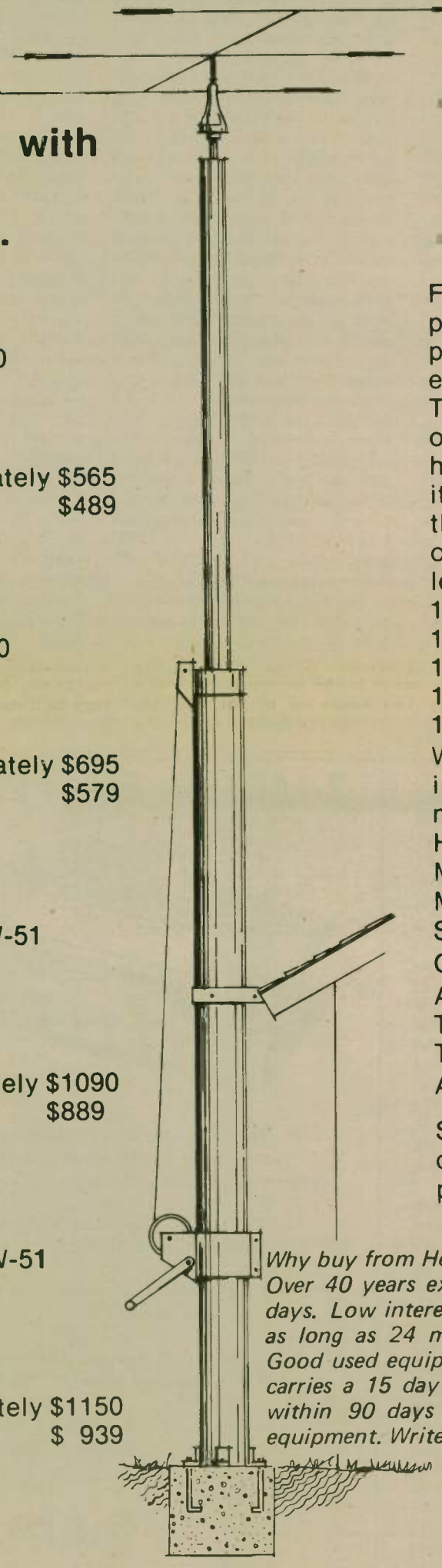

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Tristao CZ-454 FS or Triex W-51
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CDR Ham-II
RG-8 100'
Control Cable 100'
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Package Price: $889

Package No. 4
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FM Forum

Dayton Hamvention 1975

Talk by R.B. Shreve, W8GRG

continued from last month

In the final showdown it will be political clout that determines what frequencies we keep. One of the objectives of 20282 is to make more amateurs; if we don't like the way they propose to do it, we should say so, but we should try to be constructive and if we don't like the present proposals suggest some alternative that will strengthen Amateur Radio. Don't just say, "If this thing goes through I'm going to sell my gear and get off the air." That's just playing into the hands of those who wouldn't like anything better than to have you do just that.

Our concern for the future of Amateur Radio should go beyond taking a position on Docket 20282, however. Whether we keep two-meter FM a nice, polite, well disciplined band where everybody is on frequency and nobody's deviation exceeds 5 kHz (and don't ask me whose repeater I listen to) or open it up to the Chatter Brigade, we need to do more than just change the license structure. We can get the political strength we need only by using our great value in an emergency and our day-to-day record of public service to build public support and voting power OUTSIDE the ranks of Amateur Radio. We, all of us, need to put in some time selling ourselves in our communities.

How? Obviously, the clubs and individuals who sponsor and teach code and theory classes, who put on programs, show movies, give talks and demonstrations before schools and civic groups, are doing their part. If this type of activity is your thing, join a group in your area, or if there is none, get one started. Others who are helping are the amateurs who set up exhibits and demonstrations at state and county fairs, and those who supply communications for parades, fund drives and other public events. They are performing a real service, both for the public and Amateur Radio. The trouble is these activities don't reach enough people; not enough of us work at them, and the occasions are too few and far apart for maximum impact.

My personal opinion is that the thing we need most is to get ourselves in the public eye, not just once in a while, but day after day — to attract public attention constantly to the value of Amateur Radio. This is what we are working on in Cleveland, using the 16/76 repeater, WR8ABC. It started with our weather watches a couple of years ago. Every time there was a tornado watch or other severe weather possibility, one of the repeater control stations would transmit the bulletins from the weather bureau on the repeater and gather reports from base stations and mobiles throughout the area on spot conditions such as damaging winds, hail, and local flooding. Significant reports were relayed back to the weather bureau. The local group was soon joined by stations in outlying areas who kept us posted on developments, particularly to the southwest where most of Cleveland's severe weather comes from.

We soon found that a lot of people besides our members were beginning to listen to the repeater when the weather became threatening, and that some non-amateurs were favorably impressed and saying nice things about us. As a natural outgrowth we continued the operation into the winter, collecting and repeating information on heavy snows, freezing rains, and anything else that made for difficult or dangerous driving anywhere in the area the repeater serves. The real breakthrough came on December 1st when we had the big snowstorm that closed most of the highways in Western Pennsylvania, Northern Ohio and Michigan, and stranded many motorists for as much as 24 hours. Not long after we started relaying road condition reports that morning, radio station WDOK asked permission to monitor the repeater and use our information on the air. Two other radio stations and a TV station followed, using the informaton we gathered all day and into the evening. We told them all that they were welcome to use anything they wanted; our only condition was that they credit Amateur Radio with supplying the information for their broadcasts.

The public response was excellent. We got a lot of good publicity, some nice letters, and a lot of phone calls. I remember two calls in particular — both came after most of the excitement was over and we had settled down for the night. The first was from a Cleveland family asking us to get them some word of their son, a Navy man, who had left Cleveland on a bus bound for Washington the day before, and had disappeared somewhere in the wilds of the Pennsylvania Turnpike. We gave it a good try, but the bus company had 27 unlocated buses and no way of knowing which one he was on. Nobody on the repeater had seen even one bus, and the first word his family got was when the Highway Patrol found all the passengers safe and sound in a snow drift the next day. However, they appreciated our efforts and Amateur Radio made some new friends.

The other call was from a woman whose daughter and son-in-law had telephoned from a service plaza on the Ohio Turnpike to find out if they could make it the rest of the way to Cleveland. I told her our reports indicated they could. They did make it, and she was so impressed that the next time we had a storm she called me at six a.m. to say the kids were driving up from Youngstown and did I think she should call them and tell them not to try it.

Out of the work the Cleveland area operators did during that one storm on December 1st and 2nd — and it was truly an area effort, not just the 16/76 repeater club — a very worthwhile relationship has developed. Every time a mobile encounters hazardous roads — ice or fog or flooding — or a major tie-up caused by an accident, he reports it to the control station, who relays it to WDOK for retransmittal as a public service bulletin. Each time, Amateur Radio gets a credit line. We also supply spot road reports to the AAA for inclusion in their "Icicle Network" tapes — a recorded report on road conditions available 24-hours a day during the winter to anyone calling their special "road conditions" telephone number. Again, Amateur Radio gets credit on the tape for information we supply.

From our experience it seems probable that radio stations and auto clubs in other cities would be interested in a similar service. It's worth a try; as I said before, the more often we can get the words "Amateur Radio" before the general public in connection with a worthwhile service, the better.

There are a number of matters affecting VHF FM besides the rules governing remotes and Docket 20282 on which the League and the VRAC are working: expansion of the frequency and power limits on 6-meter repeaters; authority for portable operation of remotely-controlled repeaters; the use of repeaters for slow-scan TV. Most of this has to do with modification of FCC rules to give amateurs greater freedom of action.

There is one matter of growing concern to all of us in the more crowded parts of the country that I want to mention before I close. That is what we are going to do when we run out of 30 kHz spaced repeater channels on two meters. Since all frequency assignment plans are a matter of coordination rather than regulation, and depend on voluntary compliance to make them effective, it is important that we start thinking and working right now to develop a plan that will have general acceptance and support.

One possibility is assignment of tertiary frequencies — repeater pairs separated by only 15 kHz from the present channels. Obviously this presents some problems, as we found out in Cleveland with WR8ABC when we had a secondary base-station input on 146.355, only 15 kHz from the primary input of the 146.34/94 repeater WR8ABD. There were many occasions when a station using one repeater keyed up the other one as well. I have not had any experience with repeaters whose outputs are separated by only 15 kHz, but I suspect that many of the receivers in general use would have problems separating two such signals.

The plan adopted in Southern California, which appears to be working quite well, is to reverse the input-output frequencies on the tertiary channels. This means that in between the 146.13/73 and 146.16/76 repeater channels there would be a repeater with its input on 146.745 and its output on 146.145. The idea is that it will be a lot easier to protect the 13 and 16 repeater inputs against one reasonably stable, well maintained transmitter operating on 146.145 from a known location than it would be to keep out a whole batch of individual stations nominally on that frequency but probably scattered two or three kHz either side. The repeater outputs on 146.73 and 76 should not be bothered too much by individuals transmitting on 146.745 if they don't use too much power. I would very much like to see someone in a crowded area such as Cleveland or Cincinnati experiment with a repeater on a reverse tertiary split and give us the benefit of the test results.

Another possibility is shared frequencies using CTCS—so-called "PL" or "Channel-Guard." Disadvantages of such a sharing plan are readily apparent. It would require some cooperative give and take between the users of two repeaters on the same frequency that were close enough to each other geographically for the output of one to blanket the other in parts of their common service area. PL on the inputs would prevent the users of one repeater from timing out the other, but would not protect listeners against interference. I doubt that this would be a popular solution with those who like to ragchew on the repeater.

CTCS on a repeater input also creates a problem for the transient operator. Changing reeds in

[*Please turn to page 42*]

AREC net saves two lives

from page 2

was dispatched to the west end of (state road) SR 1917. James Howard, WA4IUX/M, was dispatched to the east end of SR 1917. They were instructed to stop traffic and inform them that the bridge on SR 1917 was under water and hazardous and impassable.

WA4FFW contacted the Department of Transportation for the state and informed them of the conditions of SR 1917. The DOT dispatched a truck with men and signs to close the road.

The DOT was highly appreciative of the AREC actions and asked if they would survey various other points.

Net control then dispatched WB4SGA/M to check out one of the other roads. The DOT arrived and blocked off the west end of SR 1917. WB4GSN/M, who had been at this position, was then dispatched to check other points.

Mike found a flooded area with the residents evacuating the area in an outboard motor boat. After seing they had reached safety at a nearby neighbor's residence which was on very high ground, he proceeded to check a main road, US Highway 70. It was found that the main road also was to be closed due to water over the Back Creek bridge.

The NC Highway Patrol secured this bridge, turning traffic around. The past few hours had been hectic but appeared to be well in command. All points in the area had been checked and rechecked. At 0100Z WA4FFW instructed WB4SGA and WB4SGC to secure and return to their home QTH. This left WA4IUX/M still at the east side of 1917. Jim was awaiting arrival of the DOT sign. Net Control contacted DOT and they assured him the sign was in place but about 1 mile further east on 1917 from WA4IUX's position.

WA4FFW relayed this message to WA4IUX and told him he could secure his position, but would he check the water at the Back Creek Bridge on state road 1917 one last time before he did secure? Jim's position was about 1 mile east of the bridge. At this time net control returned the WR4AGC repeater back to normal amateur service.

Everything looked like it was in good shape. The job had been done, no lives had been lost, roads were posted closed. Everyone was a little tired, wet and hungry but the feeling was a good job had been done.

Net control was standing by to secure the net following the final report from WA4IUX/M. Jim had just reported he had arrived at the bridge and would be out of his mobile a few minutes, checking the water.

After about 1 minute and at 0132Z, WA4IUX/M called net control. He stated he thought he heard the sound of someone calling for help. He relayed he saw no one. The rushing, roaring, overflowing water was so loud he wasn't sure, but he thought that he heard someone.

There was no way for Jim, WA4IUX, to cross the bridge. He was approximately eight miles from the other side and the roads he would have to take.

At this time net control called WB4SGA. Billy responded that he just had sat down at the table to eat a well deserved supper.

WA4FFW relayed WA4IUX/M's message that there may be someone in the water. WB4SGA and WB4SGC were asked to check it out from the west side of the bridge. They were about six miles from their assignment. Billy and Mary mobilized and at 0155Z they arrived at their assignment.

WB4SGA called net control and reported he did hear someone calling for help and asked net control to obtain additional help. Net control asked WB4SGA to reevaluate the situation. At 0201 WB4SGA radioed that there were three persons in the water about 200 yards from the road. Apparently their automobile had been swept off the road. He would do what he could to rescue them. Send help. Net control dispatched Mike Chockley WB4GSN, his wife, and his son Joe. They had been monitoring and quickly mobilized. WB4GSN had already secured a lot of rope and hand lanterns he felt would be needed.

At 0207Z net control contacted the Alamance County Rescue Squad and told them what they had found, giving them detailed information that WB4SGA had radioed in.

At 0210Z Jim Brafford, WB4ZIN, was asked to take over as net control. WA4FFW moved to the scene of the accident since he also serves as radio officer of Civil Preparedness of Alamance County.

At 0235Z rescue members and vehicles were at the scene. The life boats were equipped with 7.5 hp outboards but the current was so strong they could not overpower it. Life lines had to be placed on the boat. At approximately 0250Z two of the victims were rescued. They were tired and wet but safe and well. It was determined that there was a 3rd person still to be rescued. The car was pulled from the water, but no one was found. The car had been completely covered by the rain swollen creek. A search until 0600 by all parties failed to reveal the third person and operations were suspended.

Monday, 14 July, the search began at 1500Z with 4 rescue boats and several ground teams walking the shallow water, looking and hoping. The delay was to let the water recede since the rain had let up. It was and had been raining since Saturday evening but not as hard now.

At 1700Z the search was cancelled because the water was quickly rising and it was raining harder. The current was beginning to get swift and was very hazardous to the searchers. About 120 persons had participated.

An early check Tuesday morning by WB4SGA revealed the water was going down. The Alamance County Rescue Squad decided to try again. Mutual aid from the five surrounding counties' volunteer fire departments and rescue squads was set up.

The Alamance AREC group

(*please turn to page 34*)

West Coast VHF/UHF Conference

Kelly Scheimberg, W8KPY, spoke on his favorite subject, 'Moon-bounce', expounding some of the present and past pitfalls of same.

Wayne Overbeck, K6YNB, wondering how the dead fish made its way into his 1296 bucket antenna. Tony Bickel, K5PJR, on left and unknown op to rear.

Louis N. Anciaux, WB6NMT, Conference coordinator, running down the prize table giving a brief description of the two tables full of goodies.

Lou Anciaux, WB6NMT
Photos by Ed Munn, W6OYJ

The 1975 West Coast VHF/UHF Conference was held on 2-4 May at the Sheraton Inn on Harbor Island in San Diego Bay.

One-hundred and forty paid attendees showed up to claim some 250 prizes. Technical talks on Saturday, followed by the noise figure measuring Saturday evening, antennae measuring Sunday, were the formal highlights.

For the early arrivals a tour through the Naval Electronics Propagation Research Lab was held Friday for two dozen VHFers and their wives. This tour of the Tropospheric Research Facility directly tied in with the talk by Dr. Richter on Saturday.

The Sheraton Inn's facilities were ideal for this size conference. The preponderance of good restaurants on Harbor Island kept the conventioneers well filled. The hotel's lagoon proved invaluable for the antenna range. Results this year were far more consistent than in previous years.

Saturday's technical program featured Gary Frey, W6KJD (K6QEH), talking about simplified solid state VHF amplifier designs. Copies of Gary's very interesting talk may be obtained from George Drysdale, WA6ALQ. Send a legal-sized self-addressed manila envelope with 40 cents postage affixed to George at 6013 Silva Ave., Lakewood, CA 90713.

Next up, Dr. Jergen Richter from the Naval Electronics Lab Center at San Diego, spoke on Tropo ducts, their formation, detection using radio and audio sounders, and propagation via for the VHFer. Slides shown by Dr. Richter showed the wave-type motion predominant at the upper boundary of the duct and, in some instances, some insects were readily discernible 'surfing' along this boundary.

After lunch, slightly marred by a late return, James L. Heritage from NELC spoke on Field-Aligned Meteor Scatter. His talk covered some of the original work he helped conduct in the late '50s. Although the ERPs utilized in performing these experiments were well above the normal amateur's station, the well-equipped EME station may have sufficient capability to utilize the techniques under very favorable conditions.

Next, Paul Shuch, WA6UAM, gave an informative talk on simple microstripline design. His talk mainly centered around 1296 MHz low noise pre-amplifiers. However, the techniques utilized are applicable to all our VHF & UHF bands with ease. An SASE to Paul at 14908 Sandy Lane, San Jose, CA 95124 with 40 cents postage will get you a copy of his talk.

Kelly Scheimberg, W8KPY, wound up the formal talk sessions with his very humorous series of anecdotes of his EME attempts over the past several years. The slides Kelly presented were alone worth the price of admission. The 'Boy-Wonder' should be back at it again by now.

Two short impromptu talks at the end of the Saturday talks closed the formal sessions. Jim Fisk W1DTY, editor of **Ham Radio**, spoke briefly on VHF in the New England area. Chuck Swedblom, WA6EXV, with an assist from Dick Kolby, K6HIJ, played a taped program explaining AMSAT & OSCAR. Chuck and Dick both spoke on some of the future ideas being planned for OSCARs.

At the end of the technical talks the prize drawing was held. Over $20 retail value per attendee was a rough guess of the prizes. The large number of prizes required nearly two passes thru the box of tickets. A large number of solid state low noise devices were obtained by Gary Frey, W6KJD, which made up about one-third of the list. The rest were donated by various manufacturers. Westinghouse donated enough diodes so that everyone attending received a bundle in their registration packets.

After a pleasant dinner, where small groups ventured to the various eateries, the noise figure measuring was conducted by Chuck Swedblom, WA6EXV, on Saturday evening. Unlike the conferences held in Northern California, the numbers of pre amps and converters brought for measuring weren't large. Most conference goers were caught bending elbows and ears. The results of those who did enter are tabulated below.

Sunday morning saw a large group of sleepy-eyed operators standing about in a large field over-looking a lagoon. The range was finally set up and, after some considerable trouble, measurements finally commenced. The problem was that two different antennae were picked to get the range aligned, and both were shorted. As a consequence the frequency kept coming out at 142 MHz. After searching out a counter to ensure we were on

(*please turn to page 32*)

George Mitchell, K6ZE, and Stan Savage, W6ABN, listening attentively to one of the speakers.

nets

PREAMBLE

This Net Directory lists all nets that have registered with ARRL since the latest printing of this directory. Annual registration is required for listing. Nets are registered on form CD-85, available from ARRL. Only those nets on frequencies inside the amateur bands, and whose primary function is public service, are listed. Listing does not give any net the right to prior or exclusive use of a frequency at any time.

Information listed in the columns in Part I is as follows:

Net Name — Listed in alphabetical order. A double asterisk (**) indicates that the net is part of the ARRL National Traffic System (NTS). Nets are not listed as NTS unless specifically registered as such. Nets alleging to be part of NTS but not indicating proper liaison or coverage are not following the system concept and as such are not indicated as parts of NTS. Refer to the Public Service Communications manual for further information on NTS.

Freq. — The net frequency or frequencies in kHz. When a repeater call was given, it is listed below the frequency.

Days — Days of operation. M = Monday, T = Tuesday, W = Wednesday, Th = Thursday, F = Friday, S = Saturday, Sn = Sunday, Dy = Daily (7 days per week), H = Holidays, 1/3 Sn = first and third Sundays of each month, etc. Days of operation are per GMT, not local time.

GMT [UTC] = Time net starts in GMT per daylight savings time. An asterisk (*) indicates that the net does not change time (per GMT) when states revert to standard time.

Purpose — E = Emergency preparedness; T = Traffic handling; L = NTS Local; S = NTS Section; R = NTS Region; A = NTS Area; W = Weather; O = Other. All NTS nets have both E and T purposes.

Coverage — Area the net covers or serves. States and provinces are abbreviated with standard 2-letter abbreivations.

