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# Dayton! DX Convention

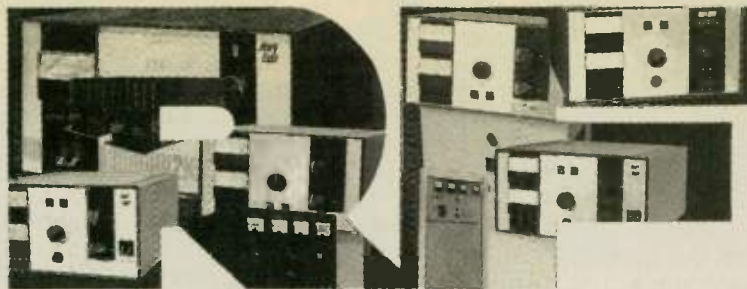
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# Worldradio

Year 19, Issue 1

July 1989 • \$1

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# Closer and closer!

GLENN WEAR, WB6AVI

My wife, Jo Ann, and I live in the mountains near Wilseyville, CA. As we sat on our deck one sultry summer evening, we could see lightning flashes in the distance. As the evening progressed, the lightning moved closer. We watched for a while, and at about 2230, decided to go to bed.

Before turning in I disconnected the HF antenna at the back of the rig and laid the coax on the table. I also checked to see that the 2M rig was disconnected.

I found I could not sleep, as the lightning was hitting closer and closer. I was on my knees in bed, looking out the window, when suddenly there was a loud noise, like a shotgun blast next to my head, and a blinding flash of light. The night lights went out and the smell of ozone filled the room. We had experienced a direct lightning strike!

After a few scary minutes, we found the flashlight and made a quick search around the house. There was no fire, so we returned to bed.

The next morning, we checked the power panel. There were several cir-

cuits tripped as well as the main. Later, the XYL noticed broken glass on the floor next to the table where the radio gear sits. The glass had come from the lamp on the table where I had laid the coax. There was a large burn mark on the metal base of the lamp.

We determined that the lightning had hit my antenna, traveled down the coax, jumped to the lamp, exploded the lamp-bulb, then traveled the house circuitry to the main, and out to the power-pole where it blew a fuse.

All of the damage was not apparent at first. A more thorough search showed that the strike had damaged the following equipment: Antenna balun; Ten-tec Transceiver; 25 Amp

and 15 Amp Tripp-lite power supplies; 2M Yaesu Memorizer Transceiver; Table-lamp; stereo tuner and a 12-volt, 40 Amp power supply in our motor-home. Some, but not all, of this equipment has been replaced.

I realize now that there were a few more precautions I could have taken to protect my equipment. I hope this story alerts everyone to the need to set up his station so it can withstand lightning that comes closer, and closer and TOO CLOSE! —Thanks to Charlotte Farr, co-editor of the Calaveras ARS' newsletter, who felt this was an important story which should reach a large group of people. And so she sent it to us. □

## Albania at last

Peter Vekinis, EI4GV, and some US Amateurs are planning to do a double header DXpedition to Mount Athos (SV/A) and Albania (ZA) in September. Mount Athos will be from Sept. 2 through 9 and Albania from Sept. 9 through 16. Kenwood will supply the equipment for the DXpedition from their Benelux office, near Brussels. The arrangements for the visit are being done through certain diplomatic channels in Brussels and Belgrade. The request has been passed on to the appropriate Albanian authorities.

Albania is the most sought after country for DX purposes (according to the ARRL Needed DXCC list) while Mount Athos comes 15th for the world, 10th for the western United States, 16th for the central United States and 19th for the eastern United States.

Peter was the founding president of the radio Amateur club at the Euro-

pean Commission in Brussels. The club has the call sign OR5EC, a special Belgian call for this station. Peter speaks English, French, Italian, German, Greek and some Dutch and Spanish. He is a journalist who has travelled extensively.

For more information on the DXpedition, contact Peter via FAX or electronic mail, if possible. His FAX number is 011 32 2736 3662, on from 1500Z until 0600Z and E-Mail addresses include Compuserve 73157, 1773, the Source IP2006 and Telecom Gold mag 100655. □

# Dayton!!!

ON THE COVER: World renown for the massive flea market. Truly a veritable journey through the history of radio. Our cover shows a stop for those whose rigs still glow in the dark. Classic tubes, each with its own personality.

## CONTENTS

### FEATURES

Annual event pairs scouts and Amateur Radio — 27  
Club expresses thanks — 17  
Dayton — 6-8, 18-19

International DX Convention — 14-17  
Packet radio design — 27  
Reallocation reviewed — 49  
You want it fixed when???? — 28

### COLUMNS

Advertisers' Index — 63  
Amateur Radio Call Signs — 10  
Awards — 20  
Contests — 56  
Digital Bus — 40  
DX Prediction — 35  
DX World — 34  
FCC Highlights — 10  
Hamfests — 54  
MART Classifieds — 61  
Mobile — 42  
New Products — 59

Off The Air - 29  
Product Review — 57  
Public Service — 26  
Publisher's Microphone — 4  
QCWA — 43  
QRP — 50  
Six Shots! — 46  
Special Events — 22  
Subscription, Worldradio — 9  
Traffic — 52  
10-10 International News — 44  
VE Exams — 12

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tions tool to develop the skill, quality and  
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## PUBLISHER'S MICROPHONE

We first give honors due to the latest  
to join the Worldradio Super-Booster  
Club (Lifetime Subscribers). Here are  
those bright enough to know a good  
deal when they see it:

Gerald Rosen, Newton, MA; Jerry  
Molaver, Waterbury, CT; Pete Kemp,  
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Porter, W8KYZ, Elyria, OH; Terry  
Ann, N6AXK, and Gary Pesselt,  
WB6PSY, Winnetka, CA; Keith  
Beard, WE6R, Monterey, CA; and  
Gene Benson, N6ARC, Aptos, CA.

Apologies to Fred Clement, N8EFP,  
of Plymouth, MI, and Karl Pagel,  
N6BVU, of Orange, CA, who also  
"stood tall" recently but were in-  
advertently unmentioned.

Jim West, N6AAD, of Rio Linda,  
CA, wrote: "I would like to thank you

for the fine job your publication does  
on articles dealing with public service  
work. I have found many workable  
ideas in your magazine that have  
helped me develop realistic goals for  
our radio club."

Jim is President of the Caltrans  
RACES Club and said their listing in  
our Clubs section brings him three calls  
a month "from Amateur Radio oper-  
ators who are interested in becoming  
active in ARS emergency services pro-  
grams."

We're here as an open forum for  
Amateurs to exchange ideas. What-  
ever you have done, experienced or ac-  
complished will be of interest to some-  
one else in another city, state, country  
or continent. Don't be bashful or say  
(as we hear so often at hamfests), "I'd  
send in a story, but I'm not a writer."

It's amazing how often we hear the  
phrase, "I'm not a writer." We're not  
looking for Hemingway pretenders.  
Just sit down and write as if you are  
writing a letter to a friend.

We recently returned from the  
Dayton Hamvention and, of course,  
the International DX Convention. At  
both were slide shows of the various  
DXpeditions to exotic locations. Odd-  
ly, our records of these exciting events  
are pictures. We say oddly because it is  
truly an aural event!

It would be, it would seem, ap-  
propriate to have audio recordings of  
the DXpedition. Would you like to hear

what you sound like from the other side  
when you finally break through the  
pileup? Would you pay a few dollars for  
a cassette of the half-hour time frame  
surrounding your contact? Possibly  
such could be a fundraiser for the DX-  
peditioners to help pay those horrible  
bills for the charter boat.

Audio tape would give us an oral  
history. There are film documentaries  
of events. What we should have in  
Amateur Radio is sound documen-  
taries of our events. Could future DX-  
peditioners be better prepared if they  
listened to an entire DXpedition?  
Would it be instructive in what to, and  
what not to, do?

When (possibly) eventually all of our  
contacts are automatic voice recorders  
on transmit and receive with auto-  
matic logging and it's all through the  
satellites or off the moon, you might  
hear, "Grandpa, what were DXpedi-  
tions like in the old days?" You could  
just pull out a tape of Clipperton.

Which of the following is true about  
87 percent of 10? a. It is greater than  
10, b. It is less than 10, c. It is equal to  
10, d. Can't tell.

Half of the 17-year-old high school  
students asked flunk that question (see  
*Wall Street Journal*, May 10, 1989,  
A20). And how many marked the cor-  
rect answer with a wild stab of pure  
guesswork?

Such young people are not going to  
squeal with delight to get into an  
avocation that starts off the first  
lesson with E=IR.

When the concerned ask "Why  
aren't our young people interested in  
Amateur Radio?," the real answer is  
because they aren't much interested in  
anything. Our Biology students in  
worldwide competition came in LAST,  
even beaten by Thailand.

Is there an answer to all this? Tune in  
next month.

—Armond, N6WR

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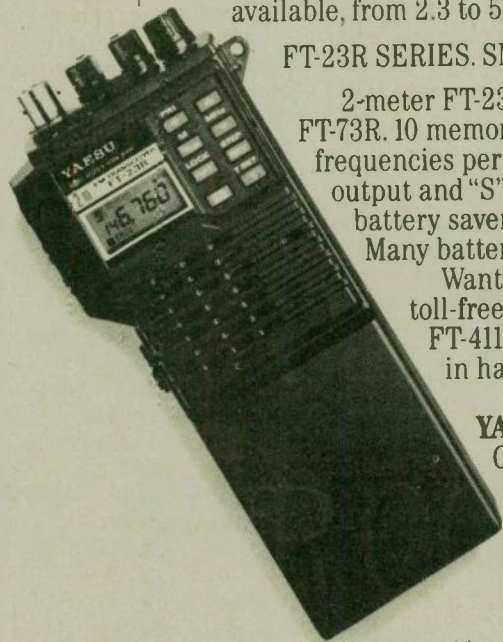
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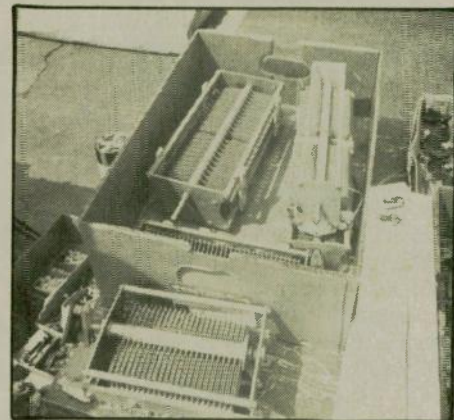
# Dayton, April 28-30



It's wall to wall and shoulder to shoulder — the annual ham magnet! From every corner of the globe they flock to Dayton. The full story (well, not really — it's impossible to do it justice) next month in *Worldradio*.



Lew McCoy, W1ICP, says to Jack Althouse, K6NY, "Fess up Jack, you're that Kurt N. Sterba, aren't you." Lila says, "We've always thought it was you, Lew."



Hmmm, on a warm sunny day there was a man wearing a trenchcoat standing near this table at the Dayton flea market. As he peered over his sunglasses we can only assume he was from the FCC and wanted to see WHO was buying these for his homebrew linear.

## MARS hailed by former director

The following is a synopsis of a speech given by Major General Alonzo E. Short, Jr., at the Dayton Hamvention, as reported by Norm Brooks, K6FO.

I often wonder why they call you folks Amateur operators. You are truly professionals. You are the heroines and heroes of the electronic airwaves. If you were somehow or other able to analyze it, MARS affiliate members have probably given more joy to families and individuals during good times and bad than any other group on the face of the earth.

I am not a ham, and not a MARS member, but I have been a MARS Director several times. I was on Okinawa and I fell into what would

have to be a MARS member paradise. At the time I was there, I was the battalion commander and I had a second hat as MARS Director.

At that time we were giving the island back to the Japanese for management. A lot of people were leaving the island. One of the groups that was leaving had all the Collins equipment and they gave a lot of that stuff to me, as MARS Director.

My MARS program at that time was a fledgling. One of the more knowledgeable individuals suggested, "Major, why don't you start giving away door prizes?" We started giving away linear amplifiers and receivers, and pretty soon my MARS membership was "standing room only."

But I gotta say, as I went back 15 or 16 years later, many of the dies that were cast at that time were ongoing now with a very good program.

I had a dream last night about two stuffy Major Generals who were sitting with an old Master Sergeant. As I recall the dream, one MG was named Win Baggish, the other Blow Hardy. They were saying, "Welcome to

Dayton, I'm Win Baggish, West Point class of '63."

Along with his Hamvention book, he had a copy of *Fortune 500*. He said, "I married money, my wife and I had two sons, one's a lawyer and one's a doctor."

The other MG, not to be outdone, said, "Blow Hardy here. Citadel, 1954. I married a socialite and we also have two sons, one's an astronaut, the other a physicist."

The sergeant, who was sitting there reading a copy of *National Enquirer*,



Major General Alonzo E. Short, Jr., a former director of MARS in Okinawa, addressed the MARS forum at Dayton.

\*\*\*\*\*

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got annoyed with all of this. They turned to him asking, "what about you?" He said, "Hah! Sergeant Win Gage here. I've been MARS Director and First Sergeant of everything from a squad to a battalion. I've never been married, but I also have two sons — and both of them are Major Generals." (laughter)

I'm truly happy to be here. Before I came down, I had an opportunity to look over the roster of speakers and participants that would be before this forum. I noted that ALL are Amateur Radio operators or MARS members.

You've been told about the history of MARS and the great accomplishments that have been made in the emergency communications arena. This tells you unequivocally again that MARS and Amateur Radio operations are two of the most important entities we have for servicing our country.

The problem with it is that as Amateur Radio operators you have become proficient — like the proverbial light switch. Everytime you hit it, it comes on. You can take it for granted.

MARS is well over 65-years-old. If you started talking about its accomplishments, they are too numerous to count. How many of us in this room were in Vietnam? There's not a person who was there or who, as an Amateur Radio operator, didn't have some input.

There are thousands of stories that emanated from that era. You don't always like to think about things based on something like a war. Let's face it, emergencies, war included, are inevitable in our civilization today. But those horrible things are made more bearable by folks like yourselves, who are reaching out, always.

My command, the Information Systems Command, manages and operates Army MARS for the Secretary of the Army, and we depend on MARS in times of emergency. Have we put adequate resources behind it? Perhaps not.

Just about any person who has spent some time in any uniformed service has had some experience with MARS. Most of this exposure has been morale and welfare type communications. I've got to add this — the speech writers write "morale and welfare," but when you're sitting on Quam-Tri, and some-

one patches you back to your father or someone patches you back to your buddy in Saigon, that's not just morale and welfare.

But even if you left it at that, and asked the Navy about MARS, I'm sure what their answer would be. Just take that incident of a few days ago (explosion on *USS Iowa*). I'm sure somebody sitting in this room probably conveyed some messages to some distraught families over that accident.

Ask the Army or the Air Force and they will recall their days in Vietnam and Korea. The Marine Corps also considers MARS to be the central part of their daily telecommunications requirements.

Do not minimize in any way the importance of morale and welfare communications. How many of you have sons and daughters in the service? You may have nephews and nieces, or even grandsons and daughters in the service. Have any of you talked to them via MARS?

As I travel, I see these young men and women, and I ask them, "Have you had an opportunity to talk to your mother and father to let them know how things are going?" Their faces light up.

In the Army today the AWOL rates since 1976 are down by 73 percent. Drug use and abuse is down by 81 percent. Crimes against equipment, buildings and individuals are down by 40 percent. We have the highest educated army ever. MARS has played a big role in these great statistics. Don't let anybody tell you that morale and welfare is a small thing — it's not.

MARS primary mission is to provide augmentation communications to the Armed Services during times of emergency. That has been done so well on your part yet you don't get enough recognition for it.

A large number of the young military that you helped during the Vietnam era have grown up to become senior enlisted men, General officers, senior governmental officials and Congressional Representatives. Because of that they still view MARS as an outstanding facility.

Alot of these folks have impressed in their minds that MARS is just for health and welfare. They see it as

something that the club does out there. The unfortunate thing about that kind of attitude is that the folks making those judgments control the purse strings. When it comes to appropriating the dollars that would stand behind a strong program, these individuals are not in the direct information flow to understand the critical mission that is performed by the MARS.

Less than 20 percent of the resources that make up the MARS program are provided by the government. Eighty percent is provided by folks like yourselves, the volunteer affiliate membership. Somehow, we have not adequately gotten that message out to those who make the financial appropriations.

The MARS Director from the DOD attended several Congressional hearings on MARS. The information that was provided during those hearings made no indication of the mission or actual capabilities of MARS.

The director then assembled the three service MARS chiefs in Washington and issued some specific instructions on changes that should be initiated in the program. At that time the three chiefs started working together to reestablish MARS in an emergency communications role.

A support agreement was signed with the National Communications System, pledging support to the national government in times of national disaster. We will continue to push and bring this thing to the level of consciousness that all of our commanders will understand and in turn push the people that they support, so they can get fully behind this.


MARS should be proud of the progress that has been made in the past few years, but it's not enough. It must be known worldwide and accepted at every level of command that has a requirement for contingency plans. How many times have you heard it said on the news, "I'm so mad at the government — they should have KNOWN

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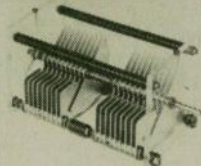
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this," whether it's an oil spill or a hurricane, they should have KNOWN.

You already know that this is a good program. I would like to say to all of you we want you involved. We want you to know who your MARS Directors are. If the MARS Directors are not coming out and soliciting you, those of you who are civic minded should find out who he or she is and go after them. Make available your time and certainly your vast experience and capabilities in terms of training other people.

If the MARS "club" is not moving, try to invigorate it. Try to infuse some life there so this vital means of communication will continue to grow and become even more viable than it is.

I pledge, from the Army side, that we are going to move out smartly with this program, and do all that we can to ensure that it gets the right kind of airing at the right places within the Army. We're going to become more pro-active with the pen and the pencil writing about what's going on in the MARS and Amateur Radio world. □

## Dayton Antenna Forum

PETER ONNIGIAN, W6QEJ

Five very good papers were presented at the April Hamvention this year. They were moderated by Tim Duffy, K3LR. Following is a brief description of each.

### Transmission Lines

Those who attended this session were in for a treat, the likes of which are rarely seen outside colleges which have electromagnetic studies programs. The effects of VSWR in a transmission line were demonstrated by feeding a 25W 2M transmitter into the line.

Dave Smith, W8YZ, demonstrated this very well, using loop lamps to indicate current flow.

Using these lamps, the effect of standing waves were visually displayed as the load resistance was changed to cause VSWR changes. Matching the line with the same resistance at the load end produced lamp brilliance which was equal throughout the 15 ft. distance. But putting a load of 200 ohms to the 100 ohm line showed locations which were higher in lamp brightness and areas where the lamp went out, indicating a current standing wave.

At any given point along the line, the load (antenna) impedance was matched to that of the line and the lamp brightness was uniform from that point back to the line input. However, from the match location to the load, there were still standing waves. Some were surprised to see this!

Both Bruce A. Ray, and Kurt N. Sterba have been saying this for years in the AERIALS column of this magazine. The antenna matcher or antenna tuner does nothing to the antenna or the line VSWR from the antenna to the tuner. The tuner only provides a match from itself to the transmitter! This fact was well demonstrated by Dave's show and tell session.

### Computer Propagation Models

Think Amateur propagation knowledge levels are not on a par with that of professionals? Think again. Dr. Jim Breakall, WA3FET/6, who works at the Lawrence Livermore Labs, says they have modeled Amateur HF skywave propagation.

The important reflection layers of the ionosphere are the D region, from 45-55 miles above the earth; E region, 65-75 miles, depending on sun angle; the F1, from 90 to 120 miles, and the F2, which from 100 to 200 miles are the major HF ionized reflectors for skywave propagation. The sporadic E lay-

er is not like the other layers just described, but more like large clouds with height and width variations that occur about 75 miles above the earth, Dr. Breakall said.

He said this sunspot cycle will perhaps be the "big one" due to the way it started. Ionization is the highest just after local noon. Although forecasting propagation conditions on any given frequency is not an exact science but more of an art, Dr. Breakall said there is a computer capability to accurately predict MUF which is now being used by our military. It will soon be "cleaned out" and made available for civilian use.

### Low Band DXing

An avid contester, Ken Wolf, K1EA, described his 80M vertical array of five towers with an elevated radial system.

His towers consist of four, 4 inch drawn aluminum tube's tapering to a half inch at the tips and base insulated with polycarbonate. His radial system of five radials for each tower is placed 14 ft. above ground. By switching the outer towers, Ken is able to achieve three element Yagi performance with vertical polarization.

### Stacked Yagis

Frank Donovan, W3LPL, discussed the importance of stacking Yagi antennas for best low elevation angle transmission and reception. His conclusions were that at 120 ft. above ground, the 20M Yagi produced a peak at 6 degrees above the horizontal, while there was a null at 15 degrees.

Frank has experimented with three like Yagis mounted one wavelength vertically, starting at 120 ft. and down. By a system of power dividers/combiners, he is able to switch to any one or any combination. Under present sunspot propagation conditions, Frank said the combined three are best to Europe, while the single uppermost is best for Japan!

The stacking height depends on propagation angles of the desired elevation pattern. Frank demonstrated with slides that in a two stack array, the (please turn to page 18)



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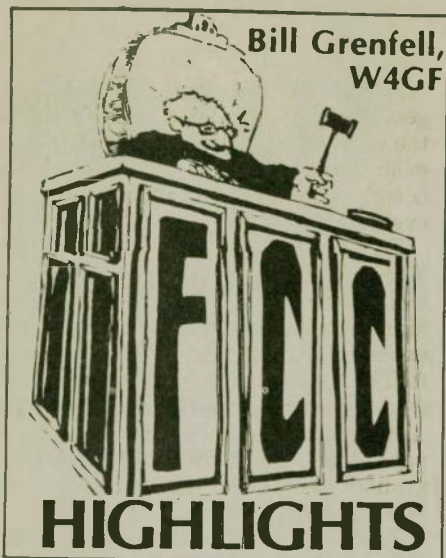
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Bill Grenfell,  
W4GF

## HIGHLIGHTS

A petition to create a new subclass of the Novice license, to be known as the Novice-V, has been submitted (April 14) to the FCC for consideration, by Burt Fisher, K1OIK. "The privileges of the Novice-V would include all modes, emissions at full Amateur power above 52 MHz, but FM would not be allowed in the 2M band... he eliminated the bottom 2 MHz of the 6M band and FM on 2M to make the proposal more acceptable to the Amateur community.

"Examination requirements... would remain basically as they are at present... but the five wpm... would not be required... In its place would be substituted a 10 question written exam to ascertain that the applicant has knowledge of the International Morse Code." Burt stated, in part, "... as a teacher of young people interested in electronics... the public would be served as the base of potential scientists and technicians would be enhanced..." (W5YI Report, 05/01/89).

In Docket 87-389, "The FCC has completed a monumental rewrite of Part 15 of its rules, which concern technical standards for non-licensed RF products of all kinds... these include so-called 'unintentional' emitters, such as... TV and radio receivers and other appliances... and 'intentional' low power transmitters, such as cordless telephones, garage door openers..." etc.

The FCC noted, "... the risk of in-

terference to ARS (Amateur Radio Service) transmissions by Part 15 devices operating below 30 MHz at the new emissions levels appears to be very low... we continue to believe that the proposed rules for the 30-960 MHz range are adequate to guard against significant interference to authorized services from part 15 equipment."

With regard to Part 15 devices operating in the ISM bands (including 902-928 MHz), the FCC said: "The League and individual ARS operators object to allowing Part 15 devices within ISM (Industrial, Scientific and Medical) frequency bands allocated to the ARS, citing the possibility of interference both to and from Part 15 operation."

Because they are non-communications RF generating devices, the radiations of which are very difficult to suppress (by shielding, etc.), ISM devices may be operated in certain bands (902-928 MHz, 2400-2450 MHz, 5.725-5.875 GHz and 24.00-24.25 GHz) without such suppression. For a number of years the Amateur Radio Service has been allocated use of these bands, as much as it can, without protection from ISM radiations therein.

According to ARRL's Perry Williams, W1UED, the League may petition the FCC to reconsider the action, particularly because of alleged potential interference to Amateur operations. (Westlink Report 04/28; W5YI Reports 04/15 05/1; ARRL Letter 04/21).

"The FCC has announced that it is

extending the present version of the FCC Form 610A "Application of Alien Amateur Radio Licensee for Permit to Operate in the United States." Along with other red tape, "The FCC had to determine how many individuals are projected to use the form and the 'Estimated Annual Burden' on the public... In this case the FCC estimates that 2000 alien Amateurs will spend 166 hours filling out the forms.

"All this red tape is caused by the Paperwork Reduction Act of 1980." (W5YI Report 05/01/89).

On March 15 the FCC issued a Notice of Proposed Rulemaking, PR Docket 89-65, which would change the frequency segment for automatically controlled beacons in two VHF bands, as the result of ARRL petition RM-6512. It would change the automatic beacon segments from the present 144.05-144.06 MHz to 144.275-144.300 MHz and 432.07-432.08 MHz to 432.300-432.400 MHz with the object of minimizing interference from automatic beacons to weak-signal communications. (ARRL 03/16/89).

### END-OF-MONTH LICENSE TOTALS

February 1989		March 1989
47,500	Extra	47,734
99,491	Advanced	99,811
114,256	General	114,606
104,113	Technician	105,002
81,029	Novice	82,259
446,489	Totals	449,412 □

House reallocation hearing report on page 49

## 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 May 1, 1989.

For more information about the 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 17326.

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	WS0V	KF0CM	N0KNK	KB0EMA
1	NW1G	KC1OP	N1GMN	KA1TSK
2	WO2R	KE2MQ	N2JHX	KB2HSC
3	NU3S	KD3MP	N3HAL	KA3UOE
4	AB4OB	KM4RL	N4VPB	KC4KJB
5	AA5LJ	KG5TR	N5OHX	KB5JHA
6	AA6NP	KJ6TE	N6UYS	KC6DIF
7	WZ7P	KF7TH	N7MQX	KB7HQE
8	WR8Y	KE8YQ	N8KSK	KB8HCS
9	WG9X	KE9PX	N9IJZ	KB9CPT
North Mariana Is.	AH0H	AH0AE	KH0AM	WH0AAL
Guam	KH2K	AH2CE	KH2DS	WH2AMA
Johnston Is.	AH3B	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra, Jarvis Is.	AH5A			
Hawaii		AH6JT	NH6SW	WH6CDB
Kure Is.			KH7AA	
American Samoa	AH8C	AH8AD	KH8AH	WH8AAY
Wake Wilkes Peale	AH9A	AH9AD	KH9AD	WH9AAH
Alaska		AL7LD	NL7RF	WL7BUV
Virgin Is.	NP2E	KP2BO	NP2DB	WP2AGQ
Puerto Rico		KP4QD	WP4VG	WP4IIP



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# Information needed

## STU COOK, N6FUP

In the *Six Shots* column of the May issue, Ray Clark mentioned a technical tip that would solve my last RFI problem.

The item was a filter (#IR202) from Arrowhead Enterprises of New Milford, CT. If any of you can provide me with the address or phone number of this company (there's no listing in the article or through directory assistance) it would be greatly appreciated.

Send comments to **Worldradio**, 2120 28th St., Sacramento, CA 95818. □

# Code Ode

Troy Weidenheimer, W0ROF

*It's more than dots and dashes,  
It's a place.*

*A sanctuary for those who've learned  
To love the mysterious magic of  
Thoughts arriving in mile-long  
strings  
On roads of ether or wire.*

*Even more, it's peace,  
A shield from the disordered sounds  
Of traffic, angry people  
And industrial clutter clatter,  
Within its warm mantle  
We find soothing respite.*

*And the patter of bright ideas it is,  
The sharp focusing of others'  
thoughts  
From miles beyond our vision's  
range,  
As in a dream we sit so still,  
It floats in our ears and stirs our  
minds  
With concern, remembrance,  
speculation  
And mirth.*

# No Code petition

Citing the support of AMSAT, Tucson Amateur Packet Radio (TAPR) and Barry Goldwater, K7UGA, a central Florida ARC, has dropped a bombshell by filing with the FCC for the creation of a new and code-free class of entry level Amateur license. The Melbourne, FL-based South Coast Amateur Technical Group has put forth a detailed request that petitions for the creation of a new Apprentice Class license and the gradual phase out of the current Novice.

According to its petition, the Apprentice would have no code test requirement, but would be limited to a single, 10 year term. As far as privileges the Space Coast petition calls for the opening of all modes and bands above 30 MHz and a full 1500W maximum power output. Apprentice Class hams would be given Group D call-signs and would be expected to upgrade to at least Technician Class before the end of their initial 10 year term.

*And code is music,  
From sounders and speakers it  
dances  
In the shack to each sender's inner  
clock,  
And comes butter-smooth, deliciously  
swinging,  
Or choppy stacatto from a "fist"  
praising definition,  
Or perfectly metered, flowing  
exquisitely  
From the gentle hand of an artist.*

*A place,  
And peace,  
Intelligence and  
Music.  
Code is more than dots and dashes.  
— Greater Cincinnati ARA, OH □*

In the area of testing, the club suggests the requirements be the same as the current Novice Class. That is, two examiners with General Class or higher licenses unrelated to the examinee and over the age of 18.

Finally, the Space Coast Amateur Technical Group says that its proposal will have no impact on Technician or higher grade licensees other than the expected growth that will result from it. The only impact will be on Novices who would be grandfathered into the Apprentice Class. Novices who have passed a 5 wpm code test would be granted Technician privileges for their license term.

This is the first of what some expect to be a number of no code petitions hitting the mailbox at the FCC. As such don't be too surprised if there is a significant delay before this and any others are assigned rule making number designations. — *Westlink Report* □

A lightning bolt can be as long as 20 miles. — *Central Arkansas Radio Emergency Net*



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# VE exam schedules

As a service to our readers, Worldradio presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is two months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid July.

Worldradio, 2120 28th St., Sacramento, CA 95818.

Please mark the envelope "VE Exams."

