

Worldradio

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California preempts FCC

California State Senate Bill 1431, introduced by State Sen. Hershel Rosenthal (D-Los Angeles), is designed to make cellular telephone transmissions private. The legislation, if passed, would outlaw the manufacture, importation, sale, use or ownership of any piece of receiving equipment (including scanning receivers) capable of listening to the 800-900 MHz cellular telephone frequencies.

A minimum fine of \$2,500 for a first offense, up to a \$10,000 fine, one year in jail or both for additional violations. There are no exceptions for services with nearby frequencies or for radio experimenters.

When questioned in the State Senate concerning the preemptive role of the FCC in the matter, Sen. Rosenthal is purported to have said that the FCC deals with interstate communications, and this is an intrastate affair.

Los Angeles attorney Joe Merdler, N6AHU, has been active in leading opposition to S.B. 1431. In an interview with *Worldradio*, Merdler described plans to meet with Sen. Rosenthal and demonstrate just what could be heard of a cellular phone conversation (one side of a con-

versation as the vehicle passes through one geographic cell). He further hopes to clarify the Communication Act of 1982, specifically section 301, which defines transmissions as essentially interstate in nature and therefore the domain of the FCC.

Paul Fadelli, consultant to the State Senate Committee on Energy and Public Utilities, who assisted Sen. Rosenthal in drafting the legislation, told *Worldradio* in a telephone interview that the intent of the legislation was to prevent a manufacturer from selling a "little black box" designed solely to overhear cellular telephone conversations. When pressed as to why the legislation did not reflect that intent, Fadelli repeated that the motives were not to prevent anyone from enjoying their hobby, but to prevent unscrupulous people from overhearing business transactions.

In recent weeks, broadcast radio and television advertisements for cellular telephone companies in California have been promoting privacy — just like your own home or office. □

Tornado hits Pennsylvania

Richard Sheasley, K3QDA

A tornado touched down at 9:30 p.m. on the 31st of May, in Lycoming County, Pennsylvania.

At 4:00 a.m. the Red Cross requested the Lycoming ARES to activate, and provide at least 12 amateurs to assist Red Cross Survey teams, and establish communications between the Brady Township building, Red Cross headquarters in Williamsport, and county E.M.A.

Most telephone service in the affected area was out, with only one telephone available in Brady Township, and it was not always useable. Additional lines were not installed until late that afternoon, and most Red Cross traffic was sent through the ARES Net until that time. The Net operated on 146.13/73, using West Branch ARC's repeater. The Bald Eagle Repeater

Association's 147.69/09 was used as a backup, and 146.58 was used for direct communications to survey teams in the field.

The Red Cross headquarters station was closed at 4:30 p.m., but communications between field Red Cross teams and County EMA were continued until 6:00 a.m., 02 June.

More than 400 families in this rural area were affected; there were five deaths, and over 60 injuries sustained. The path of the tornado was nearly 10 miles long, and one mile wide. Many farms were totally destroyed.

A minor problem which arose during the emergency was identification of ARES members to other agencies. Although ARES members are issued (please turn to page 6)



First aid team preparing man for transport. Left to right: Carol Sanders, Judy Woods and Schelly Woods. (N6ADI photo)

Amateur Radio provides vital link as California fires rage

Lenore Jensen, W6NAZ

FIRE! The very word can strike terror but add a mid-day temperature of over 105 degrees and things become intolerable. Southern California amateurs did much to help over the long July 4th weekend.

Arsonists started two widely separated fires. One, in Los Angeles, was to completely char more than 60 fine homes in less than an hour of devastating fire storms and kill three residents.

A few hours before, halfway between the city and Ventura in the mountains back of Malibu, a fire broke out near Lake Sherwood, involving both the Los Angeles and Ventura County fire departments.

The Malibu Sheriff activated RACES and soon some 20 amateurs from that group and Ventura ARES were heavily involved.

Len Drayton, WA6LAU, District Emergency Coordinator for Los Angeles, commends Norman Goodkin, K6YXH, and Tom Fakehany, N6FDR, a captain of the Sheriff's Reserve, for their work as RACES leaders.

"It was like a war zone," remembers Len, who came with his four-wheel drive vehicle for the rough terrain. "The smoke was so heavy, one had to use goggles or the eyes would have burned. I will never forget the look on the faces of those tired firefighters wearing their heavy canvas outfits in that blistering heat!"

Around the clock, hams manned the road blocks, advised the Sheriff of the fire's rapid spreading and helped with communication between the CHP and the Fire Command Center at Sherwood Park. Jim Fortney, K6IYK, for instance, worked a straight 14 hours at one point.

Seven hundred and thirty-one fire fighters were involved here for three days, supported by 80 fire trucks.

The CHP radios could not get out of some of the canyons, but the Agoura Repeater did a fine job.

Meanwhile, the Ventura County ARES also had jumped into action, and their excellent results were due to years of organization and training, supporting the American Red Cross. (they have a radio room at the Chapter House)

Not only were they deeply involved with the Sherwood Fire but shortly found a tremendous need for help at the new Ojai blaze. Firefighters and the Forest Service needed all the communication they could muster.

Paul Ryan, WB6RVA, Emergency Coordinator for Ventura County, says, "We dealt with multi agencies as well as multi fires." Another had started near Filmore plus one near Santa Paul, but the holocaust near Ojai, to be dubbed the Wheeler fire, was of frightening proportions. Shelters were set up at Boyd and Nordhoff high schools as well as one at Santa Paula.

Net control operated at Soule Park, a base camp near Ojai. The Forest Service main office was at Goleta.

"Twice, around 3:00 a.m.," Paul recalls, "it was really panic city when a "Sundowner" wind pushed the fire rapidly toward the city of Ojai. Three thousand people were evacuated at 3:00 a.m. "There was a scramble to alert more hams out of their beds to fill the communications need."

Former DEC for the area, Ray Mote, W6RIC, expresses the appreciation of all to the amateurs in far-away Riverside (please turn to page 17)



sonal and humanitarian uses of Amateur Radio.

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

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

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

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

12-12 Worldwide

12-12 Worldwide is now active on 12 meters. It is a non-profit entity for promoting activity and, most important, good operating practices on the new 12 meter band.

12-12 Worldwide is also working on getting new countries on the band and other activities of interest to 12 meter amateurs.

Charter membership will be available for the first 12 months after band opening (until the end of June 1986). The station must make an on-the-air contact with a 12-12 director or an official membership station. After the first 12 months, stations will need to contact 12 members before requesting their lifetime number.

During charter membership months, amateurs may get their number by joining 12-12, also.

Dues-paying members will receive a membership certificate and a quarterly newsletter starting in the fall of 1985. They will also be eligible to participate in receiving 12-12 awards.

The awards at this time are: Worked All States 12-12 and Worked 12 Countries. Other awards will follow.

Annual dues are \$4 per year. Send your dues and number request to: 12-12 Worldwide, Steve Walz, WA5UTO, Box 222, Cherokee, OK 73728; (405) 596-3487.

1985 DX-YL to NA-YL Contest results

The winners of the 1985 DX-YL to NA-YL Contest are as follows:

SSB: Gold Cup — Martha King, WD4NKP (NA) and Paula Bloemen, DJ0EK (DX); **Second Place** — Darleen Magen, WD5FQX (NA) and Manuela Regaglia, IO2KYM (DX); **Third Place** — June Braunz, KM8E (NA) and GM4YMM (DX).

CW: Gold Cup — WD4NKP (NA) and CT1YH (DX); **Second Place** — Jeannine Cote, VE1BWP (NA) and I2KYM (DX); **Third Place** — Shirley Hooper, WD8MEV (NA) and M.E. Stafford, VK3KS (DX).

Combined score plaque winners: WD4NKP (NA) and I2KYM (DX).

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K.S.U. offers Amateur course

In what may be a first for an academic institution, Kansas State University at Manhattan, Kansas, will be offering a new course in the College of Engineering devoted to the theory and practice of amateur radio.

It will be offered for the first time during the Spring semester of 1986 and will be scheduled in the evening to make it accessible to people in the community as well as to regular students.

It is a regular academic course carrying three hours of college credit and there will be homework and exams as in other university courses. The material covered will include all the subject matter necessary for passing FCC Technician/General class amateur radio license.

The purpose of the course is to serve those who, while not desiring to become electrical engineers or technicians, are eager to become amateur radio operators. Because there are no formal mathematical or science prerequisites, the technical level will be more elementary than is usual in engineering classes and thus the course cannot be applied toward an engineering degree.

The coordinator for the course, Doris Grosh, KA0RQB, professor - Industrial Engineering, welcomes suggestions from the ham community and from technical publishers regarding possible textbooks for the course. (Send to: Department of Industrial Engineering, Durland Hall, Kansas State University, Manhattan, KS 66506.

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ARRL plans for '86 convention

Wheels are in motion for next year's ARRL National Convention, which will be held in San Diego, California, 05-07 September 1986, according to the San Diego County Amateur Radio Council, SANDARC, who will sponsor the event.

The theme of the convention is "Amateur Radio in Public Service". The event will be at the Town & Country Hotel and Convention Center, site of previous area and National ARRL conventions.

Walt Hicks, W6UZL, has been appointed chairman, and is the point of contact for advance planning for potential commercial and non-commercial exhibits; and ARRL affiliated clubs and individuals who wish to sponsor forums, technical sessions, and in particular participate in displays and activities relating to the convention theme.

If you are not already on his mailing list, Walt may be contacted as follows: Walter Hicks, W6UZL, Chairman, ARRL 1985 ARRL National Convention, 2671 Elyssee St., San Diego, CA 92123; (619) 292-7918.

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The Southern California Six-Meter Club has been formed to promote activity on 50 MHz in the southern California area. Please join our nets:

Tuesday nights at 8:00 p.m. on 50.150 SSB; and

Thursday nights at 8:00 p.m. on the Castro Peak Repeater (52.880 In, 52.280 Out).

For membership information and applications, contact any of the club officers at their Callbook addresses (all good in the 1985 Callbook). Please SASE. President Richard Duffy, K6JZK; Vice President Bob Hastings, K6PHE; Secretary Lorraine "Gracie" Hastings, N6FSL; Treasurer Dave Gutierrez; Ways & Means Howard Longshore, K6GSX.

Contact **Worldradio** for hamfest prizes.

CONTENTS

FEATURES

- All bands on a small lot — 32
- Amateur Radio call signs — 8
- Amateur Radio provides vital link — 1
- BARES keeps cool amid crisis — 12
- California preempts FCC — 1
- Envelope launch — 14
- Field Day — 3
- Ohm-Brew — 10
- Students continue to enjoy Amateur Radio — 4
- Tornado hits Pennsylvania — 1
- VE exams — 6

COLUMNS

- Advertisers' Index — 51
- Aerials — 43
- AMSAT/OSCAR — 28
- Clubs — 34
- Contests — 48
- DX World — 22
- FCC Highlights — 8
- Hamfests — 46
- Maritime Mobile — 30
- MARS — 29
- MART classifieds — 50
- New Products — 49
- Off the Air — 18
- Old-Time Radio — 45
- Propagation — 24
- Public Service — 16
- QCWA — 36
- QRP — 40
- RTTY/AMTOR — 38
- Silent Keys — 7
- Special Events — 10
- Station Appearance — 20
- Subscription, **Worldradio** — 9
- Teacher — 39
- Traffic — 42
- Who's Who in Amateur Radio — 20
- With the HANDI-HAMS — 37
- 10-10 International News — 32

Field Day

There is no activity to compare with an ARRL Field Day.

Dedicated to advancement of emergency readiness of the amateur service, it offers opportunity for testing equipment, perfecting operating techniques and reviewing message procedure.

Liberal dividends in radio result, and fun and fellowship are guaranteed.

Testing of self-powered amateur stations in actual operation is the top aim of FD. To be prepared for communications emergencies requires advance readiness. Operator experience is as essential as the equipment.

(The above was written nearly 40 years ago, announcing the first post-WW II Field Day in 1946. The dates 22-23 June, were the same as they were this year. *QST* called the event "Testing Self-Powered Emergency Rigs Afield".)

Coming home to that first Field Day in many years were Amateur Radio operators who had just been in remote spots all over the globe operating "Self-Powered Rigs Afield."

Of the 30,000 amateurs out in the field this year there were those who harked back to the days of the BC-348 and the BC-610. Now they were working through a satellite with solid-state equipment powered by a battery.

This was the 49th Field Day and there's a lot more to it than sunburn and bug bites. A suggested press release for radio clubs to send to their local media, written by the ARRL, tells the real story.

"The earthquake that destroyed over half of (insert name of community) yesterday completely wiped out communications with the outside world. Amateur Radio (ham) operators swung into action, providing instant, reliable communications with outside disaster relief agencies.

"No, (insert name of community) was not really hit by an earthquake yesterday, but Coalinga, California did suffer this fate last year, and ham radio operators did save the day, according to (insert name of local ham radio operator).

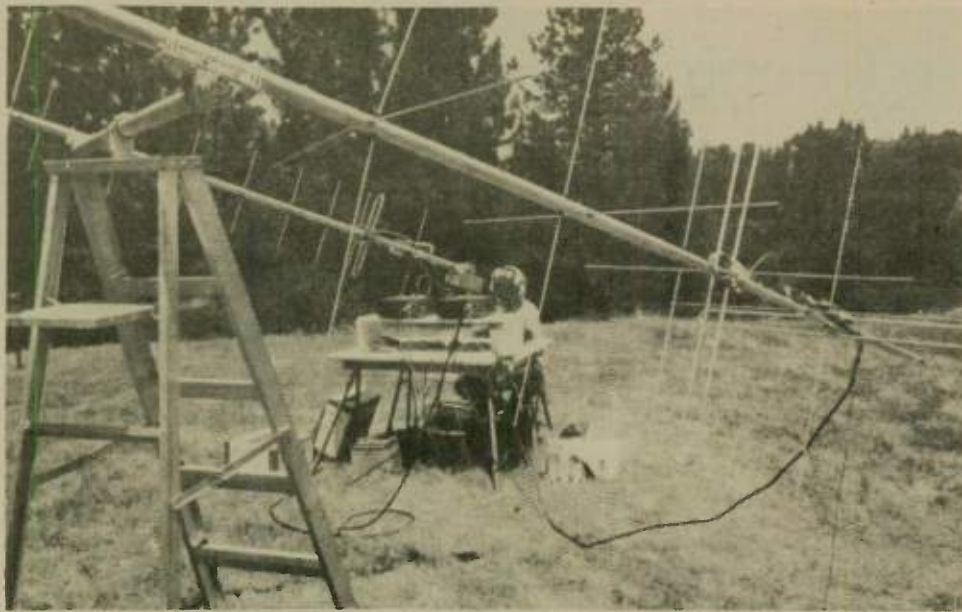
"(Insert same name) announced that local ham operators will participate in the national Amateur Radio exercise called "Field Day." On the last full weekend in June each year, ham operators from all over the country disconnect their equipment from commercial power mains and their normal efficient antennas, pack up everything and head for some spot where they can simulate the worst conditions after a disaster — no commercial power sources, no telephones and make-shift antennas — and the exercise runs for 27 hours nonstop.

"This gives them real world experience in operating under emergency conditions. Field Day is sponsored by the American Radio Relay League (ARRL), a national scientific and educational membership organization representing the interests of the 400,000 hams in the United States and Canada. ARRL's headquarters is located in Newington, Connecticut.

"The first Field Day in 1933 was an "unqualified success," as reported in September 1933 by F.E. Handy, then Communications Manager for the ARRL. "Modern" equipment back then meant suitcase-sized rigs — though some sets were "portable by truck" ... and used those fragile radio components called tubes.

"Today's ham radio equipment is solid state, compact, light-weight and more dependable than the bulky tube-type radios of 50 years ago.

(Insert your club or group's name's



Norm Brooks, K6FO, made 75 OSCAR contacts during *Worldradio* Staff ARC Field Day outing. Note creative antenna support.



Glenn Stilwell, KA6HWH, logs while Pete Onnigian, W6QEU, runs a string. Our Field Day spanned the generations. Glenn is 19 years old. In 1939, when he was 19, Pete won his section in Sweepstakes. (*N6WR* photos)

Amateur Radio operator needs in case of a communications crisis.

"For more information (insert name and telephone number of club's public information person)."

Worldradio

Every year the *Worldradio* Staff ARC goes out on Field Day, this being our 14th. Comparisons quickly come to mind. No loud generator powering the AN/TRAC with the 829-B in the final. Three of the group are ex-Signal and the heat of a June in Sacramento brings back Singapore and Saigon.

This year, in addition to our usual crew, we added Glenn Stilwell, KA6HWH. He just got out of Marine boot camp and is heading soon to USMC radio school. (Glenn is the son of Gary Stilwell, KI6T, who as W6NJU was one of the top DXers.)

When one is 19 years old and everyone else is in their 50s and 60s you get the honor of lugging most of the equipment around ... hihi.

With an all-band dipole (G5RV) about 500 contacts were made with about 75 more on OSCAR. Thanks to all who when recognizing the call sign (N6WR) said "Hello *Worldradio*". Look for us in Sweepstakes. □

Saving money and space

The following beliefs — all wrong ones — can cost you money and space, if followed. They can also waste your time.

- 1) Antenna tuners don't really tune anything; they just fool the transmitters.
- 2) Reflected power is wasted power.
- 3) Reflected power turns to heat in your tuner (or is dissipated in your finals, or makes your teeth turn orange, or etc.).
- 4) An antenna must be cut to a specific length to radiate effectively at a specific frequency.
- 5) Twin-lead causes spurious radiation.
- 6) High SWR causes spurious radiation.

Yes, if you accept even one of the above statements, you are going to spend more on your rig than you should — a lot more; mythology is always expensive if believed. So where do you get the facts?

One source is a new book, *The Easy Way*, by John Haerle, WB5IIR. It's a compendium of his lectures on the MARCO net during the last few years. Unless you have access to the definitive work of Walt Maxwell, W2DU, as printed in back copies of *QST*, this is likely to be the only place you'll find a clear and complete statement of the how and why of HF antennas. (You sure won't get it from certainly highly-vocal low-band ragchewers — and don't let the 4-letter call signs fool you!)

You send \$13 to Over Tones, Inc., 1710 Highland Park Rd., Denton, TX 76205 and ask them to send you the book. Enjoy!

— Florida Skip □

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"Continuing the yearly tradition, the Amateur Radio operators in (group name) will demonstrate their competence in providing emergency communications during this year's Field Day. This is an exercise that will sharpen the skills each



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Students continue to enjoy Amateur Radio

Young newcomers to Amateur Radio are always welcomed by older hams, who recognize the need for a new generation to perpetuate the hobby. Amateurs everywhere should be grateful to teachers like Carole Perry, WB2MGP.

Since November 1982, Carole has taught on Amateur Radio class at Rocco Laurie Intermediate School 72, Staten Island, New York, and has turned on a lot of 7th and 8th graders to the world of Amateur Radio.

Carole tells us that the July '83 article we ran brought a lot of response, and that two local clubs volunteered to help her organize two different ham classes. One class is for her Novice Class students who want to upgrade to Technician. The other is a Novice course open to the community.

WB2MGP — a General Class licensee — was an executive for an electronics manufacturing company for 10 years, and taught science at Rocco Laurie before starting the Amateur Radio class.

Here are some excerpts from her class publication, The Ragchewer, compiled by the students.

He has high hopes

Ever since I heard Dr. Owen Garriot, W5LFL, the astroham aboard the space shuttle Columbia, I've made up my mind to upgrade to a Technician license. I feel it was a once-in-a-lifetime experience hearing someone so clearly out of Mrs. Perry's 2-meter rig. I still can't believe we heard the transmission so clearly from the orbiting shuttle. I'll never forget that transmission:

I also want to upgrade so I can make contacts with people all around the world. Ham radio is a great opportunity to learn about people in other cultures. I would love to ask people from other societies how they got introduced to Amateur Radio. I would also be curious to know what kind of equipment they are operating on.

I can't imagine the feeling of talking to

people on the other side of the world right from my own ham shack. I'm so happy to be in the ham radio program! I hope to accomplish lots of amazing achievements if I'm able to upgrade my license.

Stephen Blanshaft, KA2ULD

All this ... and Merit Badges, too!

As soon as I found out that Mrs. Perry can give the Boy Scout Merit Badge test for radio, I decided to read up on it. Mrs. Perry provided me with the Boy Scout Radio book.



Carole Perry, WB2MGP (center, back row) stands with three of her students (front row) and Vince Luciani, K2VJ, and Dr. Giorgio Beretta, I2VXJ (left and right, back row, respectively).

They need to be practiced and improved upon all the time.

The ARRL has formed the Amateur Radio Public Service Corps to help amateurs gain and keep the skills they need in emergencies.

I also enjoyed reading the section on interesting job careers the radio hobby would lead me to. There's a lot to this interesting hobby of ham radio.

Ricky Morcelo

Angela stays in touch

My name is Angela Venturoso, KA2ROA. I was graduated from I.S. 72 in 1983. I am presently a sophomore at Port Richmond High School.

While at I.S. 72 I was lucky enough to be in Mrs. Perry's Amateur Radio program. Our class was not as well equipped as the program is now. All we had then was a 2-meter rig. Now there is low-band equipment as well. But we were all always eager to learn.

Everyone in my class was anxious to get a ham radio license. I understand that a large number of us did get licensed, but not everyone. If Mrs. Perry has her way, those kids will be trying for it again.

There is no ham radio program at my school right now. On behalf of my classmates and myself, we all hope that in the near future there will be a course like Mrs. Perry's in our school.

73's from

Angela Venturoso, KA2ROA

Words of encouragement

My name is Denise Kung, KA2RPI. I am a Novice ham radio operator. I think everyone should try to get a license. It is not only lots of fun; it is very useful too.

You can get on the radio and talk to friends and relatives. Or you can get on the air and make new acquaintances with other hams. It's great to work DX (foreign countries).

These are some of the privileges that come with getting a license. Joining radio clubs is of a great help, especially if you want to learn more in order to upgrade. There's lots of great things to do; so why not try to become a ham today?

Denise Kung, KA2RPI

KA2VMQ speaks up

My name is Jimmie Wilder and I am in the 8th grade at Rocco Laurie Intermediate School. When I got into the ham



In Carole (WB2MGP) Perry's classroom, Rocco Laurie Intermediate School 72, Staten Island, New York, where Vince Luciani, K2VJ (left) and Dr. Giorgio Beretta, I2VXJ (right), appeared as guest speakers on — of course — Amateur Radio. Carole's students are all enrolled in her Amateur Radio class, for which they receive grades, as they do in any of their other courses. In addition, those who wish may take the Novice exam. Each year, a few hundred do — and pass.

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VS-41	10/15/20/40	1	27	\$4.95
VS-52	10/15/20/40/80	2	52	\$9.95

*Can be used without radials
*Feed line can be buried if desired
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Type	Length	With antenna purchase	Separately
RG-58	50'	\$8.00	\$11.95
RG-58	90'	\$12.00	\$16.95

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DELUXE ANTENNA TRAPS: Completely sealed & weatherproof - Solid brass terminals - Handles Full power - NO jumpers - NO Soldering - Instructions included.

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radio class at school, I thought it was the nicest thing anyone ever did for me since I came to school. I started to learn the Morse code, and I couldn't believe I was really enjoying it.

I studied hard and finally the day of the FCC license exam came. I was very nervous. Mrs. Perry told me to be calm and to relax. I took the test, and I knew I passed it. Then one day in the summer, my license came in the mail. I was so happy!

Ever since that day, I've been thinking and planning about what to do next with my license.

Jimmie Wilder, KA2VMQ

Let's hear it for the moms!

Each term in the ham radio program, we have several moms who study along with their children and become interested in getting a radio license. Here are some of their stories.

Jenny gets me involved in everything! Last year it was ham radio. All I ever heard was didits and dahdahs. I knew things were bad when I started understanding this strange new language.

Eventually, I too started to enjoy our almost secret time together, since no one else in the family could understand what we were doing or saying. In June 1984, we took the FCC license exam and both passed. So now we're both Amateur Radio operators still hoping to get a radio and get on the air.

Fondly and 73's,

Mrs. Conte (mom), KA2UMD

Jennifer Conte, KA2VLZ

At the beginning of the 1983 school year, my son Michael came home very excited about a new course he would be taking. It was called Amateur Radio and the instructor was Mrs. Perry.

This was a subject area we both knew very little about. Michael found the course very challenging and exciting. The more he got into it, the greater his enthusiasm. It is now one of his major hobbies.

He has obtained his Novice and Technician licenses. By the way, he was the first student at I.S. 72 to get a Technician license. I'm very proud to say that I have my Novice license. I was also the first parent to take the exam in the cafeteria of I.S. 72, along with over 100 students.

My reasons for wanting a Novice license were many. Firstly, I wanted to have a better understanding of a subject that was of great interest to my son. Secondly, it became a challenge to learn Morse code, and thirdly, we had fun studying together. For the first time, he was testing me!

My special thanks to Mrs. Perry for creating an environment that stimulates students to want to learn.

Mrs. Marilyn Aronson (mom), KA2SXC
Michael Aronson, KA2RNP

I want to get my ham license because . . .

I would just love to be able to contact astrohams. It would be fun to have a hobby like this when I get older and have more free time. Ham radio might even lead me to a very interesting career.

Caryn Cooper

I just know I'm going to have a "double header" this January. Mrs. Perry is going to give me the Boy Scout Merit Badge Test for radio as well as the FCC Novice license exam. I know I will pass both. I'm working so hard!

Steven Shoshany

I think ham radio is a very interesting hobby. I am a new student at Rocco Laurie. I just moved to Staten Island recently. My mother came to school with me the first day to get me registered. I met the assistant principal, Mr. Timpone who was very nice to me. He asked me what minor track I would like. Ham radio was one of the choices. Boy, am I glad I chose it. I'm going to try very hard to pass the license exam.

Dawn Sullivan

Personal reasons for getting a license

I think ham radio is a great hobby. I

have a personal reason for wanting to get a license.

This summer my cousin had his Bar-Mitzvah in Israel. I missed it. But the worse part was that I couldn't even call him to say "good-luck." Boy did I feel terrible.

Mrs. Perry has told us that Israel has many ham radio operators. The United States also has a third-party traffic agreement with the Israeli government. This would make it possible to pass messages along through other ham radio operators.

My first hope, however, is that both my cousin and I can become licensed. We can always remain in contact then.

Donna Fischler

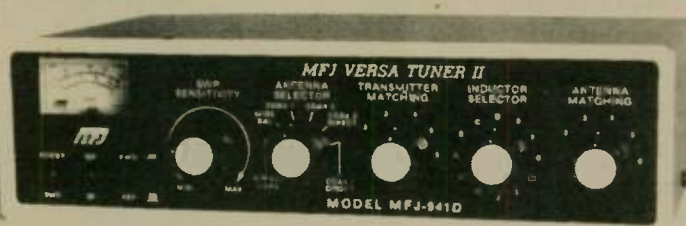
Last term I looked at my second semester program card to find that ham radio was my new shop. I walked in with a few friends that first day, thinking that this was going to be a boring shop we'd have to put up with four times a week. Little did we know that we were really in the best shop in school.

After a few days I realized two things. I realized this was the first shop I couldn't wait to attend, and secondly, that it was the only class I've ever been in where everybody was interested in what was going on.

Thanks to Mrs. Perry, I have a Novice license, and I'm studying to upgrade to

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144-148 MHz handhelds receive Police/Fire on 154-158 MHz with direct frequency readout. Hear NOAA maritime coastal plus more on 160-164 MHz. Converter mounts between handheld and rubber ducky. Feedthru allows simultaneous scanning of both 2 meters and Police/Fire bands. No missed calls. Crystal controlled. Bypass/Off switch allows transmitting (up to 5 watts). Use AAA battery 2 1/4x1 1/2x1 1/2 in. BNC connectors.

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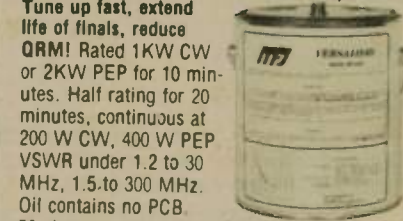
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Technician. I plan to get a digital 2-meter rig when I upgrade.

I must put in a word for Mrs. Perry. She is an excellent teacher and a wonderful person. It takes a lot of guts to enter the world of teaching today. It's very difficult

to teach something most kids never even heard of before. Mrs. Perry has brought great success and excitement to our school. 88's to Mrs. Perry.

Brian Wendel, WA2VMY □

Satellite dishes and antennas limited

Tom Philp

The Sunnyvale (California) City Council adopted an ordinance in June, regulating the location and size of satellite dishes and radio antennas, despite objections from satellite and Amateur Radio enthusiasts that the rules would kill their hobbies.

About a dozen enthusiasts waited through a five-hour meeting until 1:00 a.m., when they told council members that the dish restrictions would make it impossible to receive signals from television satellites or to communicate with experimental satellites launched by NASA.

Fearing a Sunnyvale residential skyline lined with bulky dishes and tall antennas, the council unanimously and with little comment passed the restrictions.

The thought of "looking at 5-foot dishes from my back yard . . . gives me the cold shivers," Councilman Harry Cude said.

The ordinance allows residents to install any size dish in their back yard, so long as it does not stretch higher than 9 feet off the ground. Any dish above 9 feet cannot have a surface area of more than 0.785 square meters, which translates into a dish with a 1-meter diameter.

Satellite enthusiast Howard Krawetz

told the council that he wanted to build a satellite dish so he could communicate with a NASA experimental satellite that is open to amateurs. But because the satellite constantly hovers in space at a low angle from his house, he needs a dish that's larger than a meter and above the 9-foot limit.

"Technically, it will not work," Krawetz said. "If we are limited to a 1-meter dish, 9 feet high, we just can't pick up enough signal."

The council in addition didn't adopt a suggestion by several Amateur Radio enthusiasts that the council create an exemption for licensed radio amateurs.

After seven straight hours of meetings, interviews and study sessions, a bleary-eyed council unanimously approved the ordinance at 1:45 a.m.

The quick action by the council last week was in contrast to its discussions during the first reading of the ordinance 04 June.

"I admit we might be making a mistake by passing this ordinance," Councilman Brian O'Toole said at that meeting. "I wouldn't mind addressing the issue again if we screwed up. But we got to get something on the books."

— San Jose Mercury News, CA; submitted by Gordon Girton, W6NLG □

Tornado

(continued from page 1)

County photo I.D. cards, some of the agencies were not aware of our service. Further education about ARES will be carried out with them. Some other objectives to improve future efforts will be the acquisition of traffic vests, arranging shorter shifts, and, of course, additional training.

The following stations served during the ARES Net activation: K3QDA-EC, KB3OM-AEC, KT3G and N3CYW-Co NCS, K3PMY and KA3JFC-Red Cross HQ. At Brady Township building and with the Red Cross survey teams: KC3EC, KO3B, N3CUB, W0ZD, WA0UMB, KA3JFA, KA3JFB, WB3DKC, WA3ECT, W3ILG, W3JMY, KB3LR, KC3EH and WB3FUR. □

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or Phone (502) 368-6657

VE exams

California

On 21 September, the Sonoma County Radio Amateurs will hold exams for Technician through Extra. Starting time is 8:00 a.m., with Extra first, then at spacing of about one-and-a-half hours each step until completed.

We plan for a total of 25. Spaces will be saved for those who send 610 forms,

checks and copies of their current licenses ahead of time. Walk-ins will fill the remaining spaces.

Location is Sebastopol Community Center, 390 Morris, Sebastopol, CA 95472. The tests are held during the annual radio flea market, located at the same address. □

Here's a list of many exams being given in Northern California, under many different VEC's. Bring the items shown in message about all exams to each. Fees are

\$4.00, unless noted. Info items: Date, Address, Telephone, Call sign of contact person.

Aug 20	1980 Santa Maria Way Sacto CA 95825	(916) 483-0551	W6YFW
Sep 14	Los Altos Foothill flea market	(408) 255-9000	W6NLG
Sep 21	7822 Wash. Ave Sebastopol CA 95427	(707) 823-7885	W6DTV
Sep 21	11040 Broken Hill Rd Reno NV 89511	(702) 851-3717	K7VY
Oct 19	9 Cielo Vista Terr Monterey CA 93940	(408) 649-8766	KA6VSE
Nov 1&2	2543 Dos Rios Dr San Ramon CA 94583	(415) 837-3080	WD6G (+)

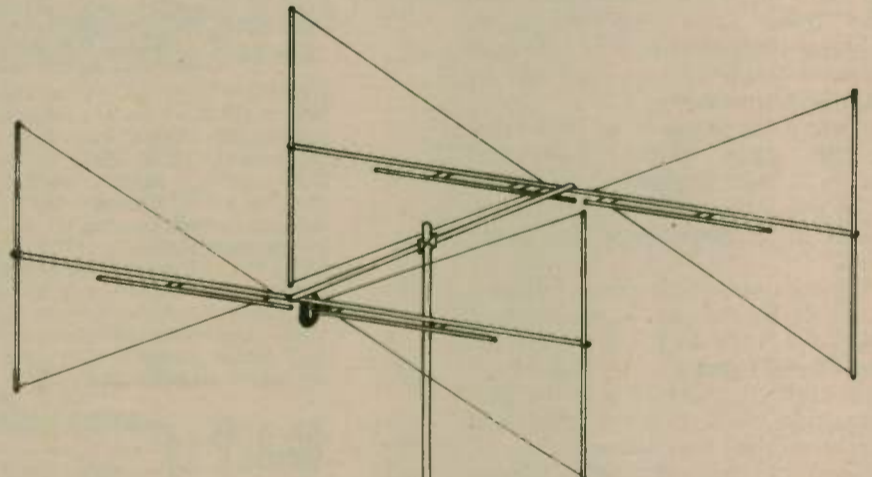
Actual city of exams: (+) Pleasant Hill. The rest are same as city of contact person. Good luck. If you have knowledge of exams not on this list, and would like

them added, leave me a note in the box. Spread the word.

Also on 146.700 Mt Tamalpais RTTY RPT DE KK1A/6. □

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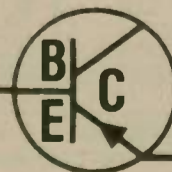
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• Silent Keys •

Hensley Morehen, WA6DJI

Hensley John Morehen, WA6DJI, passed away Sunday morning, 30 June, at his home QTH in San Francisco. He was 64 years old, having been born in San Francisco on 18 March 1921. Approximately six months ago, after not feeling up to par, his illness was diagnosed as Mesothelioma, a type of cancer he had developed over the years due to working with asbestos in his occupational environment.

Ever since he was a youngster around the age of 12, he was interested in radio. Bill Anderson and Bob Knight were his mentors and helped him build his first radio set. Sometimes in the evenings, Bob and Hensley would pass Uncle Vern's (W6ERS) house and loop up at his Zepp antenna. Years later, he and Uncle Vern would build W6ERS's 60-foot tower piece by piece.

He enlisted in the Navy in World War II, entering Navy Communications in January 1942, and attended numerous training centers throughout the United States. He was eventually stationed aboard the *USS BIVIN*, and his tour of duty was in the South Pacific. He often spoke highly of the island of Moorea in Tahiti.

By the end of the War he had risen to Chief Petty Officer and then transferred to the Naval Reserve and returned to civilian life. At the start of the Korean War in 1950, he was recalled to active duty. He was stationed in Guam and while there got his amateur operator's license and became active on CW from KG6FAE.

Hensley received his call WA6DJI on 28 November 1958, and promptly went on the air on CW. Field Days with the San Francisco Radio Club from 1959 until 1982 found him busy helping everyone with their antennas and then operating all night on 20 or 40-meter CW.

He was really dedicated to Amateur Radio and gave of himself. Since 1958 he held all the active offices of the San Francisco Radio Club at least two times and was on the Board of Directors for 10 years. He was the SFRC representative to the CCRC (Central California Radio Council).

In 1983, Hensley was awarded the San Francisco Radio Club Hall of Fame Award.

He was an active CW DXer on 20 meters (worked 278 countries) using only 300 watts and a 3-element 20-meter mono-band antenna. Once in a while you could hear him on 75-meter phone. During the past 16 years, Hensley and Bip Bachman, W6BIP, worked together as a team in many CW and phone contests.

He is survived by his wife, Maria, and children Patricia, Ronald and Robert. He will be sorely missed by his many friends in the San Francisco Radio Club. — *Bip (W6BIP) and Elsie (WA6QC) Bachman* □

Your log is still useful

Larry Joy, KB9C

Have you ever thought about using your station log book for something other than keeping track of the contacts you make? I am an engineer working in design and development of new equipment. As part of my job, I keep a detailed engineering notebook. Its purpose is to describe problems, test setups, accomplishments, ideas, calculations and plenty more that is pertinent to my work. Anything that I

may have a later interest in is put in my notebook.

Ever renew your license? You did put a notation in your log when you mailed off your Form 610 to the FCC, didn't you? And when you received your license, you did put a notation in your log along with other pertinent information such as when it expires, what class license it is and the address shown on the license . . . didn't you?

How about when you put up that new 80 meter dipole? Did you bother to record

the calculations you did to decide how long to make it? Did you have to trim or add to it after testing? Did you measure and record its SWR for future comparison? If your station doesn't seem to be working as well next year as it is now, you may want to compare antenna SWR then versus what it was when it was put up. That kind of information can really be useful!

How about some other ideas? If you go to the Dayton Hamvention, why not put down some notes on weather, what you

saw, what you'd like to do different next year, etc?