Mgr. — Call of net manager or other amateur to whom correspondence can be directed.

continued from last month

DeWitt County Amateur Radio Club Net	3915 146,940	Sn	1930*	EW	DeWitt Co., IL	WA9LHU
Double Trouble Net	14,270	M-F	2000	ET	USA South America	OA4J
						W6PHE, K4OL, W2AIM
Douglas County 2 Meter AREC Net	(in) 146,340 (out) 146,940	W	0100	ET	Douglas Co., NE	WAØDHU
Early Eighty Free Net (EEFN)	3733	M-S	0930	TW	W1-2-3-4-8	WN3VGV
EARS Practice Net	3710	WF	0300	TO	North Western USA XE VE	WA7GCE
East Coast Amateur Radio Service Net	7255	Dy	1100	ETW	East Coast	WA3INW
Eastern Area Morning Net (EAMN)	7143	TWTh	1205	ETW	Eastern USA	WA2NRD
Eastern Area Net (EAN) **	3670	Dy	0030	A	Eastern Time Zone	K2KIR
Eastern Area Slow Net (EASN)	3726	Dy	0020	T	W1-2-3-4-8	WN1RFD
Eastern Canada Net (ECN) **	3652/7040	Dy	2345/0130	R	VE1, 2, 3	VE3AWE
Eastern Massachusetts-Rhode Island Net (EMRI) **	3660	Dy	2300/0200	S	Eastern MA RI	WA1MSK
Eastern Massachusetts Two Meter Net (EM2MN) **	145,800 146,520	M-Th F	0000	S	Eastern MA	W1ABC
Eastern Pennsylvania Emergency Phone and Traffic Net **	3917	Dy	0200	S	PA	WA3PZO
Eastern Pennsylvania Net (EPA) **	3610	Dy	2300/0200	S	Eastern PA	K3PIE
East Tennessee VHF Net	50,400	MWF	2200	E	Eastern TN	W4SGI
Egyptian Radio Club Net	(in) 146,160 (out) 146,760 WR9ACA	T	0330*	EW	St. Louis, MO & Granite City, IL area	K9IIT
Eighth Region Net (8RN) **	3530	Dy	2345/0130	R	8th Call Area	W8PMJ
Eighth Region Net Daytime (8RND) **	3940	Dy	2030	R	8th Call Area	WA8MCR
Empire Slow Speed (ESS)	3590	Dy	2200	T	NY	K2UIR
FAX Net	50,550	Th	0100	O	Delaware Co., PA South NJ	WA3DZT
Region Net Five (RN5) **	3645/7095	Dy	0030/0230	R	AL AR LA MS OK TN TX	W4HFU
Region Net Five Daytime (RN5D) **	7290	Dy	2000	R	AL AR LA MS OK TN TX	W5HWY
Firelands Amateur Radio Red Cross Emergency Net **	145,490	Th	0000	L	Erie & Huron Cos., OH	K8ONV
First Region Net (1RN) **	3602	Dy	2345/0130	R	1st Call Area	W1QYY
First Region Net Daytime (1RND) **	3930	Dy	2000	R	1st Call Area	WA1SQB
Florida Amateur Sideband Traffic Net (FAST) **	3940	Dy	2100/0130	S	FL	WA4BPE
Florida Crown AREC Net (FCN)	28,690 146,940	W	2230	E	Duval Co., FL	WA4VZF
Florida Midday Traffic Net (FMTN) **	7247	M-S	1600	S	FL	W4SDR
Florida Post Office Net (FL PON)	3982	TTh	2130	ET	FL	W4BGL
Florida QCWA Net	7247	Sn	1600	E	FL	W4IYT
Florida Sidebanders Emergency Net	3940	W	2230	E	FL	W4OVE
Flying Samaritan Service Net	3860	Dy	0300*	ETW	AZ CA NM XE	W6HCD
Foreign Service Net	21,415	Sn	1500*	O	USA Africa Europe S. Amer.	
Fort Wayne Area 6 Meter Net	50,580	Dy	0000*	T	North Eastern IN	W9PMT
40 Meter Eye Emergency Net	7294	M-S	1300	E	CA LA MT NM OK TX	W5JA
Four-County Emergency Net	146,520	W	0030*	ETW	Central Northern OH	K8IQB
Fourth Region Net (4RN) **	7095/3567	Dy	2345/0130	R	FL GA NC SC VA W.I. C.Z.	W4SHJ
Fourth Region Net Daytime (4RND) **	7233	MWF	2100	R	FL GA NC SC VA W.I. C.Z.	K4FTB
Gainesville ARS Net	(in) 146,220 (out) 146,820 WR4ACE	M	0030	T	Northern FL	K4GWQ
Gator Net (GN) **	7115	Dy	1230	S	FL	W4EH
General Electric Net	50,598	F	0100	T	Delaware Co., PA South NJ	WA3KFT
Georgia Post Office Net (GA PON)	3900	Sn	1615	ET	GA	WA4DOY
Georgia SSB Net (GSBN) **	3975	Dy	0000*	T	GA	K4JNL
Georgia State Net (GSN) **	3595	Dy	2300/0200	S	GA	WA4BAA
Georgia Training Net **	3718	Dy	2200	S	GA	WB4TVU
Gibson County AREC Net **	50,580	W	0100	L	Gibson Co., IN	K9PNP
Glens Falls AREC Net	51,000	T	2300	ET	Warren & Washington Cos., NY	WA2PCK
Gloucester County 6 Meter AREC Net	50,900	M	2300	E	Gloucester Co., NJ	WA2SEA
Granite State Phone Net (GSPN)	3945	T-S Sn	2300 1330	ET	North Eastern NY NJ W1	K1APQ
Granite State Traffic Net	3945	Sn	2200	T	W1 NY	K1WKS
Greater New Bedford Emergency Net **	50,700 146,550	M	2300	L	New Bedford, MA area	W1LE
Great Lakes Emergency & Traffic Net (GLETN)	3932	Dy	0130	ET	IN MI OH WI	WB8CHE
Greene County RACES Net (GCRN)	28,670	Sn	1600	L	Greene Co., PA	WA3MUU
Green Mountain Net (GMN)	3932	M-S	2130	ETW	North Eastern USA	W1JLZ

continued in next months issue

7400N TTL

SN7400N	.16	SN7451N	.27	SN74151N	1.25
SN7401N	.16	SN7453N	.27	SN74153N	1.35
SN7402N	.21	SN7454N	.41	SN74154N	1.25
SN7403N	.16	SN7459A	.25	SN74155N	1.21
SN7404N	.21	SN7460N	.22	SN74156N	1.30
SN7405N	.24	SN7470N	.45	SN74157N	1.30
SN7406N	.45	SN7472N	.39	SN74160N	1.75
SN7407N	.45	SN7473N	.45	SN74161N	1.45
SN7408N	.25	SN7474N	.45	SN74163N	1.65
SN7409N	.25	SN7475N	.80	SN74164N	1.65
SN7410N	.20	SN7476N	.47	SN74165N	1.65
SN7411N	.30	SN7480N	.50	SN74166N	1.70
SN7412N	.42	SN7482N	1.75	SN74167N	5.50
SN7413N	.85	SN7483N	1.15	SN74170N	3.00
SN7414N	.70	SN7485N	1.12	SN74172N	18.00
SN7416N	.43	SN7486N	.45	SN74173N	1.70
SN7417N	.43	SN7488N	3.50	SN74174N	1.95
SN7418N	.25	SN7489N	3.00	SN74175N	1.95
SN7420N	.21	SN7490N	.59	SN74176N	.90
SN7421N	.39	SN7491N	1.20	SN74177N	.90
SN7423N	.37	SN7492N	.82	SN74180N	1.05
SN7425N	.43	SN7493N	.82	SN74181N	3.55
SN7426N	.31	SN7494N	.91	SN74182N	.95
SN7427N	.37	SN7495N	.91	SN74184N	2.30
SN7429N	.42	SN7496N	.91	SN74185N	2.20
SN7430N	.26	SN74100N	1.25	SN74187N	6.00
SN7432N	.31	SN74107N	.49	SN74190N	1.50
SN7437N	.47	SN74121N	.55	SN74191N	1.50
SN7438N	.40	SN74122N	.49	SN74192N	1.50
SN7439A	.25	SN74123N	1.05	SN74193N	1.40
SN7440N	.21	SN74125N	.60	SN74194N	1.45
SN7441N	1.10	SN74126N	.81	SN74195N	1.00
SN7442N	1.08	SN74132N	3.00	SN74196N	1.25
SN7443N	1.05	SN74141N	1.15	SN74197N	1.00
SN7444N	1.10	SN74142N	6.50	SN74198N	2.25
SN7445N	1.10	SN74143N	7.00	SN74199N	2.25
SN7446N	1.15	SN74144N	7.00	SN74200N	7.00
SN7447N	.89	SN74145N	1.15	SN74251N	2.50
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SN7450N	.26	SN74150N	1.10	SN74285N	6.00

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CD4006	2.50	CD4042	1.90	74C42N	2.15
CD4007	.29	CD4044	1.50	74C73N	1.50
CD4009	.59	CD4046	2.51	74C74	1.15
CD4010	.59	CD4047	2.75	74C90N	3.00
CD4011	.29	CD4049	.79	74C95N	2.00
CD4012	.29	CD4050	.79	74C107N	1.25
CD4013	.53	CD4051	2.98	74C151	2.90
CD4016	.69	CD4053	2.98	74C154	3.00
CD4017	1.35	CD4060	3.25	74C157	2.15
CD4019	.69	CD4066	1.75	74C160	3.25
CD4020	1.69	CD4069	.45	74C161	3.25
CD4022	1.25	CD4071	.45	74C163	3.00
CD4023	.29	CD4081	.45	74C164	3.25
CD4024	1.50	74C00N	.39	74C173	2.60
CD4025	.34	74C02N	.55	74C193	2.75
CD4027	.85	74C04N	.75	74C195	2.75
CD4028	1.65			80C97	1.50
CD4029	2.90				

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LM305H	.95	NE536T	6.00	LM3900N	.55
LM307CN	.35	NE540L	6.00	LM3905N	.60
LM308H	1.00	NE550N	.79	LM5556N	1.85
LM308CN	1.00	NE555V	.75	MC5558V	1.00
LM309H	1.10	NE565H	1.25	LM7525N	.90
LM309K	1.25	NE565N	1.95	LM7528N	2.20
LM310CN	1.15	NE566CN	1.95	LM7534N	2.20
LM311H	.90	NE567H	1.25	LM7535N	1.25
LM311N	.90	NE567V	1.95	80388	4.95
LM318CN	1.50	LM703CN	.45	LM75450	.49
LM319N	1.30	LM709H	.29	75451CN	.39
LM319D	3.00	LM709N	.29	75452CN	.39
LM320K-5	1.35	LM710N	.79	75453CN	.39
LM320K-5.2	1.35	LM711N	.39	75454CN	.39
LM320K-12	1.35	LM723N	.55	75491CN	.79
LM320K-15	1.35	LM723H	.55	75492CN	.89
LM323K-5	14.00	LM733N	1.00	75494CN	.89
LM324N	1.80	LM739N	1.29	RCA LINEAR	
LM339N	1.70	LM741CH	3/1.00	CA3013	1.70
LM340K-5	1.95	LM741CN	3/1.00	CA3023	2.15
LM340K-12	1.95	LM741-14N	.39	CA3035	2.25
LM340K-15	1.95	LM747H	.79	CA3039	1.35
LM340K-24	1.95	LM747N	.79	CA3046	1.15
LM340To-5	1.75	LM748H	.39	CA3059	2.46
LM340To-6	1.75	LM748N	.39	CA3060	2.80
LM340To-12	1.75	LM1303N	.90	CA3080	.85
LM340To-15	1.75	LM1304N	1.19	CA3083	1.60
LM340To-24	1.75	LM1305N	1.40	CA3086	.59
LM350N	1.00	LM1307N	.85	CA3089	3.25
LM351CN	.65			CA3091	8.25
LM370N	1.15			CA3123	1.85
LM370H	1.15			CA3600	1.75

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8200	2.59	8288	1.15	8831	2.59
8210	3.49	8520	1.29	8836	.49
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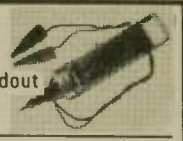

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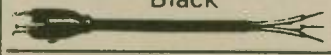

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THUMBWHEEL SWITCHES

THUMBWHEEL SWITCH ONLY
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Part No.	Description	Price
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SR 12	Decimal	3.00
SF 21	10 Position BCD only	2.50
SR 21		3.00

Snap together – No Hardware

SERIES SF Front Mount Assembly ($11.70)

Note: Picture to the left has the following 4 ea. SF 12, 1 ea. SF EP, 1 ea. SF BB, 1 ea. SF DP and 1 ea. SF HB

ACCESSORIES

Part No.	Description	Price
SF EP	End Plate (Pair)	.50
SF DP	Divider Plate (each)	.40
SF BB	Blank Body (each)	.40
SF HB	Half Body (each)	.40

SERIES SR Rear Mount Assembly ($13.70)

Note: Picture to the left has the following 4 ea. SR 12, 1 ea. SR EP, 1 ea. SR BB, 1 ea. SR DP and 1 ea. SR HB

ACCESSORIES

Part No.	Description	Price
SR EP	End Plates (pair)	$ .50
SR DP	Divider Plate (each)	.40
SR BB	Blank Body (each)	.40
SR HB	Half Body (each)	.40

Ordering: Order desired switch or switches and add necessary accessories for your particular application

NEW PROTO BOARD-100

Here's a low cost, big 10 IC capacity breadboard kit with all the quality of QT Sockets and the best of the Proto-Board series . . . complete down to the last nut, bolt and screw. Includes 2 QT-35S Sockets; 1 QT-35B Bus Strip; 2 5-way binding posts; 4 rubber feet; screws, nuts, bolts; and easy assembly instructions.

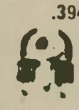
COMPLETE KIT . . . $19.95

POCKET CALCULATOR KIT

5 function plus constant – addressable memory with individual recall – 8 digit display plus overflow – battery saver – uses standard or rechargeable batteries – all necessary parts in ready to assemble form – instructions included. 3" x 5¼" . . . . . $17.50 each

OPTIONS –
115VAC Transformer . . . . . 4.95 each
6 each "N" Alkaline Batteries . . . . . 2.50 lot

.394" DIAM. TRIMMER

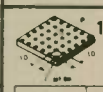


STANDARD RESISTANCE VALUES
MODEL 100Ω 500Ω 1K 2K 5K 10K 20K 100K 200K 1Meg

Model TR11

RESISTANCES (OHMS)	1–9	10–24
STD 100Ω 1 MEGΩ	35	.30

1/16 VECTOR BOARD



P Pattern
0.1" Hole Spacing

MATERIAL	STOCK NO	LONG	WIDE	PRICES 1	PRICES 20
PHENOLIC	64P44 062XXXP	4.50	6.50	1.72	1.54
	160P44 062XXXP	4.50	17.00	3.88	3.32
EPOXY GLASS	64P44 062	4.50	6.50	2.07	1.88
	84P44 062	4.50	8.50	2.58	2.31
	160P44 062	4.50	17.00	5.04	4.53
	240P84 062	8.50	17.00	8.23	8.26
EPOXY GLASS COPPER CLAD	160P44 062C1	4.50	17.00	6.80	6.12

WALL or T.V. DIGITAL CLOCK

12 or 24 Hour
25' VIEWING DISTANCE
Walnut Case-6" x 3" x 1"
Hr. & Min.-.6" High
Seconds-.3" High

KIT - All Comp. & Case $39.95
Wired & Assembled 115 Vac $44.95

DISPLAY LEDS

CA	Common Anode	CC	Common Cathode
MAN 1	Com. Ano.	.270	$1.95
MAN 2	5x7 Matrix	.300	4.25
MAN 3	Com. Cath.	.125	.95
MAN 4	Com. Cath.	.187	1.95
MAN 7	Com. Ano.	.30	1.50
DL33	Com. Cath.	.125	1.95
DL747	Com. Ano.	.625	2.50

DISCRETE LEDS

MV 10	Red	5/$1.00
MV 50	Red	6/$1.00
MV 5024	Red	5/$1.00
MV 5024	Green	4/$1.00
MV 5024	Yellow	4/$1.00
MV 5024	Orange	4/$1.00

IC SOLDERTAIL – LOW PROFILE (TIN) SOCKETS

	1-24	25-49	50-100		1-24	25-49	50-100
8 pin	$.19	.18	.17	24 pin	$ .68	.62	.56
14 pin	.23	.22	.21	28 pin	.89	.81	.73
16 pin	.27	.26	.24	36 pin	1.10	.99	.90
18 pin	.46	.41	.37	40 pin	1.25	1.13	.93
22 pin	.65	.59	.53				

SOLDERTAIL STANDARD (TIN)

14 pin	$.30	.28	.26	28 pin	$ .99	.90	.81
16 pin	.33	.31	.29	36 pin	1.39	1.26	1.15
18 pin	.42	.39	.37	40 pin	1.59	1.45	1.30
24 pin	.59	.54	.49				

SOLDERTAIL STANDARD (GOLD)

8 pin	$.30	.27	.24	24 pin	$ .70	.63	.57
14 pin	.35	.32	.29	28 pin	1.10	1.00	.90
16 pin	.38	.35	.32	36 pin	1.55	1.40	1.26
18 pin	.52	.47	.43	40 pin	1.75	1.59	1.45

WIRE WRAP SOCKETS (GOLD) LEVEL #3

10 pin	$.45	.41	.37	24 pin	$1.05	.95	.85
14 pin	.46	.42	.38	28 pin	1.40	1.25	1.10
16 pin	.55	.50	.45	36 pin	1.59	1.45	1.30
18 pin	.75	.68	.62	40 pin	1.75	1.55	1.40

50 PCS. RESISTOR ASSORTMENTS $1.75 PER ASST.

ASST. 1	5 ea:	10 OHM	12 OHM	15 OHM	18 OHM	22 OHM	1/4 WATT 5% = 50 PCS.
		27 OHM	33 OHM	39 OHM	47 OHM	56 OHM	
ASST. 2	5 ea:	68 OHM	82 OHM	100 OHM	120 OHM	150 OHM	1/4 WATT 5% = 50 PCS.
		180 OHM	220 OHM	270 OHM	330 OHM	390 OHM	
ASST. 3	5 ea:	470 OHM	560 OHM	680 OHM	820 OHM	1K	1/4 WATT 5% = 50 PCS.
		1.2K	1.5K	1.8K	2.2K	2.7K	
ASST. 4	5 ea:	3.3K	3.9K	4.7K	5.6K	6.8K	1/4 WATT 5% = 50 PCS.
		8.2K	10K	12K	15K	18K	
ASST. 5	5 ea:	22K	27K	33K	39K	47K	1/4 WATT 5% = 50 PCS.
		56K	68K	82K	100K	120K	
ASST. 6	5 ea:	150K	180K	220K	270K	330K	1/4 WATT 5% = 50 PCS.
		390K	470K	560K	680K	820K	
ASST. 7	5 ea:	1M	1.2M	1.5M	1.8M	2.2M	1/4 WATT 5% = 50 PCS.
		2.7M	3.3M	3.9M	4.7M	5.6M	

PRIME INTEGRATED CIRCUIT ASSORTMENTS

ASST. 8	3 ea.	SN7400	7401	7402	7403	7404	SSI/TTL $5.95 ASST.
		SN7410	7430	7438	7440	7472	
ASST. 9	2 ea.	SN7447	7490	7491	74100	74121	MSI/TTL $9.95 ASST.
		SN74145	74175	74180	74191	74193	
ASST. 10	2 ea.	CD4001	4002	4011	4012	4013	CMOS $9.95 ASST.
		CD4016	4017	4019	4023	4030	
ASST. 11	2 ea.	LM301T	301N	302T	307T	309K	LINEAR $10.95 ASST.
		LM311T	565T	567T	741T	741N	

Satisfaction Guaranteed. $5.00 Min. Order. U.S. Funds.
California Residents — Add 6% Sales Tax
Write for FREE 1975S Catalog — Data Sheets .25¢ each

JAMES

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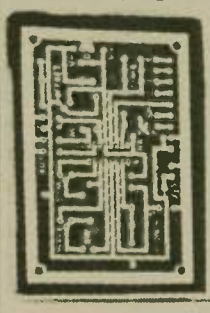
PHONE ORDERS — (415) 592-8097

IC'S EXAR KITS

FUNCTION GENERATOR KIT



XR-2206K
FUNCTION GENERATOR KIT

features sine, triangle and square wave, THD 0.5% typ., AM/FM capability

XR-2206KA **$19.95**
Includes monolithic function generator IC, PC board, and assembly instruction manual.

XR-2206KB **$29.95**
Same as XR-2206KA above and includes external components for PC board.