List the location, and information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

p/r = pre-register

w/i = walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
<b>Arizona</b>				<b>Maryland</b>			
July 1	Tucson	K7OPX (602) 886-7217	w/i OK	July 8	College Park	NF3I (301) 963-4008	
<b>California</b>				July 22	Laurel	(301) 725-1212	ltd w/i
July 1	Burbank	W6JEP (805) 948-8493	w/i OK	<b>Massachusetts</b>			
July 8	Apply Valley	WB3KMZ (619) 240-2025; or K6BET (619) 244-6080	w/i OK	July 15	Melrose	NC1V (617) 665-6061	w/i
	Jackson	WZ6Y (209) 295-7947	p/r pref; w/i OK	July 19	Cambridge	Nick Altenbernd (617) 437-0320	2-day p/r
	Los Altos Hills	KG6XF (408) 255-9000	w/i	July 21	Holyoke	William C. Sample (413) 567-7301	w/i
	San Pedro	N6DYZ (213) 325-2965	p/r; ltd w/i	<b>Michigan</b>			
	Santa Barbara	KB5AH (805) 682-2665	p/r pref; w/i OK	July 1	Saginaw	KO8M (517) 793-9636	w/i OK
July 9	Hanford	AA6GZ (209) 924-4221	w/i only	<b>Minnesota</b>			
July 15	Tehachapi	W6KQI (805) 822-6128	w/i	July 8	Bloomington	Emery Mehl (612) 529-6638	
July 16	Sunnyvale	W6NLG (408) 255-9000	p/r pref by 7/16	July 15	Minneapolis	Jeff Kolb (612) 699-6861	p/r pref
July 19	Eureka	KB6FIW (707) 442-9245	p/r	<b>Nevada</b>			
July 20	Fountain Valley	N6ISY (714) 775-6095	w/i	July 1	Minden	W6FFT (702) 266-3661	w/i only
July 27	Long Beach	KA6HOQ (714) 897-6331; or NF6X (213) 434-8278	w/i	July 15	Minden	W6FFT (702) 266-3661	w/i
July 29	Eagle Rock	KB6RXE (818) 791-1779; or AA6HE (213) 256-2904	w/i	<b>New Jersey</b>			
	Hawthorne	WS6T (213) 600-4160	p/r pref; w/i OK	July 3	Sayreville	K2FD (201) 442-9215	w/i
July 30	Santa Cruz	WD6EHL (408) 255-9000	w/i only	July 8	Cranford	N2XJ (201) 635-7686	w/i OK
<b>Colorado</b>				July 15	Jackson/Toms River	Dave (201) 350-5363	p/r or w/i
July 8	Denver	W0IJR (303) 366-9689	p/r pref	July 21	Bellmawr	WAVQG (609) 546-7710	w/i OK
July 15	Westminster	N0HNR (303) 451-1231; (303) 278-4280	p/r or w/i	July 22	Pennington	AA2F (609) 737-1723	p/r pref; w/i OK
<b>Florida</b>				<b>New York</b>			
July 15	Melbourne	AA4NP (407) 768-1954; WB9IVR (407) 724-6183	w/i	July 20	New City	Robert Douglas (914) 623-5551	w/i OK
	W. Palm Beach	W4SS (407) 967-1477; KG4U (407) 582-7617	w/i	<b>Ohio</b>			
<b>Hawaii</b>				July 9	Independence	KE8WS or KE8WT (216) 526-3807	w/i
July 15	Hilo	AH6P (808) 935-1652	w/i	July 29	Akron	KX8V (216) 688-9876	p/r pref; w/i OK
<b>Idaho</b>				<b>Pennsylvania</b>			
July 8	Boise	W7JMH (208) 343-9153		July 1	Erie	W3CG (814) 665-9124	w/i OK
<b>Illinois</b>				July 8	Apollo	KJ3Q (412) 339-3363	p/r; no w/i
July 8	Oak Forest	KA9HDN (312) 247-0650	w/i	July 15	Pittsburgh	WA3ZPL (412) 364-9528	p/r; no w/i
July 11	Macomb	Joe Rossmiller (309) 837-4277		<b>South Carolina</b>			
July 15	Quincy	Ron Rose (217) 224-9238		July 15	North Charleston	AA4IX (803) 873-9465	w/i
<b>Indiana</b>				<b>Tennessee</b>			
July 1	New Castle	Peggy Coulter (317) 288-0481		July 8	Memphis	Maxine Balentine (901) 386-4375	p/r by 7/6
July 15	South Bend	NI9Y (219) 255-4455	w/i OK		Morgan County	AA4UP (615) 435-6052	w/i OK
	Columbus	Richard Shelton (317) 763-6090		July 15	Henry County	KQ4F (901) 642-5966	w/i OK
July 29	Rushville	N6RS (317) 763-6090	w/i only		Knoxville	N4BAQ (615) 688-7771; or N4DF (615) 525-5923	1 day p/r
Aug 6	Terre Haute	K9DFK (317) 249-2020; or NX9Q (317) 482-1866	p/r 30 days prior	<b>Texas</b>			
		K9EBK (812) 466-2122		July 2	Princeton	NW5W (214) 736-2397	w/i
<b>Iowa</b>				July 8	Lubbock	KG5BL (806) 794-8317	p/r; w/i
July 7	Sioux City	K0TFT (712) 239-1749	p/r pref; w/i		Midland	KT5G (915) 694-9450	
July 8	Altoona	NA0R (515) 964-0900	w/i		San Antonio	NS5I (512) 681-0702	w/i
<b>Kansas</b>				<b>Virginia</b>			
July 29	Topeka	NQ0S (913) 273-3328	w/i OK	July 8	Harrisonburg	KB4WOM (703) 867-5428	w/i
<b>Kentucky</b>				July 15	Chesapeake	KC4YX (804) 424-4764	
July 15	Louisville	Otis Herron (502) 969-7332		<b>Washington</b>			
				July 26	Redmond	WR7V (206) 881-1088	w/i

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- **1 full year guarantee**



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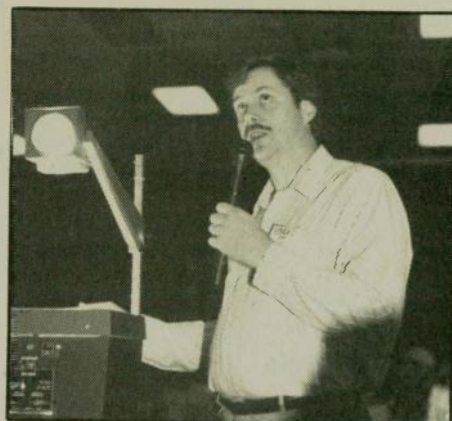
WORLD RADIO, July 1989 13



Ian Campbell, VE3IEC, explained that setting up in places like Melish Reef is not all fun and games.



Bob Cox, K3EST, presented the plaque to Martti Laine, OH2BH, bringing Martti into the *CQ Magazine* Contest Hall of Fame.



Dave Bottom, KD6AZ, gave a most informative presentation on DX spotting networks with Packet.

## 40th annual

# International DX Convention

JOHN MINKE, N6JM

Photography by Armond Noble, N6WR

*The following is a synopsis of events which took place at the DX Convention which took place in Visalia, CA, the weekend of April 21-23.*

### DX Forum

No DX convention is complete without a DX forum. This year's was chaired by Jim Maxwell, W6CF, a member of the ARRL DX Advisory Committee.

To begin the forum, Jim explained the workings of the DXAC, which serves as an advisory to the ARRL Awards Committee and Board of Directors. The DXAC consists of 16 members — one per ARRL division and CRRL. All members are volunteers. John Kanode, N4MM, serves as liaison to the board with John Lindholm, W1XX, a staff member from headquarter staff.

Items may be brought up by DXAC, board of directors or headquarters. The committee makes its recommendations after study and a formal vote. New country petitions take about 90

days to review. Recent action of the committee includes the addition of M-V Island (12 Yes, 3 No and 1 Abstain). They also voted on the acceptance of the operation of 4J1FS (M-V Island) with 8 Yes, 6 No and 2 Abstain.

The action on the addition of Rotuma Island (3D2XX) was all 16 members in favor. However, they rejected 9 to 6 the proposal to make Rotuma retroactive to 1945 (the Awards Committee later accepted the proposal). As for Okino Tori-shima (Baldwin's Reef) that was shot down with 10 Nos and 6 Yes'.

There has also been additional activity recently from such potential new ones as There-i-Ra Reef (Conway Reef), which probably will be accepted. Other requests include Basilica del Santo (an extension of the Vatican), Marquesas

Islands, Austral Islands, Frederick Reef and Banaba (Ocean) Island.

Other DXAC items as of April 22 included 30, 17 and 12M contacts for DX-CC credit and 4U1VIC and The Council of Europe (TP2CE) still being rejected.

Ellen White, W1YL, DX Editor of *QST*, reported that the operator of XU1SS may soon be coming out of Cambodia to the United States.

Jim discussed the subject of Antoine Baldeck, F6FNU, a French QSL manager. Several years ago Antoine began requesting that French DXers include extra funds when using his services, and eventually extended his practices to others. An example of a Crozet Island QSL card was sent out to one unfortunate DXer who didn't send Antoine enough funds. The card was cut in half! As a result of his antics, the REF will no longer accept QSL cards he handles.

Rusty Epps, W6OAT, reported on the QSL handling for the recent 3D2XX operation. They had made 34,000 contacts and as of March 21 9,649 envelopes with 16,734 QSL cards were received. Over the normal IRCs, or "green stamps," for postage, a total of \$9507.45 was received (this was

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Kip Edwards, W6SZN, presented a great set of slides that truly gave one the feeling of being there on Rotuma.

made up of \$1 bills, stamps and about 3,000 IRCs). Of course there were some requests without any funds at all, including no SASE.

At the conclusion of the forum, a clam shell from Kingman Reef (1988 operation) was donated by Burt Myers, W0RLX, to be auctioned off. That little item went to the highest bidder for \$225! The clam shell will also be inscribed with the QSO data if the recipient is in the log. The \$225 will go to the Northern California DX Foundation to be used for future DXpeditions.

### Contest Forum

The Contest Forum was chaired by Jim Neiger, N6TJ. But prior to getting into the forums, the Northern California Contest and DX clubs presented several of their awards for achievements to those present.



**Bob Ferrero, W6RJ, received a plaque from Rusty Epps, W6OAT, and everyone's appreciation for the many years he's devoted to the Northern California DX Foundation.**

The present activities of the Contest Advisory Committee were presented by John Hultquist, K6GSS, and Marty Woll, N6VI. John and Marty are the Pacific and Southwestern division members of the CAC. John said that he is a new member and had only been on the committee for three weeks and is looking for input.

Marty reported that all logs (ARRL contests) are checked by headquarter staff and not outside volunteers. He said that all comments should be addressed by letter rather than a phone call, as copies of such correspondence must be forwarded to each other member of the committee.

Dick Norton, N6AA, continued with his Logging Accuracy Study (he presented this last year). Much emphasis was directed toward unique calls — calls that show in one contest's log only and no others. Comparison charts were shown, with other contesters reporting calls with one letter difference than the unique calls. This is an indication that the contesteer might have erred in copying a call, which resulted in the unique call.

N6TJ introduced Gary Caldwell, WA6VEF, who reported on the famous California QSO Party. A total of 360



**Gary Pesselt, WB6PSY, (r) wondered whether he would get his picture in the magazine if he signed up for a Lifetime Worldradio subscription at the convention. Publisher Armond Noble, N6WR (l), answered, "certainly," and it was done.**

logs were received with 46 new records made. Gary presented various winners present with the club's personalized vintage wines.

Additional awards were presented by Hugh Allen, W6MFC, of the Southern California DX Club, and Bob Cox, K3EST, representing CQ. Bob's awards included the multi/multi operation to the team at KP2A for their record in 1987 and the effort by P40V and company.

N6TJ then introduced the panel of contestants that included Bob; Carl Cook, AI6V; Glenn Rattmann, K6NA; Martti Lane, OH2BH, and Fred Laun, K3ZO. Their responses to the practice of sending incomplete calls (only two letters, etc.), were all about the same. A

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good operator should be able to pull the complete call out of the pileup. All wanted complete calls sent to them. Well, almost all. Martti said he didn't necessarily need it, as he knew most of the calls anyway.

Another question directed at the group was the use of excess power. This was a difficult topic according to Bob. He related that to the 55 mph speed limit.

At the end of the forum, N6TJ again presented his annual call copying contest. This year it took a new twist. Instead of copying one of those Neiger creation CW tapes, it was a phone contest. Each participant was given a CQ Worldwide contest log form. The object was to run around the room exchanging with each other a DX call and zone number for a period of 10 minutes. All that was necessary was the call and zone — no time or signal report. It reminded us of the cocktail party the previous evening where there was this clown running around the room shouting, "CQ CQ No contest!"

### Saturday banquet

Following a cocktail party hosted by Ham Radio Outlet, all attending DX-ers were treated to a banquet. There was no head table this year and all seating was at eight-person tables.

After the banquet the club officers of

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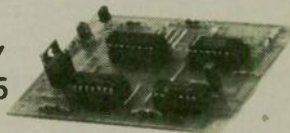
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the two major California DX clubs plus the hard workers of the convention committee were introduced. Both the Southern and Northern California DX clubs presented awards to their memberships.

W6CF paid tribute to Herb Becker, W6QB, for his contributions to DXing. Such accomplishments credited to Herb include the original WAZ program and assistance in establishing the DXCC countries list. Herb was originally licensed as 6AAQ in 1920, was the editor of *Radio* in 1934 and wrote over 200 technical articles. He was also a saxophone player in the old Horace Height's band. Herb became a Silent Key in March. With that a toast to Herb Becker was made.

Jim also recognized Bud Bane, W6WB, one of the Northern California DX Foundation trustees, a living legend.

This annual convention has been continuous for 40 years now. Charles Bailey, W7YU, has attended all of them, including this year's affair.

Kip Edwards, W6SZN, who was a member of the Rotuma DXpedition team, presented an interesting program on the brand new DXCC country. It was not easy to get to Rotuma. Not so much due to the transportation, but because one must be invited.



Carl Cook, AI6V, "I wonder if I can get Martti to believe that I made 500 contacts an hour at P40V." Martti Laine, OH2BH, "Somehow I have the feeling that a big baloney story is about to come my way."

To support his talk Kip was well supplied with slides of the trip (two screens with separate projectors were set up 180 degrees out of phase to provide satisfactory viewing for everyone). A total of four operators were part of the trip: Kip; Eric Scace, K3NA; Toni Zimmer, KN3T, and Ed DeYoung, VK8XX. Ed's XYL was also on the island for a short period.

Although the DXpedition received financial assistance from the NCDXF, they were able to return \$2,500 after all contributions had been received.

### DX packet networks

Bright and early at 8:30 Saturday morning Dave Bottom, KD6AZ,



**Terry Dubson, W6MKB, wore his headgear from Siberia.**

presented the first of several sessions during the convention program. Employing some of the latest techniques, packet radio can be widely applied to give the active DXer up-to-date information on DX being spotted, propagation and other pertinent data.

Dave is active in the Northern California system and explained how it works. Because I'm new to computers and eventually plan to get involved with packet radio, we thought this would be a good one to cover.

His presentation was supported with various charts and diagrams. He showed how several users of the system were connected to a Packet Cluster Node. Basically a terminal — such as an IBM personal computer or compatible — is connected to a radio link through a TNC, Terminal Node Control.

With a user successfully connected into the system, he may input and extract information. Instead of coming on the old fashioned DX spotting net and ask what has been on, the packet user might ask what the last 10 DX stations had reported. Or he might ask for the last 10 reports of a particular station. The information is endless, although the information being requested must have been previously entered into the system.

Another feature of packet radio is that the user does not have to be signed on to receive messages. Any traffic for him will be stored and later forwarded to him when he signs on.

Dave also suggested that when using the system, rather than tie up your computer, use what is known as a dumb terminal with keyboard and monitor. To connect your radio to the system would only require inputs at the microphone connection and speaker connection.

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### Sunday brunch

DXers are dedicated people. With a Sunday morning brunch at 8:00 in the morning after that big banquet and other functions the previous evening, one has to be. After the brunch the DXers were treated to two programs.

But before we get on with the program, do you remember Jim Neiger's phone contest during the Contest Forum Saturday morning? After spending the wee hours of the morning, he came up with some interesting results. The top 10 included the following in descending order: VK1ZL (K5MM), PJ1B (WA6VEF), KH6BZF (N6TR), 9Y4VT (KG6GF), VP9KM (W6CF), TI1C (N6IG), VE7SZ (OH2BH), OX3SG (NC6U), FR5DX (W6OAT) and JY7Z (N6AA). The calls in parentheses are the actual calls of the contestants. Notice that N6AA won another one. He can win with or without a radio.

The first program was presented by Ian Campbell, VE3IEC, who discussed the most recent DXpedition to Mellish Reef (VK9ZM) and Willis Island (VK9ZW). Approaching the reef was no easy matter and the DXers actually lost some precious time getting set up. There were no trees on the reef, but they did plant some coconuts in the hope of producing some trees — and shade — for future DXpeditions.

The team landed at Willis Island on the return trip to Australia. This little island is a weather station with a total of four inhabitants. The team about tripled the population. A total of 45,000 contacts were made during this DXpedition, with 31,000 of them from Mellish Reef.

The second program was presented by Terry Dubson, W6MKB, who talked about the recent joint US/USSR DXpedition. A group of Americans had the opportunity to operate from Siberia using the special call US0SU. The team first arrived in Moscow prior to flying to Pevek. There they visited several DXers at their homes and made many toasts with glasses of vodka — and more vodka.

It was very cold in Pevek, which is on the Arctic Ocean. From there they were taken by helicopter to Ostrov Ayon, a little island off the coast. They could have walked out there, as the ocean was frozen over. This was quite a contrast to the conditions of Mellish Reef.

As usual this annual DX convention was quite successful. Just over 600 were reported registered. Next year's affair will be hosted by the Southern California DX Club. Start thinking about this one now if you wish to attend.

For the gift that keeps on giving, see p.9.



# Beam antenna wind survival

PETER ONNIGIAN, W6QEU

Problems with your beam staying up? Wind damage during winter months? Ice load bending elements? Broken balun wires? We have all experienced these problems and Dave Leeson, W6QHS, has now come up with some solutions. Dave learned the hard way — by experiencing disaster. After putting up beams on his mountain top near San Jose, CA, wind gusts in excess of 100 mph occurred during winter storms.

Dave gave a very detailed talk with the exotic title, *The Wind In The Yagi*, during the Visalia International DX Convention. Structural engineers, along with the Electronic Industries Association (EIA), have divided the continental United States into three wind zones — A, B and C, with A being 30 pounds per square ft. This means 86.6 mph winds, with a peak gust to 113 mph.

Dave's QTH is in Zone C, which is 50 PSF with a mean wind velocity of 112 mph and gusts to 146 mph. Dave stated his TH7DX had a wind survival rating of 99 mph, but after modification, it was OK for 110 mph; while his KLM 5-elements on 20 had a survival of 76 mph. After modification it was good for 104 mph, but both still failed to meet his mountain top wind speeds and resulting pressures.

Dave explained that it is not widely known that the greatest wind load on most Yagis does not occur at broadside or head on, but at an angle with the boom that varies from 14 to 45 degrees. In the case of the tribands, however, the least wind is at 90 degrees to the boom, due mostly to the traps.

He detailed how to reinforce the inside of various elements of popular antennas, including the HyGain 144BA, TH7DX, 204BA and 205BA. By strengthening the inside of the element, the wind loading is not increased nor is the tuning disturbed. This is done by inserting smaller diameter tubes into existing elements. It will be interesting to see if the manufacturers take Dave's suggestions.

During the question period one ham

asked why none of the current antenna manufacturers made antennas meeting EIA RS-409 structural and electrical specification requirements for Amateur antennas. Such a standard has existed for more than 15 years and excellent electrical requirements for gain, VSWR, wind loading and corrosion specs are given. Dave answered by saying he felt that all manufacturers would follow suit, only after the first one started building high quality antennas following the specifications.

During an impromptu gathering after the talk, it was agreed that the AERIALS column article by Bruce A. Ray, which appeared in the May 1989 issue, had considerable merit. That article, Yagis and reality (page 47), said many commercial yagis have inflated gain values. The consensus was that the EIA RS-409 standard should be followed by the antenna manufacturers, which is not done now for electrical or mechanical-structural performance. □

## Club expresses thanks

WAYNE PENNING, WD9FLJ

On Tuesday, April 11, members of the Fox Cities ARC presented Paul Poberezny, Experimental Aircraft Association President, with a plaque expressing the club's thanks to the association for the efforts they have made to enhance the operation of the W9ZL special event station.

The plaque contains a very colorful picture of a "Warbird" in the background (the same as the special event certificate), as well as some history regarding the club and the station.

The Fox Cities Club is based in Appleton, WI, and has operated the special event station for the last three years during the largest international

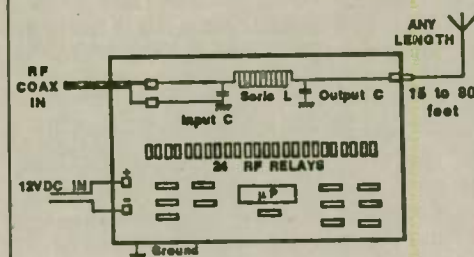
fly-in in the world, held at Wittman Field in Oshkosh, WI. □



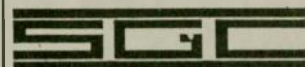
At the presentation were Rick Kosiorek, N9ALF; Don Baker, NB9J; EAA President Paul Poberezny; Wayne Pennings, WD9FLJ; Mike Jackson, WB9BBI, and Ron Pohlman, KE9MV. (Photo courtesy of Larry Siebers, KD9IA)

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
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## Antenna Forum

(continued from page 8)

higher antenna determines the low angle lobe. In a stack of two 5-element 10M antennas, for example, with the top at 70 ft. and the lower at 35 ft. above ground, the maximum lobe was at 19 degrees. But a simple 7-element 10M antenna at 195 ft. is a terribly low angle DX antenna because its elevation pattern is full of lobes and nulls about 2.7 degrees apart from the nadir to the zenith.

### Computer Modeling Yagi Antennas

The late Dr. James Lawson, W3PV, wrote an excellent book, *Yagi Antenna Design*, which should be on everyone's bookshelf if they are interested in Yagi antennas. Now comes John Devoldere, ON4UN, who has written a computer program.



Peter Onnigian, W6QEU (r), enjoyed John Devoldere's, ON4UN, discussion of his computer program for Yagis.

At Dayton John, who is the author of *Low Band DXing*, presented a description of his computer program for Yagi antennas. He explained that Yagi design is a very complex matter. Books and formulas are difficult. Modeling programs exist but are complicated, as there are so many interacting variables.

John programmed his data from 14 different sources, including Dr. Lawson's work and the MININEC program. His program can print out prop-

erties in the database with constant OD elements or tapered elements. There is an unbalanced gamma matching sub-program. It covers structural design as well as electrical with input for alloys, tube wall thickness, length and so forth.

The effects of wind, gusts and ice are

also programmed, so that both electrical and mechanical design data is available from this IBM PC compatible program.

Yagi Design by ON4UN is available for \$75 from B.W. Jorden, K7KI, P.O. Box 36373, Tucson, AZ 85740. □

## Slow Scan TV

### NORM BROOKS, K6FO

When Armond Noble, publisher of *Worldradio*, asked me to cover the SSTV Forum at the Dayton Hamvention on April 29, I was glad because it was a new subject for me. I had prided myself on keeping up with what has been going on in the "high-tech" aspects of Amateur Radio, but SSTV was one mode I had not looked at in depth lately.

Dr. Don C. Miller, W9NTP, was the moderator of the forum. He introduced Tom Hibben, KB9MC, and Ben Blish, N4EJI. What these two gentlemen showed of the very high tech work they had been doing in video signal processing made me realize an important fact: SSTV technology has been developing as fast or faster than other modes considered to be on the cutting edge — satellites, ATV, packet and other

digital modes.

If you're remembering the original SSTV pictures that reproduced in eight seconds and were plagued with interference from other modes, take another look. The SSTV crowd is generating superb graphics on computers. They are producing high resolution pictures from equipment that was not originally meant to be so. They are sending full color three dimensional pictures. They have devised a method for a computer to send a SSTV picture and resend it automatically if a portion of the picture is wiped out by interference, jamming, etc., not unlike packet radio.

Dr. Miller emphasized that high-tech developments in SSTV differ from those of other Amateur modes because they are developed by hams — they are not adapted from commercial usage. In SSTV these truly "ham ideas" are now accepted and used by the military.

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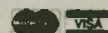
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"Slow Scan TV is now over 30-years-old," said Miller, "and Tom Hibben, who is a graduate of Cornell University, could be called a member of the second generation in SSTV."

Tom's talk was a summary of his longtime work in writing a Commodore 128/64 program for image processing. It just about takes all the memory available on the Commodore. This work will be at a standstill for awhile, as he is now branching out into the Commodore Amiga computer.



Ben Blish, N4EJI, gave an "eye opening" discussion on the Amiga SSTV System.

With videotape and slides, he showed us graphics in many fonts generated on the Commodore 64 to run on the Robot 1200. To quote Tom, "It's a very simple thing, once you understand how to do it."

Multiple menus let you look at 30 different fonts so you can make a selection before sending on the air. Tom used key strokes and a mouse to assemble the letters, both upper and lower case. To help position things on the screen, he developed a frame cursor which he used in this and other programs as well. He pre-programs call sign, name, address, city and state so they can be called up at any time (I saw all this as the SSTV version of the memory keyer in CW!)

Tom's program includes a routine for copying any part of the screen, even a photograph-type screen, then overlaying it to a different portion of that same memory, or to a different memory with the copied part.

In an example he removed a rectangle out of the screen, changed its size and put it back into another part of the screen. Screen portions could be "pasted" together, thus making a photo-montage. Tom then took the eye of a "Cover Girl" type photo and reproduced it in various sizes, all over the screen.

The climax to his demonstration was a photo of himself, holding his own (severed) head in his hand!

Next Ben demonstrated his Amiga SSTV System. He started by showing a picture of birds with 300 points by 400 lines of resolution. This is the highest resolution in SSTV today (this

means the TV monitor can distinguish between 300 individual points on each horizontal line, and that there are 400 distinguishable horizontal lines).

Next he demonstrated Ray tracing, which is unique to Amiga. He showed an image that was not a picture or a drawing. No human hand produced it. The "renderer," or person who produced the image, drew the outlines of the object with the computer, then, by means of a computer program, actually calculated the lines that a ray of light would make in reflecting off the object. Thus, we saw highlights (reflections of

light) produced entirely by computer. All this is done in terms the computer can understand, x and y coordinates, the color wanted, etc.

This is also the way three dimension images are formed. They are rendered once, then rendered again with the image separated by the distance between your eyes. Without special electronic glasses, the picture would look fuzzy. However, to see 3D, you use electronic glasses, which have LCD shutters on them (LCD is liquid crystal display, just like the black letters on your *(turn to next page)*)

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# AWARDS

## Two clubs honored by Weather Service

The National Weather Service, an agency of the Department of Commerce, awarded a Certificate of Achievement to The St. Charles ARC and to the St. Peters ARC on Wednesday, March 15.

These presentations were made in appreciation of the effort put forth by the members of these two organizations in operating a Severe Weather Radio Network on Amateur Radio frequencies from the National Weather Service Office in St. Peters, MO.

This radio network supplies information to the NWS forecasters during severe weather. This information is used along with weather radar and other sources in forecasting severe weather, including severe thunderstorm warnings and tornado warnings. This network has been in operation for over six years.

The clubs involved supply equipment and manpower to operate this

network on a voluntary basis.

The awards given are among the highest that can be awarded by the National Weather Service to a civilian organization or individual. Only five or six have been awarded by the NWS in the greater St. Louis area in the last 13 years. □

## Young Amateur wins again

Westlink Report's 1986 Young Ham of the Year, Shawn Alan Wakefield, WK5P, has been named winner of the 1988 Barry Goldwater ARRL Foundation - administered scholarship.

According to QST, Alan says he will use the \$5,000 award to help in financing his education at the University of Oklahoma.

WK5P gave credit for his interest in entering a career in electrical engineering to his experience in Amateur Radio. □

## SLOW Scan TV

(continued from page 19)

watch). The LCD shutters turn each eye on and off at 30 frames per second, thus giving the viewer a true three dimensional image which was received over SSTV circuits.

The big advantage to this 3D system is that it gives full brightness color pictures, which cannot be done with the old red and blue glasses. The only drawback to the system is the cost — the glasses run \$125.

As to combating interference, Ben said, "Take a picture, 24 seconds, which is basically an RGB low-resolution picture. You can take that picture, and interrupt it any way you care to, with whistles, hums, clicks, turn off your transceiver, even tune the dial. Then go somewhere else.


"When you come back, first of all, it'll pick up right where it left off, but down where it belongs. Time has gone by and it knows where it ought to be and it will pick up back there. It won't have color errors, it won't have luma errors, no problems. The only problem you might have is retuning your transceiver."

Ben then demonstrated ART (Amiga Radio Transceiver) sending a 24 second picture. Special tones sent at the beginning of the picture told the receiving equipment what the forthcoming image was going to be. It tells its size and resolution and the general curve of the grey scale across the image, in other words, what the contour is. Think of it as a very smooth, blurry image being sent first in a very compressed form, which helps the system reconstruct later if it gets hit.

The demonstration used two separate complete Amiga systems, one sending to the other. While the image was being sent, Ben broke the coaxial line so no signal was transmitted. When he reconnected, the signal picked up again. Because it had received a blurry image at the beginning, it knew exactly where to pick up again. So, even with a maliciously interfering carrier, the system would carry on during the periods the carrier was not there!

