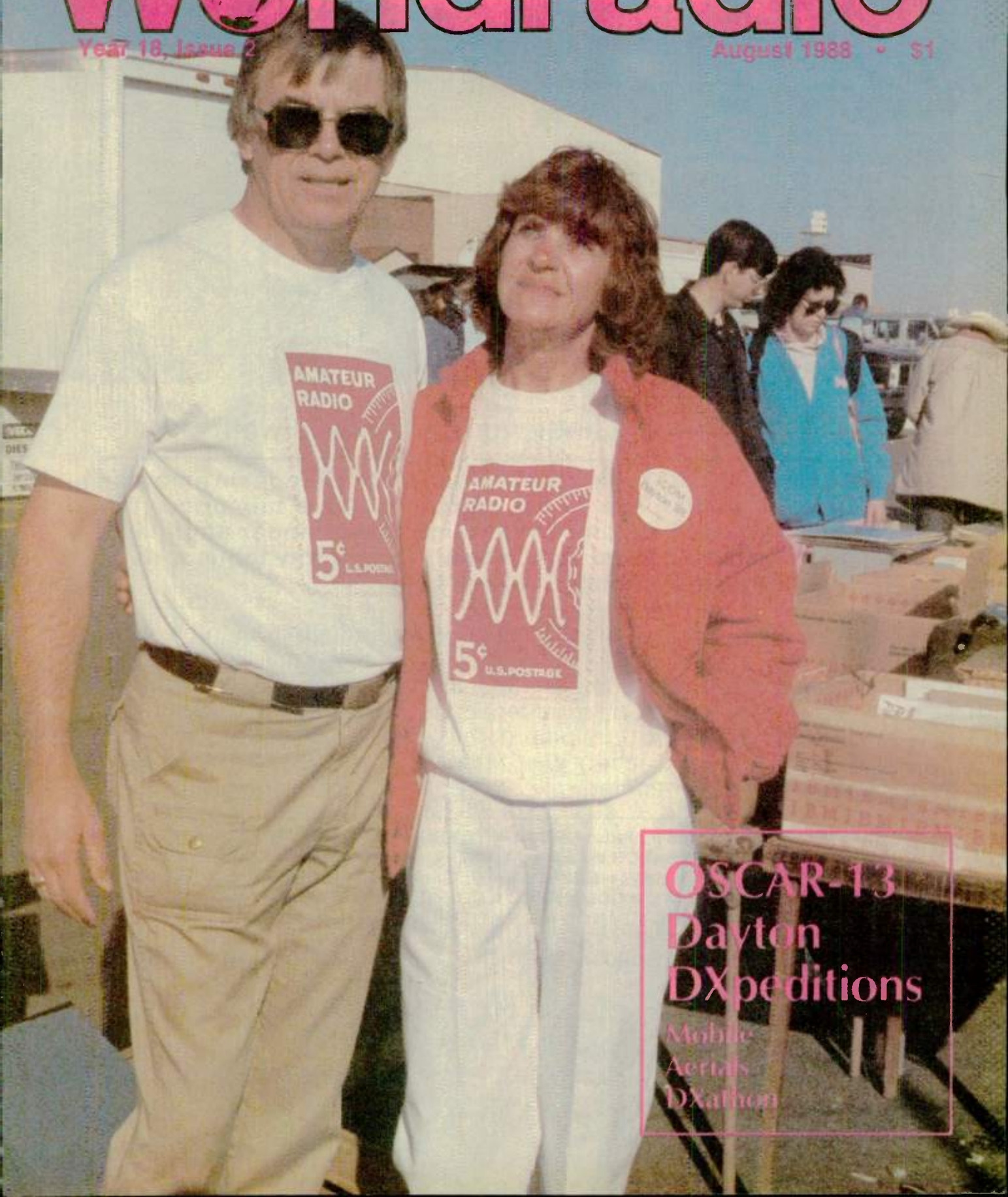


World Radio

Year 18, Issue 2

August 1988 • \$1

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Tom Christian, VR6TC — descendant of Bounty mutineer Fletcher Christian — is shown here with his family. From left to right (front): Darlene, Raelene and Sherilene; (back) Betty, VR6YL; and Jackie. The entire population of Pitcairn Island is Seventh-Day Adventist. As part of their economy, they rely upon the sale of stamps and on the supply ships that periodically pass by, en route to other ports. (Photo courtesy of Dr. Charles "Mert" Moser, W6HS)

Pitcairn's fuel fund for VR6TC-VR6YL

Jack Comer, Jr., WA2EDO, Eatontown, NJ
Harrison Church, W0KXP, Lebanon, IL
Carolyn Sharon, VE7FNP, Port Alberni,
B.C., CANADA

Margaret Demeules, W3HSS, Port St. Lucie,
FL

Ian Elliot, W7JMX, Bozeman, MT

Jerry Starkey, WA6LIJ, Los Altos, CA

Cecil Creder, WD8ECM, Redford, MI

Hugh Glasgow, NR6S, Cerritos, CA

Adrian Fallert, WB8GEW, Hamilton, ON

George Bloomfield, N8FGH, Detroit, MI

Richard Harris, A15P, El Dorado, AR

Ralph D'Orio, Jr., K5GX, Hudson, FL
Joe Reisert, W1JR, Chelmsford, MA

There are still a few guides to Pitcairn left. If you're interested in receiving one, send \$5 postpaid to Dr. Charles M. Moser, W6HS, 10861 Langdon Ave., Mission Hills, CA 91345. Moser is also QSL manager for Tom (VR6TC) and Betty (VR6YL) Christian. "But," says Moser, "no SASE, no QSL!" □

Share your knowledge with your fellow amateur and Worldradio reader.

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HAM FAIR '88

The Japan Amateur Radio League, Inc. (JARL) will hold their HAM FAIR '88 at the New Hall (Shinkan) of the Tokyo International Trade Center in Harumi, Tokyo from Friday, August 26 to Sunday, August 28, 10 a.m. to 6 p.m.

The coming event will have three principal features: 1) The fascination of ionosphere communication; 2) A challenge toward high technology; and 3) first encounter with GHz.

Concurrent with JARL, an organization comprised of some 80 manufacturers and dealers in Amateur Radio and computer or related businesses, the Japan Amateur Radio Industries Association will sponsor a commercial fair that will have 20 or more booths installed in the hall. □

FRONT PAGE: In the flea market at Dayton was this happy couple. From their clothes you could guess they were Amateur Radio operators. The 5¢ stamp was issued in 1964 to honor the 50th anniversary of the American Radio Relay League. The day of issue was one year to the day after one of Amateur Radio's finest moments, the massive message handling after the Alaska earthquake.

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the flame of vitality to this avocation.

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ance of active radio amateurs concerned
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tions dealing with dramatic, personal and
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PUBLISHER'S MICROPHONE

First, we give the honor due to the
latest Worldradio Lifetime Subscrib-
ers:

Eldon Burkinshaw, W1END, (His
call brought to mind "West End" and
I said to myself he should live in
London. I glanced down and saw that
he does!), Londonderry, NH! Bert
Wright, W2BW, New York, NY; Otis
Beasley, WD5U, Chicago, IL; Paul
Charbonneau, KB5BFU, Hattiesburg,
MS (hams in the area needing dental
work, he's the man to see); Mark
Nielsen, KA7ETG, Apache Junction,
AZ; Edmond Ng, Hercules, CA, and
Harvey Sunada, KH6EN, Honolulu,
HI.

Every year there's a huge neighbor-
hood flea market held a few blocks
from my house. Every year I go, hop-
ing to find a Hallicrafters S40-B for \$5
or so. Usually no such luck. But this
year there was a box of tubes — 5¢
each. I was rummaging through and
the seller said, "I'll give you the whole
box for a dollar."

Now, I'm keeping the 6L6 and the
6AG7 (someday I'm going to build
that transmitter) and the 2E26, but
someone else is going to get the

others. As much as I enjoy nostalgia, I
think some real collector would have
much more feeling for them.

Here's the list: 2A5, 24, (3) 24A's,
55- (2) 56's-57-58, 6C6, 816, VR-150,
9002 and 9003 in WWII boxes, 224, (3)
210's, and a Heintz and Kaufman
24-G.

Make your bids for the lot. We'll
notify the bidder and he can send us
his check made out to HANDI-
HAMS. We'll ship the tubes to the
winner and the check to a group that
helps people who have had a far
greater hurdle than a code test to over-
come, get on the air.

We had a lot of reaction to our color
cover last month (our first). You are in-
vited to send in your pictures. If yours
is selected, you'll earn enough money
to buy a new antenna! (A 2M rubber
duck, used.)

For the "I'm too old to learn"
crowd: a 77-year-old amateur just up-
graded to Advanced!

A lot of amateurs also like to travel
overseas. Some go every year on their
vacations, or every two years, or every
three. If you are in that category, drop
me a card and I'll arrange for you to
receive (absolutely free) a sample copy

of the magazine International Travel
News.

Wesley Randles, W4COW, Stod-
dard, NH, Treasurer of QCWA, wrote
in to say that a QCWA chapter can be
formed with 10 members, and inter-
ested parties in areas which don't yet
have a chapter can write to national
HQ for a list of members in their area.

John Sturek, K6OZV, San Jose, CA,
commented on the increased size of
the magazine and said he "goes
through it cover to cover several
times." He said he "likes the diver-
sified coverage of all the different
facets of our fine hobby."

Bill King, KB6DSX, Lancaster, CA
(who has subscribed to Worldradio for
the past 16 years) is teaching a Novice
class for the Antelope Valley ARC.
They have 25 students, and he asked
for a copy of Worldradio for each of
them. So done.

And how was your Field Day? We're
always interested in what you did that
was new, different, interesting, etc. It
is certainly the Event of the Year.

To paraphrase the TV show of some
years ago, *Naked City*, and their 7
million stories in NYC... there are
2,000 groups on Field Day and yours
deserves to be on our pages.

The program *Ham Radio Today* on
HCJB mentioned Worldradio the
other night. HCJB is where the late
Clarence Moore invented the Cubical
Quad back in the '40s.

Just how many amateurs, prior to
being licensed, built the one- or two-
tube super-regens in a cigar box? HC-
JB was always one of the first stations
logged. I still remember the thrill of
hearing Radio Sweden!

Interesting how some folks now,
even with the most modern gear in
their shacks, are nostalgically build-
ing the tube (transmitters and recep-
ters) stuff of their youth. It seems to be
the latest fad. I'd like to hear from you
on that, or any other matter.

—Armond, N6WR

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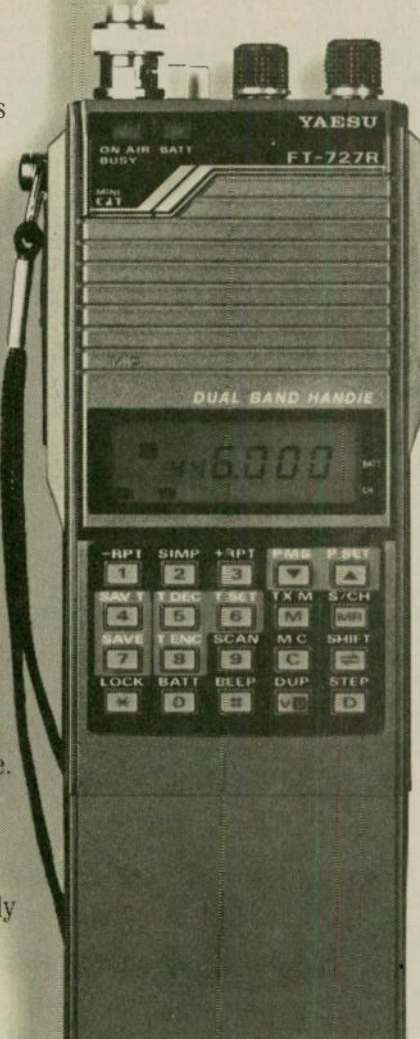
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New OSCAR satellite born!

Ross Forbes, WB6GFJ

At 11:19:04 UTC on June 15, the first Ariane IV rocket successfully lifted off from the Kourou launch facility in French Guiana. Except for a 6-minute delay from the projected launch time, the countdown and subsequent launch was perfect.

Amateurs followed the launch listening to the HF network established by AMSAT-NA. Coverage was heard around the world, as participating stations on ALINS (AMSAT Launch Information Network System) were linked by special telephone lines. Ralph Wallio, WØRPK, AMSAT Vice President of Operations, was responsible for organizing the ALINS net.

Those not monitoring VHF, UHF or HF frequencies watched launch coverage provided by Arianespace on Spacenet 1, or the C-Span TV network.

Once a successful launch occurred, amateurs eagerly awaited news from Arianespace Directors, who announced the successful deployment of each satellite carried into orbit. While Panamsat and Meteosat were quickly hailed, amateurs had to wait an additional hour.

The Phase IIIC satellite was carried into orbit inside a canister and would not be deployed for an additional 60 minutes. Finally the canister was opened, Phase IIIC was released into space, and the general beacon was turned on.

One member of the command team — Ian Ashley, ZL1AOX — announced the general beacon was heard at 14:03:38 UTC on 145.811 MHz. Following tradition, the Phase IIIC spacecraft was then given the name AMSAT/OSCAR-13. Amateur Ra-

dio's newest satellite was officially born.

ZL1AOX reported OSCAR-13's telemetry to be nominal. Signals varied between S5 and S8 on his IC-275 (including preamp and 22-element crossed Yagi).

Telemetry indicated the beacon was in the low power mode, using the omni-directional antenna. Battery voltage was reported to be about 13.8V, with a positive charge rate and the sun angle indicated -21° . This information was great news since it indicated OSCAR-13 was in nearly the exact planned position. Unlike AMSAT/OSCAR-10, which was bumped into an incorrect position, OSCAR-13 appeared in perfect condition!

Following the successful birth of AMSAT/OSCAR-13, congratulatory messages came into AMSAT-NA from around the world, including Project OSCAR, SA-AMSAT, AMSAT-SM, AMSAT-ZL, the UoSAT team and AMSAT-LU. As news of OSCAR-13's birth quickly spread, users pointed their satellite antenna systems to be among the first to hear OSCAR-13.

Telemetry from OSCAR-13 on 145.812 contains information about the internal conditions of the spacecraft and general text messages. The first text message was sent to the worldwide Amateur Radio community and was written in German, English, Spanish, Portuguese and French. The message read:

"K Hi, this is AO13, the intl. spacecraft to support science/education, amateur space communication and above all intl. friendship. 73s from the AMSAT Launch Team"

The AMSAT Launch Team was stationed at the Kourou launch site to monitor OSCAR-13's last weeks on the ground. The team was also active on HF frequencies using the call sign FYØEK.

Anyone who worked the station and would like a commemorative QSL card should send their card with a self-addressed envelope (SAE) and three international reply coupons (IRC's) to DK5KQ. The team members included Hanspeter Kuhlen, DK1YQ; Don Moe, DJØHC/KE6MN; Dave Cowdin, WDØHHU; Hermann Hagn, DK8CI;

Hans Doerr, DF4FE; and Junior DeCastro, PY2BJO.

When OSCAR-13 reaches its first orbit, there is still a great deal of work to complete before the transponder will permit general use by the worldwide Amateur Radio community.

The initial orbit is elliptical and takes OSCAR-13 to almost 37,000 km at apogee, but dangerously close to earth at perigee (nearly 230 km). Therefore, Bob McGwier, N4HY, and Phil Karn, KA9Q, will be very busy working to determine the exact orbit OSCAR-13 is in.

Once the precise figures are known, this information will be given to ZL1AOX, and DB2OS who will trigger the kick motor. There will be at least two firings of the kick motor. The kick motor will only be fired at apogee.

The initial firing of the kick motor must take place within a short period of time. If the kick motor were not used fairly soon, OSCAR-13 would quickly fall back to earth. The first use of the kick motor will increase the perigee of OSCAR-13 to a safer distance (800 km) at perigee. It will also raise the inclination to 57° .

Once the final orbit is set, the worldwide network of OSCAR-13 command stations will orient the spacecraft to its proper position, and make the final calibration measurements. When all of these tasks have been successfully completed, OSCAR-13 will be open for use by Amateur satellite users around the world.

The transponder should be available for general use sometime in early August.

Up-to-the-minute information about OSCAR-13 can be obtained from the many AMSAT-NA nets. You can also obtain assistance in tracking the new spacecraft and in setting up your own satellite station. Check-in to the net that serves your region:


Sunday — 14.282(±), 1900 UTC, International

Wednesday — 3.840(±), 0100 UTC, East Coast Net; 0200 UTC, Mid-Continent Net; 0300 UTC, West Coast Net.