TIMERS		
XR-555CP	Monolithic Timer	$ 1.10
XR-320P	Precision Timer	1.55
XR-556CP	Dual-555 Timer	1.85
XR-2556CP	Dual Timing Circuit	3.20
XR-2240CP	Programmable Counter/Timer	4.80
PHASE LOCKED LOOPS		
XR-210	FSK Demodulator	5.20
XR-215	High Frequency PLL	6.60
XR-567CP	Tone Decoder (mini DIP)	1.95
XR-567CT	Tone Decoder (TO-5)	1.70
STEREO DECODERS		
XR-1310P	PLL Stereo Decoder	3.20
XR-1310EP	PLL Stereo Decoder	3.20
XR-1800P	PLL Stereo Decoder	3.20
WAVEFORM GENERATORS		
XR-205	Waveform Generator	8.40
XR-2206CP	Monolithic Function Generator	5.50
XR-2207CP	Voltage-Controlled Oscillator	3.85
OTHER EXAR IC'S		
XR-1468CN	Dual + 15V Tracking Regulator	3.85
XR-1488N	Quad Line Driver	5.80
XR-1489AN	Quad Line Receiver	4.80
XR-2208CP	Operational Multiplier	5.20
XR-2211 CP	FSK Demodulator/Tone Decoder	6.70
XR-2261	Monolithic Proportional Servo IC System w/4 ea. Driver Transistor	3.79

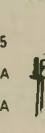
Special Requested Items

RC4194	Dual Track V Reg	$5.95	N8T57	$3.00	2533	$11.85
RC4195	* 15v Track Reg	3.25	4024P	2.25	8263	5.95
MC1741	High Slew Op Amp	4.00	2513	11.00	8267	2.75
MC4044P		4.50	2518	7.00	8288	1.15
CA3130	Super CMOS Op Amp	1.49	2524	3.50	8826	3.00
40410	3w PNP	1.75	2525	6.00	8880	1.35
40673	3w NPN	1.75	2527	5.00	7497	5.00

DIODES

TYPE	(Zener) VOLTS	W	PRICE	TYPE	(Rectifier) VOLTS	W	PRICE
IN746	3.3	400m	4/1.00	IN4003	200 PIV	1 AMP	.10
IN751A	5.1	400m	4/1.00	IN4004	400 PIV	1 AMP	.10
IN752	5.6	400m	4/1.00	IN3600	50	200m	6/1.00
IN753	6.2	400m	4/1.00	IN4148	75	10m	15/1.00
IN754	6.8	400m	4/1.00	IN4154	35	10m	12/1.00
IN9658	15	400m	4/1.00	IN4734	5.6	1w	.28
IN5232	5.6	500m	.28	IN4735	6.2	1w	.28
IN5234	6.2	500m	.28	IN4736	6.8	1w	.28
IN5235	6.8	500m	.28	IN4738	8.2	1w	.28
IN5236	7.5	500m	.28	IN4742	12	1w	.28
IN456	25	40m	6/1.00	IN4744	15	1w	.28
IN458	150	7m	6/1.00	IN1183	50 PIV	35 AMP	1.60
IN485A	180	10m	5/1.00	IN1184	100 PIV	35 AMP	1.70
IN4001	50 PIV	1 AMP	.09	IN1186	200 PIV	35 AMP	1.80
IN4002	100 PIV	1 AMP	.10	IN1188	400 PIV	35 AMP	3.00

TRANSISTORS



MPS-A05	5/$1			2N3905	4/$1
2N918	.25	2N2906A	4/$1	2N3906	4/$1
2N2219A	3/$1	2N2907A	5/$1	PN4249	4/$1
2N2221	4/$1	2N3053	2/$1	PN4250	4/$1
2N2222A	5/$1	2N3055	.95	2N4409	5/$1
2N2369	5/$1	2N3725A	2/$1	2N5129	.19
2N2369A	4/$1	2N3903	5/$1	2N5139	.19
2N2484	4/$1	2N3904	4/$1	C106B1-SCR	2/$1

CAPACITOR CORNER

50 VOLT CERAMIC DISC CAPACITORS

	1-9	10-49	50-100		1-9	10-49	50-100
10pf	.05	.04	.03	.001	.05	.04	.035
22 pf	.05	.04	.03	.0047	.05	.04	.035
47 pf	.05	.04	.03	.01	.05	.04	.035
100 pf	.05	.04	.03	.022	.06	.05	.04
220 pf	.05	.04	.03	.047	.06	.05	.04
470 pf	.05	.04	.035	.1	.12	.09	.075

100 VOLT MYLAR FILM CAPACITORS

.001mf	.12	.10	.07	.022mf	.13	.11	.08
.0022	.12	.10	.07	.047mf	.21	.17	.13
.0047mf	.12	.10	.07	.1mf	.27	.23	.17
.01mf	.12	.10	.07	.22mf	.33	.27	.22

± 20% DIPPED TANTALUMS (SOLID) CAPACITORS

.1	35V	.28	.23	.17	1.5	35V	.30	.26	.21
.15	35V	.28	.23	.17	2.2	25V	.31	.27	.22
.22	35V	.28	.23	.17	3.3	25V	.31	.27	.22
.33	35V	.28	.23	.17	4.7	25V	.32	.28	.23
.47	35V	.28	.23	.17	6.8	25V	.36	.31	.25
.68	35V	.28	.23	.17	10	25V	.40	.35	.29
1.0	35V	.28	.23	.17	15	25V	.63	.50	.40

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

Axial Lead					Radial Lead				
.47	50	.15	.13	.10	.47	25	.15	.13	.10
1	50	.16	.14	.11	.47	50	.16	.14	.11
3.3	50	.15	.13	.10	1	16	.15	.13	10
4.7	25	.16	.14	.12	1	25	.16	.14	11
10	25	.15	.13	.10	1	50	.16	14	11
10	50	.18	.14	.12	4.7	16	.15	13	10
22	25	.17	.15	.12	4.7	25	.15	13	10
22	50	.24	.20	.18	4.7	50	.16	14	11
47	25	.19	.17	.15	10	16	14	12	09
47	50	.25	.21	.19	10	25	15	13	10
100	25	.24	.20	.18	10	50	16	14	12
100	50	35	.30	.28	47	50	.24	21	19
220	25	.32	.28	.25	100	16	19	15	14
220	50	.45	41	38	100	25	24	20	18
470	25	.33	29	.27	100	50	35	30	28
1000	16	.55	.50	45	220	16	23	17	16
2200	16	70	.62	55	470	25	31	28	26

EDITORIAL

Armond Noble, W6AJY
Editor, Worldradio News

The other day the Office of Telecommunications Policy received a letter from a very disgruntled amateur.

(The Office of Telecommunications Policy is part of the Executive Branch and its office is not far from that of the President.)

The amateur was complaining about a proposal in Docket 20282. He said, "If that goes through, in order to keep my VHF privileges I would have to take a test in front of the FCC just because my test was given to me some years ago by my high school science teacher. So I have to make a round trip of 20 miles twice a week for the next 16 weeks to brush up on my code and theory." He went on to say how unfair he thought that was and so on.

He must have forgotten that when one renews his license he makes the statement that he can still meet the code speed requirements of his grade of license. In the particular case of the letter writer it was five words per minute.

It seems strange in this day of so many teenagers getting a license that one who has already passed the test would find it such an arduous task to again pass the test. We have the ARRL license Manual, the AMECO courses and Q&A and the Posi-Check, etc. It seems just scanning the radio magazines would keep one's technical knowledge up to the level of the basic knowledge necessary to pass the 50 question test (a great deal of which is now rules and regulations).

Somehow our heart doesn't bleed for someone who has to be so terribly inconvenienced to make a 20-mile round trip to study. We don't hear any complaints from the person who teaches the class!

The moral of this story is — If you are less than bright please don't write to the White House and advertise the fact. They might judge all radio amateurs from such a letter.

As for the rest of you, do your best to keep such people from writing such letters to Gerald Ford's helpers and don't print such in your club bulletins.

Speaking of bulletins, we also read the following, "The ARRL Forum (at conventions) is another must, and often DXers are noticeable by their absence, figuring it's all for the traffic and Sister Cities types. Get in there and speak up. DXers are smarter and more technically qualified than most amateurs. Give Amateur Radio the leadership it needs. Tell how you do it. They may give you the chance."

Well, while I must admit that DX is certainly exciting and DXpeditions are part of the adventure of this activity, it is certainly not as constructive as other facets.

The above quoted comment sounded like a "put-down" of traffic and Sister City "Types" (bad word). With the upcoming WARC we must have all the ammunition possible to defend our present frequency allocations. The Sister City activity is something we can talk about proudly and the traffic handlers have made us more friends with the governments of Nicaragua, Honduras and Liberia (to name a few) than all the DXers put together.

While many DXers do a great job of sending Callbooks and parts, hosting travelling foreign amateurs, etc., these are not on-the-air activities such as traffic and Sister City.

One of our real hopes is that no government official was listening to the bands lately to hear the type of behavior of our "smarter and more technically qualified" amatuers during recent DXpeditions.

Let's not put down our "traffic and Sister City types," they may be our salvation.

Which brings up a point. What if at license renewal time, instead of saying you still know the code, etc., you had to write down how you had justified your license according to the purposes as outlined in Part 97.1 of the rules.

Frankly, what we would prefer to see instead of all this well-roundedness is one great, mangificent effort in one thing. Get out and really be gung-ho about something and reach some heights of accomplishment. Most people just piddle a little with this, tinker with that and never achieve anything in any of them. We prefer those who wish to stand out in something.

In some circles today there is mockery aimed at the "over-achievers." What rot. We need the over-achievers to make up for all the under-achievers who never do anything with anything.

What we need more of is those who "pull out the stops". Where is the pride today?

Progress is made by those who give their maximum effort to their school work or to their job or to their service club, etc. The rest just ride along on their coattails.

The other day we heard someone say on-the-air, regarding Amateur Radio, "I have lots of other hobbies, too."

Let's STOP referring to Amateur Radio as a "hobby." Nowhere in the Communications Act of 1934 or the Rules and Regulations of the FCC or the international regulations is this activity referred to as a hobby. It is called the Amateur Radio Service.

We believe Amateur Radio is far too important to be in the "hobby" classification. And while we're on that, let's make a real effort to drop "ham". Get it out of print and out of our vocabularies. Look at what your dictionary calls "ham". Let's not let that be our image to the public. We dropped the word from our writings here in **Worldradio** some time ago. Let's give this avocation some prestige.

Dr. Theodore Cohen, W4UMF, has suggested that, whenever we write about this service, the first letters be capitalized, such as Amateur Radio. Other publications have said they are going to do it. We've done it here for a couple of years now.

As you noticed on page one of this issue, Prose Walker, W4BW, has retired from his position as Chief of the Amateur Division of the FCC. We would be less than objective if we didn't say that his tenure in office was certainly a most controversial one. In fact, on these pages we disagreed with his actions on many occasions.

However, it must be said that what he did, he did with what he felt was in the best interests of Amateur Radio. You may have disagreed with him (and that is the American way), but one could never question his motives or dedication.

Now that he has retired, if you see him at a convention or hear him on-the-air (mostly 20 CW), let's let the past be the past. Let's treat him as one of the gang, which he is, and certainly much more than most.

A tip of the hat to someone who had a job with the impossible task of trying to please everyone. Let's hope he can bring his talents to the Amateur Radio side of the upcoming WARC.

On the night of 28 July I attended a meeting of the Northern California Contest Club. Talk about zip and zing. Holy Toledo! What spirit.

And, while the club has quite a few "big guns," they certainly don't tell the little guns to "eat dirt." Quite the contrary. The more knowledgeable are telling the others "how to do it," and there are work parties to put up towers and antennas for each

[*Please turn to page 42*]

Southwestern Division CONVENTION

OCTOBER 24-26, 1975

Holiday Inn®

VENTURA, CALIFORNIA

Main Banquet Speaker - Mr. Roy Neal, K6DUE, NBC News Correspondent

The network's leading expert on aerospace coverage, Mr. Neal has been present at every one of America's major space flights. He was recently NBC-TV Correspondent for the Soviet-US space link-up from Mission Control in Houston.

Contests

1. T-Hunt on 146.52.
2. VHF/UHF Antenna Measurement. The highest gains measured on 144, 432, 1296 and 2300 MHz will receive prizes. Test antenna will be receiving 1000 Hz modulated vertically polarized signal.
3. QSL, CW and other contests, too!

Amateur of the Year Awards

Three Southwestern Division amateurs will be recognized for outstanding service or acts in three categories. Write for details.

1. Action or service to amateur radio not involving an emergency
2. Action in Public Service
3. Action in Emergency Communications

Prizes

1. The Early Bird prize will be a major prize drawn from the first 35% registered. Over 15% have already registered, so hurry!
2. All registrations received prior to October 10 will be eligible for the big pre-registration prize.
3. The main door prize will be given away at the banquet.

Other activities include:

- Hourly Prizes
- Steak BBQ Banquet and Dance
- No Host Cocktail Party
- Major Exhibitors
- Special Events Station/Talk-in Station
- Major Interest Breakfasts
- Tremendous Ladies' Program
- Wouff Hong Ceremony
- Hospitality Room with Free Coffee
- Excellent Technical Sessions
- 150 RV Spaces
- Swap Tables
- FCC Exams
- ARRL Forum with Gen. Mgr. Baldwin
- FCC Forum with the Commissioner

A.R.R.L. SOUTHWESTERN DIVISION CONVENTION
OCTOBER 24 - 26 • VENTURA, CALIFORNIA
HAMCON, INC. REGISTRATION
P.O. BOX 5131
VENTURA, CA. 93003

NAME (HANDLE– FOR BADGE) _____ CALL _____

_____ _____

Badges Will Be Made From Above Information –PLEASE PRINT

ADDRESS _____

CITY _____

STATE _____ ZIP _____

NO.		ADVANCE	DOOR
____	REGISTRATION PACKAGE Tech Sessions, Exhibit, Banquet	12.50	14.00
____	BANQUET ONLY (No Door Prizes)	9.00	9.50
____	REGISTRATION W/O BANQUET Tech Sessions and Exhibits	5.00	6.00
____	LADIES LUNCHEON/FASHION SHOW Not included in Registration Package	5.00	Not Available
____	RECREATIONAL VEHICLE SPACE	4.50 Nite	4.50 Nite

**REQUESTS FOR CANCELLATION MUST BE RECEIVED BY 17 OCTOBER, 1975.*

CHECK / M. O. FOR $_____ ENCLOSED. MAKE PAYABLE TO HAMCON, INC.
ADVANCE REGISTRATION CLOSES 10 OCTOBER, 1975.

▶ HELP US PLAN A CONVENTION THAT YOU WILL ENJOY ◀

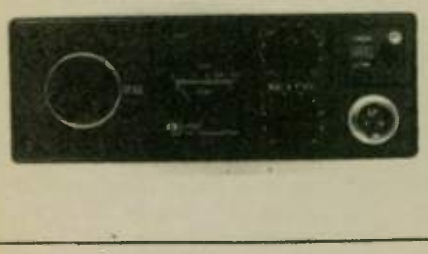
PROVIDE INFORMATION BELOW

I WOULD LIKE TO ATTEND A BREAKFAST SUNDAY MORNING
- ☐ QCWA
- ☐ MARS
- ☐ TRAFFIC
- ☐ WCARS
- ☐ RTTY
- ☐ QRP
- ☐ DX
- ☐ LADIES
- ☐ FM

I WOULD ENJOY THE FOLLOWING ACTIVITY:
- ☐ FCC EXAM
- ☐ TX HUNT
- ☐ SWAP TABLE
- ☐ CW CONTEST
- ☐ HOME BREW CONTEST

PLEASE SEND ADDITIONAL INFORMATION ON:
- ☐ HEADQUARTERS HOTEL
  Single $18
  Double $24
  Suite $40
- ☐ OTHER HOTELS
  $8.00 and up
- ☐ RV SPACE
- ☐ HAM OF THE YEAR AWARD
- ☐ ANTENNA CONTEST

Back to school specials



IC-30A $399

+

Choice of either-
fixed station ARX-450
antenna or mobile
LM-450K antenna

free with IC-30A purchase

=

QRM
Free
QSOs
on 450

IC -22A $249

+

22/82
28/88
34/94
94/94
52/52

no additional charge

=

Mobile
enjoyment

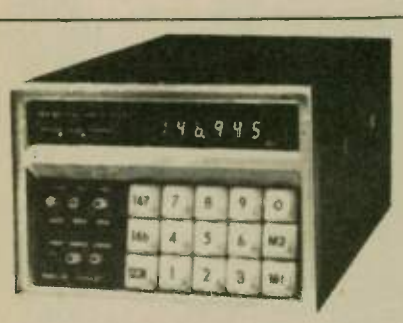
IC-230 $489

+

AC PS
IC-3PA
$89

=

Armchair
copy



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Heh, heh... show how there is no TVI on your own set... so it must be their fault. Drake Hi-Pass filter for $6.95. Get two for $13.90.

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DX DIGEST

Gary Stilwell, W6NJU

The evening of 8 July started out quite innocently as we had a meeting of the Sacramento DX group. It would be an evening of getting together with DXers and chatting about DX and related matters. Although Mt. Athos was in the back of my mind, I never dreamed at the time how the thrill and chase of DX would once again entangle me.

It started casually with a discussion about Mt. Athos and how conditions were predicted to be good for the trip, and it appeared the West Coast would have a good shot at this expedition. Somebody said, "How do you expect to work him with your 20-meter dipole?" A good question indeed. I replied that, with an expedition lasting a week as was planned, I ought to have a good shot. From the other side of the room came a comment about how easy it would be to put up a beam and somebody chipped in, "I even have a tower you can use for the week." This discussion continued while talk of other DX went about the room. Suddenly somebody said, "Look at Stilwell and that gleam in his eye; it looks like his mind is planning all sorts of things."

Yes indeed, it had started. By Friday night I had my old 20-meter boom out in the yard and I was looking over the elements of what used to be a five-element 20-meter beam. It shouldn't be hard to build, and this weekend's Communications Department party would be a good place to test the antenna.

By Saturday a three-element beam was built and placed on top of the house. Signals in the CD party were better than with the dipole, but it still didn't seem to have the punch one would expect.

As the week wore on I convinced myself that the answer was to get the beam as high as possible. So by Friday I had assembled a couple of sections of an old Hy-tower which would give me about eighteen feet. Saturday morning started out as a scorcher which eventually ended up at about 104 degrees. With a little help from the family the tower was erected, and with help from neighbors the beam was lifted onto the tower. Another chance to test the beam in a CD party and all seemed well.

The vigil, of course, started Saturday afternoon with the thought that possibly the Mt. Athos crew would arrive and start operating at an early time. The vigil continued as the days passed and the rumors flew. Evidently the crew had experienced problems. They arrived and couldn't get permission to operate. Tuning the low end of 20-meters, one could get several stories as to what was happening. Finally, the news broke. It was now Wednesday and the rig problems should be resolved and Mt. Athos activated at 1000Z. Up early in the morning to span the band brought information that there still was no sign.

Then came the call at the office. Mt. Athos was on the air and had good conditions to the West Coast. Several stations in California had worked the expedition and things were going well. Unfortunately the day was filled with many work problems and Mt. Athos would have to wait until tonight. Upon arrival home a quick check with Bob Kovak, W6ONZ, revealed Mt. Athos had been coming through all day and had worked several W6's, including W6ONZ and a sideband contact with Bill Mattison, W6ARJ. A quick listen on CW produced a pile-up of 8's, 9's and Ø's, but SV1GA/A is unreadable. Hopefully will have an opening tonight and all should be able to get through.

0500 comes and a CW pileup of W6's develops — but horrors, I can't read any signal. The phone rings — he's on 14.080 about 5-5-9 — but I still can't copy him. I hear many Southern California stations working Mt. Athos and a Northern California station, but, alas, no sign here. The band goes out and Mt. Athos has escaped.

Another phone call to Bob to establish operating pattern during the day. Very quickly upon arrival at work arrange to take a few hours off to come home. The trip is made at mid-day and no sign of Mt. Athos. Tune the band — nothing. Well, there's always tonight and maybe I'll have better luck. The appropriate time arrives and lo and behold there's SV1GA/A coming through with a readable signal. The phone rings — he's on 14.080. Yes, I know; I'm tuned up and ready to go. The phone rings again — he's on 14.080. Yes, I know; I'm going to get in the pile-up. Two stations are worked, and all of a sudden SV1GA/A drops down in strength and the band is closed. The phone rings again and friends on the other end want to discuss our camping plans for the weekend.

Well, ahhhh — I'd rather postpone the camping this weekend if at all possible. Arrangements are made to stay in town. However, the reports on Friday are terrible conditions with no sign to Europe.

Friday is a scorcher, 108 degrees; however, I decided that no matter what I was going to try to lift the beam another 5 to 10 ft. out of the tower if at all possible. "What!" the wife says, "putting that thing up? You banged your head, cut your face and cut your leg — you mean you're going up there again?" Yes, things are getting desperate and we may be lucky if we get another European opening.

All worked out well on Saturday afternoon; there was a short European opening into California.

I wonder what adrenalin pumps in the system of a DXer. When the challenge comes we seem to rise to the occasion, putting aside our thoughts and concentrating on that one elusive country. After working Mt. Athos I was leaning back with satisfaction. It was a combination of exultation and exhaustion. I had done it! At that moment my dear wife walked into the shack and inquired just when was I going to mow the lawn or did I intend to rent our property to the Green Berets as a jungle training school. They'll never understand what's really important will they?

(Editor's Note: Gary modestly left out of his column that working Mt. Athos put him at the very top of the DX Honor Roll. He has worked everything there is . . . congratulations. —W6AJY)

All sorts of things are said during the wait and during the operation, and one can only wait until this story of the DXpedition is told. In brief, Marty Laine, OH2BH, and Aris Germanis, SV1GA, did a yeoman job. After arriving at Mt. Athos they had to wait for a Holy Council meeting on Monday before they could get the official permission to operate. Then the rig problem developed and Marty, OH2BH, had to make the long journey back to Athens to get new equipment. The group did work about 4,000 stations and 110 countries. W6's worked totaled about 200, with only 2 known contacts on SSB, those being with Bill Mattison, W6ARJ, and Bill Hoverman, W6FW. It appears there will still be a healthy demand for Mt. Athos and someday this rare DX location will again be activated.

Liechensten

DK7PF/HBØ and DK7PV/HBØ plan to be active from Liechenstein from 1 September through 16 September. Operation will be on all bands, both CW and SSB. QSLs will be handled by DK7OM.

Fernando de Noronha

Evidently PUØYS and PVØAKL had more of a signal into Europe then in North America. Joe is planning to operate from St. Peter and Paul Rocks around 15 September using PY7YS/Ø. Hopefully conditions will allow better signals to the states at that time.

Burma

Robin did make it to Burma but

was unable to take along amateur equipment due to weight limitations. Robin may still activate if he can make a second trip and take the equipment with him.