Mind boggling! Do you wonder at all why I find that the SSTV crowd has come a long way? □

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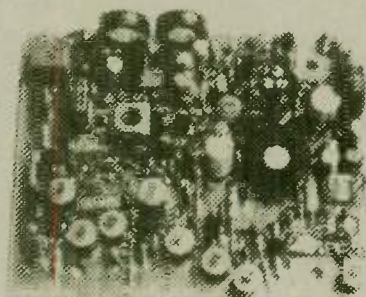
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**HAM LOAF RECIPE:** Ingredients are one Amateur Radio operator, two trees and a hammock. Mix well, cover and allow to remain undisturbed for several hours. Garnish with one handi-talkie and a rubber ducky. —Antelope Valley ARC, CA □

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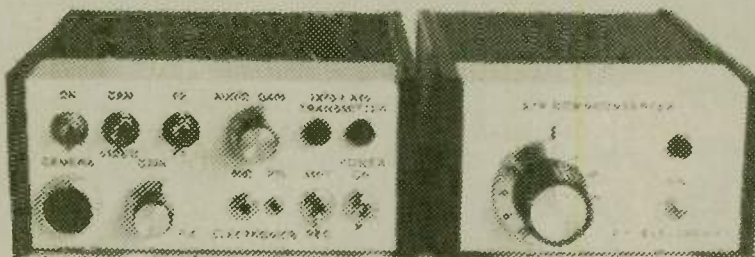
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# SPECIAL EVENTS

## Swiss celebration

The Top of Michigan ARC will operate special station WM8T the week of July 19 through July 22 in celebration of a Swiss festival called Alpenfest.

Times during the week will vary, however on Friday, July 21, and Saturday, July 22, the station will operate from 1700Z to 0200Z the next day.

Suggested frequencies are: CW — 14.040; SSB — 3.965, 14.265, 21.350 and 28.365.

For a certificate send a QSL and SASE (9×12 for unfolded) to P.O. Box 88, Gaylord, MI 49735. □

## Flat Hammock Island

For only the sixth time in history, Amateur Radio is going to Flat Hammock Island (Fishers Island Sound, NY). The Tri-City ARC will mount its sixth annual expedition on Sunday, July 16, and will operate from this unique, uninhabited island from 1300Z to 2000Z.

Look for KA1BB in the lower 20 kHz of the General class phone and CW bands — 10, 15, 20 and 40M, the center of the 10M Novice band and the 2M SSB band.

QSL with a letter size SASE via Tri-City ARC, P.O. Box 686, Groton, CT 06340.

For further information please contact Bob Dargel, KA1BB, 8 Willow Lane, East Lyme, CT 06333; 203/739-8016 (home) or 203/739-1300 (business). □

## Five Nations

On the weekend of July 29 and 30, the Scottish Tourist Board Radio Amateurs Expedition Group will sponsor five special stations from National Trust properties in five different countries over the same weekend.

The stations are GB2NTS, GB2NTU, GB2NTE, GB2NTW and E17-M/P. These are respectively "National Trust for Scotland," "... Ulster," "... England," "... Wales" and "... for Ireland." They will be set up on the National Trust properties in these countries.

Frequencies are 3.7-7.065-14.140 and 14.240-21.250 and 28.400/600 plus or minus QRM. CW will be on +10 kHz

when used and RTTY will be on 21.090-14.085 when used.

A special certificate will be offered for this event. Write to Scottish Tourist Board Radio Amateur Expedition Group, P.O. Box 59, Hamilton, Scotland, ML3 6QB. □

## New York Air Show

The Oswego County ARES and the Fulton ARC will operate special station KY2F on July 8 and 9 from 1500Z to 2300Z both days from the Central New York International Air Show.

Operation will be in the middle portion of the General 40, 20, 15, 10 and 2M bands and the Novice portion of 10M.

For a certificate send your QSL card and a large SASE to Fred Swiatlowski, KY2F, P.O. Box 5227, Oswego, NY 13126. □

## Checkered station

The Amateurs of Petal and Hattiesburg (MS) will be operating May 26 - July 18 to celebrate the International Checkers Tournament.

Operation will be in the lower General portions of all bands and the Novice SSB portion of 10.

Send QSL and large SASE to KA5UBL, P.O. Box 2131, Hattiesburg, MS 39403-2131. □

## NAS Open House

The Naval Air Station Moffett Field, in cooperation with the NASA Ames Research Center ARC and the Navy

Moffett Field ARC, will be operating a special events station during the annual NAS Moffett Field Open House.

The dates are July 1 to 2, and the station, K6MF, will be on the air from 16:00 UT (9 PDT) to 1:00 UT (5 PDT) both days.

K6MF will operate on 14.280 and 21.380 MHz, voice (A3) only.

Special QSL cards are being prepared to commemorate the special events planned for this open house. In addition to viewing the aircraft and operations of the NAS, the Navy Blue Angels will be performing along with various NASA research aircraft. These QSL cards will be mailed to those contacts who send a SASE to: AARC, P.O. Box 73, Moffett Field, CA 94035. □

## Meetings in Britain

The AMSAT-UK Space Colloquium will be held at the University of Surrey the weekend of July 28-30. Also, RSGB will hold its Second Annual Packet Radio Symposium there simultaneously.

For further information contact Ron Broadbent, G3AAJ, 94 Herongate Rd, Wanstead Park, London E12 5EQ, England. □

## CBS' 62nd year

In celebration of the 62nd anniversary of the establishment of CBS in the radio and television industry, the CBS ARC will operate station KZ6N from Television City in Hollywood. The event is from July 17 to July 23 from 1600Z to 0400Z daily.

Suggested frequencies are 7.235, 14.030, 14.280, 21.310 and 28.475-28.550.

For a QSL send a large SASE to: KZ6N, CBS TV City, Room 50, 7800 Beverly Blvd., Los Angeles, CA 90036.

## Amateur Radio Day in Maine

Governor John McKernan has signed a proclamation designating July 15 as Amateur Radio Day in the state of Maine.

The proclamation recognizes the nearly 2,500 licensed Amateurs in Maine and their "reliable and state-of-the-art two way communications for civic events and public service functions." Amateurs were cited for their "work with municipal, county and state emergency and disaster assistance agencies to provide essential communications." The proclamation further noted that "Amateur Radio operators in Maine actively encourage

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the development of high-technology education by offering their hobby to young people through schools, scout groups, youth organizations and their own clubs."

Special event station W1TLC will be operated from the Union Hamfest on July 15 from 1200Z to 1800Z to commemorate Amateur Radio Day. □

## Jazz "bands"

The Davenport RAC will again operate station W0BXR during the Bix Biederbeck Memorial Jazz Festival, July 28 through 30, from 0000Z to 2400Z each day.

Operation will be on phone and CW, 80-10M, 10 kHz up from the lower end of the General class band edges.

Certificates for your QSL and SASE via Davenport RAC, 2131 Myrtle, Davenport, IA 52804. □

## Fort Laramie

The High Plains ARC will operate station KT7V at Historic Fort Laramie from 0000z July 4 until 0000z July 5.

Frequencies: Phone — 3.850, 7.250, 14.250, 21.360 and 28.550; CW — 50 kHz up from the lower edge of the band.

For a QSL send a business size SASE to KT7V, 111 Camino Del Rey, Torrington, WY 82240. □

## Alaskan gold

In celebration of the discovery of gold by Fedrix Pedro in the Fairbanks (AK) area, the Arctic ARC will operate special event station KL7KC from 0000Z July 15 to 0900Z July 24.

Suggested frequencies: Phone — 7.290, 14.240, 21.340 and 28.350; CW — 7.030, 14.030, 21.030 and 28.005.

For a QSL card send a SASE to the Arctic ARC, P.O. Box 81389, Fairbanks, AK 99708. □

## Balloon Extravaganza

The Falls City (NE) ARC will operate station K0JKS from 1300Z until 2300Z July 22 to commemorate the 4th annual Hot Air Balloon Extravaganza from Brenner Air Field in Falls City.

Suggested frequencies: 14.285 and 28.310.

For an unfolded certificate send an 8½×11 SASE and QSL to Bob Eis, WA0W, 1702 Fair Ave., Falls City, NE 68355. □

## 250th birthday

The Goshen (CT) Quadrimillennium Committee will sponsor the operation of special station KU1Q for a 24 hour period from 1300Z July 15 until 1300Z July 16 from the Goshen Fair Grounds to commemorate the 250th birthday celebration.

Operation will be SSB on the low end of the Novice portion of 15, 20, 40 and 80M.

For commemorative certificate send a QSL card and a 9×12 SASE for an unfolded certificate or a #10 for a folded certificate to: 250th, P.O. Box 65, Goshen, CT 06756. List the sequence number for a prompt reply. □

## Boy Scout locale

From July 9 to July 15 an Amateur station will be set up at Emerald Bay (Boy Scout Camp) on Catalina Island, CA in commemoration of the Boy Scout's use of Emerald Bay since 1925.

Station WA6OPZ will be in operation from 1500 until 0700 UCT daily (8 a.m. until midnight local time).

The frequencies used will be around 28.45 SSB and the lower 25 kHz of the 15, 20 and 40M General phone bands. CW operation will be around 7125 and 21150 kHz.

Those contacting this station can get a certificate by sending a QSL card and

a 9×12 SASE to Marshall Jacobson, 16441 Gilmore St., Van Nuys, CA 91406. □

## World Veteran's Games

The Valley ARC (Eugene, OR) will operate station W7PXL from 0100Z, July 29, until 0100Z, August 7, from their Eugene Red Cross location to commemorate the VIII World Veteran's Track and Field Championships.

Suggested frequencies: Phone — 3.850, 21.300, 14.250 and 28.500; CW — 14.060, 21.060 and 28.060.

For a QSL or certificate featuring the Championships logo, send an appropriate sized SASE to: Valley ARC, P.O. Box 70314, Eugene, OR 97401. □

## Annual REACTION

The REACT ARC (Madison, WI) will be operating July 23 through 27 in conjunction with the 2nd annual meeting of the REACT ARC and the 14th annual Convention of the REACT International Inc.

Operation will be in the lower parts of 80, 40 and 20M and in the 10M Novice band.

For a certificate send a 9×12 SASE and QSL to REACT ARC, c/o WB3FQY, P.O. Box 1033, Lancaster, PA 17603. □



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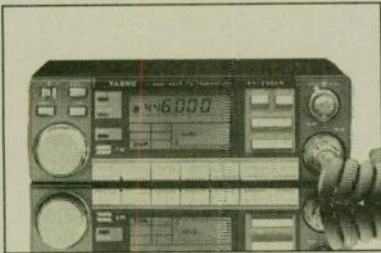
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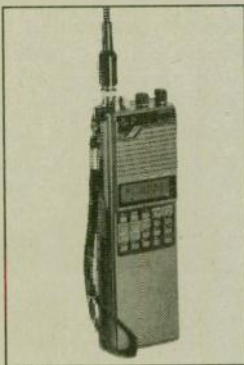


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# PUBLIC SERVICE

## When it rains, it pours

DAVID BLACK, KB4KCH

The phrase "when it rains, it pours" will long be remembered by the hams of Alabama after the weekend of Nov. 1988.

Amateurs within about a 300 mile radius were faced with three major communications events: a tornado, a train derailment and a foot race (this latter with 3,000 people taking part); and it all took place within a 12 hour period!

Hams in Tuscaloosa were called into service in the early hours of Nov. 20, when the tornado slammed into the city's south side. Six people were hurt and damage was heavy. The hams performing relief efforts told the extent of the damage: "What damage that there is here is probably more than all the king's horses and all the king's men can get off at this point. We might be able to keep the mud from running in his house right now, but it is going to take major surgery!"

Just two counties away, Amateurs were spending a long night helping at another emergency. Hundreds of people had to be evacuated when a 75 car train derailed north of Birmingham.

Sulfuric acid began leaking, forcing residents in two towns to leave home for the night. No serious injuries were reported.

Finally, there were many tired feet as well as tired Amateurs in Birmingham the day of the 20th. That is where the hams provided communications for a six mile race with thousands of runners taking part.

All of these communications events proved the ability of Amateur Radio to cope with any communications emergency. — Westlink Report □

## Help if you can

JAMES YOHE, KF7KY

It was Nov. 16 at 0448 UTC when I heard the SOS call. I was tuning around in 20M when I decided I'd go up and listen in on the MARS traffic at 14.475 MHz. As I neared that frequency I heard a fairly readable CW call for help, "SOS SOS SOS de W0OKD/MR." It was sent several times.

I stayed there waiting for a MARS operator to respond. They could barely hear the call in Ohio and tried a few times to request confirmation of the call sign. One of the operators said he would try to make contact after going "charley whiskey." As the next few minutes passed I tried again to locate the distress call. Not a call from MARS or the other party was heard.

I phoned the ARRL Emergency coordinator, W7FPB, and asked what should be done. We both sat listening to normal phone patch traffic. A CW beacon of "K" was all we heard out of the ordinary. "I'm going to give a call," I said, knowing I didn't have frequency privileges but rationalizing the FCC would overlook this infringement for the sake of an emergency.

"Break, break," I called to interrupt the MARS traffic. NN0KRQ came back and asked for my call. I gave it and said I had picked up a distress call earlier. Indicating I would like to try to bring him up again I was invited to call. Several times I tried but no response. Perhaps it was too late or he went to another frequency. I didn't know.


Next I called the Coast Guard in Portland to report the situation to BM2 Engelbrecht, Officer on duty. He took the report and patched me through to Seattle where I repeated the story. They couldn't find W0OKD's name or address, so after hanging up I called on my 2M handheld. W7DLF on 147.24 came back to me upon my plea for information. This was forwarded back up through Portland to Seattle.

By now the Coast Guard had the FCC monitoring the frequency, other CG stations contacted, various "search and rescue" organizations on alert and, I believe, the Air National Guard contacted. Everyone was ready but nobody could do anything because I hadn't jumped in to gather that all important information about location and type of help needed.

I decided to try calling this person to see if his family could be of some help. I called and woke him up. The call copied wasn't W0OKD after all. I must have messed up a character. Earlier I had written over an "M" with the "K." The Coast Guard was informed of my findings and suggested maybe the call was W0OMD. Later I found that this wasn't correct either. My only excuse was that I didn't copy fast enough to be accurate and I was nervous.

I sat in front of my rig tuning around and hoping I could hear the "SOS" call again. I felt I had failed in not jumping in when I had a good copy on him. Worried that maybe I'd get in trouble for transmitting without privileges kept me getting this person's location and type of help he needed. That would truly have been help.

So, I write this to say to anyone unlucky enough to run across a distress call that no matter what your license says you can do, just get in there and help. It could save someone's life or property. Don't be afraid of what the consequences might be, like I was. Do what is right and help save that person. — Oregon Tualatin ARC, Portland, OR



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From left to right: Alexis Seidel, Cub Scouts from Springfield, Pack 73, Webelos Den — Greg Marx, Jonathan Gordon, David Kessler, Brian Gruber, Chris Filippis, Michael Wyden, Joseph Porter and Patrick O'Neill; Roselle Park Pack 52 — Adam Seidel, Dennis Leedy and Josh Azran; and standing, Amateur Radio Operators, Scott Seidel, WA2WUX, and Eric Deutchman, WB2LMW. (WA2QNZ photo)

## Annual event pairs scouts and Amateur Radio

Cub Scouts from Springfield, New Jersey Pack 73, Webelos Den participated in the 31st annual Jamboree On The Air, an annual event sponsored by the World Bureau of the World Organization of the Scout Movement.

JOTA was held Worldwide on October 15 and 16, 1988. Thousands of Amateur Radio stations around the world invited local scouts to visit their homes and participate in the operation of their Ham Radios.

The Amateurs established contact with other participating national and international ham operators, who also had scouts visiting their shacks.

The scouts got a chance to talk to their fellow scouts hundreds or thousands of miles away. Typical information exchanged consisted of location, scout rank, name, hobbies, etc.

In Springfield, NJ, on October 15, 1988, Emergency Management Staff Members Scott Seidel, WA2WUX, and Ron Scull, WA2QNZ, and Amateur Eric Deutchman, WB2LMW, invited scouts from Pack 73 to visit the Springfield Office of Emergency Management Headquarters to participate in the Jamboree.

After viewing the videotape, "The New World of Amateur Radio," produced by the ARRL, the scouts got a firsthand experience with Ham Radio. Stations were contacted via 10M SSB in McKinney, TX, WB5LUA, Grand Iowa, NE, KA0TDR, Lompoc, CA, W9JKV/6 and on the island of Jamaica in the Caribbean Sea, 6Y5MV. The scouts of the Webelos Den talked directly with scouts from the other states as well as scouts from the 21st Manchester Scouts Group in Jamaica.

Present also at the ham station in Jamaica was Mr. Hale, Director of Scouting for the island of Jamaica, who exchanged information with our scouts.

Equipment used was a Yaesu 767GX and a three band beam. □

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## Fundamental 'truths'

Whatever *can* happen, will. Whatever *can't* happen, will anyway. Whatever *should* happen, won't — until it's too late to do any good.

If it ain't broke, don't fix it. When all else fails, read the instructions (so you can *really* mess it up). It works better when you plug it in, unless it goes up in smoke. There is always somebody who could have *told* you not to buy one of those.

Everything has to be somewhere, but either you can't find it or you trip over it in the dark. If you don't know something, you can't find out anything else (KC3LM's Law of the Conservation of Ignorance).

The higher the price of the computer you want to buy, the more likely its salesturkey (I mean, salesperson) was pushing cheese fries or magazine subscriptions in the last 30 days.

Before you get depressed, consider: This is the *good* news.

—Mid-Atlantic ARC, Villanova, PA □

## Packet radio design

In early April the ARRL announced the creation of a new project to develop the next generation of modems and protocols for high-frequency packet radio transmission. The project will coordinate the efforts of Amateur Radio designers whose proposals are adopted by the ARRL.

Modest funding will be available for reimbursement of approved direct out-of-pocket expenses relating to the development of prototypes, but not labor, overhead or other costs. General information concerning this project can be found in the May issue of *QST* magazine.

Funding for this project is to come from two sources. One is the League's Technology Fund, which welcomes individual and corporate contributions. Also, the League has applied to the

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Federal Emergency Management Agency for a small grant to help underwrite this project.

FEMA has indicated keen interest. One reason is that they want to retain their ability to communicate directly with Amateur Radio operators using packet radio. Further, they need to encourage interoperability between equipment owned by FEMA and Amateurs. In addition they believe that Amateurs will develop equipment that is inexpensive enough to permit large quantity procurement by the federal government.

Senior designers interested in participating in this development project may obtain further information from Lori Weinberg at 203/666-1541, ARRL Headquarters, 225 Main St., Newington, CT 06111. □

## Goldwater tape available

Barry Goldwater, K7UGA, Amateur Radio's elder statesman, has endorsed the concept of Amateur Radio licensing without a requirement for the Morse code.

For Goldwater it didn't come easily... he is a long time CW operator who enjoys the code. But Barry is aware of the pressure on the radio spectrum — and the fact that Amateur Radio is not growing. He feels more youngsters need to be attracted to Amateur Radio.

In a late Feb. 1989 interview with Roy Neal, K6DUE (formerly of NBC

News), Goldwater tells why he feels a code-free ham ticket is in our — and our nation's — best interest.

Bill Pasternak, WA6ITF, and Frosty Oden, N6ENV, have captured the interview on videotape, and it is available for you to view at your ham club meetings. The 10 minute VHS video tape is available from: Fred Maia, W5YI, P.O. Box 565101, Dallas, TX 75356-5101. Cost is only \$4 for book rate shipment, \$5 for priority first class mail.

This video will make an excellent program for your club meeting when you discuss the pros and cons of adopting a no-code VHF (and higher frequency) ham class. □

## De-emphasize code?

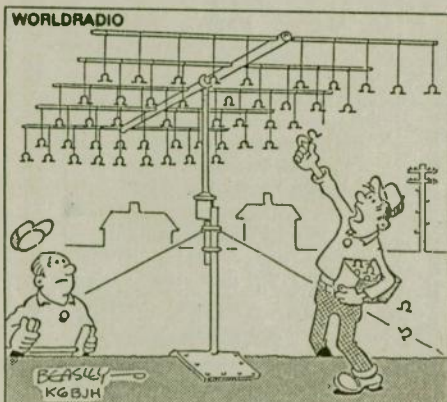
A petition was filed on April 3, by Clement Bourgeois, Jr., N5AIK, of Erath, LA. He argues that a knowledge of code is essential and that the FCC should keep the code... but reduce speed requirements to 5 - 10 - 15... or only a 2 speed level.

"We need theory, operation and skills resourcefulness more than 'speed demons' in the Amateur service," he argues.

Clement also suggested that after "so many years" as an Advanced Class operator, one should be grandfathered to Extra Class in lieu of 20 wpm as an alternative if the prior recommendation is not considered. He is 76, a retired postmaster and a long term Advanced Class operator.

Clement said he has tried for years to upgrade... but that nervousness during the code test has blocked progress. He has even resorted to a variety of medications to solve the problem.

"All has been of no avail and the admonitions of the code 'experts' to practice ad infinitum has not helped... nor do I expect it to ever help." — W5YI Report □



BEASLY K6BJH

## You want it fixed, when????

Gordon West, WB6NOA, well-known instructor and writer, is preparing a three part national article on Amateur Radio equipment service. If your radio should break beyond your own capabilities to fix it, it may need to go back to the factory for service. It could also be repaired at the dealer level, too — maybe.

Gordon's article on factory and dealer service will focus on equipment

from (alphabetically) ICOM, Kenwood and Yaesu. He has personally visited all three companies and will detail their service departments with photographs, repair time and statistics and recommendations from each factory on what Amateurs can do to get their equipment serviced quickly and properly, the first time.

Gordon's series on service will also uncover the many Amateur Radio equipment dealers well prepared to tackle complicated repairs on equipment both in and out of warranty.

"Some dealers who sell ham equipment will only recommend the factory for complicated repairs," WB6NOA said. Other dealers will tackle almost anything, and get the rig turned around in no time flat. My series on service will help you identify which route to go when your radio should fail."

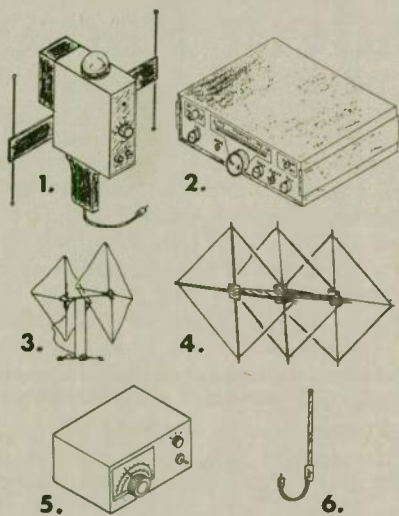
Gordon stresses that the article will be positive for the manufacturers, dealers and ham needing a fix on a dead or sick radio. A statistical review of factory service turn-around time plus average expense for repair will allow hams to draw their own conclusions on where to get their equipment fixed.

Gordon also is looking for input from consumers. "I'm not looking just for war stories — I would like to also point out some dealer and factory 'hero stories' from hams who have enjoyed exceptional service. Send me your comments."

Amateurs wishing to detail service praises and service war stories should write: Gordon West, WB6NOA, 2414 College Dr., Costa Mesa, CA 92626. Dealers offering equipment repair should also write West so they may be included in this upcoming series scheduled for publication this Fall. □

If you're not subscribing to Worldradio, you're missing a lot of Amateur Radio news.

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## A few problems

As a recent early retiree (I say early because I don't want any one to think I'm really, really old and senile, which they might if they decide to read on), I

find I have time on my hands to do all those things I didn't have time for before, such as all those letters to the editor or criticism to the various board of directors.

At first my thoughts were so negative I thought, "If this gets published I'll have a byline that reads *Poison Pen Patty*." As a result I made a list of all the good things I could think of about Amateur Radio to balance it out.

The first thing that comes to mind is Amateur Radio for the handicapped. I am always amazed when I find someone I have talked to many times before is blind. What memories these people

have! Then we have the severely disabled quadriplegic and other victims of paralysis. One way or another they manage to learn the code and theory and can demonstrate their proficiency with a puff and sip.

Next comes the Elmers and classroom teachers with the patience of Job to get Ohms law across to us.

Then comes all of the people involved with public service. ARES/RACES groups in many cities and disaster teams getting ready for the "big one." So many people think the government will provide. They have a hard lesson coming and had better start preparing.

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IC-735 Gen Cvg Xcvr	1099.00	Call \$
IC-751A Gen Cvg Xcvr	1699.00	Call \$
IC-725 New Ultra-Compact Xcvr	949.00	Call \$
IC-575A 10m/6m Xcvr	1399.00	Call \$
<b>Receivers</b>		
IC-R7000 2+ 1300 - MHz Rcvr	1199.00	Call \$
IC-R71A 100 kHz-30 MHz Rcvr	999.00	Call \$
<b>VHF</b>		
IC-228A/H New 25/45w Mobiles	509/539	Call \$
IC-275A/H 50/100w All Mode Base	1299/1399	Call \$
IC-28A/H 25/45w FM Mobiles	469/499	Call \$
IC-2GAT New 7w HT	429.95	Call \$
IC-2SA New Micro Sized HT	419.00	Call \$
IC-900 Str Band Mobile	639.00	Call \$
IC-901 New Remote Mount Mobile	TBA	Call \$
<b>UHF</b>		
IC-475A/H 25/75w All Modes	1399/1599	Call \$
IC-48A FM Mobile 25w	509.00	Call \$
IC-4GAT New 6w HT	449.95	Call \$
IC-04AT FM HT	449.00	Call \$
IC-32AT Dual Band Handheld	629.95	Call \$
IC-3210 Dual Band Mobile	739.00	Call \$
IC-2500A FM 440/1.2 GHz Mobile	999.00	Call \$
<b>220 MHz</b>		
IC-375A All-Mode 25w Base Sta	1399.00	Call \$
IC-38A 25w FM Xcvr	489.00	Call \$
IC-37A FM Mobile 25w	499.00	Call \$
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IC-12GA Super HT	529.95	Call \$



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TS-440S/AT Gen Cvg Xcvr	1449.95	Call \$
TS-140S Compact Gen Cvg Xcvr	949.95	Call \$
TS-580S HF Plus 6m Xcvr	1149.95	Call \$
TL-922A HF Amp	1749.95	Call \$
<b>Receivers</b>		
R 5000 100 kHz-30 MHz	1049.95	Call \$
R 2000 150 kHz-30 MHz	799.95	Call \$
RZ-1 Compact Scanning Rcvr	599.95	Call \$
<b>VHF</b>		
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TR-751A All Mode Mobile 25w	669.95	Call \$
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TH-215A 2m HT Has It All	399.95	Call \$
TH-25AT 5w Pocket HT NEW	369.95	Call \$
TM-721A 2m/70cm FM Mobile	729.95	Call \$
TM-621 2m/220 FM Mobile	729.95	Call \$
TM-701A 25w 2m/440 Mobile	599.95	Call \$
TH-75A 2m/70cm HT	TBA	Call \$
<b>UHF</b>		
TS-811A All Mode Base 25w	1265.95	Call \$
TR-851A 25w SSB/FM	771.95	Call \$
TM-431A Compact FM 35w Mobile	469.95	Call \$
TH-45AT 5w Pocket HT NEW	389.95	Call \$
TH-55 AT 1.2 GHz HT	524.95	Call \$
TM-531A Compact 1.2 GHz Mobile	569.95	Call \$
<b>220 MHz</b>		
TM-3530A FM 220 MHz 25w	519.95	Call \$
TM-321A Compact 25w Mobile	469.95	Call \$
TH-315A Full Featured 2.5w HT	419.95	Call \$



FT-767GX

HF Equipment	List	Juns
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FT-757 GX II Gen Cvg Xcvr	1129.95	Call \$
FT-767 4 Band New	1929.00	Call \$
FL 7000 15m-160m Solid State Amp	1995.00	Call \$
<b>Receivers</b>		
FRG-8800 150 kHz-30 MHz	759.95	Call \$
FRG-9600 60-905 MHz	699.95	Call \$
<b>VHF</b>		
FT-411 New 2m Loaded HT	399.95	Call \$
FT-212RH New 2m 45w mobile	459.95	Call \$
FT-290R All Mode Portable	599.95	Call \$
FT-23 RT TT Mini HT	344.95	Call \$
<b>UHF</b>		
FT-712RH 70cm 35w mobile	499.95	Call \$
<b>VHF/UHF Full Duplex</b>		
FT-736R New All Mode 2m/70cm	1749.95	Call \$
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Amateur Radio is trying to teach them.

Some of the biggest "brains" I have worked with in years past have been Amateur Radio operators. It's that way in most of the aerospace industry. I think in most cases the Amateur came before the engineer. Their contributions to the scientific world are invaluable.

Not to be bypassed are all the nets that play a big part in our daily communications. The Maritime Mobile Nets that help sailors that are in trouble make contact with the Coast Guard or another ship in the area. MARS operators devote many hours to pass traffic from service people to their families. Civilian workers in the Antarctic and aboard ships at sea keep in contact with family and friends at home. The list could go on and on.

While on the subject of nets, that's where some of our problems are. After the terrible Mexico City earthquake and the recent hurricanes in South America, the Caribbean and United States. As I see it the biggest problem is that everyone wants to help. Unless you are in the immediate vicinity of the disaster or the area the net controllers are trying to reach, stay off the air. It only causes more confusion. It's hard to do. So many times I sit with my fingers on the mike.

Unfortunately disasters also bring out the worst in some people. Human nature is sometimes hard to figure out. I can't understand the person who wants to keep a sched to ragchew and can't stand by for an emergency.

Some nets have a purpose, some don't. To many it's a question of belonging. Just checking in and being recognized makes a person feel good. What I'm concerned with are the legali-

ties and the attitudes of some nets. I overheard one evening not too long ago, "WE WERE HERE FIRST, IF YOU'VE GOT THE GUTS, GO AHEAD AND TRANSMIT BIG DADDY."

Fortunately most nets don't operate that way, but we do have the "IS THE FREQUENCY BUSY?" syndrome. Try to give more than three seconds for a response. You won't have to say, "I asked and no one answered." Be aware of the nets and their operating frequencies and the services they perform. Over the years I'm sure some lives have been saved through the efforts of the Amateur community.

Also to be considered are the legalities of all transmissions, not only on nets, but anywhere. We don't need another Jonestown, drug dealers or just plain business being conducted on Amateur Radio. Be alert! If something sounds phony don't pass it on.