Membership in AMSAT-NA is \$34 per year and includes a bi-weekly newsletter, *ASR (Amateur Satellite Report)*. Send your membership dues to: AMSAT-NA, P.O. Box 27, Washington, D.C. 20044. Telephone: (301) 589-6062.



—Report written by Ross W. Forbes, WB6GFJ (AMSAT-NA Regional Coordinator) with assistance from AMSAT News Service and Bob McGwier, N4HY

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Updates

Those of you who read "MARS Forum" in our July issue, page 47, may be curious as to who wrote the article. Norm Brooks, K6FO, was the author.

On page 24 of our July issue, we said that BOB'S CORNER would be back, starting with the August issue. After the July issue went to press, Bob Decesari, WA9GDZ/6, told us he would not be able to continue the column after all.

We would like to continue running a monthly (or bi-monthly) column on construction projects, but would like to leave it open to anyone who wishes to submit their ideas/articles. We do request that you double-check the accuracy of your facts and diagrams. Diagrams should be drawn in pen, neatly and legibly.

Send articles and ideas for this column to: TUNE FOR MAX SMOKE, Worldradio, 2120 - 28th St., Sacramento, CA 95818. □

DXer says good-bye

One of our long-time subscribers — Dave Snyder, W6ZS, of Lakeport, California — has written to tell us that, due to poor health, he has retired from DXing.

"My DXing days ended when I cut my tower down three years ago," he writes. "I'll be 86 in August, so I've had my fun. Just short three or four of 200 on DXCC List, but worked 153 oblasts in USSR, with seal confirming 150." How many of our readers can match this? □

'The drums go bang . . .'

Marijane Evans, NP2AZ

"O the drums go bang and the cymbals clang and the horns they blaze away . . ."

Bert McNamara, cruising the Caribbean aboard his sailboat, *McNamara's Band*, recently took and passed the Amateur Radio Novice exam at Roosevelt Roads Marina in Puerto Rico.

The examiners were Harley Nethken, KF4SZ, who is cruising aboard his boat *Rainbow*, and Shel Nemeyer, KF4ZT, also cruising on a boat named *Rainbow*.

Obviously, the Irish still believe rainbows bring good luck. ". . . a credit to old Ireland is McNamara's Band!"

.....

Check your license expiration date.

Operating schedule of FO-12

According to power condition, operation may miss the schedule; but once its condition recovers, operation schedule is to come back again to the

schedule as soon as possible. Necessary information will be posted to BBS of FO-12, if it is available.

Mode Begins at (in UTC)			Mode Begins at (in UTC)			Mode Begins at (in UTC)				
Month	Day	Time	Month	Day	Time	Month	Day	Time		
June	4	0353	DI	24	1020	JD	14	0610		
	5	0259	JD	26	1033	DI	15	0516		
	7	0110	DI	27	1141	JD	17	0124		
	8	0218	JD	30	1100	DI	18	0435		
	11	0546	DI	31	1006	JD	21	0355		
	12	0654	JA	August	2	1020	DI	22	0301	
	14	0505	D		3	1128	JD	24	0314	
	15	0613	JA		6	0845	DI	25	0220	
	18	0533	D		7	0751	JA	27	0234	
	19	0439	JA		11	0617	D	28	0140	
	22	0156	D		12	0724	JA	October	1	0100
	23	0304	JA		13	0630	D		3	0113
	25	0318	D		14	0536	JA		4	2325
	27	0131	JD		18	0603	D		6	0032
	29	0143	DI		19	0712	JA		8	1339
	30	0049	JD	20	0415	D	9		2258	
	July	2	0103	DI	21	0523	JD		12	1406
		4	0116	JD	25	0348	DI		13	1312
		7	1530	DI	26	0457	JD		15	1325
7		1935	JD	27	0606	DI	16		1231	
8		0143	D	28	0511	JD	18	1245		
9		0049	JA	30	0120	DI	19	1151		
9		2355	D	31	0228	JD	21	2016		
13		1409	JA	September	3	0758	D	22	1922	
14		1315	D		5	0201	JA	26	0936	
16		1328	JA		7	0623	D	27	1043	
17	1235	D	8		0529	JA	29	0855		
20	1356	JA	10		0543	D	31	0909		
21	1301	D	12		0150					
23	1141	JD*	14	0000						

*July 7 from 1530, and September 14 from 0000, acquisition of telemetry at every two seconds, when mailbox does not function. A card will be sent from JARL to reporter of received telemetry.

JA for analog QSO (SSB phone, CW) DI digital system working except transmitter
 JD for digital (packet) communication D transponder off

Correction

Our apologies to Roy P. Barkhuff, KE0JI, whose letter we printed in our July issue, page 27 ("It's about time!"). Roy is from Norfolk, *Neb-raska* — not Virginia. □

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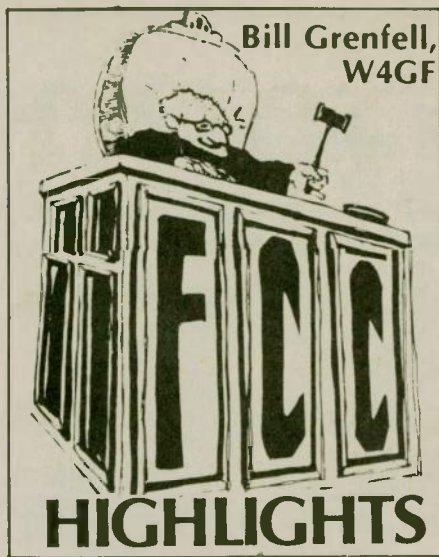
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The FCC-proposed rewrite of the Amateur Radio Service rules, which was reported in last month's *HIGHLIGHTS*, is too long to reproduce here or in other Amateur Radio publications in its entirety. The government print occupies 37 pages! However, "If you have any special concerns regarding the FCC rules, or if you simply want to be well informed on a matter of great importance to Amateur Radio, you should obtain your own copy of the NPRM. A large self-addressed envelope with 85¢ postage, sent to ARRL HQ and marked 'Docket 88-139,' will speed a copy back to you." (*ARRL Letter*, 05/13/88) The ARRL address is: 225 Main St., Newington, CT 06111.

In response to a petition by the ARRL, the FCC has amended rule section 97.313 to require foreign amateur operators using reciprocal permits to place their U.S. prefix first, followed by their call sign, while operating in the United States. "For example, 'W4/DL6TJ' instead of 'DL6TJ/W4'." Several other countries have already implemented the procedure. (*ARRL Letter*, 05/23/88; *Westlink Report*, 05/27/88)

"Eleven hams in Puerto Rico face the possible revocation of their licenses because of FCC charges that they were involved in testing fraud. On May 3, the government issued

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'Show Cause, Suspension and Designation' orders in which it names several volunteer examiners as the nucleus of a group which assisted family members, friends and acquaintances to fraudulently obtain ham radio licenses. Also charged with obtaining licenses by fraudulent means are several candidates allegedly tested by the suspect VE's."

The amateur licenses of each of those named was to be automatically suspended on May 28, unless a written request for a hearing on the charges was filed by one of the accused prior to then. The proceedings come after a year-long investigation by FCC.

"The FCC noted that it became suspicious of the possibility of license fraud when it saw a huge upward spiral in the census of hams residing in Puerto Rico. At the time, the average national growth of amateur operators was about 3.5% while in Puerto Rico it had exceeded 50%. Additional revocation proceedings are expected. . . in addition to losing their amateur licenses, those involved in the license fraud scam could also face criminal prosecution." (*Westlink Report*, 05/27/88; *W5YI Report*, 05/15/88)

The Seattle, Washington FCC office and the State Section of the ARRL have entered into a formal agreement with respect to the use of volunteers to relieve the FCC workload, the main function of the Amateur Auxiliary Group being to resolve Amateur Radio interference problems. "In addition, the Seattle FCC office will refer

other amateur-oriented inquiries to the Auxiliary for response." (*Westlink Report*, 05/07/88)

FCC's former Special Services Division Chief, Ray Kowalski, left FCC last December to join a Washington law firm. However, before he left, recognition was given by the FCC to two overlapping 220 MHz repeater coordination organizations, and their cooperation was called for. However, it has obviously failed since one body has filed suit against the other.

Even though he was no longer with FCC, Ray was on the program of the Dayton HamVenture in April. He spoke about amateur volunteerism, such as repeater coordination, as being "Ham radio's greatest strength (and) also its greatest weakness. . . Sooner or later, a repeater coordinator is going to have to tell somebody no (you can't have a frequency), and when you do you are going to get sued. . ."

"I think that lawsuits are completely out of place in Amateur Radio. However, it is my personal view that lawsuits are the logical and natural result of the posture that the FCC has placed ham radio in today." (*Westlink Report*, 05/13/88, 05/27/88)

"The ARRL has made an offer to the FCC to solve the nationwide repeater coordination crisis through a one-time League-sponsored national repeater coordination referendum, one that would let repeater owners in (please turn to page 10)

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 June 1, 1988.

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	WJ0K	KE0VZ	N0JKE	KB0CVG
1	NR1U	KC1JS	N1FTJ	KA1SFG
2	WG2L	KE2HH	N2IGT	KB2FWJ
3	NQ3I	KD3IB	N3GHH	KA3TGJ
4	AB4IQ	KM4CH	N4TAD	KC4FRR
5	AA5GA	KG5KT	N5MRD	KB5GOP
6	AA6IV	KJ6HW	N6SIL	KB6YSO
7	WO7N	KF7KV	N7LDS	KB7FFO
8	WG8N	KE8SD	N8JPA	KB8EZH
9	NZ9H	KE9LB	N9HNR	KB9BAB
North Mariana Is.	AH0F	AH0AE	KH0AK	WH0AAH
Guam	KH2K	AH2BY	KH2DH	WH2ALP
Johnston Is.	AH3B	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra, Jarvis Is.	AH5A			
Hawaii		AH6JA	NH6PI	WH6BYU
Kure Is.			KH7AA	
American Samoa	AH8C	AH8AD	KH8AG	WH8AAX
Wake Wilkes Peale		AH9AD	KH9AD	WH9AAH
Alaska		AL7JY	NL7OA	WL7BRT
Virgin Is.	KP2Y	KP2BN	NP2CO	WP2AGA
Puerto Rico		KP4PC	WP4OT	WP4IAQ

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FCC Highlights

(continued from page 8)

various locations choose whom they want to coordinate them." It was made by ARRL Hudson Division Director Mendelsohn, WA2DHF, at the FCC Forum at the 1988 Dayton HamVention.

FCC Personal Radio Branch John Johnston was present and appeared to have no objection to the proposal. It now must be brought before the ARRL Board of Directors for approval. (*Westlink Report*, 05/13/88)

When a River Edge, New Jersey amateur was denied a 5' variance request to the town's 35' maximum tower height limit, he filed a complaint in district court against the city officials claiming an invalid use of the city's police powers and constitutional violations. The defendants claimed that the 1985 FCC Memorandum Opinion and Order called PRB-1 was not applicable in this case because "the FCC specifically did not preempt local regulations such as those at issue in this case."

Finally, an appeals court opinion found that PRB-1 did apply; the township agreed to recognize the validity of PRB-1 and granted WA2INW the variance. "This is the third published case finding in which the validity of PRB-1 has been upheld by a federal court." (*Westlink Report*, 05/13/88)

Calling the United Parcel Service proposal in Docket 87-14 to allocate 220-222 MHz to narrow band land mobile users "seriously flawed," the Department of Defense (DoD) has filed comments with the National Communications System (NCS), strongly supporting Amateur Radio. This was in response to the late-filed UPS comments in the Docket.

DoD/NCS noted that the amateur community and the radiolocation operations of DoD have successfully shared the 220-222 MHz segment for many years, and the UPS proposal would "preclude the shared use of these frequencies by radiolocation, forcing the two users to attempt to find other suitable frequencies." (*ARRL Letter*, 05/23/88; *FCC HIGHLIGHTS*, 05/07/88; *W5YI Report*, 05/15/88)

The FCC has agreed to "withdraw without prejudice to the filing of further petitions on the subject" the ARRL petition to modify Sections 97.31 and 97.515 of the rules governing appointment of Volunteer Examiners (VE's). The original petition was filed to prevent VE's whose accreditation had been suspended or revoked by one VEC, from serving as a VE under a different VEC.

After discussing the situation with representatives of the FCC, it appears that there are alternative methods of dealing with this problem which will be more easily pursued if a formal petition is not on file. (*ARRL Letter*, 05/23/88)

"In 1986, Andrew Bodony, K2LE, brought suit in U.S. District Court to overturn denial by the Village of Sands Point, New York, of his application for a building permit for an 86' tower, retractable to 23 feet ... the court found PRB-1 to be a proper exercise of FCC authority and invalidated the village's 25' height limitation as it unduly restricted Bodony's antennas.

"This case represents the first time a zoning ordinance was declared invalid on the basis of PRB-1, and it is an important precedent for radio amateurs fighting unreasonable local zoning ordinance[s]." (*ARRL Letter*, 05/23/88)

TV Answer Inc. (TAI) in RM-6196 has requested the reallocation of 500 kHz in the 216-222 MHz band to market an interactive viewer response system, and suggested that 220.5 MHz would be a good candidate for this reallocation since "it was underutilized by amateurs."

"The ARRL had filed strong comments and reply comments to the TAI

petition, which noted its many defects, including lack of specific technical data. TAI has now filed reply comments [on] its own petition which contains three attachments of new engineering technical data.

"Why does ARRL want this data removed? For the simple reason that the introduction of new data in one's reply comments is forbidden by the Commission. The ARRL, or anyone else, does not have an opportunity to reply to this new information.

"This new technical data should have been included in TAI's original petition, or included in its comments." (Interestingly, TAI did not file comments supporting its own petition!) (*ARRL Letter*, 05/23/88)

KC6 — the Federated States of Micronesia (FSM), formerly East Caroline Islands — is now a sovereign, self-governing nation in free association with the United States. FSM has not yet established procedures for licensing of amateur operators; however, under the Compact of Free Association, the United States is authorized to act on behalf of the FSM in certain telecommunications matters.

Until FSM issues amateur permits, FCC licenses granted in the USA still apply. (*ARRL Letter*, 05/23/88)

Use of Single Sideband Suppressed Carrier (J3E) emission in the entire 10.10 - 10.15 MHz band is requested in a petition filed at FCC by A.J. Sivo, W2FJ. He "... argues that amateurs are not using the 30M band to its fullest extent. He further requests '... in order to achieve full utilization of the 10.1 MHz band, that no sub-allocation of the various modes be made.'"

He refers to the 160M band as a successfully working precedent for operation in a band where no sub-allocation of the various emission modes has been made. "The FCC ... is requesting public comment on the proposal." Comments should refer to RM-6363. (*W5YI*, 05/15/88)

The definition of a frequency coordinator (Section 97.3(aa)) in the FCC rules should be changed to read: "An individual or organization selected in a regional area by owners or trustees of amateur repeaters, remote bases and auxiliary links, which recommends frequencies and, where necessary, associated operating and technical parameters ...," according to a petition filed at FCC by K.V. Pagel, N6BVU. He "... feels that recognition as a frequency coordinator should come solely from repeater/remote/auxiliary owners or trustees not users. ... users don't

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care about the coordination process," he argues. (W5YI Report, 05/15/88)

The recent grant of the special call sign GB2UP to the UoSAT DCE ground station by the United Kingdom "... allows U.S. AMSAT packeteers to take advantage of the limited third-party agreement in effect between the USA and the United Kingdom.

"The treaty agreement allows third-party traffic to be passed to or from U.K. stations using call sign prefix 'GB', except those with GB3." (W5YI Report, 05/15/88)

"The ARRL/VEC has received notification that the FCC voided the upgrades of 23 amateurs in the New York City area. The session in question was administered by the ARRL/VEC in January 1986, and has been under investigation by both the FCC and the ARRL/VEC for irregularities. The VEC Liaison Team was discredited in November 1986 for irregularities detected in several sessions that year.

"Each individual's license class (if any) reverts to the class that he or she held prior to the test. The individuals are still eligible to apply for upgrades.