DX Advisory Committee

The DX Advisory Committee has asked if there is sufficient interest in the country criteria used in consideration for the ARRL Countries list to warrant the printing of the criteria on the Countries List. The criteria is available in the October 1972 issue of **QST** and a copy of the criteria is available upon request to Headquarters. Comments should be made via DX Advisory Committee members or to League headquarters. The Committee still has under consideration question of eliminating the no-cross mode provisions in the five band DXCC rules.

DXCC

The CW DXCC continues to attract new recipients as John Kline, K9UTN, receives certificate number 9 H. Feldthaus, OZ1VY, receives certificate number 10, and Bob Harriss, K6VY, received certificate number 11. OZ1VY is the first recipient of the CW DXCC outside of the United States.

QSL Information

CR8AG to CT1SH	HS2AIG to WA4BKC
CT2BQ to K9ECE	SV1GA/A to OH2BH
CV0Z to CX2CS	TU2EG to F6CYU
CX3BR to W3HNK	VP2ABA to W3HNK
CY6ARQ to VE6TK	VR1PE to KH6GKD
C5AU to G3LQK	VP8OD to W3HNK
EL1E to WB0ARU	VE1KE to WA1QBH
FG0BUY to K0SGJ	ZD3R to G3LQP
FK8AB to I0PQ	ZD9BT to GB2SM
FM0BUT to K0SGJ	ZK1CW to W4BAA
FP0MM to WA1JKJ	3E1KC to W6GE
FS0BUY to K0SGJ	4X4UR to VE3MR
FY7AX to W3HNK	9V1SH to W7PHO
HC8GI to W3HNK	9Y4SF to WA5GFS

23rd Annual W9 DXCC Banquet

The Indianapolis DX Association will host the W9DXCC Banquet, to be held Saturday, 20 September 1975, beginning at noon at the Holiday Inn in Itasca, IL. Expected guests include VS5MC, K5QHS, W9NTP, WB8EUN, WA8ZDF, W9LT, W9RE, W9CTY and Ambassador Armin Meyer, W3ACE (ex EP3EM and YI2AM).

Pre-registration is $13.00 prior to 1 September 1975 and should be sent to the Indianapolis DX Association, 7008 West 71st Street, Indianapolis, IN 46278.

Many thanks for information to Geoff Watts Newsheet, QSL Managers Directory, **HR Report**, Long Island DX Association and West Coast DX Bulletin for information used in this column.

Sean Flannery, EI5HSI/IS

Stanford *from page 10*

There is no doubt that his influence over the years kept the club going. University populations tend to "turn over" about every four to six years, so it falls to the faculty and staff to perpetuate the good things. Stanford appears to have been lucky in this respect, both in faculty and club officers.

Eighty former club members, including one XYL, returned the questionnaire, but not all answered all the questions. However, it is possible to come up with some interesting statistics about the old grads.

69% gave their occupations as engineer, scientist, engineering educator or researcher.

31% were in non-engineering pursuits such as banking, business, government service, etc.

Over 10% of those replying listed themselves as corporate presidents, vice presidents or other top management.

The significance of the above figures is unclear because over 75% of the respondents were in the School of Engineering and all were amateurs when they arrived on campus. However, it does bring up the classic chicken-or-egg type question: Did their interest in Amateur Radio induce them to spend their lives as engineers and scientists, or did their scientific bent lead them to the ranks of the amateurs? Either way, their work and their avocation complement each other.

Although their first try was remarkably successful, the club officers feel sure that there are some people whom they have missed through lack of knowledge. If you are an ex-Stanford Amateur Radio Club member and [illegible] included in future revisions [illegible] to be why it's loose-leaf), answer the following questions (as comprehensively as you wish) and send to W6YX Call Book address.

1. Name, degree (if any), year graduation (if any).
2. Present call, call while at Stanford, others in between.
3. Address and zip.
4. Occupation.
5. HF bands used, approx. hours of operation.
6. Any other actively used bands or areas of special interest in Amateur Radio.
7. Brief comments of general interest.

One last statistic — of the 80 ex-members who responded, 64 still have an amateur call, and 3 of the back-sliders are planning to get back on the air.

VE YL

I am writing a book on the history of Canadian YLs and Amateur Radio, and would appreciate any info you might have on this subject. I am especially interested in the "old stuff," pioneers in the different facets of amateur radio; the "first" for YLs, the youngest, the oldest; those who were ops in the service, ships, public service, traffic; Canadian YLs (amateurs) who have been well known in other fields.

Any info you might have I will try to follow up. Your help will be most appreciated. I'll be looking forward to hearing from you. 73/33/88 as the case may be. **Cathy Hrischenko — VE3GJH,** 30 Lisburn Crescent, Willowdale, Ontario, Canada M2J 2Z5.

September 1975 Maximum Usable from Burbank, CA

The numbers listed column are the Maximum Usable Frequencies (in megahertz) for contacting five major areas of the world

SEPTEMBER 1975

UT	AFRI	ASIA	EURO	SOAM	SPAC
01	11.0	20.5	9.5	20.4	21.8
02	8.1	20.0	8.4	16.9	21.9
03	7.7	17.7	8.3	13.5	21.8
04	9.8	16.3	8.7	12.0	21.0
05	9.0	14.5	9.4	12.1	17.4
06	8.3	13.8	10.2	12.6	14.5
07	8.3	12.8	10.5	12.4	13.4
08	7.6	12.3	9.7	10.4	13.1
09	7.2	12.0	9.4	12.4	13.0
10	7.0	11.6	9.0	12.6	13.1
11	7.6	11.0	9.1	11.4	13.1
12	9.0	10.2	10.0	11.9	12.1
13	10.9	9.9	11.7	14.6	11.1
14	11.7	11.2	13.8	17.5	12.1
15	12.8	12.5	15.4	19.0	13.1
16	13.4	12.1	16.0	19.5	12.0
17	13.6	11.9	15.8	20.4	10.1
18	13.6	12.2	15.5	22.1	9.4
19	13.7	13.3	16.0	24.1	11.4
20	15.1	15.5	13.9	25.7	15.0
21	14.1	17.8	12.4	26.4	17.9
22	14.6	19.5	11.0	25.2	19.5
23	14.0	20.1	10.0	22.9	20.5
24	13.1	20.4	9.5	20.9	21.3

EATERS

...a giant step backward

Milton Kohl, W8SLY

In our February meeting we discussed use of the repeater and decided to allow freedom of choice for each individual to use the repeater as he may choose.

In this editor's opinion this created a "Giant Step Backward" in the operation of our repeater and has literally reversed all of the repeater discipline that we have developed over the past five or six years the MVFMA has been in existence. We now have the repeater tied up in long winded rag chews from base stations making it impossible for mobile stations to use the repeater.

Originally the repeater was devised as a method of providing reliable, extended coverage for mobile units who do not always have the advantage of a good location and good antennae. Thru the skill and hard work (not to mention money) of our dedicated members, we have gone beyond the original concept and now have a repeater that extends reliable communication to hand held units over a wide area. But it isn't worth a damn if the base stations have it so tied up that you can't get in!

We have always insisted that a breaking station be given immediate priority. There has even been a degradation of this, similar to what I have heard on other repeaters. Instead of allowing the breaking station to proceed, he is left waiting until a sometimes long transmission is completed. Have you ever been mobile, or on a portable, and been unable to break in for 15 or ...nutes, or even three minutes when an emergency arises? Even one minute seems like a long time when you are in motion waiting to convey a message or get some road help!

On the air and at various times in this publication we have attempted to extol the virtues of short, "one thought" transmissions, but it seems to have fallen on many deaf ears!

We have many new members in our club and many other people using the repeater since we distributed a publication regarding correct operating procedures. Most of these people, therefore, have not been schooled in the proper operating technique on an FM repeater. And, unfortunately, many of the old timers have brought with them old time operating habits from high frequency or VHF-AM.

Probably one of the worst habits which seems to be gaining is the occasional letting up of the mic switch to restart the time-out timer while engaging in a long winded AM type transmission. This, of course, defeats the whole purpose of the 3 minute timer. Long QSOs, whether from a fixed location or mobile, makes it impossible for the other mobile to enjoy the use of the repeater during his half hour or so going to or coming from work. If you consider our membership of 128 members and an eighteen hour operating day, we have only 8 minutes each as a fair share of repeater time. Eight minutes is a **long** time of short question and answer transmissions, but it's a **short** time of long transmissions of the rag chew variety. We believe it is possible to get a great deal of enjoyment out of repeater operation, complete with your own personalized identity and character, but still conform to good operating procedure which will allow maximum use for all members.

This writer believes that it is time for the club to act to reinstitute the kind of repeater discipline that has characterized the MVFMA for many years, and has made it possible for us to earn the reputation of an outstanding repeater and an outstanding public service and emergency communications group! It will work only if each member helps control the discipline!

FM Scanner — Miami Valley [OH] FM Assoc.

●

Rocky Mountain Radio League Operating guidelines and policies

The following operational guidelines and policies have been established by your Board of Directors during the five year incorporated history of the RMRL. This is to insure the most beneficial use of the Squaw Mtn. and metro repeaters for the members of the RMRL, and to develop a professional and concise manner of operation that will allow the best use and monitoring of these frequencies.

The amateur radio repeaters operated by the Rocky Mountain Radio League (RMRL) currently are utilizing the following frequencies:

WRØABF, Squaw Mtn., 146.34 MHz input, 146.94 MHz output, 5 kHz Dev.

WRØAHK, Thornton, 146.31 MHz input, 146.91 MHz output, 5 kHz Dev.

WRØABG, Squaw Mtn., 444.45 MHz input, 449.45 MHz output, 5 kHz Dev.

Maintenance of the above frequencies within at least 1 kHz of the nominal input frequencies and within 1 kHz of the deviation stated will promote the most satisfactory system for each amateur involved, and will certainly make the entire system most effective.

The Squaw Mtn. repeaters are available for use to all properly licensed amateurs who are willing to abide by reasonable restrictive practices. The repeaters were established for the primary purpose of providing rapid, dependable and long-distance communications between mobile and portable stations, and between these stations to base stations. It has never been intended that other types of usage would be permitted to interfere with the primary purpose.

At the present time the (RMRL) has over 165 dues-paying members, and well over 300 users. With this number of users it is obviously necessary to establish the following guidelines:

1. All transmissions should be brief and of sufficient importance to warrant the use of a busy repeater channel. If at all possible, other means of communication should be used for less important or extended communication. Make all possible use of direct channels or the telephone.

2. Rag-chewing and other types of less important extended time communications should not be engaged in on the repeater channels. In times of peak traffic, communications should be kept brief and of importance. We consider it not in the best interest of good amateur practice to communicate several blocks or miles for extended periods while utilizing the vast coverage resources of a mountain repeater system. Such short range communications, making consistant use of a 100 watt-coverage repeater, is not in keeping with good operating practice and is not respectful of other repeater monitor stations.

3. Test transmissions of transmitters on repeater channels should be kept to a very minimum. Actually, it is seldom necessary to test on a repeater channel except to receive a frequency check from a technician at the repeater site reading discriminator voltages. In any event, all tests must be identified. Lack of identification subjects both the testing station and the repeater trustee to the suspension of amateur privileges. A test of a transmitter may be accomplished on an adjacent channel into a dummy load with equal results.

4. Precautions must be taken to insure that accidental keying of repeaters is eliminated. Care also should be exercised so that unauthorized persons, including children, cannot use amateur equipment. A stuck microphone from one station can render the repeater useless to all 300 users and tie-up the repeater output channel for most of Eastern Colorado.

5. The exchange of formal messages should be limited to emergency or public service messages on repeater channels. Adequate alternative routing channels normally exist for delivery of all other traffic.

6. The use of 146.94 MHz (simplex) in this area is discour-

[*Please turn to page 42*]

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TELEVISION

Dave Ingram, K4TWJ

What makes Amateur Radio the exciting and challenging hobby that it is today? Is it the fascination of person-to-person long distance contacts — the enjoyment of common interest discussions — the challenge of designing your own circuits — the aspect of pioneering new areas of technology — more than this, or a carefully selected group of these ingredients?

I feel that a combination of these parameters directly determines the enjoyment acquired from our great avocation: The larger this combination, the greater the enjoyment. This is where the "Golden Age" world of Slow Scan TV comes on strong. There are so many of the previously mentioned attractions associated with SSTV that newcomers usually find it today's most fascinating mode of communication. Hopefully, these considerations have stirred an interest among you non-Slow Scanners so let's now discuss your plight.

SSTV is a real blast and, compared to many phases of Amateur Radio, it's relatively inexpensive. Several of the gang began in Slow Scan TV for an outlay of less than one hundred dollars — much less. I personally started in Slow Scan by picking up an oscilloscope at a hamfest for twenty dollars, then scrounging parts and building the SSTV adapter described in June, 1970 **QST** (that circuit is now in the **ARRL Handbook**). Shortly thereafter, my wife; Bob Campbell, WB4OEE; and I began watching pictures roll in from around the world. (In fact, some of the local amateurs came over to get in on the excitement.) Fellow SSTVers taped photos of myself, the rig, special hobbies, etc. (which I mailed to them) so I could transmit SSTV from my tape recorder. Next, I built a "Can Scanner" camera which must have cost all of twenty dollars (this unit was described in March, 1973 73 Magazine) and from there things started rolling. The point I'm trying to make is this: getting started in SSTV is the only difficult time — after that it's easy and fun.

Last month we looked at SSTV happenings in the United States, so now let's talk about SSTV in other areas of the world.

One of the original Slow Scan TV pioneers in Italy is Professor Franco Fanti, I1LCF. In addition to designing quite a bit of SSTV and faxsimile gear utilizing Italian available parts, Franco writes an informative monthly SSTV Column for **CQ Electronica**. This Italian group presently sponsors the Worldwide SSTV contest each February. I usually try to co-ordinate stateside participation in this contest, so you will probably be hearing more on this in the near future.

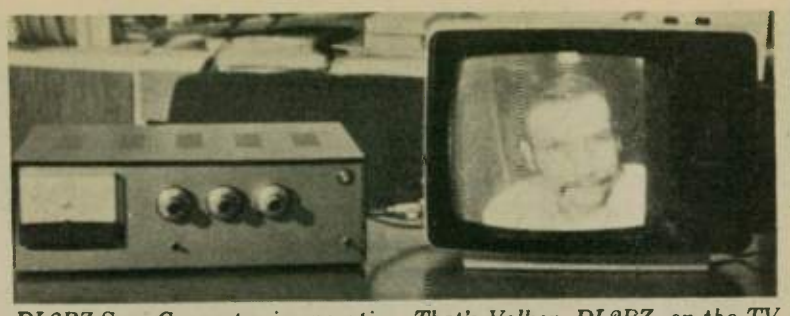
As one might expect from a technically oriented country, German amateurs are quite involved with Slow Scan TV. One of the fellows responsible for exposing many "DLs" to SSTV is Volker Wraase, DL2RZ. Recently, Volker won top honors in the DARC technical design competition with his digital Fast to Slow Scan Converter. Details of this unit appeared in the April, 1974 German magazine **QRV**. Volker recently completed design and construction of his digital Slow Scan to Fast Scan converter and he is now able to supply information and printed circuit boards to interested parties. This converter uses 112 ICs, and the main memory utilizes a group of those ever-sought 1404 dynamic shift registers.

Franta Smola, OK1OO, has been quite instrumental in getting many Czechoslovakian amateurs into SSTV. Franta has designed several Slow Scan units and he writes a monthly SSTV column for the USSR Magazine, **Radioamateursky**.

Down under, the Eastern and Mountain District Radio Club of Australia assists prospective SSTVers by making available printed circuit boards of a high quality monitor and camera, and by co-ordinating activity among local area Slow Scanners. Due to a scarcity of P-7 cathode ray tubes in Australia, the EMDRC developed a special E-26 SSTV phosphor which allowed regular TV picture tubes to be rebuilt for SSTV use. Presently, this group is proposing an aspect ratio change from 1:1 (square picture) to the standard Fast Scan ratio of 4:3. This change will permit converted picture tubes and scan converters to display full screen pictures rather than leaving blank areas on each side.

There is a fair amount of SSTV interest developing in several South American countries. Possibly this is due to propagation trends "piping" SSTV into those areas. Some South American countries (like Bolivia) are reluctant to permit SSTV operations. Amateurs in these countries are constantly working with governmental officials to rectify this situation.

Professor Franco Fanti, I1LCF, in a corner of his SSTV/Fax setup.



DL2RZ Scan Converter in operation. That's Volker, DL2RZ, on the TV screen.

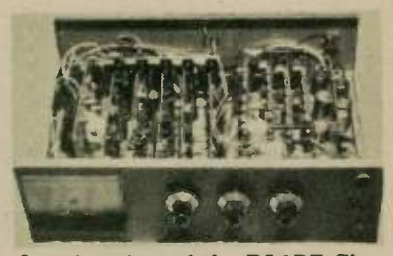
DXpeditions are also beginning to incorporate SSTV in their operations. The most recent example of this was Dr. Don Miller's operation as W9NTP/CEØ. I hope all of you had a chance to contact him during that June operation from Easter Island.

Hal Holler, HR2HH, is an old time SSTVer in Honduras. The last time I talked with him (June, '75) we made plans to exchange color SSTV a month later. I'm now set up and keeping a watchful eye for him on 14.230 MHz, the "heart of SSTV" frequency.

How much do you watch commercial television — enough to catch some ideas applicable to Slow Scan TV? One idea which is fairly obvious is the differences between TV programs originating on the West Coast and TV programs originating on the East Coast. West Coast originated programs reflect influence from the motion picture industry by illuminating subjects and background equally. This gives an overall picture blend similar to what you see in movie houses. East Coast originated programs reflect influence from the theatre by playing down the background and illuminating the subject(s). These high contrast pictures produce a dramatic effect like one might see in a play. Illuminating subjects and playing down the background is accomplished by shining lights on the rear of the subject. Many times there are more "rear lights" than "frontal lights". Ratios of 10:1 aren't uncommon.

How does this information relate to SSTV? Well, by combining these trends we can produce some outstanding results. The regular light bar (front illumination) is ideal for televising the shack, gear, etc. Pictures of people and small objects take on a realistic depth when illuminated from the rear. If you would like to try your hand at this, just place one or two lights behind and above the televised object (while maintaining normal frontal illumination, naturally) and watch the results as you vary light levels. There's a world of experimentation in lighting, so have a ball and we will "see" you on 14.230 MHz.

●



Interior view of the DL2RZ Slow to Fast Scan Converter. This unit uses 112 ICs.

PC board of the DL2RZ Fast to Slow Scan Converter. No modifications to the camera are required.

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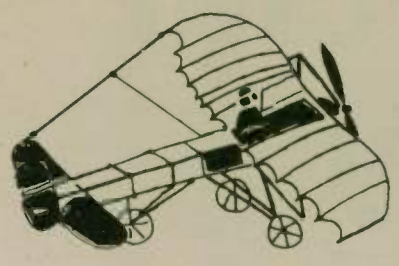
AERONAUTICAL MOBILE

Vern Weiss, WA9VLK



Pilots, be they Student Certificate-holders or ATPs, are required to hold only FCC Restricted Radiotelephone licenses if they plan on using the aircraft radio. With the exception of check-writing knowledge, holders of this certificate need know little else. This, I think, is very evident on weekends on 122.8 (unicom).

Surely the frequencies remain fairly organized in some less-populated regions of the nation, but in the Chicago airspace, for one, unicom is slightly more than unuseable come four o'clock Friday afternoon, and stays in this 75-meters-on-Field-Day state until about 9 o'clock Sunday night.

122.8 is a very good idea as far as uncontrolled fields go, but unfortunately (let me stick my neck out) a growing number of pilots do not know the first thing about how to use it. This is where a little more than the Restricted Radiotelephone license comes in.

F'rinstance . . . if you were in Northeast Illinois on the 20th of July of this year you would have heard on 122.8 a Restricted Radiotelephone licensee (probably) inform nearby traffic, "Morris Unicom, this is Cessna November One Two Three Four Golf (changed to protect the guilty) 8 and a half miles southeast of the field with the field in sight and we'll be landing. Could I please have the wind direction, windspeed and active runway? . . over." Over!? Over indeed! Overworded, overwasteful and overstupid. The bad part is that transmissions of this type are not uncommon.

Another classic is:

Plane A: "Bugbox Unicom, Cessna 2345, winds and active please."

Bugbox: "Three Four Five, Bugbox. Winds Two Three Zero at eight. Aircraft using Two-two."

Plane A: "Roger three Four Five."

...Five seconds later...

Plane B: "Bugbox Unicom, here is Cessna 4567-Hotel, could I please have your winds and active runway."

And so it continues. Repeat, Repeat. Repeat. Ad nauseum. Listening to the frequency most any Sunday afternoon and one would think that some pilots have forgotten how to fly-by and determine the winds and active by themselves from watching a tee or sock. In fact I have heard some pilots get downright desperate when unicom would not answer. Maybe if I would have thought to tune up to 121.5 (emergency-use only) I would have heard these gooneybirds declaring an emergency.

Finally, I must include the award-winner on unicom. One day last spring a pilot called for the winds and active. After being advised of same he replied, and I quote, "Ten-four, Piper eight eight uniform." I was napping at home listening to my home receiver and I immediately fell off the couch, stalled and went into a graveyard spiral.