It's hard to censor most business dealings and next to impossible to stop someone from saying, "Have you paid the gas bill?," "Did the real estate man take care of the property?," "How much money do you need?" Best thing you can do is warn your patchee ahead of time.

Prime time needs to be devoted to ATTITUDES. The soapbox individual is not accomplishing anything. His ideas might be of value, but his methods are wrong! When one of these individuals gets to foaming at the mouth, I just change frequencies. If you have a legitimate gripe, don't jump into the middle of a net and start spouting. It just irritates the wrong people, especially if it goes on for 90 minutes. It's like one of those people in the public park whom everyone thinks

is off his rocker.

Old adage — *The Pen Is Mightier Than The Sword*. Write to the ARRL, FCC, QST, Worldradio, local newspapers. Anyone — but not on the radio. You make it sound like JUNK!

Next on my list is "Membership Drives." One of my biggest fears is a "No Code License." Sometimes while looking for a clear frequency to run a patch, there is not one clear kHz. Anyone with a real desire or necessity to transmit has to switch on the amplifier and *charge!* Do we really need quantity or quality?

I am a member of the ARRL and plan on continuing. We need representation in Washington. Not unlike the NRA, that's the big thing that keeps us going.

And now finally, MEXICO! I guess this is one of my overall big gripes, and I must put it down on paper.

The OM and I love Baja. We have been going down there for around 15 years, and it would be really nice to keep in touch with our four kids and seven grandkids by Amateur Radio.

It hasn't worked that way. It has cost several hundred dollars so far, and I have yet to be issued an Amateur call sign. I tried passports, money orders, tons of paperwork, love and kisses (kidding) and have never made the grade.

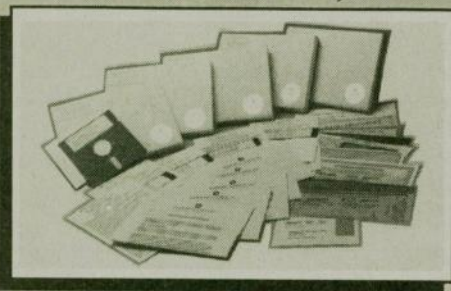
The last time, in November of 1988, we spent three hours driving around Tijuana. We finally found their communications place, with the help of a little old lady from the snack bar at the first toll gate to Ensenada. I had all the paperwork that Gordon West mentioned in his article in *Worldradio* (Feb. 1988 issue). It still didn't work.

Three people who spoke very good English told me that I would have to wait for two weeks for the call to be issued from Mexicali. Since our vacation was only scheduled for two weeks, that wouldn't do much good.

As it turned out I was able to transmit for 24 hours for the Baja Amateur Radio Racing Association. I am a member and was at Camalu, checkpoint #10 for the Baja 1000 Race (great fun).

I guess if I had a sailboat and a Novice license, I wouldn't have so many problems. I didn't really mean that. I'm glad the mariners are able to get permission to operate in Mexico. I

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guess I'm just jealous for us landlubbers. With all our tourist dollars going into Mexico, things are bound to change. I hope so anyway.

Gordon's instructions are very good for boaters, but they don't do too much good for us people running around in campers and motorhomes. Unless you are going through Mexicali. If so, you stand a pretty good chance of getting a license in one day.

Well, I just found another two cents in my pocket, so I might as well throw it in too. When complaining about CBers causing interference, don't lump them into one category. Quite a few years ago a local group of us were on CB. We talked between our homes and cars, shot a little "skip" and went to other areas of 11M for a clear frequency. We decided there was more to radio, and all decided to go to school and learn. Most of us went on to earn our licenses. I flunked advanced twice and on the third time I made it. Some day I might go for extra. All of those people turned out to be fine operators and don't deserve the abuse.

Thanks for listening. If you have any feedback, I'm "good in the call book."

PATTY SMITH, WB6DRG

Torrance, CA

## Dispose wisely

The following is a reply to "It's Only Fair," appearing on page 40 of the July 1988 issue:

While it's safe to say that most hams become packrats and accumulate large quantities of parts and equipment through the years, advising brother amateurs to get rid of anything not used in the past five years is a bit silly. Every amateur knows that as soon as you throw out that oddball part, a favorite piece of gear is going to fail, and you know what part it needs? Next, you'll find the price of a new one is \$55 and you'll have to wait three months for delivery.

Setting the spoofer aside, there is a market for collectible parts and equipment. The trick is in putting out the word to those who might be buyers. The advice to seek "the opinion of another — preferably younger — amateur" isn't necessarily the best either. The younger ham may have no idea of the worth of something he never saw before. Something he might consider junk could turn out to be a National SW-3 or RME-69.

You'll even find that there are buyers or those who will accept donations of logbooks and vintage QSL cards. I shudder to think of vintage gear or historical records being hauled to the dump and lost forever.

The suggestion to make a list of equipment and its approximate value is good. The equipment can be advertised in local amateur radio newsletters and in the nationally circulated magazines when the time arises.

While you're still drawing breath, you might wish to make a donation to a museum or sell some of the surplus. Another idea is to give some of it to aspiring Amateurs or newly licensed hams. About 22 years ago, when I was a young pup, the ham who is now WA4DID of Miami gave me a couple of 866As, which now do service in a restored Johnson Valiant, and a huge National variable cap which has been part of my shunt-fed tower omega match for years.

Let's not heave that stuff into a dumpster!

DAVE HEIL, J52US (K8MN)

Bisau, Guinea-Bissau

West Africa

## Let's communicate

In reflecting back over the last years as an Amateur Radio operator, I realize the importance of each aspect of radio and even the importance of combinations of those aspects of radio. None can or should be eliminated or set aside without losing part of the overall picture.

I have been exposed to many facets of radio, including direction finding, contesting, Field Day, emergency operations, CW, sideband, DXing, QSL cards, club activities and the experience of being an emergency coordinator for my county. ALL ARE IMPORTANT!

We have recently been told we are to lose part of the 220 band even though many people fought a good battle. How, then, can we even consider giving up an even bigger part of Amateur Radio just to please a very few? When we give up the code or make it optional, we give up the very foundation of Amateur Radio itself. Among other things, it has saved many lives when it was the only form of communication available. In wartime prisoners sent code (the only form of communication available) by blinking their eyes. They would have been in total silence for weeks at a time without the code.



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We are not CBers or children with expensive toys. We are communicators and code is another of its forms. We will want to retain, maintain and use all available means of communication. It wasn't easy for me to learn the code. I had to put in many long, hard hours of sending and receiving to even pass the five wpm test, but I did it and found a sense of pride and accomplishment. Many have fought learning code only to turn around a few years later and realize they actually like it after it ceases to be a chore.

We must not let code fall by the wayside. Do we also do away with the written test and hand out licenses upon demand? It sounds crazy but that could be the next step. Let's henceforth resolve to support the retaining of Morse code as a vital and historical part of the world of the Amateur for all times!

JEAN PRIESTLEY, KA2YKN

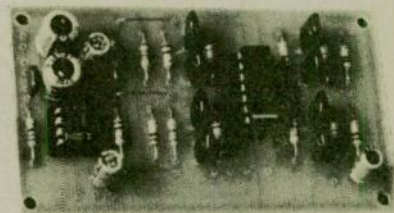
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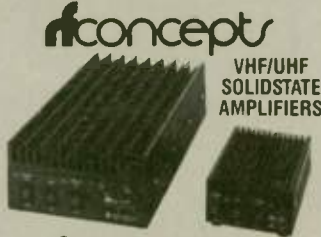
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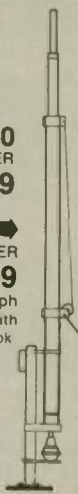
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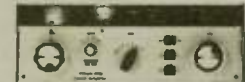


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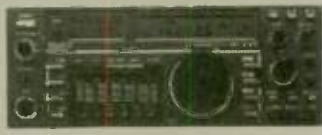
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# DX WORLD

John F.W. Minke III, N6JM

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## Activities Calendar

- 01-02 July RCV Venezuela DX Contest (SSB)
- 08-09 July IARU World Championships
- 15-16 July LCRA Colombian DX Contest
- 15-16 July MARTS SEA Net Contest (CW)
- 22-23 July RCV Venezuela DX Contest (CW)

## W-100-N

Our congratulations to the following DXers for completing the requirements for Worldradio's Worked 100 Nations Award:

- 357. WA4PMF Ray Ortega (All 20M SSB)
- 358. WA7OET William R. Hansen, Sr.

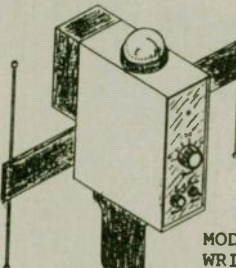
## Pacific tour

Ronald "Bing" Crosby, VK2BCH, has sent us the latest itinerary for his 1989 tour. Unfortunately we received it too late to print the early schedule. By the time this reaches you he most likely will be concluding his operation as 5W1GY at Apia, in Western Samoa. From there he plans to operate over at Pago Pago as VK2BCH/KH8 from June 16 to July 7.

Bing says he hopes to get over to the Tokelau Islands, but it depends upon the shipping. He has no dates set.

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Also on his schedule is Rotuma, from July 8 to Aug. 8, which was a surprise. From what we have been told one has to be invited to Rotuma by a resident. There are no facilities for travelers whatsoever. Perhaps Bing has family there?

All QSL cards should be sent direct to VK2BCH, P.O. Box 344, Forster, NSW 2428, Australia. Please include IRCs, "green stamps," for return postage. No QSL requests will be accepted via the bureaus.

## Bahrain (A92)

According to *DX News-Sheet* Don Street, A92BE, says that several A92 calls have been pirated on CW. There are presently no stations in Bahrain active on CW. Don doesn't even have a key!

If you need Bahrain on 15M, look for Don between 2300 and 0115 UTC between 21.287 and 21.346 MHz. Don also paid a couple of visits to 10M and was worked near 28.485 MHz around 2100 UTC.

There was a report of another call working in Europe. A92FB was found on 28.470 MHz at 1130 UTC, although that time is supportive into North America.



During their South Pacific DX-pedition, DL5UF and DF2UU made about 14,000 QSOs on SSB and 7,000 on CW. They operated from Upolu Island in Western Samoa as 5W1HZ and 5W1HY, Tutuila Island in American Samoa with their calls appended /KH8, and from Tongatapu Island in Tonga as A35UF and A35DX. Here the two take time out at the Faleolo International Airport. (photo courtesy of DF2UU)

## St. Pierre and Miquelon (FP8)

Ralph Hirsch, K1RH, will return to St. Pierre to operate for about a week as FP/K1RH. Ralph plans on operating all bands, 10 through 160M,

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and hopes to be able to include the WARC bands. This will be the fifth year that Ralph has fired up from St. Pierre. Look for him beginning June 29; he will be there through July 7.

Anyone considering operating from this little nation should be aware that there is a complete station at the Hotel Robert, which consists of antennas, power, antenna rotator, antenna tuner, SWR and power meters, etc. However, you must bring your own rig.

## Brunei (V85)

This little nation is located on the island of Borneo, squeezed in by East Malaysia. There hasn't been much activity here recently, although several stations had been reported with intermittent activity.

For a CW contact try checking the bands for these:

V85AA	14.003 MHz	1245 UTC
V85BJ	14.015 MHz	1430 UTC

Or, if SSB suits your fancy, try these:

V85AA	14.174 MHz	1530 UTC
V85AH	14.226 MHz	1615 UTC
V85BA	21.269 MHz	1500 UTC
V85GA	21.196 MHz	1715 UTC
V85NR	14.247 MHz	1715 UTC
V85WS	14.226 MHz	1600 UTC

## Macquarie Island (VK0)

According to the DX newsletters, there are two stations active from Macquarie Island. VK0GC has spent much of his time on the 14.222 MHz net at 0700 UTC. He has also been reported elsewhere — 7.166 MHz at 0815 UTC or 7.085 MHz at 0745 UTC working split. On 15M Graham has been worked on 21.230 MHz around 0530 UTC, 21.280 MHz at 0215 UTC and 21.289 MHz at 0215 UTC.

A YL signing VK0AE was also reported on April 25 for a list operation on 14.206 MHz running for a couple of hours, beginning around 1030 UTC.

## Chagos (VQ9)

The Chagos Archipelago, also known as British Indian Ocean Territories, is located in the middle of the Indian Ocean almost due south of the Maldive Islands. At least two stations have been reported active from this one during the month of April, and both of them on CW.

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Near 14.013 MHz from about 1300 UTC, VQ9AX has been on often. This one has also been on 10M near 28.026 MHz at 1415 UTC.

Reported on four bands is VQ9QM, who was worked on 3.502 MHz at 2100 UTC in Europe, 14.029 MHz at

1300 UTC, 21.031 MHz at 2200 UTC and 28.032 MHz at 2030 UTC.

### Banks and Torres DXpedition (YJ1)

This DXpedition will be history by the time you read this. As of mid-April the DXpedition team consisted of three operators: YJ8JS, VK8AV and VE7TG.

All donations will be greatly appreciated. At the time of this writing the participants were \$300 short. Contributions should be sent to Vanuatu ARS, P.O. Box 665, Port Vila, Republic of Vanuatu, South Pacific Ocean.

QSL requests should be sent via G0CGL, Eric Carling, 46 Jubilee Gardens, Ensburry Park, Bourne-

mouth BH10 4ET, England.

### Marion Island (ZS8)

ZS8MI has been reported on 10M near 28.435 MHz at 1500 UTC and 15M near 21.230 MHz at 1900 UTC. He has also been worked on 14.256 MHz at 1400 UTC.

Earlier in the month of April he had been reported near 14.145 MHz and listening between 14.160 and 14.170 MHz, according to *The DX Bulletin* and *QRZ DX*.

A CW frequency has also been given for 14.010 MHz. Check that one between 0700 and 0900 UTC.

### Mauritius (3B8)

The most active call found on the

## DX Prediction

Maximum Usable Frequency from West Coast, Central U.S., and East Coast (courtesy of Engineering Systems Incorporated, Box 939, Vienna, VA 22180).

The numbers listed in each section are the average Maximum Usable Frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Tokyo, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio De Janeiro. Chance of contact as determined by path loss is indicated as bold MUF for good, plain MUF for fair, and in parentheses for poor. UTC in hours.

### JULY 1989 WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	26	30	25	(20)	28
12	(25)	23	23	21	26
14	(31)	27	22	26	34
16	36	27	21	30	40
18	39	23	(20)	31	45
20	40	30	29	28	48
22	34	35	43	24	44
24	29	39	48	20	39
2	25	41	50	17	33
4	27	42	49	24	28
6	36	39	44	29	25
8	31	36	32	26	23

### CENTRAL USA

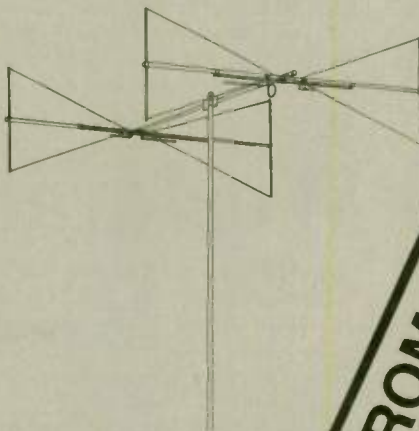
UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(28)	24	27	22	22
10	33	19	24	21	24
12	40	24	22	26	30
14	45	28	21	30	37
16	49	27	(20)	32	42
18	49	(23)	(20)	32	46
20	40	31	55	29	48
22	33	35	46	24	45
24	29	34	49	22	37
2	25	33	49	17	31
4	27	31	46	24	27
6	36	29	39	26	24

### EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	27	24	31	19	23
9	30	(20)	25	23	24
11	38	25	23	28	29
13	44	29	(21)	31	37
15	48	24	(21)	33	42
17	48	(19)	(20)	33	46
19	44	(23)	(27)	31	48
21	36	28	43	28	46
23	31	31	48	26	42
1	27	33	49	22	35
3	22	30	48	21	30
5	32	29	41	24	26

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- Add-on kit for 17 and 12 meters available now.
- 26 ft. tall

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- 32 feet tall - may be top loaded for additional bandwidth.

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bands from Mauritius recently is 3B8CF. Check 20M near 14.033 MHz from 0300 UTC or 10M near 28.030 MHz at 0245 UTC. This station has also been on SSB on 14.240 MHz around 0330 UTC.

Another active call reported on at least two bands is 3B8FP. This station was found near 14.242 MHz at 1815 UTC and 21.335 MHz at 1715 UTC working Europeans. For RTTY fans he has also been worked on 21.097 MHz at 1815 UTC.

Other calls reported from Mauritius include 3B8DB on 28.490 MHz at 1300 UTC, 3B8FQ on 14.008 MHz at 1300 UTC and 3B8FV on 14.177 MHz at 1300 UTC.

### Singapore (9V1)

One can always use a contact with Singapore. Located at the southern tip of the Malay Peninsula, this one is always considered to be a good snag. The DX bulletins revealed several calls during the month of April. They include the following:

9V1OK	14.036 MHz	2330 UTC
9V1QG	14.245 MHz	1030 UTC
9V1VB	28.017 MHz	2345 UTC
9V1VD	14.008 MHz	1715 UTC
9V1VW	14.019 MHz	1445 UTC
9V1VY	14.245 MHz	1000 UTC

9V1WR	14.215 MHz	1400 UTC
9V1WW	21.270 MHz	1600 UTC
9V1XM	21.247 MHz	1500 UTC
9V1XR	14.027 MHz	1215 UTC
9V1XW	14.007 MHz	1300 UTC

### Rwanda (9X5)

9X5AA recently spoke at one of the Redwood Empire DX Association meetings in Petaluma recently. He mentioned that he has a Tuesday schedule with his QSL manager (W4FRU) on 21.360 MHz at 1900 UTC. He will be more than pleased to work anyone needing him, but please wait for him to finish business with his manager.

9X5AA has also been worked on 21.039 MHz at 2300 UTC and near 21.345 MHz after 1945 UTC.

Also from Rwanda there is 9X5KP, who visits 21.335 MHz from 1745 UTC. He has been reported on there as late as 1930 UTC.

### USSR oblasts

Valery Volkov, UI8IAJ, reports activity from Oblast 052 (UI8T), April 11 through 17. This was to have been an all band affair, CW and SSB, with the calls UI8QZ/UI8T and UI8QU/UI8T.

Valery also has logs for last year's oblast DXpeditions, May 23 to 28, from UI8V, and Aug. 26 to Sept. 1 from UI8Q. He will do the QSL chores (see QSL Routes). Please include a SAE with two IRCs.

### DX is!

Remember the old *West Coast DX Bulletin* that was published by Hugh Cassidy? Ol' Cass had a unique style of writing (he is presently the DX Editor for *CQ*) and when he threw in the towel in 1979 after 11 years of writing, editing, printing and mailing that weekly publication, there became a void in the DX world.

A few years ago a book that included excerpts from the old WCDXB was offered for sale to the DX community. We received a note from Cass the other day that he had contacted one of the Allen brothers who had put the book together and learned there are still a few copies left.

If interested in obtaining one, contact Charles Allen, W5DV, 1000 North Walnut Ave., #202, New Braunfels, TX 78230. The cost is \$7.50, which includes postage for mailing anywhere in the United States. It is advised to check with him in advance in case all copies have been sold.

# The 1989 Worldradio DXathon

**ELIGIBILITY** — All licensed Amateur Radio operators, worldwide.

**DATES** — Start: 0000 1 January, 1989. End: 2359 31 December, 1989.

Exceptions: No contacts made during the time frame of any DX Contest will be valid. This is to be a prestigious award program, made so by its difficulty.

**BANDS** — 80, 40, 20, 15, 10 meter bands, plus satellite/moonbounce frequencies.

**MODES** — Phone, CW, Digital (includes RTTY, AMTOR, packet), Visual (SSTV), and Satellite (includes moonbounce).

Five Bands/Five Modes equals DXathon.

**CATEGORIES** — There is only one category — Single Operator.

**OBJECTIVE** — Contact as many NATIONS on as many modes as possible. A NATION is defined as an entity with enough sovereignty to issue its own postage stamps.

**VALID CONTACTS** — A NATION may be worked but once, on each mode, regardless of the frequency band. This is not a five-band per mode contest.

**SCORING** — Final score will be the total number of NATIONS contacted on the various modes. Contact with your own NATION does not count. The highest possible score would be about 900.

**SUBMISSIONS** — Entries must be received by 1 February, 1990. No QSL cards need be submitted or received by the entrants. Send signed log extracts to:

### WORLDRADIO

2120 - 28th Street

Sacramento, CA 95818 USA

Award winning logs will be published in *Worldradio*. Decisions of the DXathon committee will be final. The committee has the right to disqualify entries for violation of the letter or the spirit of the rules. By submitting an entry, the participant agrees to abide by the decision of the DXathon Committee.

### AWARDS

**World Champion** — The World Champion will receive a trophy significant enough to honor the effort.

Gold, Silver and Bronze Medals will be awarded for the highest scores on each continent.

Certificates will be awarded for:

A.—The highest score in each NATION.

B.—The highest score in each USA call area.

C.—The top single-band score in A. and B. above.

D.—Technician/Novice scores as warranted.

E.—High scoring 4 mode, 3 mode, 2 mode participants.

Nations with the highest participation (weighted vs. Radio Amateur population) will be honored.

In case of ties, duplicate awards will be made.

A certificate of participation will be awarded each "radio athlete."

It would be appreciated if monthly scores were sent in for publication.

**RULE CHANGES** — Rules may be modified over the years to reflect feedback from the participants. Please send copies of this page to your DX friends.

1989  DXathon

### Silent Key

Jostino Ramiro Santos, CT1UA, became a Silent Key at the end of March at the age of 47. He died of complications following major surgery for abdominal problems.

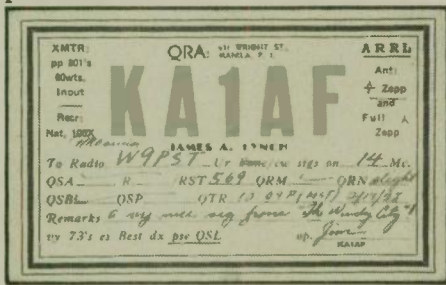
His funeral was April 1. He is survived by his wife and two children.

Most active DXers worked Miro at one time or another, and I'm sure that many of you may have met him. He was at the International DX Convention at Visalia just last year.

Many thanks to WA6AUD, DX Editor for CQ, for this information.

### Antique QSL department

This card dates back a little over 50 years. No, it isn't KA1AF of Foxboro, MA. This call was assigned to James A. Lynch of Manila. Prior to the Philippine's independence, this country was a U.S. territory — thus the "KA" prefix.



This card was submitted by Bob Truhlar, W9LNZ. The cards came from the estate of Roy Weisbach, W9UX. On Feb. 17, 1938, Roy, then signing W9PST, worked Jim on 20M CW, receiving a RST 569 report. The time indicated was 10:09P (MST), with MST most likely meaning Manila Standard Time.

### QSL routes




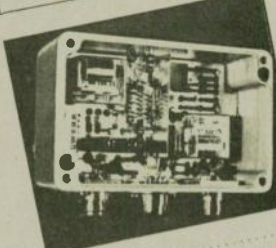
A35AA	-N5XX	J20RAD	-F6AJA
A35CE	-DJ9ZB	J4/DK6AS	-DJ8MT
A35DX	-DF2UU	J73EH	-WA4WIP
	(See Note 1)	JX1UG	-LA5NM
A35UF	-DL5UF	JY5CI	-G4WZF
BY1QH	-K18W	LX/DL2EBX	-DL2EBX
	(See Note 2)	LX/DL4EBN	-DL4EBN
BY4WNG	-K18W	NP4Z	-WC4E
	(See Note 2)	OD5LP	-HB9CRW
BY9GA	-K18W	ON8LS/5N0	-DL3VD
	(See Note 2)	P29KDY	-JR1EMV
BZ1WH	-BY4RB	P29VMS	-DL2GAC
C31SD	-CT1AMK	P40YL	-HB9CUY
C9MKT	-SM5KDM	PJ8CW	-AB1U
CE9AP	-CE3ESS	PJ8JP	-AB1U
CE0ZIG	-NR8J	PY0TY	-PY1DFE
CT3EU	-G3PFS	RV0YF	-RB7GG
CY0SAB	-VE1CBK	S01A	-EA2JG
D68TW	-K3ZO	S79MC	-AK3F
DF2UU/KH8	-DF2UU	S79MST	-G4IRG
	(See Note 1)	SUIEE	-WA9INK
DK1CE/KH8	-DJ9ZB	T30JS	-VK9NS
DL5UF/KH8	-DL5UF	T30RA	-KN6J
EI8EM	-W2ORA	T33JS	-VK9NS
ER4L	-UA4LCQ	T33RA	-KN6J
FG5DX	-WB7FRA	T5MF	-I2MQP
FG5R	-W7EJ	T5YD	-F6AJA
FH/DL7FT	-DL7FT	T50DX	-I2JSB
FS5D	-W7EJ	TA2BK	-DJ0UJ
FS5R	-WB7RFA	TE25UN	-T10RC
FW0BX	-ZL1AMO	TK5EP	-P6EJH
GD4UZL/P	-GW4UZL	TL8SC	-K4UTE
H5AW	-ZS6AW	TR8RLA	-NV7J
HC8JG	-WA6ZEF	TT8CW	-F2CW
HK0TCN	-K4TXJ	TY9CR	-DJ8CR
IY0ONU	-I5KKW	US0SU	(See Note 3)

V29OA	-W7KNT	ZK1XL	-SM7PKK	7S6DO	-SM6DEC	9H1JP	-9H5CO
V31AB	-WA4WIP	ZK1XV	-VK2BCH	7X4AN	-DJ2BW	9N9ITU	-JH8GAB
V31BB	-K3FEN	ZS/K9BO	-N9BHW				
VK5AQZ	-KJ5W	ZS8MI	-ZS6PT	CM5CB	-P.O. Box 2932, Cardenas, CUBA		
VK0AE	-VK2DEJ	3B8DB	-NA5U	CO2LE	-P.O. Box 125, Havana, CUBA		
VK0MP	-VK6AGC	3C1MB	-EA7KF	D68CY	-P.O. Box 85, Moroni, Republic of COMOROS		
VP8BWL	-G3NKK	3C1MM	-EA1QF		-P.O. Box 4204, F-97500 St. Pierre and Miquelon		
VP8WA	-WA4JQS	3D2CR	-DJ9ON	FP5DX	-Box 1139, APO San Francisco, CA 96305		
	(See Note 4)		(CW)	KN0E/KH3	-P.O. Box 10552, St. Thomas, VI 00801		
VQ9LF	-N6HPX	3D2CR	-DK9KX	NP2CY	-P.O. Box 1273, Khabarovsk 680 051, USSR		
VR6ID	-KB6ISL		(SSB)	R0C			
VU2WAT	-WA2YMX	3D2VN	-DF3VN				
VU7JX	-W2XP	3V8QZ	-Slim!	RF8V/			
WA0GMX/TF	-WA0GMX	3X1SG	-ON7GV	UA9XFJ	-P.O. Box 20, Ukhta 169 412, Komi, USSR		
XE2KB	-EA1AU	4N0R	-YU1AGL	T30MT	-P.O. Box 72, Bairiki, Republic of KIRIABATI		
XF4L	-OH2BN	4S7NMR	-KZ8Y		-P.O. Box 587, Port Gentil, GABON		
XX9KA	-KQ9V	4Z8UX	-4Z4UX	TR8CJ	-P.O. Box 6, Tbilisi 380 002, Georgia, USSR		
XX9TO	-KA8HOK	5H3TW	-K3TW	UF6CX	-P.O. Box 1, Pitsunda City 384 894, Georgia, USSR		
XX9TX	-KA8IFC	5V7RW	-WB4LFM	UF6VAG	-P.O. Box 71, Samarkand 703 000, Uzbek, USSR		
YJ1BKS	-G0CGL	5W1GY	-VK2BCH				
YJ1TRS	-G0CGL	5W1HA	-DJ9ZB				
YJ8JS	-N4EVS	5W1HX	-DJ9ZB	UI8IAJ			
Z21AB	-N5FTR	5W1HY	-DF2UU				
ZC4BS	-G4KIV		(See Note 1)				
ZF2AH	-WA6VNR	5W1HZ	-DL5UF				
ZF2JT	-WA6VNR	601YD	-F6AJA				

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typ. 0.6 db	typ. 0.6 db	typ. 0.9 db
18-20 db	18-20 db	17-19 db
150 Watt	150 Watt	150 Watt
750 Watt	750 Watt	350 Watt
Type N	Type N	Type N

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N GAS xxx MA  
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## Visit Your Local RADIO CLUB

For information on how to get your club listed in "Visit Your Radio Club," plus receive many other benefits, write to Club Liaison, Worldradio, 2120-28th Street, Sacramento, CA 95818.

### ALABAMA

**Montgomery Amateur Radio Club (W4AP).** Alabama State Trooper Dist. Office. Intersection of Coliseum Blvd. & Federal Dr. Randy Smith, N4LZK, (205) 832-4598. Meets 3rd Monday/monthly, 7:00 p.m.

### ALASKA

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

### ARIZONA

**Arizona Amateur Radio Club.** Meets: 2nd Thursday/monthly, 7:30 p.m., 1510 E. Flower St., Phoenix, AZ. Club info on W7WGWR 147.88/147.28 Rptr.

**Old Pueblo Radio Club.** Meets: 2nd Wednesday/monthly, 7:30 p.m. Location: Franklin Bldg., University of Arizona. N.E. corner of 5th St. & Park.

**Tucson Repeater Assoc.** P.O. Box 40371, Tucson, AZ 85717-0371. 2nd Sat./monthly, 7:30 p.m., Pima Co. Communication Bldg., 2545 E. Ajo. Net Thurs. 7:30 p.m. 146.28/88 (146.22/82, 147.68/08, 147.70/10-PKT).

**Western Arizona Radio Club.** Meets: 2nd & 4th Thur./monthly, 7:30 p.m. at Fort Mohave Mesa Fire Dept., ½ mi. East of Hwy 95 on Joy Ln., Mohave Valley, AZ. Net Tues. 7 p.m. 147.12 or call (602) 758-5171.