Notebooks are important. Your log book can be more than just a record of contacts. It can be a diary of your interactions with Amateur Radio — *Ham-splatter, Fort Wayne RC, IN.* □

•••••

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Bill Grenfell,
W4GF

HIGHLIGHTS

On 06 June 1985, ARRL filed a petition, RM-5038, with the FCC which includes a request for Novice phone 25 watt operating privileges in the 220-225 MHz band. Other privileges proposed for Novice and Technician licensees are: CW and digital communications at 28.1-28.3 MHz and CW and SSB at 28.3-28.5 at 200 watts output; all voice and data modes, 5 watts, 1246-1260 MHz. Expansion of the element 2 (Novice) examination syllabus to include basic voice and digital techniques, and elimination of the rule limiting all licensees to Novice power levels in the Novice bands. (from *QST*, July 1985, page 9)

Full text of the petition was not available at the time this month's 'HIGHLIGHTS' was written. It is likely that details on the petition will be published in August *QST*. Comments on the petition should be addressed to: FCC, Washington, D.C. 20554. A copy should be sent to the petitioner, the ARRL.

Novice and Technician operation with CW in the 10.10-10.15 MHz band has been requested of the FCC by Larry Garens, KC5OQ. Also filed with the FCC by KC5OQ were the following petitions: RM-5023, requesting 'phone privileges for Novice and Technician Class licensees in the band 28.35-28.40 MHz; RM-5025, requesting Novice CW and 'phone use of the 220-225 MHz band; and RM-5022, requesting the use of ASCII by all classes of amateur operators in the 28.19-28.20 MHz band. Comments may be filed with the FCC at Washington, D.C. 20554. Mention the RM number(s) and send copies of the comments to the petitioner.

A \$2,000 Notice of Apparent Liability has been issued to James Brantley, licensee of amateur station K6KPS, for violating FCC Rule Section 97.113, "Broadcasting prohibited".

"The Commission had received complaints from amateurs over a long period of time that Brantley was disrupting their communications. Most recently there were complaints that Brantley had been disrupting communications on the 20-meter band. Brantley would call 'CQ' for long periods or make calls to nonexistent stations, which had the effect of occupying the frequency and disrupting com-

munications of other amateurs who were using the frequency."

At times, Commission personnel observed, "He did not establish communications with any station, not even with (other) stations which made numerous attempts to respond to his CQ calls. It was evident that the purpose of these transmissions were merely to occupy the frequencies and thereby disrupt normal communications. Other stations on the frequencies complained of the disruption and requested Brantley to move, but he ignored these requests.

"... 'broadcasting' involves communications which are not directed to a particular station." (Section 97.91 specifies the authorized one-way communications which will not be construed as broadcasting.) "The Notice of Apparent Liability was issued on 13 June 1985, and Brantley has 30 days to submit payment or a reply." (FCC NEWS 5341 06/24/85).

FCC's proposed land mobile use of 421-430 MHz, GEN Docket No. 85-113, reported two months ago in *HIGHLIGHTS*, is opposed by WB0QCD (Westlink Report, 05/31/85) and by ARRL (*ARRL Letter*, 06/20/85).

WB0QCD claims the WARC 1979 Agreement makes this spectrum "primary" for Amateur Radio, and ARRL claims that "Such action is unjustified by the terms of the proposed reallocation; it is unnecessary, given the directional, intermittent nature of amateur operation in the band; and it would be highly disruptive to existing amateur ATV and FM repeater operation". (*ARRL Letter*, 06/20/85).

At least two other amateur news bulletins are identifying this proceeding as General Docket 85-188. This Notice of Proposed Rulemaking is titled "GEN Docket No. 85-113", and was adopted 15 April 1985.

FCC's June 12th Notice, PR Docket 85-196, proposes to transfer maintenance of the amateur examination question pool from FCC to the volunteer examiner coordinators. The FCC "would require that each VEC's question pools be publicly available. It would authorize volunteer examiners to design their own examinations sooner than the 12/01/85 date specified in the existing rule.

"Volunteer examiners would be able to choose whether to make their own examination designs or to use those provided by their VEC. Both VECs and volunteer examiners would be required to keep examination designs in confidence."

Original comments on this Notice of Proposed Rule Making should be filed by 30 August 1985 and reply comments by 30 September 1985.

The FCC denied a petition for rule making which proposed to increase the code speed required of Technician Class examinees to 7 wpm and of Advanced Class examinees to 15 wpm. The purpose of the petitioner, W7JWJ, was to permit Advanced Class-licensed examiners to administer the 13 wpm code test to General Class candidates and, to permit Technician-licensed examiners to give the

Amateur license statistics

Class	29 March	30 April	31 May
Extra Class	36,496	36,670	36,983
Advanced	97,490	97,376	97,551
General	116,888	116,728	116,816
Technician	80,850	80,906	81,406
Novice	79,051	78,942	78,090
Individual operators	410,775	410,622	410,846
Club stations	2,301	2,285	2,285
Military recreation	174	174	170
RACES	375	368	361
Total stations	413,625	413,449	413,662

5 wpm code test to Novice Class license candidates.

Presently, an Advanced Class licensee examiner cannot give the General Class code test because rule Section 97.28(a) requires the 13 wpm test must be administered by an Extra Class licensee (who has passed a higher speed test). In denying the petition, FCC wrote,

"... The ostensible objective of this petition, to introduce additional Advanced Class examiners into the volunteer examiner program, is not currently required. Within one-and-a-half years of the creation of the program volunteers appear to be administering amateur operator examinations to over 4,000 applicants each month. This is 50% above the rate they were administered in 1983 under the previous system.

"There is no indication at this time that the volunteer program suffers either from a lack of volunteer examiners or a lack of examination opportunities."

On 12 June 1984, the FCC adopted an order authorizing immediate use of 1269.05-1269.85 MHz using "Mode L", available to the Amateur Satellite Service on a secondary, non-interference basis pending final action on PR Docket 85-23. This was requested jointly by AMSAT and ARRL. While the original action authorized such use only by Extra Class licensees, it was subsequently expanded to include all but Novice Class operators.

The repeater coordination PR Docket 85-22 comment deadline was moved by the FCC from 01 July to 15 August in response to a petition from ARRL. The reply comment deadline remains 30 September

1985. The League requested the 45-day extension so that the "... Board of Directors could consider input from members at its July 25th meeting."

The FCC has amended its rules concerning the retransmission of non-broadcast stations by broadcast radio and television stations. Amateur stations are prohibited from being used as remote pickup or auxiliary link broadcast service facilities. However, FCC indicated a rule of reason will apply in that emergencies involving human safety or the immediate protection of property may warrant limited use of amateur stations for conveying news information directly relating to an unforeseen event, "... if it cannot be transmitted by any means other than Amateur Radio because of the remote location of the originating transmission or because normal communications have been disrupted by earthquake, fire, flood, tornado, hurricane, severe storm or national emergency." Recently, the Communications Act of 1934 was modified by Congress to make it clear that the secrecy provisions of Section 605 did not apply to Amateur and CB communications. Prior to that action, there had been some question as to whether Section 605 did or did not forbid retransmission of Amateur station transmissions by broadcast stations. In an unrelated action by Congress in 1984, Section 605 was redesignated as Section 705.

Petition RM 4983 asks the FCC to approve a co-equal shared 350 kHz segment in the 220-222 MHz band for oil exploration telemetry using wide-and pulse code modulation. The comment deadline on

Amateur Radio Call Signs

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

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

Radio District	Group A	Group B	Group C	Group D
	Am. Extra	Advanced	Tech./Gen.	Novice
0	NM0E	KD0YM	N0GHQ	KA0VBV
1	NA1C	KB1TK	N1DPA	KA1NEX
2	NK2N	KD2NS	N2FQT	KA2YQC
3	KW3M	KC3SQ	N3ELY	KA3OHP
4	AA4KT	KJ4GB	N4MIM	KB4OXC
5	NX5M	KF5BW	N5IEV	KA5WNL
6	WJ6I	KG6VD	N6MGK	KB6JIK
7	NO7M	KE7HK	N7HIB	KA7VTT
8	NN8E	KD8ZL	N8GRT	KA8WXP
9	NH9F	KD9QD	N9FGO	KA9TWD
N. Mariana Is.	AH0D	AH0AC	KH0AI	WH0AAG
Guam	AH2V	AH2BD	KH2BV	WH2AGF
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	**	AH6GE	NH6EE	WH6BEW
Kure Is.			KH7AA	
Amer. Samoa	AH8B	AH8AB	KH8AD	WH8AAP
Wake Wilkes Peale		AH9AC	KH9AB	WH9AAE
Alaska		AL7HA	NL7GM	WL7BHP
Virgin Is.	KP2L	KP2AU	NP2BH	WP2AEL
Puerto Rico	WP4N	KP4IQ	NP4OK	WP4EHM

**All of the Group A call signs for Hawaii have been assigned. Any request for a Group A call sign will now be assigned a Group B format.

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this petition was 13 June 1985.

The FCC reminds holders of valid radio-telephone first class, second class and general radiotelephone operator licenses that they are eligible for a lifetime diploma form license. They may apply for one at the FCC Field Office that issued the last current license, whether it was an initial licensee or a renewal, on or before 31 December 1985. Those who fail to do so before that date will receive a card form renewal which will prohibit it from being used for broadcast purposes.

Mark the request "Lifetime License" and submit a copy of the present license if it has an endorsement on it. Enclose a stamped self-addressed envelope at least 4 1/8" x 9 1/2" (at least 9" x 11 1/2" if you don't want them to fold the certificate).

"Malicious interference to Amateur Radio operations in the Detroit, Michigan area may result in a fine, prison or both for three area residents.

"On 08 May, U.S. Attorney Joel M. Shere announced the issuance of formal complaints in federal District Court charging Glenn Barrick of Detroit, Richard Szabo of Farmington Hills, and Robert J. King of Redford Township with various violations of federal law. The three were charged with unauthorized use of frequencies in the Amateur Radio Service. Of the group, only King holds an amateur license: WB3WKA according to FCC.

"Barrick and Szabo were charged with operating in the Amateur Service without a license, while King was accused of operating contrary to FCC Part 97 Rules and Regulations, including failure to identify properly. Attorney Shere said the FCC initiated its investigation after receiving numerous complaints from ham radio operators about deliberate interference with vital public service communications.

"Many of those who complained participate in the Sky Warn Tornado Watch and/or RACES." (Westlink Report, 06/28/85)

"U.S. Marshalls and FCC Field Engineers recently raided . . . two stores and seized over \$18,000 worth of external power amplifiers and transceivers capable of operating on frequencies other than the authorized CB channels. The FCC . . . has initiated criminal prosecution against Fix It Man CB Sales and Service stores located in Millbury, Ohio and Monteagle, Tennessee for the marketing of illegal CB radio equipment.

"The owners of the stores now face up to a \$10,000 fine, and possibly one year in prison." (ARRL Letter, 06/06/85)

The Houston, Texas and Seattle, Washington FCC Field Offices have been relocated. They are not at: 1225 N. Loop West, Houston, TX 77008; and 3605-132nd Avenue, SE, Bellevue, WA 98006.

VEC statistics, May 1985: Volunteer Examiner Coordinators = 48; Exam Sessions = 328; Elements administered = 7436; Persons examined = 4925; Defective applications, average = 3.78%; Pass rate range = 33.33-87.50%; Pass rate average = 57.88%; Late submission average = 2.13%; Defective report average = 5.79%; Total elements administered, October '84 through May '85 = 35,474.

Licensing activity for April and May 1985: New Novices = 1,943 and 1,980; Total all new = 2,043 and 2,174; Upgrade to Tech. 498 and 1,027; Upgrade to General = 413 and 777; Upgrade to Advanced = 306 and 643; Upgrade to Extra = 217 and 347; Total upgrades = 1,434 and 2,794.

The FCC's Gettysburg licensing facility advises that the FCC is allowing VEC's to approve waivers of the examination 30-

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day wait-after-failure rule for "any good reason". "VE's are instructed to attach a letter to the application (FCC Form 610) from the applicant stating their reason why the 30-day rule should be waived." (W5YI Report, 07/01/85)

A petition for rule making has been filed with the FCC "... which seeks to add amateur 40-meter telephony privileges in the 7075-7100 frequency subband

"to stations transmitting from any location within the claimed boundaries of the Republic of Texas at the time of annexation by the United States on 29 December 1845. . ."

The petitioner, Robert G. Wheaton, W5XW, "... said that the FCC has adopted a NPRM that proposes to add 7075-7100 kHz amateur voice privileges to the Caribbean Insular area the same as it has previously to Hawaii and Alaska.

He strongly feels that the situation in the Republic of Texas (i.e., close proximity of foreign telephony privileges and severe shortwave broadcast interference in an isolated area) are very similar to that of the other insular locations." (W5YI Report, 07/01/85)

President Reagan has reappointed FCC Commissioner Dennis Patrick for a seven-year term. (W5YI Report, 06/15/85) □

SPECIAL EVENTS

OK Corral

On Labor Day weekend, a special event station will again operate from the heart of the famous OK Corral at Tombstone, Arizona. The special event is the 4th annual rendezvous of the gunfighters.

Old West and movie buffs will remember the OK Corral as the site of the shootout between the Earp and Clanton factions in 1881. Another bit of history is being added this year with the oldest active Amateur Radio call in the state of Arizona — W7GV — being used.

Operations will begin at 1500 UTC, 31 August, and will run through 2200 UTC, 02 September. **Frequencies:** SSB — 28680, 21380, 14280, 7280, 3730; CW — 21130, 7130, 3730.

A certificate will be awarded to all who work us, as well as SWLs. Please send a large 8½" × 11" SASE (40 cents postage) to: W7GV, P.O. Box 36032, Tucson, AZ 85741. □

Old Trusty Antique and Engine Show

The Hastings (Nebraska) ARC will operate W0WVW from the Old Trusty Antique and Engine Show at Clay Center, Nebraska from 1900Z, 07 September to 1900Z, 08 September, in the General portion of the 80-40-20-15-meter bands.

For QSL, send #10 SASE to Hastings ARC, P.O. Box 128, Hastings, NE 68901. □

Two anniversaries

The Harrisburg Radio Amateur Club will operate W3UU as a special event station in celebration of 125th anniversary of the City of Harrisburg and the 200th anniversary of Dauphin county, Pennsylvania, 01-02 September, from 1200Z until 2100Z.

Operation will be in the lower portion of the General Class 40 and 20-meter bands with some operation in the Novice 40-meter band.

Certificate for SASE to KA3BZX, 116 Revere St., Apt. 2, Harrisburg, PA 17109 USA. □

Paul 'Bear' Bryant

The West Alabama Amateur Radio Society (WAARS) will operate the 3rd annual special event station on Saturday, 14 September in commemoration of the greatest college football coach in history, Paul "Bear" Bryant.

The Bear Bryant special event station will operate from the campus of the University of Alabama. WAARS will operate using the call sign WD4DAT from 1300Z to 2400Z on that date.

Phone frequencies will be the bottom 25 kHz on the general 40-10-meter phone band. The club will also work Novices on the bottom 25 kHz of the Novice band. The club will offer a handsome commemorative certificate of the event to any station worked if sent \$1 and a large SASE. The address is: West Alabama ARS, P.O. Box 1741, Tuscaloosa, AL 35403. □

Miss America Pageant

The Southern Counties ARA will operate K2BR 10-14 September, from the Miss America Pageant, Atlantic City, New Jersey.

Frequencies: Phone — 25 kHz inside General Class phone bands; CW — 65 kHz up from lower band edges; Novice — 7.125, 21.250 MHz.

QSL with SASE via SCARA, Box 121, Linwood, NJ 08221. □

Air-to-ground public telephone

Members of the Utica-Shelby Emergency Communications Association (USECA) will operate from 1300Z to 0400Z, 14-15 September, to celebrate the first air-to-ground public telephone service which was inaugurated between Chicago and Detroit in 1957.

The call KA8KTV will be used on 80, 40, 20, 15 and 10 meters, depending upon propagation. CW will be in the Novice portions only, except on 20 meters. K8QLM will be the call used on 147.18/78.

A special QSL will be sent out to all stations making a contact with either of the above two stations, on either day or any mode. A special certificate will be awarded to all stations that make contact with the same station operator on two different days, two different bands and/or two different modes (CW, phone, RTTY, 2 meters).

For a certificate, send a large SASE. For a QSL, send a 4" × 9" SASE. Send to either USECA, P.O. Box 291, Utica, MI 48087. □

Salem Lutheran's anniversary

Members of the Berry's Mountain Amateur Radio Club will operate from 1600Z to 2200Z, 14 September, to celebrate the 150th anniversary of Salem Lutheran Church.

Operation will be 10 kHz up from the lower edge of Novice bands on 80/40 meters, and 25 kHz up from the lower edge of General phone bands on 80/40/20 meters using the call sign N3ELR.

Calligraphy certificate, 8" × 10", designed by the pastor, N3ELR, for your QSL and SASE to Salem Lutheran Church, Box 427, Elizabethville, PA 17023. □

350 years!

Celebrate Connecticut's 350th anniversary with the Connecticut DX Association and the Newington Amateur Radio League.

Using the call of KW1V and operating from the grounds of the State Capitol in Hartford, Connecticut, we will be in the General and Advanced U.S. Phone bands from 1400 to 0100 UTC on 21 September and from 1400 to 2100 UTC on 22 September.

For a special QSL card and a colorful Official Connecticut Tourism Map send a large #10 business-size SASE with 39¢ postage to Dave Rose KW1V, 13 Long Crossing Rd., East Hampton, CT 064234. □

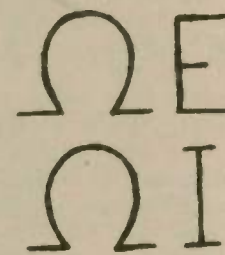
Winesburg Fall Fair

The Clyde Amateur Radio Society will operate station NF8E from 1600Z-0000Z, 21 September and 1600Z-2200Z, 22 September, from the Winesburg Fall Fair.

Frequencies: CW — 7.125 and 21.150. Phone — 3.9, 7.250, 14.300 & 21.400. Certificate via Ervin Remaley, KA8CAS, 333 Belle Ave., Bellevue, OH 44811. □

Ohm-Brew

Charles Jackson, SV0AA, is our September winner with this entry. He gets a free one-year subscription as his prize. Turn to page 45 for the answer.



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

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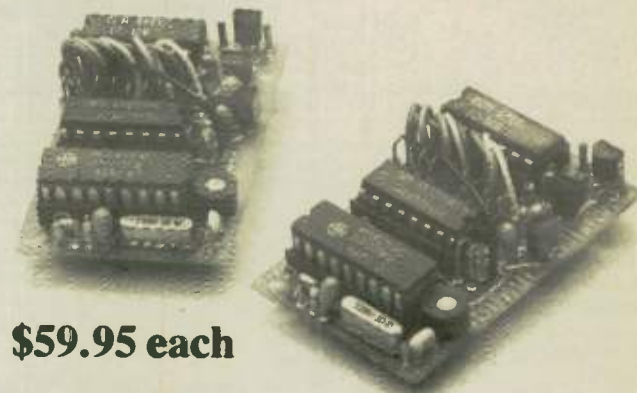
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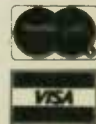
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BARES keeps cool amid "steambath" crisis

David Black, KB4KCH
Photos, Don Frizzell, KA4ZEW

A hospital losing all of its communications? Preposterous, you say?

That's exactly what happened at the Veterans Administration Hospital in Birmingham, Alabama, during the evening of June 10, 1985.

And had it not been for BARES, the Birmingham Amateur Radio Emergency Service whose members manned communications posts around the clock, a patient's life could easily have been lost.

The problems started around 9:30 Monday night when an underground water main burst, spewing water into the hospital's basement. Unfortunately, that's where the building's telephone system, air conditioning system and elevator control equipment were housed.

The water poured in at what was described as a phenomenal rate. At one

point, several Birmingham Fire and Rescue Service pumper trucks called in to drain water out of the basement were unable to keep up with the incoming flow.

In much of the affected area, officials estimated the water at between three and five feet deep. But in a few spots, depths of up to eight feet were reported.

It wasn't long before every telephone on all of the building's nine floors had gone dead. With the flow of cool air stopped, temperatures throughout the structure began rising.

With only one small freight elevator working, doctors, nurses, patients and visitors all got quite a workout using the stairs.

Hospital officials quickly realized that they were faced with a serious and life-threatening situation.

Phones that were normally used for nurses and doctors to exchange impor-

tant information about patient conditions and treatments were useless. If an emergency developed, authorities knew they had no way to request medical equipment from the supply, products and delivery section on the first floor. Nurses in the four intensive care units knew that if a patient's condition suddenly worsened, they would have a much harder time summoning physicians. In general, officials realized that they suddenly had to run a hospital without their most basic means of communications.

When service crews summoned to the scene announced that no quick fixes seemed possible, a plea for communications help was made.

One of the first people to be called was Joe Smith, WA4RNP, director of BARES and head of emergency communications for the 340 member Birmingham Amateur Radio Club, Inc. (BARC).

"I got in touch with over two dozen hams, asking some to report to the hospital immediately, and others to be on standby."

Smith also notified Birmingham-Jefferson County Civil Defense officials. CD Officer Wayne Randle immediately activated members of his Volunteer Operations Staff (VOS), with VOS personnel also being asked to go to the scene.

The first amateur operator arrived at the hospital just one hour after the main broke, and immediately began setting up a base station on the first floor near the Emergency Room.

"There was so much steel and concrete both in the building and in the area, I knew we'd need a 2 meter rig with a lot of power," Smith said. A Kenwood TS 7950 radio was brought in, with a five-eights wave magnetic mount antenna being placed in a nearby window. The rig would serve as a base radio for communications with hams using handi-talkies elsewhere in the building.

In addition to using a 2 meter simplex frequency for primary communications, Smith also had to use the autopatch on the club repeater, W4CUE, to make several priority phone calls.



Steve Loggins, KB4HYU, relays information to hospital officials at the main command post.



Joe Smith, WA4RNP, standing, looks over emergency operating schedule from hospital's main command post. Boyd Bradshaw, KB4GDN, right, assists with emergency communications.

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to be worthwhile. In at least one case, Smith said, a monitoring machine in one of the wards sounded an alarm, indicating problems with a patient's blood gases.

Because a handi-talkie equipped ham was present, the nurse was able to contact a doctor in only seconds.

Volunteers staffed other key areas, too, including the Emergency Room.

"In the ER, we had a person come in with a bad ankle injury," he said. "Because the hospital's pager system (which was tied to the telephone equipment) was inoperable, I used the auto-patch to contact an orthopedic surgeon."

Amateurs also manned the hospital's surgical recovery area, the food services division, and many other locations.

"The food service area turned out to be pretty important, too. A lot of patients were on special diets, which meant that the food service personnel had to know which meals to deliver to what rooms on what floors."

As the hours progressed into early Tuesday morning, hospital officials knew that the day ahead would be a trying one, and with no air conditioning, a hot one. One patient would later re-name the hospital "a nine story steambath."

The decision was made to cancel all but emergency surgery. Even routine X-rays became difficult, since medical personnel had only two portable X-ray machines that worked.

"We had to assign a ham to keep track

of where the X-ray machines were located at any given time, as well as where they were needed," Smith said.

With the help of the nearby University of Alabama at Birmingham (UAB), partial telephone service was restored shortly before 5 p.m. on Tuesday, June 11, nearly 19 hours after the water main had burst.

Had it not been for UAB allowing the VA hospital to tap into its phone system, everyone agrees, the outage would have lasted even longer. But even at this point, many phones remained inoperative, and the need for hams to stay at the hospital continued.

The number of operators on duty at any given point varied with the time of day or night. At one time, Smith said, well over a dozen radio amateurs were scattered among the various floors, at nurses stations and other areas, all passing important information.

For Smith, setting up an operating schedule posed a challenge, since the accident had occurred late at night during a work week.

"When I was making the initial calls Monday night," he said, "I tried to contact a lot of retired hams, because I knew it might be easier to schedule them, as opposed to people who had to work. Even so, we did have a lot of people who took off from their jobs just to help.

We has some hams come down for two or three hours. Others were on location

for six or eight hours . . . and we even had a few who put in more time than that." (Smith was one of the "few" . . . he didn't leave the hospital until late Tuesday night, nearly 24 hours after the emergency had begun!)

Later Tuesday, the hospital's paralyzed telephone system began seeing a little more life with each passing hour.

It was also by this time that the public had learned of the situation, through television and radio news reports, as well as newspaper accounts.

One local television station, WVTM-TV, led its 5 p.m. newscast with a live report from the scene. During that report, the hams and their efforts were mentioned.

The same station interviewed Smith himself for its 10 p.m. newscast. Heavy emphasis was given to the tireless hours amateurs had spent, providing their vital services.

By late Tuesday night, with the worst of the crisis over, hams were still on the scene. "We stayed with a skeleton crew, just in case the efforts at getting the phone system back up suffered a setback," Smith said.

On Wednesday morning, June 12, at about 1 a.m., the last amateur operator on duty at the hospital was allowed to go home. Hams had been providing emergency communications for the facility for well over 24 hours straight!

"Looking at the whole episode in

perspective, I think it went quite smoothly," Smith said. "We really didn't have any major foul-ups. People knew where to go and what to do, and they did their jobs quite well. And this was despite the confusion, the heat, and no elevators!

As far as the radio traffic we passed, I'd estimate that one third of it involved matters of a life-threatening nature. I'd like to think that our efforts during those hours saved a life."

In all, 27 BARES members responded to the call for help, with 10 Civil Defense VOS personnel assisting, too.

Hospital officials later credited the volunteers for their contributions, saying, "we couldn't have done it without them."

Despite all the problems, Smith recognizes that things could have been worse.

"At least we had electricity. But I had thought early on about the possibility of not having power, so we planned for that and brought plenty of batteries, too. Fortunately, we didn't have to use them!"

But it is fortunate that Smith, amid all the pressing matters he had to deal with during the crisis, did think about electricity.

At the height of the leak, water was creeping higher and higher toward the building's main power grid, also located in the basement.

Luckily, the water stopped short of the grid . . . but with only 18 inches to spare!

GORDON WEST'S RADIO SCHOOL UPDATED TEST GUIDES

Gordon West's Radio School announces the continued availability of their nationally acclaimed "test guides" for every amateur radio class of license. Originally developed solely for Gordon West's own ham radio classes in Southern California, amateur radio operators throughout the country have been using the test guides to successfully pass the new volunteer-administered examinations.

The Radio School test guides list all revised 500 test questions plus the multiple-choice answers in an attractive 8½ × 11 inch manual. The exact questions plus the exact distractors (wrong answers) and the exact correct answer are listed as they will be found on ARRL or W5YI volunteer examinations. The General and Advanced class test guides list 500 updated questions, the Extra class test guide has 400 questions, and the Novice class test guide covers 200 questions.

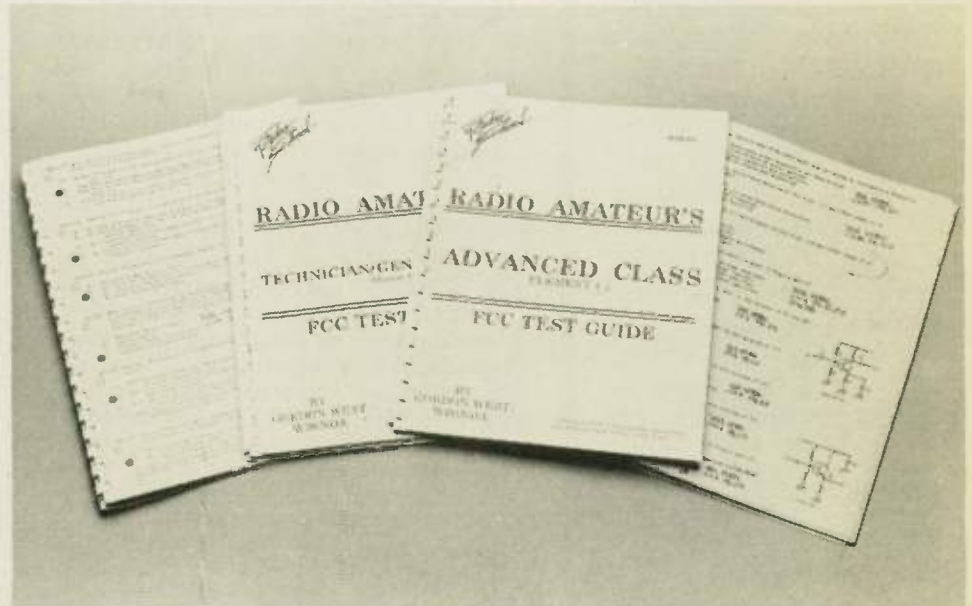
"Our test guides are similar to an FAA pilot's manual," comments Gordon West. "This will take the surprise out of any examination upgrade — every question and every right and wrong answer are in the books exactly as they will appear on an ARRL or W5YI examination," adds Gordon West.

Each test guide also lists "study notes" that reflect reference material on where the questions are derived and where to find out more information about the answers. Formulas for solving the problems are also incorporated in each test guide.

Also included in all test guides are several pages of instructions to the applicant on where to locate a Volunteer Exam Coordinator, and how to sign up for a local volunteer-administered examination. Also included are the necessary test forms that applicants must fill out ahead of time, to include the new FCC Form 610, Revised.

All test guides have also been updated to reflect new rewordings of FCC test questions. This will allow students to see any format change in any one of the FCC-approved questions. This includes the new technician and advanced class updated questions.

Study guides are available for \$19.95 plus \$3.00 postage. Be sure and specify which study guide you want.



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Jill Johnson, about to sell the first envelope at Mooroolbark Post Office. (Photo by Ken McLachlan, VK3AH)

Envelope launch

Ken McLachlan, VK3AH

The Wireless Institute of Australia's 75th Anniversary Celebrations were given a further public relations boost when Australia Post released a 33 cent internal postage pre-paid envelope on the 22nd of May, to honour the oldest Amateur Radio society in the world.

All states of Australia had record sales, and many of the 4,800 post offices were assisted by their local amateurs in providing static displays of old and new equipment, such as Horn speakers, microphones of the mid-1930s vintage, half-a-century-old Morse keys and modern solid-state transceivers. Special posters were printed by the WIA, banners created and ample stocks of handout material were available.

A large working display of the old and the new was set up in the Philatelic Centre in the centre of Melbourne, the capital city of Victoria. This display was an actual homemade 1936 vintage amateur station that is still operable, complemented by modern-day state-of-the-art transceivers. Additional special posters had been printed for the occasion by Australia Post in addition to the WIA posters.

I had the pleasure of producing and interviewing Chris Long, Acting Curator of Electronics for the Museum of Victoria — a gentleman with a wealth of knowledge who is dedicated to his profession, in a 40-minute tape that took a look at the history of radio and how the hobby had as-

sisted its development since the turn of the century.

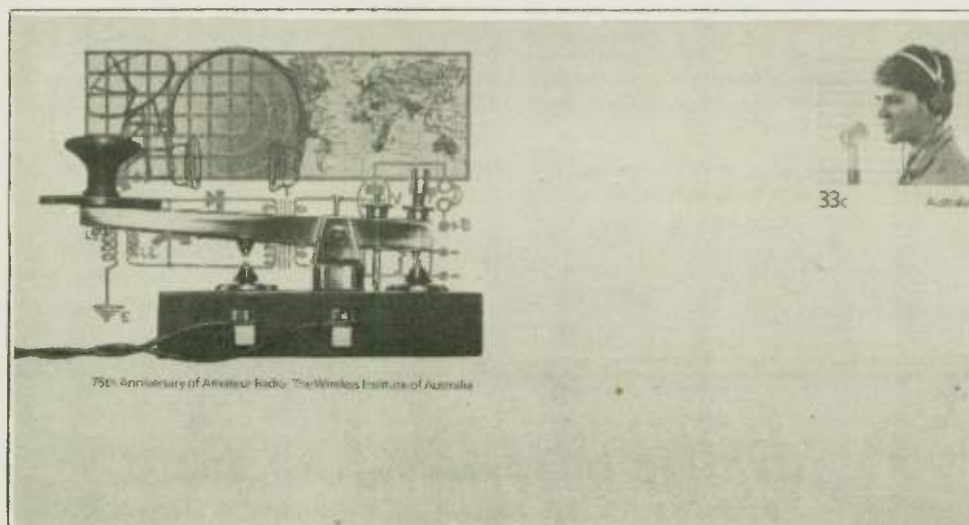
This tape included the actual voice of Marconi, playing of records on the broadcast band prior to World War II, generally on all home "brew" equipment even down to the record players. Special dispensation was made by the Department of Communications to replay it over 3RPC, a FM Community Radio Station in Portland, Victoria, and a history-making simultaneous broadcast on the 80, 40 and 20-metre amateur bands with the assistance of Keith VK3AHK, and his helpers.

At the conclusion of the tape, that was introduced by the Honorable Federal Minister for Communications, Michael Duffy, MHR, call backs from all listeners on the amateur bands were rebroadcast over 3RPC.

In a letter of thanks to participants, Mike Chandler, Public Relations Officer Australia Post Victoria, said, "Due to the help provided by many members of the community, the launch was one of the most successful ever undertaken by Australia Post in Victoria."

Judging by the interest that was taken throughout Australia, it is sure that many more people are aware of our hobby, the benefits it can provide to the community, and the way to become an active participant in a rewarding pastime.

Many more events are planned to celebrate the 75th birthday of the Wireless Institute of Australia, including the continued use of VK75A, the commemorative call that is being used from all mainland call areas.



Hams aid in search

A call was made to Walt Read, W6ASH, from Charles McDermott, KA6NDX, about 11:00 a.m. requesting help by Amateur Radio in an attempt to contact the son of a friend who had just passed away. The only information available was that he was vacationing on the big island of Hawaii. The name and age were given and nothing else. The local relatives knew no more.

Walt placed frequent emergency announcements on the Alaska-Hawaii emergency frequency and was soon assisted by Tony Schena, KH6PV, on Oahu. He alerted amateurs on a local frequency. Within 20 minutes, three amateurs on the big island were in contact with Walt in Los Altos, California.

After consideration of the unusual situation, it was decided to divide the telephone yellow pages in parts and start phoning local hotels and motels. At this point the granddaughter advised that he was probably in Kona. The phone search through over 100 numbers was continued. This proved fruitless, and the family was so notified. They were told we would next contact all car rental agencies. Meanwhile, the police were alerted and the local radio station agreed to put the word out. Through a car agency record, his hotel was located. The local family had assisted in this.

About this time, Dr. Robert Smithwick, W6JZU, joined to assist Walt. In Hawaii, Howard, KL7CD, contacted the hotel and left his number on the door with a message. Meanwhile, the manager proceeded to check the beach area and the swimming pool area. No luck, until about six hours had passed since the first call when Howard received a call from the man. He explained the situation and advised him of all possible flight schedules. Jean Sease then called home at once and as of this writing is homeward bound. The family was very grateful.

Hats off to the Hawaiian amateurs for a big job well done. □

ABOUT YOUR SUBSCRIPTION

When does it expire?

Printed on your address label in the upper right-hand corner is a 4-digit number, such as 0286. This tells you that the last issue of your subscription is February, or the second month of 1986.

Why does my renewal notice come so early?

Advance planning is essential in producing a periodical. We have to plan for the time the issue will be in the mail, the time it takes to get ready to mail, and also the time it takes to process new subscriptions and renewal information at the computer house. If you wish uninterrupted service, we need to have your renewal instructions at least six weeks prior to the beginning of the month in which your subscription expires.

How can I ensure that my renewal will be added to my present subscription?

By making sure you include your subscriber number, the 6-digit number that precedes your expiration date, in all correspondence about your subscription. It enables us to serve you better.

HENRY

REPORT #2

New models reflect our policy by design. Technology moves fast. At Henry Radio we keep up with a steady flow of new models, some for amateur use, some for commercial use, some for industrial use and some for scientific research.

Here are three new models for this month:

*New UHF model 3004 1500 watts output at 440 MHz.

*New VHF model 3002 1500 watts output at 144 MHz.

*New HF 5K Classic, 3.5 to 30 MHz (not for sale to U.S. amateurs)

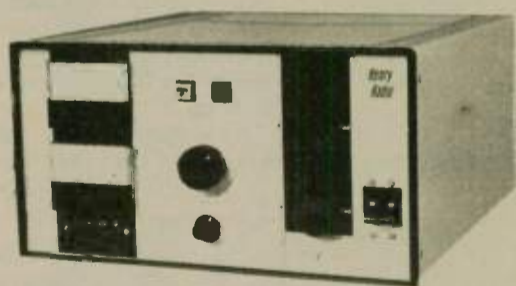
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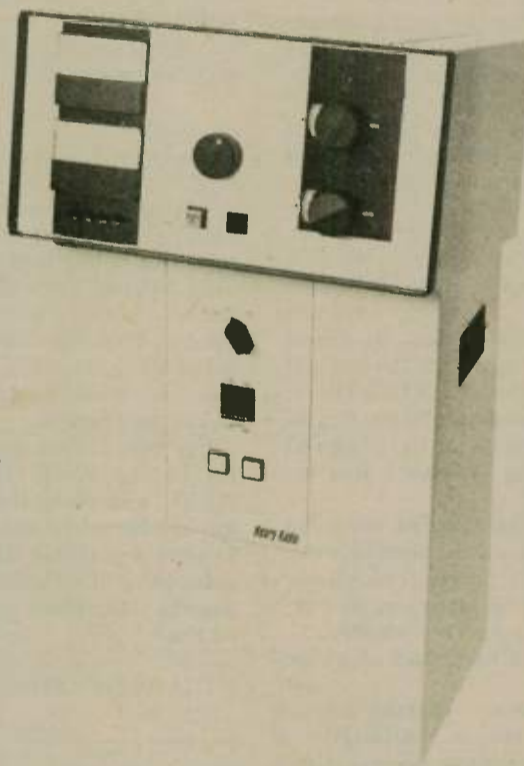
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2002-A...a bright new rework of our popular 2002 2 meter amplifier. Uses the new Eimac 3CX800A7. The RF chassis uses a 1/4 wave length strip line design for extreme reliability. It provides 2000 watts



input for SSB and 1000 watts input for CW. Because this tube is rated at an unheard of 15dB gain, only about 25 watts drive is required for full output.