The action came as a surprise, as there had been no communication concerning this investigation from the FCC in nearly 18 months." (ARRL Letter, 05/13/88)

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44,617	Extra	44,819
98,505	Advanced	98,403
113,900	General	113,623
95,256	Technician	95,810
82,705	Novice	82,780
434,983	Totals	435,435

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220 MHz		
FT-33R, mini HT	TBA	Call \$
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FT-311 RM Mobile	499.95	Call \$
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IC-751A Gen. Cvg Xcvr	1699.00	Call \$
IC-575A 10m/6m Xcvr	1399.00	Call \$
IC-2GAT Handheld	429.95	Call \$
Receivers		
IC-R7000 25-1300 + MHz Rcvr	1199.00	Call \$
IC-R71A 100 kHz-30 MHz Rcvr	999.00	Call \$
VHF		
IC-228A New 25w Mobile	509.00	Call \$
IC-228H New 45w Mobile	539.00	Call \$
IC-275A All Mode Base w/PS	1299.00	Call \$
IC-275H All Mode Base 100w	1399.00	Call \$
IC-28A FM Mobile 25w	469.00	Call \$
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UHF		
IC-475A All Mode 25w	1399.00	Call \$
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IC-38A 25w FM Xcvr	489.00	Call \$
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TS-140S Compact, Gen. Cvg Xcvr	929.95	Call \$
TS-680S HF Plus 6m Xcvr	1099.95	Call \$
TL-922A HF Amp	1649.95	Call \$
Receivers		
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VHF		
TS-711A All Mode Base 25w	1029.95	Call \$
TR-751A All Mode Mobile 25w	649.95	Call \$
TM-221A Compact FM 45w	439.95	Call \$
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TH-415A 2.5w 440 HT	399.95	Call \$
TH-45AT 5w Pocket HT NEW	369.95	Call \$
TW-4100A, 2m/70cm FM	599.95	Call \$
TH-55 AT 1.2 GHz HT	TBA	Call \$
TR-50 1w 1.2GHz FM	629.95	Call \$
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p/r = pre-registered

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Alaska				Maryland			
Aug 3	Anchorage	KL7HFQ (907) 243-2221	w/i	Aug 13	Frederick	N3RO (301) 845-2670	ltd. w/i
Aug 6	Fairbanks	AL7IF (907) 474-0842	w/i	Aug 18	Towson	Ron Derencz (301) 765-2843	w/i
Aug 6	Juneau	KL7KD (907) 789-0292	w/i	Massachusetts			
Aug 17	Eagle River	KL7HFQ (907) 243-2221	w/i	Aug 20	Wellesley	ND1Z (508) 533-6822	p/r by 8/13
Arizona				Oct 1	Boxboro	KA1AE (617) 887-2658	p/r by 9/1; some w/i
Aug 20	Prescott	WC7R (602) 445-1465	30-day p/r	Michigan			
Aug 27	Tucson	W0YOY (602) 297-5885	30-day p/r	Aug 7	South Haven	WD8AGC/WD8MEU (616) 637-3905	w/i
Sept 17	Scottsdale	N7JOR (602) 952-9596	30-day p/r	Minnesota			
California				Aug 6	Duluth	KA0SYN (218) 879-4010	w/i OK
Aug 6	Burbank	W6JEP (818) 848-9340	w/i OK	Aug 14	St. Cloud Hmfst.	N0GNN (612) 252-0783	w/i OK
Aug 6	Van Nuys	N6LGO (818) 988-7165	p/r; ltd. w/i	Missouri			
Aug 7	Chico	W6YKU (916) 342-1180	p/r pref	Aug 23	St. Charles	NF0Q (314) 946-0948	w/i only
Aug 7	Pleasant Hill	WX6A (408) 255-9000	w/i only	Nevada			
Aug 13	Camarillo	N6SR (805) 484-4461	w/i only	Aug 13	Las Vegas	NK7N (408) 255-9000	w/i only
Aug 13	Downey	K6OWA (213) 869-6683	w/i OK	Aug 20	Reno	K7HRW (702) 972-3933	30-day p/r
Aug 13	Los Altos Hills	KG6XF (408) 255-9000	w/i OK	New Jersey			
Aug 17	Eureka	KB6FIW (707) 442-9245	w/i	Aug 6	Alpine	NZ2T (201) 348-0575	w/i OK
Aug 18	Fountain Valley	N6ISY (714) 775-6095	w/i only	Aug 13	Cranford	N2XJ (201) 635-7686	w/i OK
Aug 20	Huntington Beach	KD6DA (213) 691-1514	w/i OK	Aug 18	Bellmawr	WA2VQG (609) 546-7710	w/i OK
Aug 21	Hanford	KB6FUA (209) 924-2838	w/i	New York			
Aug 21	Sunnyvale	W6NLG (408) 255-9000	w/i only	Aug 6	Bethpage	W2QUV (516) 354-6861	w/i OK
Aug 25	Long Beach	KA6HOQ (714) 897-6331	w/i OK	Aug 13	Greenvale	W2NL (516) 541-2450	w/i OK
Colorado				Aug 13	Selden	George Sintchek (516) 751-0894	w/i OK
Aug 13	Denver	W0IJR (303) 366-9689	p/r pref	Aug 28	N. Babylon	W2DUK (516) 957-5287	w/i OK
Aug 13	Pueblo	WB0YES (303) 948-2291	30-day p/r; ltd. w/i	North Carolina			
Aug 20	Estes Park	WB0NUL (303) 988-7222	p/r pref	Aug 13	Raleigh	WM4P (919) 834-5001	
Aug 20	Huntington Beach	KD6DA (213) 691-1514	w/i OK	Oregon			
Connecticut				Aug 6	Portland	Randy (503) 649-5066	w/i only
Aug 13	Stamford	N1AWJ (203) 438-7889	p/r pref	Pennsylvania			
Aug 27	Gales Ferry	KY1F (203) 536-0187	w/i OK	Aug 6	Erie	W3CG (814) 665-9124	w/i OK
Delaware				Aug 7	West Mifflin	KQ3W (412) 466-5204	2-day p/r
Aug 20	Wilmington	AWARE, 3208 Concord Pike, 19803	w/i OK	Sept 17	Beaver County	KF3V (412) 843-6560	30-day p/r
Florida				Sept 17	McKeesport	KQ3W (412) 466-5204	30-day p/r
Aug 2	New Port Richey	AA4FG (813) 849-1224	w/i OK	South Carolina			
Aug 6	Jacksonville	W4PTT (904) 781-0972	w/i only	Aug 20	Columbia	N4WR (803) 345-3373	w/i OK
Aug 8	Ocala	NT4B (904) 237-5783	w/i	Tennessee			
Aug 18	Pensacola	AA4W (904) 968-6499	w/i OK	Aug 20	Memphis	WD4LFD (901) 386-4375	2-day p/r
Aug 20	Melbourne	N4FUY (407) 768-0888	w/i OK	Texas			
Guam				Aug 6	Austin	KF5NB (512) 272-8233	w/i
Aug 14	Windward Hill	AH2S (671) 646-7611	p/r; some w/i	Aug 8	Brady	WD5H (915) 597-2561	7-day p/r
Illinois				Aug 13	Midland	KT5G (915) 694-9450	w/i OK
Aug 3	Granite City	N9MX (618) 344-8164	w/i OK	Aug 13	San Antonio	NS51 (512) 681-0702	w/i
Aug 10	Leonore	Don Selbrede (815) 223-2848	w/i OK	Virginia			
Aug 13	Belleville	WA0LIS (618) 397-7235	w/i OK	Aug 7	Berryville	NC4B (703) 869-5241	ltd. w/i
Aug 13	Decatur	Bill Lowe (217) 262-3327	w/i OK	Washington			
Aug 13	Dixon	KS9O (815) 652-4537	w/i OK	Aug 6	Seattle	W7JWJ (206) 523-9117	w/i OK
Aug 13	Oak Forest	NF9N (312) 448-9432	w/i OK	Aug 13	Everett	KK7M (206) 355-2141	w/i OK
Aug 20	Morton	Denny Chestney (309) 662-1230	w/i OK	Aug 20	Renton	WA7UVJ (206) 854-4031	w/i OK
Aug 25	Chicago	W9WBY (312) 929-6550	w/i OK	West Virginia			
Indiana				Aug 9	Fairmont	KU8C (304) 366-0132	7-day p/r; no w/i
Aug 6	Indianapolis	Louise Clark (317) 241-1272	w/i OK	Wisconsin			
Aug 6	La Porte	Allen Short (219) 326-6872	w/i OK	Sept 3	Racine	NW9P (414) 658-8390	30-day p/r
Aug 6	Muncie	Peggy Coulter (317) 288-0481	w/i OK				
Aug 6	South Bend	NI9Y (219) 255-4455	w/i OK				
Aug 13	Hammond	Mike Kasrich (219) 962-5512	w/i OK				
Aug 19	Evansville	Blanche Elpers (812) 424-9182	w/i OK				
Kansas							
Aug 27	Topeka	NQ0S (913) 273-3328	w/i OK				
Maine							
Aug 13	St. Albans Hmfst.	AK1W (207) 667-2198	w/i OK				
Aug 27	Bangor	K1AG (207) 947-4051	w/i OK				

MFJ TUNERS

The world's most popular 3 KW roller inductor tuner with cross-needle meter gives you the widest range matching network available for coax, balanced lines and random wires *plus* you get antenna switch, dummy load and balun - all at a super price . . .

The MFJ-989B is a compact 3 KW PEP roller inductor tuner with lighted Cross-Needle SWR/Wattmeter that handles the highest power of any MFJ tuner! Its roller inductor allows you to get your SWR down to the absolute minimum. And you get other outstanding features like an antenna switch, dummy load, balun and more -- all at an outstanding price.

At only 10 3/4 x 4 1/2 x 15, the MFJ-989B matches the new, smaller rigs.

Why can you get your SWR down to minimum every time? Because the MFJ-989B has a roller inductor with 3-digit turns counter plus a spinner



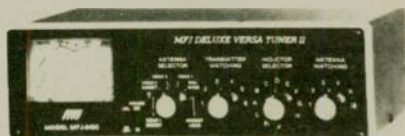
MFJ-989B \$349⁹⁵

knob for precise inductance control! And because it has the widest range matching network available for coax, balanced lines and random wires. And it covers 1.8 to 30 MHz continuously.

The MFJ-989B's 2-color, lighted Cross-Needle Meter not only gives you SWR automatically with no controls to set but also forward and reflected power at a glance!

Plus . . . 6-position antenna switch, 50 ohm dummy load, 4:1 balun for balanced lines, ceramic feed-through, and flip-stand for easy viewing. Meter light requires 12 V.

MFJ's Best VERSA TUNER II



MFJ's all-in-one Deluxe Versa Tuner MFJ-949C II gives you a clutter-free shack and \$149⁹⁵ all the features you could ever want at a super price. Here's what you get: coax/balanced line/random wire 300 watt tuner for 1.8-30 MHz, Cross-Needle SWR/Wattmeter, 50 ohm dummy load, 4:1 balun and 6-position antenna switch . . . all in a compact 10x3x7 inch cabinet that matches the smaller new rigs.

You can tune out SWR on dipoles, vees, long wires, verticals, whips, beams and quads.

A lighted Cross-Needle meter gives you SWR, forward and reflected power -- all at a glance. A 6-position antenna switch lets you select 2 coax lines, direct or through tuner, random wire/balanced line and dummy load. 1000 volt capacitors, efficient airwound inductor, heavy duty switches.

MFJ's smallest VERSA TUNER

MFJ-901B \$59⁹⁵

The MFJ-901B is our smallest -- 5x2x6 inches -- (and most affordable) 200 watt PEP Versa tuner -- when both your space and your budget is limited. Matches dipoles, vees, random wires, verticals, mobile whips, beams, balanced and coax lines continuously 1.8-30 MHz. Excellent for matching solid state rigs to linears. Efficient airwound inductor. 4:1 balun.

144/220 MHz VHF TUNERS

MFJ-920 \$49⁹⁵

MFJ-921 \$69⁹⁵

MFJ's newest VHF tuners cover both 2 Meters and the new Novice 220 MHz bands. They handle 300 watts PEP and match a wide range of impedances for coax fed antennas. MFJ-921 has SWR/Wattmeter.



MFJ's Fastest Selling TUNER



The MFJ-941D is MFJ's best selling MFJ-941D 300 W PEP antenna tuner! Why? \$99⁹⁵ Because it has more features than tuners costing much more and it matches everything continuously from 1.8-30 MHz. It matches dipoles, vees, verticals, mobile whips, random wires, balanced and coax lines.

SWR/Wattmeter reads forward/reflected power in 30 and 300 watt ranges. Antenna switch selects 2 coax lines, direct or through tuner, random wire/balanced line or tuner bypass. Efficient airwound inductor gives lower losses and more watts out. Has 4:1 balun. 1000 V capacitors. 11x3x7 inches.

MFJ's Mobile TUNER



MFJ-945C \$79⁹⁵

Don't leave home without this mobile tuner! Have an uninterrupted trip as the MFJ-945C extends your antenna bandwidth and eliminates the need to stop, go outside and readjust your mobile whip.

You can operate anywhere in a band and get low SWR. You'll get maximum power out of your solid state or tube rig and it'll run cooler and last longer.

Small 8x2x6 inches uses little room. SWR/Wattmeter and convenient placement of controls make tuning fast and easy while in motion. 300 watts PEP output, efficient airwound inductor, 1000 volt capacitors. Mobile mount, MFJ-20, \$3.00.

2 KW COAX SWITCHES

MFJ-1702 \$19⁹⁵
MFJ-1701, \$29⁹⁵
60 dB isolation at 450 MHz. Less than .2 dB loss. SWR below 1:1.2.

6-positions. Unused positions grounded. For desk or wall mount.



MFJ-1701



MFJ's 1.5 KW VERSA TUNER III



The MFJ-962B lets you use your barefoot rig now and have the capacity to add up to a 1500 watts PEP linear amplifier later. Its small size -- 10 3/4 x 4 1/2 x 15 inches -- matches the new compact rigs.

A lighted Cross-Needle SWR/Wattmeter makes tuning a snap and gives you SWR, forward and reflected power -- all at a glance.

6-position antenna switch handles 2 coax lines, direct or through tuner, wire and balanced lines. 4:1 balun, efficient airwound inductor with heavy duty ceramic switch, 6 KV capacitors. Flip-stand tilts tuner for easy viewing.

MFJ's Random Wire TUNER

MFJ-16010 \$39⁹⁵

You can operate all bands anywhere with any transceiver when you let the MFJ-16010 turn any random wire into a transmitting antenna. Great for apartment, motel, camping operation. Tunes 1.8-30 MHz. Handles 200 watts. Ultra compact 2x3x4 in.



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\$79⁹⁵ MFJ-931

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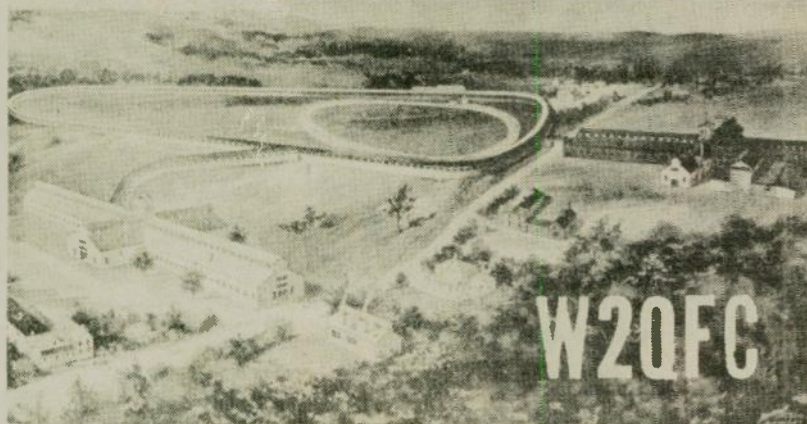
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Racing Day

The Pioneer Radio Operators Society (PROS) will operate W2QFC in the East Aurora, New York Village Park, center of activities for the 15th Annual "Racing Day" — July 31. The community annually celebrates its heritage as a turn-of-the-century trotting horse mecca.

Frequencies: 3935, 7235 and 14235 kHz from 10 a.m. to 5 p.m. EDST. Special picture QSL via SASE sent to: Don Wagner, W2QFC, 308 Parkdale Ave., East Aurora, NY 14052-1619. □

EAA Fly-in/convention

The Fox Cities ARC will once again sponsor a special event station at the annual Experimental Aircraft Association Fly-In and Convention, scheduled for July 30, in Oshkosh, Wisconsin.

The FCARC is based in Appleton, Wisconsin and has operated the special event station at the EAA convention for the past three years. This station will operate using the club call, W9ZL, and plans to operate on or near 14.293 and 7.243 MHz. They will operate on other bands as conditions and operators permit.