### CALIFORNIA

**Amador County Amateur Radio Club.** P.O. Box 1094, Pine Grove, CA 95665. Senior Citizens Center, Jackson, CA. Meets: first Thursday/monthly, 7:30 p.m. WA6WIY Rptr., 146.835, 146.235. Net Tues. 7:30 p.m.

**Associated Radio Amateurs of Long Beach, W6RO.** P.O. Box 7493, Long Beach, CA 90807. Meets: 1st Friday/monthly, 7:30 p.m. Signal Hill Recreation Hall, 1708 E. Hill St., Signal Hill, CA.

**Butte Amateur Radio Club.** Meets: 3rd Thursday/monthly, 8 p.m., Chico Community Hosp. Conf. Center on Rio Lindo off Cohasset Rd. Net: 28.330 Wednesdays, 8:30 p.m. For info: 893-5208, KE6EP or KB6COH.

**Caltrans RACES Club.** Meets: 1st Mon./monthly, 8:30 a.m., State Transportation Bldg., 1120 N Street, Rm. 4123, Sacramento, CA. Info, Jim West, (916) 445-1757.

**Citrus Belt Amateur Radio Club.** P.O. Box 3788, San Bernardino, CA 92413-3788. Meets: 1st Fri./monthly, 7:30 p.m. at 777 E. Rialto Ave., San Bernardino.

**Clairemont Repeater Assn.** P.O. Box 7675, Huntington Beach, CA 92615. Meets for breakfast 3rd Sat., 8 a.m. odd months. W5YI Broadcast Sundays 2000. Net last Tuesday 2000. WB6HUL/R 145.220-1A PL.

**Contra Costa Communications Club WD6EZR/R.** P.O. Box 661, San Pablo, CA 94806. Meets 2nd Sunday at 9:00 a.m. Hickory Post Restaurant/Lucky Lanes. For info call Don K6DPQ, (415) 222-2449.

**East Bay Amateur Radio Club.** P.O. Box 1393, El Cerrito, CA 94530. Meets: 2nd Fri./monthly 8 p.m., Salvation Army, 4600 Appian Way, El Sobrante. Nets: Slow CW, Wed., 8 p.m. & SSB Net, Wed., 9 p.m., 21.395. Info, Bob Fields, KC6AOH, 415/237-3761.

**Fullerton Radio Club, Inc. W6ULI.** P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Center, 340 W. Common Wealth, Fullerton. Net: ea. Tues., 8 p.m. 147.495 simplex. Info, Gracie Hastings, N6FSL (714) 990-9203.

**Gabilan Amateur Radio Club GARC.** P.O. Box 2178, Gilroy, CA 95020-2178. Meets: South Valley Jr High School, 385 I.O.O.F. Ave., Gilroy. 2nd Thurs./monthly. 7:30 p.m. Talk-in 145.47/144.87.

**Golden Empire Amateur Radio Society (VEC).** P.O. Box 508, Chico, CA 95927. Club call W6RHC, Repeater 146.25/85. Meets: 3rd Friday/monthly, 8 p.m. at 1528 Esplanade, Room 110B, Chico.

**Hilltop Amateur Mastertie System (HAMS).** Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza, 12924 Washington Blvd., Mar Vista, CA. Meets 3rd Mon./monthly at Bicycle Shop Cafe, 12217 W. Wilshire Blvd., W. LA. Info, N6FD 213/823-0767.

**Kern River Valley Amateur Radio Club.** P.O. Box 2611, Lake Isabella, CA 93240 Meets 4th Sat./monthly at 4 p.m. (Pot Luck). Veteran's Hall, Lake Isabella WA6UYW Rptrs. 146.085/146.685 224.22/Down 1.6 WB6ODZ Rptr.-224.58 Down 1.6 Low-Level.

**Livermore Amateur Radio Klub (LARK).** First Presbyterian Church, 5th & L St. Bill Richards, WD6J, (415) 829-5229. Net Mondays 1900 on 147.12 + . Meets 3rd Saturdays/monthly, 9:30 a.m.

**Marin Amateur Radio Club (MARC) W6SG.** Box 1231, San Rafael, CA 94901. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA (415) 883-9789 (Summer exceptions; contact Pete N6IYU, 924-1578). Sunday AM Club at Red Cross, San Rafael.

**Moreno Valley Amateur Radio Assoc. P.O.** Box 7642, Moreno Valley, CA 92302. Meets: 4th Monday/monthly, 7 p.m., Moreno Valley Unified Sch. Dist. offices, 13911 Perris Blvd., Moreno Valley. Net Tuesdays, 8 p.m. 146.655/055

**Mount Diablo Amateur Radio Club. P.O.** Box 23222, Pleasant Hill, CA 94523. Meets: 3rd Fri./monthly, 8 p.m., Grace Presbyterian Church, 2100 Tice Valley Blvd., Walnut Creek, CA. Net Thurs., 7:30 p.m. 147.06 + . Info, Vicki, (415) 458-4527.

**North Hills Radio Club.** P.O. Box 41635, Sacramento, CA 95841. 3rd Tuesday/monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress Ave., Carmichael, CA. Net 145.19 Thur. at 8:00 p.m.

**North Shores ARC.** (619-275-1495) So. Clairemont Recreation Center, 3605 Clairemont Dr., San Diego, CA. 1st Tuesday/monthly, 7:30 p.m. Club net each Monday, 7:00 p.m. 28.485 MHz.

**River City A.R.C.S.** Meets: 1st Tuesday/monthly, 7 p.m. SMUD Bldg., Room B & C, Elkhorn & Don Julio, Sacramento, CA. For info: (916) 483-3293.

**Riverside County Amateur Radio Assoc. c/o County Emergency Services Div.,** 4080 Lemon St., Ste. 8, Riverside, CA 92501. Meets: 2nd Thur./monthly, 7:30 p.m., bsmnt., County Adm. Bldg., 4080 Lemon St., Riverside. Nets: Mon., 7:15 p.m., 222.860/224.46C and 7:30 p.m., 146.28/88; Tues.—YL Net, 7:30 p.m. 224.460. Bkfst., 3rd Sat., By You Bob's Rest., Riverside.

**Sacramento Amateur Radio Club.** Contact: Gary Bryant, KB6KZZ, (916) 646-1171. Meets Sacramento Blood Bank, 32nd St. & Stockton Blvd., Sacramento, CA, 2nd Wednesday/monthly, 7 p.m.

**San Fernando Area Radio Club, W6SD** P.O. Box 3151, Van Nuys, CA 91401. Meets: 3rd Fri./monthly, 7 p.m., Red Cross Van Nuys, 14717 Van Nuys Blvd., Van Nuys, CA 91401.

**San Gabriel Valley ARC.** Bowling Green Clubhouse, 405 S. Santa Anita Ave., Arcadia, CA 91006. Meets: 1st Tuesday/monthly, 7:30 p.m., except Dec. W6QFK, Repeater 147.165/765.

**San Mateo Radio Club.** Beresford Park Recreation Center, 28th Ave. and Alameda de las Pulgas, San Mateo, CA 94403. 3rd Friday/monthly, 7:30 p.m.

**Santa Clara County Amateur Radio Assoc. (SCCARA) W6UW.** P.O. Box 6, San Jose, CA 95103. (408) 249-6909. Meets: 2nd Mondays/monthly, 7:30 p.m. Net other Mondays, 7:30 p.m. W6UU 146.385 + /442-425 + .

**Santa Clara Valley Rptr. Society (SCVRS).** P.O. Box 2085, Sunnyvale, CA 94087. (408) 247-2877. 146.76 (-600 kHz), 224.26 (-1.6 MHz), 444.60 (+5 MHz). 2 meter/220 net Mon. 9 p.m. Mtgs.-3rd Fridays.

**Shasta Cascade Amateur Radio Society (SCARS) P.O.** Box 664, Anderson, CA 96007. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm., Grape St., near Parkview Ave., Redding, CA. Net 146.64 Wed., 8 p.m.

**Sierra Foothills Amateur Radio Club. P.O.** Box 3262, Auburn, CA 95604. Meets: 2nd Friday/monthly at Auburn Fire Station, 226 Sacramento St., Auburn, CA. Nets 7:30 p.m. Tues. 28.443 MHz, Thurs. 145.43 MHz link with 223.86 MHz.

**Simi Settlers Amateur Radio Club. P.O.** Box 3035, Simi Valley, CA 93063. Meets: 2nd Thurs./monthly, 7:30 p.m., at Seventh-Day Adventist Church, 1636 Sinaloa, Simi Valley. Rptr. 147.93/33

**Solano County Amateur Radio Society.** P.O. Box 457, Fairfield, CA 94533. Meets: 3rd Wed. 7 p.m., Vanden High School. 441.150 + 5 (Remote 145.69 simplex) PL 77Hz, (707) 448-1461.

**Southern California Six Meter Club. P.O.** Box 448, Cypress, CA 90630. USB Net Tues., 8 p.m., 50.150 and 8:30 p.m., 28.400. FM Rpt. Net Wed., 7 p.m., 52.18/98 and Thurs., 8 p.m., 52.28/88. FM Smlpx call freq. 50.300.

**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, 223.68 MHz.

**Stockton-Delta Amateur Radio Club.** Meets: 2nd Thurs./monthly 7:30 p.m., Red Cross Bldg., 747 N. Pershing, Stockton, CA (Hwy 5, Pershing off-rmp). Net 28.450 SSB 8 p.m. Wed. Visitors welcome. Club Rptr. W6SF receives 147.165 MHz.

**The Trinity County ARC.** P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wednesday/monthly, at the CD Hall in Weaverville, 7:30 p.m. WD6FHX Rptr. 146.13/73.

**Tri-County Amateur Radio Assoc. P.O.** Box 142, Pomona, CA 91769. Meets: 2nd Monday/monthly, 7:30 p.m. Pomona First Federal S&L, (basement), 399 N. Garey, Pomona, CA.

**United Radio Amateur Club K6AA. L.A.** Maritime Museum, Berth 84. Foot of 6th St., San Pedro, CA 90731. Meets: 3rd Friday/monthly except Dec., 8:00 p.m. Talk-in 145.655 Simplex.

**Victor Valley Amateur Radio Club. P.O.** Box 869, Victorville, CA 92392. Meets: Victor School Board Room, 6th & "A". 2nd Tuesday/monthly, 7:30 p.m. WA6EFW Rptr. 146.34/146.94.

**West Coast Amateur Radio Club.** Fountain Valley School. Talbert/Bushard. Fountain Valley, CA. Meets 3rd Thursday/monthly. 145.44-4Z.

**Western Amateur Radio Assoc. Cerritos Park East, 166th St. and Carmenita Ave.,** Cerritos, CA. Meets: 1st Tuesday/monthly, 7 p.m. Rptr., N6ME 145.40/224.18 MHz.

**West Valley Amateur Radio Assoc.** 18011 Saratoga — Los Gatos Road, Los Gatos, CA 95030. Meets: 3rd Wednesday/monthly, 7:30 p.m. W6PIY/R. Net Tuesday, 8:30 p.m., 147.39 + , 223.96.

**Yolo Amateur Radio Society.** Meets: 1st Thursday/monthly, 7:30 p.m. 1207 Sycamore Lane, Davis, CA 95616.

### CONNECTICUT

**Tri-City ARC.** Groton Public Library, Route 117, P.O. Box 686, Groton, CT 06340. Meets: 2nd Tuesdays/monthly, 7:30 p.m.

### FLORIDA

**Indian River ARC, Inc. (IRARC).** 597 Capri Rd., Cocoa Beach, FL 32331. Martin Andersen Senior Center, 1025 S. Florida Ave., Rockledge, FL. Meets: 1st Thurs./monthly, 7:30 p.m.

**Platinum Coast Amateur Radio Society, Inc. (PCARS).** P.O. Box 1004, Melbourne, FL 32902. Meets: American Red Cross Bldg., 1150 S. Hickory St., 2nd Monday/monthly, 7:30 p.m. Talk-in on 146.850 rpt.

**Sarasota Amateur Radio Ass'n, Inc.** Meets: 3rd Tues./monthly, 8 p.m. on the 6th floor (board rm.) of the County Admin. Bldg., corner of 301 & Ringling Blvd. Club Rptr. W4IE, freq. 146.91/31, open to all. Phone patch \*Up #Down. Welcome.

**South Brevard Amateur Radio Club.** P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tuesday/monthly, 7 p.m., Melbourne Library, 2275 S. Babcock St., Melbourne, FL.

**West Palm Beach Amateur Radio Club, Inc.** P.O. Box 6834, Southboro Station, W. Palm Beach, FL 33405. Meets: 2nd Tues./monthly, 7:30 p.m., Palm Beach Emergency Op. Cntr., 3723 Beveledere Rd., W. Palm Beach. Info: H. Felton, 655-4632 or H. Logan, 848-0513.

**HAWAII**  
**Big Island Amateur Radio Club.** P.O. Box 1938, Hilo, HI 96721-1938. Meets: 2nd Tuesday/monthly, 7:00 p.m., Helco Auditorium, 1200 Kilauea, Hilo. Talk-in on 146.76(-).

**ILLINOIS**  
**Amateur Cross Link Repeater.** 10, 6, 2 mtrs., 220, 440, 900, 1.2 MHz, ATV. Meets: 1st Sat./monthly, 7:30 p.m. Info: net Sundays, 8 p.m., 147.225 MHz. KD9FA Rptr./Chicago.

**Bolingbrook Amateur Radio Society.** Meets: 3rd Mon./monthly, 7:30 p.m., Annerino Rec. Cntr., Recreation Dr., Bolingbrook, IL. Info net Thursdays, 8 p.m., WA9DIP/R 224.54/222.94 and WD9AKO/R 147.33/147.93.

**Chicago Suburban Radio Assoc. (CSRA).** P.O. Box 88, Lyons, IL 60534. 447-HAMS. Meets: 2nd Wed./monthly, 8 p.m., Clyde Bldg., 7222 W. Cermak, N. Riverside, IL. Net Mondays at 8 p.m., 147.225+ and 29.68.

**Dupage Amateur Radio Club W9DUP.** Mid-America Savings & Loan, 55th & Holmes (55th St. near RT 83), Clarendon Hill, IL. 4th Monday/monthly, 7:30 p.m. Club rptr. 145.250 — 600 kHz.

**Elgin Amateur Radio Society.** P.O. Box 1351, Elgin, IL 60120. Meets in EOC Rm. of Elgin Municipal Bldg. 2nd Friday/monthly, 8:00 p.m.

**Fox River Radio League.** Valley National Bank, Lower Level, Northgate Shopping Ctr. & RT. 31, Aurora, IL. (312) 584-4925 for more info. Meets: 2nd Tuesday/monthly, 7:30 p.m.

**North Shore Radio Club.** Meets: 2nd Monday/monthly. Net 8 p.m. Tues. Karger Center, 1850 Green Bay, Highland Pk., IL. WB9FRM Rptr. 147.345 + 600 (PL 1B). Info: NSRC, P.O. Box 1066, Highland Pk., IL 60035.

**Northwest ARC/W9LM.** Meets: 2nd and 4th Tuesday/monthly, 7:00 p.m., Oehler Funeral Home downstairs community room, Lee & Perry Street, Des Plaines, Illinois.

**Schaumburg ARC (SARC).** Meets: Schaumburg Park District Community Rec. Cntr. at Bode and Springinguth Roads, Schaumburg, Illinois. Third Thursday/monthly, 7:30 p.m. Net 28.350 8:00 p.m. Thursdays.

**Six Meter Club of Chicago K9ONA.** Bank of Lyons, Lower Level, 8601 West Ogden Ave., Lyons, IL. 2nd Friday/monthly, 7:30 p.m. Club Rptrs: 146.371.97, 448.30/444.30.

**York Radio Club.** Meets: 3rd Fridays/monthly, 8 p.m., Elmhurst College (Science Bldg.), Elmhurst, IL. Net Mondays, 8 p.m. W9PCS/147.42 simplex.

## KENTUCKY

**Kentucky Colonel Amateur Radio Club, Inc.** Meets: 3rd Thurs./monthly, 7:30 p.m., mtg. rm., Greenwood Mall, Scottsville Rd., Bowling Green, KY. ARES net ea. Thurs., 7 p.m. KA4CLL/R146.850.

## MARYLAND

**The Peninsula Radio Operators Society (PROS).** Family oriented activities, training and exams held throughout the year. PROS Rptrs. 146.925 and 146.625. PROS, P.O. Box 2315, Salisbury, MD 21801.

## MASSACHUSETTS

**Mohawk Amateur Radio Club.** Meets: 4 Wed./monthly, 7:30 p.m., American Legion Hall, 325 Pequog Ave., Athol, MA. (One block north of downtown traffic lights, past the bridge)

**Mt. Tom Amateur Rptr. Ass'n, Inc.** P.O. Box 3494, Springfield, MA 01101-3494. Meets: 3rd Thurs. (Sept.-May), 8 p.m., Holyoke Com. College, Holyoke. 2M, 220, 440 & packet. Info net Wed., 7:30 p.m. 146.94/R. Emer. net Sun., 8:45 a.m.

## MICHIGAN

**Hazel Park Amateur Radio Club.** Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 147.51 Simplex Call-in.

**Oak Park Amateur Radio Club.** Oak Park Community Center, 14300 Oak Park Blvd. (same as 9 1/2 Mile Rd., west of Coolidge). Oak Park, MI 48237. 2nd Monday/monthly, 7:45 p.m. Talk-in on our 224.36 MHz or 146.64 MHz.

**South Eastern Michigan A.R.C.** Meets: 1st Friday/monthly, 7:30 p.m. Grosse Pointe North High School, Bldg. C, Cafeteria Commons. For info contact: AK8I (313) 372-1252. W8FWC Rptr. 146.740/146.140.

## MISSOURI

**Kansas City Heart of America Radio Club.** Meets: 3rd Tues./monthly, 7:30 p.m. at Red Cross Bldg., 211 West Armour Blvd., Kansas City, MO.

**PHD Amateur Radio Assn. Inc.** P.O. Box 11, Liberty, MO 64068. Meets last Tuesday/monthly, 7 p.m. Red Cross Bldg. (816) 781-7313, Volunteer Examiner Coordinator.

## NEBRASKA

**Pioneer Amateur Radio Club (PARC).** P.O. Box 445, Fremont, NE 68025. Meets: 4th Friday/monthly, 7:30 p.m. at Keene Memorial Library, 1030 North Broad. Wed. ARES net 146.67 19:30 CDT/19:00 CST.

## NEVADA

**Frontier Amateur Radio Society (FARS).** Meets: 3rd Monday/monthly, 7 p.m., Denny's Restaurant across from Nevada Palace, 5318 Boulder Hwy. Net Mondays 7:30 p.m., 145.39 rpt. on Black Mountain. Club info, Jim Frye, NW7C, 456-5396.

**Las Vegas Radio Amateur Club (LVRAC).** Meets: 2nd Tuesday/monthly at 7 p.m., Nevada Power Building, Wengert Rm., 6226 W. Sahara Ave. (Near Jones). Net Tuesdays 8:00 p.m. on 146.94 MHz. Info: Call Jeff at 363-9013.

**Nevada Amateur Radio Assoc. (NARA)** 2333 Rodney Cir., Reno, NV 89509. Meets: 3rd Tuesday/monthly, 7:00 p.m. at First Federal Savings & Loan Bldg., 2330 So. Virginia St., Reno, NV.

**Sierra Intermountain Emergency Radio Assoc. (SIERA).** P.O. Box 2348, Minden, NV 89423. (702) 782-8266. Meets: 2nd Tuesdays/monthly, 7:30 p.m., Douglas County Lib., Minden, NV. Talk-in: 147.270 +.

## NEW HAMPSHIRE

**Great Bay Radio Assn., WB1CAG.** P.O. Box 911, Dover NH 03820. (603) 742-0130/755-2600. 2nd Sunday/monthly, 7:00 p.m. Dover Dist. Court. Talk-in 147.57.

## NEW JERSEY

**Bayonne Emergency Mgt. ARC (BEMARC).** 16th St. & Ave. A Firehouse, Bayonne, NJ 07002. Meets: 2nd Tues./monthly, 7:30 p.m. Rptrs: 53.09/145.430/224.280/445.575 MHz.

**Delaware Valley Radio Assoc. (DVRA).** Our Lady of Good Counsel Church, 137 W. Upper Ferry Rd., West Trenton, NJ 08628. Meets: 2nd Wednesday/monthly, 8:00 p.m.

**Gloucester County Amateur Radio Club (GCARC).** Woodbury V.F.W. 1st Wednesday/monthly, 8:00 p.m., Woodbury, NJ. Talk-in 147.18/78. For info call K2JF (609) 589-2318.

**South Jersey Radio Assoc. (SJRA).** Pennsauken Sr. Hi Sch. at Hylton Rd. & Remington Ave., Pennsauken, NJ 08109. Jan.-Oct. 4th Wed./monthly, 7:30 p.m. Nov.-Dec. 3rd Wed. due to Thanksgiving and Christmas. Talk-in 145.290 rpt. Club call K2AA.

## NEW YORK

**Communications Club of New Rochelle, NY.** Harrison Street Firehouse. Bill McCarren, K2LV, (914) 738-0768. Meets: 1st Monday/monthly, 8 p.m.

**Genesee Radio Amateurs (GRAM).** N.Y.S. Civil Defense Center, State St., Batavia, NY 14020. Meets: 3rd Friday/monthly, 7:30 p.m. 147.285 + W2RCX.

**Hall of Science Amateur Radio Club.** P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tuesday/monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park at 7:30 p.m. The tristates' only 3-band linked rpt. system 144.300 S/223.600 - /445.225 -.

**Orleans Amateur Radio Club (WA2DQL).** Meets: Office of Disaster Preparedness (CD), West County House Rd., Albion, NY 14411, 4th Wednesday/monthly, 7:30 p.m., 147.527-WA2DQL.

**PROS, Pioneer Radio Operators Society.** Meets: 1st Wed./monthly (except July/Aug.), 7 p.m., Masonic Temple, Rt. 78, Java Village, NY. Other Wednesdays, 8 p.m. 145.170/144.57-. Repeater KC2JY.

**The Radio Club of J.H.S. 22, N.Y.C., Inc.** WB2JKJ, P.O. Box 1052, New York, NY 10002. 24-hr. hotline, (516) 674-4072. Non-profit org. uses Amateur Radio to enhance education of young people, nationwide. Join us — "Classroom Net", 7.238 MHz, 7 a.m. E.S.T. PSE QSL!

**Suffolk County Radio Club.** 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Wy. W2DQ/R 144.610/145.210, 223.080/224.680 rpt. Info Call Jim Heacock (516) 473-7529.

**Westchester Amateur Radio Assoc. (WARA).** Scarsdale Village Hall, Scarsdale, New York. Meets: 1st Wednesday/monthly, 8:00 p.m. For info call Dan Gabel, N2FLR, Pres., (914) 723-8625.

**Westchester Emergency Communications Assn. (WECA)** 147.66/147.06, 222.80/224.40, 447.475/442.475. Meets: 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Info: P.O. Box 831, N. Tarrytown, NY 10591. (914) 631-7424.

## NORTH CAROLINA

**North Carolina Chapter TSRA.** Meets: Mondays, 28,350 on the air, 8 p.m. local time. "The Alligators" — all month, no ears.

**Raleigh Amateur Radio Society, Inc.** P.O. Box 17124, Raleigh, NC 27619. Club net nightly, 8 p.m., W4DW, 04/64. Meets: 1st Wednesdays/monthly, 7:30 p.m., YMCA. 18th Annual Hamfest, April 9, 1990.

## OHIO

**Amateur Radio Fellowship (ARF).** Keith Melvin, KA8TKE, Sec. P.O. Box 2486, Streetsboro, OH 44241. Meets: 1st Sat./monthly, Kent Wally Waffle. KA8YKT rpt. 147.675/075.

**Ashtabula County ARC.** Ken Stenback, A18S (964-7316). County Justice Center, Jefferson, OH. 3rd Tuesday/monthly, 7:30 p.m. County Rptr., 146.715.

**Clyde Amature Radio Society (C.A.R.S.).** Meets: 2nd Tuesday/monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 44811. NF8E Repeater 144.75/145.35. Net Sunday 9 p.m.

**Dayton Amateur Radio Assoc.** P.O. Box 44, Dayton, OH 45401. Meets 1st & 3rd Fri./monthly (Sept. thru June) 8 p.m., Career Academy on River Corridor Dr. Info on W8BI 146.34/94 & 222.34/223.94.

## RADIO CLUB *continued*

### PENNSYLVANIA

**Butler County Amateur Radio Assoc.**  
Meets: 1st Tuesday/monthly, 7:30 p.m. at  
Red Cross Bldg., 312 Mercer St., Butler,  
PA 16001. Call-in 147.96/36

**Mercer County Amateur Radio Club**  
W3LIF. P.O. Box 996, Sharon, PA 16146.  
Meets: 4th Tuesday/monthly at 7:30  
p.m. at Shenango Valley Medical  
Center, Farrell, PA. Net, Thursdays 8:45  
p.m. on 147.75/15 W3LIF/R.

**Warminster Amateur Radio Club.** Meets:  
1st Wednesday/monthly 8 p.m., St. John's  
Lutheran Church, York Rd., Hatboro, PA.  
Nets: WA3DFU/R info. Net Wed. 8:30,  
147.09/147.69.

### VIRGINIA

**Southern Peninsula Amateur Radio  
Klub (SPARK).** Meets: 1st and 3rd  
Tuesdays, Salvation Army Community  
Bldg., Hampton, VA. Operates 148/13  
146.13 /73 Rptr., VEC Information (804)  
898-3774.

**Virginia Beach Amateur Radio Club  
(VBARC).** Open Door Chapel, 3177  
Virginia Beach Blvd., Va. Beach, VA.  
Meets First Thursday/monthly, 7:30  
p.m. For info (804) 497-1235.

### WEST VIRGINIA

**Jackson County Amateur Radio Club.**  
D. Geneal Bailey, NK8P, Sec.-Treas. 113  
Winters Dr., Ripley, WV 25271. First  
National Bank of Ripley. Meets: 1st  
Thur./monthly, 7:30 p.m. Net Mon. 9 p.m.  
on 146.67/07 WD8JNU/R.

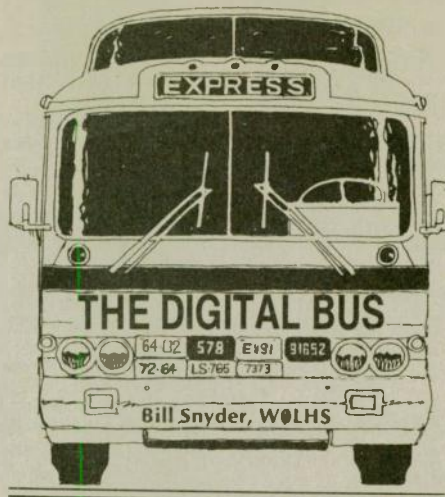
**Tri-state Amateur Radio Assn.** Meets: 3rd  
Tues./monthly, 7 p.m., Green Valley Vol.  
Fire Dept., Norwood Rd. & 16th Street Rd.,  
Huntington, WV. ARES net Thurs. 9 p.m.  
on 146.76/16 W8VA/R. Info N8IKP  
523-5264.

### WASHINGTON

**Mike & Key Amateur Radio Club.**  
3rd Sat./monthly, 10 a.m., Tukwila Com.  
Ctr., 4101 So. 131st St., Seattle, WA. Net.  
Wed. eve., 7:30 p.m. 146.22/146.82 rptr.

### WYOMING

**University ARC.** 146.01/61 Meets: 1st  
Tues., 7:30 p.m. Sept.-May. U.W.  
Physical Plant Bldg., 15th & Lewis St.,  
P.O. Box 3625, Laramie, WY 82070.  
June-Aug: Bernie Club picnics  
Wednesdays.



How did you discover the wonderful world of ham radio? I'll bet every ham radio fan in the world will tell a different story when asked that question. We discussed that subject at a recent breakfast gathering of dedicated Amateurs and conversation set me to thinking about my own entry into the fraternity.

I was in junior high school here in Fargo in 1930. A number of kids in my class were hooked on reading pulp magazines which featured fiction and fact about WW I aviation. I was one of them.

My intense interest in aviation began with the Lindbergh solo flight across the Atlantic. When Lindy made his triumphant tour of the United States after his return, I was in the crowd that watched him land in a Fargo pasture and speak in an outdoor amphitheater. That day was the beginning of the aviation boom as far as I was concerned.

I read Lindy's book, *We*, about a dozen times. It was pretty exciting

stuff for an 11-year-old kid. Then I discovered the aviation pulps.

For you 1989 youngsters pulp magazines were so-called because they were cheap magazines printed on paper that resembled newsprint. For a few nickels you could buy a couple hundred pages of thrills and excitement. We kids read and traded pulps with adventurous names like *War Birds*, *Wings* and *Battle Aces*. We discussed the Red Baron and his ilk like they were our peers. We all vowed to join the Army Air Corps as soon as we were old enough. Many of our group did just that during WW II.

My search for new aviation pulps lead me to the 8th Street Cigar Store newsstand, a tiny hole in the wall store that I passed on my way home from the downtown movie theaters. I remember vividly the day I was scanning the large magazine rack that covered one wall of the little shop when I spotted an orange covered magazine with a picture of a radio transmitter in one corner. It was *QST*. As was my habit I paged through any new magazine discovery. I wondered what the strange diagrams and the long list of "Calls Heard" were all about.

I recall trying to pronounce the title. "Quist," I called it. It was probably the added line: "...devoted entirely to Amateur Radio," that caught my eye.

I had watched my father build our first three tube radio set in 1922 and I had listened in the earphones as he logged broadcast stations in Pittsburgh, Chicago and St. Louis. There was no doubt about it, radio was the marvel of the age. I had also toured WDAY, the pioneer broadcast station in our area, and the control room fascinated me. I wanted to get my hands on those knobs.

So, instead of a copy of *Battle Aces*, I popped for "Quist." As I walked the remaining eight blocks to my home (we walked in those days, kiddies) I became immersed in the contents of the little magazine. I read an ad from Cunningham tubes telling me they had the "right combination to bring your radio up-to-date," and an ad from RCA Radiotron tubes that claimed you would receive "more distance on the same set" if you plugged them in your radio.