What I am getting at by taking up this much space is that since we are Amateur Radio Operators as well as pilots I think we should set an example of quick, efficient communication. I have heard of one pilots' group which invited an operator/pilot to one of its meetings to hold a clinic on radiocommunications. He went a little deeper by touching some slightly technical aspects such as modulation, static, effective range and "black boxes," but nonetheless I am sure some better techniques came from the one-night session. You know, that's not a bad idea!

Speaking of whatever we were just speaking of, the FCC has cited a pilot for improper identification. No kidding. The pilot, allegedly after calling for winds and active runway, signed off with, "Roger, Seven Five Quebec." The FCC says you must give your aircraft type when signing off...that is, not just "Seven Five Quebec", but "Mooney Seven Five Quebec." The Aircraft Owners' and Pilots' Association (AOPA) has filed an objection with the FCC's complaint. In it the AOPA inquires, in essence, if the Commission doesn't have anything better to do. I must side with AOPA for comparing this violation to the free-for-all on the Citizen's Band; I view the violation as nothing other than petty. AOPA: well worth $23 a year.

Air mobile activity in this part of the country this summer has been as sluggish as a J-3's lift. To my surprise, I have heard even more low band operation from the air than on two-meters. A while ago I asked for suggestions for a "national calling frequency" for aviation/Amateur Radio activities. The frequency would be used whenever aeronautical radio operations took place. Also, it would be a sort-of "clearinghouse" for pilots who could monitor the frequency in hopes of contacting other pilots for practical reasons as well as ragchews concerning flying. Not too many suggestions have arrived pushing the low bands. The tally: two feel a calling frequency should exist in the forty-meter band, four feel somewhere in the two-meter spectrum a frequency should be picked, and three felt both should be available. I personally favor having two frequencies available, one in the VHF portion and the other in the HF portion. Since no one suggested any specific frequencies, I will throw out two and let you vote on them, pro or con. In the forty-meter band, 7270 kHZ (727) and in the two-meter band, 147.27 MHz (727). Let me know what you think, ok?

A reminder to those who fly autopilots. If you will notice, your omni goes kaplooey when you transmit on the aircraft transceiver. Keep in mind that your two-meter hand-held can have the same effect. When your auto pilot is engaged and set to track inbound or outbound from a VOR while you sit back and jabber into the brick, your autopilot will lead you in funny directions.

There have been a number of inquiries concerning useable distance of Amateur Radio aboard an aircraft. Since HF bands are dependent on skywave reflection, HF forecasts are difficult to [*please turn to page 43*]

MARITIME MOBILE

Bill Yost, WA6PIU

The SOS and You

With a slant toward the critical, I take you again to the open sea. Here is found our sailing amateur not in his usual mode of well-being. His rig has suddenly become his life support system. Perhaps he has been hit by a whale, or overwhelmed by a storm. Maybe one of the crew has had an appendicitis attack or a serious injury. Could be his water or food has become contaminated. In cases of long passages he may have exhausted his food due to equatorial calms.

Whatever the reason, he is reliant on land stations to provide immediate, efficient service in providing assistance.

While many rescue calls have been handled with great dispatch and competence on behalf of the amateur, I often wonder if the average operator is really prepared. For instance, the other day I checked into one of the traffic nets with the question, "Can someone give me the San Francisco Coast Guard search and rescue phone number?" After much fumbling and doubling involving the telephone operator, I finally got the wrong number. With a bit more awareness, a simple glance at the inside cover of the phone book would show the correct number. OK, I know amateurs are sincere; I know they will do anything to help you. But, without the tools it is hard to get the job done. Unfortunately, the FCC regards our service as a hobby with the only operating concern centered on keeping us within our bands. There is not one question on any amateur exam concerned with service operating. Ironically, service is one of the quoted reasons for our existence.

Thus, the new amateur is left on his own resources to develop his station and skill around the service mode. So how about handling the emergency — certainly the epitome of service.

Let's look first at operating habits. As a new Novice your style is developed. With a dynamic code speed of 5-7 wpm you eke out your QSO. Long and laboriously you exchange information, repeating everything just to make sure. Perhaps your rig is such that you must throw switches in going from transmit to receive. You send your call several times with each exchange since you are both proficient at sending it and also proud of it. In essence there is a long period between transmit and receive. And so it goes.

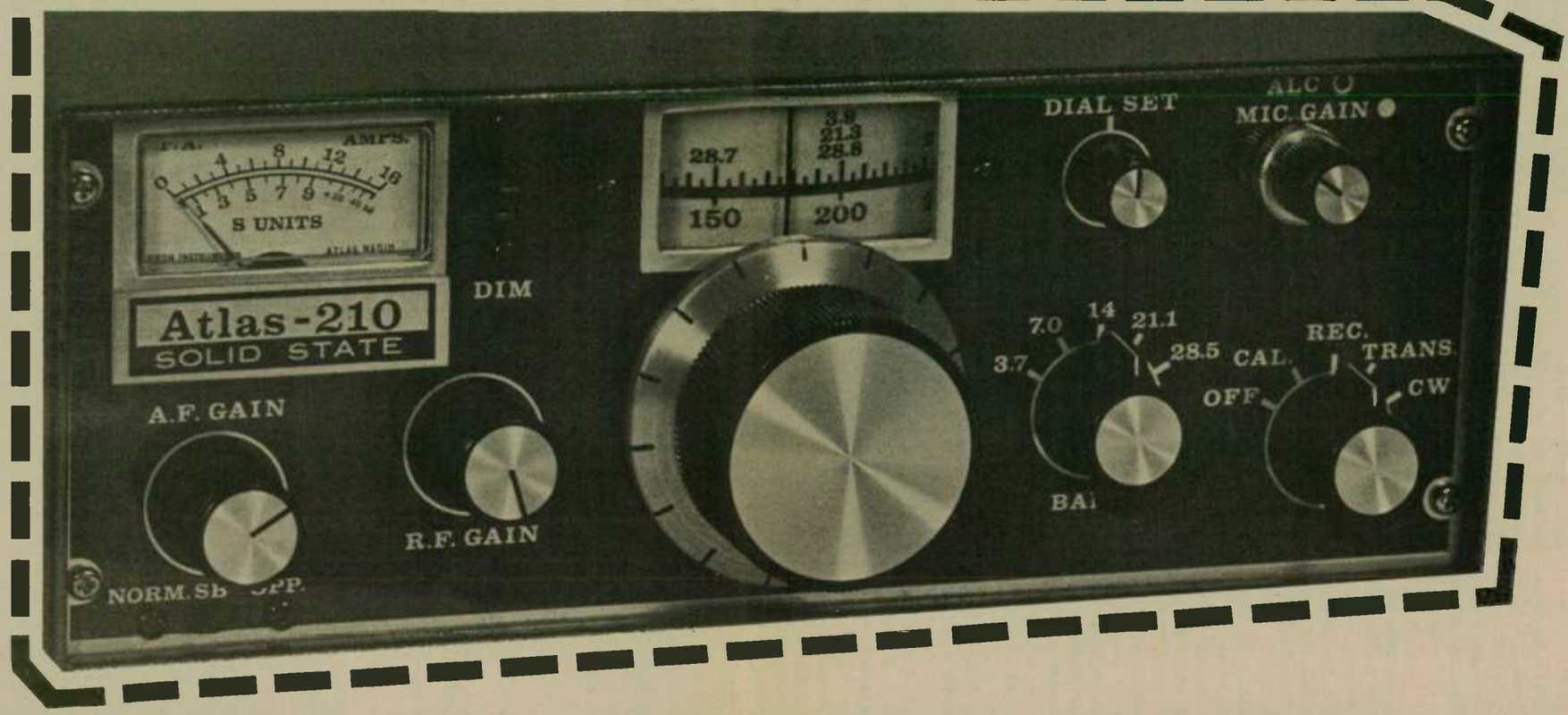
The big day comes. You get your phone ticket. Wow! I can communicate at an easy 100 wpm is your thought as you pick up your first QSO. You turn it back to him. After what seems like years, he is still talking. I guess he is still talking to me. He has got to identify sooner or later. With a series of "overs", "go aheads", and "back to you" — all is quiet. Quick, get on that mike key. Let's see, start talking; got to keep the frequency clear. Hopefully, I'll get that linear next week. Oops, forgot his name, report, QTH, rig and antenna. Isn't that required by law? I'm running out of things to say. Covered weather three times. Layed my rigs serial number on him. A complete desertation on my dipole. Got to turn it back early. God, this is painful. I guess I can give his call a few times to fill in . . Finally it's his — relax. Wait, the band has folded. He can't copy. And so your first phone QSO enters the log as you become assimiliated into the mode of HF SSB operation.

Meanwhile, back at sea, our skipper amateur isn't too concerned about the details of grandma's operation. As he waits patiently for a break he eyes his sick crew. Apprehensively, unable to break, he QSYs from such strong signals searching for a chance to break. How was he to know that the two stations were in the same town, running kilowatts with their receiver RF gains turned down? When he does get acknowledged, is he immediately connected with a source of help? Chances are there will be much fumbling around and inefficiency in getting the traffic through to the proper authorities. With time a factor, and perhaps a low battery aboard, such repetition may make the difference in a successful rescue.

So how do you change an operating custom that has been developed as a Novice and maintained on the phone bands? Recent 2-meter repeater operation has offered some salvation. With three minute timers there is a natural tendency to develop a conservation mode between stations, allowing breakers easy access.

Back on the HF bands, however, where most MM emergencies occur, good operating procedure must come within. While VOX operation has been around for years, it sees relatively little use — let's revive it! Before the RF gain is turned down, turn down the power. With the craze for kilowatts, alligator stations are [*please turn to page 41*]

CAUTION!



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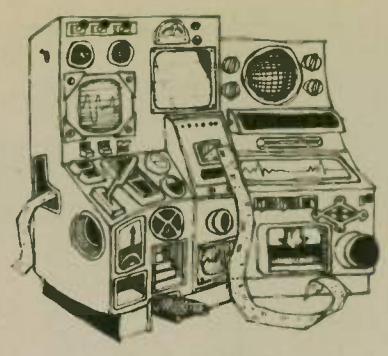

VHF-UHF

Lou Anciaux, WB6NMT

July saw the first portable EME work by Wayne Overbeck, K6-YNB. Wayne, along with Will Alexander, WB6RIV, put together an array of 16 eight-element Quagis. (A Quagi is a Yagi, but with the REF & DE being a quad loop). They also had two 500W amps along with a generator for each for power. The plan was to feed both amps in parallel using combiners to get 3 dB more goo.

July 10-16 were to be the dates and the Utah-Nevada border was sought for the QTH. Not too unlike other trips in the past, Murphy was hard at work. Two tire/wheel breakdowns, the inability to find a decent QTH within access of his vehicle, poor WX, among other troubles. were the order of the day. The first few days were spent in frustrating non-productivity. Finally, they managed to get things set up in a valley on the border late on the 12th.

Big winds blew the array into terrible misalignment, & one generator created so much QRN that it had to be shut down in order to hear. But finally, on the 13th, a complete and successful two-way EME QSO with Bob Sutherland, W6PO, was accomplished. The array, sadly somewhat askew and only 8 Quagis, plus only a single amplifier, did yield results. A partial QSO was also obtained with Dan Berge, WA7BJU.

On the 14th good echo returns were also obtained during moonset period. All that time expense, effort, frustrations, bad WX etc., etc. just for one QSO. It did give Bob a new state, so perhaps it was worth it. But, for Wayne, . . . well . . . perhaps the guys who say amateurs are crazy may have heard about such amateur devotion. Whoever said there is no challenge in Amateur Radio just doesn't appreciate an impossible task being accomplished by an amateur.

On the 15th, Wayne ventured to the famed Utah Pass near St. George with its pipeline to SoCal and some tropo. Condx were apparently depressed due to poor WX conditions, but some success was had. ON 50 MHz, he managed to QSO 4 stations, WA6JRA, W6ABN, WB6RFB & WA6ARC. On 144, caught WB6NMT, WB6-IMV, WB6RFG, WA6AXA, K6-PHY, WA6OOC, WA6JRA, WA6-MDT & WA6ARC. On 220, the lone QSO was with WA6ARC late a.m. 16th. No 432 sigs were heard either direction.

The system has been overhauled, and Wayne xpects to be again on Utah-Nevada border on 9-11 Aug. for EME work. Then he will venture to Brian, head over 11-13th for Perseids, and on 13-14th back at the Utah Pass for tropo. The usual W. Coast VHF liason freq. of 3815 kHz, especially at 0500 GMT, will be active.

Elsewise, EME is still the growing concern for many. Bengt Jockert, SM6CKU, has had three EME QSOs, with K8III, K1WHS & VE2DFO. He is presently running 80-el colinear with 1/KW output via 7/8" heliax. Expects an 8877 to be on soon, and possibly another 80 els to be added to array. He has heard at least ten other EME stations.

Lucky Whitaker, W7CNK, is also going great guns with his array of 8 16-els KLMs, and 8877 amp. He has worked 16 stations, and heard 11 others. A report from Will McCormick, WB5BKY, on his QSO with Lucky indicated, "He sure did have a nice signal. Kind of bogs the imagination." QRM is almost a way of life nowadays on 144 EME.

A note from Andy McLellan, VE1ASJ, tells of 50MHz activity in VE1-V01 land. He is active nightly around 50.110, and others in area include VE1RL, VE1OD, VE1RG and VE1KO-VE1SY & VE1PL having gear, but not active. Too bad we didn't have this info before Es season ended. At least know who to look for in the future.

432 has been productive between the South end of the Bay Area and SoCal. Both Mike Staal, K6MYC, and Ken Holliday, K6HCP, have been easily worked here by Jim Bogdan, WB6IMV; Gary Field, WA6SQU; Lew Stone, K6HX; and myself. Save for Gary and Mike, most of us are running in the 20-70W out class and small arrays. Signals have been quite good, and SSB has been used for the most part.

The numbers of guys coming on 144 with the new SSB rigs is really astounding. Almost nightly someone new appears it seems. As is also almost the case, they come on vertically polarized, whereas most all SSB is horizontal. Once they get switched onto correct plane the immediate reaction is one of wonderment. Most are so ingrained to FM that to QSO over more than a few miles is unknown to most. 300-500 mile QSOs are so common we amost forget what a thrill it can be for the first time.

Without undue deliberation, plenty of publicity is going around for the RFI Bill, HR-7052. This seems to be a yearly deal to get it into Congress, just to have it die. Perhaps this is our year to make some progress. Get those comments into Congress now. See comments on this bill in July **Worldradio, Ham Radio** and **QST**.

Keep the letters coming to 4519 Narragansett Ave., San Diego 92107.

●

VHF/UHF Conference

(*continued from page 18*)

frequency, the source was set in band and left in a desperation move so as not to hold the measurements up further.

As soon as we declared the measurements open, Don Roberts, W7FN, hooked up his 7-element Yagi-Uda and immediately had nearly 20 dB gain over the 13-element Yagi-Uda that had been used to set up the range. This immediately indicated what the problem had been.

The antennae measurements are tabulated below. The new KLM 432 16-element LPY looks to be a very promising antenna. The array of four Mike and Mel tried weren't optimumly spaced, as indicated by the small 3.5 dB increase obtained for the quad array. Time prevented their making additional adjustments to find the proper spacing point.

Chuck Swedblom, WA6EXV, and Paul Shuch, WA6UAM, making light of the obvious stinking noise figure being observed by fellow in rear.

The range showed itself to be quite superb. The KLM single 16-element measured within 0.1 dB of what Mike measures on the KLM range. Carrying the numbers to each antenna known to have a specific gain performance, the numbers obtained agreed to remarkably close amounts.

The power source ran about five watts on each band, except 1296. The ½ watt on that band gave very low figures on the H-P 415 meter, but on the three lower bands very excellent levels were obtained. On 432 MHz both vertical and horizontal polarizations were used. Results of the antennae gains were the same; however, the remarkable difference between the two polarizations was that the vertically polarized system was 6 dB less than the horizontal system. The source and measured antenna were the same, just the polarization was changed. Certainly indicates what many of us have been saying over the years . . . 'over a flat terrain, such as water or plains, vertically polarized VHF signals suffer greater attenuation than do horizontally polarized.'

Wayne Overbeck's, K6YNB, Quagi design led the pack on 144 and 220 MHz. The Cush-Craft Yagi-Udas and 432 20-element colinear fared as expected. Although Wayne's Quagi came in low on line-up on 432, the gain is under a dB off from the 144 and 220 MHz versions. This feature indicates the design has some merit, and should prove to be popular.

Another surprise antenna was the 10-element Yagi-Uda entered by Rick Samoian, WB6OKK. This antenna was a scaled version of the 220 antenna described by WB6NMT in the March, 1972 **QST**.

Speculation on next year's conference location indicates possibly Arizona may be selected. If not, it most likely will fall to the Northern California gang again. When and where will be decided late this year.

Some of the various individuals who lent assistance to this year's bash included: Jerry Petrizze, WA6VLF; Gene Powers, WB6-CXF; Lanny Holt, K6HAA; Jerry Gustil, K6DYD; Red Truax, W6BLK; Ed Munn, W6OYJ, who also took all the photos; and probably a few others I've managed to forget. Mike Staal, K6MYC, and Mel Farrer, K6KBE, brought the KLM bandpass measuring gear for all to use on the antenna range. The speakers have been mentioned, without whom we would have had a dull Saturday session. Jim Bogdan, WB6IMV, brought back-up noise figure measuring gear. Five lovely young ladies from NELC provided a cheery greeting at the registration table: Lori Glowczewski, Esther Robson, Billie Coon, Micki Marshall and Sally Conway. A wifely assist from my wife Marie helped the wives find their way around. An especial thanks goes to my daughter Mariatte, who stuffed all the 500 envelopes and stamped them, plus stuffed the registration packets.

Don't miss next year's. I'll be the guy raising hell in the back this time. **Measurement tabulations next month.**

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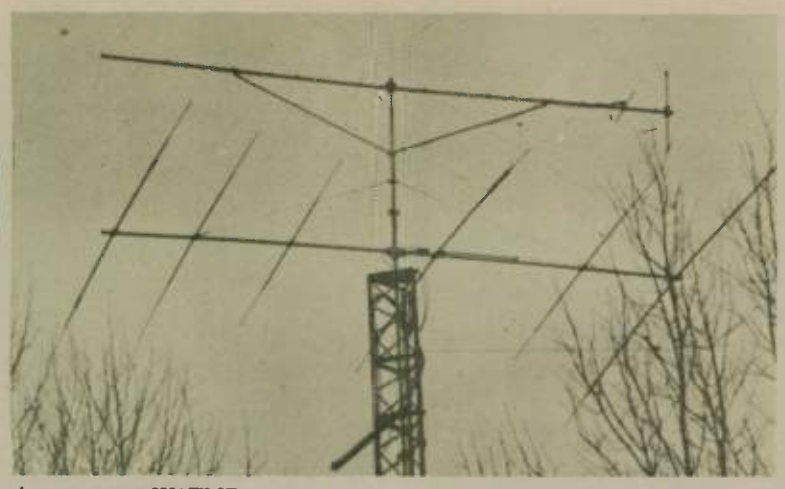
OSCAR AMSAT



Antennas at W3TMZ

Joe Kasser, G3ZCZ

The June 1975 issue of the "AMSAT Newsletter" announced the new "OSCAR" Award. This "OSCAR Satellite Communications Achievement Recognition" Award is designed as a not too-difficult award that any satellite user can achieve. It is also to be a means of granting recognition by AMSAT to Radio Amateurs who have achieved special firsts through an AMSAT-OSCAR spacecraft, or who have contributed significantly to the AMSAT-OSCAR space program.

DX activity through the satellites is increasing at some enormous rate. Stations such as 4W1ED, ZB2BL, TU2EF and FY7AS have been worked from Europe. The activity seems to be encouraged by new imported equipment for SSB and CW on 144 MHz. This activity promises fantastic results for users of the AMSAT Phase III high-orbit spacecraft due to be launched in the late 1970's. Full details of the new spacecraft were published in the June 1975 issue of the "AMSAT Newsletter."

We would like to compile some statistical data on the educational usage of the AMSAT-OSCAR 6 and 7 spacecraft. One of the prime reasons for getting the spacecraft launched in the first place was the educational program. The Education Program needs more publicity, and this means we need statistical data and photographs. If you used the spacecraft for an educational demonstration, even if it was receive only, or know of someone who did, please send the details to AMSAT, Dept. of Publicity and Information, PO Box 27, Washington, DC 20044 USA. This information will be very helpful in gaining support for future satellite projects.

Photographs are required for illustrating numerous articles published about AMSAT-OSCAR activities. Black and white pictures or color slides are the most suitable; color prints are difficult to reproduce. If you have any photographs you would like to see published, please send them in.

Carl Schultz, W6CG, and Ed Kimber, W7VEW, have been sending experimental ECG (heartbeat) data through the spacecraft and are getting good results, both in receiving the data and decoding it.