Special certificates will be issued for working W9ZL during the EAA convention. QSL to K9DHR, 264 Evergreen Dr., Kaukauna, WI 54130. Send either a large SASE or \$1, and the club will supply the envelope. □

Summer Outing

The Detroit (Michigan) Arsenal, U.S. Army Tank-Automotive Command (TACOM) will hold its annual Summer Outing on July 30. The TACOM ARC will be operating a special event station from a tent on the main midway.

Operation will be from 1400Z to 2100Z on 146.55, 7.275, 14.325, 21.325 and 28.325 MHz.

For 8x11 QSL certificate, send self-addressed stamped envelope (SASE) to the following address: U.S. Army Tank-Automotive Command, ATTN: AMSTA-CG CPT Ifflander, Warren, MI 48397-5000. □

Revolving Door Day

The Warminster ARC will operate station WA3DFU from 1400Z to 2200Z (longer if operators permit), on August 6 and 7, in commemoration of the 100th anniversary of Revolving Door Day.

"The revolving door, a device that was useful in preventing large quantities of cold air from entering public buildings in winter, was patented by Theophilus Van Kannel of Philadelphia on August 7, 1888. — *Peter's Almanac*; by Dr. Laurence J. Peter, author of *The Peter Principle*.

Frequencies: 3.885, 7.26, 14.26, 21.335 and 28.335. Local contacts may be made on 146.55 simplex. For certificate, send QSL and SASE to WARC, 136 DeHaven Ave., Pennel, PA 19047. □


Smith Island

The Nanticoke ARC of Seaford, Delaware will operate a special event station from Smith Island, Maryland from 1800, August 5, to 1800, August 7.

This three-day operation will have three transmitters in operation on 80 through 10M, phone and CW. CW — around 40 kHz up from bottom of each band; Phone — around 3860, 7260, 14260, 21360 and 28460. The station call will be KW3Z, and the QSL manager is K3TLG. SAE and IRC's for DX and SASE for U.S. gets direct return; others via bureau.

This operation qualifies for Zone NA-83 for Islands on the Air (IOTA) awards.

Smith Island is the most remote and distinctive of all the Maryland Islands in the Chesapeake Bay. It was named for Captain John Smith, who explored the Bay in 1608. Smith Island is actually a compact group of islands ex-



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tending about 8 miles north and south, 4 miles east and west. Nearly all of the land is salt marsh or meadow. Elevation is 2' above sea level. The population is approximately 750.

To the best of our knowledge, the KW3Z operation in July of 1987 was the first amateur activity from this island. This expedition will represent the second. The station location will again be from the Ewell Volunteer Fire Company quarters. The Nanticoke ARC is indebted to the fire company for the use of these facilities. □

Reefton Electrical Centennial

In honor of the first town in the Southern Hemisphere to be reticulated with electric power — Reefton, New Zealand — a special event station will be operated. Operation will last from August 1 to August 6. Call sign will be ZL6REC.

The station will be set up in a large empty shop on the main street (Broadway) of Reefton, a small town of 1,500 people on the South Island of New Zealand, about 50 miles inland from Westport and Greymouth.

Bands operated will be 80 and 40M, as conditions permit, throughout each day. Also 20M (near 14.250, if possible) — phone and possibly some CW. A VHF group hopes to do a static display and some communications via satellite. The group also plans to have window displays of vintage radio. Visiting amateurs are welcome to assist with the operation.

A special QSL is being produced and will be sent via the bureau to all contacts logged. (County Hunters' Note: Inangahua County) **PLEASE DO NOT SEND QSL IN REPLY.** For more information, contact Dave Oates, ZL3MF, P.O. Box 20, Westport 7600, NEW ZEALAND. □

Mount Davis

The Somerset County ARC will operate NI3D the weekend of August 13-14, from the top of Mount Davis — the highest point in Pennsylvania. Operation will be in the lower 25 kHz of each of the General phone bands, as conditions permit.

For special QSL, send an SASE to Ernest Gelpi, NI3D, RD 2 Box 71, Somerset, PA 15501. □

USS Ling submarine

The Bergen ARA will operate NK2K aboard the *USS Ling* submarine, from 1400Z to 2000Z, August 11-14, to commemorate the 25th anniversary of BARA. Operation will be on the General portion of the 80-10M bands.

For certificate, send QSL and #10 SASE, or for unfolded, a 9x12 SASE to: Warren Hager, K2UFM, 31 Forest Dr., Hillsdale, NJ 07642. PLUS, work any of our club members under their own calls after 2000Z and get a regular certificate. QSL and SASE to the station worked via Callbook. □

Bill Baird Festival

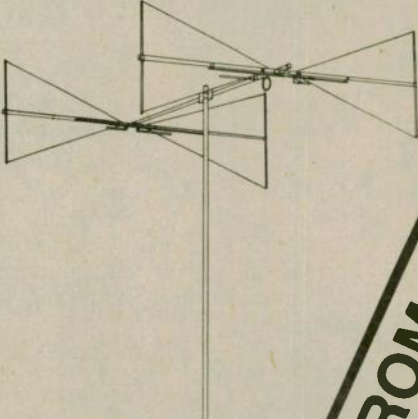
A celebration by the hometown people honoring the world-famous puppeteer, Bill Baird, will be held in Mason City, Iowa. In order to help celebrate, the North Iowa ARC will sponsor a special event station August 20-21,

using W0QZP for the call. Suggested frequencies will be 7235 and 14235.

A specially crafted certificate will be awarded to stations worked and may be secured by sending a QSL and a #10 SASE to W0QZP, 2911 N. Carolina Ave., Mason City, IA 50401. □

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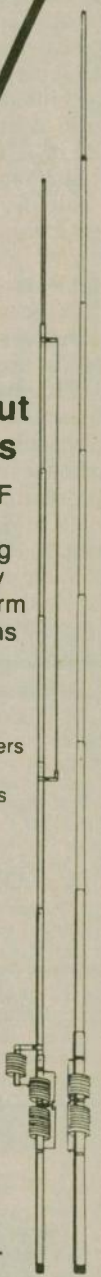
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Seward House Museum

On Saturday, August 27, the Auburn ARA will operate a special event station from 9 a.m. to 5 p.m. The station's location will be the William H. Seward Mansion (now the William H. Seward House Museum), using the call N2DTG. *Frequencies:* lower portions of 20 and 40M, CW and phone bands.

Send QSL and #10 SASE to either N2DTG, 114 Dunning Ave., Auburn, NY 13021; or N2DTG, c/o Auburn ARA, P.O. Box 427, Auburn, NY 13021. □

Jumping Frog Jubilee

Dorothy Cox, WB6IFL

The Calaveras ARS manned special event station WA6YGA, in conjunction with the Jumping Frog Jubilee and Calaveras County Fair in the Sierra foothills of Northern California.

Radio contacts were made May 21 and 22 in 49 states, and in Canada, Japan, Lithuania, Mexico, Nova Scotia and Saipan. A total of 538 contacts were made. Special certificates commemorating the Frog Jump and Fair will be sent to each station contacted which requests one: CARS, Box 122, San Andreas, CA 95249.

CARS President, Dorothy Cox, KB6IFL, expressed her appreciation to the amateurs who worked the station, reaching out to the world.

Amateurs who manned the special event station were: Tom Costanza, WA6CYI; Hal Farr, WQ6H; his XYL Charlotte, N6NML, and son Tom, WJ6O. □

ESTABLISH A HAM TESTING CENTER IN YOUR AREA

As of 1984, all ham radio license testing is handled by the amateur radio community itself. Teams of three Extra Class volunteer examiners (VE's) can now conduct all ham license upgrade examinations.

W5YI-VEC, the initial national VE Coordinator approved by the FCC, oversees the largest alternative (to the ARRL) testing program in the U.S. You can be a part of it by following the simple testing instructions provided.

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Let's get Amateur Radio growing again!

Mexico hams convene

The Radio Club of Colima, Mexico is sponsoring the 1988 Convention of the Asociacion de Radio Aficionados de la Republica Mexicana. The event takes place July 14-16 in Colima.

The sponsoring organization is extending an open invitation to all U.S. radio amateurs to attend and take part in this event. For further information, write to E.C. Guerra, XE1ANU, Cristobal Colon #13, Villa de Alvarez, Colima, Col. MEXICO 28950. — *Westlink Report*

The Asociacion de Radioaficionados de la Republica Mexicana held its first anniversary convention in Hermosillo Sonora, Mexico recently.

Eladio Alvarez, Director General of ARRM, presented the goals of ARRM which included establishing an emergency 2M network throughout Mexico. To encourage new amateurs, ARRM plans to offer license training. Amateur Radio examinations in Mexico are essay type and extremely difficult, calling for verbatim recall of the various regulations by number! — *W5YI Report* □

MARCO nets

MARCO, the Medical Amateur Radio Council Ltd., operates daily and weekend nets for medically oriented amateurs. Presently, over 550 doctors, nurses, dentists, veterinarians, physiotherapists and lab technicians are members.

For more information, write to MARCO, P.O. Box 73's, Acme, PA 15610. — *Westlink Report* □

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— See page 9

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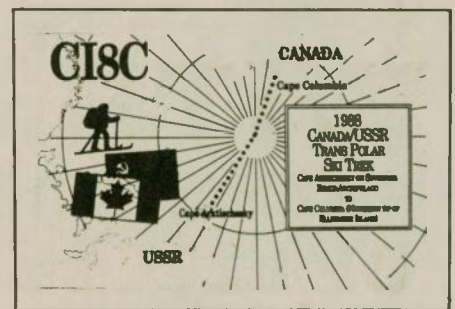
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SKITREK ends

At 1435 UTC on June 1, the 13 Soviet and Canadian skiers completed their 90-day, 2000 km journey from Cape Arctic in the Soviet Union, via the North Pole, to Ward Hunt Island in Canada. They were all in good health and walked ashore, alongside one another in one line, personifying the spirit of cooperation between the two groups, which has made it possible to complete this first-time crossing of the Arctic from Russia to Canada.

Word of their safe arrival was passed from the expedition by Amateur Radio to the Canadian base station CI8C at Resolute Bay, which then relayed the good news to Ottawa, Moscow and the other participating stations of the Polar Bridge Amateur Radio network.

This has been very much a team operation, with the Amateur Radio component providing the safety and housekeeping lifeline for the skiers.

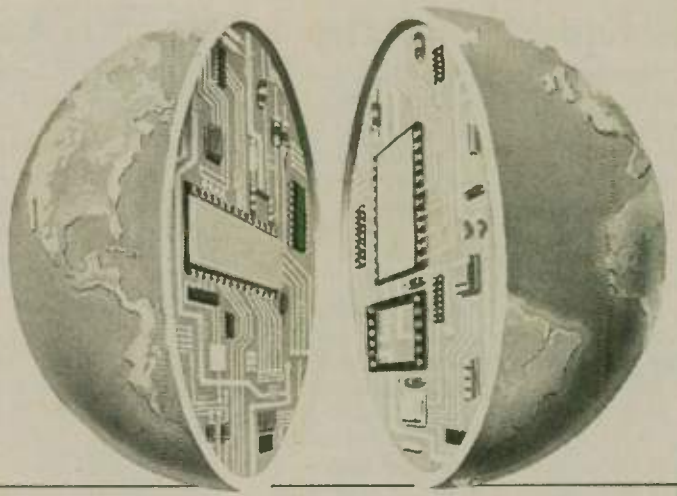
From the Amateur Radio standpoint, with the exception of a loss due to an opening in the ice, of all of the Canadian ICOM equipment being used by Barry Garratt, 4K0DX, at North Pole 28 (the floating Soviet ice station near the North Pole), the complete communications system worked extremely well. It was a tribute to the dedication of the team of amateurs who worked for over three months in support of the expedition.

Sincere congratulations to Dr. Dmitry Shparo, UA3AJH, Chief of the expedition, and his four Canadian and eight Soviet companions on their impressive achievement. Amateur Radio operators are proud and pleased to have been a part of this most exciting enterprise. □

New DXCC country

The DXAC is considering the reinstatement of Okino Torishima 7J as a DXCC country. The League stretched the DXCC rules to make it a "country" in 1976 in order to obtain JARL/Japanese support at WARC79. Its DXCC country status was deleted after WARC-79. — *W5YI Report* □

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DXpeditions

The first five DXpeditions listed here were reported on by Pete Onigian, W6QEU. The latter two are by John Minke, N6JM. The scene was the 39th Annual International DX Convention in Visalia, April 22-24.

Andaman Islands

Lying in the Bay of Bengal, this tropical Indian island is 13° above the equator between India and Burma. The Japanese invaded it during World War II and held it for a short time.

Mrs. Chitra Vidya Prakash, VU2-CVP, together with several other VU amateurs, launched a DXpedition to the Andaman Islands in late 1987. There are about 300 islands in the group, and Ross Island is the most developed. The operating sites were two tourist hotels, about 4 miles apart — one for CW and RTTY, and the other for SSB.

With stations in various hotel rooms, the operators had their own operating space, which reduced the confusion normally associated with multi-multi operation in one large room.

Although 160M was not possible, inverted Vees were used on 80 and 40M. The hotel building heights were ex-



Chitra Vidya Prakash, VU2CVP, presented the program about Andaman and Nicobar Islands DXpedition.

cellent for the tribanders and mono-banders. VU2GDT physically put up the antennas, including the beams, and was aided by the hotel staff.

About 12,500 CW contacts were made under the calls VU2DVP and VU2TS. On SSB there were about 13,000 Q's, and some 8,000 QSL cards have already been sent out, but 5,000 were to be sent out in May. Radioteletype was also used, contributing to the grand total of a bit over 31,500!

QRN level — typical of the tropical areas with large bodies of water — was at least S9 on 80M, said Chitra, so contacts on that band were limited to very strong signals.

This year the Southern California DX Club, sponsors of this International DX Convention, provided a large-screen TV projector. Chitra put this to good use as she brought a 30-minute videotape of their operation. It looked very real, and sounded even more realistic listening to the audio of calls from European, Japanese and American amateurs, one after the other on 20M, some on short path and others the long way around.

This presentation via video by Chitra was most interesting as the tape also included a tour of the lush tropical Ross Island and the island of Port Blair.

For those who have not worked the

Andaman Islands, DXpeditions will be going there as the Indian government is turning these islands into vacation resorts. So there will be many more DXpeditions soon, and perhaps a resident amateur in the not-too-distant future.

The Colvins

This husband-and-wife Yasme DX team never fail to surprise their many fans at the DX Convention. They brought their friends up to date on several past Yasme-sponsored DXpeditions. Speaking to a Friday night standing-room-only crowd, Lloyd Colvin, W6KG, described their last trip, after returning two weeks previously from the People's Republic of China.

Lloyd stated that 77 Yasme 60 awards have been given out to amateurs who worked 60 or more Yasme-sponsored DXpeditions.

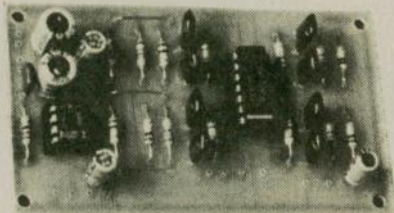
Iris Colvin, W6QL, said they were invited by the King of Nepal to visit Nepal and celebrate the King's birthday, in December 1987. Lloyd and Iris operated from Katmandu's best hotel. They received the first license issued by the government of Nepal to a non-resident in 33 years! Just after the Colvins got theirs, another was issued to a group of Japanese amateurs in late 1987.

Unable to get an amateur license from Burma, Bangladesh, Bhutan or Thailand, the Colvins traveled to Sri Lanka, where they were helped in securing operating permits by 4S7EI and 4S7AVR. Local TV had a clip of their amateur operation. As invited guests, the Colvins appeared before the Amateur Radio Club of Sri Lanka.

Having applied for a license in 1987, they were able to get their ticket in March of this year from the Ministry of Communications in Sri Lanka. "You can't go into Sri Lanka and get a license," said Lloyd, due to internal

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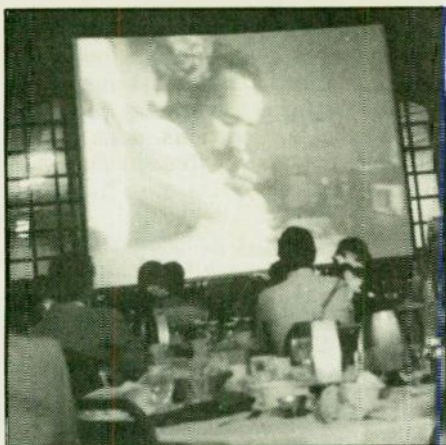
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Jackie Calvo, F2CW, dressed up in the garb of the UAE to spin the tales of the A61AB operation.