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

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

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

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PUBLIC SERVICE

Hams and CAP join in ELT search

It turned out to be a false alarm, but the beeping ELT transmitter had been aboard a downed plane, the pilot and any passengers would have been found within two hours.

At 9:30 p.m. on 23 June, Sal Lagonia, N2EQM, got a phone call from the commander of the Civil Air Patrol in Westchester County, New York. Lagonia is Director of Emergency Services for Westchester CAP and is vice president if the Westchester Emergency Communications Association (WECA), the local public service ham club. He was told that "SARSAT," the Search and Rescue Satellite, had detected an activated ELT (Emergency Locator Transmitter) in the Westchester area.

Lagonia dispatched a CAP airplane equipped with VHF, which narrowed the search to the area around one town. Two ground units were sent out.

Bob and Sarah Wilson, N2DVQ and N2EYX, followed the signals in one car, while Dwight Smith, N2FMC, homed in from the second. They kept in touch with each other and with CAP headquarters on 2 meters, first on WECA's 147.66/.06 repeater, then on the Putnam Emergency and Amateur Repeater League's (PEARL's) 145.135/4.535 repeater. N2EQM and Westchester County EC Willard Smith, K2CFX, coordinated activity at CAP headquarters.


By just after 1:00 a.m., the two ground units located the transmitter — inside a building. It was later learned that it had been aboard a helicopter which made a rough landing earlier in the day, and that the pilot had removed the ELT from the craft, thinking that would deactivate it. It didn't.

Signals from ELTs are picked up by the orbiting SARSAT satellite, a joint project of the United States and the Soviet Union. Reports of "sightings" are transmitted to Scott Air Force Base, outside Belleville, Illinois. Air Force officials there notify the appropriate CAP officials and set the search into action.

Lagonia said the Air Force had praised his team's quick response and quick results in finding the transmitter. He noted that half the hams participating were not CAP members. "Without their help and the cooperation of WECA and PEARL in making their repeaters available," Lagonia said, "we would never have found the transmitter as quickly as we did." □

.....
"It's not that our good deeds are performed for thanks, but our survival may depend on letting the world know about them."

Lenore Jensen, W6NAZ



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Memo of understanding

Representatives of the New Hampshire chapter of the March of Dimes and the New Hampshire (NH) Amateur Radio Association — a council of representatives from amateur clubs in New Hampshire, recently signed a memorandum of understanding regarding amateur support of March of Dimes walkathons in the state.

Pete Cantara, KI1M, NHARA President, and Brad Trafton, state March of Dimes Executive Director, signed the document at a recent March of Dimes executive board meeting. The memo of understanding basically states that: A) NHARA will encourage member clubs and individuals to provide communica-

tions and safety support for NH March of Dimes walkathons; B) amateurs will be involved only in communications and safety support, and will not be involved in the fundraising aspects of the event; and C) the NH Chapter of the March of Dimes will identify amateur participation in these events in press releases and promotional material.

Tafton, noting that fundraisers such as walkathons generate a large percentage of their annual revenue, said that amateur safety and communications support in previous walkathons has greatly contributed to their perfect safety record. Cantara said that he was looking forward to a long and happy working relationship between NHARA and the NH March of Dimes.

The memo of understanding was written by Bill Burden, WB1BRE, who is a member of both NHARA and the NH March of Dimes executive board. It is believed to be the first memo of understanding between an Amateur Radio organization and a public health organization (except for the ARRL memo of understanding with the American Red Cross, which is an emergency communications agreement).

In addition to composing the memo, Burden also wrote a walkathon procedures manual for amateur clubs and individuals to use as a reference guide in planning communications and safety support for walkathons. — Pete Cantara, KI1M □

DARC and Shake '85

The Downey ARC holds service as one of its most important concerns. It has developed several disaster plans as a part of its community service program. The most recent plan was developed in correlation with the Don Davis, Fire Chief of Downey who is head of their Disaster Program.

The City of Downey, in support of the Amateur Communication in case of emergency, has purchased and installed two 2-meter radios and antennas, one at each of their main EOC and secondary EOCs.

The first EOC is regularly used as the City RACES radio for the regular check-ins and exercises. The backup EOC has been recently installed and provides communication less frequently but as needed. The City of Downey reproduced copies of the Disaster Plan for the club and added some additional frequency information to the lists.

On 18 April, the DARC Net was activated on 144.930 S at 9:03 a.m. by Bob Shand, W6TBG, at EOC. He is City Clerk and close to the EOC. At 9:30 he assigned Art Varney, WA6OZQ, and Tom Van Buskirk, NA2D, to activate the second EOC as W6TOI Station 2 and take check-ins as Station 1 was participating in RACES communications for the Shake 85 exercise. Ray Welton, WA6LVO, was assisting Bob at EOC.

A jammer joined the club frequency, so Art communicated to all the need to move to Frequency 2. The jammer could not find the alternate, and the exercise continued without a break. Very shortly, 12 of the club members had checked in for assignments.

Two of the members — Merritt Yancy, K6CDX, and John Shelton, WA6MGW — were sent as mobile units to Downey Unified School District Headquarters. There

they received several messages relating to the drill. Merritt and John relayed the messages to EOC at police headquarters. Bob and Ray in turn relayed them to RACES Coordinators at Norwalk Sheriff's EOC as a part of RACES exercise.

Others from the club were manning City EOC's in Sante Fe Springs and Norwalk as RACES members. Several members in the club have their mobile rigs ready to roll with supplies for assignment.

Our club programs have included Disaster preparedness and discussions with the city's disaster leaders. Recently, a surplus generator trailer from the fire department was given to the DARC to assist us in operations independent of utility power. The

club has also purchased and equipped a van for emergency communications under the leadership of Reed Craven, WB6BFB; Ray Welton, WA6LVO; and Bob Turner, N6HEB.

The city is planning to provide a scanner for the van, so the operators can follow police and fire frequencies. The van and generator trailer are parked at the City Police Yard and may be used as a mobile communication van as directed by the City EOC. It has 2-meter and HF rigs with multiple antennas.

Copies of the plan are available from Ken Wahrenbrock, KF6NC, 9609 Cheddar St., Downey, CA 90242. □

On volunteering

The Amateur Radio Service depends on volunteers for all our attempts to promote our hobby and provide a public service. Nobody has ever paid any of us for the hours of free labor to this club and its hobby. Volunteering is a lovingly cherished tradition, a tradition which, if it did not exist would signal an end to our hobby, as we know it.

Dr. Tom Comstock, N5TC, Vice Director of the West Gulf Division of the ARRL, addressed the issue of Volunteering in a recent issue of the *Field Forum*, a League newsletter distributed to ARRL volunteers throughout the USA. He asserts that recent research has concluded that:

1) A leader's expectations and the way

volunteers are treated directly determines how those volunteers perform.

2) People work more effectively and productively if they are treated with respect, concern and interest.

3) If a leader sets feasible high performance standards, volunteers generally will meet or exceed them. In other words, it is essential that clear objectives be set.

To quote Dr. Comstock, "Some people are like wheelbarrows, they have to be pushed. Some are like kites, they will fly away if you don't put a string on them. Others are like footballs, you never know which way they will bounce. Some are like trailers, they have to be pulled. Still others are like balloons, always ready to blow up."

As a general rule, volunteers are best handled in that grey area somewhere be-

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Members of the Humbolt (Iowa) Radio Club ride on the club's float in the local 4th of July parade. Although the tower and beam are just window dressing, N0GCR worked six stations during the parade, including AA3II.

tween the democratic and participative styles of leadership (leaning in the direction of participative). That's because most amateurs are highly individualistic.

When volunteers are used, they should be made to feel that their services are worthwhile and appreciated. Nothing is more frustrating than to volunteer for a public service event and get there to waste time in an unimportant capacity. Or worse, do important work and not feel appreciated. — Reprinted in *The Atlanta Hams*, Atlanta, GA

CW can be fun

Ralph Kelly, N6HUO

My dad knew how! That's George L. Kelly, formerly Sergeant Major Kelly, 5BNR. He was a radio operator and taught radio school in 1923 for the U.S. Army First Cavalry Division, Fort Bliss.

In those days the only way you could advance was to go through school, even if it meant copying 18 wpm to get classified as an operator, and Dad had no desire to stay a horse soldier, having left the Border Patrol to join the Army in the first place.

So Dad went to radio school, and then stayed on as an instructor. When he wanted to build up the base station, the Army told him to go down and become a licensed ham and in that way the communications people from the military would give him some more equipment. So he did, and they did, and he received 5BNR — later W5BNR when W prefixes were allocated.

We kids used to get a kick out of him because we could always tell when the crew was out working the radio station. When someone pressed the key, the tubes would light up the whole area like blue lightning!

Even though Dad let his license lapse, what with World War II, Korea, and a few other assignments, he never forgot his code and he could copy 30-35 wpm in his head. Well, one day we were just sitting outside with the radio going and my dad got to laughing. I asked him what was going on, since I sure couldn't copy that fast. Dad said he was listening to a guy in San Diego making a date with a gal in San Francisco to meet here in Santa Barbara. She told the guy when she'd be arriving, what she'd look like, and that she'd be wearing a bright red dress.

Well, we naturally had to be at the airport ourselves and, sure enough, here comes the gal as described. So Dad went up to her, called her by name, thanked her for coming, and commented that she was just what he expected, wearing that bright red dress. Well, yes, the gal said, but you're not what I expected!

Dad broke down and explained that he and I were copying the mail and just wanted to make sure she really did arrive. About that time the guy from San Diego showed up, so we introduced ourselves and all of us went over to the local pub for a couple of drinks. What happened after that, we don't know. So if said YL and OM read this, we'd like to hear your side of the story, and beyond. — *Key Klix*, Santa Barbara, CA

The deadline for news releases and special announcements is the 10th of the month, two months prior to issue date. Example: Deadline for the August issue, which is mailed in early July, is 10 June.

Fires

(continued from page 1)

whose repeater used the same frequency as the main one being used: 146.88 MHz. "As they have been for years, they were extremely generous in staying off the air. We often can hear each other."

Scheduling approximately 70 amateurs for the long week of work was Gervase Kyle, KA6BPH, filling about 1600 man-hours.

The Forest Service was deeply impressed by the amateurs and warmly welcomed their help. Not only did the sign, "Send free messages home" at the base stations bring heavy response from the firefighters, but the Forest Service itself discovered the amazingly accurate ability of Packet Radio.

In fact, so successful was the activity, possibly the first use of Packet in such a major disaster, the Service asked that their own resources traffic be so handled.

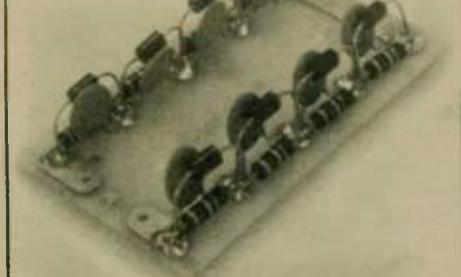
Among the Packeters were Tom Van Norman, WA6UEO; Bill Talanian, W1UUQ; Moe Ward, AC6I; Orville Beach, WB6WEY; Paul Hansen, KA6UPD (whose daughter Rae also gave much time to the event); Tony Rodriguez, CP5NP; and no doubt many others.

The EC for Simi Valley, Roger Arm-



Packet station in Paul Hansen's (KA6UPD) motor home. (N6ADI photo)

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New Santa Barbara communications van sets up for Wheeler fire.

strong, WD6EVT, is due much credit for his efforts during the long hours.

As the heat and fire intensified, Paul Ryan recounted that his group had also been involved three weeks before, providing communications to shelters at Port Hueneme where many residents had been evacuated after a gas leak.

As the new fires spread, he also was happy that AREA classes had been given to members for work with the Incident Command Systems, a coordinating umbrella enabling all the many agencies and municipalities to work together under one set of disaster rules.

Even though the city of Ojai, where many artists live, was saved, the relentless blaze spread over the mountains threatening seaside residential areas such as Carpinteria and Goleta (on either side of Santa Barbara). A new base camp was established at the Pendola Ranger Station, six miles north of Santa Barbara.

Throughout all this, the Red Cross first-aid stations, as well as the shelters, were provided with communications back to the Chapter House.

In turn, the Los Angeles Red Cross headquarters had its own fine radio room (installed last year for the Olympics by Bob Burns, N6ZH) activated and manned with operators. Royce Bell, KX7Q; Les Harness, N6JNH; and Ron Dickey, KG6JC, banded together for the purpose. Not only were they in touch with Ventura, but 20 operators also used the Red Cross radio frequency of 47.2 MHz. The aftermath of the Baldwin Hills fire required constant links to the various vans supplying the shelters for the homeless.

As the Wheeler fire spread northward, the amateurs were busy helping with the transfer of firefighters and other personnel to new areas. And, as some fires died down, the Red Cross appreciated their serving in Damage Assessment and relaying of information to the Forest Service. Al Pacino, Director of Disaster Service, praised the caliber of ham volunteers.

Ray was pleased to point out that staff members of the Ventura Chapter, after 10 years of cooperation, have been so intrigued by Amateur Radio that they have earned their own tickets. The Chapter Manager, a member of the Board of Directors and the Director of Safety Services, all have licenses.

At this writing, the fires continue but the amateur operators will stay as long as needed.

We wish we could list all who helped — "the good guys and gals," — as opposed to the arsonists who caused most of the tragedies.

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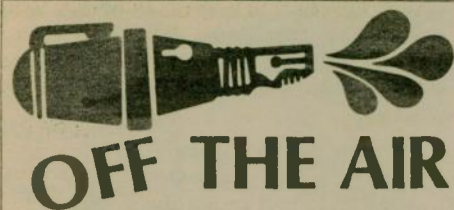
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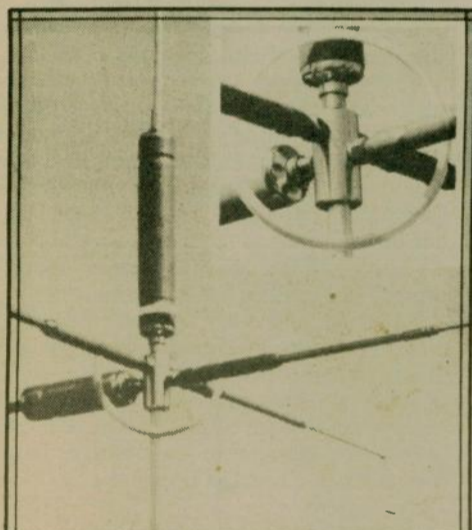
Ideas for Novices

Much has been said and written lately about the sad state of Amateur Radio, especially with respect to the large number of Novices who either fail to upgrade or drop out of Amateur Radio altogether. I have done a great deal of thinking and asking around about this and find these two factors to be the most significant reasons for this situation:

1) Lack of low-cost, suitable equipment that the younger novice can buy which would be of adequate quality so that novice operation would be pleasurable — something in the 75 to 100 watt category for under \$150 (including power supply).

2) Difficulty of mastering 13 wpm code (getting over the long-recognized, 10 wpm plateau). Some people, even with daily contact with Morse code may stay at 10 wpm for as long as several years!

As for the first reason, I don't know what the answer is. Sad to say, U.S. manu-



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facturers don't seem to be interested in low-dollar value items any more — not just in radio/electronics, buy many other items as well.

The second reason is something we all can (and must) do something about. The proposal was made some years back to change the General Class code-speed requirement to 10 wpm vs. 13 wpm and to make 13 wpm applicable to the Advanced Class. This idea, it seems, died from lack of support. I feel we owe it to our hobby to mount a concerted campaign to have this change made. In my opinion it will do much to encourage up grading to the General Class.

J. HARVEY CHASE, W4TG
Gray, Georgia

Warning about computers

For those who are hams, CB'ers and marine radio operators and who use computers, I have a sad story to tell and also a warning about the use and location of computers.

I was given a VIC 20 computer, and I thought it would be a good idea to set it up on my operating desk next to my radio transceiver, and by using the computer and the monitor I could program QSLs and net information into the computer. This, I thought, would be a big help to me with my Amateur Radio operating, but the sad part of this story is that the radio frequency energy from the transceiver ruined the computer the first time it was turned on.

I am sorry to lose the use of the computer. I would like to pass along this experience to all hams, CB'ers and marine radio operators and hope they don't make the same mistake I did.

Check with the computer manufacturer and find out how close you can install the computer from the transceiver. I wish I had done this before I placed my computer near the transceiver, thereby ruining it once and for all.

KENNETH HAND, WB2EUF
East Hampton, New York

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Peace try?

I note that several prominent world leaders are Amateur Radio operators. Would it not be a significant historical event if these leaders could be linked together by satellite with a future space mission carrying an amateur? Perhaps a

Do something now

Much has been said recently about bringing new blood into the amateur radio hobby, and several articles have focused on the wonderful services being provided in the public interest, convenience or necessity. All of these remarks are laudable, and the two situations can easily go hand in hand. Additionally, there are a few other problems we each must face someday that can easily be solved now, while helping with the first two I mentioned.

What will become of our equipment when we tire of it, or leave for the land of the Silent Key? And how can we find replacements for the tax loopholes about to run out of town on the Amtrak rails? These remarks are addressed to dealers as well as the average Joe Q. Ham.

I suppose we have all seen on the "used" shelf at the few remaining amateur radio stores, some piece of equipment that could be put to better use in a shack somewhere. Perhaps we have a piece or two in our attic or garage that we haven't really been using in the recent past, but hesitate to just throw away. Maybe one of our really senior citizens has some neat stuff that his or her surviving spouse will have some problem disposing of in some coming period of distress. One cure would be to put that gear to good use now, getting the tax advantage now, providing a

Do we still need 'Mr. T' on the CW team?

Orin Levis, W6DZ

The recent flap over code/no-code in the ham license exams has made everyone more aware of the CW mode and its vagaries.

For example, why do we continue to send the Tone, in the R-S-T system? 99-44/100 percent say 5NN or 55N; the purists, 599. There are very few bad-notes these days.

"Tone" is a hang-over from the old days. It was difficult to get a pure DC note. Looking in my logs for the early 1930's, I find reports ranging from "raw AC", "RAC" (rectified AC, no filter), "smooth RAC" (a little filter), and up to "PDC" (pure DC).

Changing AC to DC involved "self-rectifying circuits," chemical ("slop") rectifiers, or expensive tube diodes — either high vacuum or mercury vapor.

Iron core chokes with high voltage (HV) insulation were few and far between. Many were homemade from formulae in the ARRL Handbook (area of core, wire size and turns, core air-gap if any, etc.).

Also, HV filter capacitors were scarce and expensive. Scrounging from old radios was tough because most were rated at 180 to 200WV DC. My log shows calculations for a series-parallel combination of 12 capacitors, for a total of 2/7ths of 1mfd. across the HV leads. "Note much better!", the log says.

Well, war surplus capacitors, chokes and transformers solved all that, along with inexpensive HV rectifiers and diodes. *Anybody* can have a PDC note now.

A rough or bad note is so rare these days that we don't need to mention it every QSO — unless it *demands* mention-

form of prayer for world peace during such an event would make a small dent of the course of world affairs.

The varied backgrounds of the people represented should have some impact on thinking about the future of mankind.

EDWARD ERICKSON, W2CVW
South Amboy, New Jersey

service now, and perhaps to help out some youngster getting started down that primrose path we have each delighted in following.

There are literally thousands of applications for used equipment in each of our hometown areas, and many of them are equally deserving of attention; there is simply no room here to list them all, but a few will get your minds moving in the right direction. Rigs and associated equipment or appurtenances are sorely needed by schools, camps, Courage HANDI-HAMS, Civil Defense, FEMA, DSA, National Weather Service, fire and police departments, and our many clubs with active Novice classes, among countless others.

Perhaps your donation of useable and serviceable equipment now will be just what is needed to get new hams on line or to provide that equipment needed by present-day hams to provide the vital service to the public that will keep this hobby active and thriving.

Think about it now, while you can still do something about it, and before the spouse cleans house for you or a good piece of equipment self-destructs on your shelf!

JERRY MURPHY, K8YUW
Lakewood, Ohio

ing. In that case, a better description than 595, or 572 is needed. (Who can define a Tone of 5 or 2 right now?)

If we drop the "T" from the RST system, it would save about 100,000,000 "9's" and/or "N's" in a year's time. DX-peditions would save fuel, time and writing when on CW. (They give *everybody* 599.) For the die-hards, a Tone is more apropos these days for the SSB transmissions, in the sense of "audio and signal quality."

There are many, many SSB signals on the air, whose perpetrators *need* to be told that they are:

- T-1 Utterly unreadable — over-processed to death.
- T-2 Think I can copy, but turn down the drive.
- T-3 I can copy anywhere — over a 15 kHz band.
- T-4 Your processor is almost adjusted right.
- T-5 Sounds good — don't change a thing.

In the past, a bad CW note usually was the result of the lack of certain equipment. Nowadays, a rotten SSB signal usually is self-imposed, aided and abetted by the theory that "if a little is good, then a *lot* will be even better!"

Unfortunately, over-processing (or over-driving) only results in audio garbage (never mind what your wattmeter might say).

So let's drop the "T" from RST on CW, and then possibly consider an optional rate system for phone signal quality.

Your friends may accept a "number" criticism better than a bald "Your signals are lousy, Garfield! Get the marbles out of your mouth!"

The Viscount of Nostalgia/

Lenore Jensen, W6NAZ

With nostalgic music high on the hit parades of many, Floyd Fellows, WA4CLG has come up with an album of "brand new" songs that sound like the popular music of a few decades back.

In St. Petersburg, MS Records was looking for new material. One of Floyd's many talents has always been the writing of songs. So he packed some up and took them to the producers.

"I guess they liked what I had because they selected about a dozen, got the band and singers together and made the records," he said. "It was about that time that I acquired the title 'Viscount of Nostalgia.'" (Later, he found out that in the English peerage, a viscount is between a baron and an earl in rank.)

The album is called "The Sounds of Nostalgia," and Floyd's had fun appearing on the "promotion circuit" to tell about it.



Floyd Fellows, WA4CLG

He inherited his talent from his father who was known as "Fellows, the Piano Man," and ran a music store in upstate New York. So music was an important part of his growing up.

"I'd heard songs in my head for a long time and in high school there was a course in melody writing. I took it and now, 50 years later, I'm still at it." He learned to play the saxophone and naturally was in the school marching band.

But he was not destined to earn his living with tunes. Radio and electricity beckoned. After WWI, Floyd was experimenting with Ford spark coils and rotary spark gaps, the latter assembled from an erector set. In high school he was the local expert on radio, giving lectures to various groups. He built broadcast receivers of one tube design, for a store.

"Then," he recalls, "the famous Armstrong regenerative circuit would bring in distant stations, so the store I built for was telling customers that by a minor wire change, the set would become regenerative. So sets were sold with no infringement on Mr. Armstrong's patent. The buyer made his own change!"

His ambition to be a radio engineer led him to Rensselaer Polytechnic Institute at Troy, New York in 1925, only to learn there wasn't a radio engineer (R.E.) course except for one class. So he wound up with an E.E. (Electrical Engineer), and later became a licensed Professional Engineer in several states. He's a life member of IEEE (Institute of Electrical & Electronic Engineers).

Floyd became a specialist in generators,

power units, transmission lines and transformers.

Meanwhile, he had learned to play the piano well and managed to turn out a number of songs which were recorded, but during the Depression, music was certainly not profitable. But he did get a combo together and played at social events and clubs.

After a period of working for the Stevens Engineering Company of New York, he moved to serve as chief power engineer for the Vanadium Steel Corporation in Cambridge, Ohio.

About then he became WA8FLE and over the years has held WB2KLQ,

WA5RDI and WA8ZJH before becoming WA4CLG.

He became a 5 when he was director of engineering for the New Mexico Public Service Commission and a second-time 8 in Cincinnati when he was with the Emery Chemical Company.

Today he calls himself "unretired," as a consultant — especially on solar energy applications and energy conservation. He's even designing and supervising commercial swimming pools in his sunshine-filled state. Investigating "black box" hoaxes is another of his interests.

But probably his greatest zeal is for music that's "for the young at heart and

young hearts." While most of his songs are of the '30s, '40s, '50s and '60s in spirit, he has at least one lovely melody with words that fit modern Gospel, starting:

*"If only you'd believe,
There'd be no cause for tears,
Your faith can move the world,
And scatter all your fears..."*

Floyd Fellows' full life has given him a strong philosophy. □

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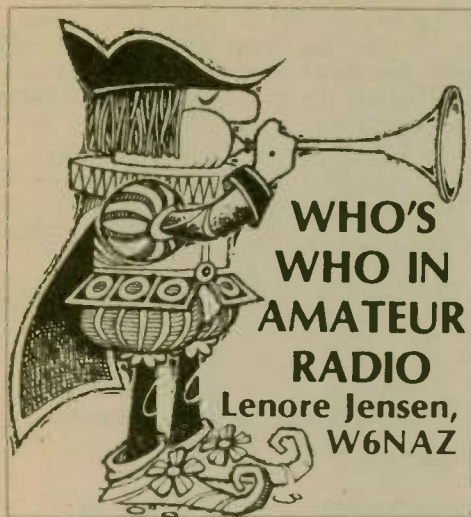
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If you know of a YL operator still active after 62 years on the air, she probably is Elizabeth Zandonini, W3CDQ, of Washington, D.C.

"Liz" has made ham friends worldwide and QSOs, many of them each afternoon between 3:00 and 4:00 p.m. from her home station "on CW, please note." Strictly a code operator "on my 1922 hand key" she operates at 20 wpm. She points out, "I never could use a bug; I like my old key." (Liz is an ardent booster of CW: "Every licensee should know CW... its discipline can transfer over to voice operation.")

She had shunned microphones until 2 meters became popular, an FM mode which keeps her in touch with her long-time pals of the Rock Creek Radio Club.

Now looking forward to her 87th birthday on 11 December, Liz remembers the time in 1917 when she took a National Radio course, hoping to become a ship operator with her new commercial license. World conditions changed that, but before long she was teaching code to hospitalized veterans wanting new positions.

"I remember, at Fort McHenry, an officer had a spark gap transmitter and that further 'sparked' my interest."

In 1921 she obtained a job at the Bureau of Standards, as the only woman in its radio section of 21 persons.

"I worked at the first WWV as a Radio Aide, doing most everything. We took measurements, wound coils, made receivers, tested things and the like. Then they had me translate radio items from foreign magazines." (Her father had taken the family to Italy for a while when Elizabeth was a child, where she became familiar with other languages.) "And we put out a now famous publication — *How To Build A Crystal Set From An Oatmeal Box*." More than 20,000 copies were distributed.

When Liz decided to get an Amateur license in 1922, "The Radio Inspector found I could not copy CW at 5 wpm, so I said to please try me at 20. That I could do easily, so I passed. Hi.

"I built my first receiver and transmitter, a one-stage 5-watt job." (Liz deplors that youngsters nowadays do not usually have the fun of building.)

As the Bureau grew along with radio, it established field stations around the world, many of them manned by hams.



Liz Zandonini, W3CDQ, on-the-air 62 years.

"From my own station, I became friends with many of them." In fact, she became friends with many overseas stations. "I have a number of pen pals, too, over all these years."

One of her assignments at the Bureau, easily understood by those who know this active, charming lady, was to be a guide for visitors. Thus her circle of acquaintances grew larger and larger. "You can understand that those of us who live in D.C. feel we are where the action is!

"I had forgotten, but 30 years later, Herbert Hoover, Jr. (the first W6ZH, a call now held by his son), reminded me that I had helped him set up his ham rig when he worked at the Bureau during a Christmas vacation as a young man. He later became president of ARRL and was speaking at a convention."

She remembers several very special occasions due to a traditional activity ARRL formerly sponsored. Before the inauguration of a president, the League invited amateurs in each state to relay a message to the new head of the country. D.C. hams would go in a group to deliver the messages. "We did this for five presidents. Mr. Roosevelt and Mr. Truman each met us in person."

"Huey Long of Mississippi sent a 250-word message and we took turns copying it," she reported.)

Liz is an ardent joiner of Amateur Radio clubs, is a 55-year member of ARRL and attends most of its conventions as well as those of YLRL. An enthusiastic traveler, she's visited Europe often to say hello in person to familiar calls. Cordial hosts and hostesses welcomed her warmly. One ham in Brussels owned a

large restaurant and gave a champagne party in her honor. She welcomes visitors here, in turn.

How come she could travel so much?

"After all," she smiles, "I never married and had no troubles of any kind!"

Most clubs she joined soon recognized her abilities and would elect her to all their offices. Also, she belonged to IRE.

Since she retired for the Bureau of Standards, W3CDQ enjoys 20 meters and CW, running 100 watts to an indoor antenna. "It's a multi-band dipole, exactly 66 feet long. My good friend Ethel Smith, K4LMB, and her OM helped me put it up and we were delighted to find the attic the exact length!" (No outdoor antennas are allowed in her neighborhood, but she gets out as well as many stations with beams.)

Among her many trophies is one honoring her as "Member Of The Year" by the Antique Wireless Association.

What has Amateur Radio meant to W3CDQ? Liz answers promptly, "Friendship!" Her many admirers agree.

Happy Birthday, Liz!



Richard D. Swanson, KA0GUJ, of Wellman, Iowa has won the Station Appearance award for September. He's proved that you don't have to buy a lot of expensive equipment or build a large console to have an attractive, efficient station. He describes his equipment and accomplishments as follows:

"I am going on five years as being an amateur with the present General Class license.

"About a month ago, I upgraded my HF equipment to a Kenwood TS-130S, but 20 days after I bought it, the rig decided it did not want to work on 20, 15 or 10 meters. So, as it was still under warranty, I sent it back to the dealer I bought it from. As luck would have it, I still had my Swan 500 in a box in my attic. So am getting by until I get my Kenwood back.

"The present equipment I use is a Swan 500 with Swan 117XC power supply/speaker with Swan WM-2000A SWR/wattmeter, MFJ-941D tuner, Shure 450 desk mike. The other equipment in the picture is my Astron RS-20A power supply with MC-50 desk mike for my Kenwood TS-130S transceiver. Antennas are 40-meter inverted Vee at 35 feet and a Hy-Gain TH3JR Tribander at 40 feet on a Rohn tower.

"I have WAS for CW and will apply for WAS SSB in a few weeks. I also do a little county hunting, but don't get much time to check into the County Hunters Net."

Richard will receive a free year's extension of his subscription.

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The locomotive driving Ham's daughter?

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The circus owner Ham's daughter?

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The lightning rod maker's daughter?

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The transformer maker's daughter?

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The microphone maker's shy daughter whom you have to push to talk?

The meter maker's daughter?

She has great measurements.

The meter maker's musical daughter?

She can do all the scales.

The magnet maker's daughter?

She showed great reluctance.

The Army man's daughter who showed a capacity for violence?

They inducted her.

The theater manager Ham's daughter?

She reacted when O. Henry was in the circuit.

©J. Horlock, KA3NHB, 1985

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AWARDS



St. Louis Award

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Cost of this award is \$1 (or 4 IRCs). For DX stations, air mail is 6 IRCs.

This award can be endorsed once for single band and mode on the original application, or for 2 IRCs at a later date.

The 10 cards must be in your possession for this award. Apply with a list of the cards which have been certified true by another amateur and yourself.

Address all applications to: Jim Glasscock, W0FF, 3416 Manhattan Ave., St. Louis, MO 63143.



Zone 4 Award

Issued for working one station in each of the call areas of zone 4 on the WAZ list.

Required call areas are as follows: VEs 3, 4, 5 and 6; W/K 4 (Kentucky, Tennessee or Alabama only); W/K 5; W/K 7 (Montana or Wyoming only); W/K 8 (Ohio or Michigan only); W/K 9; and 0 for a count of 10 cards.

Cost is \$1 or 4 IRCs; DX air mail 6 IRCs. Application certified true by yourself and one other amateur.

Send application to Jim Glasscock, W0FF, 3416 Manhattan Ave., St. Louis, MO 63143.

Nominations open for Elmer Award

Named in honor of all the "Elmers" who, since Marconi, have given of their time and talents to help others become Amateur Radio operators, the Northern New Jersey Chapter of QCWA has established its "Elmer Award."

The award will recognize as "Elmer-of-the-Year" the radio amateur in northern New Jersey who has done the most to pass on the knowledge he or she has gained over the years to the next generation of Amateur Radio operators.

The award will consist of two ap-

propriately engraved plaques. The first will carry the name of each year's winner and rotate annually; the second will carry the name of the current year's winner and may be kept permanently.

The winner will be selected by a panel of five judges, three of whom shall be members of the Northern New Jersey Chapter of QCWA; two will be prominent local amateurs.

Presentation of the award will be made to the 1985 winner at the chapter's annual meeting, in the fall of 1985 (the date to be announced later).

Rules

1) Nominations for the award may be

made by any licensed Amateur Radio operator in northern New Jersey.

2) Nominees must be licensed Amateur Radio operators who reside in northern New Jersey.

3) Each nomination shall be accompanied by a statement (of 500 words or less) detailing the reasons the nominee is deemed worthy of the award.

4) All nominations must be received on or before 14 September 1985 by the chairman of the Chapter's "Elmer Award" Committee.

Please direct all communications to: John J. Brischler, W2SGI, 34 Franklin St., Little Ferry, NJ 07643; (201) 641-4251.

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Activities Calendar

- 24-25 August JARL All Asian Contest (CW)
- 14-15 September DARC European DX Contest (SSB)
- 26-27 October CQ World Wide DX Contest (SSB)

Refer to Frank Anzalone's column, ('Contest Calendar' by W1WY), in your latest issue of CQ for details.

W-100-N

The following DXers were awarded Worldradio's Worked 100 Nations certificates:

- 256. DL9XW Hans-Peter Gunther
- 257. HH2WL Larry Wilson
- 258. NE8Q Harold J. Crosthwaite

Sometime back we announced that it would not be necessary to submit the QSL cards for this award. All that would be necessary was a signed statement by two licensed amateurs that the applicant did have the cards in his possession. We did receive one application with the cards plus the signed statement. This was not necessary. By sending your cards it costs additional postage to send them — plus the fee of \$7.50. With our new plan you save the extra postage and another \$2.50 on the application fee. Complete information for this award is available from N6JM.

Mount Athos (SV/A)

Last month we commented on the dim future of operations from Mount Athos. In the July 8th issue of "QRZ DX" Bob Winn, W5KNE, reports that Frank, DL7FT, claimed to be on Mount Athos and came on the air Friday, 28 June. He was reported to have stated that he had no written permission and that no one for the past 10 years has had permission to operate from there. He had been on the air many times since that date, although it is not known if he was on Mount Athos at the time. "QRZ DX" goes on further to state:

"Evidently, Frank was trying to make a point by operating from Mount Athos without permission, because he suggested that everyone send their QSLs to W3AZD at the DXCC Desk in an attempt to get his operation accepted for DXCC credit. There is no indication that Frank's ploy will work, because without documentation the cards will not be accepted for DXCC credit." Not only that, W3AZD is not the QSL manager for DL7FT/SV/A.

Fermadec Island (ZL8)

It appears that there will be some more activity from Kermadec Island this fall. Chris, ZL7OY, (formerly ZL4OY/A), will be going to the island as a member of the weather crew in October. The call Chris will be using will most likely be ZL8OY.

Djibouti (J28)

At least two stations have been reported from Djibouti during the month of June. The most active one is J28Ei who has been reported on four bands, which include 3.506 MHz at 0145 UTC, 10.106 MHz at 2238 UTC, 14.024 MHz at 0320 UTC, 14.251 MHz at 1645 UTC and 28.558 MHz at 1228 UTC. He has been on at other times in addition to those above.

Not so active is J28EF who was reported only once. He was found on 7.073 MHz at 2252 UTC.

New Caledonia (FK8)

Recently active from New Caledonia is Sharad Sahai, FK0AT. He has been reported in lower reaches of 20 meters — mostly the Extra sub-band on CW. Look for him near 14.010 MHz after 0400 UTC. Sharad has also been worked on 80 meters around 1015 UTC on 3.533 MHz.

For many years Sharad had been active from Guadeloupe signing FG7AS. If anyone needs a card for a FG7AS contact, or from any of his other operations that include HW7G, TK7GAS, TO7GAS and VP2AW (August 1980 CW operation only), you may send your requests to P.O. Box 2899, Noumea, New Caledonia.

French Polynesia

Northern California DX Club member, Ross Forbes, WB6GFJ, is out in the Pacific again doing his thing. Ross was signing FO0FB until August 1st, followed by a few days of operating from the Cook Islands as ZK1XE.

Wallis Island (FW8)

Active from Wallis Island is Francis, FW8AF, who expects to be leaving the island within a few months. When he leaves there will be no activity from the island.

"The Long Island DX Bulletin" reports that Francis is on almost daily near 14.250 MHz from 0001 UTC. He also



Here's the editor of "QRZ DX", a recent visitor at the Fresno DX Convention. Bob Winn, who when not busy putting out the bulletin, is busy chasing DX with the call W5KNE. Notice the buttons "I love DX" and "I love CW?" (Photo by N6JM)

keeps a schedule with F8RV every day on 14.275 MHz at 0800 UTC. Upon completion of his schedule he listens for DX calls.

Other spots on the bands and times should also be checked as FW8AF has been found way up at 14.309 MHz at 0430 UTC. All QSL cards for FW8AF should be sent to P.O. Box 92, Matautu, Wallis Island.

Kirghiz (UM8)

At least six different stations have been reported active from Kirghiz during the month of June.

Kirghiz is one of the Soviet Republics. If you get out your map you will find it deep in the Asian continent next to the western edge of China.