Other mysterious advertisements in "Quist" extolled the virtues of "B" eliminators, fixed and variable condensers (they call them capacitors nowadays) and ready-made coils for all purposes. By the time I had arrived home, I was confused as to just what Amateur Radio really was all about; to me it was a mystery and I wanted to solve it.

For the next few weeks I studied my "Quist" until I had nearly memorized every page. It was then that I dis-



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covered the radio parts section of the SS Kresge dollar store.

I spent many long hours studying the collection of tube sockets, condensers and other radio parts without purchasing a single item. I would ask technical questions of the cute young lady who clerked in that section and I would always get the same answer, "I don't know much about them things, I just sell 'em."

My nickels and dimes quit buying *War Birds* and *Wings* and were used to purchase *Radio News*, with its diagrams of audio amplifiers, broadcast receivers and other vacuum tube gadgets. But "Quist" was the only magazine I could find that talked about equipment to transmit signals, so I bought them as they came out.

With money sponged from my railroad telegrapher father, I built my first breadboard ham receiver that featured two 201-A tubes operated by a stack of A and B batteries. And it worked! I was off and running in the world's greatest hobby. As I write this nearly 60 years later, I look back at 60 years of fun and excitement. Ham radio is the world's greatest hobby! Agree?

### Packet stuff

I really don't know where to address this note, but I hope it reaches the powers that run the packet bulletin board network. I believe we need to change the system that handles BBS bulletin traffic addressed to "ALL." We need to set geographical limits on some of the bulletins that are circulating in the packet system. I find bulletins on my BBS that are of no interest to my local users. For example I find club meeting notices from cities 2,000 miles from Fargo and "For Sale" ads for flea market stuff in California. If a message gets addressed to "ALL" somewhere in the United States, it

seems to wind up on my board.

All AMSAT bulletins are welcomed at my station because I and a couple of other users want and need the information contained in them. The RLIBBS bulletins deal with the operation of my system, so they are useful and needed. But I don't think we should clutter up the packet system with a "for sale - one hand-held" announcement from 2,000 miles away. When I "RH" the message and check its routing to me, I sometimes see 20 BBS' listed, so I know the message is cluttering up more than my board. Can't we put limits on this abuse?

### International packet traffic

When I first operated on HF packet some years ago, I used to regularly work JA1DSI, Minoru Tsuda, on 20M. Minoru and I have been STEAM RTTY (the classic kind) friends for a long time. So the other day I was happy to find a message on my BBS from Minoru. It had been relayed to me by N8FIS in Fremont, OH. He had received the Tokyo origination by mail. It was on a computer disk and at Minoru's request, he dumped it into the packet system for me.

Two of our local Fargo hams, KF0CG and K0GPX, have been using the international packet system to arrange

schedules for WARC band contacts with Australia. They have had remarkable success. Most of the messages move to and from VK land in only one day each way; that's better than I have done sending a message to Minneapolis, only 240 miles away.

This brings up a point: Is sending a packet message to a licensed ham in Japan considered third-party traffic? The way I look at it is this: It is just two hams communicating between themselves. They can do it directly or via OSCAR 13, so why not via packet? Do you have any thoughts on this subject? I'll be glad to hear them.

### Eavesdroppings

"GOT OVER MY SPRING FEVER BY CONTRACTING SUMMER SLOW-DOWN DISEASE... ALL THE DX BANDS HAVE BEEN OPEN EXCEPT ABOVE 14 MHZ... I NEVER CALL CQ ON RTTY BECAUSE I AM AFRAID I MIGHT HOOK A FISH WHO CAN'T TYPE... I WOULD PROBABLY BUILD MY OWN TRANSCEIVER IF I KNEW HOW... MY WIFE HAS NO TECHNICAL ABILITY AT ALL - I HAVE TO CHANGE THE TOILET PAPER ROLL... I WON'T HOLD YOU WITH THIS HUNT-  
(please turn to page 48)

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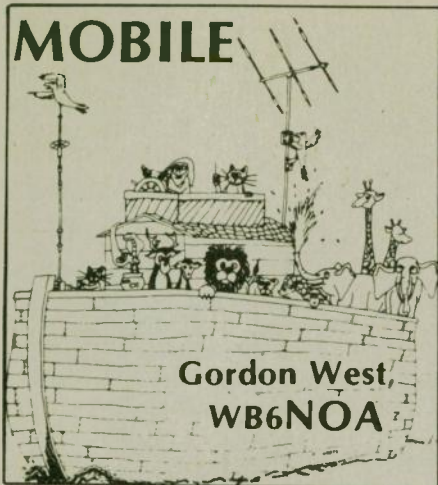
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# MOBILE



Gordon West,  
WB6NOA

## Hot lips mike?

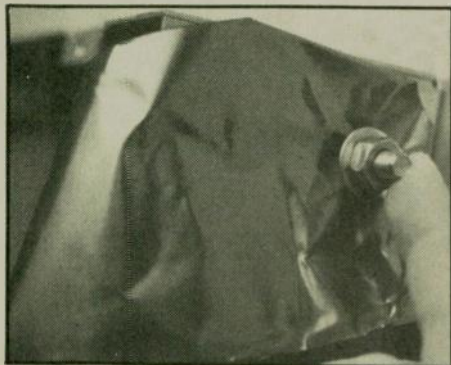
Have you ever been stung by a microphone? Did you ever notice the tingle that the little mike clip made in your hand. And did you ever feel a tiny little spark between the mike element and your lips?

"Hot mikes" are a common problem with high frequency mobile operation, 2-30 MHz, 100W output. Ground loops recirculate the surrounding RF field and create some RF "hot spots" on your equipment and surrounding electronics.

These "hot spots" may also be seen as gauges that swing as you modulate, panel lights that illuminate on voice peaks and abrupt changes in your cruise control or your marine automatic pilot system.

Good grounding techniques may take as much as 90 percent of this problem away. Good grounding may ONLY be accomplished using a low reactance ground system. This means small or large round wires are no good for equipment grounding.

Round wires look like coils at certain RF frequencies. Coils oppose the flow of AC, called reactance, so that welder's cable ground lead from the tail of your equipment down to your mobile ground system may be absolutely ineffective at frequencies between 3 and 23 MHz.



Copper ground foil attached to ground terminal on Kenwood 440

Three-inch wide copper foil, available from all Ham Radio Outlet stores, is the ultimate in a low reactance ground. One inch wide plumber's tape also works nicely. So does tinned braid. But again, wires won't work.

It's sometimes difficult to affix the ground foil or braid to the tail of your transceiver's ground connection. Some rigs offer a nice ground post but others may offer only a little pinhole wire connection.

On those "pinhole" radios attach your foil to the sides of the chassis using the existing sheet metal screws now holding on the cabinet box. I have even seen hose clamps grounding foil to the PL-259 connector as one way of getting a good ground connection to the chassis.



Ground braid (seen lower right) on auto-coupler

On vehicles ground to the vehicle frame. In mobile homes go down to the metal vehicle chassis as well as to the metal structures holding your stove and refrigerator in place. In aircraft



Gordon checking ground foil attached to SGC auto-coupler, during Mexico XE2GOD portable operation

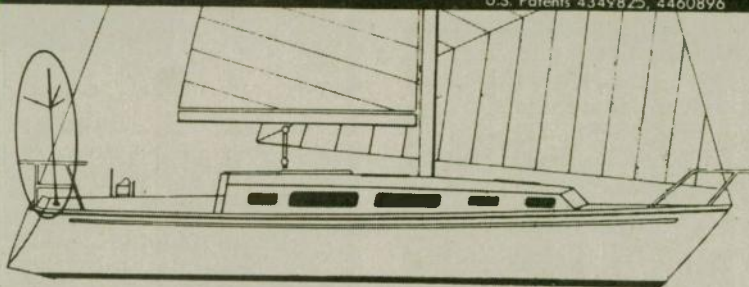
ground to the skin of the airplane and in boats ground to as many bonded underwater bronze through-hulls as you can find. Power boats may also ground to the lead in their keel — even though the lead is not actually contacting the sea water.

For temporary installations run your ground to any large metal surface that you can find. In condos pick up copper cold water pipes (just hope there are no PVC connections down the line!). In apartments or hotel rooms, ground to window frames and try for the screen holding the stucco on the side of the complex.

Low reactance ground connections will take the heat off the mike and give your signal an undistorted sound on transmit. If you're getting bit by the mike, change out those tiny ground wires to good ground foil connections.

## The Spider<sup>TM</sup> Maritimer<sup>TM</sup> Antenna

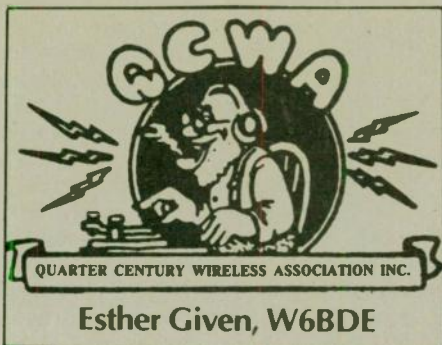
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The *QCWA Journal* recently published an interesting communication from Carole Perry, WB2MGP, a teacher at Intermediate School #72 on Staten Island, NY.

For nine years Perry's program has included "Introduction To Amateur Radio" for 350 sixth, seventh and eighth graders each term. During this time she has observed some definite patterns in human interaction between the school children and some QCWA members whom she has invited to her classroom to work with the youngsters. One of the rewards she has recognized and enjoyed is the opportunity to witness the rapport and "real communications" that take place between her young students and the hams with years of experience. She states it's obvious that there's more going on than just learning radio procedures.

In addition to her daily job of teaching school, Perry has done volunteer work with local AARP Chapters in her community and finds there is a vast untapped resource of mature people who can benefit from and be an asset to the Amateur Radio Service. She feels privileged to be involved in education and enlightenment about Amateur Radio at both ends of the age spectrum.

Perry's work has involved many QCWA members and, because of her expertise in the field of educating hopeful Amateurs, she has been invited to serve on the QCWA Education Committee. She is preparing a proposal suggesting ways in which QCWA can play an active leadership role by setting forth educational programs for both youngsters and oldsters.

QCWA ballots will be sent in mid-May to all current members in good standing. This is the year (odd numbered) when four officers and five of QCWA's 10 directors are elected by the membership to two year terms.

Presidential candidates for the 1989 election include Harry Dannals, W2HD, who served a term as director in 1984/85; and Jim Walsh, W7LVN, who has served as QCWA secretary for six years.

Vice presidential candidates are in-

cumbent Hugh Winter, W5HD, and John Weber, KA2IXW.

Two offices are unopposed offering candidate John Swafford, W4HU, for secretary and incumbent Wes Randles, W4COW, for treasurer.

Five directors will be elected from a field of nine candidates: George Apfel, W2GHV, Pete Backstrom, W3DM, Travis Baird, W9VGO (Inc.), Milt Chaffee, W1EFW, Neil Foster, KC4MJ, Art Kay, W5APX (Inc.), Jack Kelleher, W4ZC (Inc.), Stuart Meyer, W2GHK (Inc.), and Robert Ray, W5ZMI. Members of Canton, OH, Chapter 23 will serve as tellers for the 1989 election.

At a meeting of Pelican Chapter #128, Reggie Iverson, K4QZ, was honored with the presentation of QCWA's 75 year certificate.

Reggie's 1912 Amateur license was quickly followed with a commercial ticket, and he became a crack trans-Atlantic operator for the Navy at shore stations on the east coast.

In 1920, following WW I, the *New York Times* hired him to set up a radio receiving station. Reggie assembled and built equipment that would bring in signals from Europe and ran an antenna from the flagpole atop the Times Building down to a corner of the Flatiron Building, along its 3rd floor and back to the radio room above. For the first time in history, European press reports were printed in a US paper the day things happened.

In 1922 Reggie installed a completely new radio room at the *Times*, which included newfangled radiotelephone receivers. He was then sent to Nova Scotia, a joint venture assignment, to set up another trans-Atlantic receiving station to supply daily news to the *NY Times*, *Philadelphia Ledger*, *Chicago Tribune* and a major paper in Canada.

Shortly thereafter Irish rebels cut the cables at repeater stations on the Irish coast. Reggie, the only engineer/operator in Halifax, was forced to

copy press from 10 a.m. to 1 a.m. daily (15 hours) until other operators could be recruited. His know-how was of great help to Byrd and Amundsen in their polar race and thereafter press radio communications with world-wide expedition parties became top priority news.



Reggie Iverson, K4QZ (second from right), is presented his 75 year certificate as Wes Randles, W4CDW, treasurer; Jim Walsh, W7LVN, secretary, and Leland Smith, W5KL, president, look on.



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" 2-217	2W	IN =	170W OUT
" 2-117	10W	IN =	170W OUT
" 2-317	30W	IN =	170W OUT
" 2-417	45W	IN =	170W OUT

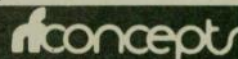
220 MHz Amps			
RFC 3-22	2W	IN =	20W OUT
" 3-211	2W	IN =	110W OUT
" 3-112	10W	IN =	120W OUT
" 3-312	30W	IN =	120W OUT

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# 10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ  
10-10 19636

You have no doubt heard the voice of this 10-10er many times on NBC News, and in fact you have most likely watched him on NBC TV a good many times also as he described the space launches from Cape Kennedy. He was the Executive Producer and anchor of the recent ARRL publicity video tape, *The New World of Amateur Radio*. He also was involved in the production of the ARRL documentaries *Moving Up to Amateur Radio*, *Amateur Radio's Newest Frontier* and *SAREX - Shuttle Amateur Radio Equipment*. Just in case you have not yet guessed, our 10-10er of the month is Roy Neal, K6DUE/4, 10-10 #50959.

Roy joined NBC News in 1952 and is recognized as one of the leading news experts on aerospace. He has participated in the coverage of every major American space flight. He worked all of the Mercury flights directly from the Cape, covered all the Gemini and Apollo flights from the Johnson Spacecraft Center in Houston and was instrumental in setting up NBC's coverage plans for those flights. In addition to reporting the manned flights, he covered other aspects of the space age, including Ranger, Lunar Orbiter and Surveyor flights to the moon, Mars and Venus, as well as the Voyager flights to Jupiter and Saturn.

As a 35 year news veteran, Roy reported a wide range of stories and events on the network's *Nightly News* and *Today* and hosted special programs. He was also in charge of NBC's Radio Operations for the West Coast and frequently reported for the radio networks.

Born in Bryn Mawr, PA, Roy graduated from the University of Pennsylvania as a Journalism, English and Drama major. His news career started as an announcer and sportscaster for radio station WIBG in Philadelphia in 1940.

He served in the US Army as an Infantryman and then as a Program Manager of the Armed Forces Radio Network in Europe. After discharge in 1946, he returned to Philadelphia, where he joined the news staff of station WPTZ in the early days of televi-

sion.

Roy's career with NBC began in 1952 when the NBC Television Network sent him to California to establish the West Coast news bureau. He pioneered many radio and television techniques — wearing the twin hats of producer and correspondent.

Amateur Radio operator Roy Neal began hamming in 1934 when he was first licensed as W3GIB in the Philadelphia suburb of Wayne. From homebrew equipment he migrated into early experimental work, including aeronautical mobile transceivers on 5M — a band long gone from Amateur frequency allocation.

Immediately following WW II, Roy went back on the air as D4ACA in Hoechst, Germany. He was Program Manager for the American Forces Radio Network in Europe and handled phone patches by the hundreds. After the war, back in Philadelphia, W3GIB was among the early experimenters with tri-band antennas and 2M relay stations — more commonly known today as repeaters.

When Roy moved to California in 1952, he picked up his present call, K6DUE. Active on most Amateur bands ever since, he can be found on 220 MHz, 2M and 10 through 75M, with occasional forays into satellite tracking to spice a diet of DX and mobile QSOs.

Roy is currently chairman of the ARRL-AMSAT Work Group for SAREX, Manned Space Flight. A high point of his Amateur career was in 1986, when he was Ham of the Year at the Dayton Hamvention.

Roy retired from NBC in 1986 and moved from Woodland Hills, CA, to High Point, NC. He uses a Kenwood TS940S transceiver, a Kenwood TL 922 amplifier and a KT-34XA beam as the basic equipment, along with his VHF and UHF equipment. He spends 15 to 20 hours a week on the radio, so you just might hear K6DUE, on 10M from his "retirement" home in High Point.

## A new roster

As this is being written, the 1989 Roster is at the printer and Dee Gilbert, KA6HQJ, is ready to send them out. The roster has 128 pages plus a cover and is printed on individual pages, three hole punched for use in a standard notebook. This should make

using the new roster very easy.

The page format is five columns with 420 numbers to the page. The type size is a little larger than the last roster, which should make it a little easier to read.

If you would like a copy, the price is \$7.50 for paid members with US, Canada and Mexico addresses. For non-paid members, the price is \$10. DX paid members price is \$9 US currency and non paid DX members price is \$15. The rosters will be shipped first class mail (or air mail to DX stations).

Send your roster order to Dee Gilbert, KA6HQJ, Roster Manager, 515 E. 2nd St., Rialto, CA 92376. You *must* include a copy of your membership card or a copy of your address label from the latest copy of the *10-10 International News* if you are requesting the paid member price of \$7.50.

Only a limited number of rosters are being printed and they will be sold on a first come, first serve basis. Get your order to Dee today.

## A new 10-10 number

The Board of Directors has authorized the issuance of a special 10-10 number to the ARRL station W1AW. The 10-10 number 57575 has been awarded to W1AW in celebration of the ARRL Diamond Jubilee 75th year. W1AW qualified for their 10-10 number by contacting ten 10-10 members and submitting their application.

This is only the second time in the history of 10-10 that a special number has been assigned. The previous number assignment was #25000, given to the Queen Mary in Long Beach, CA.

## Summer Phone QSO Party

The annual summer 10-10 Phone QSO Party has been set for the weekend of August 5 and 6 by Contest Manager, Harry Syring, WB1FTQ. The party is open to all Amateurs, but only paid-up 10-10 members are eligible for awards. 10-10 conducts "QSO Parties" to encourage 10M operation and interest in the net. Non-members may use numbers collected to qualify for membership and members may use numbers collected for awards.

For contest rules see page eight of the Spring Issue of *10-10 International News*. A dupe sheet is required if you intend to submit your log for judging. If you are not familiar with a dupe sheet, how to use one, how to fill it out, etc., a SASE (#10 business size with \$.25 postage will get you a sample and detailed instructions from me.

Here is a chance for all of you new 10-10 members to get your feet wet in a fun contest. If the band favors us with good propagation, you can make contacts at the rate of several a minute.

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The fun begins at 0000 Zulu on Saturday (this is 5 p.m. Friday evening PSDT on the west coast). If you are not familiar with Zulu or UTC time, get acquainted with this time schedule before the contest, as all logs must be kept in Zulu (or UTC) time.

### Finally

Received a nice note from Erland Belrup, SM7COS, in Kullboarp, Sweden. Kullboarp is between Stockholm and Copenhagen. Erland has been retired since 1975 and as a service to the sightless in Sweden and Norway, he reads *Worldradio* on to cassette tape. He says that he has used many of the articles from the 10-10 column during his years making these cassettes for the blind.

He requested additional information about 10-10 so he could pass it along to his "readers" or "listeners." We appreciate what Erland is doing for the sightless and hope the information on 10-10 will be of interest to those lucky enough to receive his cassettes.

If you are not a member of 10-10 but would like to learn more about it, please send me a "green stamp" (\$1) to cover printing and mailing costs and you will receive not only a package of information, but also the latest copy of the *10-10 International News*, the official 10-10 publication. It would also be appreciated if you would enclose an address label.

I also run a "lost and found" department for those of you older members who have forgotten or lost your 10-10 number. A #10 SASE with a list of all of your former calls will get you a check of the computer records to find your lost number.

73 for this month es hope to cu on 10 soon. □

Worry grows lushly in the soil of indecision. —*Arrowhead RAC, Duluth, MN*

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# DX World

(continued from page 37)

UM8MCW	—P.O. Box 1, Orlovka 722 210, Kirghiz, USSR
V85NR	—P.O. Box 572, Kuala Belait, BRUNEI
VK8XX	—Ed DeYoung, P.O. Box 912, Alice Springs, NT 5750, AUSTRALIA
XE1THD	—Baptist Bible Fellowship International, P.O. Box 191, Springfield, MO 65801
YN/KC6BWN	—Mike Prentiss, AP #8, Sebaco, NICARAGUA
ZD7VC	—P.O. Box 5, St. Helena Island, SOUTH ATLANTIC
ZD8JW	—Jim Williams, CSR/P.O. Box 4235, Ascension AAF, Patrick AFB, FL 32925-0235.
ZD8Z	—Jim Neiger, P.O. Box 4355, Orange, CA 92613
ZP6XDW	—P.O. Box 73, Caacupe, PARAGUAY
ZP6XGG	—P.O. Box 73, Caacupe, PARAGUAY
4Z5Y	—P.O. Box 2099, Tel Aviv, ISRAEL
5N8ZH	—P.O. Box 293, Kano, NIGERIA
5N0LRC	—P.O. Box 5, Lagos, NIGERIA
5N0SKO	—P.O. Box 1832, Lagos, NIGERIA
5Z4BP	—Ben Point, P.O. Box 3029, Nairobi, KENYA (See Note 5)
6W1AAD	—P.O. Box 971, Dakar, SENEGAL
7X5VRK	—P.O. Box 190, Bousada, ALGERIA

### Notes:

1. Use P.O. Box 2017, D-7550 Rastatt, West Germany. This address differs from that of the Callbook.
2. This route applies for operation by NS7Z, ONLY. All others via bureau or Callbook address.
3. US stations QSL via UA0KK; South American via JG1OUT.
4. Use latest Callbook address.
5. This station requests 3 IRCs, but no envelope.

Many thanks to the following contributors: W9LNQ, DF2UU, UI8IAJ, VK2BCH, N0JTE, N2OO, N4EVS, W5CJZ, WA6AUD, NS7Z, K1RH, K2YOF, Western Washington DX Club (KS7L), Salt City DX Association (KB2G), Redwood Empire DX Association (KB2G), Northern Arizona DX Association (W7YS), Japan Amateur Radio League, *DX News-Sheet* (G4DYO), *The Long Island DX Bulletin* (W2IYX), *Inside DX* (N2AU), *QRZ DX* (W5KNE) and *The DX Bulletin* (VP2ML). □



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### Worldwide 6M DX continues!

All times UTC. Apr. 1, Flux = 176: 0001, VK2s have a Caribbean opening again. 0200, very weak, 50.760 ZL TV audio in here. ZK1WL and FO5DR worked by W6s. T30DJ has VKs and KH6s. 1154, HC5K QSOs 5H1HK! 1745, LU7s have CTs. 1836, 8R1AH QSOs YS1ECB and TG9AWS. 1910, VP5D in here weak. 1950, ZLs into W5UWB. 2000, KG4SM has ZLs. 2130, LUs still in here. 2300, starting at this time and continuing into the new radio day til 0400Z, KH6HI got KP4, BR1AH, PZ1AP, TI2, HC8 and VK.

2nd, Flux = 184: 0034, 8R1AH QSOs VK4s, VK8RO, VK8AH, NI6E/KH6, HP3XUH, PZ1AP and TI2NA. 1330, Europeans have a Caribbean opening again. 1350, 8R1AH, QSOd YC0BO. 1900, ZLs reported in by W5UWB. 2140-2155, N7DB,

K7RWT and N7BLS all get VK9NS.

3rd, Flux = 191: 0014, VK9NS worked TG9. 1338, VE1YX QSOd ZS3AT. 1657, YB0CXN worked W4CKD/W8 on two way CW across Africa! Bob received the QSL recently via registered letter! Nice going, guys! 2014, HC5K in here and working W7s. 2123, LU8YY0 in here.

4th, Flux = 186: 0645-0700, KH6VP QSOd ZS6LN on SSB. 2000, ZLs into the Caribbean again. 2027, LUs in here again. 2042, W3XO/5 QSOd PJ9JT. 2200, LUs and HC5K still in here. HC5K works W5,6,7 and 0s. ZL TV audio in here. We also have F2 BS. T30DJ hears W6/B and ZLs. 2220, W7FN-WA reports first ZL TV audio into Washington this year. 2228, LU8YY0 in here, but the other LUs are gone.

5th, Flux = 193: 1800, LU1VK in here. 1900, ZL2KT hears VP5D. 1937, PJ9JT, LUs and F2 BS into W6s. 2123, T30DJ heard VP2. 2300, YS1ECB is working VKs. KH6IAA worked HK3AVR, an American, with no 6M antenna. He was using his 10M antenna!

6th, Flux = 198: 0626-0710, ZSs have a big KH6 opening. One KH6 got 23 ZSs! ZS6LN worked a different set of KH6s than the others did! One KH6 from Honolulu was only running 5W and got ZS3E! 1215-1223, ZS4AAB heard the PY2AAB/B. 1930, ZLs into Caribbean again! 2110, W5FF and W6s in here on F2 BS and LU8YYO is in. 2200, WA6BYA hears VKs on F2 BS, LUs and ZLs in direct.

7th, Flux = 200: 2147, ZLs are into K6QXY. 2300, VKs work T20JT.

8th, Flux = 204: 0215, K6QXY and WA6BYA get T20DJ. 1500, VKs have start of JA opening which stayed with them most of the day. 2035, LU1VK works W5FF. 2200-2220, KH0AC got

VK2s, VK4s, KG6DX and T20JT before he had to sign off. KX6DS reports he has worked JA over 100 VKs and several hundred JAs the past week or so. He also worked 5W, ZL, T20 and FK. He has made over 3,000 QSOs since last June. He will be winding up his stay there in a few more months.

9th, Flux = 191: 0100, LUs work into HC, HC5T gets LU8MBL, LU5MAN, LU1MNX, LU7FA and LU9EHF. Closed at 0240Z. 0240, JH1ECU got many KH6s. 0314, I work TG9SO, as do W3XO/5, ND2X. First time I have heard Roberto in many, many years. 1200, VKs had bit JA opening. 1316, T20JT worked 5H1HK! 1958, 8R1AH was working KP4. 2228, LU1VK back in here again. I don't have the date and time on this, but it was reported that during an opening, around 0600-0700Z, to ZSs with AH6IO/KH6 working about 20 ZS6s, he suddenly worked an AP2 Pakistani station!

10th, Flux = 179: 0255, W5OZI heard LU8YYO and worked OA8ABT. 0320, OA4QC was working XE1MD. 2100, VKs have ZL TV audio.

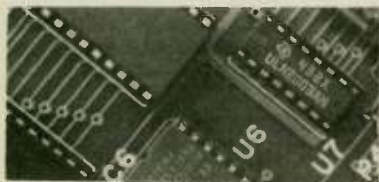
11th, Flux = 181: 0245, An unidentified CE was heard in here during the third straight night of So. American activity until 0335. W5OZI worked LU7DZ, LU8MBL, OA8ABT and OA4QC all on CW. 0830-0930, ZLs had a good JA opening, with ZL7TPY working 92 JAs! 1335, VE1YX heard the ZS3VHF/B. 2045, N6XQ QSOd ZL7TPY.

12th, Flux = 180: 0500-1400, during this period T20JT worked many JAs, P29, YB0, FK and FO. 1930-2030, G3ENY works LUs. 2009, N4EJW in here strong on Es! 2045-2125, ZL7TPY works W3XO/5, W5VY, WA5IYX, K5ZMS and many others in W4 and W6 land. 2125, ZLs in here very weakly. 2214, ZLs into W4, W5, W6 and W7s.

13th, Flux = 185: 0000-0340, HC5K, HC2FG and HC1BI get XF4L, TI2KD, NI6E/KH6, LU8MBL, FM3AG, PZ1AP and YC0UVO for an hour! QSL XF4L via OH2BN. 2150, ZL7TPY in here for 10 minutes. 2305, W8HXT/4-FLA has VKs. 2355, ZL7TZ is in here now.

14th, Flux = 196: 0000, W6 and W7s have VK4s. 1800, San Antonio has Es to NM and AZ. 2228, 3D2AG QSOd YS1ECB!

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15th, Flux = 198: 0000, Northeast US has aurora: 0730, ZS4s work JAs. 0915, ZS2s get JAs. 2010, ZL7 into NM. 2200, ZL7TPY is in here again. VK9YQS/0 is into the W6s. 2350, KG4SM is into VK4s very strong.

16th, Flux = 205: 1930-1956, KM5X, near Dallas, works LUs and CX8BE. 2130, VK2BA worked CO2KK! VK4DDG got ZK1CG! 2215, ZL7TPY is in here working W5OZI.

17th, Flux = 205: 2000, LUs are into NM. VK3OT is hearing XE1GE. ZL7TPY works VKs. ZK1XH works VKs. 2317, VKs are working T20AA, 3D2ER and H44. PYs, CEs and LUs are working XF4L.

18th, Flux = 202: 0031, VK2QF QSOd 8P6JW and 8P6LL! 0115, XF4L is still very strong into VK5s. VKs have a JA opening. 1930, LU8YYO/B is in here. 1940, ZL2KT worked W1CS/FS on St. Martin. 2010, XF4L worked HC5K S9+40! 2020, LU8YYO is in here. HC5K is into K5LZO. 2054, 9Y4VU has FO5DR. 2229, ZL7TPY into VK4s, says VK4DDG.

19th, Flux = 206: 0600-0640, ZS6BMS has been copying VK video from Tasmania and New South Wales the last few days! CU1 was reported heard by VK6RO working into Japan! 1930, ZL1XH worked VK9YQS/0. 1937, K1TOL works CX8BE. 2000 on, VK9YQS/0 got W5FF, W5DXN, KN5S and WB7OHF. 2100, ZK1XH, working ZLs. 2140, ZK1XH got VK3OT. XEs into VKs. V31PC into VKs. 2153, VK2QF had a one way with V321PC. 2200, ZL2KT and ZL2AGI both worked V31PC! So did an unknown VK4! 2214, VK6RO, AA7A, WA7YWM and WW7B all worked VK9YQS/0, MacQuarie Island! Sometime during all this 9Y4VU worked YC0! VK3OT wants everyone to know that when he goes to Lord Howe Island around Mar/April 1990, he hopes the call sign will be VK2LHI (Lord Howe Island). So if you hear VK2LHI, DON'T pass it by as just another VK2!