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conflicts and other problems there. At least one year is required.

The Colvin talk was, as always, combined with beautiful color slides and narration by both Lloyd and Iris of their antenna installations and operating positions, plus the local hams who helped them get on the air.

Galapagos Islands

Operating in the 1987 World Wide DX Contest, Terry Dubson, W6MKB, described in great detail the HC8DX operation, in which the group made more than 15,600 contacts.

DX Conventioneers were able to see slides of the Galapagos Islands not seen before on Public TV or National Geographic specials. Dubson indicated there were no telephones on the biggest island in the group, San Cristobal, but there is radio-telephone, so the locals are very familiar with radio communications.

The HC8DX operation took place on the highest point on San Cristobal Island, which was reached with chains on a truck, loaded down with radio equipment, housing items and about eight 45' telephone poles! A permanent building from an abandoned farm provided the operation shelter from the very wet weather. Monobanders were used on 10, 15 and 20M, plus a 2-element 40M beam. Dipoles for 80 and 160M completed the 5-band operation.

Jack Summers, N6BI, and Dick Norton, N6AA were among the operators in this multi-multi operation. To cut down the tropical static, Beverage antennas over 1,000' long

were used for receiving on 80 and 160M. Dubson indicated the QRM due to tropical QRM as usually about 40dB over S9 on the dipole transmitting antennas, but the Beverages were very useful in cutting this down to about S3 to S4.

Interestingly, 20M was operated around the clock as there was always some direction where a short path was open. Thus, hundreds of contacts were made to Europe or Japan since propagation was excellent.

The peak contact hour was reached on 15M where 279 Q's were made in 60 minutes, with nearly all of the contacts being made with Japan. This

operation finished the 87 World Wide in third place with 33.9 million points!

Ethiopia

It may be come time before another DXpedition goes into this Communist country, as Jin Fugiwara, JF1IST, did several months ago. Fugiwara operated as ET3JIN, using the government radio antenna facilities.

A conical monopole (vertical) all-band antenna was used for the amateur bands, where more than 10,000 contacts were made over a three-month period. But due to propagation, less than 500 were with U.S. hams. The ET3JIN operation took



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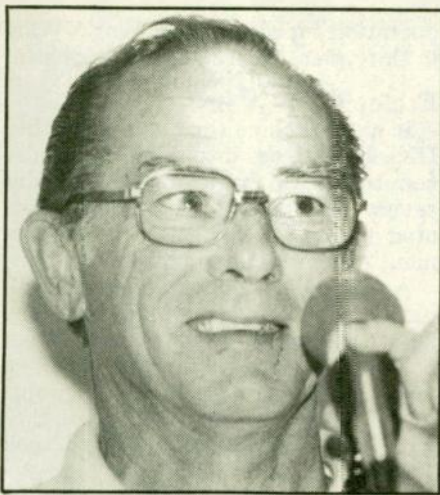
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Ron Wright, ZL1AMO, again returned to the DX Convention — this time to tell about Auckland Island.

place during the first three months of this year.

Market Reef

A large group of rocks, 900' x 300' in overall size, with one lighthouse plus a power and storehouse building, best describes this island. It is located north of Finland, and is administered jointly by Finland and Sweden.

It's a difficult place to get to. Due to very rough seas and poor water landing positions, the journey to Market Reef was made with a helicopter. Three trips from Brando Island to Market Reef were necessary, costing more than \$3,000.

The operation took place January 27-31 of this year, with John Crovelli, W2GD, who proved that there are rock—big ones—at Market Reef, and not coral! This rare one aided by a gang of Finnish amateurs put in a 160M operation, along with the usual higher frequency bands. More than 200 stateside QSO's were also made from Brando Island by W2GD/OH0.

The 100-year-old lighthouse provid-

ed the operating room for OH0MB where a total of 1,800 contacts were made over an 87-hour period. This DXpedition furnished a new country contact on 160M to many who took part in the last World Wide DX Contest.

Auckland Island

A regular visitor to the Visalia convention was Ron Wright, ZL1AMO. Many DXers will remember Ron being inducted into CQ's DX Hall of Fame for his efforts from past DXpeditions. This time it was Auckland Island, another DXpedition earlier this year.

"Hi everybody," were Ron's first remarks, as he has surely worked everybody from one of his past operations. The DXpedition, assisted by Rolly Runciman, ZL1BQD, and Wayne Mills, N7NG, using the respective calls ZL9AMO, ZL9BQD and ZL0AFZ/ZL9.

Ron presented the group with a fine selection of slides taken from their Enderby Island location, reached by a 60' fishing boat. During their 10-day visit the team made about 20,000 contacts. Included with the team were two non-amateurs, Graham Taylor and a YL.

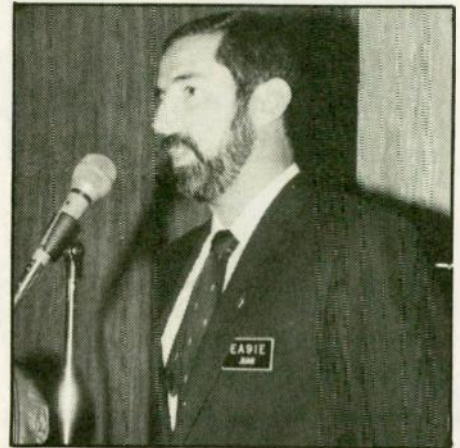
Ron also expressed his thanks to the Northern California DX Foundation, Yasmé Foundation, and various clubs and individuals—including Japan and Europe—for their donations to help with the costs of the DXpedition.

The Western Sahara DXpedition

The banquet speaker at the Visalia convention was Martti Laine, OH2-BH, who spoke on the recent S0RASD DXpedition to the Western Sahara. Martti reported that they were not allowed to take pictures or videos of the operation, although they were able to put something together. He was approached by the Lynx DX Group some time ago to represent them in getting a new DXCC country organized.

Martti worked with Juan Rosales Fernandez, EA9IE, (also present) on the organization. Juan also said a few words and informed us that there was to be a DXpedition to Yemen the end of June. It is to last five to seven days with about five operators. The call is reported to be 4W0EA.

Martti was able to produce a video of the new country, which included



Juan Rosales, EA9IE, snapped quite a few heads at the banquet by announcing a DXpedition to YEMEN! (W6NLG photo)

some scenes of S0RASD. When this one came on the air, it was DXCC #319. The first W6 to work this station was Jim Rafferty, N6RJ.

Following Martti's presentation of Western Sahara, Hugh Allen awarded the pre-registration prize—a TS-940S, courtesy of Kenwood and Ham Radio Outlet—to Dennis Pickering WA6-RTC. The Henry 2K amplifier was won by Jack Hoffman, W6TVP, with U.S. Towers' MA40 rotatable mast won by Orson Just, K6JGV. Darryl Beckman, W6JII, received a certificate for 30% off on an ALPHA-80 amplifier, and Eimac 3CX800A7 tubes went to John Fisher, K2JF. A life subscription to CQ was won by Peter Dahl, K0BIT. □

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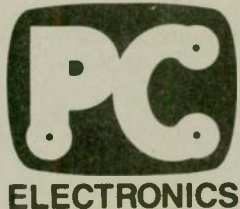
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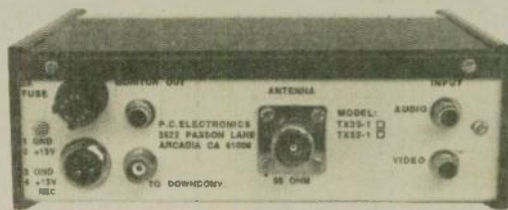
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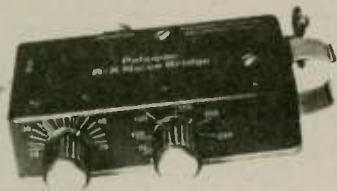
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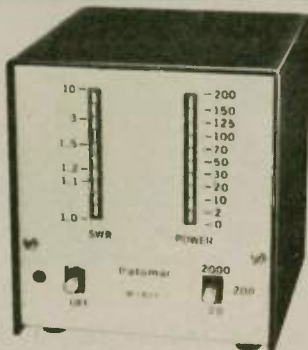


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FCC Forum

NORM BROOKS, K6FO

I look forward to the FCC Forum at Dayton each year, because it is such a pleasure to hear the FCC leadership tell us about "rules" in the Amateur Radio Service. I wish *EVERY* active amateur operator could come to Dayton, or some other major Amateur Radio convention, and hear John Johnston, W3BE, Chief of FCC's Personal Radio Branch speak about the "rules."

John always reminds us that his job is to administer Part 97 of the FCC rules. But he also says more than that. He wishes there were less rules, and he wishes that the Amateur Radio community would stop asking (and petitioning) for more rules!

At the FCC Forum at the Dayton Hamvention on Sunday, May 1, he introduced Ed Jacobs, the Engineering Assistant to the Chief of the Private Radio Bureau (PRB).

Ed has worked in the Field Operations Bureau, where he worked on enforcement for seven years, principally chasing CB'ers (laughter). He then transferred to the office of engineering and technology, working principally on international matters.

On December 9, 1987, Ralph Haller, N4RH, was made Chief of the PRB. Ralph is an Amateur Extra, and has been a ham since he was 10 years old. He came to Dayton five years ago to oversee the very first examinations put on by volunteer examiners.

Ray Kowalski, former chief of the Special Services Division and a regular visitor to the convention, has left the FCC to go into private practice. He has been replaced by Bob MacNamara. Bob sends his greetings and regrets he could not come to the

convention because of Navy Reserve duty. Maybe we'll see him next year.

The rules for the Amateur Service are Part 97. They are available to you in two forms.

The Government Printing Office version is in Code of Federal Regulations, Title 47. It is revised each October 1 and costs \$20. You get a lot of additional material besides the amateur rules. The other form is the FCC Rule Book, published by ARRL. This is the one we use because it is usually more current. It also gives a lot of policy that has developed over the years, that doesn't necessarily have to be in the rules.

Rules rewrite

On March 24, 1988, the FCC adopted a Notice of Proposed Rule Making to modernize the Amateur Radio Service rules. This is because modern technology has moved along so fast that it is difficult to apply the rules, as written, to modern practices. It is expected that the revision will reduce the total body of the rules by 40%.

The current rules were drafted prior to 1951, when the primary modes used by amateurs were AM phone and CW. Then, the term radio station envisioned racks of equipment, not the HT you can now put in your pocket. Over the years, as new modes came along, the rules followed with patchwork at best, using the antiquated rules structure.

Experimental service

In the United States, the FCC wants to encourage the experimental aspect of the Service. In Part 97, we try to avoid the "how to" rules, which characterize the rules of the other services we regulate.

For the Amateur Service, we will try to state simple basic requirements that each operator and station must observe. You take it from there, applying your own personal interests, your imagination and your technical skills.

We will start with the five statements that you once hated, and now you love, stating the fundamental purposes of the Service, such as serving the public during emergencies and natural disasters. It is also permissible to provide communications at public gatherings, where the public would be the main beneficiary, not the sponsor.

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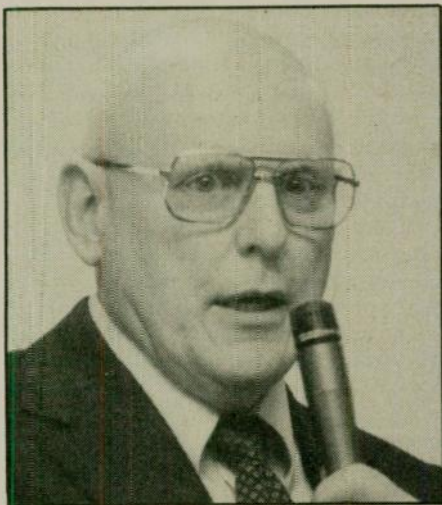
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John Johnston, W3BE, addressed several FCC-related topics at the FCC Forum in Dayton this year.

pretty confusing as a result of the 1979 WARC. Prior to that we had about 14 designators: A1, F1, etc. Now it looks like we have 1,300 designators.

As an example of how technology can change things, it was pointed out to me that it is currently illegal for you to use your computer to copy Morse code. Emission A1 is to be received by ear only!

We do not intend to go to greater specificity than to use terms you already use. We have CW, Phone CW, Phone, Image, RTTY, Data, Pulse, SS (Spread Spectrum) and Test.

Swap nets

We try to keep business communications out of the amateur bands. To say that you have a transmitter or receiver for sale is not considered a violation of the business communications rules. The new rules will state that equipment offered in swap nets must be for use in an amateur station by an amateur operator.

Comments on all this are due by August 31, with reply comments due October 31, 1988.

Docket 87-14

The date for comments on Docket 87-14 has passed. Everyone is frustrated because the future of the 1 1/4 M band is so uncertain. To compound the matter, a petition was filed to take 500 kHz for an interactive television system. There is no clue as to how this docket will come out.

A question was raised from the audience about the United Parcel Service filing on this docket six months after it had been closed. John just smiled,

Pass it on . . . WORLD RADIO

not replying to this comment.

Part 15 — "devices"

With new electronic technology, there are a lot of new devices being proposed to do a lot of wonderful things. Many of these devices use low-power radios. The trick is to call them "devices" rather than "transmitters." They fall under Part 15 of the Rules.

Part 15 started in the '30s, with the advent of the wireless record player. In this docket, the FCC proposes to get these devices organized into two broad categories, called "intentional" and "unintentional" radiators.

Intentional radiators would cover garage door openers, toy walkie-talkies, cordless telephones, etc. Unintentional radiators would cover such things as computers, VCR's, receivers and the like.

The proposal is to have a generalized set of frequency and distance rules for these devices. They would be permitted on just about any frequency except certain sensitive frequencies, such as those in the safety services. Amateurs have filed many comments.

Special call signs

PRB-3 has yet to be decided. This is the proposal to provide a way for you to get special call signs. It will be operated by the private sector. The FCC has not issued a special call sign for over 10 years. Last year we had to deny 246 separate requests for special call signs.

The plan is that all the present call signs will be frozen. We will discontinue call sign changes for any reason whatsoever. All new stations would get a 2x3 call sign with a prefix NA to NZ. All other call signs, all 12 million of them, will be made available to the Call Sign Coordinator to assign. If you got a special call sign, you would use either your FCC-issued 2x3 call sign, or your special call sign in identification procedure.

Thirteen organizations have expressed interest in being the coordinator.

Volunteer examiners

The VE system is functioning reasonably well. There are 61 regional Volunteer Examiner Coordinators, with 10,000 accredited VE's. They

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conducted 4,378 examination sessions last year. The VEC's are working together and getting good ideas from each other.

Unfortunately, there have been some instances where licenses have had to be pulled. Remember, when you sign the back of that 610 form, you are signing a legal certification. If you don't believe the exam was properly given, do not sign the form! The success of the system depends on you.

If you have information on improperly administered tests, give that info to the VEC. They can stop any more sessions where suspect VE's are involved, until the matter is resolved.

Packet

We continue to get inquiries about rules for packet, but rules have never been developed. We are waiting to hear from the amateur community on this. We won't do anything on packet until we hear from you.

Petitions

Each quarter we receive a half dozen or so new petitions for changes in Amateur Radio rules. We recently got one on a new subject, requesting that a time limit be placed on amateur informational bulletins. The proposer feels that such bulletins contribute to the congestion on the amateur bands.

We have always prohibited broadcasting on the amateur bands, but we make allowances for informational bulletins because they keep you informed about your service. Part 97 even goes so far as to allow WIAW to pay control operators to send these bulletins, and services like Westlink are covered, too.

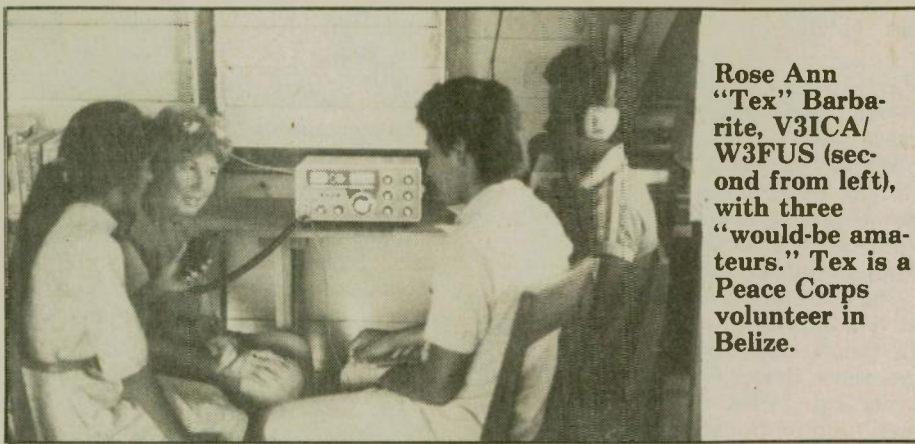
Most of the new petitions are denied because they cover a subject recently ruled on, or they fail to show that the proposed rule change is really needed.