Wake Island (KH9)

Presently on Wake Island working for the Meteorological Service is Tom, AH9AC. He won't be there long and probably will be departing in a couple of months. He has been worked on 14.179 MHz around 1300 UTC. Some DXers asked him for a CW contact, which he honored — on the same frequency. Forty

meters activity is planned. All QSL requests should be sent via Box 445, Wake Island, via Hawaii 96898; or via his QSL manager, W1ISD.

Republic of Zaire (9Q5)

Look for Orv, WA9PCI/9Q5, who has been active on 14.260 MHz on Tuesday and Thursday from 2100 UTC. Also, reported on the band is 9Q5MA, who has been worked on 14.220 MHz at 0700 UTC, and on 14.183 MHz at 2000 UTC.

Sao Tome (S92)

Luis, S92LB, appears to be a very popular person on the bands recently. He has been found near 14.227 MHz usually accompanied by CT4NH. He speaks very little English and finds it difficult to copy with the pile-ups from the hungry DXers who need Sao Tome.

As a result it appears that Luis will be workable only via the DX nets. He has been invited into the International DX Association Net that meets on 14.236 MHz, and he has also been appearing in Snooky's Net on 14.183 MHz most days around 1900 UTC. He has also been worked near this frequency from 1830 to 2100 UTC. An attempt by S92LB to work 15 meters on 21.300 MHz from 2000 UTC has eased the tension on his end.

Chad (TT8)

Activity from three stations has been reported for the month of June and there is the possibility of another surfacing.

Eric, TT8AK, formerly FK0AQ, has been reported on 14.227 MHz from 2200 UTC, and has been keeping the Europeans happy with 75-meter QSOs on 3.799 MHz around 2350 UTC, and up on 15 meters on 21.203 MHz at 1410 UTC.

John, G3KQL/TT8, who works for an oil company there and has been worked near 14.225 MHz from 1900 UTC. He is reported to be living in a shipping container at Sarh, in southern Chad. He will be on vacation part of the time but should be available from mid-September until the end of the year.

Gordon, KA4JRY/TT8, has been filling in the gap in John's absence, operating from the same location. After a short vacation this summer he should be back in Chad for a year.

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Lastly, Larry, N7DF, of the Kansas City DX Club, may have hit the bands from Chad during a 90-day assignment to the American Embassy in N'Djamena. Larry also hopes to be able to operate from other African locations, such as Sudan, Southern Sudan, etc. QSL chores will be handled by Larry's brother, K0HGW.

Rodriguez Island (3B9)

We received a note from Franz Langner, DJ9ZB, a member of the most recent Clipperton DXpedition, concerning a new operator on Rodriguez Island. Robert Gerard Felicite is the first resident radio amateur on the island and has been assigned the call 3B9AA. Franz reports that he is trying to help him come on the air, but needs an HF transceiver.

As he doesn't have much in the matter of funds, and what he does have goes to the support of his mother and sister. Anyone who could come through in the way of QSL cards, antennas, etc., might contact Bert directly at Victoria Street, Port Mathurin, Rodriguez Island, or you might contact Franz at Carl Kistner Str 19, D7800 Freiburg, West Germany. I would suggest contacting Franz first to see what he has to say. Bert is 28 years of age and was born on the island.

If you can't wait for 3B9AA to come on the air perhaps you should scout around for 3B9CD who has been reported active in June on at least three bands. On 75 meters he was found on 3.799 MHz around 0045 UTC; 40 meters he was near 7.003 MHz after 0215 UTC; and on 20 meters he was at 14.199 MHz at 0345 UTC.

Prefixes

Up across the border, residents of Lethbridge, Alberta, were authorized to use the special prefix VX6 from July 14 to 27, to celebrate the 100th birthday of that city.

"QRZ DX" reports that certain stations in Belgium have been authorized to use the special prefix OT to celebrate the 150th anniversary of Belgian Railways.

Greece (SV)

Ernest Bracy, W1BFA, sends us a note regarding the recent J4ATC operation from Athens, of which he was the operator. He says that 1722 contacts were made in 80 countries with all contacts made on 20 meters, mostly SSB.

The special call sign J4ATC was assigned to the IFATCA-Conference station to commemorate the 24th Annual Conference of the International Federation of Air Traffic Controllers' Associations, 18 through 22 March 1985. Credit for the operation of the station also goes to Spiros Stefanou, SV11R, and the Radio Club of Athens, SV1SV.

If you still need a contact with this country there were several that were reported on the air during the month of June.

SV1JG	14.200 MHz	0530 UTC
SV1OL	14.182 MHz	0300 UTC
SV1PL	14.152 MHz	0630 UTC
SV1RK	14.197 MHz	0800 UTC
SV1TY	14.056 MHz	0515 UTC
SV8CS	14.250 MHz	0530 UTC
SV8RX	14.178 MHz	2300 UTC
SV0DT	14.183 MHz	2100 UTC

Fernando De Noronha Island (PY0F)

Vasco, PY0FG, a member of the Brazilian Air Force, is now stationed on the island. He only holds a Class B ticket, which allows him only to operate 40 and 80 meters, phone only. On 75 meters he has been reported near 3.795 MHz between 2200 and 0300 UTC. Anyone wishing a schedule with him should make arrangements through PT7WA.

IOTA

The following islands have been reported in the pages of "DX News Sheet"

EU-07	Basket Island	EJ2B	(DXpedition in July)
EU-09	Orkney Isles	GM4YBJ	14.191 MHz 1200 UTC
EU-10	North Uist	GM3ILU/A	14.237 MHz 1715 UTC
EU-12	Shetland Isles	GB4LER	28.503 MHz 1315 UTC
EU-14	Corsica	TK/DK9CG	28.502 MHz 1330 UTC
EU-15	Crete	SV0DT	28.562 MHz 0930 UTC
EU-16	Brac Island	YU2CPB	14.214 MHz 1915 UTC
EU-17	Lipari Island	ID9XRU	14.160 MHz 2030 UTC
EU-30	Bornholm Island	OZ4XR	28.545 MHz 1645 UTC
EU-32	Ile de Re	F6AXP/RE	(DXpedition in July)
EU-45	Ventotene Island	I2DMK/1B0	14.167 MHz 0900 UTC
EU-52	Zante Island	SV8RX	14.176 MHz 2045 UTC
EU-73	St Paul Island	IJ7ET	(DXpedition in July)
EU-83	Palmaria Island	IP1VXA	14.187 MHz 0800 UTC
AF-18	Pantelleria Island	IH9ZYP	14.097 MHz 1830 UTC
AF-23	Sao Tome	S92LB	21.300 MHz 1900 UTC
AF-42	Alboran Island	EH9IA	14.210 MHz 0700 UTC
AS-03	Sri Lanka	ON5OS/4S7	14.182 MHz 1630 UTC
AS-05	Dickson Island	UZ0BWC	14.020 MHz 0900 UTC
AS-18	Sakhalin Island	UA0FF	14.175 MHz 1800 UTC
AS-29	Stolbovoy Island	UZ0QXG	14.064 MHz 1630 UTC
NA-04	Pelican Island	N5FHR/1P1	(DXpedition in May)
NA-09	Prince Patrick Is	VE8MC	14.184 MHz 1645 UTC
NA-18	Greenland	HB9APJ/OX	(DXpedition in August)
NA-46	Chappaquiddick Is	KV1B/1	14.172 MHz 2045 UTC
NA-58	Hilton Head Island	N9NN	14.020 MHz 1645 UTC
NA-83	Cobb Island	N3GR/3	14.253 MHz 1830 MHz
SA-01	Easter Island	CE0FQU	28.515 MHz 2245 UTC
SA-03	Fernando da Noronha	PY0FG	3.795 MHz 2215 UTC
SA-04	Galapagos Islands	HC8E	(DXpedition in August)
SA-12	Margarita Island	YV7AXM	28.534 MHz 2100 UTC
SA-23	Itaparica Island	PT7BR/PY6	21.254 MHz 1615 UTC
SA-26	Santa Catarina Is	PP5OW	21.265 MHz 2030 UTC
SA-29	Grande Island	PY1ZAK	14.277 MHz 2015 UTC

In addition to the above reports DXpeditions to Christians Island (EU-30) by OZ4CHR and Rugen Island (EU-57) by Y24DO/P are planned for the month of August.

Obviously, many of the above frequen-

cies and times are not workable in the Western Hemisphere this time of the year. They are listed only for the purpose of letting you know what is available and if you hear them you will know where they are.

VR6EO and VR6HB respectively.

Silent Keys

There have been several well known DXers who have become Silent Keys recently. In addition to Don Wallace, W6AM, the DX community was sad-

Pitcairn Island (VR6)

There is another operator on Pitcairn Island. Jim, G3OKQ, a member of a volunteer crew to help repair the main jetty built in 1977, arrived on the island Saturday, June 1st. He has been assigned the call VR6JR and has been operating from Tom Christian's station since June 7th. Both he and Tom, VR6TC, have been active near 14.180 MHz from 0200 UTC. Jim should be there for about five months and will handle his own cards when he returns home. Also, check higher in the band near 14.220 MHz. Around 0700 UTC he has been reported on 7.195 MHz and at 0930 UTC down on 75 meters on 3.795 MHz.

YL Kari, VR6KY, has been worked near 14.273 MHz at 0615 UTC along with another station VR6AB, found near 14.193 MHz at 0300 UTC.

Leona Wallace, WA6OHB, sent us some additional information on another Pitcairn call taken from "Pitcairn Miscellany" a few months ago:

"Ham operators around the world may have heard the new call sign, 'VR6IM' coming from Pitcairn and may well be wondering who the new ham operator is.

"Following an incident earlier this year when, somehow it appeared that ham messages may have caused some confusion in a medical matter, our Administration forwarded a directive requiring all ham operators on Pitcairn, discussing any medical matter by ham radio to change their call sign to VR6IM. All such medical calls must have the authority of the Medical Officer and the Island Magistrate and are to be logged in a different book.

"So if you are a ham operator and you are wondering who VR6IM is, then wonder no longer."

Leona and her husband, Carl, were on Pitcairn Island last November signing

dened to hear the passing of Father Dave Reddy, CE0AE, of Easter Island. Father Dave suffered a major heart attack and stroke on Tuesday, June 4th, and died at 0025 UTC on Thursday, June 6th. There are many of us who received our first Easter Island contact from Father Dave. A photo of CE0AE was in our column in the December issue of Worldradio.

Sebastiao Mattos, PY1SM, died of a heart attack recently. He was less than one month before his 100th birthday! He was active up to the time he became a Silent Key and must have been the oldest active radio amateur in the world!

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CWRJ Award

Diploma CWRJ (CWRJ Award) will be issued by the Rio de Janeiro CW Group to any licensed amateur for confirmed contacts with 20 different stations in Brazil with the PY1 prefix. All contacts must have been made since 16 December 1980 and must include at least five CWRJ members, also an endorsement to this award for each additional 20 contacts with PY1 stations, including one CWRJ member for each series of 20.

To apply for this award send your certified list of contacts with a fee of 10 IRCs to CWRJ, P.O. Box 621, 24000 Niteroi, RJ, Brazil. As this is an award sponsored by a CW group all contacts must be via CW.

GPCW Award

This award, Certificado GPCW, is sponsored by GPCW (CW Group) of Brazil. The requirements for this award are to work at least three different members of GPCW since 05 November 1973, and all contacts, as above, must be on CW. A minimum signal report of RST 338 is required.

To apply for this award prepare a certified list of confirmed contacts and send, with a fee of 5 IRCs, to GPCW, P.O. Box 556, 11100 Santos, SP, Brazil. There is a special award for SWL stations.

CWSP Award

Here is another CW award that is offered by the Brazilians. This award is offered by the Grupo de CW de Sao Paulo and requires contacts with at least five different members of that group. All con-

tacts must have been made since 15 October 1976. This award also includes endorsements for each additional 10 PY2 contacts for a total of six.

To apply for this award prepare a certified list of contacts with a fee of 10 IRCs and send to Grupo de CW de Sao Paulo, P.O. Box 15098, 01000 Sao Paulo, SP, Brazil. Include one of your QSL cards with your application.

Brazil CW Award

This group also offers the BRCW Award (Brazil CW Award) to any licensed amateur who has worked at least 15 different States or Territories, including Fernando de Noronha and Trindade Islands. To qualify for this award you must hold the CWSP Award with its six endorsements. To apply for this award send your list of contacts with a fee of 10 IRCs to the above address.

Check back through your QSL files for your PY cards. With the band conditions the way they are during this part of the cycle it is a good time to catch up on paper chasing. Again, all of the above four awards must be CW only.

Clubs

The Northern California DX Club recently elected their new slate of officers that include Kip Edwards W6SZN, President; Smitty Smithwick K6TMB, Vice-President; Ron Pantan W6VG, Secretary, and Jim Knochenhauer W6ITL, Treasurer.

The club meets the second Friday of every month, usually at Harry's Hofbrau in Palo Alto. All DXers are invited to attend. Further details are available from P.O. Box 608, Menlo Park, CA 94026.

1986 International DX Convention

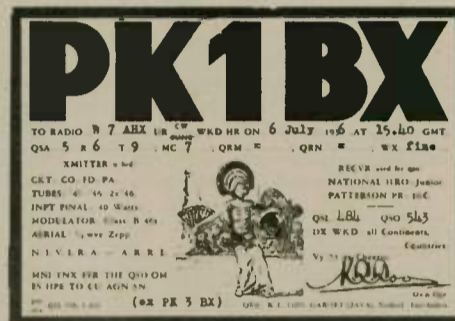
The Southern California DX Club, host of the 1986 annual DX convention in California, announces that the convention will take place April 18, 19 and 20, back in Visalia at the Holiday Inn. This comes to us as a big surprise as the prime reason for moving the convention away from Visalia was the required amount of space for this size of a convention. Only 225 rooms will be available, (and that's the total amount of rooms that are available there). The crowds were just getting too large and Visalia could no longer support such a crowd.

Perhaps the clubs in California should get together and host the convention at a different location entirely each year. One year the Southern club could host it in Los Angeles, the Northern club would have it the next year in the Bay area, and

perhaps some of the other DX clubs in the state could also host the convention in their area. That's the way it is done with the Pacific Northwest DX Convention up north. — N6JM.

Antique QSL Department

We checked back through our QSL files for these two this month. The first one is from George Heitzman, W7AHX, of Venta, Oregon, for a contact he made with PK1BK on July 6, 1936. This one is a colorful card in that the call letters and sketch are in green, the border and printing is in blue, plus a little printing in red at the bottom. The operator is given as K.L. Loo, ex-PK3BX, of Garoet on Java in the Netherlands East Indies. George was living in Eugene, Oregon, at the time of the contact.



The second card is from the estate of the late Roy Weisbach, W9UX, and formerly W9PST, NU9UU. This contact dates back to May 29, 1928, for a contact made with SB1AW in Rio de Janeiro in Brazil. As mentioned in the past issues the prefixes were simple; 'S' for South America, and 'B' for Brazil. Likewise for Roy, where 'N' stands for North America, and 'U' for United States. This was a pink card with purple and red printing.

QSL Information

Most likely the most pressing item on QSL cards is where are the CE0AA cards. A few months ago we told you to write a letter to the Radio Club of Chile explaining your situation. Later, we added some follow-up addresses. The July issue of "Bulletin" the official newsletter of the Southern California DX Club, edited by George Morris, W6ABW, had this to say: "If you have not yet received your CE0AA QSLs, write directly to Mickey Gelerstein, CE3ESS, at the address below. Do NOT enclose any return envelope, QSL, or IRCs. Do NOT put any call sign on the envelope. Make the envelope look like ordinary business or personal mail. Write only a letter detailing the contacts with CE0AA and information on what your original QSL information contained — IRC's or green stamp. Good Luck!!! Mickey Gelerstein P.O. Box 9834 Santiago, CHILE"

Many DXers have already received their CE0AA cards. Those who sent their QSL cards via the bureau route have already received a reply via the same route. Don't worry, yours will come — eventually. Ours arrived on July 10th, being mailed from Santiago on June 25th via

air mail. The envelope contained cards for all the contacts. My 40 meter card was my 100th confirmation on that band.

"QRZ DX" reports that cards for ZD7BJ mailed to P.O. Box 25, St. Helena Island are being returned. No other address was given.

If you need a card from Angelo, D44BS, for a past contact, you may send an SASE to Angelo Mendes, 137 Chestnut Street, New Bedford, MA 02740. He will be here for about two years and has the logs from 1980 up to the time he left.

In regard to the FO0XX and XF4MDX QSL cards they just could already be in the mails by the time you read this.

If you are still looking for your J87J QSL from Bob, K4UEE, it probably will be several weeks before they can be mailed. Bob reports in "QRZ DX" that they still have not been received from the printer.

QSL routes

A35PP	-ZL4QS	IY4FGM	-I4IKW
A92DZ	-G3VIE	J4ATC	-W1BFA
A15TP/TF	-W3HMK	J5WAD	-W6CNA
AM8ORM	-EA8RCP	J6LKL	-KE1A
CT3EU	-G3PFS	J28E1	-PC1JEN
DX1N	-JJ3FMP	JY5C1	-G4WVZ
EF5UIT	-EA5CS	JY9MG	-JR3XMG
EH9IA	-EA7GW	JY9RL	-WA6POZ
FG7AS	-FK0AT	JY9WR	-G4ATS
FO8BI	-FD6HSI	NJ2DVP9	-K2JF
FO8FB	-WB6GFJ	OG3AA	-OH3AA
G3KQL/TT8	-W4BWS	OH0MM OJ0	-OH2KI
HP1AC	-KM7Z	ON4OS 4S7	-ON4OS
HP1XKA	-JA7AGO	ON6TW GU0	-ON7JF
HS4ANH	-OE2REL	P29SN ZL1	-ZL2BOF
HS01YY	-JA8ATG	PT0M1	-W3DJZ
HW7G	-FK0AT	S92LB	-CT10H
I2DMK 1B0	-I2MQP	SV9CS	-Bureau
IBUDB 1B0	-IBQLS	SV0DH5	-Bureau
IP1VXA	-IBPU	T3OAT	-G4GED

Propagation

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

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

You can get a free complete set of these predictions for low angle antennas, Maximum Usable Frequency (MUF) and Frequency of Optimum Transmission (FOT). Requests should be sent to Bill Welsh, W6LS, 2814 Empire, Burbank, CA 91504. Each request should be accompanied by a self-addressed stamped (54¢) envelope at least 9" x 11 1/2".

OCTOBER 1985

UTC	AFRI	ASIA	OCEA	EURO	SO AM
0100	18.2	23.3	26.5	9.9	19.6
0200	13.5	20.1	26.8	9.4	15.6
0300	11.8	17.1	22.9	8.3	13.3
0400	10.9	15.0	18.7	7.3	12.6
0500	10.6	13.5	15.8	7.6	12.9
0600	10.8	12.3	14.5	9.6	13.7
0700	10.7	11.6	14.1	10.7	14.7
0800	10.3	12.2	13.7	10.9	14.5
0900	9.7	12.1	13.4	10.7	15.1
1000	9.1	12.2	13.8	10.2	14.1
1100	9.0	12.3	14.3	9.7	12.2
1200	10.1	11.8	13.6	10.1	12.5
1300	12.7	11.2	12.3	11.9	15.9
1400	15.7	12.0	13.2	15.5	20.6
1500	18.1	13.2	16.0	17.8	24.1
1600	19.7	13.0	13.9	19.7	25.6
1700	20.8	12.4	11.9	18.4	26.2
1800	21.9	13.4	12.5	16.8	27.3
1900	22.8	14.9	15.7	15.0	28.7
2000	23.6	17.7	19.6	12.9	29.8
2100	23.9	20.1	21.9	11.1	30.3
2200	23.8	23.7	22.9	10.2	29.4
2300	23.0	24.8	23.9	10.0	27.4
2400	21.1	24.9	25.2	10.5	24.2

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T31AT	-G4GED	ZC4CZ	-G4MJQ
T32AB	-N7YL	ZC4WW	-G3ZNF
TF5TP	-DL7MQ	ZK1XE	-WB6GFJ
TK5EP	-F6EYS	ZK1XN	-W3VH
TK7GAS	-FK0AT	ZV2BW	-PT2ADV
T07GAS	-FK0AT	ZV2ACW	-PT2ADV
T29WC	-DL4BC	ZV2ADV	-PT2ADV
UM8MU	-W7PHO	3D6AA	-KB5DQ
VK0DJ	-VK3DYL	3V8PS	-IN3RZY
VP2E/NL7G	-KL7GNP	3X0HAB	-DL8CM
VP2M	-K66IP	4S0AA	-ON4OS
VP2MD	-W2RQ	5H3QM	-VE7QM
VR6JR	-G3OKQ	5T5MS	-HB9AAA
	(See Note 1)	5U7LD	-IN3RZY
WA1ZCE/SV8	-WA1ZCE	9J2LL	-I2SB
ZC4AB	-G4SDJ	9Q5MA	-K1VSK
ZC4CW	-G4JFI	9X5WP	-WB6VKD

A92DU - P.O. Box 20712, Manama, Bahrain
A92EM - Frank Jolley, 30 Oban Drive, Blackburn, Lanc. BB1 2HY, England
A92P - P.O. Box 14, Manama, Bahrain
AH9AC - P.O. Box 445, Wake Island, via Hawaii 96898

Improve your QSL'ing techniques

Martin Walton, KD0AE

DX'ing is fun and a serious endeavour, but why let it go down the tube by ineffective and careless QSL'ing, or lack of information?

Listening is of the utmost importance before, during and after your contact. On a list operation or heavy pile-up, never ask the DX station for the QSL route; he will give it, along with his call, every 10 minutes or upon completion of the operation. Never answer any inquiries by anxious DX'ers. Ask the other station after the operation for QSL route, but get it. Your contact is not complete until you know where to send the QSL card.

You know the frequency and the mode (2xSSB-2xCW, etc.), but do you have the GMT time and date correct? Spell out the month as JAN 10 85, not 1/10/85. He may take it as OCT 1 85; result: "not in log". You may use 10 I 85 (Arabic for month). Postal routing is especially important for Indian Ocean Islands and Spanish Africa. If it is a French Island, put VIA FRANCE on the envelope; via Spain or Portugal for those islands.

Assume that all postal systems outside the United States of America are not secure and that any mail that looks like it is going to an Amateur Radio operator or from an Amateur Radio operator contains money, stamps or IRCs, and is an item

Who is reading WORLD RADIO? You are, of course. But there are others. Here is a list of the DX locations in which WORLD RADIO currently has subscribers.

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| Canada | New Zealand |
| Colombia | Nicaragua |
| Denmark | Norway |
| Ecuador | Panama |
| England | Philippines |
| Fiji | Pitcairn |
| Finland | Portugal |
| France | Puerto Rico |
| French Polynesia | Saudi Arabia |
| Germany | Singapore |
| Guam | South Africa |
| Guatemala | Spain |
| Greece | Sri Lanka |
| Hong Kong | Sweden |
| India | Virgin Islands |
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| Italy | |

Do you have an overseas friend you would like to send a radio-related gift, but are concerned about foreign postal regulations or customs charges?

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BY0AA	-P.O. Box 202, Wulumuqi, People's Republic of China
D44BS	-Angelo Mendes, 137 Chestnut Street, New Bedford, MA 02740
FK8EJ	-P.O. Box 672, Noumea, New Caledonia
FK0AT	-Sharad Sahai P.O. Box 2899, Noumea, New Caledonia
FP4CJ	-P.O. Box 37, St Pierre et Miqueion
FY7AN	-P.O. Box 746, Cayenne, French Guiana
HP1AZO	-P.O. Box 6213, Panama City 5, Panama
HP1PK	-P.O. Box 4304, Panama City 5, Panama
HS0A	-P.O. Box 2008, Bangkok, Thailand
IH9ZYP	-P.O. Box 25, Pantelleria Island, 91017 Italy
J88AB	-Ron Bailey, Stoney Ground, St Vincent, W.I.
P29PR	-R. Parkes, P.O. Box 2778, Boroko, NCD, Papua New Guinea
PY0FG	-P.O. Box 10, 53990 Fernando de Noronha, Brazil
PZ1BK	-P.O. Box 1153, Paramaribo, Surinam
S79CW	-P.O. Box 4, Mahe, Seychelles

S92LB	-P.O. Box 147, Sao Tome (See Note 2)
SV0AH	-P.O. Box 55, Rhodes, Greece
TA1D	-P.O. Box 1167, Istanbul, Turkey
T11CUR	-P.O. Box 84, 2050 San Jose, Costa Rica
T12KD	-P.O. Box 523, San Jose, Costa Rica
TR8PC	-P.O. Box 177, Libreville, Gabon
ZD7YL	-P.O. Box 25, St Helena Island
5A3TB	-Mohammad Arifi, P.O. Box 2325, Tripoli, Libya
5B4OS	-P.O. Box 7040, Nicosia, Cyprus
5H3DG	-D. Giles, c/o Stohert Group, P.O. Box 6306, Dar es Salaam, Tanzania
5H3FG	-D. Giles, c/o Stohert Group, P.O. Box 6306, Dar es Salaam, Tanzania
5N8ZH	-P.O. Box 293, Kano, Nigeria
5T5RG	-P.O. Box 322, Nouaghibou, Mauritania
5Z4WC	-P.O. Box 49460, Nairobi, Kenya
6W3NU	-P.O. Box 72, Diourbel, Senegal
9K2BZ	-Abdul-Jabber Marafie, P.O. Box 1262, Safat, Kuwait
9X5BJ	-P.O. Box 626, Kigale, Rwanda

Notes
1. Expect a delay of five months for your card.

2. Another QSL route was given for this station as CT10H.

Our thanks to the following contributors: W1BFA, WA5KBH, KA5NIF, N6OF, WA6OHB, W7AHX, W9LNQ, DJ9ZB, SV0AA, Carolina DX Association (W4WMQ), Kansas City DX Club (AB0X), Southern California DX Club (W6ABW), Western Washington DX Club (K7ZR), "The DX Bulletin" (K1TN), "The Long Island DX Bulletin" (W2LYX), "DX News Sheet" (G4DYO), and "QRZ DX" (W5KNE).

The Mailbox - The DXer's Friend

Hal Godfrey, N6AN

DXing, the masterful art of radio communication - the objective to work as many different countries as possible to earn a variety of awards and for sheer personal achievement. The art of DXing has been written about and discussed these past years; however, little, if anything, has been said about the ultimate and final step in the DX process - the "mailbox". The depository for the final proof of the QSO - the QSL card.

There are many types of mailboxes, all to be treated with equal respect, but the most typical is the one at the end of the driveway, on its spindly leg - an inanimate object - a source of suspense six days a week. To the DXer, the mailbox becomes the focal point of all hope and in some cases despair.

There was a time the mail was a thing to be shunned, or left to pile-up like unshoveled snow, in the hope that like snow, it would eventually go away.

Now, to rock-solid DXers the mail box serves as a potential friend rather than a foe, and as such requires positive action. QSLs must be sent out if QSLs are to be received. The more sent out the greater the reward. Once the QSL cycle has been established the only thing left to do is to maintain a "mailbox vigilance". This is accomplished by several simple rules:

1. Keep the mailbox under selective observation. Don't be trapped into the "watched pot" syndrome by glancing toward the mailbox at such pointless times as breakfast. Wait until mailtime.
2. Rely on your ears rather than your eyes to pick up the mail truck's approach. With a little practice the mail truck's unique ker-chunk can be heard at distances up to 100 yards.
3. Listen for neighborhood dogs, the nemesis of all mailpersons. This is generally proof positive the mail has arrived.
4. Avoid having your wife go to the mailbox. She, more often than not will bring in letters to "occupant", shopping ads, or bills. Worse still, she may sing out, "No QSL cards today!"
5. Exude a brisk assurance and an air of confidence when approaching the mailbox. If the QSL return has been thin the past three or four days, the law of averages is with you. Be positive - say aloud, "That CE0, San Felix card will be here today."

So it is, all alliance with that battered tin tube by the side of the road. Keep up the vigilance, the rewards can be great or at worse, only temporarily disappointing.

worth stealing. They want what is inside as well as the stamps; thus, use two American flag 20-cent stamps and one 4-cent stamp. Absolutely no new 44-cent airmail or commemorative stamps. Cut a snip off one corner of each stamp, thus destroying it as a collector item. Use a business-sized security (blue-lined) envelope with a typed business address such as Walton Engineering Corp., Inc., street address, city, state, ZIP and UNITED STATES OF AMERICA (spelled out) for a return address. Then type the QSL address (NO call signs). Type VIA AIR MAIL twice on the envelope and underline.

For the return envelope, use a regular size security (self-sealing, if possible) type, typing your name, street address, city, state, ZIP and UNITED STATES OF AMERICA (spelled out). Again no call sign. Put the green stamp/IRC in the envelope along with the card and securely seal the business-sized envelope. Never use any tape on the envelope. Do not put VIA AIR MAIL on the return envelope.

In some countries, the DX station may be in trouble if caught with green stamps. In some countries, IRCs are worthless. Find out! One contact per mailing. It is best to get a contact on two bands or more, but each contact is a separate mailing. Personalize your card with a note about you and thank him for the contact. Sweeten the pot and include a couple of commemorative stamps, canceled or

mint. It certainly won't hurt.

Does your QSL card reflect your name, address, city, county, state and United States of America (spelled out) - all on one side of the card with the required contact data? It makes it easier for him or her.

Before you give up on receiving the QSL, wait six months (eight months for DXpedition or rare and large pile-up). Remember, he has to go home, get cards he has received, fill out the cards and mail them. The very recent San Felix Island DXpedition made 31,000 contacts. That's a lot of cards to fill out. For Russia, send your QSL card as an air mail postcard to Box 88, Moscow, with his call sign on it! That's the only way to insure that he gets an American stamp. Remember, until he gets your card, he is not going to QSL. Then wait two-and-a-half to four years, unless you worked him on the Family Hour (14.226 MHz, 1530Z). If you do not have SASE's in the ARRL QSL Bureau, you won't receive any bureau cards.

Stateside QSL managers lose money as a rule on stateside contacts, as some don't include a stamp (or envelope!) for return. An extra 22-cent stamp won't break you. In any case, if you want the card, you pay the postage; the DX station doesn't need your card, and the United States of America is not a rare country.

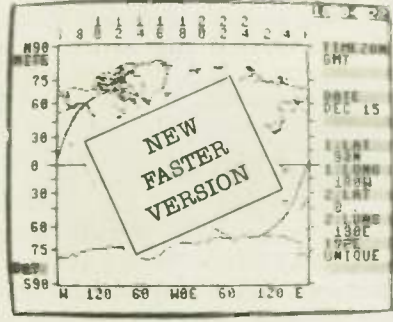
Using this system, I have received cards from 292 countries with two failing to get through or respond. Good QSL'ing and 73 KD0American Eagle Martin

The farmer's daughter

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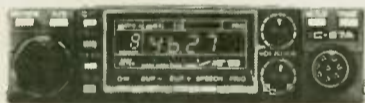
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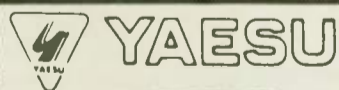
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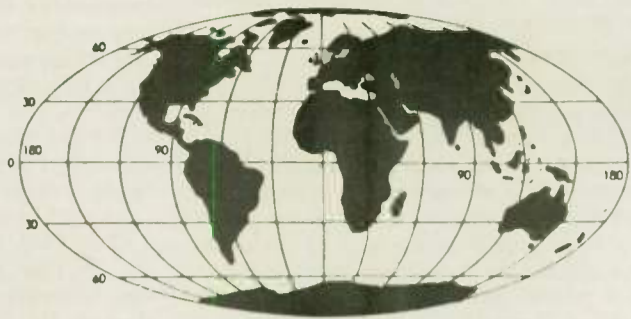


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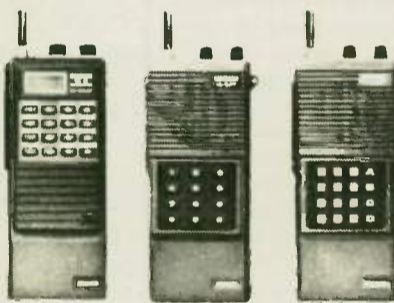
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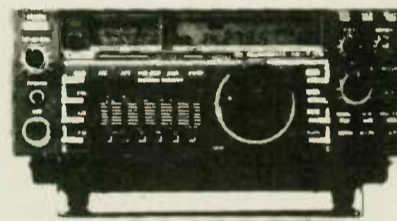
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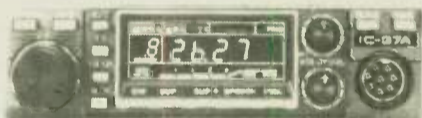
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So you want to be an inventor

In the course of human endeavor, one of the areas of greatest interest is that of invention. If we accept the dictionary definition of invention "1. Act of finding, or finding out; discovery; also that which is discovered. 2. The power to conceive and present new combinations of facts or ideas, to devise new methods or instruments, etc.", there are a great many such new ideas or combinations of facts which should be accepted as "inventions". But try to get a patent for them. You'll run into an unbelievable complex of rules and legal obstacles that defy logic, psychology and simple reasonableness.

For example, in the law of patents, there is no such thing as a positive definition of invention. All of the rules state what is *not* patentable. I defy anyone to come up with a rule that says what is patentable.

The Constitution of the United States Article I, Section 8, clause 8 provides the basis for the protection of what today has come to be known as "intellectual property".

The Congress shall have the power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . .

You will notice that writings and discoveries are included, and that authors and inventors are those to receive the "right" to their writings and discoveries. There is no mention of inventions, as such. It is only an assumption that discoveries include invention, or that they must be synonymous. The Patent Act which is currently in force clears this point up by declaring — "When used in this title unless the context otherwise indicates — the term 'invention' means invention or discovery." (35 U.S.C. Sec. 100a)

Now why, I ask, is it unless the "context" otherwise indicates? It either does or doesn't. I guess this is one of the reasons the law is such a strange business to most people. Always there must be some kind of "disclaimer". And lawyers earn their livelihood arguing over these strange phrases inserted in the laws which make for uncertainty and lead to litigation.

The definition given above of invention came from *Webster's New International Dictionary* (Second Edition). In a later Webster, "Invention is to the contrivance and production of something that did not

before exist. Discovery brings to light something which existed before but which was not known."

Only inventions are patentable; discoveries are not. What is the difference? Well, Newton's laws — universal gravitation, Einstein's laws ($E=MC^2$ and others) — are discoveries, as is the determination of the speed of light.

The Edison electric lamp, kinoscope (motion picture projector) and phonograph are classed as inventions, as are the first vacuum diode (Fleming valve) and triode. The latter is the invention of Lee DeForest.

Under U.S. Patent Law, the classes of inventions are Processes, Machines, Articles of Manufacture, Compositions of Matter, Designs and Plants. It is interesting to note that there is specific subject matter excluded as unpatentable, which we'll consider in a future column. We mentioned discoveries above as not being patentable.

The novel aspects of subject matter which is the result of or that requires, mental activity are not patentable. This is what makes computer programs unpatentable. If, however, the program requires a machine to execute it and cannot be used without the machine, the combination might be patentable if the machine has novel circuitry configurations.

A process patent, sometimes also described as a method patent, would be granted for the novel sequence of steps which constitute the process or method. You might consider these steps much as a recipe. Such patents are granted largely in the manufacturing and chemical industries.

A machine patent would be granted for a novel machine which can be electrical or mechanical. The novelty for a mechanical device lies in a new configuration of parts which achieve a hitherto unexperienced result. An electrical, radio or electronic circuit, a computer configuration, or component not previously known could be patentable. Because "machine" inventions are based on a rule of action and there are so many known mechanical elements, it takes a really clever patent practitioner to overcome the patent examination which precedes the granting of a patent by the U.S. Patent and Trademark Office.

Apart from the fact that the alleged invention must be novel and useful, it must also be unobvious, and this is one of the knottiest hurdles of all to overcome. The "obviousness" rule reads like a "Catch'22":

A patent may not be obtained . . . if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been ob-

vious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Who is of "ordinary skill" in the art? What do they mean by "the manner in which the invention was made"? These are questions which are continually being addressed by the courts. The most difficult aspect of all is who has the means today to engage legal counsel at the going rate of \$200 an hour to resolve the issues in a patent suit, even if the patent is granted. Invention apparently is something the average technical person cannot afford.


There is no reason why an individual can't go it alone. Many patent applications are filed and successfully prosecuted

by individuals "in Propria Persona" (on his own behalf). However, when the going gets rough and the PTO (Patent and Trademark Office) Examiners reject your claims for "obviousness" or some formality which you may not have observed, it's best to seek professional help.

By the time you read this column, the Shuttle Flight 51-F will have come and gone. I hope you were able to make contact with W0ORE, the "Ham-in-Space".

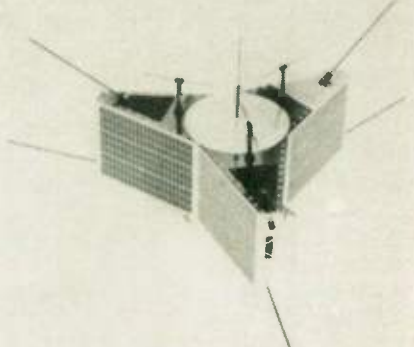
July 15th was the deadline for your letters to the Citizens' Advisory Committee on Commemorative Stamp Issues, Washington, D.C. 20260, urging them to issue a U.S. Commemorative Postage Stamp, or a series of them to honor the 25th anniversary of the first OSCAR Spacecraft coming up on 12 December 1986. □

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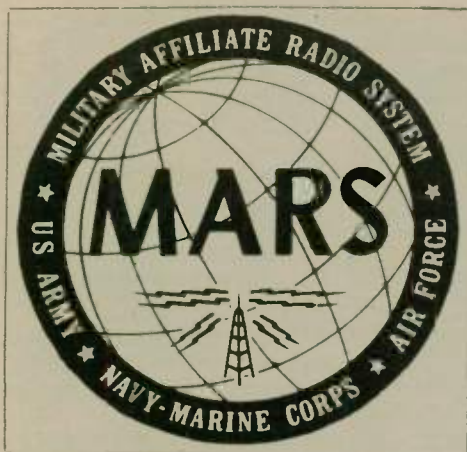
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Military Morse code training to merge

The Defense Department, in a cost-cutting move, has decided to consolidate the manual Morse code training centers of the Army, Air Force, Navy and Marine Corps at Fort Devens Army Base in Ayer, Massachusetts.