20th, Flux = 189: 0031-0052, VK3OT has XE1OT, XE1GE and other XEs. 1332, LU8MBL heard the ZB2VHF/B. 2226, VK2BA works V31PC. 2312, VK3OT worked XE1GE. ZL7TPY works VK5s. KB5ENR/KH3, Johnston Is., is said to be somewhat active on Six now. As of this date ZL7TPY has worked over 700 contacts. I think he has 19 countries,

including ZL1 and 2, VK2 through 8, W4, 5, 6 and 7s, YS1ECB, KP4s, KP2A, KG4SM, XE1s, HI8, FK1TS, H44GF, H44GR, JA1 through 0, KH6, T20, PJ9, XF4, ZF2, FS7 and VP5.

21st, Flux = 193: 0600, JAs into VK3OT. 0720, ZS6XJ was briefly heard by VK3OT. 21/1715-1730, G3JVL says CX4HS was into the UK. 2152, HP3XUH worked 3D2ER. 2316, ZK1XH and 3D2ER both worked ZL7TPY.

22nd, Flux = 185: 0000, KH6FOO heard YB0ARA, who was pegging his S meter! 1940, HI8WPC works ZLs, ZL7TPY and LUs and CXs. 2120, KG4SM has ZLs again. He has worked ZLs and VKs most everyday in the past few weeks. He has worked nearly every ZL there is on, including ZL7TPY. His list of countries include FO5, TG9SO, W6s and YS1ECB, for about 34 countries worked. As far as he knows, contrary to what has been published recently, he is the only KG4 active on 6M. AH6IO/KH6 (his QTH is listed under his old call, NH6FS) has provided Rick, KH6JEB, with an IC-502 and Cushcraft A50-6 for Kure Island. Rick should be there in June. There is a Novice operator on the island already who is about to upgrade to Technician. Once he does, he will be able to keep the rig active.

23rd, Flux = 193: 0215, we have had very good tropo conditions on VHF/UHF the past couple of days. I worked several stations in Louisiana, one running 2W and a 2el quad. 2045, FO0AQ works ZLs.

24th, Flux = 187: 0100, N5TP and KM5X (Dallas) heard ZL TV audio. ZL1AXB heard N5TP's keyer. All this took place at 51 MHz. 2057, ZL4LV in here. 2130, FK8EB/Mobile hears XE2. 2145, ZL1AKW is in here and to XE2UZL, W6s and W7s.

25th, Flux = 177: 0700, KH6IAA has been hearing the ZS6LN/B for the past several days around this time. Yesterday he had Es to W6s. 2100, WA6BYA reports W5FF and a W7 in on F2 BS. He heard KL2KT, FO and FK today. 2200, KA1MFR, RI, reports aurora north and east of him.

26th, Flux = 173: With the K Index at 6 for part of this day, little has been heard on 10M because of the geomagnetic activity. There probably has been considerable auroral activity occurring around the world, but no way to report it on 10M. 2342, VK2QF just

worked WA5LBT, LA! WA6BYA works VK2s. VK5NY had LA W5 stations in strong. 2356, K6FV/B into ZL1s. FK8EB is hearing WA6BYA.

27th, Flux = 172: 0720, VK3OT reports JAs and KH6s being worked. 2105, KG4SM worked TI2KD, TI2HL and TI2NA. 2115, KG4SM got YS1ECB. 2205, HP3XUH worked CO2KK! 2230, ZL TV audio in here, but no ZLs. 2259, KG4SM gets VK2s and six VK4s.

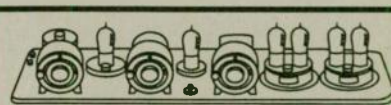
28th, Flux = 179: 0025, HP3XUH got K5CM. 0130-0200, CE3BFZ is in here on TE very weakly working other Spanish speaking stations. 1930, HH7PV heard ZL2KT. 2025, ZL0AAH hears LA W5s. 2045, V31PC was heard by ZL2KT, who also heard the VP5D/B. 2050, ZL TV audio is in here. 2100, ZLs worked by WA5IYX here, who hears all ZL call districts. This is at 51 MHz, where one was S9+30! ZL2KT reports ZLs were copying the US TV Channel 2 audio, which is at 59.750 MHz! This is a switch, as it is us usually telling them we are listening to THEIR TV audio! 2119, KH6IAA worked HP3XUH. 2125, HP3XUH hears H44/B. 2130, FO5DR was heard in here. 2140, LU3EX, LU8YYO and others in here. 2200, VK2BN hears PJ2/B. VK4DDC hears PJ9EE. 2215, KG4SM got numerous ZLs. 2240, W4CKD/8 and W3XO/5 got FO0AC. 2319, KG4SM hears VKs now.

29th, Flux = 184: 28/1200-1730, Gs have a long opening into ZS5s and ZS6s. 0045-0100, VK3OT is in here and works W4CKD/W8, Ohio! Steve also works some W0s, I believe. 0142, 3D2ER is reported into KS! 0215, W0NRI works OA8ABT. 0259, OA8ABT is reported to be working KKG6DX! 0311, CE3BFZ is now in here, working W0NRI, CO. 1800, FO0AQ is into KG4SM already. 2200, LUs are in here, along with CX8BE.

30th, Flux = 175: 2040, LU8YYO is in here.

### Who's on six!

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special 12 month permit now. Z23JO is in need of a 6M brick. If you can help contact ZS6WB, who needs a copy of Oct. 1963 CQ Magazine. If you can help him, please contact him.

CO2QR is on crystal control 50.009 slow CW daily from around 1800-1900Z, with 15W to a dipole. CO2-OM is to be on CW crystal control soon on 50.124.

### Future DXpeditions

"Bing" Crosby, VK2BCH, starts a three month Pacific DXpedition, the first stop being ZK1XV, May 14 to June 7. Watch for him later from 5W, KH8 and maybe ZK3, Tokulau, or 3D2, Rotuma. QSL direct ONLY (no bureau cards) to home call AFTER AUGUST.

### The big bang!

The spectacular sunspot of March, which caused so much activity, crawled around the east limb of the Sun on March 5. It covered some 3,000 millionths of the solar disk and was the largest spot ever observed at so high a northern latitude (34°). It coughed up one of the strongest solar flares ever recorded.

On March 10 it produced a rare type of flare — one that was easily visible in white light. On March 12 it started blood red auroras across the world, visible as far south as Honduras and

Dominica. On March 13 it caused a surge on the Quebec, Canada, power grid, knocking out electricity across the entire province. Thanks Sky & Telescope, May 1989, for information.

### ZL7TPY Chatham Island 6M results

Kerry Mundell, ZL7TPY (QSL to ZL2TPY, 6 Alberta Rd., New Plymouth, New Zealand), says he has to get his QSLs printed up, so it will be 6 to 8 weeks before he gets them out. He asks that you please be patient. (K5ZMS note: It would not hurt to send along a green stamp to help with the QSL expenses).

Kerry left the 5-element yagi and rotator on Chatham for use next year. He may activate a new grid square next time (AE15).

While at Chatham Kerry worked, ZL1 and 2; VK2,3,4,5,7 and 8; W4,5,6 and 7; YS1ECB; KP4A; KB8RO/KP4; KP4BZ; KP4EOR; KP4ELT; KP2A; KG4SM; XE1GE; XE1MD; H18WPC; FK1TS; H44HP; JA0,1,2,3,4,5,6,7,8 and 9; KH6HI; NI6E/KH6; T20JT; PJ9JT; XF4L; ZF1RC; W1FC/FC7; VP5D; ZL7TZ; V31PC; ZK1WL and 3D2ER, for a total of 23 countries in 41 call districts and 813 QSOs with 600 different stations. Heard were ZB2VHF/B, OX3VHF/B, P29PL and XE1OT.

He has now worked 37 countries from ZL and heard T20, T99, ZB2, HL9, ZS3 and OX3. He is the first and only ZL since 1946 to hear all six continents. No one has worked Africa or Europe yet.

I now have an answering machine on my 512-674-5781 number. You can leave me DX reports, questions and info at any time, except between 0400-1100 UTC, when I will be sleeping. See you on The Magic Band all of a sudden! □

## Digital Bus

(continued from page 41)

AND-PECK, GRUNT-AND-GROAN TYPING...AGREE WITH YOU THAT HF PACKET IS NOTHING BUT RUFF, ROUGH, AND BBS-ED...THE ONLY TIME I OPERATE MY HAM OUTFIT IS BETWEEN NAPS...TODAY THE BAND SOUNDS LIKE THE SIGNALS ARE COMING FROM EITHER MARS, VENUS, OR NORTH DAKOTA...I HAVE BEEN WONDERING ABOUT THIS SATANISM STUFF THAT IS GOING AROUND AND WOULD LIKE TO MEET SOME OF THOSE DEVIL-WORSHIPER GIRLS I BEEN HEARING ABOUT...THOSE QSLs COST TWO BUCKS FROM JOLLY OLD ENGLAND...SORRY I DIDN'T ANSWER YOU RIGHT AWAY CAUSE I HAD TO VISIT THE SAND-BOX...HOPE YOU HAVE A NICE DXABLE DAY...I WORKED A NEW COUNTRY ON SIDEBAND, BUT I'M NOT REALLY SURE OF HIS CALLSIGN...I SEE JERRY FALWELL IS SELLING CORRESPONDENCE COURSES, I'D RATHER GET ONE FROM JIMMY SWAGGART..."

Thanks to W0HAH, N0HUS, KF0CG, KZ6U, W7VFR and a host of others for their help with this column. Write me: Bill Snyder, W0LHS, 1514 So. 12th St., Fargo, ND 58103. My packet address is W0LHS @ W0LHS.ND.USA.NA. 73 and DIT. □

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# Reallocation reviewed — House hearing: ARRL vs. FCC regarding 220 —

On May 12 ARRL representatives testified in Washington in a three hour hearing of the Government Information, Justice and Agriculture Subcommittee of the House Committee on Government Operations. Appearing in a room packed with Amateurs and press, the ARRL panel and a witness speaking on behalf of the Secretary of Defense objected to the procedures followed by the FCC in deciding to terminate access by radio Amateurs to the frequencies between 220 and 222 MHz (FCC General Docket 87-14).

In his opening statement Subcommittee Chairman Bob Wise of West Virginia, whose father was an Amateur, noted that Amateur Radio operators provide a much needed service. He observed, "Much is made nowadays of the lack of 'volunteerism' in our country, and a call has been made for our citizens to renew their commitment to making our country a place where 'a thousand points of light' focus each other's attention on how we can help one another in times of emergency and need.

"If we consistently frustrate those who are willing to give of themselves, their time and their resources in the form of vital public services — especially when this is done without compensation — how can we hope to increase this volunteerism?"

ARRL West Virginia Section Manager Karl Thompson, K8KT, led the testimony by stressing the volunteer nature of Amateur Radio emergency communications and particularly its significance in his state. He underlined the importance of the threatened band segment to repeater linking and packet radio development.

ARRL Executive Vice President, David Sumner, K1ZZ, testified that the process used by the FCC in deciding to reallocate the bottom 2 MHz of the 220 MHz Amateur Radio band to land mobile use had failed to take into account the comments of individual Amateurs and ignored public record evidence. These comments had documented the band segment's importance to public service and experimental communication, and the great cost to Amateurs and to the public if these operations had to be moved elsewhere or abandoned for lack of frequency space. He cited alternatives to the reallocation which had not been adequately considered in the proceeding.

Richard Rudman, W6TIA, Chairman of the Los Angeles County Emergency Public Information Advisory Group, described the crowded conditions in Southern California in the en-

tire 220 MHz band and the tremendous impact the FCC decision had on packet radio development. He stressed the importance of Amateur Radio in emergency planning for such major catastrophes as earthquakes, which are not limited to the West Coast.

FCC Chief Engineer Dr. Thomas P. Stanley; United Parcel Service Strategic Planning Manager Gene Hughes and Dr. Dennis Bodson of the National Communications System, appearing on behalf of the Secretary of Defense, also gave testimony. In response to questions from the Subcommittee, Dr. Stanley conceded, among other things, that the reduction in the size of the band was a significant loss of Amateur capability that was not offset by the granting of primary status in the remainder of the band.

Following the hearing David commented: "In a number of ways, the FCC responses to the Subcommittee's questions contrast sharply with what was said last August when the Report and Order was adopted. Until now, the Commission did not seem to understand the great impact its decision would have on Amateur Radio. Now that this is clearly established in the public record, perhaps it's not too late for the Commission to have a change of heart. We deeply appreciate the efforts of the Subcommittee, and particularly Chairman Bob Wise, which led to this hearing." Also to be commended, he said, are the leading Amateurs in West Virginia, who went to the Congressman.

The ARRL, the Secretary of Defense and some 550 Amateur Radio clubs and individual licensees have filed petitions for reconsideration with the FCC.

Action on these petitions is pending.

The Subcommittee will be reviewing the record of the hearing to determine if further action is appropriate.

— ARRL News Release, May 12 □

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What's free and can be used to power your shack without polluting the environment, causing acid rain, depleting natural fossil fuels or destroying nature's beauty? Sunlight energy, that's what.

When I first became interested in solar power, about the ONLY thing I knew for sure was that "going solar" was expensive. Solar panels (called modules nowadays) were made of discrete round (sometimes square) silicon cells, soldered together to form banks of cells at various wattage outputs. The panels were covered with glass to protect the cells from the hazards of the environment. They weighed a ton and were not exactly portable. Invariably, some nerd would come along and toss a rock or shoot a B-B through the glass surface and ruin the panel. The cost of these early solar

panels was prohibitive for K7YHA.

Several years ago, things changed for the better with the advent of "thin film technology." The art and science of growing the silicon solar cells directly onto sheets of stainless steel not only lowered their cost, but improved their reliability tremendously. No longer do solar modules have to be covered with glass to resist the elements. These modules are so rugged that you can actually hole them with gunfire and they will continue to produce electricity from the sun's rays!

These new thin-film modules are primarily designed for remote installations, where they can be placed and forgotten for 15 to 20 years. Made by Sovonics, these modules are very lightweight, easily transportable and rugged to the extreme. In short they are perfect for emergency power applications, charging repeater battery banks, QRP operation, Field Day excursions, disaster/emergency exercises and a host of other applications.

Jim Stevens, KK7C, of Antennas West, provided me with his QRV-Solar Power Supply, consisting of a Sovonics P-201 23W solar module (1.6 amp @ 14-volts output), M-8 charge controller, mounting hardware and applications manual. The manual explains EVERYTHING I ever wanted

to know about how to set up a solar power station. It takes the newcomer through all the steps necessary, including a thorough explanation of how the module and charge controller work, installation, orientation and hook-up of the module and charge controller and an in-depth look at the necessary background information on how to properly design and size a solar power station. The manual is a real work of art.

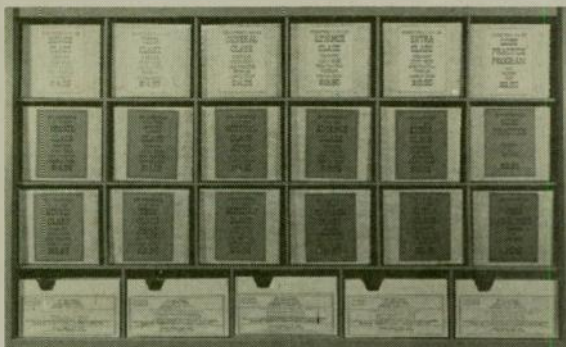
The very first thing I noticed about the P-201 solar modular was the weight. It was ridiculously light. The stainless steel panel was surrounded by a tough aluminum frame that could be mounted directly to a roof, tower or other support. The module was completely wired and ready to charge a battery and does not need to be mounted on a roof or side of a tower to work. I have leaned the module (facing the sun) against a chair in the middle of the yard and successfully charged a deep cycle battery.

The efficiency of the P-201 module is considerably higher than the older discrete cell panels. This means that on hazy or overcast days the power output from the Sovonics module will be higher. This translates to more current to charge a sagging battery bank.

Let's take a look at how to place a solar power generation system on-line. There are three major components of a solar power station: The solar module, a form of charge regulation (to prevent overcharging the battery gassing) and some form of storage.

First, and most obvious, you must procure a solar module. The size of the module will determine the charging rate of the battery bank. It is very unwise to try and run electronic equipment directly from the output of the solar module. Fluctuations in the sunlight due to haze, clouds and rain/snow can cause the module output to fluctuate drastically. Therefore, some form of storing the energy produced by the solar module must be employed.

The most common method is to use a deep cycle or RV battery connected to the module. The battery acts as a constant load and will give the electronic equipment a constant voltage, unaffected by fluctuations in sunlight energy. If you have several RV batteries connected in parallel to form a 12-volt battery bank, then you must



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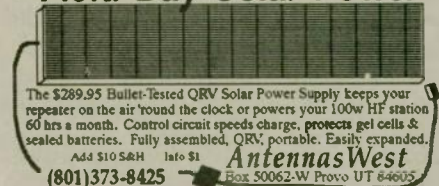
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add several solar modules (in parallel) to provide the necessary current to adequately charge the battery bank. RV batteries (also called deep cycle batteries) are the recommended choice by experienced solar power enthusiasts. The rationale goes something like this: If you want to start something, use a standard lead-acid car battery. If you want to power something, use a deep-cycle battery.

The reason lies in the method of construction. Standard car batteries have thin lead plates and can only be discharged a small amount before recharging. If the discharge cycle is taken below a certain point, the thin plates begin to warp and the battery life is drastically shortened. A deep cycle battery, on the other hand, is constructed using thicker lead plates and can withstand large discharge cycles without any ill effects.

Between the solar module and the battery there needs to be some form of charge control to prevent overcharging on sunny days. As long as the battery bank is being exercised by regularly going on air, overcharging is not really a problem. However, during the days when you don't get on the air and the solar module continues to charge the battery bank, overcharging becomes a concern. As the battery is overcharged, gassing of the electrolyte occurs, drastically shortening battery life.

A charge controller overcomes both the overcharging and gassing problems. As the battery bank becomes charged, the charge controller decreases the charging current down to a trickle charge rate and holds that rate until the battery bank is exercised enough to warrant full recharging current, at which time the controller will allow increased charging current to flow from the solar module into the battery bank.

Proper sizing of the solar module/battery bank system is critical to ensure that you have the necessary power available for extended emergency operating.

Solar modules are rated in watts. The amount of electrical energy that can be generated in a given amount of time is measured in watt-hours or kilowatt-hours. The P-201 is rated at 23W (1.6 amps @ 14VDC). This is less than the peak power output under perfectly aligned noonday summer sun.

Actually, this 23W rating is very close to the power you would expect if you laid the module flat on the ground under a full sun. Tilting the module between 40 and 60 degrees toward the Equator will even out the difference in power obtained between the summer and winter months, resulting in greater overall module efficiency.

In order to properly size your solar generating station, you must first ob-

tain the power requirements of your station equipment and assess your operating patterns. These two things determine how much power your station will consume per day or per week. Once these two variables are accurately assessed, you can select the proper solar system combination that will provide the necessary power for your station.

The Antennas West Solar Power Manual fully explains how to go about this task, which is much too detailed to fully explain in this column. Once you determine the total amp-hours you'll expend operating on various modes, you can determine the size and number of solar modules and proper battery capacity to support your station for extended periods of operation.

In my particular situation I am quite happy using a single P-201 panel with a single RV battery to power my Argonaut 509, Kenwood TR-2200A (2M transceiver), MFJ-1278B and KAM multi-mode data controllers, CoCo II computer (terminal for packet, RTTY, AMTOR and CW) and PRO-2021 scanner. In addition I can charge my micro HT and hand-held scanner batteries and power my Sony 2010 receiver during emergencies. Using this system, I have yet to run out of power, even during extended operating during QRP contest weekends, SETs, etc.

Solar power, especially for QRP operating, is the only way to go. It is now affordable, thanks to thin-film manufacturing technology. It's reliable, and over a period of the 20 year life cycle of the solar module, the cost is almost free. Not only will you enjoy the benefits of free energy, those who employ solar energy systems are helping to slow down the destructive impact on the environment caused by the depletion of natural resources.

My thanks to Jim Stevens, KK7C, of Antennas West, for providing the QRV-Solar Power Supply. If you would like more information, contact Jim at: P.O. Box 50062, Provo UT, 84605; 801/373-8425.

Next month we'll begin a multi-part series on digital communications and QRP. What it is, what's available and how well some of the whiz-bang data controllers REALLY work. Until then, 73s. □

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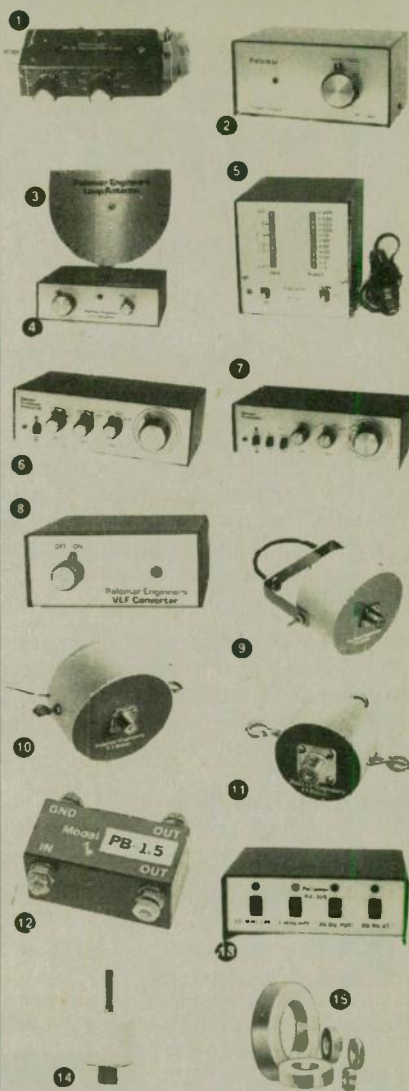
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# TRAFFIC

Gerri Sweeney, N4GHI

### The map

Alas, alack. . . the new (1989) *ARRL Net Directory* just arrived without a map on the cover. The map was extremely useful as a quick reference for routing traffic. Because of the map, the *Directory* was kept close at hand. What is on the cover now doesn't help anyone do anything. The designer seems to have forgotten the ageless adage, "If it ain't broke, don't fix it."

### Are phone patch nets traffic nets?

They all call themselves traffic nets, but generally no third party traffic is passed. They are useful in finding outlets for traffic.

### International traffic nets

IATN 14303 1100-1130Z

### International hailing/phone patch nets

Intercon	21390	20-2200z
Halo	21390	17-1800z
IMRA	14280	1730-1900z

IATN (International Assistance and Traffic Net) is sponsored by the ARRL and is the international outlet for the National Traffic System. All international traffic originated in state nets is filtered to the Eastern Area Net (8:30 p.m. EST). A liaison station picks up the international traffic for the following morning IATN. All countries are invited to check in with or without traffic. Only third party written traffic is passed on the net.

Intercon meets for two hours each day and primarily links US and South American stations for the purpose of a phone patch. When the net is not functioning, stations are requested to keep the frequency free as a "hailing frequency."

The Halo net is a missionary net. Members will take traffic for their area.

IMRA (International Missionary Radio Association) wishes to be of service in times of emergencies to pass health and welfare traffic. For information on their newsletter, write: Rev. Michael Mullen, St. John's University, Jamaica, NY 11439. IMRA's president, Rev. Mullen, WA2KUX, received

the ARRL International Humanitarian Award. Membership of 40 countries is claimed.

Various nets are called on 14313 and change names throughout the day. Their reason seems to be United States to United States phone patches, though they claim one of their primary purposes is to be of aid to maritime stations.

### Problems

Nets which try to capture a frequency and hold it throughout the day (even when not actively meeting) seem to draw interference. While their end goal of having an international hailing frequency is good and mostly useful; legally no one owns a frequency. Even though you may have had a schedule or run a net on a certain frequency for 10 years, if you happen there one day and someone else is using the frequency, you must move.

Other options are to ask the people talking if they will move. Generally they will. Some net members begin to feel it's THEIR frequency and, as soon as this happens, a range war is not far behind.

We generally move off a frequency when we are asked gently and when we feel we do have a choice. We tend to get stubborn when we are told we must move. A range war begins with bad words followed by intentional QRM. No one is a winner.

Perhaps the FCC should be encouraged to set aside one frequency (on long range bands) for international hailing, but until this happens, we still have to share. NO ONE OWNS A FREQUENCY!

Phone patches are abused. When do you cross the line of transmitting business? If you are a non-profit organization, can you discuss non-profit business?

The ARRL feels members cannot even send a monthly net report to Headquarters via a traffic net, let alone

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a phone patch. Other non-profit organizations take a looser view. Phone patches between friends rarely qualify as passing traffic.

### Emergencies

While all the above wish to help in times of emergencies, only IATN and IRMA will remain on frequency and actively pass traffic. The others are hailing frequencies and are of help by linking stations in the disaster area with the outside world.

There are other nets which start when an emergency does. When a hurricane threatens, a Hurricane Net starts operating on 14225. IARU will start a net on 14275. When an emergency does occur, everyone wants to help. All the above nets are available for communications. They only await contact from someone in the affected area to be of use.

Few foreign countries have their own traffic nets. Thus, to pass a message in many countries, one not only has to locate a station in the country, but generally the city of destination as well. A priority for the ARRL (and groups working in foreign countries) should be to encourage sister societies to establish some traffic nets in their countries which would link with the international scene.

### Procedures

Separation of lines in an address is especially important for international traffic. When using CW, AA is sent at the end of each line as a marker. Some ops forget what mode they are using and instead of using an AA between zip and phone, dutifully tap out "phone or tel."

Some must try and save paper by writing everything on one line. They often forget to insert AA when sending, which leaves the receiving guy/gal copying on the desk as they run off the paper.

These AAs are really important when sending foreign traffic. The number of lines varies. When sending via voice you might say "next line." Names and spellings aren't familiar and as they progress through the system of nets, they often become so garbled that they perish before they leave the United States.

Spacing is particularly important between words. Messages can even be sent in Spanish if attention is given to proper spacing of letters and words. Voice and CW modes use different procedures and good ops understand why and comply.

### Packet

This medium can be a valuable tool

when used correctly. Each STM (Section Traffic Manager) should have a data person who keeps up on the BBS' in the area and lets everyone know what's happening on a periodic basis. This may be in written form, at hamfests or during on-the-air training sessions. The data person would work with PBBS systops to: answer questions about traffic procedures and share information on personnel (who is using the board and whether traffic is being removed on a timely basis) and what technical systems are currently being used. The data person would also work on the larger picture of establishing connections in other regions (other "data persons").

S/he would know about the HF BBS' on packet, RTTY and AMTOR which are passing traffic. The Eastern Area of the NTS has established a packet manager for each region (RPM). Data managers should work with them to keep current on what's happening.

The local data person is now a valuable resource because s/he knows who's doing what where.

Next month — how to utilize this resource in running a special event traffic station.

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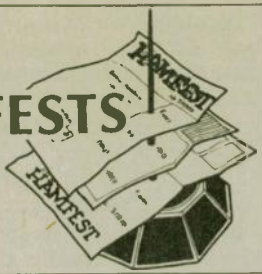
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# HAMFESTS



## Colorado

The SKI COUNTRY ARC will sponsor a hamfest from 9 a.m. to 2 p.m. Saturday, July 29, at the Colorado Mountain College Community Education Center in Glenwood Springs. Admission is free.

Featured will be swap tables, a snack bar and VE exams.

For more information contact SCARC, P.O. Box 302, Carbondale, CO 81623; 303/945-9342. □

## Illinois

The DUPAGE ARC is hosting its seventh annual Hamfest Computer Show on Sunday, July 10 at the American Legion Post grounds in Downers Grove. Doors will open at 8 a.m. and seller setup begins at 6 a.m.

Admission is \$2 in advance and \$3 at the gate.

There is an indoor hall for dealers, an outdoor paved area for flea market and tailgate sellers and plenty of free parking and handicapped facilities. Indoor tables are priced per 8 ft. at \$12. There is also testing for new and upgrade licensing. Food and refreshments are catered by one of the area's restaurants.

Talk-in on 145.25-600.

For tickets or table reservations send a SASE to: Hamfest Chairman, DuPage ARC, P.O. Box 71, Clarendon Hills, IL 60514. □

The FOX RIVER RADIO LEAGUE will sponsor a hamfest on Sunday, July 16, at the Pheasant Run Lodge in St. Charles.

Drive in unloading will begin on Saturday after 7 p.m. Sunday set-up will be from 6 to 8 a.m. and doors will open at 8 a.m. The outside flea market will open Sunday at 6 a.m.

There is a 2,000 car capacity for the outside flea market and free parking and tailgate selling. There is 26,000 square ft. available for indoor exhibits.

Featured will be VE exams at 11 a.m. (bring original and photocopy of license), hourly drawings with grand prize drawing at 1 p.m. (winner need not be present to win) and commercial Amateur dealers and computer vendors flea market tables.

Tickets are \$4 in advance, \$5 at the gate. Advance tickets get an extra prize drawing stub. Inside flea market tables are \$6.

All orders must include a SASE. Reservations will not be accepted after July 1. For commercial exhibitor reservations contact Louis Petkus, 2So872 Wagner Rd., Batavia, IL 60510; 312/879-6350 or 312/584-4925. For tickets or information contact Phil Fors, N9FXQ, 104 May St., West Chicago, IL 60185; 312/231-0707. □

The AMATEUR CROSS LINK REPEATER will be having its annual hamfest Sunday, July 23, at "THE HALL" on Harlem Ave. in Berwyn.

Setup is from 6 a.m. to 8 a.m. Doors are open from 8 a.m. to 1 p.m.

Tickets are \$3 in advance, \$4 at door. There will be an outdoor flea market area (bring your own tables) and dealers tables inside.

Talk-in on 147.225, 224.480 and 443.700 MHz.