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Rose Ann "Tex" Barbarite, V3ICA/W3FUS (second from left), with three "would-be amateurs." Tex is a Peace Corps volunteer in Belize.

Peace Corps volunteer teaches Radio in Belize

Rose Ann "Tex" Barbarite, V3ICA/W3FUS

In a country where hurricanes are a way of life, one would expect a dearth of ham activity in Belize. Not so . . . although there are not too many active, legal hams here.

Lack of equipment or parts — or even technicians — are some of the reasons. But their spirit is not lacking, and those who *are* active work twice as hard for what we take for granted in the States. When a rig here is down, there is usually no way to make repairs, so it sits until someone will take it out of the country for repairs.

I teach here at the technical high and started with four youngsters who wanted to learn Amateur Radio. It was after reading what Alan Kline, KB1DJ (former *TEACHER* columnist for *Worldradio*), wrote, that I decided to put aside Home Economics during lunch time and teach these kids code.

Only with the help of so many stateside is this possible. First of all, the International Mission Radio Association (IMRA) — via Warren Mulhall, WA2BPV — sent a rig. And how do you excite kids about Amateur Radio except with a chance to listen and talk?

Code practice oscillators came next.

Voice of America got one for me, and my son in Maryland put together a Heathkit and sent another.

Then there's Earl Rouse, W6ZZC — God bless him! He's sent code tapes, talked to these youngsters, sent some books and tools, and through him we've received many much-needed books. So you see, it's not really my project at all.

While talking with Earl, a ham in Morro Bay, California — Tony Lee, WB6PYD — read the mail and collected some ARRL books for us. Jules Wenglare, W6YO, made us a dipole and sent extra parts. A Costa Rica amateur, Wayne Hauser (of Visalia, California), TI2VOA, also helped ship books and made another antenna for us. We were on our way.

During this time, these students also had a chance to talk to John Efinger, WA4PFI, of Mobile, Alabama. He gave them a "lesson" over the air. Wish I could have taped that QSO. A Southern drawl, a Creole accent and two Spanish-speaking youngsters — it was hilarious!

Then there was Mac, N5DVY (now WS50), who asked to talk to them. These students have learned geography, communications, and to promote their own country. Mac was coming to Belize for a visit, so he got a bit of information from them about the cayes.

I was privileged to have an eyeball QSO with Mac when he came to Belize City airport and brought us a brand new Callbook. You see, books are just not available here, so I do make a big

thing of it, and am so grateful for all the amateurs who have helped us.

The students have made some visual aids using poster boards and colored pens. And one local active ham — Marcel Gabourel, V31CD — has asked to take over when I leave. He's doing a lot already.

Three more California radio amateurs who have helped are: Mort Brewer, W6JU; Ralph Agee, W6ZEK; and Alan Gil, W6LSU.

License requirements here are for only 5 wpm code, along with the technical questions. And by golly, the students have really got to have the proverbial "bug" to persevere under such adverse conditions. These kids have the guts to continue, though they know they will have trouble getting a rig of their own.

I am a Peace Corps volunteer. Our country director gave full approval for a transmitter here, but lately — for reasons which I'm sure are very valid — that approval was reversed. This is where Marcel will have to take over, unless I can convince the powers that be to let me continue.

Though my background is in electrical engineering, I teach Home Economics to third and fourth form girls, work with a youth group in town, and help with a project called "Help Aged." One fits in where needed and I love every minute of it. Wonderful country and super people. □

New Yorkers walk

Charles Salzman, WB2JQD

On Sunday, April 24, the New York March of Dimes celebrated its 50th anniversary by holding its annual walk-a-thon to help in the fight to prevent birth defects of the unborn and newborn.

Although the day proved cloudy with a chance of showers, over 20,000 people of all ages participated in this yearly function. Over \$2 million was raised and will go toward the March of Dimes' continuing effort to give the newborn a better chance for a healthy future.

The Hall of Science ARC, WB2JSM, provided checkpoint communication for this event, which consisted of a round-trip walk — a distance of 18.6 miles. All HOSARC members who participated were rewarded in knowing their efforts were well done and greatly appreciated. Charlie Becker, WA2JUI, HOSARC treasurer/secretary, did a fantastic job as control operator.

The event was a huge success, and the Hall of Science ARC is looking forward to again being part of this very special fund-raiser in 1989. □

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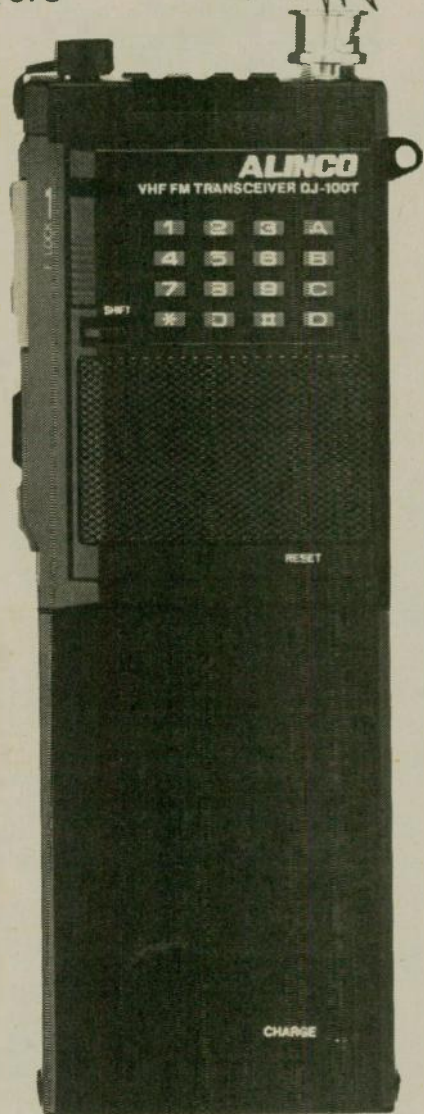
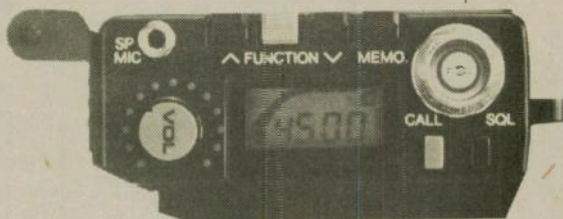
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Florida MCI is a success

Joseph Bushel, KI4BI

The sun was blazing, and it was an unusually warm day for late November — even for northern Florida. The change of command ceremony on the Navy base began, enhanced by the weather and good spirits of all involved. All told, 300 to 400 people were expected to crowd into the hangar for the ceremonies.

Five minutes after the start of the first speaker, a strange loud noise sounded from above the hangar. Moments later, the roof splintered into thousands of pieces and two helicopters crashed down onto the spectators.

This scenario set the stage for the largest mass casualty incident (MCI) ever for Duval County. Added to this, Clay County conducted a second simultaneous MCI involving approximately 40 additional injured from an explosion in a school. Involved were the public service agencies from two large northern Florida counties, as well as the U.S. Navy, the National Guard, the Red Cross, and in excess of 100 Amateur Radio operators from the ARES organizations of both counties.

The scene was set by the Navy, the amateurs and the Red Cross to test the capacity of the overall system. The "injured" were actually evacuated to all surrounding hospitals by both surface and air ambulances.

It is a pleasure to report that all phases stood up well to a very exacting test. It was apparent to all that Amateur Radio contributed greatly to the operation's success.

Duval County Emergency Coordinator (EC) Al Elmore, WA4RGO, and Clay County EC Russ Oder, N4KOX, spent many hours in the planning stages of this exercise, and their planning was apparent. Each EC functioned not only in their EC capacity, but also as county communications officers, and were responsible for the critique of the overall communications function.

It would be an impossible task to name all those who participated in this exercise and naming some would be unfair. The success of this MCI can be contributed to all equally. Technical innovations played a big role, however. Duval County covers approximately 840 square miles, making communications with a hand-held from the entire county nearly impossible. A portable repeater has been developed, utilizing some crossband techniques, which allowed full quieting copy with



Casualties await assistance and evacuation at an MCI last fall.

all hand-helds at the scene on *low power*.

Previous drills and close work with Red Cross, public safety and the hospitals have resulted in forms designed by the local hams to facilitate handling of hospital report traffic. Clay County EC N4KOX found this to be a bit cumbersome and resorted to using packet for these

types of transmissions. The packet unit, mounted in a pick-up truck, used many feet of paper but had "hard copy" on every hospital report sent.

While the drill was a success, everyone seemed to come up with some thought about how it could be done better. Everyone started thinking! Isn't that the purpose of such a drill? □

Hikers saved by hams twice in one day

Bob Jost, KB6BOK

A potentially dangerous situation, involving 20 students and 10 adults from Manchester (California) GATE School, was averted by emergency Amateur Radio communication on October 24.

A wrong turn on a three-hour hike in the Sierra Nevada Mountains placed the group several miles from their intended destination. A steady rainfall, heavy cloud cover and impending darkness added to the possibility of a cold, wet night on the trail.

Amateur Radio contact was established with Ed (WB6MCG) and Betty (WB6LYU) Peters on the 224.94 repeater by Bob Jost, KB6BOK, along for the hike as a parent chaperone. Ed and Betty contacted the park rangers to alert them about the group's location and to request assistance.

Dwindling batteries in Bob's hand-held reduced communications to listening to the ranger's instructions, relayed by Ed and Betty, and replying with one kerchunk for a yes and two kerchunks for a no. Voice contact with the ranger was established just as darkness fell.

The ranger, soon joined by another ranger, escorted the students to a parking area, and distributed blankets, warm drinks and reassurances. He then returned to the trail to guide two parents still on the trail to safety.

After being notified that the party was safe, the Peters' relayed the information back to Bob's family, who then contacted the other parents waiting at the school.

Ed and Betty got another chance to "save the day" when, on the way back to Fresno, one of the cars transporting the students hit a large rock that had fallen onto Highway 180. A crumpled fender and a flat tire halted the group for a second time. This time, when Betty called the 911 operator to report the road hazard to the CHP, the operator recognized her voice! Betty again relayed a message to the waiting parents. □

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RV park bans aeriels

I thought you might be interested in a recent experience I had on my trip to the California desert:

My wife and I left Earp, in the California desert on the Colorado River, and fought high winds against the side of the motor home all the way to our favorite resort in Palm Springs. We were anxious to arrive in time for our schedule with WD6EQQ and N6HSQ, so upon arriving, I quickly put my Spider antenna up on the roof rack of the RV and was all set for the schedules.

Shortly after erecting the antenna, I was informed that ham antennas were not allowed in The Desert Shadows RV Resort on Ramon Road in Palm Springs. I made it a point to talk with a member of the resort's Board of Directors to make sure they understood the recent legal decisions concerning ham antennas. Irvin Katz, the board member, freely admitted they would probably lose in court if I wanted to pursue the question legally.

Of course, as an "overnighter" in this RV park, I decided to only report my experience to Worldradio and write off Desert Shadows from my list of favorite RV parks.

TOM YORK, N6DFL
Carmichael, California

American Morse lives

The July '87 TRAFFIC column in Worldradio, concerning American Morse Code, was most interesting. Our club appreciates this publicity for the "Mother Tongue," as Brad Bennett, K4MR, styles it. The opinion that "it may still be in use somewhere" is valid, as this code is in use yet by some railroads in Mexico. How much longer it will last is uncertain.

I was bothered, however, by the assertion that space-letters in American Morse are an invitation to error and by the inference, in the statement "but it worked," that American Morse is inferior to International Morse.

Such statements stem, I fear, from a chip-on-the-shoulder attitude not uncommon in Amateur Radio when a comparison of the two codes is made. I say this as one who was first educated in International Code, then made his

living with American who has, since being licensed in 1957, practiced them both.

Properly sent, American Morse is crystal-clear, and no more prone to error than International. We frequently hear claims on the air like "My nag is Jimjim pd Q6 is Dbbeb ...", when "My name is Jim Jim and QTH is Tibbets" was intended. Poor sending corrupts either code equally, and the fault lies not with the devisers, but with the practitioners.

Those interested in the origins, uses, history and traditions of American Morse telegraphy (this is our principal focus — we are not just another radio sub-group, although over 500 members are radio amateurs) may wish to join the Morse Telegraph Club. A sample copy of our quarterly paper, *Dots & Dashes*, and an application are available from: A.J. Long, 520 W. Schwartz St., Salem, IL 62881.

BILL DUNBAR, AD9E
Normal, Illinois



Four of a kind

The state of Wisconsin allows Amateur Radio operators to license *all* automobiles owned with the same call plate. Many people in the state don't realize this is legal, especially those in law enforcement.

All four vehicles in the picture belong to me, and three of the four have permanently mounted 2M antennas.

This is the third state in which I've had call plates — all different calls, but the only one with multiple plates.

DAVID BOLAND, W9NWX
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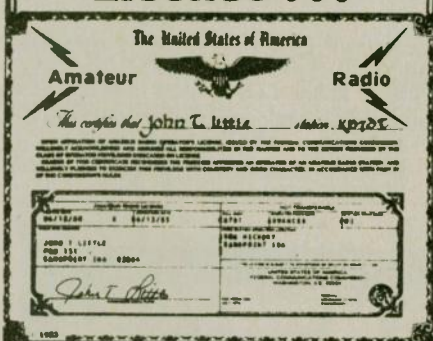
First things first. The first thing you must know about radio is how to work with it safely. It takes some of the joy out of life to be given a long list of cautions and taboos when you are starting out to do something that looked like so much fun. In keeping precautions to a minimum, they are directed toward three objectives:

THINK: a) preventing electric shocks, b) preventing falls while installing antennas, and c) preventing injury from tools such as *hot solder*.

All matter is composed of atoms, including you. Be careful, or you may soon learn how a light bulb or resistor dissipates heat.

— North Florida ARS, Jacksonville □

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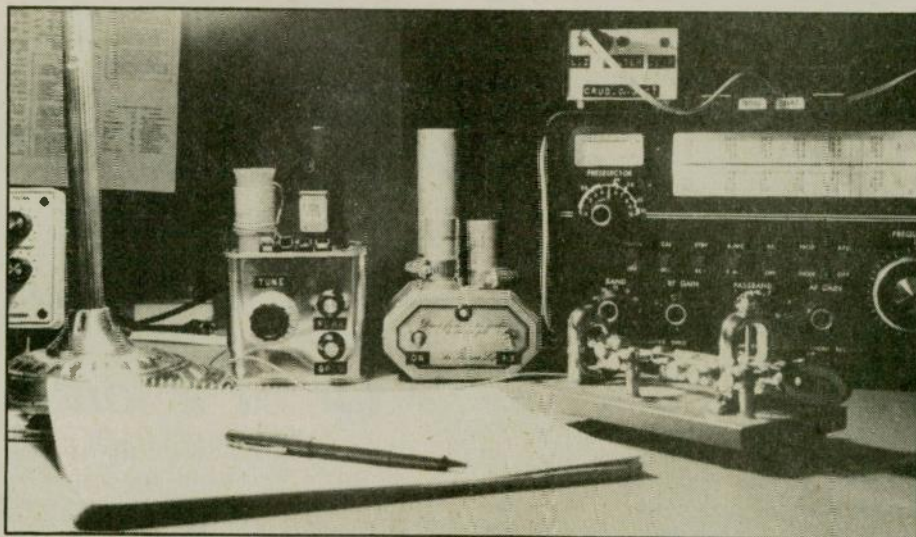
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STATION APPEARANCE

AUGUST WINNER
Edward G. Stiles, WA7P



Send *Worldradio* a picture of your shack and the staff will choose a winner to receive a free one-year subscription! Stations will be judged by neatness (wires tucked away, etc.) and accessibility of equipment. Monetary value of equipment is not a consideration.



We felt that Edward G. Stiles, WA7P, of Tucson, Arizona, deserved a one-year's free subscription to *Worldradio* with this photo he submitted. Following is the letter that accompanied it:

"In re: PUBLISHER'S MICROPHONE in June *Worldradio*. Thought you might like to know that what is nostalgia for some is just day-to-day operating for others. Here is a photo of the rig I use most of the time.