In the change, the Air Force will close its Morse code school at Keesler Air Force Base in Biloxi, Mississippi, in 1987. The following year, the Navy and Marine Corps will shut down their joint Morse training facility at Corry Station in Pensacola, Florida.

"The department will realize a net savings approaching \$1 million annually by consolidating this course," said Donald C. Latham, Assistant Secretary of Defense for Command, Control, Communications and Intelligence.

About 550 sailors and Marines learn Morse code annually at Cory Station, and 450 Air Force people do so each year at the Keesler center.

Classes last between two and 38 weeks, but average about 20 weeks.

The changes followed a study by the Inter-Service Training Review Organization, a Pentagon commission studying ways to consolidate duplicate training functions by the services, the National Se-

curity Agency and the Office of the Secretary of Defense.

"This consolidation action continues the DoD goal of increased training effectiveness and efficiency for all services involved in a similar learning exercise," Latham said.

Although advanced computers are becoming a staple in the military, Morse code remains an important form of communication, officials said. The code is a backup language in areas where setting up computer equipment is impractical or in the event the computers malfunction.

— Eisenstadt, *Navy Times*, via W2HBO

Where MARS fits

(Condensed from a speech by Col. Charles Stanley Jr., AAA90P, Deputy Chief of Staff for Operations, U.S. Army Information Command).

Everybody enjoys knowing where he fits into the "big picture." Army MARS's big picture is the U.S. Army Information Systems Command, of which I am Deputy Chief of Staff for Operations. We are a \$1.7 billion operation, with about 33,000 military and civilians stationed all around the world.

What are our operations? Besides MARS we maintain just about all of the Army's communications, plus the Hot Line, plus the Army's Air-traffic control, plus computers, plus audio-visual, plus ... but you will want to hear about MARS, right? Well, let me start by saying that I am an active MARS member myself, and so is my boss, Lt. General Fage. (He phone-patches to the Pacific; I concentrate on U.S. traffic nets.) And I can tell you that last year you folks saved your soldiers and their families over \$1.5 million in message expenses as well as providing about half a million dollars worth of training of our radio operators.

Just as important is the potential MARS has to provide communications under national emergencies when other systems fail or are overloaded. One of my goals is to keep our leaders aware of your capability. For example, the Director of the National Communications Systems knows we are here and is using us for national exercises.

What improvements would I like to see? Well, I would like us to be more involved in communications exercises. To be effective, we must be pros! We must be able to establish networks and pass traffic under adverse conditions. To do this, we must practice and demand quality of operations.

Therefore, we need to instill a sense of purpose in all of our nets — we need to enforce standard voice, teletype and CW procedures. When conditions are poor — don't just complain and let our potential enemy know of our frustration. Take advantage of the situation by establishing your nets anyway and passing some traffic, even if you have to shift to CW or say words twice. We all do well in an armchair-copy net; it's tough things that need practice. Remember, poor practices waste good net time, and new operators tend to copy what they hear — so let's be pros, correcting and helping each other.

I can guarantee you our support from HQ USAISC — and thanks for all of your support. You are all super folks, and I know America is proud of what you do as volunteers in support of MARS. via Florida Skip



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Just plug in your camera, VCR, or computer composite video and audio, 70 cm antenna, 12 to 14 vdc, and you are ready to transmit live action color or black and white pictures. Sensitive downconverter tunes the whole 420-450 MHz band down to channel 3 on your TV set to receive. Both video carrier and sound subcarrier are crystal controlled. Specify 439.25, 434.0, or 426.25 MHz. Extra crystal \$15.

WHAT ELSE DOES IT TAKE TO GET ON ATV?

Any tech class or higher amateur can get on ATV. If you already have a source of video and a TV, it costs about the same as getting on 2 meters.

DX with TC70-1s and KLM 440-27 antennas line of sight and snow free is about 15 miles, 7 miles with the 440-6 for portable use such as parades, races, search and rescue, etc. You can add one of the two ATV engineered linear amps listed below for greater DX.

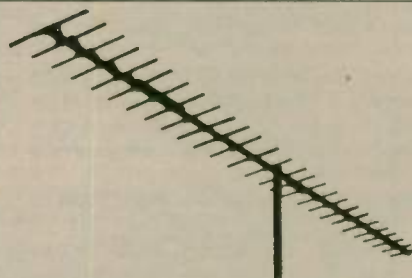
AT 70 cm, antenna height and gain is all important. Foliage can absorb much of the power. Also low loss tight braided coax such as the Saxton 8285 must be used.

The TC70-1 has full bandwidth for color, sound, and computer graphics. You can now show the shack, computer programs, home video tapes and movies, repeat SSTV or even space shuttle video if you have a TVRO.

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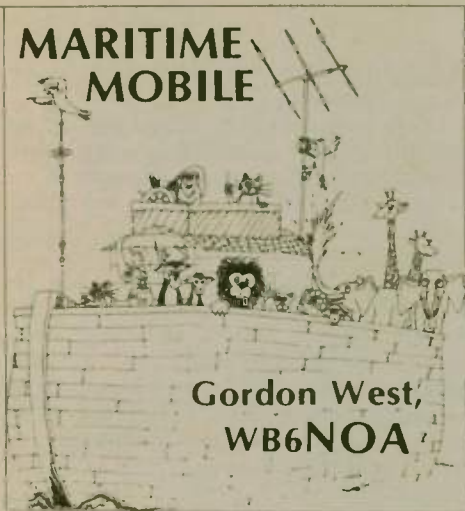
KLM 440-27 14.5 dbd antenna \$89
KLM 440-6 8 dbd antenna \$38



Alinco ELH-730G 20 watt amp \$105
ATV, SSB, FM. 4.5 amps.

Pass it on . . . WORLD RADIO

MARITIME MOBILE



Gordon West,
WB6NOA

Tuners, couplers and trimmers

This month we are going to clear up, once and for all (I hope), the mystery behind tuning up marine antenna systems, mobile H.F. antennas, and random wires for portable use. If we get it right, you will understand why ham radio \$400 automatic-type antenna tuners won't work on most marine antenna systems. We will also clear up the confusion on mobile resonant and non-resonant whips, plus the precautions that must be taken with any portable or fixed station long-wire antenna system.

The job of the tuner, coupler, or trimmer is to provide maximum transfer of radio frequency power by a solid state or tube-type radio into the antenna system. This matching device must be capable of resonating a non-resonant whip to a particular ham radio frequency as well as simultaneously matching this whip or backstay to the 50 ohm output impedance of your transceiver.

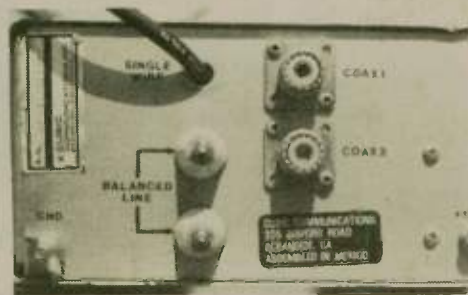
In marine and mobile installations using a resonant whip or multi-band resonant antenna, an antenna matching device might not be necessary at all. If you provide the proper length ground plane directly below the feedpoint of the pre-tuned whip, multi-band whips, or multi-band trap antenna, everything will work find without the need of a tuner.

On home installations of a beam, dipole, inverted Vee, ground counterpoised 5-band trap vertical, you probably won't need much antenna matching at all. If the antenna is slightly out of resonance, you pop it in by simply lengthening or shortening the elements or wire length, or tuning the actual antenna matching network. Ham radio automatic antenna tuners are actually "trimmers," and they trim down the SWR from a high of 1.8 to an optimum 1.1 to 1.0. The automatic amateur radio type tuners are 50 ohms out to the transceiver and 30 to 60 ohms in from the antenna system. These \$300 ham radio automatic tuners **WON'T WORK WITH**

LONG WIRE, BACKSTAY, OR UN-LOADED WHIP SYSTEMS!

The amateur radio automatic tuners are fine for trimming out dipoles and beams that are cut to a specific frequency, and you want to operate a couple hundred kHz away from the desired spot. For 80 meters, the automatic antenna tuner will generally flatten out your operating range on a dipole considerably. However the ham radio automatic tuner (which should really be called a "trimmer") won't automatically tune up on that 80-meter dipole on 10, 15, 20 or 40 meters.

There are lots of *manual* antenna tuners around, and most *manual* tuners will give you more tune-up capabilities than the automatic "trimmers." Look on the back of a manual antenna tuner. If it just has coax-type connectors, it's fine for tuning up 50-ohm type systems. This means you run coax cable out of the tuner to your antenna. Most manual tuners can match antenna systems from 25 ohms to 100 ohms quite nicely. If you run coax cable back to a backstay or non-resonant 23-foot marine whip, the tuner may work out well when manually adjusted. However, the terminated end of the coax at the antenna must also have a ground counterpoise attached to the braid. This means the backstay antenna system will only tune up with a manual ham radio tuner providing there is copper foil run to the chain plate that the braid is attached to. This tuner will tune up a mobile whip quite nicely on a car, but it won't work if the whip is stuck on the side of the house without ground radials.



Feedpoints on rear of tuner

Some manual \$100 tuners feature a single wire output. A front panel control selects the single wire output that may be capable of tuning any piece of wire with a resistance of 2 ohms and a reactance of -1000 ohms, to a resistance of 348 ohms with a reactance of 140 ohms. Again, ground foil must be brought up to the tuner in order for it to properly resonate a random long wire system.

In marine applications as well as portable and mobile applications, we normally don't use this low impedance reactance-type single wire output. There is so much RF within feet of your solid state digital transceiver that serious distortion occurs within your set. In almost every case of



Gordon West, WB6NOA, and friend

garbled operation, I have traced the problem to a poor ground system or a single wire antenna system simply fed too close to the transceiver.

With the manual tuner, the best bet is to run coax out of the tuner and into your non-resonant wire, making sure to ground (with copper foil) the braid of the coax at the feedpoint. You will find that a good \$100 tuner (such as the MFJ 941D) will tune up this affair nicely, only if there is a good ground plane beneath the feedpoint. You will also discover that the manual tuning inductance and capacitance knobs must be set precisely for minimum SWR. Like picking a 3-tumbler safe, only one combination on the manual tuner will do the job. It will take a real expert to find this combination "in the cold" without previous experience in tuning up 50-ohm, non-resonant long wire systems.

This now leads us to the ultimate long wire tuner, the fully automatic marine tuner. This tuner is mounted far away from the transceiver directly below the backstay, whip, or long wire feedpoint. Like all antennas, copper foil must be brought up to the base of the automatic tuner in order for it to operate properly.

The fully automatic marine tuner (a \$1,000 investment) automatically selects the right inductance and capacitance to

instantly (almost — about one second) tune up your transceiver to any length of wire. For instance, a 35-foot piece of wire (backstay or whip) is to be tuned up on 160 meters. Inductance must be added by the tuner to tune out the reactance and the impedance must be transformed from your transceiver's 50 ohms to about 5 ohms. Up at 14 MHz, shunt capacity is used to tune out the reactance and the impedance will need to be brought down from 775 ohms to 50 ohms.

The automatic marine coupler selects reed relays that, in turn, select different amounts of inductance and capacitance to tune up this entire system. The tuner usually goes back aft and out of the way and simply clicks away when a new frequency is selected and the transmitter is keyed. The \$1,000 variety tuners (such as the Hull 402CU) require a start and stop line that is energized by marine transceivers for tune-up operation.

If you plan to use an amateur radio on an automatic marine-type tuner, you will need to use the Stephens Engineering #1612 fully automatic tuner at \$1,500 that requires no data line — just plain old RF to tune up on.

Now let's summarize — ham radio style automatic antenna tuners only work as antenna trimmers. They are not suitable for tuning out random wire or non-

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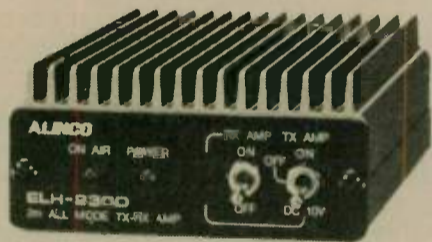
resonant whips. In order to tune out a backstay or non-resonant whip, you must either use a manual antenna tuner or the very expensive marine automatic tuners.

Using the long wire output on an antenna tuner that is located next to a solid state high frequency radio will usually lead to severe distortion and RF feedback. The newer digital solid state radios cannot stand RF nearby.

Mariners wishing to save money and use a manual tuner will need to have it pre-set by a qualified antenna expert who is familiar with tuning up a 50-ohm non-resonant system.

The marine automatic tuner is the best way to go because it is remotely mounted away from the transceiver and offers instant tune up into any long wire, whip, or backstay in a fraction of a second. However, the marine automatic tuner must be foil grounded for proper operation.

I have a new book out on marine electronics, and several chapters are devoted to high frequency long range radio communication — this book is a must if you're into marine radio and marine electronics. You can order it directly from Radio School, 2414 College Drive, Costa Mesa, CA 92626 for \$9.95 plus \$3 for postage and handling, plus 6% tax if you live in California. I'll happily autograph it for you, too!



Two-meter power amplifier

In my never-ending product evaluations, I had the pleasure of testing some new 2-meter power amplifiers from Alinco. These cute little Japanese amplifiers feature strip-line technology and all amps may be operated either FM or single side-band. The unit we tested was Model ELH-

230D, which takes 2 watts in from a hand-held and gives us a good 40 watts output. A unique heatsink design keeps the amplifier relatively cool on long transmit times, and they even give us a receiver pre-amplifier. In the FM model, receiver pre-amplification is usually a disadvantage on most small hand-helds — the hand-helds will begin to pick up unwanted out-of-band signals because of too much amplification on the receiver. Normally, run the receiver pre-amp off.

The amp may also be run on rechargeable nickel cadmium batteries, and they even give you a small auxiliary battery input jack. Status lights indicate power on as well as transmitter on. You can switch both the transmitter amplifier as well as the receiver amplifier on or off.

The power leads that come with this tiny amp were way too small for full power output — so chop off the leads and use heavier wire for more power out.

Everything else on the amp tested fine, including the fast or slow cycle time, depending as to whether you are on side-band or FM. There's only one line of side-band hand-helds available, so most of you will probably run this little amp FM. For more information on Alinco amplifiers, check the index here in *Worldradio* for their advertisement page number.

Another new amplifier company is vying for the high power end of the business, and that is Falcon Amplifiers. These high-tech, high-power amplifiers are relatively new on the market, and we will be giving you some additional product evaluations on these sets soon. It's interesting to note — both Falcon and Alinco personnel were originally associated with the super-quality line of Mirage amplifiers that were originally KLM amplifiers. This is a common industry phenomenon — product lines and product managers constantly on the move!

That's it for this month — good mobilizing, whether you are out on the high seas or driving down the road, and don't forget to re-read this section on tuners so you'll know the difference between ham radio automatic antenna trimmers and the true marine electronic worldwide radio antenna tuners. □

Tri-Town classes

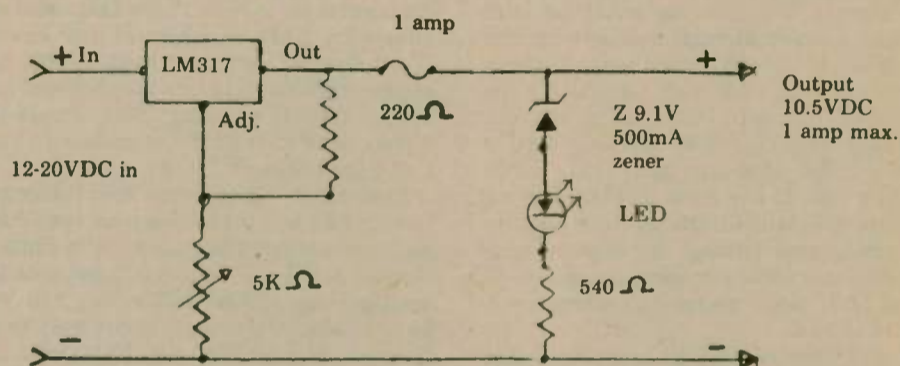
The Tri-Town Radio Amateur Club, in association with the Homewood-Flössmoor (Illinois) Park District, began instruction in the spring session of Amateur Radio code and theory classes. The classes are held weekly at the Homewood-Flössmoor Junior High School for a period of 12 weeks. Thorough

instruction in all aspects of Amateur Radio theory as well as Morse code are provided by volunteer instructors. Tri-Town offers both Novice and Technician/General license classes.

Interested individuals can communicate with the Tri-Town Radio Amateur Club by writing to P.O. Box 302, Hazelcrest, IL 60429. — *Rich Bauer, N9DKO*



The instructors and students in our current Novice class, many of whom have already passed their Morse code proficiency exam. They are: (left to right, front row) Instructor Martin Monahan, WD9JGG; Tony Degeoey; Ed Pekny; Tom and Marian Grzeslo; (left to right, back row) Instructor Jim Vandermark, WD9EWB; Dick Provancal; Tom Dykas; William Scheffler; Dennis Taylor.



Two-meter hints

George Lehtinen, W8IOC

Portable 2-meter transceivers have become very popular, lately, but many of

the most popular units have voltage requirements which do not allow them to be plugged directly into mobile (12-14VDC) power sources.

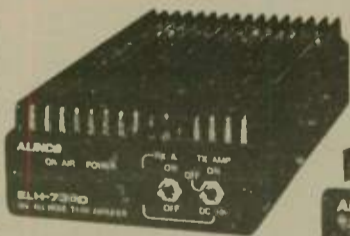
The simple circuit shown here solves that problem. This one was built to provide 10.5 volts for a Yaesu, but the regulator could be adjusted for other voltages with the 5K pot. The input voltage was varied from 12 to 20 volts. The whole thing goes nicely into a very small project box, and no big heatsink is needed, but the case of the LM317 must be insulated from ground.

The resistor-zener-LED series combination are optional, but they provide a nice visual indication (without having to use a meter!) that if the pot is adjusted until the LED just begins to glow, the output voltage will be exactly 10.5 volts. When it glows brightly, the output will be 11 or more volts.

— *Hiawatha ARA, Marquette Co., MI* □



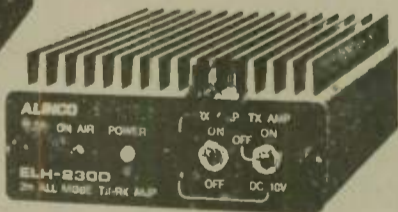
ALINCO CORPORATION The new name to look for in Amateur gear and the name to watch for innovation.



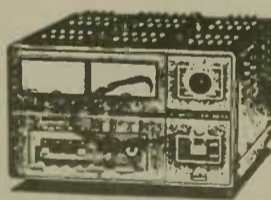
ELH-730D
List \$156.95

RF Power Amplifiers

* GaAsFet RX Preamp

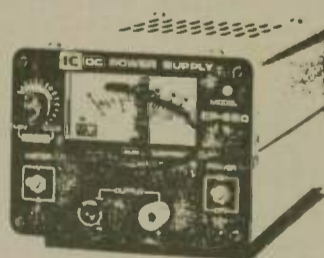


ELH-2300
List \$89.95



EP-3030 List \$208.00

Power Supplies



EP-660 List \$69.00

Model	ELH-2300	ELH-2500	ELH-7300
Frequency Range	144-148MHz	144-148MHz	440-450MHz
Modes	All Mode (FM SSB CW)	All Mode (FM SSB CW)	All Mode (FM SSB CW)
Input Power	1W-3W	1W-3W	3W
Output Power	30W	50W	30W
Power Source	DC13.8V/45A	DC13.8V/10A	DC13.8V/7A
RX-PRE-AMP (About)	10dB	10dB	15dB
Input & Output Impedance	50Ω	50Ω	50Ω
Dimension (m/m) (W x H x D)	3.6" x 1.6" x 6.5"	3.6" x 1.6" x 8.5"	3.6" x 1.6" x 7.75"
N/W (About g)	18 oz.	24 oz.	23.5 oz.

Model	(With Two Meters) EP-3030	(With Dual Meter) EP-300	(With Two Meters) EP-660
Output Voltage	About 10V-15V D.C. (With Voltage Adjuster on rear side)	About 10V-15V D.C. (With Voltage Adjuster on rear side)	About 10V-15V D.C. (With Voltage Adjuster on rear side)
Output Current	25A D.C. (Continuous) 30A D.C. (Max.) (50% Duty Cycle)	5.5A D.C. (Continuous) 8.5A D.C. (Max.)	50A D.C. (Continuous) 55A D.C. (Max.)
Ripple Voltage	Under 30mV (P-P) (Rated)	Under 30mV (P-P) (Rated)	Under 30mV (P-P) (Rated)
Power Consumption	770VA (Rated)	180VA (Rated)	1,300VA (Rated)
Circuit Protection System	Automatic Current Limiting System shuts down in excess of 30 amps	Automatic Current Limiting System shuts down in excess of 6 amps	Automatic Current Limiting System shuts down in excess of 55 amps
Dimension (L x W x H)	13" x 9 1/2" x 6"	9" x 4 1/2" x 4"	18 1/2" x 12 1/2" x 7.8"
Weight	18 lbs.	8 1/2 lbs.	44 lbs.

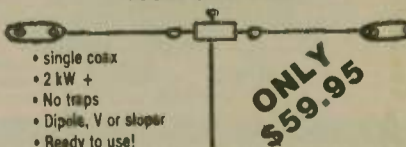
many others from 6-55 amps

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10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

Ten-Ten Countries Award

In addition to working 10-10 numbers for the fun of it and receiving "Bar Awards" for each 100 numbers worked, there is also the sport of working 10-10 members in foreign countries. After working 25 10-10 countries and receiving QSL card confirmation, there is a beautiful 11" x 14" certificate available for the first 25 countries confirmed. Endorsement stickers are issued for each 10 additional countries confirmed from 35 to 75 countries and in multiples of five countries thereafter.

The ARRL Countries List serves as the official countries list for the 10-10 Countries Award. All stations must be land stations (ship or aircraft contacts cannot be counted), and member stations operating from countries on the ARRL Countries List will count as a contact with that country as long as a QSL card is provided for that contact. QSL cards must be sent to the Awards Manager for all countries claimed. DX stations outside the continental United States may submit non-returnable photocopies in lieu of actual QSL cards, as long as all required data is shown.

At the date of this writing 205 basic certificates have been awarded of which 28 certificates have been issued to 10-10 members in 20 different DX countries. Four 10-10 members have attained the 115 Country Endorsement. They are:

- | | |
|----------|----------|
| #1 N9CDO | #3 W1FPM |
| #2 K4HAV | #4 KC5CP |

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In addition eight have achieved 10-10 DXCC (100 10-10 Countries). To date 184 ARRL DX Countries have been claimed by those 199 members who have qualified for the 10-10 Countries Award Certificate. Many of these countries claimed include short-term DXpeditions by 10-10 members. The Countries Awards Manager, Alan Sherman, K1AS, reports that even propagation being what it is, applications and endorsements are still running about 10 per month. Why don't you get out your DX QSL cards and see just how many 10-10 DX contacts you have. Alan Sherman, K1AS, RR4, Box 422, Danielson, CT 06239, will send you all information and an application form for a #10 (business-size) SASE.

The 10-10 Closed Contest

This contest will begin at 0001Z on Saturday, 05 October, and end at 2359Z on the same day. This contest is meant to be short and fun! Try to contact as many 10-10 members as possible using any mode and in any part of the 10-meter band. For scoring information and log submittal information, look on page 9 of your Spring 1985 issue of *10-10 International News*, the official 10-10 Net publication.

If you are not a 10-10 member, use this contest to work your 10 contacts and get your own 10-10 number. If you have a 10-10 number, but your membership has expired (you would know this because you did not receive a Spring 1985 issue of the *News*), send your \$4 for your dues to your Call Sign Manager NOW.

Remember, there is no re-instatement fee; just \$4 will make you a current dues-paying member. Then send me 56 cents in stamps and I will send you a copy of the Spring issue of the *News* and you will have all the information about the Closed Contest. My address for 10-10 information or a copy of the Spring issue of the "News" is 18130 Bromley St., Tarzana, CA 91356. Let me hear from you!

10-10 information?

If you are interested in joining 10-10 and having your own 10-10 number, a note (or your QSL card) along with a #10 (business size) SASE to the above address will get you all the information you need. If you would like to have a sample copy of the official 10-10 publication, *10-10 International News*, send me 56 cents in stamps for a copy of the latest issue of this 32-page magazine.

Ten-Meter Novice Phone?

Last month we reported that *Westlink News* announced that the ARRL was considering a filing with the FCC for a rule

change that would give Novice and Technician Class license holders phone privileges on a portion of the 10-meter band, as well as some other higher frequencies. It is now understood that the ARRL has forwarded their request to the FCC. Watch *Worldradio* and other publications for additional information. We will also keep you informed as to the latest information as it becomes available.

New DX Manager

Illness has forced Carl Schoen, W4NJS, to relinquish his post as 10-10's DX Manager. Carl has done a fine job for several years, and we all will miss him as our DX Manager. Carol Hugentober, K8DHK — who is the wife of 10-10's 8th District Manager, John Hugentober, N8FU — has agreed to take over the duties of DX Manager and all materials are in Carol's hands. The work of DX Manager will continue without interruption.

Carol and John are real dedicated 10-10 members and their volunteer work for 10-10 is appreciated. DX stations (other than VE, VO, VK and ZL) should send

dues directly to Carol at 4441 Andreas Ave., Cincinnati, OH 45211, USA.

Closing notes

We urge all members who have let their dues expire to renew. Your support of 10-10 is necessary to maintain a healthy and growing organization. If you have forgotten your 10-10 number, no matter how long ago you may have received it, send me your name and your current call (and all previous calls) along with an SASE and I will check the computer files to find your number and advise you.

If your call is a "5" area call, send your dues renewal to Grace Dunlap, K5MRU, Box 445, La Feria, TX 78559. If your call is a "6" area call, send your dues to Dick Rauscher, W6ANK, 4371 Cambria St., Fremont, CA 94538. Remember, make your check out to "10-10 International Net, Inc.", and please do not send me your dues, as all dues must be sent to the district manager with the number in your call, regardless of your residence address.

If you have an interesting story or picture on some aspect of 10-10 or 10 meters, send it along and we will consider it for publication. Best 73 and cu next month. □

All bands on a small lot

Harry R. Hyder, W7IV

Shortly before I retired, I bought a small house on a small lot. This was quite a comedown from my former acre, with its tri-band beam at 50 feet, plus miscellaneous wire antennas; but I wanted to minimize expenses and upkeep effort for what are ironically called my "golden years."

I like to be able to work all bands, 10 through 160. On a 65' by 65' lot, this

presents difficulties. How I solved my problems may be of interest to other hams similarly situated. While it will not fit your QTH exactly, perhaps you can use some of the ideas. Everything I did had a reason.

10, 15 and 20 were easy: a Cushcraft R-3 trap vertical on the roof peak. This exceeds the local 35-foot zoning ordinance by a few feet, but I have not seen any city inspectors in the neighborhood lately, so I

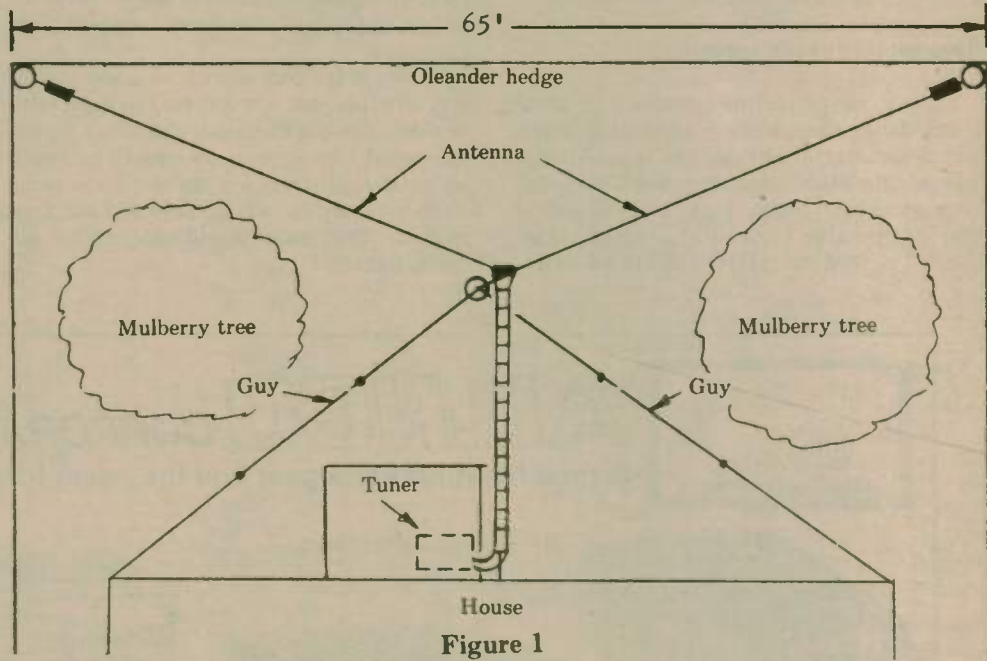


Figure 1

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am probably safe.

I was able to squeeze a 40-meter inverted V in back of the house. The center support is about 23 feet high. This low height gives high angle radiation — fine for the short skip I am mostly interested in.

The mast is PVC pipe, for two reasons. First, it is cheap. Second, since on 160 and possibly 80 meters I planned to tie the two conductors of the transmission line together and use it as a top-loaded vertical. The fact that the mast was a non-conductor seemed to be an advantage. The mast uses 15 feet of pipe, on top of an 8-foot support set in the ground.

There are two kinds of PVC pipe commonly available in "do it yourself" hardware stores — thin wall and thick wall. The thick wall pipe is known as "Schedule 40 PVC 1120." It comes in 10-foot lengths. I discovered that 1" pipe was an

easy slip fit inside 1 1/4" pipe of this type. Putting one inside the other added strength and permitted the joints to be staggered. The joint of the outer pipes is fastened with a radiator hose clamp. The inner joint, falling halfway along the 10-foot pipe section, is not fastened.

The mast is guyed. The antenna itself forms two of the guys; the ends go to two 8-foot TV mast sections, clamped to the corner posts of a chain link fence by large U-bolts. Two more guys go to the eaves of the house. Figure 1 shows the layout.

How to feed this antenna so it could operate on all bands, 30 through 160?

One obvious answer would be to feed it with open wire line, with a tuner in the shack. But the antenna is in back of the house, and the shack and transmission line entry are in the front. The idea of draping open wire line across the roof did not appeal to me. Also, when using the transmission line as a vertical (as I planned for 160), the line should be as much as possible in the clear, particularly at the high current end.

My house has a small covered patio in the rear. I decided to run open wire line to the patio, and go from there to the shack with coax.

This meant I would need some kind of tuner on the patio to match the open wire line to the coax.

I mounted a shelf on the wall of the house, under the patio roof and high enough up to be safe from rain. On this I mounted the tuner.

I ran open wire line from the center of the antenna down to the patio. The line I used was a sort of king-size twin lead with the insulation chopped out periodically, available in many ham stores or by mail order. The total length of the line is about 30 feet.

I built the tuner haywire on a piece of particle board, to determine initial L and C constants. Eventually I will make it neater — maybe.

My favorite matching circuit is the L network, and I decided to use this in balanced form. Figure 2 is the schematic.

First, I wound a balun from an Amidon kit. I wound this 4:1, for a good reason. With an L network, capacitance may be needed on either the input or output side of the network. With a 4:1 balun, the input side of the network will see 200 ohms, and less capacitance across the input would be needed than if it were 50 ohms.

For the inductances, I used some air wound coil stock from my junkbox.

I determined the proper coil taps and capacitance values for each band with a signal generator and Wheatstone bridge. The coil stock is 2" diameter, 10 turns per inch of #16 wire. The capacitor I used is four-gang unit that I picked up at a swapmeet for \$1. With all four sections wired in parallel, it totals about 2,000 pF. For some bands, I use a single section unit, because the minimum capacitance of the larger unit is too high.

Incidentally, the small size spring-type clips used for clamping to the pins of IC's make dandy adjustable coil taps.

For the 160-meter band, I used a different network. This one is merely a tapped loading coil. The balun is not used, because on 160 the antenna is unbalanced. On this band, the coil (Figure 3,) is 2 1/2" diameter, six turns per inch. 33 turns are used, with a tap at 6 turns for the transmission line.

For the coils, I used what was on hand, but even if your junk box is not as well equipped as mine, you should be able to pick up what you need for a few dollars at the next swapmeet. Of course, there is no reason why you could not buy an all-band tuner and mount it on the patio, if you prefer.

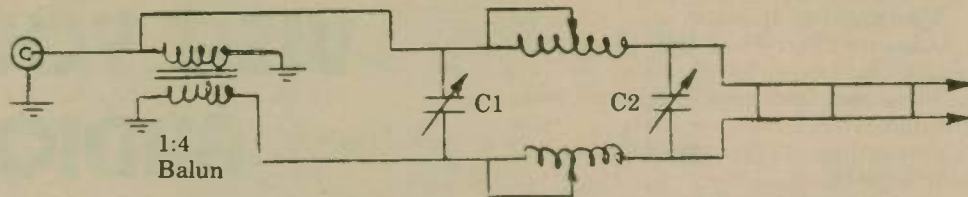


Figure 2

Frequency MHz	Capacitance pF C1	Capacitance pF C2	Turns each coil
10.3	0	150	3
7.15	0	27	12
3.525	997	0	10
3.75	986	0	8
3.9	1216	0	7

I have no doubts whatsoever of the benefits of a good radial ground system. However, on my small lot the radials would be very short and of doubtful effectiveness on 160. Besides, I did not really want to dig up the lawn to install them. But a ground of some sort was certainly needed. Fortunately, there was a garden hose outlet a few feet from the tuner, so I ran a heavy wire to that. The plumbing in my house is copper.

Figure 2 lists the coil taps and

capacitance values for each band. The capacitances were measured on a digital meter. It is unlikely that your values will be close to mine, but it will give you an idea of the range of values. Three settings were required for the wide 80-meter band.

Of course, to go from one band to another, it is necessary to step out on the patio, change taps and reset capacitors. For 160, the coax is plugged into a different receptacle, and the open wire line is clipped on the second network. I put alligator clips on the open wire line to make the change easier. It is really not very bothersome.

I have been very happy with this antenna system in the few months I have been using it. It is not a DX antenna, but for the general type of hamming I do, it is quite satisfactory. On 160, I get good reports from California and fair reports from the Middle West. I hope to do better next winter.

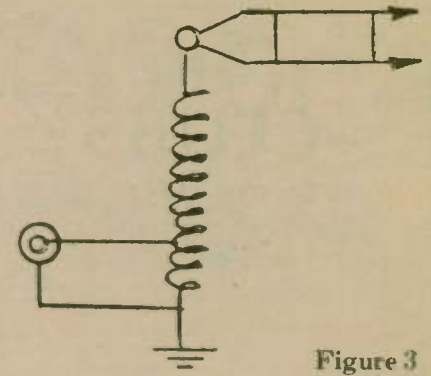


Figure 3

I hope you can use some of these ideas. Don't give up hope on your small lot!

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 Gain 18-20 dB

Transmit
 Switchable power (VOX) 150 W
 Max TX power (PTT) 750 W PEP

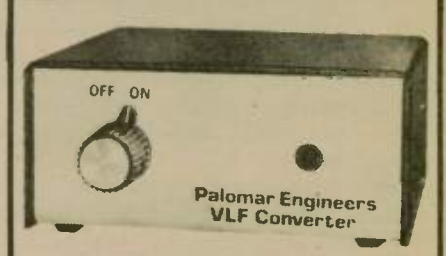
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Meetings

From the Indiana Section *ARRL Letter*, edited by Section Manager Bruce Woodward, W9UMH, we reprint the following article, written by Ron Koczor, K9TUS:

One of the biggest obstacles for most general interest ham radio clubs to surmount is to hold regular meetings which are interesting enough to make the members attend. Sometimes the problem is not as big as people think it is; usually a little thought and planning will take care of the matter.

Club meetings are important for a general interest group because they are usually the only face to face contact members have with each other. Members may talk to each other on the repeater or on the local net . . . but they need the personal contact of the meeting to generate the feeling of "club identity." So if your group depends on its meetings as part of the cohesion factor for your group, let me give you some ideas on how to keep your meetings interesting and well-attended.

With a little organization and forethought, meeting programs will not be a big problem for your group. There are enough external sources of program material to keep most clubs going for years. There are also enough internal sources in most clubs to do the same. The key is to find the sources. To make sure that sources are found, your club must have a reliable person assigned the job of setting up meeting programs.

Preferably, you should pick some officer other than the president. The vice-president usually has little to do and this job is logical for him. The key is for him to know his responsibility from the start of his term. He should be encouraged to set up a schedule of programs for at least six months in advance. You will find that club members will be more willing to give a program if they are given enough time to prepare something. Advance preparation also allows the planning of films, videotapes, etc. from outside sources.