HG5BME from the Technical University of Budapest, Hungary is planning satellite-to-home broadcast transmission tests on the following orbits: (Two-to-ten meters, SSB with full carrier, speech and music) —

OSCAR 6 Orbit 13582-October 5, 1975 0800-0810Z
OSCAR 7 Orbit 4092AX-October 8, 1975 0810-0820Z
OSCAR 7 Orbit 4098AX-October, 8, 1975 1915-1925Z

(70cm-to-2m, 15kHz FM, speech and music) -

OSCAR 7 Orbit 4180BX-October 15, 1975 0845-0855Z
OSCAR 7 Orbit 4185BX October 15, 1975 1756-1806Z

All transmissions will be in the center of the passband. Please send reports on the reception quality to Dr. A. Gschwindt, HG5BME, Radioclub of the Technical University of Budapest, H-1111, Budapest, Goldmann Gyorgy 3, Hungary.

As we find ourselves in overlap periods of OSCAR 6 and 7 each six months, please keep the downlink beacon frequency of OSCAR 7 (145.972 +/- 3kHz) free when using AMSAT-OSCAR 6. The telemetry data is useful and badly needed. These data are to be computer processed, and anyone interested in helping with that project should contact AMSAT.

If you would like to know more about the Radio Amateur Space Program or need help in getting on the satellites, please contact your nearest AMSAT Area Coordinator, listed below.

AMSAT Area Coordinators: Dennis Grinerod, WA1EHF, 288 Grand Street, Bridgeport, Conn. 06604; Bob Crumrine, WB2DNN, 24 Parkmere Road, Rochester, N.Y. 14617 (716) 342-0479; Fred Merry, W2GN, 35 Highland Drive, East Greenbush, N.Y. 12061 (518) 477-4990; Ed Bizub, WA2CBB, 1579 Franklin Street, Clark, N.J. 07066; Kaz Deskur, K2ZRO, P.O. Box 11, Endicott, N.Y. 13760; Glenn Kurzenknabe, K3SWZ, 403 Centerview Ave., New Cumberland, Pa. 17070; Ted Mathewson, W4FJ, 1525 Sunset Lane, Richmond, Va. 23221 (703) 355-5118; William Appleby, WB5DCY, 28 Linda Lane, Long Beach, Miss. 39560; Steve Hay, K5RZU, 11010 Strait Lane, Dallas, Texas 75229 (214) 361-1860; Bud Schultz, W6CG, 3050 Ball Road, #154, Anaheim, Calif. 92804 (714) 826-4850; Richard Cotton, W8DX, 5526 Buckingham Road, Detroit, Mich. 48224; Joe Schroeder, W9JUV, Box 406, Glenview, Ill. 60025 (312) 724-8816; Jim McKim, W0CY, 1404 South 10th, Salina, Kansas 67401; Katashi Nose, KH6IJ, 4207 Huanui Street, Honolulu, Hawaii 96816; John Barboe, K7VNU, Rt. 4, Box 1157, Sequim, Washington 98382; Walter Dixon, W4DWN, 820 N.E. 123rd St., Miami, Fla. 33161 (305) 895-0398; Mark Calderazzo, WB4UOK, 6257 Luzon Drive, Orlando, Florida 32809; Dr. Stephen Cruse, K3WHC, 1018 No. George St., York, Pa. 17404 (717) 848-1302; George Simmons, WA1POJ, 46 Broad St., Warren, R.I. 02885; Thomas Eavenson, Jr., K5BWZ, 7261 Stonehurst Dr., Dayton, Ohio 45424; Mike Enciso, KP4-DPN, 168 San Jorge, #11, Santurce, Puerto Rico 00911.

Jack Colson, W3TMZ [Photos by Wm. Fuller, WB4IWF]

AREC

(continued from page 17)

was asked to coordinate and provide communications. WA4-FFW activated the AREC network over the WR4AGC repeater. The local group used 146.52 simplex at the rescue scene.

The rescue boats searched the deep water. The water was receding and it was decided to put in a ground team of nine firemen. The rescue boats carried either a commercial walkie-talkie on the assigned fire frequency or an AREC member with a 2-meter hand-held. The ground team had the same coverage.

The second ground team was being prepared and there were already 4 boats in operations when the call came in that the first ground team had located the victim. This was at 1440Z. The next two hours were spent in securing the operations.

What started out 2 days before as a water survey for possible hazardous road conditions had ended. All amateurs should be AREC members, and all AREC members should be aware of what conditions prevail.

The awareness of Billy Mitchell, WB4SGA; Mary Mitchell, WB4-SGC, and Jim Howard, WA4IUX; saved two lives. WA4IUX did an outstanding job. When asked to check that bridge the last time he didn't have to get out in the pouring rain; he could have stayed in his car. If he had, with the rain beating on the car, the motor running and with the radio on, he would never have heard the cry for help. He didn't; he parked his car and got out to make his survey. Although it was his last assignment and although he had been patiently waiting for 2½ hours for the DOT road sign, he still did the job the way he was supposed to.

All the amateurs involved lost time from home, some from their jobs (2 days), and all were wet and messy and muddy, yet all felt they received something that money can't touch and that is the feeling of knowing that because of their direct actions two lives were saved.

The Alamance Amateur Radio

[*Please turn to page 42*]

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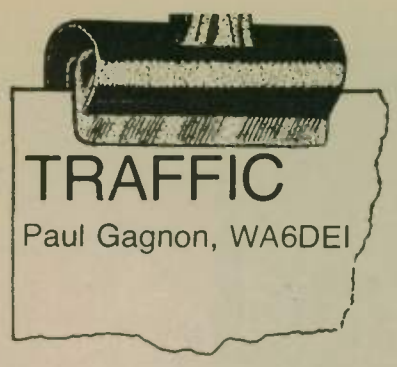


(This guest editorial was provided by **Kurt Meyers, W8IBX** in the *Hit and Bounce Net Report.*)

Where does the traffic come from?

The purpose of traffic nets is to handle traffic.

In order for nets to fulfill this purpose **somebody** has to originate traffic. It is an empty feeling to have 16 stations check into a net, none of which has traffic. Everyone sits there wondering what's going to happen.

Many people feel that the usefulness of traffic nets is declining precisely because sources of traffic are drying up. This author believes that traffic handling via Amateur Radio is still a useful service, and that if sources of traffic are drying up it is because we amateurs have become lazy by failing to cultivate sources and make known the service which we can perform.

I remember when I was new on the air that I didn't know where to get messages to send over the air. I lived in Columbus, OH; the family all lived in Cleveland, 140 miles away. I sent a few messages to Cleveland but that was about it. Where do we get our traffic and what can a newer operator do to build sources of traffic?

If you have a large family or a spread out circle of friendships, initiate traffic on behalf of yourself or your family. When I graduated in a Seminary class of 65 pastors those men immediately scattered from California to Ethiopia. Thus, W8IBX has been sending a fair amount of traffic to classmates in all parts of the country.

Your next source will come from outside the immediate family. This includes friends, neighbors, co-workers, and fellow students. It's my experience that if you tell the fellows in your office about the service you render you will receive little or no response.

My suggestion is to bring a friend to your station and let him see you send and receive messages. At that time you can describe the system more effectively and tell how traffic is relayed across the country. When the person sees you do it and observes that you enjoy it he may be moved to use your service. I find people are very hesitant to impose upon my time. The courtesy is appreciated. They just don't understand that I'll probably be on the net anyway; thus it's better to have traffic to pass than nothing but smart-alec comments. At the time of delivering a message you have received, offer the recipient the opportunity to send a reply message. Sometimes that brings a favorable response, although the recipient already feels obligated since you have helped him once by delivering a message. He hesitates to increase his sense of obligation.

The third source of traffic is special events stations. Many amateurs set up traffic handling stations at conventions, fairs, expositions, and rallies for the purpose of originating traffic on behalf of those attending the event. Actually the station need not be there on the premises. A booth can be set up to take messages. As stated two paragraphs back, it helps to have the station in plain view so that people can see what's happening. I know of a high school chap, also a radio amateur, who got permission to set up a booth at school to take messages from fellow students. He originated 100 messages in three days.

These sources will provide anything from a little to a lot of traffic. Several words of caution are in order, particularly if you follow the third route. While most traffic nets are under-utilized it is possible to saturate the traffic system with more than it can handle comfortably, particularly if large amounts of traffic must be relayed from one net to another. As a general rule check into a net with no more than ten messages, unless it's a crack net like HBN (most of the time). If you anticipate a lot of traffic, contact the managers of the nets affected at least a week in advance so that they can line up extra relay people to share the burden **or** make schedules with a big independent traffic station such as Mary Burke, W3CUL. Such operators copy traffic tirelessly by the hour and have sufficient outlets to relay the traffic. On the former method, a Kentucky station planning operation from a fair should inform the various mangers of Kentucky nets, and the manager of the Ninth Regional Net, which probably will be called upon to relay a lot of out-of-state traffic. If it is anticipated that much Ohio traffic will be originated, since visitors may stream across the border from Ohio, then some Ohio traffic people could be summoned to the Kentucky nets for assistance. Or the originating station may check into Ohio as well as Kentucky nets.

During the 1972 Simulated Emergency Test, the Saturday evening session of the Eastern Area Net (highest level net of the National Traffic system) handled 282 messages in 60 minutes. That was 4.7 messages every minute! Because of the anticipated load from SET, double or triple the relay stations normally present were on hand, along with a fantastic NCS who could send 15-20 pairs of stations off frequency to pass traffic simultaneously and keep record of all the transactions.

Another word of caution, particularly if large volumes of traffic are involved . . .strive to keep the texts as brief as possible. Utilize standardized ARRL texts as much as possible. These are available in every ARRL logbook. Selected ones appropriate for fair-goers could be posted on charts in plain view of curious onlookers.

Finally, use common sense. I know of a radio amateur who originated congratulatory messages to **every** radio amateur in the Hawaiian Islands when Hawaii gained statehood. In my judgment that was excessive, done more in the interest of Brass Pounders' League recognition than a worthwhile use of the radio amateur traffic service.

Traffic Notes

Remember the new traffic counting categories are now in effect — one point for each message originated only if the sender is someone other than yourself; one point for each message sent, including your own originations, for a possible total of two points for each message originated; one point for each message received, and one point for each message delivered to any party other than yourself. Use this system to report traffic totals to your SCM each month. Even if it is only a few points it is important to report.

We regret to announce the passing of Rolland Sumner, W4IIH, of Eden, NC, on 11 May. Ed was a consistant QNI into the Central Virginia Traffic Net since its very beginning and will be missed by all traffic men. (from *The Virginia Ham*)

Another great loss is Ken Wilmont, VE7QQ, Route Manager for BC and Manager of BCEN. Ken passed away 27 June while awaiting open heart surgery. His loss was strongly felt by all traffic men in the RN7 and Pacific Areas. He was a staunch supporter of NTS and his efforts, directed toward the continuation and improvement of all local affiliated nets, were unsurpassed and most influential. (from *IMN Bulletin*)

The Idaho Montana Net has changed frequency to 3635 kHz to eliminate some interference problems. They meet at 0130Z Monday thru Friday. Bill Smith, W7GHT, is the Manager.

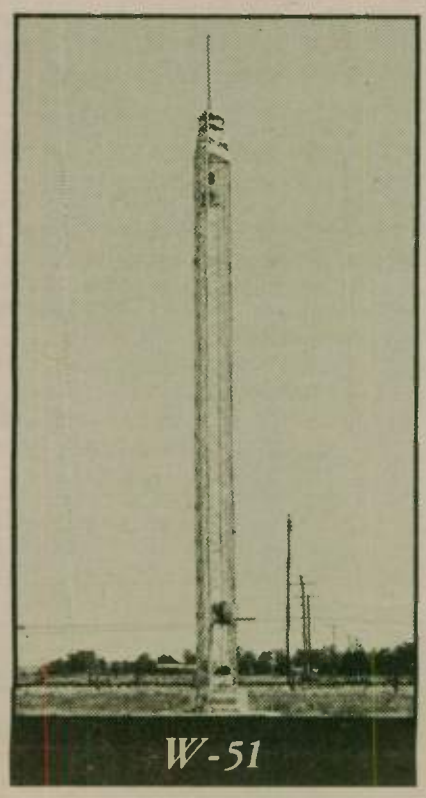
The Virginia RTTY Net meets on 3628 kHz at 1930 local daily Robert Slagle, K4GR, or Chris Galfo, WB4JMD, are the Net Controls. RTTY is an ideal mode to handle volume traffic, especially for Health and Welfare traffic in emergency areas. It can be used effectively for long haul traffic schedules and also to distribute traffic at the section and local levels. In the Los Angeles area there is an RTTY repeater on VHF that has good coverage into all the metropolitan area and surrounding cities. Traffic can be sent on the repeater and the stations with autostart get automatic copy. They can then QSL for the traffic they can deliver. How many areas have similiar capabilities? How many RTTY nets are presently active across the United States?

A most important bill has been introduced into Congress that affects all amateurs, especially traffic men who are on during the prime TV hours. HR 7052, if passed, would require entertainment equipment manufacturers to assure their equipment is not susceptible to RF interference. Write to Ted Cohen, W4UMF, 8603 Conover Place, Alexandria, VA 22308 and send along a 9 X 12 SASE with 40 cents postage and he will provide you the information. Write each of your Congressmen urging quick action on this bill.

The Mission Trail Net has one of the largest Net get-togethers each year in California. The net meets daily on 3928 at 1900 local time. This year the get-together was in Bakersfield. The new officers for this year are President Jerry Holter, W6OCP; Vice President Robert Landgrave, WA6WZQ;

(*please turn to page 39*)

NOW Top-of-the-Line Tri-Ex Towers for HAM operators at basic prices!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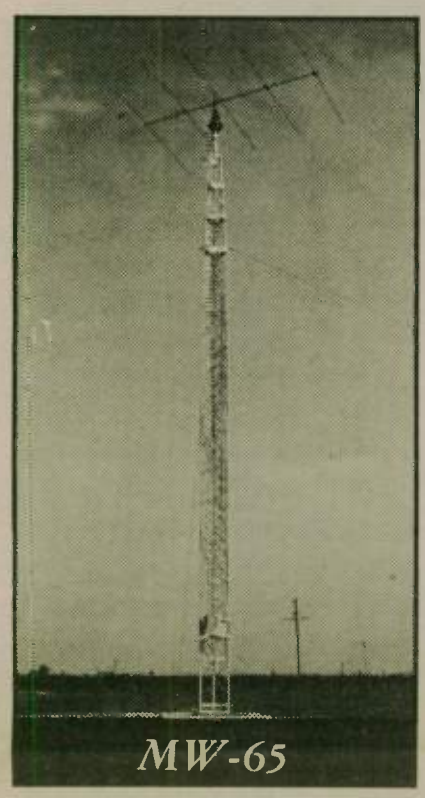
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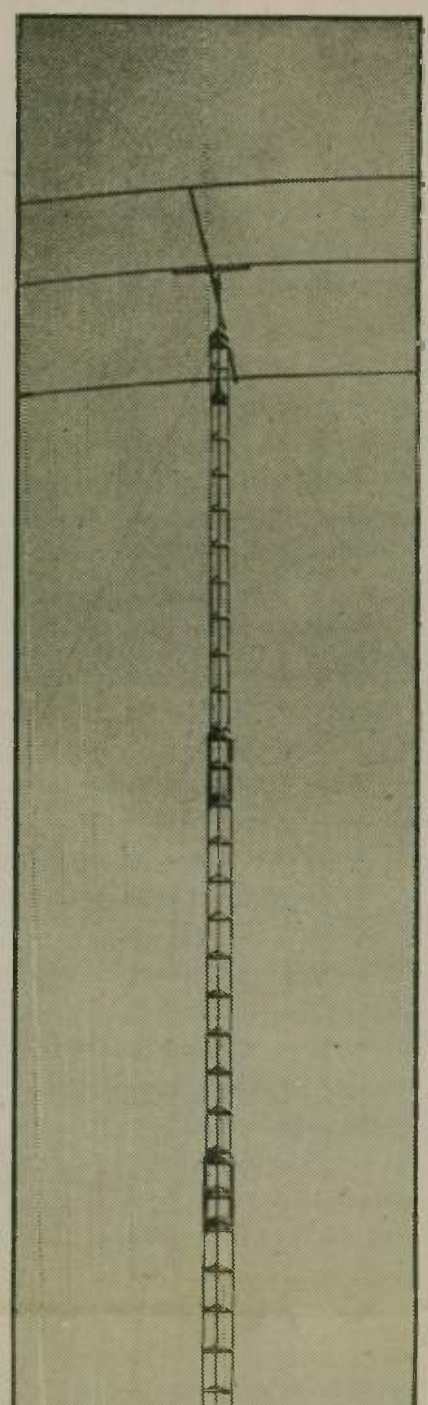

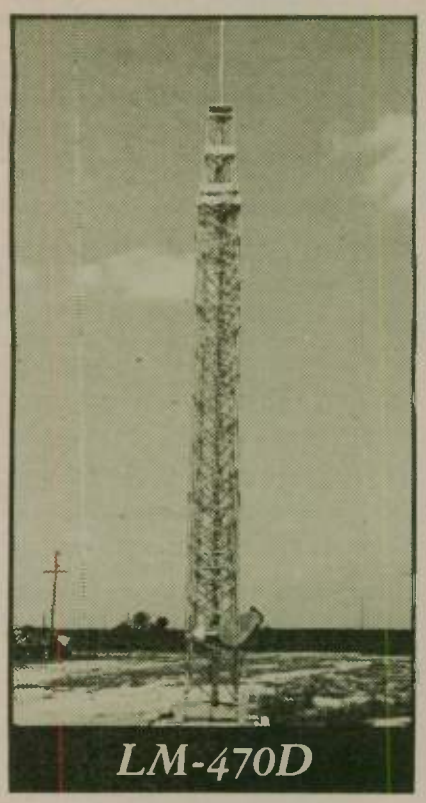
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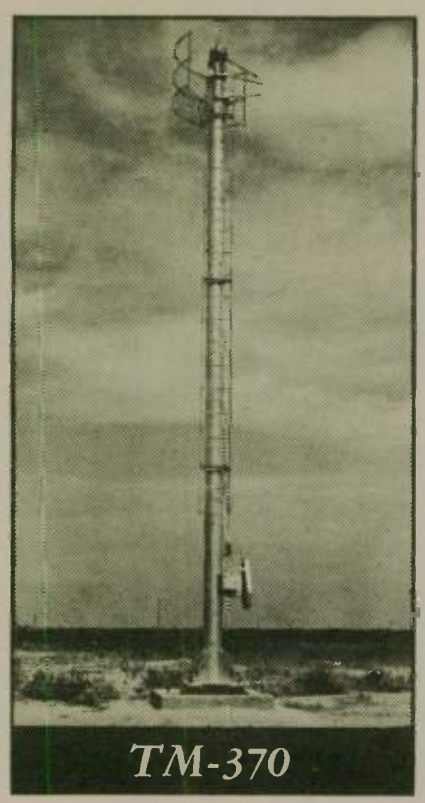
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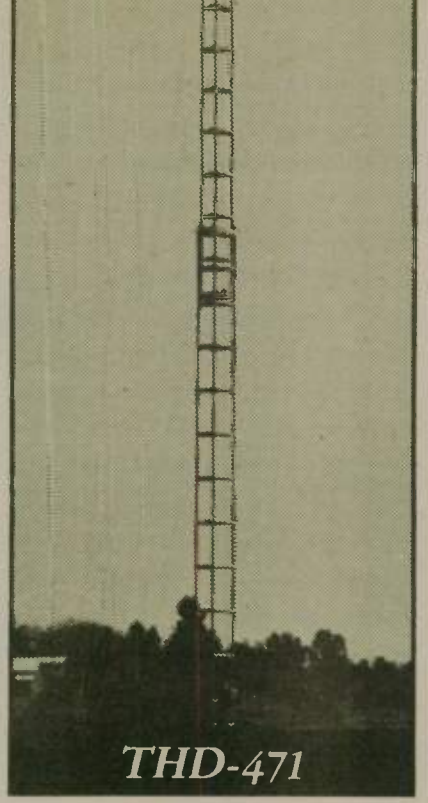
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CLUBS

The content of your paper

There are a great many editors who lament the fact that there is nothing to print in their papers. Perhaps a few ideas taken from other papers might help in filling that space.

First of all, ARNS has always been insistent on a mast head giving as a bare minimum the name and address plus the phone number of the editor. How does one submit a copy if he doesn't know where to send it? So the first consideration is a mast head giving the names of the officers of the club and such other information as the editor feels necessary.

We have gone through several club papers to see what topics they have used for that space. Herewith is a listing (not necessarily in any particular order) of the articles found. Perhaps some may give some ideas for expansion:

Biographies of members.

An article by the President-articles by the other officers-Treasurer's Report.

Net reports - club activities - Walk-A-Thons - Field Day - SET - other club communiction activities.

Reports on OSCAR 7 activity.

A section devoted to small activities of members (usually one-line or short paragraph affairs). Titles such as "This and That" - "Flotsam and Jetsam" - "Bits and Pieces" - etc.

Club History - what happened 10 years ago, etc.

Minutes of the meeting including guests and visitors who attended.

Report on the last meeting program - announcement of the program for the next meeting - announcement of future programs of a special nature.

DX reports.

VHF reports.

FM News - Repeaters - Financing - Operating difficulties.

Auction and Hamfest announcements - Included are those of a national or section nature coming up.

Letters to the editor.

ARRL Bulletins (MARS bulletins where applicable).

Want Ads.

Humor Department.

Columnists contributions.

Editorials - by the editor or a guest.