"The coil is wound with bell wire from the hardware store and wiring also is done with it. The rig is built in two discarded tea tins, mostly with swapmeet, surplus and junk box parts.

"Don't be fooled by the more modern rig just to the left in the photo. It sees use about once a week on a net. Just thought you might want to see that a lot of hams — especially QRPers — are still homebrewing, and that a tube first marketed 50 years ago still has a place on the bands.

"Incidentally, don't believe what

some will tell you. A one-tube rig can be tuned to produce a T-9 signal. This one does. Vy 73, Ed" □

Amateur "Hi"

Ever had a funny or strange experience with Amateur Radio, either on or off the air? If so, type it up (or print neatly) and send it to us for consideration in our monthly AMATEUR "HI" contest. You could win a free year's subscription to *Worldradio*!

Stanley I. Allen, W2CZS, of Barnegat, New Jersey is our July winner. Perhaps some of our readers remember this incident.

I copy the CW ARRL Bulletins every day. They send "QST DE W1AW" for about three repeats, then send the bulletins. One day they were sending the QST DE W1AW for about 45 minutes, so I wrote to them and asked what happened.

The W1AW operator said he had stepped outside for a moment and THE DOOR BLEW SHUT!!

He finally got in the shack and shut down the machine that was sending "QST DE W1AW." It was rather embarrassing to him, but very funny to me. □

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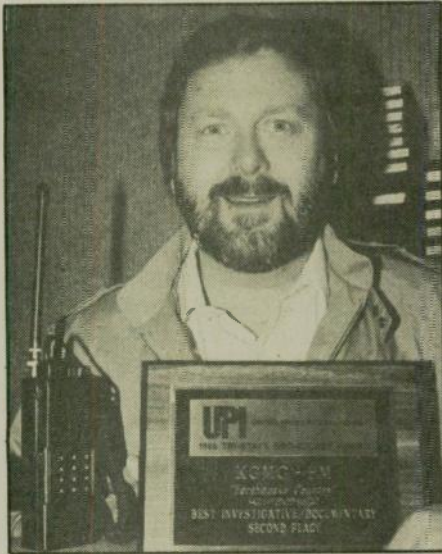
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AWARDS



Steven Sellers, N5GZP

Ham wins UPI award

Broadcaster and ham operator Steven O. Sellers, N5GZP, has received an award from the prestigious news-gathering organization, United Press International (UPI) for "Best Investigative Documentary."

The honor was awarded for a half-hour program entitled "Earthquake Country," written, produced and reported by Sellers and broadcast over San Diego Radio Station KGMG-FM, where he is News Director.

N5GZP was first licensed in 1962 as WN5ICF and has also held the calls WA3ZXK and WD5JGC. He began his broadcasting career in 1965 in Texas. □

Iowa club receives Volunteer Award

Dave Schneider, WD0ENR

The Mt. Pleasant (Iowa) ARC was one of several organizations in the state to receive the 6th annual Governor's Volunteer Award, at a presentation held at the Iowan Motor Lodge in Fort Madison, Iowa on May 24.

Iowa Governor Terry Branstad presented club president Bill Barber, N00J, with a volunteer recognition certificate honoring the club for its work with the Division of Disaster Services. The Mt. Pleasant club has been instrumental in helping Henry County obtain and equip a communications van for use by the radio club and the county's Emergency

Preparedness Service.

For several years now, the Mt. Pleasant ARC has participated in yearly Civil Defense drills, assisted with storm watch activities, conducted Field Day activities, and provided communications for the Old Threshers Reunion, which draws 90,000 people

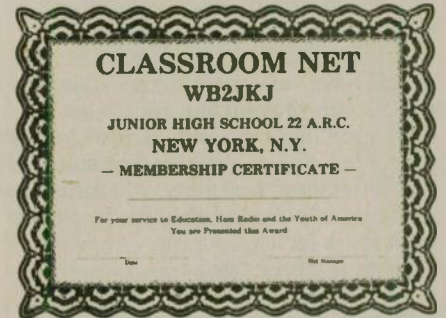
to the five-day event.

The MPARC was nominated for the award by Ed Farley, director of Emergency Preparedness for Henry County. Other officers of the club besides Barber are Gary McMeins, N0FIB, and Dave Schneider, WD0ENR. □

Classroom Net Award

Robert Silva, KB2DGI, has seen drug dealers and prostitutes. He has watched undercover policemen beat criminals bloody. He has seen people walk into East River Park and never walk out. At night he hears gunshots outside his window, one block away on Avenue D. The 16-year-old and his friends call it Avenue Death. This is Robert's home: Manhattan's Lower East Side.

Recently, he came to Huntsville, Alabama — a city of engineers and computers and rockets. Before he ever saw the city, Steve Roberts, WA4-



QXH, introduced him to it on the Classroom Net.

Roberts is part of Education Thru Communication. A one-of-a-kind educational program sponsored by the

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Radio Club of Junior High School 22* in New York City, which uses the theme of Amateur Radio as a learning tool and the call WB2JKJ.

The Huntsville ARC and Roberts decided to give Robert the chance of his life — three weeks in Huntsville and a trip to Space Camp. The club raised \$1,200 to pay for the trip and Space Camp, and Steve asked him to stay in his home.

All as a result of the Classroom Net, which meets daily on 7.238 MHz at 7 a.m. Eastern Time and continues until 8:30 a.m. The net is the start of a full day of education based on communication involving well over 200 students who might have never come to class if it weren't for this unique program. A program whose goal is to use the theme of Ham Radio to further and enhance the education of young people.

The Classroom Net encourages check-ins by people from all walks of life who are interested in the incredible possibilities our wonderful service has

to offer young people.

For those who come to class on a regular basis, an award will be granted. It signifies the recipient is truly concerned about the future of kids who may have never seen the inside of a classroom if it weren't for the interest and excitement that Amateur

Radio provides. Truly a "Class" award from the "Crew at the Core of the Big Apple," learning in a way that is as effective as it is thrilling.

*WB2JKJ, The Radio Club of JHS 22 NYC, Inc., 111 Columbia St., New York, NY 10002; (516) 674-4072. □

Mavis Stafford Bicentennial trophy

A trophy is offered to the YL or OM who contacts the greatest number of individual ALARA members, on HF bands only, in the Bicentennial Year 1988 (January 1 to December 31).

A complete extract of log, certified as true and correct by two other amateurs, will be required. The certification must read as follows:

We, the undersigned, hereby certify that the above extract is a true and correct copy of the log of

Signed

Signed

The log extract must also be signed by the operator who submits it.

In the event of a tie, the trophy will be awarded to the entrant who gained his/her total in the shortest time. Contacts on the official ALARA Net do NOT count.

Logs must be forwarded to reach the Award Custodian: Mavis Stafford, VK3KS, 16 Byron Street, Box Hill South, Victoria 3128, AUSTRALIA, by January 31, 1989. □



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" 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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ALARA Award

This YL Award is available to YL's, OM's and SWL's contacting ALARA members on or after June 30, 1975, as follows: VK/ZL—10 contacts, including five Australian call areas; DX—five contacts, including four Australian call areas.

All contacts must be made from the same call area. Repeater contacts and official ALARA Net contacts do not qualify. Special endorsements available for Mixed, CW, Phone, All 28 MHz, etc. Endorsement stickers available for each 10 (DX-5) additional members contacted.



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Applicants must submit a log extract certified correct and signed by two other amateurs, under the following headings: Date, Time UTC, Band, Mode, Call sign, and Name of ALARA member contacted, Report sent and received.

In lieu of certification, QSL cards must be forwarded. Full name, address, signature and call sign of applicant are required.

Fee (to accompany application): 3 Australian dollars (or equivalent) or 7 IRC's. Additional stickers applied for at a later date cost \$1 Australian per application.

Applications to ALARA Awards Custodian (Mavis Stafford, VK3KS), 16 Byron Street, Box Hill South, Victoria 3128, AUSTRALIA.

(NOTE: During 1988, the Australian Bicentennial year, a special Bicentennial sticker will be given to every award or endorsement applied for.) □

WAPY Award

The WAPY Award (Second Series) is available to all licensed amateurs, for contacts made on or after May 15, 1981 (25th anniversary of the Brazilian magazine *Electronica Popular*).

The award is issued to the amateur, not the call sign, but all contacts must be made from the same call area or, where no call areas exist, from the same state or county.

Do not send QSL cards. A list (GCR) showing full details of QSL-verified contacts must be certified by a recognized Amateur Radio society. There is no fee for non-Brazilian applicants (it

is suggested that 5 IRC's be sent with claim to help defray costs).

Applications should be addressed to the sponsor: Antenna Editorial Group, Caixa Postal 1131, 20001 Rio de Janeiro, RJ, BRAZIL, SOUTH AMERICA.

Rules

One confirmed two-way contact (any band, any mode) with each one of the

nine continental PY call areas (PY1 to PY9). No other Brazilian prefixes (PP, PR, PA, PS, PT, etc.) are valid.

Credit "stickers": Special stickers available to following achievements: a) CW mode only (two-way); b) Phone mode only (two-way, AM and/or SSB); c) Applicant's QRP operation in all contacts (requirement: a signed statement that no more than 10W input were used in all contacts); d) Credit for

one PY0 worked (only Brazilian oceanic islands included in DXCC list are valid). The basic award may bear one or more of the above stickers. (If a sticker is claimed for an already existing award, please mention the award's number.)

SPECIAL NOTE: Sponsor has the right of requiring originals or photocopies of one or more QSL's of contacts logged.

Super Golden Jubilee Awards

The National Capitol DX Association (NCDXA) — with over 75 members in the greater Washington, D.C. area, including Maryland and Virginia — has proudly awarded the club's Super Golden Jubilee achievement plaques to 20 members of the club:

The NCDXA Super Golden Jubilee program is an extension of the very popular ARRL program commemorating the 50th anniversary of the League's "Century DX Club" The ARRL awarded a certificate to each Amateur Radio operator who attested that he had made two-way radio communications with stations in 100 or more countries in 1987.

The NCDXA Super Golden Jubilee

Award program provided an additional incentive to each of the club's members who accomplished two-way radio communications with 200 or more Amateur Radio stations last year.

Twenty members of the NCDXA qualified for this prestigious award. Collectively, these 20 DX enthusiasts achieved two-way Amateur Radio communications with other radio amateurs in 4,483 countries in 1987.

The winners of the Super Golden Jubilee plaques, with the number of countries each worked shown in parentheses, are:

Ken Miller, K6IR (268); Dave Blanchard, N3II (254); Dave Hammond,

WC4B (250); John Kanode, N4MM (250); Alan Fener, N3EHD (233); Henry Herman, W3UJ (230); Everett Bollin, WA3DVO (227); Jo Glenn Tracey, KC3EK (223); Robert Sullivan, W0YVA (223); Daniel Szymanski, K3SKE (222); Ed Berkowitz, N3US (221); Paul Van Der Eijk, KK4HD (219); Richard Allardyce, N4RA (218); Aaron Brickman, N3FBN (217); Robert Peterson, W3YY (206); Robert Short, N3TO (205); Darrell Earnshaw, G4MZF (203); Lloyd Chastant, W3NF (216).

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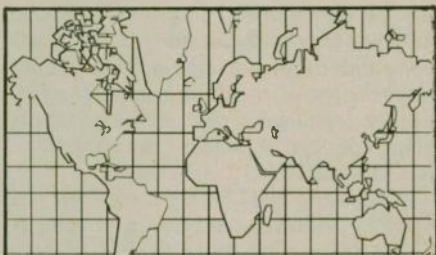
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Activities Calendar

23-24 Jul RCV Venezuelan DX Contest (CW)

06-07 Aug FRR Romanian DX Contest

13-14 Aug DARC European DX Contest (CW)

13-14 Aug WIA Remembrance Day

20-21 Aug MARTS Sea Net Contest (SSB)

27-28 Aug JARL All Asian DX Contest (CW)

W-100-N

Applicants for Worldradio's Worked 100 Nations Award picked up this past period with certificates issued to the following DXers:

334. KI4FW Frank Murphy

335. OZ1JNR John Faxen

336. YB0BOK Gunawan Wibisono

337. KB6FIW Dustin P. Smith

338. KS8W D. Brian Rockhold

Although endorsements are not made to the present series of the award, we have done so in certain cases. The award issued to OZ1JNR was endorsed "All CW;" the certificate issued to YB0BOK was endorsed "All 21.0 MHz SSB." In the case of the latter, contacts made on other bands were included. As he had at least 100 contacts made on 15M, it was endorsed as such.

The present list of nations valid for this award does not include Aruba. You may add this one to the list of valid nations — it counts.



Zhou Yu-hong (left) and Chen Fang (right) relax for their photo at BT0LS. This station was one of the two stations manned by BY4AA operators of the Tibet DXpedition. This station was set up at the 3,800' level on Everest. Chen Fang will arrive back in Nanjing in June to prepare to set up a new station, due on this fall with the call BY4RSA. He will be the station manager. Thanks to Glenn Tracey, KC3EK, for sharing the photo with us.

Andorra (C3)

Not much to report on this one, but expect some increased activity during the summer months as vacationing European DXers head to the Pyrenees.

On RTTY, a station signing C31NP has been busy near 14.095 MHz working into California around 0030 UTC mid-May. Down on the lower portions of the band on CW, C31LBB was worked the early part of May on 14.016 MHz around the same time.

Active in the recent World Wide WPX contest in May was C30LFD. We worked him the first day on 15M around 2030 UTC. His contact count at that time was 905. Hopefully, many a deserving DXer snagged him for a new one.

Prior to the big contest we worked C30LFC on 14.028 MHz at 0600 UTC — most likely part of the same group. QSL cards for this one should be sent via OH3TQ.

Comoros (D68)

QRZ DX reports that Bill, D68WB, is enroute back to Comoros after a

stateside visit. He should be active by now. He also plans some CW activity. Look for Bill on 20 or 15M.

Also from the Comoros is D68MG, who is expected to check into the IN-DEXA DX Net on 14.236 MHz on Sundays. This station has also been reported on 10M working Europeans near 28.575 MHz at 1500 UTC.

Vatican (HV)

DX News Sheet and Inside DX report that Ken Byers, K4TEA, and his brother, Brook, K4TKM, were to be active in the World Wide WPX Contest from HV3SJ. Accompanying them would be Pino, I0DUD, the QSL manager for HV3SJ.

This was to be an all-band affair, including 160M. We managed to work them on 20M a few hours beyond the halfway point of the contest. At that time the team had completed at least 2,100 QSO's. If you were active in the contest, most likely you worked HV3SJ — and possibly a new one on CW!

During the periods of non-contests, HV3SJ had been worked on 21.242 MHz around 1900 UTC the latter part of April, and also on 14.198 MHz at 0500 UTC.

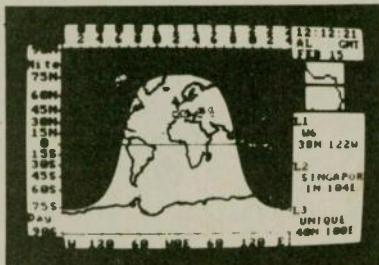
Also reported from the Vatican is HV2CN, who was found on May 10 at 0500 UTC near 14.005 MHz.

Tanzania (5H)

Inside DX has been informed by Tom, VU2TJW, that he is almost certain his next assignment will be in Tanzania late this summer or early fall. The assignment will also include trips to neighboring countries.

Very active on 15M SSB is 5H3BH, who is usually found after 1800 UTC. This station visits the higher end of the band, usually above 21.300 MHz. Below this part of the band, he has been reported on 21.233 and 21.265

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MHz. If you need this one, you will have to hunt around for him.

Another SSB type is 5H3RB, who has been worked on 21.251 MHz at 1700 UTC and on 28.547 MHz at 1015 UTC. He was working Europeans on 10M at that time.

Not to overlook the CW types, we have 5H1HK who has been quite active. He was busy mid-May near 21.043 MHz at 1315 UTC and 21.046 MHz at 2100 UTC. On 20M he was worked at 2230 UTC on the low end at 14.002 MHz. This station was also active in the recent World Wide WPX Contest and was piling up a respectable score when we worked him on 15M the first day.

Long Skip also reports a 5H1AK on 14.165 MHz at 2130 UTC working into Ontario.

Super DX Edge

Tony Japha, N2UN, creator of the famous "DX Edge," announces the availability of an IBM version of the Super DX EDGE. This version is for those DXers who own IBM personal computers (including XT and AT machines) and their compatibles. Tony says this version runs very quickly, takes advantage of advanced graphics packages, and gives instant DX information at the push of a few keys of the computer.