After the assignment is made and the schedule is laid out, you have to start filling the meeting slots. Most clubs approach this in their unique way. One method is used by the Fort Wayne Radio Club. Their meetings are laid out for the

year along the following lines:

- May meeting: Banquet
- June meeting: Field Day plans and preparations
- November meeting: elections and short film
- December meeting: Christmas Potluck Party
- one meeting: Open discussion . . . bull session
- two meetings: non-ham radio related programs by guest speakers

You can see that this takes care of seven of the year's 12 meetings. The bull session was started a few years ago and proves to be one of the more popular meeting formats. Format is open and anyone can raise any topic for discussion. The discussion generally stays controlled; however, when things get heated up, the president terminates the topic and goes on to the next. It may sound like chaos will reign . . . but the meetings tend to remain well-ordered! The club members seem to enjoy getting things off their chests and the club has gotten some good suggestions from the floor. It seems that some people will open up and participate more readily in the less formal setting of this format.

The non-ham and social meetings are important to keep people interested. Experience shows that a constant diet of tutorial or educational meetings results in reduced attendance and club membership.

The other five meetings each year are the technical and operations oriented programs which include films and videos from ARRL and other sources and presentations by area hams. Programs on OSCAR 10, propagation, using computers in the ham shack, low band DXing, non-repeater VHF activity, traffic nets, contest operation, etc. are traditional programs that usually are interesting. If your club will invest in a set of TV/BCI filters for club use, you can periodically hold a program on how to fight those problems.

One other point about the FWRC meetings is this: Officers meet in a Director's meeting the week before each monthly club meeting. It is at this meeting that the majority of club business is transacted. Most controversy is handled at these meetings (which are open to all club members). This streamlines the full club meetings and keeps the business part of the meetings mercifully short.

Club members are still given the chance to vote on significant issues at the general meetings before action is taken; however, having the officers generate a recommended action in advance really greases the wheels and reduces bickering at the general meetings. Most club members are happy to allow the elected officers to conduct the routine club business as long as they are kept informed.

VISIT YOUR LOCAL RADIO CLUB.

ALABAMA

Birmingham Amateur Radio Club, Inc. (BARC)
Meets at the American Red Cross Building
2225 3rd Ave. North in downtown Birmingham, Alabama
1st and 3rd Thursdays/monthly at 7:30 p.m.
For info call David Black, KB4KCH, (205) 933-1313

Telephone Pioneer Amateur Radio Club of Alabama (TPARCA) 1st Thurs/monthly — 11:30 a.m., Rm N102, SCB Data Ctr 1st Fri/monthly — 11:30 a.m., Caf Pvt Rm, SCB HQ Bd WD4BXAIR 147.88/28 Coco Cmptr, Net Mon/wkly 8 p.m. K4FUM/R 449 3/444.3 — Info. N4DLE 205/663-2171, Bhm, AL

ALASKA

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

ARIZONA

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

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

CALIFORNIA

Amador County Amateur Radio Club
P.O. Box 1094, Pine Grove, CA 95665, Pioneer Elementary School, Pioneer, CA • 1st Thurs/monthly 7:30 p.m.
WA6WY Rptr — 146.835, 146.235.
Net Tues. 7:30 p.m.

Contra Costa Communications Club WD6EZR
P.O. Box 661, San Pablo, CA 94806
Meets 2nd Sunday at 9:00 a.m.
Hickory Post Restaurant/Lucky Lanes
For info call Carl KA6OLK (415) 237-2621

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

El Dorado County Amateur Radio Club
P.O. Box 451, Placerville, CA 95667
W6HBB Repeater — 147.825 Out/147.225 in
Net Thursday 7:30 p.m.
Meets 4th Tuesday/monthly • Call for location

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

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

Golden Empire Amateur Radio Society (VEC)
Al Biegler WA6WJZ
Phone (916) 343-6141/call 146.25/85
Meets in conference room 3, Enloe N T Memorial Hospital,
W 5th & Esplanade, Chico • 3rd Fridays/monthly - 8:00 p.m.

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

North Bay Amateur Radio Association (NBARA)
Homestead Savings
440 Santa Clara
Vallejo, CA 94590
4th Wednesday monthly — 7:30 p.m.

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

Sacramento Amateur Radio Club, Inc.
Contact: Norm Nelson, KA6YRC, (916) 428-7122
after 6 p.m. Meets: Army Reserve Ctr., Army Depot,
Fruitridge and Florin Perkins Road
2nd Wednesday/monthly — 7:30 p.m.

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

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

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

Simi Settlers ARC (SSARC)
P.O. Box 3035, Simi Valley, CA 93063
3rd Thursday/monthly — 7:30 p.m.
Bank of A. Levy (across Larwin Sq.)
K3HZPIR 147.165/765 Simplex 147.48

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

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

South Bay Amateur Radio Assn (SBARA)
Fremont School, Laiolo Rd, Fremont
3rd Wednesday/monthly - 7:30 p.m.
Talk-in 147.015 MHz
Frank Kibbich, WB6MRQ(415) 657-5730

Stockton-Delta Amateur Radio Club, Inc.
U. of the Pacific, Rm 122
Kensington & Mendocino
2nd Wed. monthly, 7:30 P.M.
Rptr. 147.165/765 Net Wed. 8:00 P.M.

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

West Valley A.R.A. W6PIY
Meets: Los Gatos Red Cross Bldg
18011 Los Gatos - Saratoga Rd
Los Gatos, CA 95030
1st and 3rd Wednesdays/monthly

Yolo Amateur Radio Society
Box 659 • Davis, CA 95616
Meets: Conf. room — Heart S. & L.
3rd & F Sts. (opposite police station)
First Friday — 7:30 p.m.

FLORIDA

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

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

HAWAII

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

ILLINOIS

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

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

Dupage Amateur Radio Club W9DUP
Mid-America Savings and Loan
55th & Holmes (55th St. near RT 83)
Clarendon Hills, IL • 4th Monday/monthly — 7:30 p.m.
(312) 971-1156 for more information

Fox River Radio League
Valley National Bank, Lower Level
Northgate Shopping Ctr. & RT. 31, Aurora, IL
(312) 898-2779 for more information
2nd Tuesday/monthly — 7:30 p.m.

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

Schaumburg Amateur Radio Club
Meineke Rec. Center, Schaumburg
3rd Thursday/monthly — 7:30 p.m.
Net on remaining Thursdays — 8:00 p.m.
147.285 and 443.625

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

INDIANA

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

Northeastern Indiana Amateur Radio Club
P.O. Box 745, Auburn Indiana 46706
Meets: 2nd Tuesday/monthly — 7:00 p.m. at members homes
Daily traffic net at 2300Z
on 147.96/36 MHz, the WB9VDK repeater

MARYLAND

The Peninsula Radio Operators Society (PROS)
Family oriented activities — training and
exams held throughout the year.
Info net — K3NOQ/Rptr. 146.925 Tues. 1930 Local
P.R.O.S., P.O. Box 2315, Salisbury, MD 21801

MASSACHUSETTS

Billerica Amateur Radio Society (BARS)
1st Wednesday/monthly - 7:30 p.m.
Honeywell Cafeteria
300 Concord Rd., Billerica, MA 01821
Near Jct. Rte. 3 - Info - Rptr. 147.12

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

MICHIGAN

South Eastern Michigan A.R.A.
Meets: 1st Fri./monthly 7:30 p.m. K8FC Rptr. 147.75/15
Grosse Pointe North High School
Building C, Cafeteria Commons
For info contact N8CDY (313) 885-5557

MISSOURI

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

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG
P.O. Box 911, Dover, NH 03820
(603) 742-9130/332-8667
2nd Sunday/monthly — 7:00 p.m.
Dover Dist. Court. Talk-in 147.57

NEVADA

Las Vegas Radio Amateur Club
P.O. Box 27342, Las Vegas, NV 89126
Operating 146.34/94 — open autopatch — Net Tuesday 8 pm
Meeting 2nd Sunday 7:30 pm at Royal Ridge Clubhouse
4601 S. Decatur near Tropicana Ave — Talk-in 34/94

NEW JERSEY

Gloucester County Amateur Radio Club (GCARC)
Woodbury V. F. W.
1st Wednesday/monthly 8:00 p.m.
Woodbury, NJ
For info call K2JF (609) 589-2318

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

NEW YORK

Hall of Science Amateur Radio Club, Inc.
P.O. Box 141, Jamaica, NY 11415 — HOSARC — 2nd Tuesday/
monthly — Hall of Science Building, 47-01 111 St., Flushing
Meadow Park at 7:30 p.m. The tristates' only 3-band linked
rptr. system 144.300 S/223.600 — 1445.225 —

Orleans County ARC
Civil Defense Center
West County House Road
Albion, NY 14411
3rd Wednesday/monthly - 7:30 p.m.

Staten Island Amateur Radio Assn. (SIARA)
P.O. Box 495, Staten Island, NY 10306
3rd Friday/monthly — 8:00 p.m.
Rm. B-201, College of Staten Island, Sunnyside
Club Repeater — KA2PBT/R — 440.825/445.825

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

Westchester Emergency Communications Assn. (WECA)
147.66/147.06, 222.80/224.40, 447.475/442.475
Mtgs: 2nd Monday/monthly - 7:30 p.m. Little Theater
County Center, White Plains, N.Y. For further info write:
P.O. Box 131 N. Tarrytown, N.Y. 10591. Call (914) 631-7424.

NORTH CAROLINA

Rowan Amateur Radio Society
Supplementary Education Building
Salisbury, N.C. 28144
2nd and 4th Mondays, 7:30 pm

OHIO

Ashtabula County ARC
Ken Stenback, A1BS (964-7316)
County Justice Center, Jefferson, OH
3rd Tuesday/monthly — 7:30 p.m.
County Repeater — 146.715

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

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

OREGON

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

U.S. VIRGIN ISLANDS

St. Croix Amateur Radio Club
Florence W. Williams Public Library
49-50 King Street, Christiansted
St. Croix, U.S. Virgin Islands
1st Saturday/monthly - 1:30 p.m.

VIRGINIA

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

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

WEST VIRGINIA

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

You can see that this takes care of seven of the year's 12 meetings. The bull session was started a few years ago and proves to be one of the more popular meeting formats. Format is open and anyone can raise any topic for discussion. The discussion generally stays controlled; however, when things get heated up, the president terminates the topic and goes on to the next. It may sound like chaos will reign . . . but the meetings tend to remain well-ordered! The club members seem to enjoy getting things off their chests and the club has gotten some good suggestions from the floor. It seems that some people will open up and participate more readily in the less formal setting of this format.

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Of course, every club is different and must solve its problems itself. Nonetheless, your meetings can be interesting and well-attended if they are not relegated to someone who organizes them at the last minute. The key is planning and finding a person to accept responsibility. With that start your club meeting can grow into a highlight of club activity . . . something you'll be proud to invite a non-member to!

NOTE: I'd be happy to help your meeting organizer dig out sources for films, videos etc. . . . Have him contact me! □

Suffolk County RC

The Suffolk County Radio Club meets on the third Tuesday of every month except July at 8:00 p.m. at the Bohemia Recreation Center, Ruzicka Way and Smithtown Avenue, Bohemia. Everyone is welcome to attend whether or not you are a licensed Amateur Radio operator. — Bill Frisch, KA2JMA □

TIARA meetings

TIARA (Tokyo International Amateur Radio Association) will now meet on the last Friday of the month at St. Alban's Church (near Tokyo Tower) at 7:30 p.m. local time.

For further information, write the club secretary, Keith Wilkinson, ZL2BJR, CPO Box 1748, Tokyo, JAPAN 100-91. □

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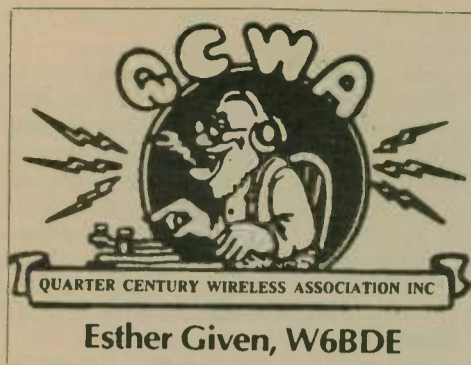
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California residents add 6% sales tax.



Convention is a pleasurable word in Amateur Radio circles. It means that time when hams who seldom see each other can meet face to face, exchange greetings personally, get acquainted with spouses and family members of a good friend on the air, attend talks and discussions, see the latest equipment and innovations pertaining to the state of the art, and enjoy the companionship of those who share the enchantment of Amateur Radio.

The Quarter Century Wireless Association will hold its annual convention at the Hyatt House in Winston-Salem, North Carolina, 26-29 September. Arrangements and planning are being handled by Piedmont Chapter #126 and Palmetto Chapter #89.

QCWA's election results will be released 01 August. Newly elected officers and board members will take office and begin their terms of service on 01 September, just prior to the convention. The board meeting will be held at the onset of the convention. A period will be set aside during board deliberations for an open forum to gain input from the members in attendance.

Late September is an ideal time to visit Carolina Country. The weather is usually excellent and temperatures moderate. Conventioneers may wish to plan some of their holiday shopping while in the area. The Carolinas are headquarters for many manufacturers of apparel, shoes, hosiery,



Seated: Maxine Dixon, K4KUU, Net Control; Marge Moore, WB6JVL, Secy. Treas.; Betty Strattan, W2PVS, Pres.; Marge Snow, W1VOS, Director; Standing: Harryette Barker, W6QGX, Vice Pres.; Beulah Barrick, W6NLM, Director. (Photo Louisa Sando, W5RZJ)

linens, bedding, luggage and many other items. Outlet stores and malls are numerous, and discount savings are substantial.

QCWA members are urged to give the convention first priority on their fall agenda. Members from many parts of the world are expected to be in attendance and an exciting program of things to see and do along with meeting/greeting camaraderie are anticipated.

The city of Lethbridge, Alberta, Canada, is celebrating its centennial in 1985. Four QCWA members — Bill Savage, VE6EO; John Erickson, VE6NG; Charles Tyrrell, VE6PV, and Villa Jean Tyrrell, VE6VJ — are residents of that city which is saluting "Pioneers of Amateur Radio in Lethbridge". The city planning commission sponsored printing of QSL cards and message forms bearing the centennial logo. Three honored pioneers, all pilots, are: Jock Palmer, ex-VE4NG, who had the

first broadcast station in Lethbridge; Charles Elliott, ex-VE4AP, whose small airport hangar was the first destination for airmail for the city; and Hollick Kenyon, ex-VE4YE, who laid out the city's present airport which bears his name. These men contributed greatly to the progress and growth of their community in communications and air transportation fields.

QCWA's Wisconsin Chapter #55 handled the processing and publication of results of the annual QCWA QSO Party. CW logs were received from 184 participants. Winner of the plaque — Earl Reichman, W8NBK — scored 40,848 points. Certificates went to the next four high scores: Don McClenon, N4IN; Ralph Hawkins, W5EC; "Bip" Bachman, W6BIP; and Leland Smith, W4YE. The Phone portion yielded 163 logs. That plaque was won by John Zwaska, W4WKQ, who racked up 36,670 points.

Certificates were awarded to Don McClenon, N4IN; Bill Branche, K9CLO; Herb Glead, W6FQ; and Arthur DeVinney, W2RRY.

Quarter Century Wireless Women, Chapter 120, the only QCWA chapter of international scope, was able to assemble 17 members at the YLRL Convention held in Las Vegas, Nevada. The group met for breakfast followed by a short discussion period. All three chapter officers and two board members were present.

At the request of Canadian members, the QCWA Board of Directors took the following action: Commencing 01 August 1985, QCWA membership in Canada and Mexico will be on the same basis as overseas membership all of whom will be known as "International" members. The determining factor will be whether the mailing address contains a U.S. ZIP code.

International membership dues will be greatly reduced since the association's publications will no longer be mailed to those outside the United States. All QCWA publications such as newsletters, directories etc. will be available to international members who may obtain them by paying printing and mailing costs.

All current Canadian and Mexican memberships will be honored until their expiration date. Life memberships prior to 08/01/85 will also be honored. □

First and greatest?

Who was the first man to use the following terms?

Armature, battery, brush, charged, condense, conductor, (dis-charge), electrify, positive (electricity), minus (electricity), non-conductor, electric shock, electrician.

Old Ben Franklin, that's who.

Historical emphasis on Franklin the revolutionary and patriot has tended to obscure Franklin the scientist and natural philosopher, but it was the latter that made him famous throughout the civilized world in his time and earned him membership in Britain's prestigious Royal Academy (founded by Sir Isaac Newton and generally limited to scientific researchers whose papers they were willing to read publicly and publish).

He was known as the man who proved that lightning is electricity and then tamed its terrifying dangers by inventing the lightning rod — along with the entire concept of attracting a charge with a high, pointed piece of iron and then "grounding" it via a length of heavy brass wire connected to another iron rod buried deeply in the earth or the water surrounding a ship.

Franklin was, as he called himself, an "electrician," but he saw himself as an amateur, not a pro, and he proved his status by refusing to patent his lightning rod or to profit by it. He also refused to believe professional scientists who taught that rubbing a resinous tube to generate electricity must inevitably be arduous and slow; he fixed spheres "on iron axes which pass through them. At one end of the axis is a small handle with which you turn the spheres like a common grindstone."

If "ham" comes from a British contraction of "(h)amateur," then Franklin exemplified every virtue such a non-commercial interest in electronics can exhibit: motivation to serve society, generosity, intense curiosity, enjoyment, experimentation, and solid methodology. Maybe we can't grant him a posthumous ham license, but we can always see him as an ideal of what we should be.

— Florida Skip □

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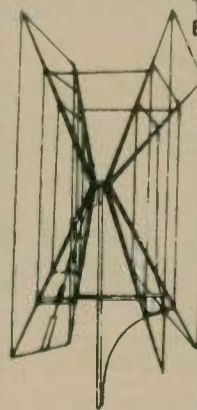
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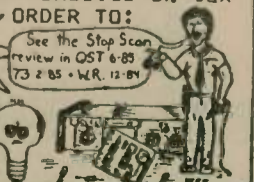
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Irregularities of ham regulations

Dick AA4PP

This is a highly technical article; do not try to follow it unless you hold a Ph.D. in electrical engineering, solid-state physics or advanced sandbox.

When my linear amplifier arrived last month, I called the manufacturer to ask how to modify it for 10 meters. They replied that such info must be sent by mail, and then only on receipt of a warranty card accompanied by a copy of a valid ham license. I complied, receiving instructions a few days later, and here is what had to be done.

First, the bandswitch now had to come

off, giving access to a little set screw which blocked the knob's rotation to the "28" position. This must be removed and then discarded. (Discard the screw, not the bandswitch knob.)

The cover then had to be opened, revealing two more little set screws, on the shafts of the variable capacitors. These also had to come off and be thrown away. (The screws — not the shafts or the capacitors.)

This completed the modification for 10-meter operation!

Now you are thinking, "Fine, Dick, but how in the world did you remove the set

screws?" I am only a ham, after all!

Well, I had to find out for myself; the instructions didn't say. But we hams are resourceful. A phone call to the Dean of Engineering at Caltech extracted the answer. A device called by experts, a "screwdriver" is used.

One applies the bladed end of the screwdriver to a slot in the head of the set screw, rotates the combination in a counterclockwise direction until the screw comes out. It is then discarded. (The screw — not the screwdriver or the amplifier.) If you don't know which way is counterclockwise, and all the clocks in your house are digital models, then you are out of luck. The Caltech people get kind of (please turn to page 41)

by Steve Gernbacher
HANDI-HAM Radio Camp
coordinator

The first day of a California Radio Camp consists of people walking around with fingers crossed hoping for great weather. Any weather not consisting of downpours, mudslides and closed highways is considered great weather. Fortunately, every day of the 1985 California Radio Camp was warm and sunny — just like the week's activities.

This was the third year that the camp was held at the Calamigos C Ranch in Malibu Canyon. The first general session took place the evening of intake day (Saturday). Introductions of faculty and counselors were made, camp rules discussed and schedules for the remaining week were reviewed. A non-denominational worship service was organized for those wishing to attend on Sunday morning.

Classes began with a station assembly contest. Students were divided into three groups and raced each other to become the first operational station. The rest of the week was scheduled with classes beginning at 9:15 a.m. and running through about 9 p.m. each evening. Faculty again used the successful format of instructing established in 1983, allowing students to choose a variety of topics emphasizing material known to be on the FCC examinations. Recreation was scheduled twice during the week, but most students opted to study theory or code.

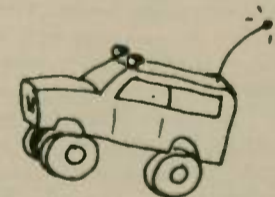
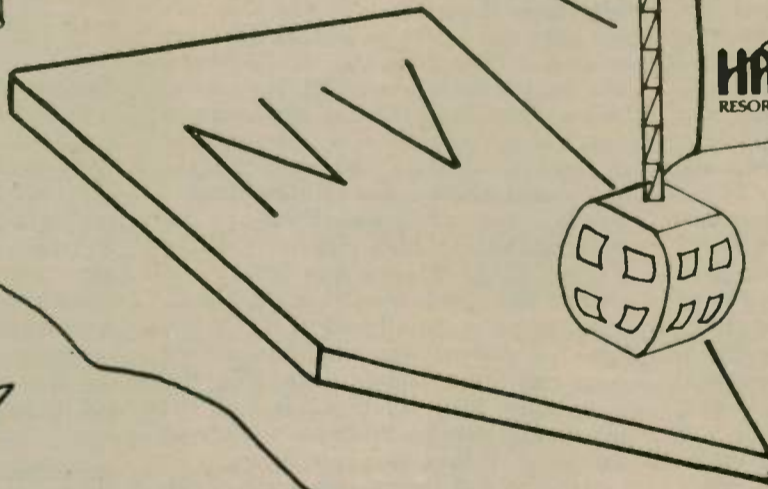
As a special feature of the session, Bill Gerry, WA6NPC, led an electronics assembly class which enabled blind students to solder without danger of burning themselves. Students assembled oscillators, continuity testers and other electronic devices in the class.

As a result of the new FCC testing regulations, the examinations at the end of the sessions created a little confusion for some people. This situation was cleared up by a meeting prior to test day. The examinations were administered on Thursday and lasted into the evening. After the exams, counselors put on a "session-ending" party for the students. Great amounts of ice cream and potato chips were consumed by all. Camp broke up on Friday as students and faculty headed home. Plans are already in the works for the 1986 California Radio Camp to be held January 11-17 at the Cotton Tail Ranch Conference Center in Malibu. □



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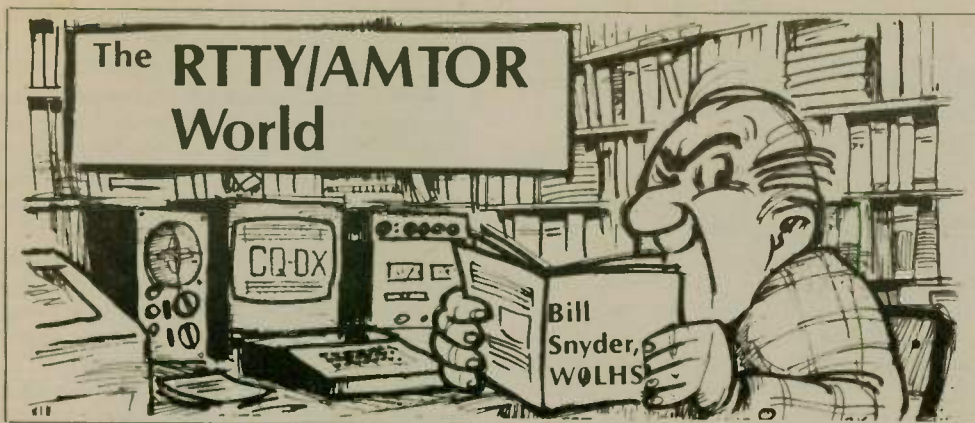


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The subject of this discussion is DX in the RTTY/AMTOR world. I've seen many RTTY newcomers register surprise when they discover they can work all over the world with 50 watts and a reasonable antenna. Yes, RTTY fans, there is DX to be worked on the "green keys." Of course, we are suffering with the sunspot ups and downs these days, but DX is still there on both "steam" RTTY and chirping AMTOR.

If you work DX on sideband by checking into nets and lists, RTTY is not for you. To date, lists and net operations have not invaded the "green key" mode, and let's hope they never do. If you are satisfied with a fast "5NN TU" on CW, then RTTY DX'ing is probably not for you either. But if you like to make friends all over the world and enjoy global camaraderie, we have your favorite radio mode waiting for you!

Personally, I enjoy working CW now and then (and I have been known to snag a "rare one" with a snappy "5NN TU" on many occasions). But the days when we slid the weights back on the bug and played "burnout" are long gone. I never did hit 60 wpm in my wildest dreams, but I can do it very easily on RTTY with my Robot and its type-ahead buffer. So speed is one of the nice things about RTTY. AMTOR is something else; not as fast, but it's accurate — no need to repeat anything. You know when it has been received properly.

The language barrier (on SSB contacts) is probably the main reason I rarely try DX'ing on phone. I have trouble deciphering call signs if the other station has an accent, and I get bored calling and calling with my 100 watts. Not so on RTTY. English is the language of the keyboard enthusiasts. Although we do see French, Spanish and Italian now and then, I've never seen any Kiswahili on the screen. It's my only "second" language and I never did master it. And what little I did

know has faded — it's been many moons since I spent a year in East Africa photographing the sights and recording the sounds. Also my high-frequency hearing is slightly impaired, probably due to many hours flying noisy airplanes. So RTTY is a natural for me.

DX'ing on RTTY/AMTOR is very gentlemanly sport — has been for years, but I'm afraid the "DX hogs" are invading our sanctuary and a few of them are wrecking it for everyone. The Clipperton DXpedition brought this fact home! The pile-ups at first were so disorderly that the island operators just plain quit trying. Only 81 out of 31,000 contacts were on Amateur Radio teletype. Sad but true.

Let's review how DX operating should be conducted on our favorite mode. It's not complicated at all.

First, *forget* the RY key! With modern computers and tuning units, there is no need to send RYs at all! If you require a line of RYs in order to tune in a signal, you do not have state-of-the-art stuff in your shack or you're not operating it correctly. With modern transceivers, you should not have to touch the dial when the other fellow tosses it back to you. And this goes for three-way QSOs as well. If the other station is off a little, use the RIT knob and not the main tuning dial. Then one of you will remain on the frequency and you won't chase yourselves across the band. Again I say it: *No RY's when you call DX!*

I've said it before, and I will continue to say it again and again: on call-ups use only SHORT CALLS, SHORT CALLS, SHORT CALLS! Let's face it — many, many times the last caller in the pile-up gets the prize. So a breed of RTTY DX fans has evolved who specialize in very long call-ups complete with RYs and everything. They try to out-last all the others, and thus get the contact. Much as I dislike it, it does work quite often.

My short-call theory also works. I run barefoot — I probably should say bare-

shack — because I sold my amplifier long ago. Given a fair chance, my TS-940 can work anything I can copy decently. I've snagged a few rare ones by waiting till the long-winded guys finish calling and then tossing my call in only twice. I tail end the tail enders with short calls.

So why shouldn't we all send our calls only two, three or four times, and then *listen*? Give the DX station a chance to answer! Wait at least 20 seconds before the second call-up. Then send your call a couple times more and *listen!*

When a rare country appears, all good sense seems to go out the window. Some ops punch up a line of RYs, send the other guy's call sign 10 times, sign their own call sign a dozen times or more, and then top it off with "please" and about 14 K's. Time has been wasted, QRM has been caused and frustration is the universal mood.

Take your cues from CW and SSB DX'ing. You'd drive the "lid managers" crazy if you tried calling a DX station on CW or SSB the way some do on steam RTTY. AMTOR is a different pile of crickets — the first one to latch gets the prize, but the machine is the long-caller, not the operator. You take what you get on that mode.

So again I plead: *Please no RYs, and please, short calls!* You'll gain, and we'll all gain with short calls. When lid managers start popping in on RTTY, I hope they invent a new word to replace Lid. I suggest SCAB — stands for Short Calls Are Better! Any other connotations are included.

By the way, you old-time brass pounders, I know the definition of a lid is an "unskillful telegrapher," but does anyone know the true origin of the term? My father was a railroad telegrapher, but that's one question I forgot to ask of him during his lifetime. I must have been spending too much time asking Dad for money, not trade secrets!

Tuning Indicators

There is a number of new tuning indicators on the market today, but I have never had the chance to try out any of them. Years ago I had two blinking "magic eye" tuning indicators — one for mark and one for space. They worked fairly well, but since then I have used an oscilloscope for quick and easy tuning. With only a 50-cycle window for good copy, accurate tuning is a must. After an hour or so of tuning with a scope, you'll wonder how you got by without one. Scopes for this pur-

pose are in almost every flea market, and they are usually cheap. For years I used an old Eico scope, and probably would still be using it if I hadn't found an SM-220 Kenwood station monitor in a used market.

The only requirement is your tuning unit must have scope outputs, one for mark and one for space. If they don't have such jacks, I would suggest a method described in the August 1984 *QST* magazine. Carl Steavenson, K6WZ, has authored a paper describing a build-it-yourself tuning scope which should appear in the *RTTY Journal* shortly.

Wonders Will Never Cease Department

I received a QSL card from UZ2FWA in Kaliningrad in record time. I took less than three months from our QSO until I marked up a new one on the confirmed list. I sent mine, with IRCs, directly to the address the operator supplied over the air. The confirming pasteboard came by airmail from Box 88 in Moscow, by way of contrast, it took over two years to get one from UA9PP via the bureau. After that one arrived I got three more from Gene in the next six months. North Dakota is a rare state, I guess.

Eavesdroppings

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TEACHER

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

School stations — Part II

Last month, I wrote about my systematic approach to introducing our hobby to kids in the public schools. This month I am going to continue this article and discuss what you need to have a successful school station.

All school stations revolve around these common facts: History, Leadership, Equipment, Students and Potential Growth. To help you with your own high school station and to help those who want to start one, I am going to discuss all of these aspects in relation to my own program and experiences.

History

Why select a particular school for you to expend your efforts at? Maybe you have been having your club's code and theory classes there during the night. If you do, you need to have a permanent station set-up for their use. Well, if you set up a station, it would be nice if the kids who attend the school during the day could use it.

Maybe you teach at the school. That is one of the best reasons to start a ham club/station. The more successful clubs have a faculty member as their advisor.

Another good reason is demand. If you have been following a grade by grade educational plan in the school system, the kids in junior and senior high school may need a ham club and station. If you establish a high school club station, the lower grade kids will know they have something to look forward to in high school. This will spur them on to study for their Novice when they are younger.

Leadership

It certainly helps to have a member of the school's teaching staff be the club's advisor or at least the station trustee. Some hams who are teachers don't want to get involved with the kids in their school for their own personal reasons, but if they do, it is a rewarding experience. They can regulate their amount of advisory time by becoming the station trustee, the club's advisor, the liaison between the school department and your ham club or they can teach the actual Novice class. Whatever they choose, it helps.

This does not mean you have to have a ham on the teaching staff. Good leadership can come from within your own ham club. Find a ham who is retired or maybe works second or third shift. They must like kids, have much patience and want to teach. Elmering is not easy. The kids are very demanding, with many questions.

Equipment

School stations must be kept as simple and modest as possible. New or aspiring Novices can't come into a shack and see fancy \$3,000 set-ups. We try to use rigs that are within the financial reach of the kids who are going to use them. Our stations have always been successful with Heathkit HW101's, SB102's or Atlas 210x's. Antenna systems are also kept simple. Multiband verticals such as the Hustler 5BTV and Morgain Dipoles are very practical antennas. With band conditions being at an all-time low, we try to emphasize the use of dipoles more than the verticals.

Who pays for the station gear? I have

always made enough money from teaching code and theory classes to adults at night to support three different high school stations. But that is because my program is an expensive one. I charge \$25 to attend a ham class. This allows for income to be generated to cover many other projects, including the high school stations.

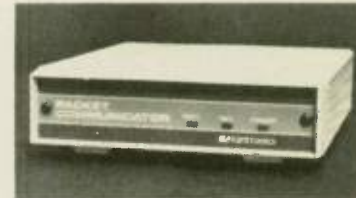
If your club doesn't have a ham class budget that allows for the expenditure to start up a school station/ham class, there are many alternatives. You can solicit used gear from fellow club members or have a raffle to raise the funds. Lack of funds should not be the reason for not *(please turn to page 41)*

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Bob Lawrence, W7VFR, writes: "We experience a lot of RY's being sent on the repeater out here, but we just tell them to knock it off!"

Carl Steavenson, K6WZ, writes of his C-64 power supply overheating problems. Carl says it can be solved by unplugging the 120 volt line when not using the computer.

QSL card from KA2FOZ adds: "Thanks for my first RTTY QSO — I'm still shaking!" You're not the first to do that!

I recently watched, with amazement, a roving mailbox station solicit jokes and stories from the public. Then I wasted about 20 feet of paper recording endless CQs and cryptic instructions on how to access the mailbox. Finally someone asked for the message directory and I was treated to the joke menu. There were goodies like "A COOL CAT NAMED NOAH, POEM TO MUDDER, DIARY OF A MOVIE USHER, FOR BEAN LOVERS ONLY, DAMNED ANGELS, DEAR MR. FCC," to name a few. Just imagine what our little 20-meter segment would be like if 100 mailbox operators each chose a discrete frequency and started calling CQ every two minutes. In all my years on RTTY I have never heard a pile-up on a mailbox — in fact, I think most SYSOPs of automatic CQ boxes eventually quit because there is so little demand for their "services." But new ones pop up with their machines on beacon mode calling endless CQs. It's the fate of the art, I guess.

Please send your comments, suggestions and ideas for the good of the order to me at 1514 South 12th St., Fargo, ND 58103. This is your column. 73, Bill Snyder, W0LHS. DIT DIT. □

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



With fall almost upon us and the annual gift-giving season not far ahead, three QRP-related books have come on the market offering good reading and ideas for new gear to build or ways to update and improve existing equipment in the coming winter months.

Leading the list is *THE JOY OF QRP: Strategy for Success*, by Adrian Weiss, WØRSP, the QRP editor over at CQ. This one has been a long while getting here, but it was well worth the wait.

Ade's book, publication of which was delayed by printing problems and a subsequent legal scuffle, offers a beginning-to-end look at low-power operating which, if nothing else, is worth reading for his thorough explanation of the philosophy and history of QRP. Not even when he was publishing *The Milliwatt* in the early 1970s did Ade gather up all the finer points of QRP and bring them into the sharp focus he achieves in this book.

Although the accent is on the joy of low-power Amateur Radio, Ade also gets into the nitty-gritty of QRP'ing, with informative chapters on how to plan operations, selection of equipment and modifying it from QRO to QRP use, homebrewing gear and an important item in any effort, techniques of operating.

He touches almost all bases in this paperback and answers most of the questions a newcomer to this phase of our hobby might have: what clubs there are, what awards are available, what contests are held and when, and where QRP'ers can be

found. In listing the internationally recognized QRP frequencies, however, Ade omits the 30-meter band. Try 10.106 or 10.120 MHz. And as for the new 12-meter band, which was unavailable when the book was written, no QRP frequency has been settled on.

Ade's book is \$10.95 (\$11.95 foreign) from Milliwatt Books, 833 Duke Street #83, Vermillion, South Dakota 57069.

A slightly different approach to QRP can be had from the folks at *Practical Wireless*, one of England's major Amateur Radio magazines.

Introducing QRP opens with a brief, introductory chapter on low-power operating practices and techniques before

plunging into the meat of the work: A series of fine home-construction articles reprinted from *PW*. Included in it is a rarity for QRP — a 160-meter transceiver.

Articles by Rev. George Dobbs, G3RJV; Colin Turner, G3VTT; and Tony Smith, G4FAI, are well illustrated and contain parts lists and printed circuit board patterns for ease of construction.

Introducing QRP costs £1.50 per copy plus 60 pence for postage, payable in pounds to: IPC Magazines Ltd., Post Sales Department, Lavington House, 25 Lavington Street, London SE1 0PF, England. Delivery is by surface mail for this 64-page publication in magazine format.

The last offering this month is the *Hot Water Handbook* — an anthology of modification articles about the Heath HW-8 QRP CW transceiver. It was compiled by me with the help of a few friends and many HW-8 enthusiasts who contributed construction and/or modification pieces to it.

This collection picks up where Ade Weiss left off with his famous series on converting the HW-8 into a "contest machine" and includes modifications which appeared in Amateur Radio publications in the U.S. and Europe.

Its price is \$3, postpaid, from me at PO Box 12072, Capitol Station, Austin, Texas 78711. □

On the go with QRP

Gordon Murray, VE3JSJ

For the past several years, I have spent many weekends in Algonquin Park (Ontario, Canada), canoeing during the summer months and snowshoeing/winter camping in winter. More recently, I have been on extended canoe trips of up to two weeks, and I hope to extend the period to perhaps a month during the next few years.

For the past few years, I have operated both VHF and HF portable while in the bush, and I think my experience might be of interest to others.

At first, I packed along an ICOM 22S 2-metre rig, powered by a 4.5 AH gel cell, together with a collapsible (very!) portable 5-element beam with 20 feet of coaxial cable. This weighed in at about 15 pounds — 6.8 kg, for you metric nuts — and was really quite useless, since it was before the Whitney and Dwight repeaters were put into operation.

From some areas of the park, I was able to hit VE3STP, and from even more limited areas, I could get into VE3NRR in Deep River. However, I soon tired of packing such equipment up mountaintops in order to try unsuccessfully for a contact. So I assembled an HW-8.

I was experimenting with antennas and, at that time, packed along a trapped dipole which was supposed to give me 80, 40, 20 and 15 metres. It was a pain to set up in the trees, even in its simplest inverted Vee mode. Two watts input will do the job — barely, though, when the summer static is up. However, I could always be assured of checking into ONTARS between 0700 and 0730 EDT on 3755 kHz. Static is usually at a minimum at that time and propagation doesn't fade out until about 0800.