QSL cards information - name badges information.

A report of new members to the club - a roster of members.

Dues Notices perhaps with the Treasurer's report.

Quotations from other papers (Be sure to include a credit line - it's one of the obligations of a quote from another paper.)

Discussion on FCC Dockets and projected FCC actions.

Reports by members on trips taken.

Publicity received - articles in newspapers - exposure on TV or by radio.

Amateur Radio News Service Bulletin.

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For clubs that say they can't find anything to do, we print the following out of this club's bulletin:

CPARA Provides PR in Kansas City Area

At press time CPARA plans to be a guest exhibitor at the Independence Sanitarium and Hospital Auxiliary's collector's show-case. The event, to be held the 25th, 26th, and 27th of April will feature an on-the-air demonstration of Amateur Radio. Also of significant public interest will be illustrations of CPARA/ASCRA activities during Hurricane Fifi, the HST Neurological Center Project, plus other informative information concerning the role of Amateur Radio in the community. All CPARA members should note that this operation will constitute April's activity and should contact Harold Haworth, WNØNBX, or Joe Jennings, KØDMN, to volunteer yourselves for logistical and operational assistance. All members are invited and encouraged to participate in this effort. We need an HF linear, rotator, coax, microphone, mast for the beam and other miscellaneous items, as well as plenty of man (and woman) power. Set-up will likely be Friday morning (25 April) with disassembly at 1800 Sunday, 27 April. Operators will be needed from 1300 to 2100 Friday and Saturday; and 1300 to 1800 Sunday. 24 hour security of the premises will be maintained by the sponsors. The show will be held at the Junior Service League Clubhouse, 3122 South Crysler. Proceeds from the event will go to the new wing of the Independence Sanitarium and Hospital. All CPARA members should send in (PO Box 26 or SHQ) their QSL cards for public display. Also, all members representing the Association should wear their name/call tags while engaged in the operation.

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International Hosting Club

The following announcement was received from W5QPX/YN4IM:

At the moment an International Hosting Club is being formed and we need chaps in "W" land to take care of DXers who will be travelling in the USA. We already have signed up members in five states and Germany, with Italy, Switzerland, England and Canada pending.

For more info please write G.L.Baker, W5QPX/YN4IM, 101 Rita Blanca Trail, Amarillo, TX 79108.

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Chicago Heights, IL 60411

Ham Radio Center, Inc.
8342 Olive Blvd.
St. Louis, MO 63132

Henry Radio
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Butler, MO 64730

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Bellingham, WA 98225

Progress Electronics
852 Commerce Avenue
Longview, WA 98632

It shall be our purpose to facilitate the exchange of information and general cooperation between members, to promote radio knowledge, fraternalism and individual operating efficiency, and to so conduct club programs and activities as to advance the general interest and welfare of Amateur Radio in the general community. (Preamble to YTARC Constitution).

[*Yellow Thunder ARC — Central Wisconsin*]

NOVICE

Your Advanced class license in one year!

Yes, we can almost guarantee that if you will follow the guide about to be presented. Just hold this in mind — How do you chop down a tree? One whack at a time. — And, every thousand-mile journey starts with but a single step. Now to the meat.

Since you have a Novice license you can copy 5, or 6 or possibly 7 wpm (or more). But for the moment let's start with 5. The biggest stumbling block that many hit is they try to rush too fast. And consequently their copy is not rock solid at any speed. Slow and easy wins the game. Using any of the recorded code courses, it wouldn't hurt to spend one month at each speed. You'd really have it down solid before moving to the next notch. That way you would move from 5 to 15 in ten months. (Not bad, some never get there.)

Get the code courses that go up one word a minute at a time. The ones that jump two words at a time present too big a jump to master easily. The idea here is that when you have 10 wpm really down pat the jump to 11 will hardly be noticed.

When to practice: We strongly recommend right after dinner. You should relax at that time anyway so why not throw on the record or tape and your earphones and go at it for about 15 minutes.

Now, since the FCC tests are given in the morning (If you are anything like me, mornings are not your best time. I spent most of of my adult life delivering the 11 p.m. news on TV so I am a night person.) you might want to get in a morning practice session.

How to do that? Get up a half-hour earlier. How to do that? Go to bed a half-hour earlier. The world won't come to an end if you don't watch the Johnny Carson Show.

As you slowly creep your way up the code ladder you will write down the right letters, numbers and punctuation without- even thinking about it. You will have done it so often it will just happen automatically, something like Pavlov's dog.

OK, now the CW is out of the way, to the theory. First, believe me, it isn't all that hard. Just going through the **ARRL Handbook** will give you knowledge by osmosis.

Armed with the **ARRL License Manual** (which is straight from the test) the AMECO theory book and Q & A books, you should have no trouble at all. A great aid is the series of **Posi-Checks**. (See their ads in the classifieds in **QST**]. With the **Posi-Checks** you should never fail anything.

Schedule yourself to go over so many questions a day in the Posi-Check. Go over them, over and over again. You will pass the tests with no sweat.

Now, the really important part is doing it. That's where most folks fall down, just the simple part of doing it. The proper attitude is important. Make it a crash project. Tell yourself that nothing will get in the way of studying and getting your Advanced. (Why so many stop at at General and get to use only half the bands is beyond me.)

Make getting your license the most important thing in your life. Be tough about it. You'll have to give some thought as to what you really want to do.

To find the time to do all this studying is quite easy. Stop watching the TV. Think about it. What is on TV? People killing each other, sadness, turmoil, anguish, etc. Who needs it? Who needs to spend hours a day staring at fictional characters doing something that you'll forget all about in a few hours. Some people watch it for excitement. Make your own excitement. Be the star of your own show!

How sad it is that only about 25% of all Novices ever get a higher grade license. Amateur Radio is one of the most exciting things there is. It will open more vistas and horizons to you than anything else. It is certainly worth the little application that it takes to get the higher grade licenses.

If viewed properly, Amateur Radio can give you an interest in other lands and other people. It can help you greatly in a career in electronics, if that is your bent. It can interest you in non-electronic fields. For example, I know a professor of geography who went into that field because of his DXing as a youth. It may lead you to look for fields in which there is overseas employment.

The other day I was talking with Wally, HI8XBB, down in the Dominican Republic. He works for CARE and has been in Tunis, Colombia, Iran and Iraq. That sounds like an exciting life. (Beats staying in Bakersfield forever.) And there are many more like Wally. You can be one of them.

With Amateur Radio you can have friends all over the globe. It will make you a man of the world. Whatever effort it takes on your part will certainly be time well spent.

It's no exaggeration to say that you won't find a better bunch of people than those in Amateur Radio. The necessary work to join them is a small price to pay for entree into this great fraternity.

Unfortunately, the present Novice situation doesn't reflect too much of what we have been talking about. There are presently ideas of widening the Novice bands so it isn't a Tower of Babel, or allowing Novices to work on CW in other parts of the band. We shall heartily endorse any such ideas, but, don't wait for such. It behooves you to buckle down and get your higher grade licenses as quickly as you can.

In the meantime, send in to this column any adventures and tell us what you are doing on the air. Lots of Novices are finding that 10 and 15 are not as dead as many would have you believe.

Did you go on Field Day in June? Lots of Novices did. They had a lot of fun and got a lot of CW practice in a hurry. Don't forget the CW practice runs on W1AW. See **QST** for the sohedules. It's good CW.

So get in there and fight, Tiger. We'd like to mention our new special for Novices. As our way of saying "welcome" to you, the price of a **Worldradio** subscription is $4 a year.

— W6AJY

●

MM

continued from page 41

it. In the future, as it develops, I will be glad to share or even relinquish the responsibilities to anyone interested in doing a good job. I am not sponsoring it, just starting it. As an individual I am definitely biased toward the Atlas as suiting my needs. As far as giving the public a feeling of well-being with a product club, I think my review was the most critical evaluation that has ever been written about the Atlas.

The idea of Ten-Tec, Swan, Collins, or any other club is a fine plan. The Fox-Tango Club featuring the Yaesu line has been highly successful. **WRN** certainly cannot be accused of biasing one advertiser. Just last issue appeared a full write-up by an amateur who got a Heathkit-401 to work.

An editor can only print what he receives. If any individuals have need of publicity or other support in starting any radio organization, I will personally use what influence I may have with **WRN** to see that they get it. I have always regarded the pages of **WRN** as an open forum to readers' opinions and expression.

I appreciate any comments that you may have concerning rigs you have used at sea or any other equipment. Let us keep this column alive with information, controversy and excitement. Keep this writer defending himself.

As I drop the hook on another month, 73, Bill, WA6PIU/R2.

TFC

(continued from page 36)

Treasurer Betty Amos, WA6IPI; Secretary Bill Long, K6EVQ; Emergency Coordinator Norm Berg, WA6JFB. They had nearly 14,000 check-ins in 1974. Congratulations to John Schweighardt, WB6EIG, who won the W6KVQ Traffic Award for the most messages handled for the year.

The Midwestern Slow Net (MWSN) meets on 7130 kHz at 1900 GMT. The manager is Tom Camerota, WB9OLF.

NTS QNI Policy: National Traffic System nets at Local and Section levels are open to all amateurs interested in traffic handling. At Region and Area levels participation is normally restricted to representatives of Sections and designated liaison stations. However, stations from outside the coverage area of the net concerned or otherwise not regularly-designated participants who report in **with** traffic will be cleared provided they can maintain the pace of the net as to procedure, speed and general net "savvy." Such stations reporting in **without** traffic will immediately be excused by the NCS unless they can supply outlets not at that time available through normal NTS channels. Visitors to NTS nets should bear in mind that NTS nets operate on a time schedule and that no offense is intended in observance of the above QNI policy. It is important to monitor these higher level nets if you intend to become a liaison station. You can pick up a lot of good practical information by listening until you understand what is going on.

Remember, if you have any information you wish to pass out regarding your net please send it along. Also, put me on the mailing list for your net bulletin. If you are doing any unique things let's hear it so we can share it with others. My address is 1791 Hedon Circle, Camarillo, CA 93010.

TEACHER

How do you teach the code to your students?

We'll go over some methods we've used and then you send in what you have done.

The first class we had we took in the Pickering Codemaster course. This is without a doubt the best beginners' course on tape/cassette. (See their ads in **QST**). We've also purchased two other beginner courses and they were, to put it mildly, rotten — full of clicks, thuds, and they sounded like they had been recorded by having an oscillator at one end of the room and the mike to the tape recorder at the other end of a room, and the room was a tile bathroom. Avoid them.

While the Pickering course is the best, we feel something is lost when the instructor of a class brings in an outside source. The rapport seems to be greater if he also sends the code.

What we would like to see is something where the students would also be studying the code at home on their own. Now, one should not dub off on another tape any of the courses to give to a student. First, the material is copyrighted, and second the manufacturer has put in a lot of time and money to develop the courses and if everybody just dubs them off we are taking the bread and butter out of their mouths. You wouldn't like somebody doing that to you, would you?

Possibly if the instructors of amateur classes got organized we could get some kind of discount on tape courses to resell to the students. Possibly **Posi-Check** may be interested in group purchases.

So, we turned to manually sending the CW. Used was the ARRL **Learning the Radiotelegraph Code.** We used the material starting on page 45. Each night of the class another group would be used. For example the first session of the night would go like this: The "A" would be sent 24 times, then the "R" 24 times, then at 24 times each L-W-J-1-P. The second time through each letter was sent 16 times, and then each letter was sent eight times. Then runs using all the letters would be sent. That was the first session of the night.

The second CW session there would be a review of the letters and then the word groups would be sent.

The third CW session of the night would be a review of the letters and then the sentences.

In five meetings all the letters and numbers had been reviewed. Then starting on Page 39 each following group was the lesson for the night. That would take six more nights.

Our class meets twice a week so in about five weeks the CW had been taken care of. Rather than tell the students the CW test was coming, they were just told to start copying. At the end they were asked to hand in their papers. Neat, no test "jitters".

At first we sent the CW by using the dash paddle of our bug for both the dits and the dahs. But during the break students would send on it and would adjust it to their own preferences. We'd take it home each night and have to spend too much time readjusting it. We then started taking that old standby, the venerable J-38.

Then we did the students (and ourselves) a great favor. We got an electronic key. Selected was the MFJ CMOS-440 for under $40 (MFJ Enterprises, PO Box 494, Mississippi State, MS 39762). All one can say is "marvelous". The dits and dahs are self-completing, the spacing is jam-proof, and after you have hit the dah paddle you quickly hit the dit paddle and the spacing is perfect.

Quite a few students generously commented that the CW coming from the keyer was an improvement over my already machine-like sending (hi hi) and those who commented were made to go out and stand in the rain.

If you aren't using an electronic keyer at your class do them (and yourself) a favor and get one. The nice thing about the MFJ is that it is powered by four penlight batteries. We had another one on Field Day which was a plugin AC type and the variation in voltage coming from the generator affected its performance severely.

If you are already using an electronic keyer in your class, well, we're just a little behind the times. Anyway, we set the dah rate for 12 in a five second period and that works out about right for 6 wpm. We're rather pleased with the number of those who pass the test using the method outlined above.

More and more adult education and community colleges are becoming interested in having Amateur Radio classes. Remember, you are invited to send in the techniques you are using so as to share that information with your fellow instructors. Let's see all sorts of good ideas pour into this column. Well, how 'bout a couple at least.

—W6AJY

ANTENNAS

Antennas. One could spend the rest of one's life studying them. And why not, sure beats sticking pins in butterflys.

It's the most important single part of your station and one in which experimentation can be done at relatively little cost. But, if one doesn't want to go into reinventing the wheel, one must know what has gone on before him.

Anyone interested in having a better signal should certainly have the *ARRL Antenna Book.* It costs $4.00 now, about what it costs to go to a movie these days, and it will certainly give you many more hours of entertainment (and information).

It is certainly a necessity for anyone who wants to really know antennas. Then you will want to know more.

Radio Publications, Box 149, Wilton, CT 06897, has books that specialize in antennas. Three titles you may find of interest are "Beam Antenna Handbook," "Cubical Quad Handbook" and "Low-Cost Wire Antennas." We've read all three books and recommend them. The author of all three is Bill Orr, W6SAI, who is also now writing the "Antenna" column for *CQ* Magazine.

For those who wish to tune their antennas to the best possible and strive to that low SWR point, it should be pointed out that the reading on the bridge (if at the transmitter) will show less SWR than really exists at the antenna. So unless the reading is taken at the antenna you could have a higher SWR than you think you do.

Now there are those who don't believe SWR is all that important, so we ask that you make this experiment on your own. If you have an antenna tuner, set your transceiver on a particular frequency. Listen to a received signal from a friend of yours. Set up all conditions for minumum SWR. Then detune the tuner until you hear the received signal go down some. Then tune-up on that frequency, observing the SWR. See if your friend notices your signal going down.

You can make this a two-way test. You can observe signal degradation of the received signal at various SWR points and your friend can observe the decrease in your signal.

We suggest that it be done with a local amateur on the 10-meter band.

Let us know what happens in your experiment and results will be printed in this column. Watch carefully what happens when you go from 1.0 to just 1.5, and then what happens when you hit 2.

For VHF buffs: We are getting very good reports on the improvement of 2-meter signals with the addition of the Ranger add-on kit on the Ringo. The write-ups in VHF club bulletins say the improvement is quite well worth the addition and that it seems to be even more than the claimed figures would lead you to believe that it would be.

The return of the Matchbox. The famous Johnson Viking Matchbox has made its return, now manufactured by the Wm. M. Nye Co. in Washington. Not only does it feature the provision for long wire and balanced feeders, but it also has coax output.

While one might feel that would be superfluous if you were coming out of a 50-ohm transmitter to a 50-ohm line to a 50-ohm antenna, one noted LA DXer is quick to publicly state that when you move

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MM

(*continued from page 30*)

becoming more prevalent. I've actually been unable to break stations running S9 while 5 kHz away I pick up a 5/8 on a 5/6 received signal.

Allowing a break between receive and transmit for potential breakers is a fine operating habit.

So much for style; how about the station? Common sense dictates a well aligned receiver. Running split has certain advantages in the event you must leave the frequency to elicit support, etc. A telephone with a patch is definitely helpful. Tape recorders that can instantly monitor are indispensable.

Say I get a distress call, what's the procedure? If the Coast Guard is required, the following information is desired:

1. The location of the vessel, latitude and longitude, plus any bearings and distance from landmarks.
2. A description of the vessel.
3. The nature and priority of the distress.
4. Do they have 2182 kHz or 156.8 MHz capabilities?
5. How many people aboard?
6. Is medical attention required?

Ideally this information can be handled direct through a patch. Be ready to relay, however, in case conditions are bad. Other support stations are especially important with poor propagation. They also can help keep the frequency clear.

When rescue has been activated by the CG. advise the distress vessel when he can expect help. Usually a plane *will* be dispatched to *confirm* the location. If there are injuries, perhaps a helicopter can be utilized. Whatever the process, you want to keep the vessel advised until rescue is imminent. At this time you are officially relieved. Details will be forthcoming at the conclusion of the rescue.

How about medical emergencies? Here again I recommend the Coast Guard. They generally have instant access to medical advisors. If a doctor is to be dispatched as part of the rescue mission, he can possibly talk to the vessel, thereby obtaining a better diagnosis.

At this point you may say, "Why bother? An emergency is so rare I will probably never encounter one in my entire amateur experience."

Just ask the operator who has been involved. He will tell you that any certificate or award ever given in behalf of Amateur Radio cannot even come close to the feeling of satisfaction obtained in rendering emergency assistance.

Wow! I'm starting to get emotional. Hopefully I have started some thinking on our attitude toward the efficient rendering of service. I am sure you are aware by now that I hate to see the word "hobby" used to describe our function. Sort of puts us in with model airplanes, basket weaving and the like. In fact I do not even like "amateur" since it often signifies lower competence, as in sport designations. I bet if you made a survey of lay public as to which was more competent, given only the Citizens Band or Amateur Radio, Citizens Band would get the edge on name alone.

Say, I am not even fond of "ham". Sounds like someone who does tricks at a party, or perhaps the main item of nourishment at a picnic. After such a shakedown of our identify I wish I could come up with some enlightening title — perhaps radio operator with amateur endorsement in small print. Oh well, perhaps someone's imagination will come up with something.

Mail Bag

While I have not been overwhelmed with mail, I appreciate the thought behind "I've been meaning to write." Hate to see this column turn into a one-man show, especially when the one man starts getting short on tricks. A few contributions from the Merchant Marine would help balance the small boat propaganda you have been getting lately. Perhaps no one reads this column. I mean, it's possible. After that front page expose of my facial format in the last issue, perhaps I scared people away. Anyway, one letter did find its way ashore as marine radiogram.

Armond Brattland, K6EA/MM

"During 30+ yrs at sea — and this is written at sea — I've seemingly thought much as W6VX has, that although amateur gear may be updated oftener than commercial gear on ships, the long established commercial practice of using calling and emergency frequencies has much that should interest the emergency minded amateurs.

"ARRL tried to put across such concept, years ago, in the NC&E frequencies, but it didn't "take". Perhaps there were just too many amateurs then that were "rock-bound," and many using plug-in coils and separate receivers without crystal calibrators. You may also remember that some of the suggested NC&E freqs. were not at points easily calibrated.

"Another negative was the fear of being caught off base for lack of proper indentification. It was easier and safer to plod back and forth in QSO, somewhere near the same frequency, without QSK — and we learned to accept what might be called "ten minute monlogues" as a good way to avoid trouble.

With SSB and some relaxation of attitudes by the FCC regarding the operation into nets, with a majority now using single dial freq control, even despite the lack of rigs with full break-in, amateurs do now get around the bands easier. Coupling this with much more opportunity for experience operating in public service nets, it could just be that the NC&E frequencies could now be established and used.

"This time around, however, how about using only such frequencies as may be easily calibrated? Most transceivers have good enough crystal calibrators, in fact, many down to 25kHz. But some have inadequate dial, especially when mobiling. I believe its most important that emergency or calling frequencies be easy to find!

"As a starter, for further discussion, how about freqs. that would permit Novices to participate, all above the special segments, such as 3700, 7100, 14.100, 21.100 & 28.100, for CW? And 3900, 7250, 14.800, 21.? and 28.?, for phone?

"Perhaps you've noted that "ARTS" (Amateur Radio Telegraph Society) has been using 7100 as a calling frequency? It's rumored that they expect to also set up a calling frequency on 20. I hope it will be 14.100. At least they are making a start in the right direction!

"I would like to see further comment, and since this subject does not really belong to /MM minded amateurs alone, perhaps it should be carried under a general heading? TU Bill and Dave for UR comments under /MM in the June issue on pg. 26. GL for a worthy cause."

A follow-up letter, in part, concerning the "Atlas Club" . . .

"Dear Bill:

At this time, I fail to see the significance of an "Atlas Club," nor a reason for an editor for **WRN**, to sponsor it, unless you also wish to sponsor a "Ten-Tec Club" or others to support advertisers in **WRN**? A product club tends to give approval for the buying public to believe that all is well with a product."

It must be realized and emphasized that while my name may appear as a staff writer, I do so on a volunteer basis. I receive no money whatsoever for this column. Since I operate as a free and independent agent, such sponsorship of the Atlas Club is strictly independent of **WRN.**

While I may have initiated the club, I have no intentions of dominating it or even controlling

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RPT

(continued from page 26)

aged in that many times the repeater may be keyed by a person not hearing the simplex operator, rendering both sets of communications useless. 146.52 has been established as the Denver simplex frequency. Its use is encouraged for short range and/or long-winded communications.