For more information call 312/712-5100 or write ACLR, P.O. Box 348257, Chicago, IL 60634 with SASE. □

The HAMFESTERS RADIO CLUB announces its 55th annual hamfest, celebrating 56 years of service to the Chicagoland area. This year's event will be at the Will County Fairgrounds in Peotone on July 30.

Commercial exhibitors will be inside an air conditioned pavilion building with convenient unloading and overnight parking. Saturday, July 29, is setup day. Arrival can be planned for 5 p.m. through 1 p.m. The hamfest hours are from 6 a.m. to 3 p.m.

Tickets are \$3 in advance and \$4 at the gate. Anyone over 15-years-old must have a ticket.

Top quality HF and VHF rigs will be award-

ed (transmitters are awarded to licensed Amateurs only). VE testing will be given on a walk-in basis only from 8 a.m. to 11 a.m.

Talk-in on the CFMC Repeater, WA9ORC, 146.16-146.76.

For information or reservations contact Don Burch, N9DWI, at 8438 S. Kolin Ave., Chicago, IL 60652; or phone 312/582-9776. If ordering advance tickets send a SASE and check. □

## Indiana

The 19th annual ARRL Division Convention and Hamfest will be held on Saturday and Sunday, July 8 and 9, at the Marion County Fairgrounds in Indianapolis.

Features include new equipment dealers, computer dealers, software dealers, computer supplies and six large buildings with wide uncrowded aisles so you can shop and browse at ease.

Technical forums will be held all day Saturday and ARRL forums all day Sunday.

Awards will be presented and wives and children will be included. This year ladies' activities have been added. Free hookup and camping on the grounds is provided by the hamfest association. Food is available on the grounds and many motels and restaurants are close by.

Gates will open at 6 a.m. both days.

The gate fee is \$6 and children under 12 enter free.

For information call 317/356-4451. □

## Maine

The MAINE HAMFEST ASSOCIATION is sponsoring the 2nd annual Union Hamfest to be held at the Union Fairgrounds in Union beginning at 8 a.m. on Saturday, July 15.

The Hamfest will feature demonstrations of packet radio, technical programs, a large grass and paved sales and tailgating area, meetings for Amateur Radio nets and clubs and VE exams. Door prizes, including a Tiny 2 packet controller, will be awarded throughout the day.

A light breakfast will be served at 8 a.m. and a Downeast Chicken Barbecue or sandwiches will be available for lunch.

Camp sites with electricity and water are available for 60 RVs or tents. Limited drive throughs are available. Camping is \$10 per night. Camping facilities open on Friday, July 14, and will remain open until noon Sunday. There will be entertainment and a BYOE supper on Saturday evening at the campgrounds.

FCC license exams will be given at 2 p.m. Walk-ins will be accepted. Those who plan to upgrade must bring a photocopy and original of their current license. Applicants for all exams must bring two forms of positive ID.

Tailgaters and vendors wishing to set up may enter the grounds at 6 a.m. General admission is \$2 per person. Tailgating and non-reserved sales space is an additional \$1.

Talk in on 146.22/82 and 146.28/88.

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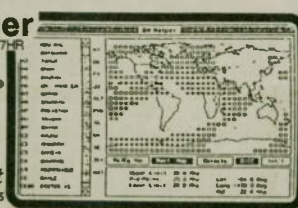
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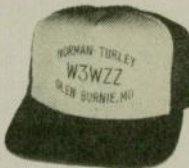
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## Maryland

The Hamfest and Computer Fest sponsored by the BALTIMORE RADIO AMATEUR TELEVISION SOCIETY will be held on Sunday, July 30, at the Maryland State Fairgrounds at Timonium.

Eight ft. tables, each with access to AC power in the Main Exhibit Hall, are \$35 each or three for \$100. Fleamarket tables will be in the 4-H Building (no AC power) and are \$20 each. Commensurate discounts are available for quantity purchases.

Dealer set up begins Saturday at 2 p.m. Sunday setup begins at 6 a.m. There is no set opening time for buyers on Sunday.

Tailgating space is on sale on the day of the hamfest at only \$5 per vehicle space. Admission is \$5 per adult. Children under 12 enter free.

Sellers are asked to use the Timonium Rd. entrance, buyers are asked to use York Rd.

Free VE Exams will be given in the air conditioned Administration Building at 9 a.m.

For table reservations and information, write to BRATS, P.O. Box 5915, Baltimore, MD 21208. □

## New York

The 9th annual Batavia Hamfest, sponsored by the GENESEE RADIO AMATEURS, will be held at the Alexander Firemen's Grounds in Alexander from 6 a.m. to 4 p.m. on July 9.

Indoor commercial exhibits will open at 9 a.m. Activities include a full breakfast, OM/YL programs, a spacious flea market, ARRL VEC exams, free camping (electric \$2) and a chicken BBQ.

Tickets are \$5 at the gate.

Talk-in on 144.71/145.31 and 146.52.

For more information contact GRAM, P.O. Box 572, Batavia, NY 14021. For tickets contact Knute Carlson, N2DRX, 26 Burke Dr., Batavia, NY 14020 (SASE). □

The ARRL Long Island Hamfair, sponsored by LIMARC, will be held at the New York Institute of Technology in Old Westbury on Sunday, July 9. Doors will open at 7:30 a.m. for sellers, 9 a.m. for buyers.

Outdoor tailgating will be featured. No reservations are needed. Sellers car space is \$5, general admission is \$3. Non-Amateur

women and children enter free. Food and refreshments are available, with many awards to attendees.

Talk-in on 146.25/85.

For further information call Mark Nadel, NK2T, 516/796-2366, or Hank Wener at 201/694-1811. □

## North Carolina

The CARY ARC is sponsoring its 17th annual Mid-Summer Swapfest Saturday, July 15, from 9 a.m. to 3 p.m. The site is the VFW Building on Reedy Creek Rd. in Cary. The facility is air conditioned.

The itinerary will go something like this: 9 a.m. - 11:30 a.m. — buying, selling, bartering, haggling, visiting; 11:30 a.m. - 1 p.m. — lunch; 1 p.m. - 2 p.m. — open auction (they sell anything); 2:15 p.m. - 2:30 p.m. — DRAWINGS; 2:30 p.m. - 3 p.m. — clean-up and goodbyes.

There is no admission fee. Registration for drawings is \$3.50 or three for \$10. Inside tables are \$10 and outside tailgating is free.

Talk-in on 146.88 MHz.

For information contact Cary ARC, P.O. Box 53, Cary, NC 27512. □

## Oklahoma

The CENTRAL OKLAHOMA RADIO AMATEURS will again this year sponsor Ham Holiday. The dates will be July 28, 29 and 30 at Lincoln Plaza Hotel Conference Center in Oklahoma City.

Featured will be technical and non-technical programs, bingo, VE Testing, QCWA Breakfast, flea market, banquet, child care, Sunday morning worship service, West Gulf Division/ARRL Forum, lodging, Wouff Hong, new dealers, major prizes and hourly drawings and live demonstrations (packet, HF, computers, etc.).

Talk-in will be on 147.030 up 600.

Tickets are \$8 in advance (P.O. Box 850625, Yukon, OK 73085) and \$9 at the door. □

## Pennsylvania

The NORTH HILLS ARC announces its 4th annual hamfest on July 9 from 8 a.m. to 4 p.m. at the Northland Public Library in Pittsburgh.

The hamfest will feature free admission, free dealer and tailgating space, free parking, food and drink, handicap facilities, VEC testing at 8 a.m., ARRL table, door prize drawings hourly and a main prize drawing (winner need not be present).

Talk-in on the WA3JDX Repeater, 147.69/09.

VEC information is available with a SASE to John Rosenwald, NM3P, 400 Stevens Dr., Pittsburgh, PA 15237; 412/931-2651. Pre-registration is suggested.

Hamfest information is available with a SASE to Bob Ferrey, Jr., N3DOK, 9821 Presidential Drive, Allison Park, PA 15101; 412/367-2393. □

The MURGAS ARC (K3YTL) is sponsoring the 10th annual Wilkes-Barre Hamfest & Computerfest on Sunday, July 2, at the Ice-A-Rama in the Coal St. Sports Complex in Wilkes-Barre. Set-up will begin at 6 a.m. and general admission at 8 a.m.

Featured will be an electronic show; buying and selling new or used electronic parts or gear and computer equipment and parts; an ARRL table; special drawings; refreshments; a family recreation area with swimming, baseball and a playground; all day prize drawings and free parking.

XYLs and children enter free, others will need a \$3 donation. Outdoor tailgating is \$3; bring your own table. Indoor selling is \$9 per space — this includes a table. Indoor reserved space will only be held until 8:30 unless it is paid for in advance. Be sure to bring your own extension cord.

FCC exams will be given. To register, send \$4.75 to Joe Caffery, W3DZH, 79 Kellers Lane, Plymouth, PA 18651. Make checks payable to "ARRL/VEC" and specify the license desired and the current license held. Exams will begin at 10 a.m.

Talk-in on 53.61, 53.81, 146.52, 146.61 and 444.825. For more information contact Mike Benish, K3SAE, P.O. Box 214, Rd. #1, Pittsford, PA 18643; 717/338-6863. □



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## Virginia

The 39th Annual Winchester Hamfest, sponsored by the SHENANDOAH VALLEY ARC, will be held Sunday, Aug. 6, at the Clarke County Ruritan Fairgrounds, two miles west of Berryville, from 7 a.m. to 3 p.m.

Gate admission is \$5; children under 12 and wives enter free. Advance admission is \$4 with SASE to address below before July 15. Tailgaters and limited tables are \$7.

Featured will be commercial exhibitors and donations from major manufacturers. VE exams will be offered at 9 a.m. at Cooley Elementary School, across from the Fairgrounds (limited walk-ins, must register by 8:30 a.m.). Breakfast, a snack bar, barbecue lunch and women's activities are also part of the festivities.

Talk-in on 146.22/82 and 146.52 simplex.

For further information contact Joanne Blaker, WB2CMV, at 703/869-4878; or write SVARC, P.O. Box 139, Winchester, VA 22601.

## Wyoming

The SHY-WY ARC will host the Wyoming Hamfest Saturday and Sunday, July 8 and 9 at the Holiday Inn in Cheyenne.

Festivities will include dealer exhibits, indoor swap tables, forums and seminars and VE exams.

Admission is \$3 in advance or \$4 at the door.

Talk-in on 146.175/887 or 146.22/82.

For information contact Fred Dumire, N7JPR, P.O. Box 6262, Cheyenne, WY 82003.

If you're not subscribing to Worldradio, you're missing a lot of Amateur Radio news.



## New Jersey QSO party

The Englewood ARA Inc. invites all Amateurs the world over to take part in the 30th annual New Jersey QSO party from 2000 UTC Saturday, Aug. 19, to 0700 UTC Sunday, Aug. 20, and from 1300 UTC Sunday to 0200 UTC Monday, Aug. 21.

Rules: Phone and CW are considered the same contest. A station may be contacted once on each band — phone and CW are considered separate bands and CW contacts may not be made in phone band segments.

New Jersey stations may work other New Jersey stations. General call is "CQ New Jersey" or "CQ NJ." New Jersey stations are requested to identify themselves by signing "DE NJ" on CW and "New Jersey calling" on phone.

Suggested frequencies: 1810, 3535, 3950, 7035, 7135, 7235, 14035, 14285, 21100, 21355, 28100, 28400, 50-50.5 and 144.146. Phone activity on the even hours, 15/10M on the odd hours (1500 to 2100 UTC) and 160 at 0500 UTC.

Exchange: QSO number, RST and QTH (ARRL Section or country). New Jersey stations will send county for their QTH.

Scoring: Out-of-state stations multiply number of complete contacts with New Jersey stations times the number of New Jersey counties worked (maximum of 21).

New Jersey stations: W-K-VE-VO QSOs count as 1 pt., DX stations count as 3 pts. Multiply total number of pts. times the number of ARRL sections (including NNJ and SNJ). KP4, KH6, KL7, etc. count as 3 pt. DX contacts as well as section multipliers.

Awards: Certificates will be awarded to the first place station in each New Jersey county, ARRL section and country. In addition a second place certificate will be awarded when four or more logs are received. Novice, Technician and mobile operator certificates will also be given.

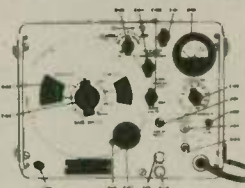
A total of four plaques have been donated by the ARRL Section Managers for NNJ and SNJ to the highest scoring single operator station residing in each of their sections (separate for Novice/Technicians and all other classes).

Logs: Must show the UTC date and time, band and emission and be received not later than Sep. 16. The first contact for each claimed multiplier must be indicated and numbered and a check list of contacts and multipliers should be included. Multi-operator stations should be noted. Calls of participating operators listed.

Logs and contact lists should be sent to: Englewood ARA Inc., P.O. Box 528, Englewood, NJ 07631-0528. SASE should be included for results.

Stations planning active participation in New Jersey are requested to advise EARA by Aug. 1 of your intentions so that we may plan for full coverage from all counties. Portable and mobile operation is encouraged.

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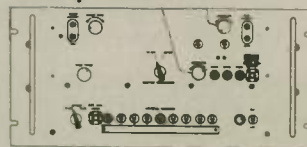
### TS-497 B/URR



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## Product Review

# CW equipment

RICH ARLAND, K7YHA

Here's a dynamic duo for the CW enthusiast. Our paddle comes from Bob Locher, W9KNI (now there is a name and call sign synonymous with CW and DX). Bob happens to be part owner of Bencher Inc. of Chicago, IL, manufacturers of the famous Bencher CW paddles. Bencher Inc. also markets many other accessories for the Amateur shack, like the YA-1 low pass filter and the ZA-1A HF balun.

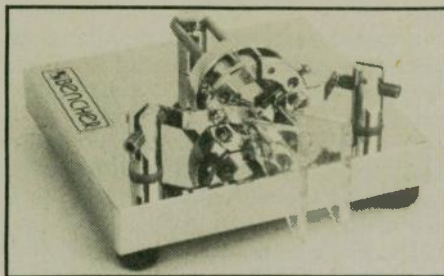
Bob's dynamite book, *The Complete DXer*, is available from Idiom Press, Box 583, Deerfield, IL 60015, at \$12.95, which includes shipping. If you haven't read this outstanding book on DXing, then you are missing a great opportunity to sharpen your DX skills and enjoy some good reading at the same time.

Our keyer comes from Joe Lunsford, N4YG, of Modular Systems in Huntsville, AL. The Smart Keyer is a low cost answer for the Amateur who wants a full function contest keyer but doesn't want to mortgage the family homestead. MSC has been selling keyers for about 12 years.

The Bencher paddles and MSC Smart Keyer go together like bread and butter.

This dual product review was born out of necessity. For Field Day I desperately needed a keyer/paddle combo to accompany me on my solo QRP effort. Having used the Steve Stuntz CW program (Feb. 1985 *QST*) for my Atari 600XL for the last 2 years, I had all but forgotten that some CW operators actually use methods other than computers to generate dots and dashes. Since my Atari would not operate from a 12-volt source, I was strapped for a portable keyer and paddles for FD. A call to Bencher Inc. and one to MSC produced a sample of wares that are really top notch products.

The BY-2 paddles arrived about a week before the keyer. I hooked the paddles up to the joystick part of the Atari and ditted and dashed up a storm. Those Bencher paddles are NICE! Having used a J-37 straight key, several Vibroplex Bugs (yes, I CAN use a bug!) and Vibroplex paddles in the past, I can state with some degree of authority that the Bencher paddles are the finest set of dit and dah makers that I have ever laid my fat fingers upon. Smoooooth, is the word! CW seems to roll off the ends of the fingers when using the Bencher paddles. Boy, this is almost as much fun as using the Atari!



The paddles that Bob sent for this review were the BY-2 deluxe set, all chrome. The base is very heavy and approximately 4 x 3.75 x .75 inches. The yoke extends the overall height to about 2 inches. The clear plexiglass (tm) paddles have a very nice "feel" to them. Tension on the paddles is adjusted by varying the length of the small screws attached to the spring on the split ring. Contact spacing for dots and dashes is varied by adjusting the contact screws in the split posts to the desired spacing.

The factory setup felt so "right" that I have not made any adjustments to either the contact spacing or the keyer lever tension. Contacts are solid silver with gold plating which will require little or no cleaning over the years.

The Bencher paddles are set up for Iambic operation. Both the dot and dash paddles can be closed at the same time, which yields a string of alternating dots and dashes (or dashes and dots, depending upon which contact was closed first). This type of operation allows a smooth flow of characters like: C, Q, F, K, L, R and Y to be sent with a little practice. This beats slapping the paddles back and forth like a non-iambic paddle would require. Not only is iambic operation easy to learn, but once mastered, it provides a very smooth flow of CW characters with a lot less motion and fatigue.

The Smart Keyer arrived about three days before Field Day. After making up the proper cords for the keyer, radio and paddles, I started using the keyer immediately to gain familiarity prior to "the big day." The MSC Smart Keyer is a very compact unit, measuring 6 x 2.5 x 4 inches with a sloping front panel. On the front panel there are Power and Load Leds and the 12 button key pad that programs the keyer's CPU. Weight is about seven ounces, so this little contest keyer can go just about anywhere. It runs off of any DC

voltage between 9 and 16 volts or any 8- to 12-volt AC source and draws about 150mA.

A small wall-block type DC supply comes with the keyer but a short piece of wire with a 3.5mm plug on one end (tip positive/sleeve negative) and the other end connected to your favorite DC supply or battery will power the Smart Keyer in the shack or field. The power, paddle and transmitter keying connectors are on the back panel. The Smart Keyer will key either a positive or negative transmitter keying voltage.

One word of caution. . .do not try to key a cathode keyed transmitter with this keyer. If you simply *must* use your new Smart Keyer on your old Johnson Viking Adventurer or DX-35, contact Joe at MSC first for a circuit that will isolate the keyer from the transmitter circuitry.

The manual supplied with the Smart Keyer gives complete details on all the functions of the keypad, how to hook up the keyer and various programming hints. Message loading, playback, tone, volume, speed and weight selection, serial numbers and message auto-repeat are detailed in the 12 page manual. Joe sent me the Version 5.0 of the Smart Keyer with the enhancements attached to the manual.

The Version 5.0 enhancements include the ability to embed commands into the six stored messages. Basically, this means that if you have a message in memory, using Version 5.0 software, you can: repeat the message, insert another message or delay into the original message, change speed (either up or down) in the middle of the message, insert a serial number, increment or decrement the serial number, etc. Talk about versatile! I couldn't do that with my Atari CW keyboard!!

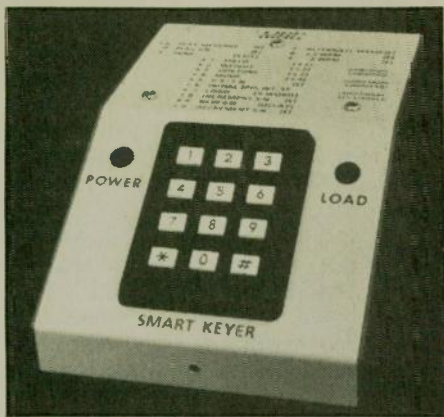
Version 5.0 software also allows restoring default values for speed, weight, sidetone volume and frequency. Message and command editing is now done with only a two key sequence. Another *big* difference (especially during the DX contests requiring a serial number exchange) is that the Version 5.0 software does not automatically increment the serial number after playback. Imbedded commands are used for this process, allowing you to customize the message for your specific needs.

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A message in one of the six memories, when recalled, will play back until through or interrupted by either touching a key or a paddle. Tone, volume and frequency of the side tone are user programmable from the keypad, adding a nice touch. The keyer has two speed memories, one of which is the current active speed. A single key-stroke selects the alternate speed (that is it will toggle between the two speeds). The MSC Smart Keyer is capable of speeds between 1 and 99 wpm.

The MSC Smart Keyer is loaded with features that make it a very powerful contest keyer. All these features are packed into a small case that combines to make this keyer a valuable asset to any contester or DXer, especially those who operate in a portable environment.

The Bencher paddles and the MSC Smart Keyer were packed in my small suitcase along with my faithful Argonaut 509, antenna tuner, microphone and cables. Field Day found us camp-

ing Northeast of Scranton in Waymart, PA. The keyer and paddles were set up along with the rest of the gear, and on the air we went. Although I was unable to really try out the sequential serial number mode, I did manage to load up four of the memories with various FD messages. Things sure worked nice.

Hit the button, and out goes: "CQ FD CQ FD DE K7YHA K7YHA QRP K." Next button will transmit: "1B EPA 1B EPA." The third message was: "QRZ FD DE K7YHA K," followed by: "QTH WAYMART, PA."

On several occasions, after the formalities of the FD exchange were completed, I switched over to the Bencher paddles and had short QSOs with other QRPers that I knew. The paddle/keyer combo worked flawlessly during FD.

My only complaint was that the finish on the paddles (all chrome) was hard to keep clean of fingerprints.

Bottom line on the Bencher paddles and the MSC Smart Keyer: Great combo that REALLY makes CW operation a joy!

Price of the paddles start at \$59.95 (for their standard set) from Bencher Inc., 333 West Lake St., Chicago, IL 60606. Tariff on the MSC Smart Keyer is \$119.95 from Modular Systems, 1304 Toney Drive, Huntsville, AL 35802. These prices do not include shipping or tax (where applicable).

I'd like to personally thank Bob Locher, W9KNI, of Bencher Inc., and Joe Lunsford, N4YG, of MSC, for supplying the products for this review. Don't forget, Worldradio is where you saw it! □

## History of QRP in the U.S.

Ade Weiss, WØRSP, champion of homebrew construction and low power operating, has compiled a history of low power communication exploits, telling the story behind the great communications records of this century. His most recent book reveals the circuits, construction methods and operating techniques that produced the milestones.

Each rare photograph tells more than 10,000 words.

Better still, Ade captures the driving spirit behind the pioneers of Amateur Radio and the drama of the events by telling the story of the Amateurs that

did it, often in their own words.

Every radio enthusiast, whether listener or Amateur, can benefit from it. The fruit of Ade's tireless and painstaking research, it's more than a priceless reference, it's a monument to the dynamism of Amateur Radio. Ade's book belongs in every Amateur's library.

The book, *History of QRP in the U.S.*, contains over 70 priceless photographs and drawings and 200 pages of thrilling stories. \$12 post paid from Milliwatt Books, 833 Duke St., #83-W, Vermillion, SD 57069. —Reviewed by Jim Stevens, KK7C. □

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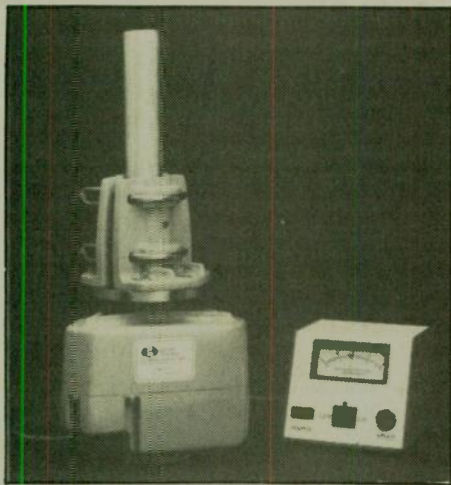
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Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

## Antenna rotator

The new Orion OR-2300 antenna rotator using a worm gear drive method is rated at 35 square ft. The special compact design allows mounting in most popular crank-up and stacked towers. The control box has a large, easy to read direction indicator with variable speed.



Rugged mast clamps incorporating a self-centering guide accept mast diameters from 1 to 3 1/2 inches. Flex mount clamping method self corrects for misaligned masts and also absorbs windload. Built-in thrust bearing and double bronze bearing decreases friction and load transfer to gear set.

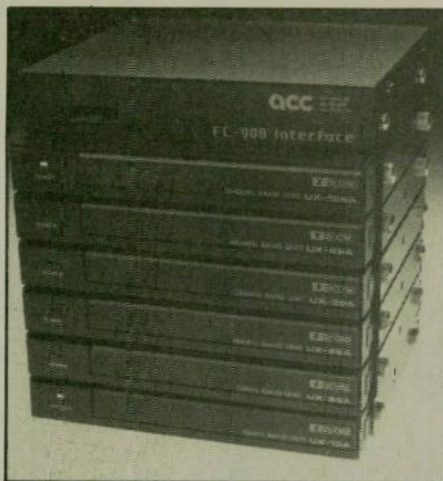
For more information contact Orion Business International Inc., P.O. Box 9577, Canoga Park, CA 91309; 818/888-4927. □

## FC-900 Interface

Advanced Computer Controls Inc. announces the new FC-900 Interface which is supported by several of ACC's repeater controllers.

The FC-900 Interface permits use of the ICOM IC-900 transceiver band units as remote base and link transceivers. The system approach is very cost effective, since the ICOM fiber optic controller and interfaces aren't needed, just the band units. And hookup is simple since everything just plugs together.

Full remote frequency control is available through Touch-Tone commands. Amateur fre-



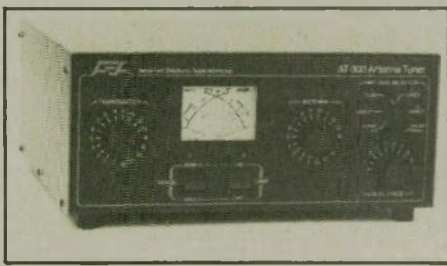
quencies on six bands from 29 MHz to 1300 MHz are supported.

Remote bases and links allow the repeater system designer to extend the range of the repeater, link it to other repeaters for emergency and public service activities and benefit from the elevation of the repeater site for all bands.

ACC manufactures microcomputer based control systems for Amateur Radio, commercial and government radio users. For additional information, contact Advanced Computer Controls Inc., 2356 Walsh Ave., Santa Clara, CA 95051; or phone 1-408-727-3330. □

## Antenna tuner

Advanced Electronic Applications Inc. introduces the AT-300, the first model in a line of antenna tuners.



Features of the AT-300 include: Low-pass design to reduce or eliminate TVI; frequency range coverage of 3.5 MHz to 30 MHz; a capacity of 300W continuous power; a dual-needle watt meter that gives direct reading of forward power, reflected power and SWR; a meter range that selects 300W and 30W to

ease tuning; 2 18-tap inductors that give improved tuning accuracy; front panel controls which include impedance adjustment, antenna switching, meter power level switching and meter lamp switching and rear panel connections that include a coax connector for transmitter input, two coax connectors to antennas, one coax connector to a dummy load, two ceramic feed-through connectors to balanced feedlines, one ceramic connector that serves single-wire antennas and a DC power connector to the meter lamp.

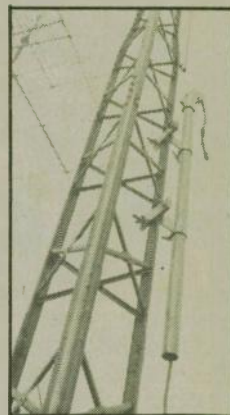
For more information contact your favorite dealer. □

## Tower equipment

The new GP21X Ginpole kit from IIX Equipment LTD., is designed to fit stamped open leg type towers. Clamps are adjustable to fit the tapering tower sections and can be spaced apart any distance to provide the necessary strength for the load being lifted.

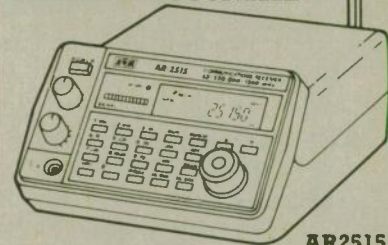
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| Alinco — 24, 25                                      | Ham Radio Outlet — 32, 33             | Radio Engineers — 28, 34             |
| Anne Wright, N6BOP — 55                              | Hamcon '89 — 53                       | Radio Place — 18                     |
| Antennas West — 4, 7, 16, 27, 30, 34, 40, 44, 50, 54 | Handi-Tek — 6                         | Radio Works — 49                     |
| Antennas, Rudy Plak — 3                              | Heath Co. — 52                        | rf concepts — 43                     |
| Antique Radio Classified — 47                        | Henry Radio — 2, 37                   | RLD Research — 11                    |
| AXM Inc. — 45  | ICOM — 64                             | SGC, Inc. — 17                       |
| Azimuth — 20   | IIX Equipment, Ltd. — 51              | Sign-On — 10                         |
| Barry Kutner, W2UP — 57                              | IMRA — 26                             | 624 Systems — 48                     |
| Bel-Tek — 15, 31                                     | Indianapolis Hamfest — 11             | Sparrow Hawk Communications — 17     |
| Brian Beezley, K6STI — 26                            | Jun's Electronics — 29                | Spider Antennas — 42, 49             |
| Butternut Electronics — 35                           | Ken Heine, W7VZS — 62                 | Summitek — 31                        |
| C.A.T.S. — 6   | Kilo-Tec — 7                          | Synthetic Textiles, Inc. — 55        |
| Callbook — 60  | Lakeview Co. — 27                     | TimeKit — 40                         |
| Command Technologies, Inc. — 41                      | Lanz Company — 50                     | Todd Skogen — 22                     |
| Cotec — 26   | Long Island DX Bulletin — 61          | Universal Radio — 59                 |
| Courage Center — 47                                  | M. Bohnhoff — 8, 43                   | Van Gorden Engineering — 4           |
| Creative Control Products — 46                       | Maxcom — 48                           | Visit Your Local Radio Club — 38, 39 |
| Diamond Systems, Inc. — 30                           | MFJ — 13                              | Visit Your Local Radio Store — 58    |
| Embroidery Warehouse — 54                            | Mike Forman — 63                      | W5YI — 47                            |
| Engineering Systems — 8                              | Mission Communications — 8            | W5YI-VEC — 15                        |
| EPO Software — 18                                    | N.E. Litsche — 56                     | W9INN Antennas — 34, 46              |
| Falcon Communications — 23                           | N6KW QSL Cards — 54                   | WRBB — 41                            |
| Fallert's Engraving — 14                             | P.C. Electronics — 21                 | Wrightapes — 57                      |
| Gene Hansen Co. — 52                                 | Palomar Engineers — 7, 45, 51, 55, 56 | Yaesu — 5                            |
| GGTE Morse Code — 45                                 | Personal Data Base — 19               |                                      |

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