Jim Buckley, VE3BGZ, would invariably recognize my chirpy signal, and even when he couldn't read it, someone else was sure to relay my "QRU". Mel St. Germain, VE3FSO, must have unbelievable ears, as he was able to read my signal one time, even when static was at an all-time high one Sunday afternoon in August, at 1730 local time.

The next phase in my operations came after I received my Advanced ticket. I had decided that SSB capability was needed, since I usually canoe with five or six people who enjoy the occasional phone patch to their homes and relatives.

When operating portable, I calculate battery requirements from the "emergency" cycle of 1:10 transmit/receive times. Thus, the crucial factor is current drain during receive.

This led me to the Kenwood TS-130S, which pulls about 800mA on receive, compared to 1.5 amps for most other rigs of similar size and performance. I packed along a 25 AH pack of sealed lead acid cells — the type used in some burglar alarm systems. They seem to be more durable than gel cells, and though heavier than NiCds, are more forgiving of abuse. The Kenwood pulls 17 amps key down, which works out at about 8 amps average SSB talk power at 150 watts input. So on the 1:10 cycle, I would have about 15 hours operating time on one charge. 100 watts portable is great; no more problems getting through static on SSB.

I used an MFJ-941C antenna tuner into a 120 ft. wire antenna. I found the long-wire/tuner combination to be more effective than the trapped dipole without a tuner, probably because the dipole did not always present a good match; proximity to trees varied from site to site and this did change the SWR.

Also, the configuration was dependent on convenient trees and varied from straight to a very narrow inverted Vee. With the tuner, I could at least always get a good match, even if I were loading up the tent pole on its own!

The long-wire was a lot simpler to set up; just throw it over tree limbs as long and as high as conveniently possible. There was no coax feedline to bother about.

The tent poles are inside the tent, protruding a couple of inches above the ridge line outside. So just clip the long-wire to the top of the pole with an alligator clip outside, and use another clip to connect a wire from the tuner to the pole inside the tent. No need to use a ground wire, as it didn't make any difference.

On one occasion, during a thunderstorm, I disconnected the long-wire from the tent pole and just loaded up the 4 ft. pole. It worked — just readable in Toronto on 80 metres SSB. But oh! The weight, even with a specially built frame!

The equipment weighed in at around 45 pounds, fully waterproofed. This was in addition to other camping equipment. Those portages were long. At one time I had 95 pounds on my back. The canoe had to be carried separately, of course. Still, the batteries did hold out, giving me one-half hour a day for two weeks.

A check into ONTARS in the morning, again in the early evening, and a check into the CJ or Quebec Radio Net in the evening. Many amateurs responded to my calls for phone patches, and I would like to thank especially Laurence Petch, VE2SD; Gordon Chambers, VE3HTJ; and VE3FSO for their assistance.

I think VE3HTJ and I may have made a first when he dialed up my sister in England on the regular telephone line and completed a phone patch to me in Algonquin.

Anyway, two years of 45 pounds or so was tiring. It can be done, and I know I can have a back-packable five-band station ready to go anywhere it would be needed and operate for about 10 hours non-stop. However, in the interests of my own enjoyment of canoeing, etc., I decided to cut weight drastically.

The Ten-Tec Argonaut draws 250mA on receive and 450mA average on SSB transmit. A 2.5 AH battery pack weighs only a couple of pounds and should give me about seven hours. I exchanged my Kenwood TS-130S with a friend for a two-week period. I used a 2.5 AH battery pack and a 90 ft. wire antenna (#22 stranded) with the MFJ mini-tuner. Fortunately, the Argonaut has a built-in SWR meter.

At one campsite on an island, there were no trees so I just strung the wire around the perimeter of the site, about 6 feet above the ground along the tops of bushes. My SSB was readable by VE3HTJ, but not phone-patch quality!

On another occasion, I had four near-perfect patches into Hamilton, Ontario one evening. My battery pack went dead after 10 days (about five hours of use), and I used flashlight batteries collected

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from the rest of the group for the contacts over the next five days.

A mixture of AA, D and even AAA cells were pressed into service; the SSB was very distorted and the CW chirpy, but readable.

Now I have my own Argonaut. And oh yes, the weight! I check in now with just 10 pounds, including an ICOM 2-AT for VHF, Argonaut, battery pack, tuner, antenna and a small 100mA/14V solar panel for charging whenever the sun shines!

The Argonaut gives me five bands, and 40 metres has quite a number of useful nets such as ONTARS on 7.055 MHz and COMSONT on 7.072 MHz at 1000 hours.

It seems to me that it would be within the bounds of present-day technology to have a small (less than 4 lbs.) SSB five-band rig with 20 watts input liquid crystal frequency read-out, and with CMOS circuitry in the receiver, it should not draw more than 25-35mA with the volume low or the audio fed into an ear-piece. VHF hand-helds don't use much more than that these days. If anyone hears of such a rig, please let me know!

— Ottawa ARC, Ontario, CANADA □

Teacher

(continued from page 39)
having a school station.

Students

Finding interested students is easy; keeping them in a Novice class is difficult. Today's high schools have classes in electronics, computers and radio/TV production, so you have plenty of potential class attendees. Advertise around the school and talk it up with the teachers who teach the above-mentioned courses for about four weeks before you want to start the ham class station project.

To promote the upcoming class to all the students, show any one of the ARRL's movies or videotapes to the kids. The teachers who teach the electronics, computer or radio/TV classes can show the movie or video in class as a part of their regular lessons. From these showings, the students will get interested and some will show up.

Potential Growth

Yes, many students will drop out of your first few Novice classes. They will give all sorts of good and bad reasons for dropping out. Some will resent the old-timers teaching them. The ones that don't want to become hams will be quickly weeded out. After a few weeks, only the serious ones will be left.

The key to keeping the kids interested in getting their Novice licenses is to have a class with lots of hands-on experiments for them to do. Every week, you must make at least one on-th-air QSO. This will enforce their reasons for wanting to stick out the end of the class and drive them to get on the air.

The first year you might only get two or three kids licensed, but that's a start. After a few years of teaching, the ham club will be an established after-school activity. The kids who want to be hams will be, and the teachers of the other subjects will be asking you for demonstrations.

(To be continued) □

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

Irregularities

(continued from page 37)

huffy if you ask them too many tough questions. I am reluctant to reveal a source of these screwdrivers for fear of tipping an illegal HF'er.

If you are wondering why this didn't go into the April (fools) issue, it's because there's a serious point here. The modification instructions quoted above are precisely what the manufacturer actually mails out. And he is following the FCC rules to the letter.

Of course, anybody who buys this linear

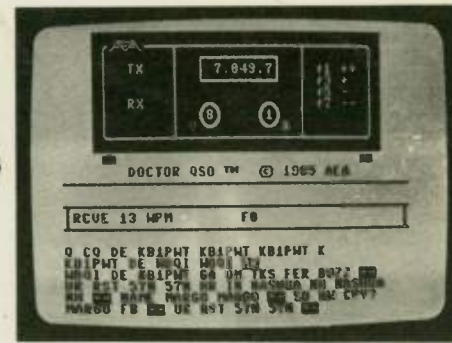
is bound to open it up, per assembly instructions, in order to mount the power transformer. Are you going to tell me they won't see two extra set screws and notice that they block the full rotation of the capacitors? Do you suppose he won't recognize that a final extra screw must be holding back the bandswitch? Aw, come on!

It may well be that the FCC doesn't have sufficient staff people to properly police the ham bands, as they claim. But you have to wonder . . . couldn't they take the guy who enforces this fat-headed linear limit regulation off his present job and put a pair of earphones on him? □

Skinner's constant (Flannagan's finagling factor)

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Collect calls

Last month, this column carried some suggestions from Red Barger, W3CVE, on ways to deliver radiograms by collect phone calls. A recent MARS directive, however, objects to such delivery. Collect calls are approved for phone patches, but not for radiograms. The reason is that military personnel are told that the messages are being sent free of charge, and a toll charge to be paid by the recipient of the message is then not appreciated. And so, if a message comes via MARS, under no circumstances should one call the addressee collect.

Alternatives? If there is nobody from a given area that checks into the net, it could be hard to deliver a message to that area. But amateur ingenuity expresses itself in other ways than in building hardware and erecting antennas.

Here are a few possibilities: Some amateur on the net may have access to a WATS line and can place the call toll-free. A call on a repeater might raise somebody who can deliver the message. You can always mail the message, and if it's a MARS message from overseas, MARS members can mail it at government expense.

If you're not a MARS member, give it to someone who is. There probably are several on your net, but if not, any MARS member anywhere can mail it. Or you can phone it yourself and pay the toll charge, which may not be much more than the postage would be, and consider it an investment in Amateur Radio's public relations.

Those of us who remember when a three-minute phone call cost as much as we earned from a day's work may still think of long-distance calls as expensive. But rates have been falling as fast as postage rates have been rising. And now making a collect call has something cheap about it, and that something is not the cost: a collect call can cost five times as much as one you dial direct. So maybe we should re-think our views on delivering traffic by collect phone call.

If none of these means are available, you can send a service message back to the originating station saying that the message is not deliverable, and explaining

why, in this case, no outlet. But this should be the last resort. Too often "No outlet" means "I'm too lazy to find one."

Smoke signals

With one exception, no amateur is under any obligation to handle traffic, and actually traffic handlers comprise about one-tenth of one percent of active amateurs. See the article on page 77 of April QST by Bradley Wells, KR7L, "Traffic Handlers, a Vanishing Breed?" And close to extinction are the old-timer traffic handlers like the late Ben White, W4PL, whose motto was, "Traffic, any amount, any time, anywhere," who got the messages through somehow, could make sense out of what to anyone else would be hopelessly garbled, and sometimes spent hours on end meeting their schedules.

But there are still a few like that — the ones you find listed every month in QST's Brass Pounders' League. The June issue listed 30 calls of amateurs who had a total of 27,630 traffic points. It is interesting that in the Section News department of QST there were 1,131 stations that reported a total of 105,149 traffic points. The 30 amateurs who made BPL, only 2.7% of those reporting, handled over one-fourth of the traffic. And even the 1,131 amateurs who reported handling any traffic are much less than 1% of the amateurs active on the air. Vanishing breed indeed!

With so few willing or able to give much time to traffic handling, how are we to be able to make reasonably rapid delivery of traffic to every little town and hamlet that has a local telephone exchange without running up long-distance bills? Amateur ingenuity again to the rescue. We can't expect every place to have representatives on every session of every net. Not even big cities are always able to do that. But to expect one amateur to check into a net or two every night, when it could be several weeks before any traffic comes for that area, is to invite someone to chase DX or ragchew or drop Amateur Radio entirely. Fortunately, that's not necessary.

Amateurs, particularly on the 20-meter phone nets, but on others as well, make use of *smoke signals* which actually in-

volve no smoke. When a message comes for someone in an area where the net has no outlet checked in, someone calls a station located in that area by landline telephone. The number is dialed, the telephone allowed to ring once, and then the amateur hangs up. One ring on the telephone is the signal to get on the air.

Even if an amateur is active on several nets, it will usually be evident from the time of the call which one is calling. If not, the amateur can check each of them and should know which one it is in a matter of a minute or so.

"Smoke signals" can be particularly helpful as a means of alerting a net in case of an emergency, if telephone service has not been completely disrupted. It's much faster than waiting for someone to answer, then explaining by word of mouth what is wanted. Just dial the number, wait for one ring, hang up and then dial the next number. This is true even in local areas, where toll charges are not involved. And using "smoke signals" in regular day-to-day net operation will help make sure they will be understood and acted upon in an emergency.

The exception mentioned at the beginning of this section? There is one kind of traffic that all amateurs are *obliged* to handle, by the International Radio Regulations themselves: "Radio stations shall be obligated to accept, with absolute priority, distress calls and messages regardless of their origin, to reply in the same manner to such messages, and immediately to take such action in regard thereto as may be required."

With that exception, there is no obligation for amateurs to handle traffic, and most do not. But if you claim to be a traffic handler, you won't be one of those who object, "We're not Western Union." True, we are volunteers; traffic handling is not our source of livelihood. But we're rendering a service, and we should strive to make it the best we can within our limitations.

Like much of the area of the United States, we here are protected from fire by a volunteer fire department. I hope our firemen never use the excuse, "After all, we're only volunteers."

Automatic control

The FCC in April, responding to a petition filed by ARRL, proposed to allow automatic control for any amateur operation above 29.5 MHz. Comment time will have passed by the time this appears in print. In fact, if the Commission acts with unusual rapidity, there could even be a Report and Order in Docket 85-105, establishing the rules.

As proposed, there would be a restriction prohibiting stations automatically controlled from handling third-party traffic. At the moment, nobody seems to know just what this prohibition is intended to prohibit. For example, the Notice of Proposed Rulemaking speaks of computer-based message systems, or electronic bulletin boards, as a possible application, but these would seem to be third-party traffic.

Would the prohibition prevent amateurs from linking packet repeaters under automatic control to develop extensive packet traffic networks? Hopefully, no. Such networks could be the source of a dramatic expansion of amateurs' ability to provide communication in emergencies. A single VHF packet channel operating under automatic control 24 hours a day could handle all the traffic now being sent by the entire National Traffic System, and have messages to their destination in a matter of minutes.

You can move a lot of traffic in a short time when speeds of 300 wpm and up are employed, and when there are no time constraints limiting traffic handling to the period that a net is in session.

Will that mean the end of manual relaying of traffic? Not for a long time. It will take years to get the network to every local telephone calling area, and even then there will be times when we will have to return to voice or CW to pass the traffic when the machine breaks down. But the handwriting is on the wall. As printing replaced the scribes who copied manuscripts, as the Linotype and the Monotype displaced hand compositors, as computer-controlled machines displaced the Linotype operators in the printing business, so packet radio and automatic control seems destined to displace manual traffic handling in Amateur Radio. Sad news to some, but it's coming anyway! □

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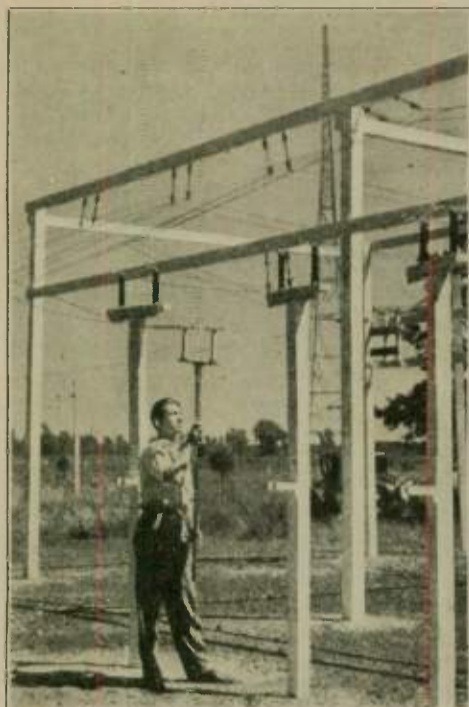
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AERIALS

Kurt N. Sterba

So, what if you don't have an antenna? Use something else! What if you don't want to incur the neighbors' wrath? Use something else.

Use a ladder, for example. I did and it worked. A plain old garden variety eight-foot aluminum ladder, set up in the backyard was my radiator in the Radiosport contest.

With a C-clamp pressing one of the thick wires of the Budwig connector to the side of the ladder, I fed it with coaxial cable. On the ground side of the Budwig connector I laid out four radials.

As you know, with a solid state rig the ammeter serves as sort of an SWR bridge. With SWR the power backs down in ratio with the amount of SWR. On every band I was able, with a tuner, to get full bore 16 amps forward power.

The tuner settings were (75) 5E5, (40) 8C5, (20) 4B2, (15) 0B6, (10) 10A0.

How did it work? With propagation that was nothing to write home about I got all U.S. call districts, Canada, Mexico and a DX.

True, I was working the big signal stations such as KB1H, N2IC, K3ZO, N4UM, KS5M, W6UE, KA7KDU, NJ8L, NB9C, KF0H and the like. But I was not getting killed in the pileups either. Obviously with 70 watts output into a ladder I was not going to command a frequency with everybody flocking to work me. I would have to move up and down the band answering the CQs. At a non-frantic pace I was able to get 3 contacts in 6 minutes, 4 in 7, 4 in 4, 3 in 6, 3 in 5, 2 in 2, etc.

True, nothing to set the contest world on fire but little runs of one a minute with no power and no antenna is sort of a moral victory. (Later with my horizontal loop on 40 I made 14 contacts in 10 minutes. Had to stop and rest. Those who say contesting is a young man's game are right!)

Why did I load up a ladder? To prove a point. If it accepts power, it works. No matter what the circumstances you can do something to radiate. Even if you are in a neighborhood that totally forbids antennas you could throw a little mobile antenna in the backyard and get in on the contests and have some fun. Should someone be prying on what you do so closely that you could not even get away with that then I have news for you. You don't live in the US of A, you're living in Bulgaria!

When a ladder (for goodness sake) will span the continent and a bit of north and south thrown in for good measure, you could go into Sweepstakes and have a ball with practically anything! So as not to be misleading I'll admit there were stations that never heard me at all. But that can happen to you running big stuff, too.

Who knows what the "resonant" frequency of a ladder is? With the rungs shorting across, what actual conditions existed? Probably just one big mess. But that was why I did it. Yes, a big blob of metal, not cut to any specific length, and during pretty crummy conditions, can fling a signal a couple of thousand miles.

Actually it was more fun to hear a station call, give him one call back and have him answer right off, knowing that my antenna was a ladder than later in the contest with the big Yagi and the amplifier.

What's next? Will we load up a station wagon on 80, a mid-size car on 40 and a compact car on 20?

Write in and tell what you have done along these lines. Have you ever just snaked 64 feet of wire along the fence and through the rose bushes? How did it work out? Others would be interested.

Should there be any scoffers reading this, let me point out that clandestine radio operators, running very low power, were not exactly putting up 100-foot towers saying "Here I am everybody!"

They really hid their antennas, and they were heard at great distances and across oceans.

I was looking in the July issue of one of the hammy magazines and there were instructions on building a Cubical Quad. It showed the center conductor going to one wire and the shield to the other wire. The direction read, "Waterproof this joint". Nothing about how to do it. What does a newcomer think when it just tells him waterproof that joint? Does he wrap a dollar's worth of tape around it? Does he go to one of the road crews and get some tar?

I think that all antenna construction articles should say "Get a Budwig connector." Now, I don't know this Budwig guy, wouldn't know him if I saw him. But he does make one fine product. I've used them for many, many years now. Bought another a couple of months ago for \$5.95. They don't break; it's just that I misplaced them. If there is anything on this earth that you get your money's worth for, it is those Budwig connectors. There's even a little hole in it so you can tie it up in an inverted V configuration. This should be used on any antenna that is coax fed. It just makes me cringe when I see antenna articles and books showing broken bottles and bits of plastic or whatever as the means of bringing the antenna and the feedline together.

Next month, Lili will bring you the whole story about the noise bridge. (KNS goes by his monicker to avoid irate comments at radio club meetings from people who make less contacts in a contest with a real antenna than he does with no antenna.)

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More on shunt fed Marconi

Mr. Armond Noble, N6WR
Publisher, Worldradio

Dear Armond,

I can't believe I read what I just read in the July issue of Worldradio on pages 43-44 alongside Lil and Curt's Aerial column. Sorry, Armond, I've got to take off the kid gloves on this one.

W8FR's "Shunt Fed Marconi" is packed with misinformation in one of the most dazzling displays of ignorance I've seen in some time. Race is 180 degrees out of phase with reality concerning the requirement for insulating ground radials. And he doesn't understand even the most basic AC theory, to say nothing of his total ignorance of transmission-line theory. He proves his ignorance of AC theory in stating that 35 ohms of resistance plus 15 ohms of reactance add to equal 50 ohms of impedance, to yield a 1:1 SWR reading on an SWR meter. How could this mathematical absurdity have gotten past your editors?! Contrary to W8FR, this impedance will not appear as "35 + 15 = 50 ohms" to any SWR meter, and its inability to discriminate between resistance and reactance will not provide "a false discriminate between resistance and reactance will not provide "a false reading of 1:1". The correct algebraic solution in this case yields impedance $Z = 35 + j15 = 38.08$ ohms (magnitude) at (an angle of) 23.2° . Referenced to 50 ohms this impedance yields a mismatch (SWR) of 1.65:1.

Race goes on to say that power reflected by reactance in a load returns to the source, only to be dissipated in the ohmic resistance of the feedline and the tank circuit, and not radiated. Although he is correct that the reflected power does return to the source, he is incorrect in saying it is not radiated, because after multiple reflections on the line, the reflected power is ultimately radiated along with the source power in the same proportion of radiated-to-dissipated power as with the source power.

I'll now point out a few more of W8FR's bits of misinformation without further comment, except to say I don't under-

stand how he acquired such a collection of erroneous concepts, or why such irresponsible drivel was printed.

1. That something is wrong if the tuning and loading controls of a transceiver have different settings when feeding an antenna system than when feeding a 50-ohm dummy load.

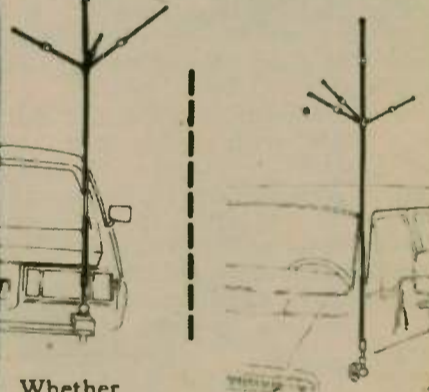
2. That a half-wavelength feedline should always be used between source and load, even if the distance between them is much shorter.

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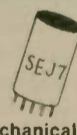
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3. That a half-wavelength of line between the source and load forms a balun.

I'm often heckled with similar absurdities during my lectures, but after my explanation in response to the heckling most of the hecklers are satisfied, admitting they learned something. Occasional-

ly there is a die-hard who'll refuse to even listen to the explanation, and typically, that person also lacks sufficient background in math and electrical theory to comprehend what I'm saying. My current concern for the errors in W8FR's article is that they confuse the readers. The reader

who subsequently learns that what he read is erroneous will not know whether to believe correct information appearing in the same journal.

I regret hitting you with this problem, Armond, but my conscience wouldn't let me ignore it.

73,
Walter Maxwell, W2DU
ARRL TA

P.S. I invite W8FR's attention to Kurt's "Aerial" column in the August 1984 issue of Worldradio. □

Putting the horse before the cart

Dave Farris, K5NT

One of the more popular topics in Amateur Radio publications in recent years has been the law as it relates to towers, beams and other antennas. Having decided to put up a tower and beam of my own, I was prompted by these articles to comply with our local laws and regulations rather than run the risk of having to dismantle an expensive installation because of a neighbor's complaint or the violation of some unknown regulation.

My first step was to apply for a building permit. I wrote a letter to the City of Austin Building Inspection Department saying who and what I was and what I wanted to do. I enclosed a map showing my QTH and a full description of my proposed tower. For the latter purpose, I used the drawings and specifications found in the Rohn catalog. The staff of the building inspection department, which was most helpful, said that for my application to be approved I would need the signature and seal of a Texas Registered Professional Engineer on the tower specifications and the approval of the City Planning Department (the local zoning authority). The first requirement was easy to meet. The second was more complicated.

I was advised by the planning staff, also a helpful group, that I lived in an area in which no structure (including Amateur Radio towers) could exceed 35 feet in height without a special permit. These are obtained by the filing of a fairly complex application consisting of a form accompanied by a site plan, tax maps and other documents, followed by an appearance before the Planning Commission. It is here that the decision is made to grant (or not to grant) the special permit. The planning staff may make a recommendation to the Commission, but the Commission is not required to follow it.

Prior to the hearing before the Planning Commission, the staff notifies each of your neighbors who own property within 300 feet of yours. They are given general information about your application and are invited to inspect the complete application at the City Planning Department. They are also invited to comment on your application in writing and to speak at the public hearing on your application if they wish. The Planning Department also provides a sign which you must place in your yard several weeks before the hearing.

About 10 days before my hearing, using the mailing list prepared by the planning

staff, I mailed letters to each neighbor. I told them something about Amateur Radio, what a beam antenna was, and why I wanted to erect one. I invited them to call or visit me if they had any questions or comments. I received little response to this letter or to the one sent by the planning staff. The few comments I did receive were positive and supportive.

At my hearing I made a brief presentation describing my application. From the questions which followed, I do not believe many members of the Commission had read my application with a great deal of care. One of my more distant neighbors was present, and he suggested that my proposed application would be unsightly. His views made a strong impression on the members of the Commission.

I was only partially successful in countering this allegation, even though I pointed out that my installation would not be visible from his lot because of the large number of trees in the neighborhood and that those few neighbors who would be able to see it were not concerned enough to be present. In the end, my application was approved by a close vote after I agreed to put up a 40-foot tower rather than the 48-foot model originally planned. Had the Commission rejected my application, I could have appealed to the City Council. Had the Council supported the Commission, I could have gone to court. Had any of my neighbors objected to the decision of the Commission, they would have had the same rights of appeal.

My special permit was granted subject to the approval of my proposed installation by the FAA and the FCC. The FAA approved it promptly (a special form is used for this purpose). The FCC folks in Houston told me verbally they had no interest in the matter, but would not send a letter to that effect due to lack of adequate staff. The Planning Department was sympathetic to this problem, and waived FCC approval. A professional engineer signed and sealed the tower specs for a reasonable fee, and my long-sought building permit was issued with no further problems.

If I had it to do over again, I would personally visit each neighbor and ask those who favored my application to attend the hearing and speak in my behalf. In administrative proceedings, I am convinced that the best prepared persons win the battles, as well as the wars.

— Austin ARC, TX □

Small loop antenna for DF

Jim Harding, K3DRJ

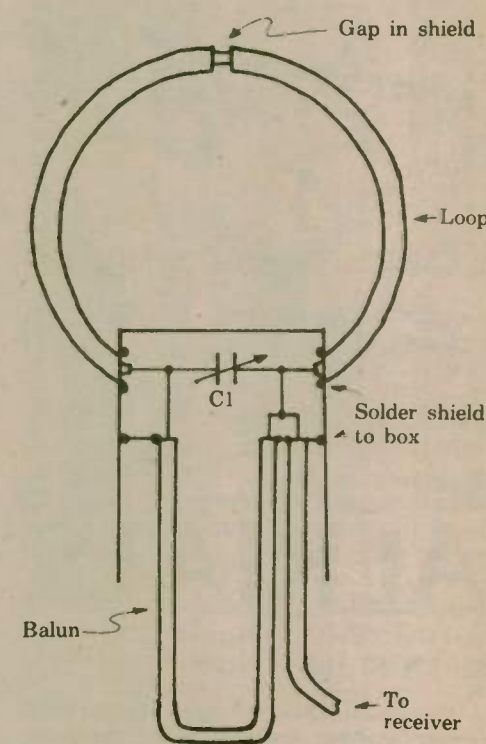
Here is some information on the small loop antenna that I constructed for a "turkey" hunt that several club members took part in about a year ago. This article gives construction data to build a small DF loop that may be useful to those amateurs who would like to locate a transmitter.

This antenna was made using the theory provided in the ARRL Handbook plus a healthy dose of amateur ingenuity. Basically, the antenna is a small shielded loop. The loop length, by theory, should be less than .08 wavelength, or at 147 MHz, less than 6.5 inches. I found that a length of 5.25 inches of RG/58 was just about right, as it was smaller than .08 wavelength but long enough to form a circle or loop of useable size. The coaxial shield must be broken at the exact center of its length. This allows the antenna to "see" the magnetic wave but shield the electric wave. A gap of between 1/8" and 1/4" will suffice.

A small box of sufficient size to support the loop and contain the tuning capacitor can be made from anything available. Double-sided PCB material makes a neat enclosure.

The box and loop are constructed first and then tuned to resonance. A small ceramic variable capacitor (7-45pF) is placed in parallel with the loop and with the aid of a grid dip oscillator, is tuned to resonate the loop at the desired frequency. After the loop has been tuned, the feedline is attached, using one of two methods — via a coaxial balun or small differential capacitor.

The coaxial balun is probably easier,



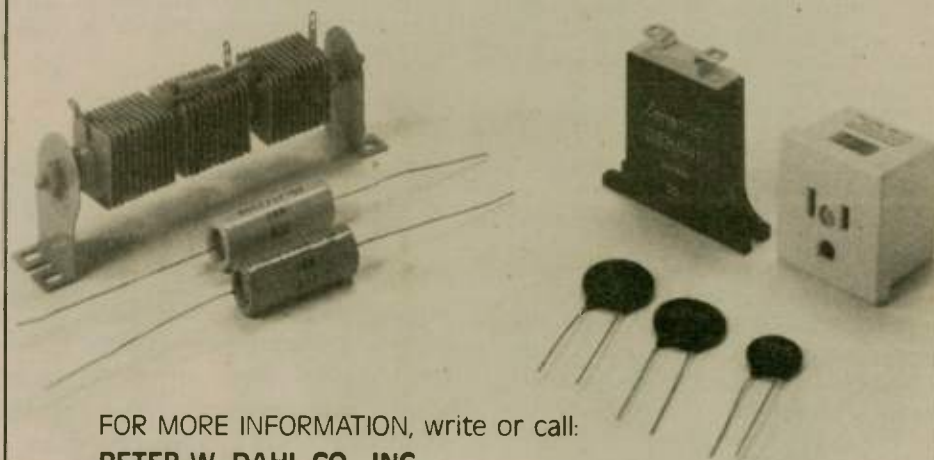
because I find it rather hard to locate small differential capacitors. A length of 27 1/4 inches of RG/58 makes a nice balun, and will give some use to some of those scrap lengths of coax that everyone has laying around. Double-shielded coaxial cable should be used to provide some additional protection from feedline pickup, but regular RG/58 of good quality should be adequate in most cases.

In use, you should get a very deep null on each side of the loop. Some experimentation with the tuning of the loop can also produce a unidirectional null in the same plane of the loop. The latter being very advantageous in tracking down the elusive turkey.

— Baltimore ARC, MD □

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The Wouff Hong

Joe Rice, W4RHZ

In an institution as old as Amateur Radio, traditions and symbols of the art appear and become a part of it. Our traditions are many, among them our long record of self-policing, our dedication to public service in all types of emergencies, our amazing versatility in experimentation and our instant response to the call of our country in time of war. But of all the symbols, only one — aside from the ARRL diamond — has become a part and parcel of the framework of Amateur Radio, the symbol of its finest traditions, its long and glorious history.

That symbol is the Wouff Hong. Every ham should know its origin.

It seems to us that now is a good time to retell the story of this famous and beloved part of the very fabric of Amateur Radio. The appearance of the Wouff Hong among the gadgets exhibited in the radio magazines aroused the curiosity of many radio amateurs. Visitors to W1AW, seeing either the original or one of many replicas in our building, ask what it means. New members of the Royal Order of the Wouff Hong, initiated during the midnight convocations of the Order at League conventions ask, "Where did it come from, in the beginning?"

It started back in 1917 in the very earliest days of ARRL and *QST*, when an anonymous amateur writing under the title "The Old Man" created a wonderful series of humorous stories in the magazine.

In a pithy, irascible style he assailed all the Amateur Radio acts that struck him as criticizable about Amateur Radio operations of the period in his famous "Rotter Radio" series, beloved to this day by all who read them. He pitilessly exposed the poor operating practices of the day, yet did it in a way which drew chuckles even from those recognizing themselves as the special targets of his ire.

In one of those stories, "Rotten QRM", he launched forth with samples of some of the poor sending cluttering up the bands in a particular QSO to which he was listening. The gibberish included the words "Wouff Hong" which, apparently, was being used by someone else for someone else.

It turned out to be one of those price-less pieces of spontaneous word invention. Instantly, it caught on with the gang. Although T.O.M. himself admitted at the time he didn't know exactly what a Wouff Hong was, it quickly became something with which both to attack bad operating practices and to discipline their perpetrators. Within three months, the editor of *QST* found it necessary to write an editorial on the growing demand from the gang for Wouff Hongs. How rapidly

this situation might have developed had not World War I intervened is a matter of speculation. But the tradition had been established, and the Wouff Hong was created in the minds of thousands of



The Wouff Hong. "... each face noticeably ... blanched when the awful Wouff Hong was ... laid on the table."

amateurs as some mythical instrument of Amateur Radio.

When *QST* resumed after the war, one of its first contributors was T.O.M. In an early 1919 issue, he contributed an article — "Rotten Starting" — to work off steam on the slowness with which our government was getting around to let us operate again. At the conclusion of the article appeared the following: "In the meantime ... I am sending you a specimen of a real live Wouff Hong which came to light out here when we started to get our junk out of cold storage. Keep it in the editorial sanctum where you can lay your hands on it quickly in an emergency. We will be allowed to transmit soon and then you will need it."

The object was duly received at headquarters. The editor, fully mindful of the historic significance of the occasion, took the instrument to one of the board meetings in New York, 03 May 1919, subsequently duly reporting in *QST* that "... each face noticeably blanched when the awful Wouff Hong was laid on the table." By an action still part of the League's official records, that board voted that the Wouff Hong be framed and hung in the office of the secretary of the League. There it remains to this day.

We know the significance of the Wouff Hong. We don't know the significance of its weird shape. Not even the beloved T.O.M. (revealed after his death, as none other than our first president, Hiram Percy Maxim) ever explained that, nor was

the precise manner of its use ever prescribed, although it perhaps may be guessed with a little imagination.

But the years passed and it continued to grow in the affections of amateurs the country over, old-timer and youngster alike. It became the inspiration of The Royal Order of the Wouff Hong, the amateur secret society of ARRL conventions. Today, it is thoroughly entrenched in the lore of Amateur Radio as its most sacred symbol. See it when you next visit ARRL Headquarters.

Don't let household current kill you

A lot of people who wouldn't go within 50 feet of a high voltage power line fearlessly play around with 120 volt household current without giving a thought to whether or not it is dangerous. It is and it can give you a deadly shock.

About 1,000 people are electrocuted every year in the United States, and here is how some of those accidents happen.

- A do-it-yourselfer using a defective electric drill in the basement is electrocuted when he touches a metal laundry tub.

- A woman whose basement was flooded wades in the water to reach her freezer. She is electrocuted when she touches the lid of a shorted electric freezer.

- A child dies when he plugs one end of the iron cord into the wall socket and the other one in his mouth.

- Two children die when a radio falls into the bathtub where they are taking a bath.

Actually it is not the number of volts that causes the shock, but the amount of current (amperage) that enters the body, how long the shock lasts and the path which the current follows.

One milliampere passing through the skin causes a tingling sensation. Only 7-10mA can rob you of your muscular control so that you can't let go; 100mA can kill if the shock lasts for one second or longer.

Usually, the current passes through a hand and out of a foot, which may not be too bad. The real danger is when the current passes in one arm, through the chest area and out the other arm. When this occurs, the current can paralyze the respiratory muscles, causing breathing to stop. Such paralysis may last even after the person is disconnected from the electrical source.

Also, the current can strike the heart, causing fibrillation and resulting in instant electrocution. The heart goes into unsynchronized fluttering, cutting off blood and oxygen circulation to body cells, including the brain.

Because of the way electricity works, low voltages, surprisingly can be more dangerous than high voltages. A heavier jolt can "clamp" the heart and prevent fibrillation. People have been known to recover from comparatively large jolts of electricity while a smaller amount, under certain conditions, can kill.

You can avoid electrical shock by using good electrical equipment, and by using common sense when you are using electricity.

—St. Charles ARC, MO

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FCC Exams will be administered on site, so arrive early if you wish to upgrade your license.

Talk-in on 147.64/04.

For more information contact: Jim Vice, Route 1, Box 462, Alexandria, AL 36250; (205) 820-0638.

California

SONOMA COUNTY RADIO AMATEURS, Inc. will be holding their 3rd Annual Ham Radio Flea Market on Saturday, 21 September, from 8:00 a.m. to 2:00 p.m., at the Sebastopol Community Center, 390 Morris Street, Sebastopol (five miles west of Santa Rosa just off Hwy. 12).

Admission and parking are free. Tables are \$6 at the door or \$5 in advance. (Advance registration gets best indoor spaces.) Vendor set-up starts at 7:00 a.m. Radio clinic, exhibits, refreshments, prizes. Auction around noon.

Talk-in on 146.23/73.

For tickets and information, write to SCRA, Box 116, Santa Rosa, CA 95402.

Connecticut

The CANDLEWOOD ARA (CARA) will hold its annual flea market at Edmond Town Hall, Main Street (Rt. 6), Newtown, Connecticut on Sunday, 15 September, from 10:00 a.m. to 4:00 p.m. (dealers 9:00 a.m.). Admission \$2. Tables \$7. Tailgating \$5. (Barry Electronics will be there.) For table reservations, send check or money order to CARA, P.O. Box 143, Bethel, CT 06801.

Talk-in on 147.72/12 or 52 simplex.

For further information, contact Gene Marino, W1IDH, Valley View Rd., Newtown, CT 06470; (203) 426-8852.

Georgia

The 12th Annual LAINERLAND ARC Hamfest will be held 22 September, 9:00 a.m. at Gainesville, Georgia in Holiday Hall at Holiday Inn.

Free tables and inside display area for dealers registering in advance. Large free parking lot for flea market. Left-foot CW contest. Ladies' country store. Many prizes and activities. Doors open at 8:00 a.m. for dealer set-up. Walk-in Novice through Extra volunteer exams begin at 9:00 a.m.

Talk-in on 146.07/67.

For information and reservations, contact Paul Watkins, W4FDK, Rt. 11 Box 536, Gainesville, GA 30501; (404) 536-8280.