7. One-way repeater traffic (i.e. repeater to simplex traffic) is discouraged and should be used **only** as a last resort. One-way repeater messages (from one station to a non-responding or non-licensed station) are illegal.

8. Attempts at "DXing" on repeater channels is discouraged. It is no great feat to communicate with distant stations through a "2 mile high" repeater.

9. When automatic indentification systems are pending or inoperative on (RMRL) repeaters, voice ID's are mandatory denoting WRØABF, WRØABG or WRØ-AHK.

10. WRØABF is monitored for emergencies 24-hours per day over most of Eastern Colorado. It is the only system with extended range from and to low power portables. We therefore encourage a voluntary "quiet hours" policy (brief and/or necessary transmissions) from 10 p.m. until 6 a.m. on all channels.

11. Visitors are welcomed on the repeaters as we hope we are welcomed on other repeaters in our travels. If an amateur uses the repeater regularly, however, he (she) is expected to join the repeater group and help pay his share of the repeater's maintenance.

12. A 1-minute time-out relay exists on the Squaw Mtn. WRØABF repeater to have an automatic means of shutdown in the event that a steady carrier is present on the input frequency. To reset the timer for another minute it is necessary only to release the microphone button on your radio.

13. An RMRL network is called each Sunday evening at 1930-2000 hours to discuss recent business with members. Monthly meetings are held on the second Wednesday of each month at 2000 hrs. at Gates Planetarium, City Park, Montview and Colorado Blvds.

We hope the foregoing information doesn't seem too restrictive, but we're sure that some or all of it will promote better use and monitoring of repeater channels and a lot of fun with a proven and vital form of amateur communication.

For the Board of Directors,
David A. Baysinger, WBØBAE,
President, RMRL

FM Forum

(continued from page 16)

your transmitter as you went from one city to another would be a nuisance, and while tunable tone encoders are available, they are expensive. One interesting idea is to have two decoders on the repeater input: one for the local tone used by members for normal operation, and another on a common frequency used nationally for transients and emergencies.

I hope that if we do go to general use of CTCS and shared frequencies, the most popular channels such as 146.34/94, 16/76, and one or two more of the most used primary frequencies will be reserved as far as possible for open repeaters with enough geographic separation so they won't have to be protected. Ideally, operators with crystals for the three or four most popular frequencies would be able to make a contact anywhere there is a repeater covering the area, without a special tone access for each locality. The response to an Ohio Area Repeater Council questionnaire earlier this year indicates most of the council members believe an open repeater should have more consideration when it comes to a clear or shared frequency than one to which access is limited.

Let me close on a personal note. In spite of my efforts to keep my personal opinions and prejudices in the background, you have undoubtedly sensed that I do have some on the matters before the Ohio Repeater Council and the VRAC. I don't expect everyone to agree with me; I do hope I'll agree with the majority, at least most of the time.

None of us mind disagreement; all of us expect some criticism. The thing that burns me is to be kicked around after the fact by someone who hasn't bothered to let us know how he felt while we were trying to reach a solution. I did not take the VRAC appointment to register my ideas; I took it to represent the 8th call area amateurs. When something somes up affecting VHF activities about which you feel strongly, let me know — on the air, on the landline, or by letter. I'm OK in every call book for the last 20 years.

travel

Since so many Worldradio subscribers are world travellers, we'd like to start a new feature.

What travel tips do you have for others? What good experiences did you have? What bad experiences did you have?

We'll print your recommendations and your "avoids" regarding carriers, lodging, restaurants, etc.

AREC

from page 34

Club, Inc. is eight years old and its members have had countless sessions on message handling, traffic nets, emergency. Just this past January a mock flood condition was exercised. This very same area and very same bridge was checked along with many others throughout the county. The many drills and sessions had been evaluated to see if they would get the job done when needed, and yet no concrete answer could be derived. But today all those eight years of drill and lessons came to life and an evaluation says if the AREC net is never activated again for an emergency it has paid for itself in a way that nothing else on earth can equal, and that is the saving of human lives.

editorial

from page 21

other. This club has a real "team spirit." It was a pleasure to be there. It's a good-natured club with all ages represented. What a cross section—the mature physician (there with his son) to the most recent member, a 14-year old General. (How 'bout that?)

If they could only bottle up the spirit of that club and ship it to the others. WOW!

Next month in this space we'll return to thoughts about the club/chapter idea and ideas about sparking the identity of the individual clubs.

INTERFERENCE

Dr. Theodore Cohen, W4UMF

ARRL Files with House Subcommittee on Communications

At the ARRL Executive Committee meeting held on 7-8 June 1975, the Committee unanimously voted to approve the proposal of President Dannals to file with the House Subcommittee on Communications in support of H.R. 7052. Introduced by Congressman Vanik in May, this bill would give the FCC the right to regulate the manufacture of home-entertainment equipment such that the susceptibility of this equipment to strong rf fields is reduced. The Executive Committee also voted to request that the bill be scheduled for hearings, and to request that the hearings include testimony by League officials.

Pursuant to the motion of the Executive Committee, President Dannals, on 9 June, wrote Congressman Torbert H. Macdonald, Chairman, Subcommittee on Communications. Excerpts from this letter follow:

"As President of the American Radio Relay League, and as a representative for the League's 100,000 members, I respectfully request to have the opportunity of testifying before your Committee on H.R. 7052."

"That the Federal Communications Commission (FCC) must have enabling legislation with which to deal with radio-frequency interference (RFI) problems can not be questioned. The number of alleged RFI cases is now becoming so great, and the cost of correcting these problems on an individual basis so high, that manufacturers, must correct design deficiencies . . . at the time of manufacture."

"Cases of alleged RFI have for too long pitted the consumer and the radio operator against each other when, in almost all cases, it is the manufacturer of the affected home-entertainment device who must bear the responsibility for correcting the problem. For this reason, I respectfully request that an early hearing be held on H.R. 7052, and that I be given the opportunity to testify in favor of the legislation proposed." [*s/H.J. Dannals, W2TUK, President*]

Recent conversations with personnel in Congressman Macdonald's Subcommittee indicate that mail on H.R. 7052 is very heavy . . . and all it is FOR! But the winds in Washington suggest that some elements within the electronic industry will oppose the measure. It is very important, therefore that each of us write to Mr. Macdonald and convey our thoughts on the need for RFI legislation.

Write:

The Honorable Torbert H. Macdonald
Chairman, Subcommittee on Communications
Rayburn Building
House of Representatives
Washington, D.C. 20515

While it is very important to write Mr. Macdonald, it is equally important to write your own Congressman. He, after all, is the one who will cast his vote on the measure when it reaches the House Floor, and unless you write him of your concern in this matter he may not have sufficient background on the problem to recognize the need for RFI legislation. You can write him at the following address:

The Honorable . . . . . .
U.S. House of Representatives
Washington, D.C. 20515

Charlie Spitz, W4API, passes along some suggestions on how to write your Congressman. First, identify yourself (a constituent, civic leader, veteran, etc.). Identify the legislation you will discuss (here, H.R. 7052). Briefly state why you are for the legislation, and why you want the Congressman to vote for it. Make your letter neat, and project a friendly image. Finally, limit your letter to a single subject so as to focus attention on the matter at hand.

One last word about letters to Congressmen should be added here. It is not suggested that "form" letters, or letters copied from "sample" letters be used. These suggest that you did not care enough about the issue to write down your own feelings on it.

As noted in last month's column, Amateurs all over the world have RFI problems. Now comes word that our neighbors to the north are incensed over a press release attributed to the Canadian Press in Ottawa. Entitled "Some Dirty Words Could Sour Hams", the release tells of a constituent who told his representative in Parliament that he was plagued by interference to his new, expensive, $800 stereo receiver. Further, the constituent blamed a nearby Amateur for the problem, saying: "Everytime I try to listen to Bach, the neighbor is playing chess on his radio. For a $10 radio license, he jams up the whole neighborhood."

What has angered Canadian Amateurs is a statement allegedly made by the Honorable Gerard Pelletier, Minister of Communications. Mr. Pelletier is reported as having said: "Get the ham operators mad enough so he uses obscene language — then we can withdraw his license." If true, it is unfortunate that even the Minister of Communications is not aware of the fact that most interference (or should we say "interception") problems must be corrected at the device experiencing the problem. Hopefully, Canadian Amateurs are moving to make known the RFI problem, as are Amateurs in the U.S. Only by educating the Public and the officials who serve us will it be possible to resolve the RFI problem through legislation (Canadian information by W.T. Davis, VE7ACJ, as published in the Bulletin of the British Columbia F.M. Communication Association, June 1975).

In closing, I would like to thank the United States Citizens Radio Council (USCRC) and its President, Mr. George Martin, for the opportunity to present material on H.R. 7052 at the recent USCRC Meeting held in Washington, D.C. The problems of RFI are not unknown to operators in the Citizens Radio Service (CRS), and so, the Council enthusiastically endorsed a motion to file with the Subcommittee on Communications in support of the bill. The USCRC, as you may know, is comprised of responsible groups within the CRS (including REACT and ALERT), and its voice, added to that of the Amateur community, will do much to further our efforts for federal legislation.

•

Ant. (*continued from page 40*)

off the exact resonant frequency of the antenna the impedance of the antenna goes up. He claims that the proper adjustment of the Matchbox as he goes up the band enables him to hear weak signals that, with the Matchbox out of the line, go unheard.

Don't forget to send in your favorite antenna gimmick, trick, plans or whatever. How do you feel on the Quad vs. Yagi debate and what do you back it up with?

AIR

(*continued from page 30*)

ascertain. As with your regular communications transceiver aboard the aircraft, you can pretty much count on these distances with the given altitudes:

Distance	Altitude
30 miles	500 feet
45 miles	1000 feet
65 miles	2000 feet
80 miles	3000 feet
100 miles	5000 feet
140 miles	10000 feet
175 miles	15000 feet

Natually, this is barring any out-of-the-ordinary band openings.

. . . If only Rohn made a 15,000' tower.

Calling all used unwanted weather instruments: Winds Flying Club wants you. If you've got some pieces of meteorological equipment laying around and out of service write to them at Box 1664, Kankakee, Illinois.

This late word in. Hart Postlethwaite, WB6CQW, Squadron Commander for the Happy Flyers (Hams And Pilots Piloting & Yakking) has devised a method of tracking down two-meter FM jammers, both fixed and mobile, from his aircraft. The system, devised by he and Robert Broadway, WA6CZJ, works very well and we will have full details in next month's column.

So ends AERONAUTICAL MOBILE. I would like to welcome Dave Ingram, K4TWJ, to the **Worldradio News** staff. He was working SSTV-DX while I was still trying to get a test pattern.

Drop me a line and tell me your aero activities. With better air density in the wind (bad, bad pun) things should start perking up. Send your news, views and photos to me at 533 South Lincoln Avenue, Kankakee, Illinois 60901.

Till next month, we'll be listening for you on the air . . . and watching for you in the air.

THE MART — CLASSIFIED
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Send to:
The Mart, Worldradio, 2509 Donne Way, Sacramento, CA 95818

Frame, Display and protect your QSL's with 20 pocket plastic holders, 2 for $1.00, 7 for $3.00 prepaid & guaranteed. TEPABCO, Box 198W, Sallatin, TN 37066.

Mobile Ignition Shielding provides more range with no noise. Available most engines in assembled or kit forms, plus many other suppression accessories. Free literature. Estes Engineering, 930 Marine Drive, Port Angeles, Wash. 98362.

Medical: Any licensed amateur radio operator in the medical or paramedical field should join MARCO (Medical Radio Council). Contact: Stan Carp, M.D., K1EEG, 44 Main St., Saugus, MA 01906, (617) 233-1234.

Editing a Club Paper? Need some help? Amateur Radio News Service would like to hear from you. For info. write: Sybil Allbright, W6GIC, 8658 Encino Ave., San Diego, CA 92123.

Revolutionary!!! Learn or improve CW ability the easiest way. Developed by Russ Farnsworth, W9SUV. 13 wpm in half the time. 3 LP records, $9.95, CA + tax. DANA RADIO, 2704 16th St., Sacramento, CA 95818.

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Wanted: An opportunity to quote your ham needs. 36 years a ham gear dealer. Collins, Drake, Ten-Tec, Swan, Kenwood, Temp, Clegg, Regency, Icom, Hy-Gain, and all others. Also $25,000 inventory used gear. Request list. Chuck, W8UCG, Electronic Distributors, Inc., 1960 Peck St., Muskegon, MI 49441. (616) 726-3198, Telex-22-8411.

Beginners RTTY Handbook — Brand new with everything you need to know to get on RTTY. Theory, application and simple equipment you can build. $2.50. Published by the RTTY JOURNAL, PO BOx 837, Royal Oak, MI 48068.

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Need 75A4 filter — F-455J--O'--5229090 00 for 800 CPS, plug-in mechanical filter. C.L. Meistroff, 7410 Chamberlayne Ave., Richmond, VA 23227.

Travel-Pack QSL Kit — Send Call and 25 cents; receive your call sample kit in return. SAMCO, Box 203, Wynantskill, NY 12198.

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Reconditioned Test Equipment. 50 cents for catalog. Walters, 2697 Nickel, San Pablo, CA 94806.

Wanted for boy's club. Technical Books, Magazines, and courses. E. Ezekiel, 43/2 Shaviv, Herzlia 46-221, Israel.

Licensed Radio Amateurs any nation may join the International Amateur Radio Journalistic Society and receive a valid PRESS CARD. IARJS is a non-profit, tax-exempt "Education-Society", a charitable Foundation, Code 501 (c) (3). Dues and contributions are IRS tax deductable. Write to Box 385, Bonita, Calif. 92002.

Picture QSL cards made from your photo of yourself, shack etc. 250 — $10.00, 1,000 — $19.50. Full color from slide $38.50. Samples free. Picture cards. Box 5471, Amarillo, TX 79107.

Mobile Ops. Tired of Ignition Noise? Please send SASE for info on shielded ignition systems. Summit Enterprises, 20 Eider Street, Yarmouthport, Mass. 02675.

Morse encoded keyboard, easy to operate — $129.95. Keyer — $49.95, with memory — $99.95. Fully warranted. Logic Division, Box 62201, Los Angeles, CA 90062.

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Wanted: Generous Americans willing to send expired CALLBOOKS to DXers. Write IARS Inc. Friendship and B-H Program, Box 385, Bonita, CA 92002.

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Wanted: Old battery receivers, National SW-3, SW-4, SW-5, FB-7, Pilot Super Wasp, old broadcast receivers, magazines, call books handbooks, catalogs and early wireless material, Erv Rasmussen, W6YPM, 164 Lowell St., Redwood City, CA 94062.

Russian Postage Stamp honoring Ernst Krenkle (DXers will recognize him as RAEM) plus booklet on collecting topical stamps only 25 cents when requesting approvals of stamps depicting radio, TV, telephony, telegraphy, satellite communications, electronics, electrical engineering. Alkanstamps, Box 3494, Scottsdale, AZ 85257.

Now Available to Hams of the U.S.A! Bicentennial T-Shirts commemorating the the 200th birthday of our country. 2-color emblem of the celebration along with "Ham Radio" printed on front of white T-shirts. Specify shirt size and whether for adult or child. Send $4.50 to MZS BOOKS, 9041 N. Hamlin, Skokie, Illinois 60076.

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Wanted — service manuals with schematics, or copies, for Morrow MBR-5 and Hallicrafters SX-71 receivers, W6OGL, 2404 Christmas Tree Lane, Bakersfield, CA 93306.

Build your own radio desk/console cabinet. Design drawings, photographs — $4.75. Bill Morris, WA5RSC, PO Box 20302, Oklahoma City, OK 73120.

Wild horses, antelope, elk. Wyoming ranch land. 10 acres — $30 down, $30 month. FREE Maps-Photos-Info. Owner-Mike Gauthier, K6ICS, 9550 Gallatin Road, Downey, CA 90240.

Join largest worldwide DXer, SWL, B-H "Certificate Hunters' Club" (B-H pay no dues/fees). Publishes international copyrighted Awards Directory. Non-Profit Organization. Write IARS Inc. Box 385, Bonita, CA 92002.

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Sale: Heath HW-30 two-meter transceiver, groundplane, beam, masts, microphone, crystals and manual, only $25.00 or trade. Very lightweight three-element 10-meter beam, $5.00. Pickup only. W6SVO, Tom Lund, (213) 588-5832.

Unbelievable but true. There are a few amateurs who are not subscribers to this great newspaper. If you are one of them please note page 13. Get on the bandwagon. Now we also have a super special. If you're a little uncertain take our trial subscription — the next two issues for one dollar. Send it to "Worldradio", 2509-E Donner Way, Sacramento, CA 95818.

QSL samples with 400 cut catalog. Send 35 cents to: Ritz Print Shop, 5810 Detroit Ave., Cleveland, Ohio 44102.

QSL Samples: .25, N & S Print, PO Box 11184, Phoenix, AZ 85061.

Your old gear collecting dust? Buyers & Sellers Ham Radio Brokerage. See our ad page 30.

RF Connectors: PL259 or SO239, five for $3.50; UG175/U or UG176/U, five for $1.20; PL258 female splice, two for $2.25; M258 "T", $2.80 each; M359, two for $3.50. All postpaid. Outside U.S.A. add 15%. NJ residents add 5%. Send for catalog. Coakit, PO Box 101-C, Dumont, NJ 07628.

R-390 Receiver Owners — Now available, Government Surplus MX-2840/URR, Audio Frequency Detector. Used to convert the I.F. output to an audio output. Connects to I.F. output, J-116, of R-390. Brand new original carton contains: MX-2840/URR, connecting cables, power cable, technical manuals, spare parts kit, 110-125 VAC power supply. $29.95, prepaid, Colonel Wayne D. Russell, 9410 Walhampton, Louisville, KY 40222.

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Transmitter: 1 KW VHF AM/FM, 60 to 160 MHz. CCA Corp., Spectrum Analyzer Polorad 2992B, 10 MHz to 20 GHz. Stoddart Field Intensity Meter, NM62A, 1 GHz to 10 GHz. DNTCO, Box 9141, Alexandria, VA 22030. (703) 751-8100.

Wanted: Radio boys with the Air Patrol by Breckenridge. Richard W. Randall, K6ARE, 1263 Lakehurst Rd., Livermore, CA 94550.

Color Video Tape Recorder, new in factory carton — $200. Companion TV camera — $150. TV camera also works well for SSTV. Also have spare parts, videotapes, service manuals, tools, etc. for the Cartrivision system. Dennis Trimble, W6LVY, 5154 Roeder, San Jose, CA 95111.

Donations needed for first L.A. high school 2M-450 repeater. Need FM radios, etc. Dorsey High School, Los Angeles, CA 90016 — WA6CMR.

Please help us out. Swedish hams need surplus VHF UHF components. Specialty sockets & chimneys for 4CX250B, all kinds of coax relays, high voltage feedthrus, etc. Make offer to SM6CKU, Allatorp 1446, S-430 33 Fjeras, Sweden.

Mini transmitter — $30.00. HP 616-A and HP 620-A sig. generators calibrated for wholesale. Nick, 10107 Lev. Ave., Arleta, CA 91331.

Atlas Ops. Share in the Atlas Adventure Newsletter and Club being organized. Send SASE for full details and sample Newsletter. c/o ATLAS Newsletter, 9004 Harvest Way, Sacramento, CA 95826.

Collins 30S-1, excellent operating condition — $1050. Alpha 374, new, in warranty — $975. Sid Sidman, 3571 Gresham Ct., Pleasanton, CA 94566. 415-846-2400.

Wanted to buy antique, table-model radios of any make or condition, dating before 1932. Crystal, battery, or early AC types. Also, old radio books and magazines, old tubes, radio parts. Write David WAØEUJ, 1880 Gage, Topeka, KS 66604

Do you want to enjoy your life and job more? Send SASE to learn how. **30 Day Results Guaranteed!** D-D Enterprises, PO Box 7776, San Francisco, CA 94119.

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Motorhome for sale. 25ft. Sportscoach (RB) — 1973 — excellent condition — many extras. Antennas — 2 mtr, TV, (2) HF — 4 KW generator, sleeps six. $1,500 down, assume loan. Send SASE for more info. W6KHS, 212 Magellan St. Capitola, CA 95010.

Hammarlund HQ180A — factory checked, aligned, calibrated. New tubes assembly line condition. Reasonable. C.L. Meistroff, 7410 Chamberlayne Ave., Richmond, VA 23227.

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For Sale — Ten Tec Argonaut, 405 amplifier 251 AC supply, tuner, mike — $425. Nine months old and proven as a portable bomb at WB6IZF/6, 9V1QF and YB0AAP/YB7. SB1LA linear in good shape — $140. Ed Gribi, WB6IZF Box 984, King City, California 93930 (408) 385-6164 or catch me on Weather Net WCARS, or WPSS.

ICOM — IC-21A & DV21, IC-230, Alpha 374 linear. All in sealed boxes. Must sell. Good prices. WA2OAF, Ed Harwid, 61 Bellot Rd., Ringwood, NJ 07456. (201) 962-4695.

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