Illinois

The BOLINGBROOK ARS announces BARS Hamfest '85, to be held Sunday, 08 September, at Santa Fe Park, 91st and Wolf Road, Willow Springs, Illinois.

Registration is \$2 in advance, \$3 at the gate. Reserved and dealers' tables available. Overnight parking available. Refreshments and prizes.

Talk-in on 147.33/93 and 146.52.

For more information, contact Ed Weinstein, WD9AYR, 7511 Walnut Ave., Woodridge, IL 60517; (312) 985-0527.

SARA Hamfest '85, sponsored by the SHAWNEE ARA, will be held Sunday, 08 September at John A. Logan College Gym on Hwy. 13, near Carterville, 9 miles east of Carbondale. Rain or shine — everything indoors.

Doors open at 7:00 a.m. Free coffee and donuts till 8:00 a.m. New equipment and computers, displays, flea market, crafts, ladies' activities, free bingo, hourly prizes and lunch. Admission is \$3 at the door.

Talk-in on 146.25/85, 3.925 and 52 simplex.

For information, contact Shawnee ARA, 502 W. Kenicott, Carbondale, IL 62901; (618) 457-7586.

The PEORIA AREA ARC will be sponsoring Peoria Superfest '85 on 21-22 September, at Exposition Gardens, West Northmoor Road, Peoria, Illinois.

Gate opens at 6:00 a.m.; commercial building opens at 9:00 a.m. Admission is \$3 in advance, \$4 at the gate. Children under 12 free. There will be Amateur Radio and computer displays, huge flea market, and FCC exams for all classes (Saturday only). Free bus to Northwoods Mall on Sunday. Full camping facilities on the grounds.

Talk-in on 146.16/76; call W9UVI.

For more information and reservations, send SASE to Superfest '85, P.O. Box 3461, Peoria, IL 61614.

The 10th Annual New Berlin Hamfest, sponsored by the SANGAMON COUNTY FAIR ASSOCIATION, will be held on Sunday, 22 September, at the Sangamon County Fairgrounds in New Berlin, Illinois from 7:00 a.m. to 3:00 p.m. Admission and flea market setup is free. Food and drink will be available and the hamfest will be held rain or shine.

Talk-in on 146.52 and 146.88.

For more information, contact: Al Swettman K9QFR, Box 2, Pleasant Plains, IL 62677; (217) 626-1634.

The CHICAGO FM CLUB presents the 15th Annual RADIO EXPO '85, to be held 28-29 September, at the Lake County Fair Grounds, lot located at the intersection of Routes 45 and 120 in Grayslake, Illinois. (about 40 miles northwest of Chicago). The hotel for RADIO EXPO is the Mundelein Holiday Inn, 15 minutes south of the fairgrounds at the intersection of Routes 45 and 60.

The exhibit area will be available for set-up from 10:00 a.m. to 9:00 p.m. Friday, and from

6:00 a.m. to 9:00 a.m. Saturday. The area is open to the public from 9:00 a.m. till 4:00 p.m. The EXPO Get-together is held at the Holiday Inn from 7:30 to 8:00 p.m. for exhibitors and from 8:00 on for everybody else who cares to come. Exhibits open from 9:00 a.m. to 4:00 p.m. Sunday. Exhibit take-down may begin after the main prize drawing has been held — usually at 3:00 p.m.

Booth spaces (10' x 10') will be \$100 per space, with an additional \$80 for telephone in booth; you'll be billed directly by Illinois Bell Telephone.

Prizes consisting of transmitters/amplifiers will be awarded only to licensed amateurs or to individuals with licensed hams in the immediate family. Non-licensed winners will be awarded non-transmitting prizes.

For more information, contact RADIO EXPO, 5127 N. Monterey Dr., Norridge, IL 60656; (312) 582-6923.

Kansas

The WICHITA ARC will hold its 1985 hamfest at Camp Hiawatha, 1701 W. 51st St. N. West 51st Street North, Wichita, Kansas, on 22 September A flea market, programs, and commercial exhibits will be featured.

For more information, contact Gary Vreeland, ND0T, 1920 S. Santa Fe, Wichita, KS 67211.

Kentucky

The 1985 ARRL National Convention, sponsored by the GREATER LOUISVILLE HAMFEST ASSOCIATION will be held in Louisville, Kentucky on 04-06 October, from 1200 to 1800 the 4th, 0800-1800 the 5th, 0800 to 1600 the 6th at the Kentucky Fair and Exposition Center in Louisville. Gigantic indoor exhibitor area and flea market covering over 200,000 square feet of floor space completely air-conditioned. Activities include ARRL Forum with many League officers and board members present, packet radio, AMSAT, FCC, National Weather Service, ladies' program and much more. Camping available on grounds. Admission \$5 in advance \$6 at the door (12 and under free).

For information, contact the Greater Louisville Hamfest Assn., P.O. Box 34444, Louisville, KY 40232; (502) 368-6657.

Michigan

The GRAND RAPIDS ARA, Inc. will hold its annual Swap and Shop on Saturday, 21 September, at the Hudsonville Fairgrounds. There will be prizes, dealers and a concession. Also in-

door sales area and an outdoor trunk swap area. Gates will open at 8:00 a.m. for both swappers and the public.

Talk-in on 146.16/76.

For more information, write to: Grand Rapids ARA, Inc., P.O. Box 1248, Grand Rapids, MI 49501.

Missouri

The 4th Annual Ozark ARC Congress and Swapfest, sponsored by the OZARKS ARS, will be held 08 September, at City Park, junction of U.S. Hwy. 60 and Missouri State Hwy. 37, Monett, Missouri.

Swapfest at 11:00 a.m.; buffet dinner at 1:00 p.m. No tickets necessary and no prizes offered.

Talk-in on 146.37/97 MHz, 7.250 and 146.52. For complete information, contact the Ozarks ARS, Box 327, Aurora, MO 65605; (417) 678-5330.

New Hampshire

On 29 September, the CONNECTICUT VALLEY FM ASSOCIATION will hold its 9th Annual Hamfest and Flea Market at King Ridge Ski Area in Sutton, New Hampshire, from 9:00 a.m. to 5:00 p.m., rain or shine.

General admission is \$2; dealers and flea market set-up \$3. Overnight camping for self-contained units only (no hookups). Food available on premises. Refreshments and prizes.

Talk-in on 146.76 or 146.52 simplex.

For more information, contact Connecticut Valley FM Association, P.O. Box 173, East Wallingford, VT 05742.

New Jersey

The GLOUCESTER COUNTY ARC announces its 7th Annual Hamfest, which will be held Sunday, 25 August, at Gloucester County College, Tanyard Road, Sewell, New Jersey.

Doors open at 8:00 a.m. (7:00 for set-up). Rain or shine tailgating and indoor spaces. There will be seminars, contests, continuous showing of W5LFL space flight, shuttle bus to and from parking lot, food and refreshments and 50/50 drawings. Tickets are \$2.50 in advance, \$3 at the gate. Sellers — \$3.50 per space.

VEC testing will be administered at 9:30 a.m. and 2:00 p.m. Two CW tests will be given at 9:30 a.m. and 11:00 a.m. Be early to register before testing starts. Each test has a 2½ hour time limit; 610 forms at test site.

Talk-in on 147.78/18, 146.52/52, 223.06/224.66 and 447.100/442.100.

For information and advance tickets, write to GCARC, P.O. Box 370, Pitman, NJ 08071; or call Milt Goldman, K3WIL, (609) 845-7000 days, or John Fisher, K2JF, (609) 589-2318.

The SOUTH JERSEY RADIO ASSOCIATION, the oldest radio club in continuous operation in the United States (1916), will hold its 37th annual hamfest on Sunday 15 September, at the Pennsauken High School on Hylton Road in Pennsauken, New Jersey.

Table and tailgate sales in the school parking lot, refreshments and food in the school cafeteria. Gates open at 8:00 a.m. for general admission. Tickets \$2.50 in advance, \$3 at the door. Tailgate sales \$5 per space plus admission ticket.

Talk-in on 145.29/144.69.

Contact Fred Holler, W2EKB, 348 Bortons Mill Rd., Cherry Hill, NJ 08034; (609) 795-0577.

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New Mexico

The Annual Northern New Mexico Hamfest, sponsored by the NORTHERN NEW MEXICO ARC, will be held 28-29 September at the all-weather facilities of Camp Stoney, 8 miles east of Santa Fe.

VEC exams will be given Saturday morning. Saturday afternoon will feature an aspencade color tour. Free overnight camping (no hookups). A tailgate flea market, dealer display, programs and fellowship will take place Sunday, between 8:00 a.m. and 3:00 p.m. Lunch is included with admission — \$3.75 for adults, \$1.75 for children.

Talk-in on .52 and local repeaters.

For further hamfest/exam information, send SASE to NNARC, Rt. 3, Box 95-15, Santa Fe, NM 87501. □

New York

The TOMPKINS COUNTY ARC presents the Fingerlake Hamfest and giant flea market, to be held Saturday, 24 August, at Trumansburg Fairgrounds, Rt. 96, 12 miles north of Ithaca, New York.

Admission will be \$2; \$1 for flea market parking. Junior ops under 12 free. Reserved indoor tables are \$5 per table. Overnight camping, no charge. Only two miles to Taughannock State Park. Door prizes and refreshments. Acres of parking. Rain or shine.

Talk-in on .37-.97 or .52 simplex.

Send inquiries and checks to TCARC, c/o David G. Flinn, 866 Ridge Road, Lansing, NY 14882; (607) 533-4297. □

Join LIMARC at the Long Island Hamfair on Sunday, 22 September, at the New York Institute of Technology on Rt. 25A, Northern Blvd. in Old Westbury, Long Island, one-half mile east of Glen Cove Road.

General admission \$3; wives, children and sweethearts free. Exhibitors \$5 per car space — no reservations.

Talk-in on 146.85.

For more information, call at night: Hank Wener, WB2ALW, 516 (516) 484-4322, or Bob Reed, WB2DIN, (516) 221-8116. □

The RADIO AMATEURS OF GREATER SYRACUSE is pleased to announce the 30th RAGS Hamfest to be held Saturday, 05 Oc-

tober, at the New York State Fairgrounds off Route 690, one mile east of Thruway Exit 39. Hours are 9:00 a.m. to 6:00 p.m. with flea market set-up beginning at 7:30 a.m.

Pleasant, bright, surroundings with plenty of chairs and clean restrooms. Superior breakfast and lunch that has made the Syracuse Hamfest famous. Giant indoor flea market; large table \$6 Outdoor tailgating in picturesque setting \$3 Exhibitors and dealers. VE exams (must pre-register). Speakers, ARRL Forum, free parking. Admission \$3.

Talk-in on 31/91 and 90/30.

For further information, contact Viv Douglas, WA2PUU, or Ed Swatowski, WA2URK, at P.O. Box 88, Liverpool, NY 13088. □

North Carolina

The QCWA 1985 National Convention, sponsored by PIEDMONT CHAPTER #126 (covering central North Carolina), will be the best and biggest ever. The convention will be held 26-28 September at the Hyatt Winston-Salem, in Winston Salem.

There will be an open forum with QCWA officers and directors, a sing-along with Leo Meyerson, Palmetto Chapter breakfast-entertainment by Lou Finch, Piedmont Chapter Banquet with guest speaker, and ragchewing and lie swapping unlimited. Activities and tours (your choice) will also be provided upon request. Ladies activities arranged by ladies of the Piedmont Chapter.

Convention registration is \$4 per person. Saturday breakfast is \$6.25; banquet is \$18 (London broil) or \$14 (breast of chicken Normandy). Registration will be confirmed if received by 05 September. Make checks payable to Piedmont Chapter QCWA. Mail registrations and fees to R.G. Low, 5335 Idaho Lane, Concord, NC 28025.

Rooms are \$50 per day, single or double occupancy at the Hyatt. Make your own reservations to: P.O. Box 599, Winston-Salem, NC 27102; or (919) 725-1234 or (800) 228-9000. Mention QCWA when making reservations. □

The MAYSVILLE HAMFEST CLUB will be holding their annual hamfest on 13 October at the Maysville Community Park in Maysville, North Carolina, from 9:00 a.m. to 3:00 p.m. There is no admission charged, but

tickets may be purchased for the drawing of prizes.

Talk-in on 145.21 (Trenton) and 146.52.

For more information, write to Maysville Hamfest, Inc., Rt. 1, Box 80-36, Swansboro, NC 28584. □

Ohio

The TWENTY OVER NINE ARC will be sponsoring a hamfest at Green Acres Lake Park Campgrounds, Youngstown, Ohio, on Saturday, 14 September.

Flea market outside; tailgate or bring own table. Dealers in outside pavilion. Hours will be 9:00 a.m. to 5:00 p.m.; set-up begins at 8:00 a.m. Admission \$2 (whether selling or buying). Prize drawings throughout the day.

Talk-in on 147.915/315 or 146.52 se simplex.

For more information, call John Tarr, KA8UPN, (216) 782-0673, or Mike Wilson, KD8XP, (216) 755-5002. □

The CLEVELAND HAMFEST ASSOCIATION is proud to announce the 11th Annual Cleveland Hamfest and Computer Show, to be held Sunday, 22 September, at the Cuyahoga County Fairgrounds in Berea, Ohio. The 'fest will last from 8:00 a.m. to 4:00 p.m.

Ample parking (including overnight) will be available. Flea market spaces are \$4 per space; provide your own tables and chairs (shelter no extra charge in case of rain). Indoor spaces are \$10 for the first 8 feet; \$8 for each additional table, which includes two chairs (same as last year). Set-up on Saturday the 21st, from noon to 5:00 p.m. and from 6:00 a.m. showday. Admission is \$3 in advance; \$3.50 at the gate.

Mail reservations to CHA Reservations, 6617 Debbie Dr., North Ridgeville, OH 44039. □

Oklahoma

The 3rd Annual Great Salt Plains Ham Social for the Oklahoma-Kansas stateline area will be held 08 September, at the Community Building on the south side of the Great Salt Plains Lake.

There will be FCC exams, free swap tables, forums, refreshments and a covered-dish lunch. Bring the XYL and kids.

Talk-in on 147.90/30.

For more information, contact Steven Walz,

WA5UTO, Box 222, Cherokee, OK 73728; (405) 596-3487. □

Pennsylvania

The Butler Hamfest, sponsored by the BUTLER COUNTY ARA, Inc., will be held at the Butler Farm Show Grounds at Roe Airport, from 9:00 a.m. to 4:00 p.m., on 08 September. Admission donation is \$1; children under 12 free. Plenty of parking; overnight campers welcome. FREE outside flea market. Indoor flea market-vendor's space \$5 per 8-foot table.

Talk-in on 147.96/36.

For more information, contact: Hamfest Chairman, P.O. Box 1787, Butler, PA 16003. □

Washington

The WALLA WALLA VALLEY RAC will hold their 39th Annual Hamfest at the Milton-Freewater, Oregon Community Building on Saturday and Sunday, 21-22 September. Building opens at 8:30 a.m. both days.

Free registration. Swap shop, bazaar, new gear displays, ladies bingo, antique and homebrew contests and repeater meetings. Snack bar at site. FCC exams Saturday. Noon potluck on Sunday, followed by prize drawings.

Talk-in on 52 simplex.

Write for flyers to: Pat Stewart, W7GVC, 1404 Ruth, Walla Walla, WA 99362. □

Wyoming

The 6th Annual High Plains Ham Roundup will be held 06-08 September in the Medicine Bow National Forest, Yellow Pine Campground, 14 miles east of Laramie, or 35 miles west of Cheyenne, on I-80. The event is sponsored jointly by the SHYWY-ARC, the UNIVERSITY OF WYOMING ARC, and the NORTHERN COLORADO ARC.

A potluck supper Saturday evening — bring a couple of your favorite dishes. Swapfest "upgrade Your Junk Box." Packet radio demonstration. Hat decorating contest for XYLs and YLs. Musical entertainment and campfire sing-along. All hams and families welcome — any QTH. No registration fees except a modest Forest Service charge for campers.

Talk-in on 22/82 and 25/85.

For further information, write to K0HRS, 2204 Vassar Ave., Fort Collins, CO 80525. □

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pand their world through Amateur Radio. The System matches students with one-to-one helpers, provides instruction material and support, and loans radio equipment.

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Howdy Days

All licensed women operators throughout the world are invited to participate in Howdy Days, beginning Wednesday, 04 September at 1800 UTC and ending Thursday, 05 September at 1800 UTC.

Procedure: Call "CQ YL".

Operation: All bands and modes of emission may be used. No crossband operation. A station may be counted *only once* for credit.

Exchange: YLRL member or non-YLRL member. Entries in log must also show date, time, band and call of station worked.

Scoring: Score 2 pts. for each YLRL member worked and 1 pt. for each non-YLRL member worked. *NO* multipliers.

Logs: All logs must show if operator is YLRL member or non-YLRL member to be eligible for awards. *DO NOT* send carbon copies of logs. Please print or type. Logs must be signed by the operator. No logs will be returned. Logs must show score and be received by 04 October 1985.

Send log to: Marty Silver, NY4H, 3118 Eton Rd., Raleigh, NC 27608, USA. Please mark your return address clearly.

Duplicates: For each duplicate contact that is removed from the log by the vice president, a penalty of 3 additional and equal contacts will be exacted.

Awards: Top scoring YLRL member will receive her choice of a YLRL pin, charm or stationery. Top scoring non-YLRL member will receive a one-year membership in YLRL.

Suggested contest frequencies

CW:	SSB:
3.540-3.570	3.940-3.970
7.040-7.070	7.240-7.270
14.040-14.070	14.250-14.280
21.080-21.110	21.350-21.380
28.080-28.110	28.580-28.610

NOTE: Since band allocations in other countries are often different than the USA, North American YLs should look for DX YLs in other parts of the bands, especially on 40 and 80 meters.

1985 Fall Classic Radio Exchange

The 1985 Fall Classic Radio Exchange will be held 29-30 September from 2000 UTC Sunday to 0300 UTC Monday. The object is to restore, operate and enjoy older equipment with like-minded hams.

A Classic Radio is any equipment at least 10 years old. Owning one is an advantage, but *not required* to operate in the Exchange. You can use *anything*, although new gear is a distinct scoring disadvantage!

Exchange: Name, RST, QTH, receiver and transmitter type (homebrew) send PA tube, i.e., "807"), and other interesting conversation. The same station may be worked with different equipment combinations and on each band on

each mode.

CW call "CQ CX"; phone call "CQ Exchange". Non-contestants may be worked for credit.

Suggested frequencies: CW — up 60 kHz from low band edges; *Phone* — 3910, 7280, 14280, 21380, 28580; *Novice/Tech.* — 3720, 7120, 21170, 28120.

Scoring: Multiply total QSOs (all bands) by total number of different receivers, transmitters, states/provinces/countries worked on each band and mode. Multiply that total by your Classic Multiplier: total years old of all receivers and transmitters used; three QSOs minimum per unit. If equipment is a

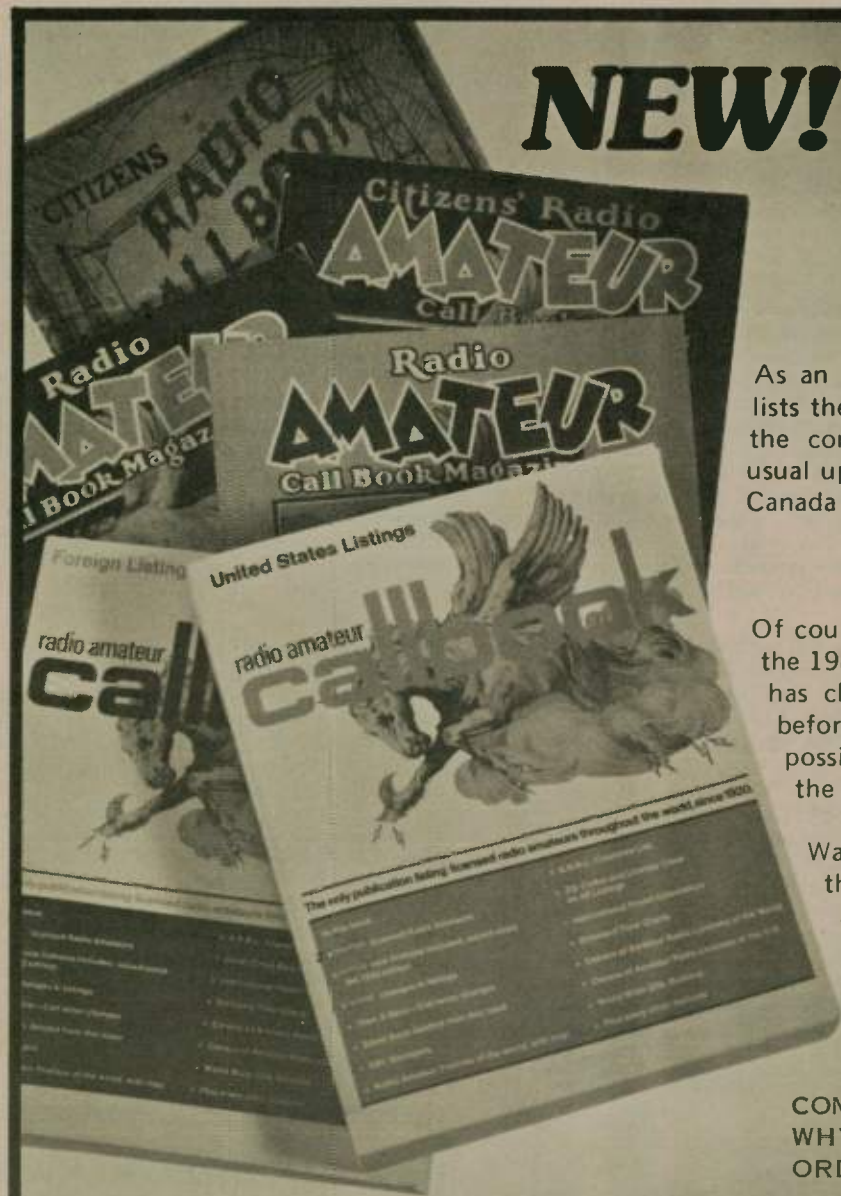
transceiver; multiply age by two.

Awards: Certificates and appropriate memorabilia are awarded every now and then for highest scores, longest DX, exotic equipment, best excuses and other unusual achievements.

Send logs, comments, anecdotes and SASE to Stu Stephens, K8SJ, 1407 Hollywood Rd., Sandusky, OH 44870. Send SASE for Classic Radio Newsletter.

Another Classic Radio Exchange will be held 26-27 January 1986. □

Check your license expiration date.



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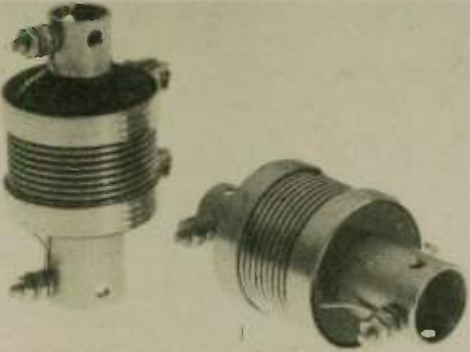
12 Meter antenna coil

KW-12 antenna coils allow trapped dipole coverage of the new 12-meter band (24.89-24.99 MHz). Resonant frequency is designed to provide a perfect half-wave dipole.

Power handling capability is 1500 watts PEP maximum. The pair is installed 9'5" from the balun. Hi-Q characteristics are obtained by optimum form factor on polystyrene. Coils dimensions are 5.5" x 1.8" diameter. Weight is 6 ounces. Tensile strength is 800 lbs. An acrylic lacquer water proof coating and all aluminum hardware help to resist interface corrosion.

Specification sheet and installation instructions are supplied.

Price and delivery are \$36.00/pair and five days respectively. For more information, contact Emily Bostick, Microwave Filter Company, Inc., 6743 Kinne Street, East Syracuse, New York 13057. Call toll-free 1-800-448-1666 or collect (NY/HI/AK/Canada) (315) 437-3953.



Antenna handbook

The *New Beam Antenna Handbook* is now on the bookshelves. Written by renowned antenna experts William I. Orr, W6SA1, and Stuart D. Cowan, W2LX, the new publication is specifically designed to save its readers time, money and trouble in the design of beam-type antennas.

Included are accurate dimensions for arrays for the 40, 30, 20, 17, 12 and 10-meter bands, as well as 6-meter and higher VHF bands; computer-aided design parameters for both HF and VHF yagis; information on the effect of hardware and element taper, and much more.

Priced at \$9.95, it is published by Radio Publications, Inc., P.O. Box 149, Wilton, CT 06897.

— *Westlink Report*

UHF cavity amplifiers

Varian EIMAC introduced six new UHF cavity power amplifiers designed for FM, CW, pulse or single-sideband linear service in the 280 to 530 MHz frequency range.

Using the EIMAC 3CX800A7 high-mu power triode, the cavity amplifiers eliminate equipment design complications and extra power supplies associated with UHF tetrode cavities, yet they provide comparable stage gain. Power gain in FM or CW service for all cavities is on the order of 11dB with efficiency ratings in excess of 55 percent, according to the company.

In addition to being more efficient, the new cavity amplifiers offer commercial, medical, scientific and amateur operators improved equipment reliability in the targeted bands because of the comparatively simple design.

The cavities provide approximately 450 Watts power output in CW and FM service over the following ranges: CV-2401, 390 to 450 MHz; CV-2402, 375 to 420 MHz; CV-2403, 280 to 300 MHz; CV-2404, 470 to 530 MHz; CV-2405, 330 to 370 MHz; and CV-2406, 450 to 470 MHz.

Standard 50-ohm Type N input and output RF connectors are used for all cavities. Silver-plated components are used to ensure the best performance and efficiency, according to the company.

The cavities are forced-air cooled and designed for mounting to a customer's 19-inch panel. Each has a net weight of about 13 pounds. All are 14 inches wide, 10 inches deep, and they range in height from 6.2 to 9.3 inches.

For additional information or literature, contact: Varian EIMAC, 301 Industrial Way, San Carlos, CA 94070; (415) 592-1221.



In the ear speaker/mike

The Ear Com is a miniature earpiece transducer that permits the user to send and receive voice communications through a radio in high ambient noise environments. The Ear Com also permits hands-free communications by the user, which is especially useful for public service applications. The Ear Com can also be used with protective gear and clothing such as a hard hat, gas mask, helmet, respirator, goggles, hearing protector, etc.

The Ear Com is designed to function as a remote microphone/speaker, through the earpiece which picks up voice sounds through the user's otolaryngeal system. The Ear Com control module amplifies, filters and conditions the voice signals which are passed on to the associated transmitter or intercom unit for transmission. Incoming audio signals are passed from the transceiver through the control unit to the earpiece.

The complete Ear Com system consists of the earpiece, control module (powered by a standard 9-volt transistor battery or by the associated transceiver) and an interface cable to attach the control module to the radio or intercom set. Ear Com can be used with most HF, VHF, UHF and 800 MHz radio equipment, including portable, airborne, mobile or fixed base sets. It is compatible with AM, FM, or SSB modulation. It can also be used with most two-wire intercom systems.

Standard interface cables are available for most transceivers. Custom interface cables are available on special order. Custom-fitted earpieces are also available. The compact control module can be worn on a belt or installed in a vehicle, motorcycle, aircraft, etc.

For push-to-talk microphone keying, the user actuates the PTT switch on the control unit, or the system can be fitted with an optional PTT switch, such as an under-arm pressure switch, steering wheel switch, etc. for hands-free operation.

For a free color brochure on the Ear Com system, contact Sales Department, Centurion International, Inc., P.O. Box 82846, Lincoln, NE 68501. Telephone (402) 467-4491 or toll-free (outside Nebraska) (800) 228-4563.



Marine electronics

Amateur Radio mariners and mobilers may now have the very best collection of Gordon West's articles on mobile and marine electronics and ham radio installations. This 8 1/2" x 11", large-format book contains over 100 pages of fact-filled suggestions on maritime mobile and mobile radio installations, as well as many pictorial diagrams on ham radio and marine electronic systems.

"This book will make for great reading by the ham radio operator who is a boat owner or for the interested recreational vehicle user," comments Gordon West, well-known instructor and writer for over 17 national magazines.

"This book will give the ham radio mariner all the answers on how to evaluate current marine electronic systems, where to shop for the best price, what questions to ask, the ins and outs of warranties, and finally, how to install the systems and use these modern computerized sets," adds West.

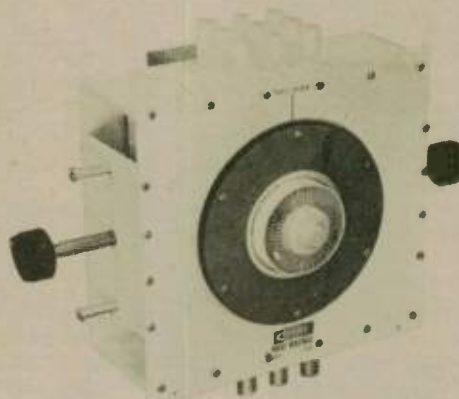
The following chapters are covered in this book: Where to buy marine electronics; Depth sounders; VHF and 2-meter transceivers; Marine single sideband and ham radio HF transceivers; Radio direction finders; Loran; Satellite navigation; Automatic pilots; Radar; Wind and speed equipment; and a directory of mail order marine electronic discount houses and a list of manufacturers and importers of marine electronic systems.

"All of our installation suggestions parallel recommendations for campers, mobile homes and vehicle installations, too. Vehicle installations are almost identical to mobile marine installations, so this book is designed with every ham in mind!"

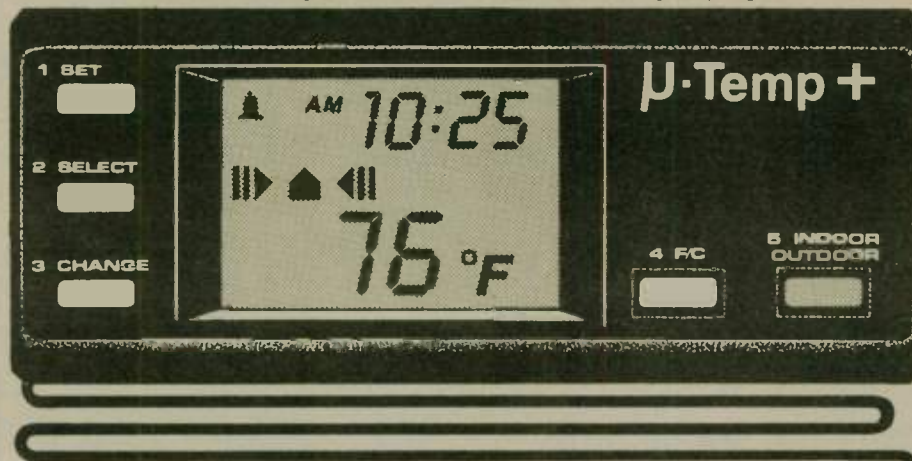
The *Straight Shooter's Guide to Marine Electronics* is available through selected ham radio stores, including Ham Radio Outlet, as well as marine stores, marine electronic houses, and directly from Radio School, Inc., 2414 College Drive, Costa Mesa, CA 92626. The price is \$15.95, and all orders are shipped first class mail the same day. Add \$3 for postage and handling.

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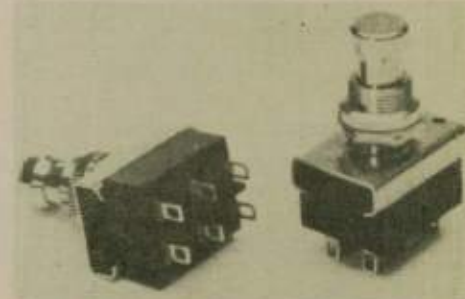


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Spokane, WA 99215



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EDITING A CLUB PAPER? Need one for your club? Interested in Amateur Radio public relations? Need some help? Amateur Radio News Service would like to hear from you. For info write Fran Norrick, WB9WPS, Route 6, Box 239, Kankakee, IL 60901.

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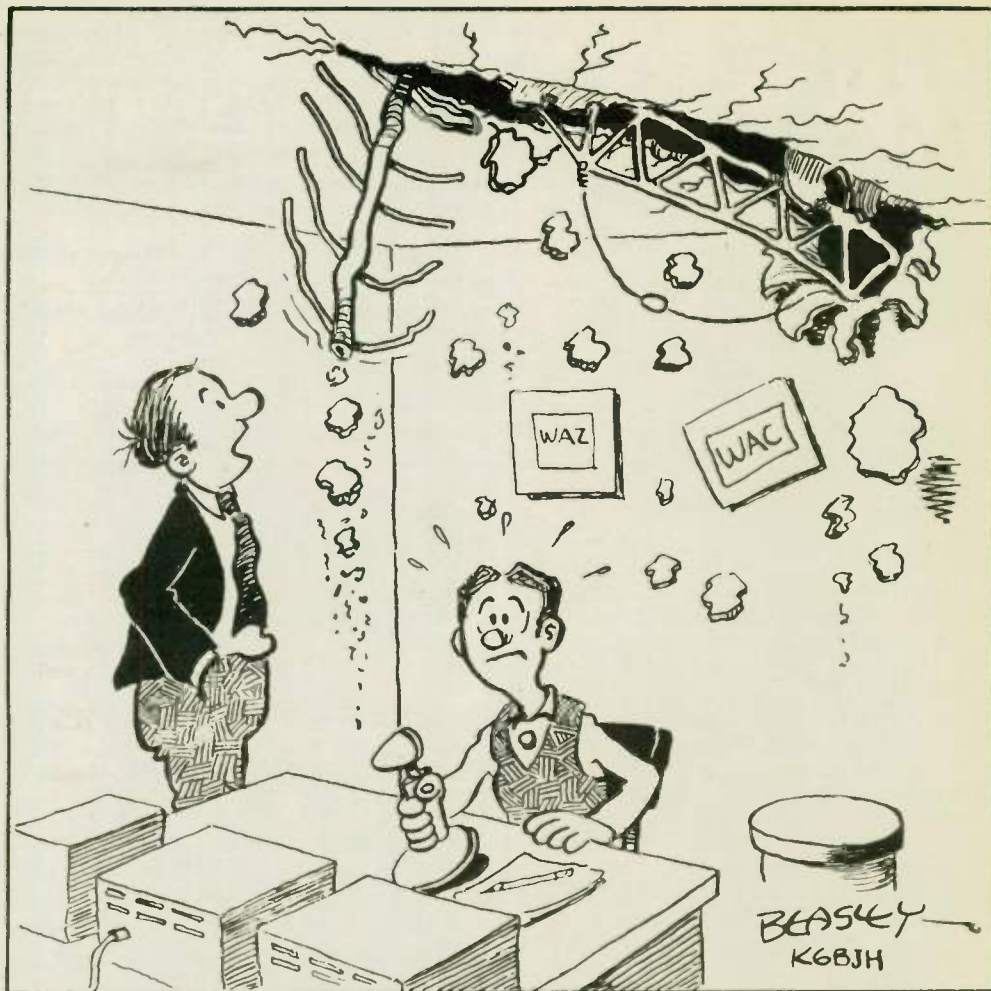
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ADVERTISER'S INDEX

- | | |
|------------------------------------|---|
| AEA — 41 | Peter W. Dahl Co., Inc. — 17, 36, 44 |
| Ainco Electronics — 31 | QCWA — 3 |
| AMSAT — 28 | QSky Publishing — 38 |
| Anteck, Inc. — 44 | Radio Amateur's Conversation Guide — 22 |
| Antenna Co. of America — 10 | Radio Clubs — 34, 35 |
| Antennas, Rudy Plak — 2 | Radio Expo 85 — 30 |
| BHC, Inc. — 2 | Radio Engineers — 17 |
| Butternut Electronics — 6 | Radio Store — 12 |
| Callbook — 48 | Rogers Advertising — 16 |
| Coin Int'l — 24 | Royal Newport Porcelains — 34 |
| Communications Specialists — 11 | Sartori Associates — 43 |
| Courage Center — 47 | Sierra Electronics — 18 |
| Cubex Company — 40 | Sign-On — 8 |
| Dana — 46 | Spectrum West — 28 |
| Dick Smith Electronics — 21 | Spider Antenna — 30, 43 |
| Display Your License — 24 | Spi-Ro Distributors — 4 |
| DX Edge — 25 | Tel Temp Enterprises — 49 |
| Engineering Consulting — 32 | TimeKit — 38 |
| ESC Products — 20 | USQS — 16 |
| Fallert's Engraving — 4 | Van Gorden Engineering — 2 |
| Fox Tango — 34, 40 | Vanguard Labs — 20 |
| Gem Quad Products Ltd. — 36 | Wendell Kent, NV6C — 35 |
| Glen Martin Engineering — 23 | W.H. Nail Company — 38 |
| Gordon West's Radio School — 13 | W9INN Antennas — 25 |
| Greater Louisville Hamfest — 6 | Webster Associates — 3 |
| Ham Radio Outlet — 26, 27 | Yaesu — 7 |
| Ham Station (Ham Shack) — 19 | |
| Handi-Tek — 40 | |
| Henry Radio — 15, 33 | |
| H.L. Heaster, Inc. — 47 | |
| ICOM — 52 | |
| IMRA — 17 | |
| International Radio, Inc. — 22 | |
| JABCO — 36 | |
| J.L. Industries — 18 | |
| Kantronics — 39 | |
| Kilo-Tec — 20, 31 | |
| Long Island DX Bulletin — 51 | |
| L-Tronics — 10 | |
| Mavis Amateur Communications — 8 | |
| Metheny Corporation — 28 | |
| MFJ — 5, 12, 42 | |
| Mike Forman — 50, 51 | |
| Nemal Electronics Int'l, Inc. — 45 | |
| N.P.S. — 42 | |
| N6KW QSL Cards — 3 | |
| Octobervention — 37 | |
| Palomar Engineers — 14, 23, 33 | |
| P.C. Electronics — 29 | |

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