Unfortunately, we have still not obtained a computer to evaluate this new product. However, a PC is on our list of priorities. Soon, we hope.

The new IBM version also includes two other features of great use to the DXer: a calculator of Maximum Usable Frequency (MUF) and a Great Circle Bearing calculator. The program has a full file of country names and Amateur Radio prefixes built in so that it is very easy to pinpoint any location for the purpose of marking it on the map or making MUF and Great Circle calculations.

Minimum hardware and software requirements for the IBM version are: two disk drives; 384K of memory; Hercules, CGA or EGA graphics package; and DOS 2.1 or later. The Super DX EDGE may be purchased from dealers or direct from Xantek at \$34.95 each. To order direct, send your request to Xantek, Inc., P.O. Box 834, Madison Square Station, New York, NY 10159.

Comments

Jerry Griffin, W8MEP, writes concerning Bear Island. Although the island has a JW prefix, he would like to know if it counts for Jan Mayen (JX). We took a look at the map and from what we can see, Bear Island is closer to Svalbard (JW) than Jan Mayen. Besides, Bear Island is included with Svalbard.

RAAG Award

The Radio Amateur Association of Greece (RAAG) offers an award to any licensed radio amateur (or SWL) who has contacted at least seven of the nine call areas, SV1 through SV9. All contacts must have taken place since January 1, 1975. There are no band or mode limitations. To apply for this award, send a certified log extract with a fee of \$2 U.S. (or 8 IRC's) to RAAG Award Manager, P.O. Box 3564, 10210 GR Athens, GREECE.

IRC's

Norm Koch, K6ZDL, offers IRC's at 50¢ each, with a minimum order of 50

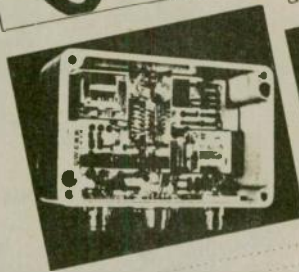
for \$25. Please include an SASE with 45¢ postage. Norm, who is the WPX program manager, will provide a computer printout of your latest WPX standing for a fee of \$3. Please provide the usual SASE with 45¢ postage.

LA5HE's Commandments for QSL Managers

Ragnar Otterstad, LA5HE/OZ8RO, sent us the following "commandments for QSL managers" which you might say is a follow-up to the comments on page 30 of the last issue (cards for a QSL manager at the W6 QSL Bureau). This is one man's rules, with which you may or may not agree.

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man Duxbury. Both had used the Somalia QSL bureau as their address. Our thanks to Tom Allison, KJ4BK, who also offered help on the above routes.

Don Minkoff, NK6A, advises us that Slim used his call as NK6A/ZB2 during the last October World Wide DX Contest, giving WA6GCS as the

QSL manager, Don knows nothing of the operation.

QSL routes

A35AS	-DJ9ZB	P40P	-NICIX
AX9LM	-DJ5CQ	P40W	-WA4CMS
AXONE	-VK9NS	P40X	-KA1XN
C30LFC	-OH3TQ	PZ6ES	-KK20
C53FV	-G3YMM	PP8AEE	-PY1QN
C53GS	-G3DQL	R4L	-UA4LCQ (See Note 5)
CEZLZN	-LU9FFA	RB8M	-UB4MZL
CE9NKY	-EA6BD	S9AGD	-SM0AGD (See Note 6)
CH9BEI	-VE1BEI	SV1RP/	SV1VH
C18CW	-VE1DH	SV5	-SV1NA
C18JH	-VE3CKF	SV1VH	-KG7F
C18TZ	-VE3MFP	SV0FG	-KA8UUS
C18YQ	-VE3XN	T32BH	-F6XUV
CP8PAX	-CP5AA	T12TEB	-F6FNU
CR5CQK	-CT1CQK	T15MRC	-VE3MR
DX7PE/Y/S	-DK7PE	TL8DN	-N2AU
EK6AA	-RW3AG	TR8CC	-F2PC
EM1AA	-U21AWV	TR8CR	-F6AYA
EM3W	-U23AZO	TU2JW	-KE3A
EM6AAK	-U26AWA	TU4GR	-DJ9GR
EO2PPP	-UP1BZZ	TV6MED	-FD1DBT
EO7LPK	-UL8PXX	TV6OLE	-F6AUS
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EV9AW	-UV9WN	TY9SI	-DK9KX
EW1C	-UC1AXC	TY0LC	-F6FNU
EW3AP	-UA3PPF	UA0BEZ	-UB5CEB
EX0DR	-UA3DR	UA0KK	-RB7GG
FM/		V21WW	-N0DH
JA2EZD	-JA2MNB	V47NXX	-AA4FS
F08AQ	-F6EYS	V18XCV	-VK4SS
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FP/NA5E	-K1RH	VK9X	-JA1UT
FP/W2NSD	-K1RH	VK4KCW/	
FR4FA/J	-F6FNU	VK9X	-JA1UT
F89TI	-F6AJA	VK9LC	-JH9GRM
FT5ZB	-F6EYS	VK9YT	-W7SW
FV6PAX	-F2BO	VK9ZR	-G4UCB
FV8NDX	-F6AJA	VP2MET	-W1SD
FW/		VP2MU	-W6AB (See Note 7)
N6LYB	-JJ3IMX	VP5J	-WN5K
H22H	-5B4MF	VU2TJW	-KE3A
H13JH	-F6FNU	KX11UP	-OE1DLW
HK0BKX	-WB9NUL	XX9MF	-KC7V
HK0BYU	-WB9NUL	XX9TUE	-CT4UE
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HL9EB	-K0VZR	ZF2ME/	
HP2XVB	-KB4WZQ	ZF8	-WB3CQN
HY7FIT	-F1GNY	ZK1DD	-G3MGN
I7IWX/		ZK1XB	-HB9DKQ
IJ7	-IK7AFM	ZK3RVC	-VK2BCH
I7LMR/		ZL5BKM	-ZL2HE
IJ7	-IK7AFM	ZP5JCY	-LU8DPM (See Note 3)
I88ITU	-I8MPO	ZP5Y	-LU8DPM (See Note 3)
IK7AFM/			
IJ7	-IK7AFM		
IK7CJV/			
IJ7	-IK7AFM		
IP1ARI	-I2CZQ		
IV3KBU	-KB1SF	3B9FR	-F6FNU
J40MAR/		3X0A/A	-I8YGZ
SV9	-DJ5RT	3Y2AV	-LA4JO
J73AD	-K4JPD	4K0DC	-UA3AOC
J79MD	-N4CRU	4K6DR	-RW3DR
JG1RVN/		4N7N	-YU7BPQ
KH0	-JG1RVN	4X6VV	-WA7WOC
JY8XY	-(See Note 1)	5H3RB	-NM2R
K2SG/		5N0WRE	-K4JZO
NP1	-N4GNR	5T5EV	-DL3KCE
K4AAC	-W6MAB	5W1GX	-HB9CVX
K4EFD/		5W1GY	-VK2BCH
VP2M	-KJ4JH	5X5GK	-VE3JW
KG4TT	-W14R	8A5ITU	-YB5NB
KL7LF/		8A9ITU	-YC9VGJ
KH3	-(See Note 2)	8J4XPO	-JA Buro
KP2AH	-WA2YMX	8J0ATC	-JA Buro
LS1E	-LU8DPM (See Note 3)	8Q7VG	-GW3WVG
		8Q7XF	-G3TXF
		8Q7XI	-VK3DXI
LU2E	-LU8DPM (See Note 3)	9H1FBS	-N5APW
		9M2AX	-JA5DQH
NH6J/		9M2BZ	-JA1VDJ
NH0	-JE1JKL	9M2QR/P	-DL2GAC
OA0PAX	-OA4OS	9M2RU	-WN6B
OH6XY/		9N88ITU	-JA8RUZ
4U	-OH3TY	9V1ES	-JA1UT
OD6PL	-HB9CRV	9V1TJ	-K0GYK
ON9CDX	-ON5NT	9V1XE	-VK3DXI
OX3KD	-OZ1KPB (See Note 4)	9X6AA	-W4FRU
		9X6NH	-DJ6EA
OX3KM	-F6FNU	9Y4DG	-N2AU
P29FG	-WA0GZC	9Y4VU	-W3EVW
P29HS	-JH5KZC		
P29MM	-K4MQG		
BY7RK	-P.O. Box 1285, Guangzhou, PEOPLE'S REPUBLIC OF CHINA		
CP6BY	-P.O. Box 2010, Santa Cruz, BOLIVIA		

CV9PJP	-P.O. Box 20063, Montevideo, URUGUAY
CX8CG	-P.O. Box 37, Montevideo, URUGUAY
EL1J	-P.O. Box 39, Buthana, LIBERIA
FO51Y	-P.O. Box 200, Raiatea, FRENCH POLYNESIA
J6LOE	-P.O. Box 307, Vieux Fort, ST. LUCIA
KX6HN	-P.O. Box 548, APO San Francisco, CA 96555
OA4BTO	-P.O. Box 538, Lima 100, PERU
OK1AEX/	
5N0	-P.O. Box 1009, Lagos, NIGERIA
P29KGW	-P.O. Box 6260, Boroko, PAPUA NEW GUINEA
P29JP	-P.O. Box 997, Madang, PAPUA NEW GUINEA
P29KH	-P.O. Box 997, Madang, PAPUA NEW GUINEA
P43WLP	-P.O. Box 35, St. Nicolas, ARUBA
PZ2AC	-P.O. Box 4224, Nicherie, SURINAME
T5GG	-P.O. Box B-62, Mogadiscio, SOMALIA
TG9NR	-P.O. Box 1200, Guatemala City, GUATEMALA
UB5IRM	-P.O. Box 186, 340000 Donetsk, Ukraine, USSR
UQ1GWW	-P.O. Box 50, Riga 226010, Latvia, USSR
3D2MP	-P.O. Box 5324, Raiwaga, Suva, FIJI ISLANDS
4S7WP	-P.O. Box 80, Colombo, SRI LANKA
9K2KW	-P.O. Box 13296, 71953 Kaifan, KUWAIT

Notes

- For contacts made with JY8XY in 1986, QSL cards may be sent via WB9YXY, who was the operator at that time. The recent JY8XY contacts should be sent via LA7ZO, and must be sent direct only (no cards sent via the QSL bureau).
- All QSL requests made with KL7LF/KH3 must now be sent direct to the home address of KL7LF.
- This QSL manager requests that all QSL requests be sent to him direct and not via the QSL bureaus.
- The correct address for OZ1KPB may not be in the Callbook; try Dan Stenvang, Sonder Alle 33, DK-9460 Brovat, DENMARK.
- You may QSL this one direct to UA4LCQ, and not the usual P.O. Box 88. QSL via P.O. Box 478, Ulyanovsk, 432017 USSR. Cards sent via Moscow are accepted.
- The Callbook address for SM0AGD is not correct. Send to Erik Sjolund, Ormbergsv 17, 19300 Sigtuna, SWEDEN.
- This route applies for contacts made during the World Wide WPX CW Contest only.

(please turn to page 38)



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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.

AUGUST 1988 WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(14)	17	19	(12)	18
12	24	15	17	17	20
14	30	19	15	23	29
16	33	16	(14)	27	35
18	32	17	(14)	25	39
20	26	26	34	23	42
22	22	31	41	18	41
24	19	35	43	(11)	30
2	(16)	36	43	(17)	24
4	22	34	42	22	20
6	18	25	30	16	18
8	(15)	20	23	14	16

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	18	13	22	(12)	16
10	27	11	19	17	17
12	36	17	16	23	25
14	41	15	15	27	32
16	41	(12)	(14)	28	37
18	31	(14)	(13)	27	40
20	26	22	34	25	42
22	21	26	41	22	42
24	18	28	43	13	30
2	16	26	43	11	25
4	22	18	34	17	21
6	20	15	28	14	18

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	18	13	21	(11)	16
9	25	(13)	18	20	17
11	34	19	17	25	24
13	39	15	(15)	28	31
15	42	13	(14)	29	36
17	41	(11)	(14)	28	40
19	28	20	27	26	42
21	23	25	38	23	42
23	20	28	42	15	30
1	17	26	42	12	25
3	18	21	31	11	21
5	21	15	25	13	18

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5375 Kearny Villa Rd.
(619) 560-4900
Tom Mgr. KM6K
Hwy 163 & Claremont Mesa Blvd

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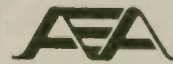
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DX World

(continued from page 35)

Contributors this month include KC3EK, W9LNQ, VE7KC, K6QS, LU8DPM, 5B4MF, OZ1KPB, KZ3H, KJ4BK, NK6A, AH6HY, W8MEP, DJ9ZB, W5FS, N2UN, WB4PJW, KH6WM, Salt City DX Association (KB2G), Western New York DX Association, Redwood Empire DX Association (VP2ML), Carolina DX Association (K2SB), *Amateur Radio Action*, *Long Skip* (VE3IPR), *The Long Island DX Bulletin* (W2IYX), *Inside DX* (N2AU), *DX News Sheet* (G4DYO), *QRZ DX* (W5KNE), and *The DX Bulletin* (VP2ML).

The bands are improving! The recent WPX Contest the end of May had 15M open around the clock. It has been a long time since we have heard Europeans on that band — and almost around the clock to boot. Even Slim was busy on this band as we worked

ZA0RA at 11 p.m. local time a few days following the contest. As the saying goes, work 'em first and worry later!

We shall wind up this month's column with some thoughts and comments of Kirsti Jenkins-Smith, VK9NL, editor of the *YL FORUM* in *Amateur Radio Action*.

Kirsti comments: "Try to visualize someone sitting for hours whistling into a mike. Surely his lips will be permanently shaped into a pucker at the end of the session. Or take the heavy breather. A couple of hours of that and you will have a hyperventilated individual reeling around the shack. He might just do himself an injury. Then there are the tuner-uppers and the guys who like to show off what they can do with a VFO; or perhaps just run a carrier on the frequency until the rig overheats and dies of natural causes." Have a good summer and good hunting! Very 73, de John N6JM. □

Past W-100-N winners

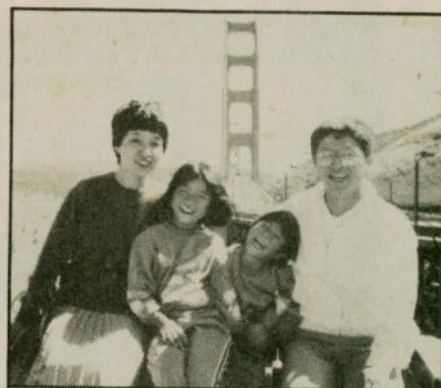
Call	Name	Issue listed
117. K81QB	Myron L. Braun	6/81
118. AG2K	Robert F. Imhof	7/81
119. WD9FOE	Anthony Tomalewicz	7/81
120. WA8CAE	John Paul Jones	7/81
121. VK6AJW	John A.E. Woodings	7/81
122. WN5MBS	Ray E. Wormley	7/81
123. AG3S	Robert K. Saulpaugh	7/81
124. W6LUR	Michael M. Elliot	7/81
125. W7KTI	Thomas F. Crawford	8/81
126. A13E	Dwight Sipler	9/81
127. K0DEQ	William C. Morgan	9/81
128. W6MUL	John S. Forchtner	10/81
129. WD6DFN	Roger W. Carter	10/81
130. WB7FAT	Karl Rietz	10/81
131. K9BQL	Jack R. Ekstrom	10/81
132. WA9WGJ	Dave Christensen	10/81
133. N5CID	Don Strong	10/81
134. KB6Q	Alan L. Abrams, M.D.	10/81
135. AG7P	William S. Perry, Jr.	10/81
136. N6ZL	Werner H. Ruhl	11/81
137. WB3DNA	Timothy R. Fanus	11/81
138. VK2HD	Heather Pike	11/81
139. KB9H	William E. Evans	11/81
140. AK1H	George J. Stevens	11/81

(Continued next month)

Past W-100-N winners (continued)

Call	Name	Issue listed
51. WD8IPJ	Don Gullett	4/80
52. K6HHD	Janice K. O'Brien	5/80
53. VK6YL	Mrs. Gillian "Jill" Weaver	5/80
54. WA6ZYG	Raymond R. Connors	5/80
55. W6TYN	Ed Baker	5/80
56. WB7UVA	Tom Weston	6/80
57. WA6OUA	Kenneth P. Ostrand	6/80
58. W6YMV	Paul Friebertshauser	6/80
59. N7ADY	Karl E. Jensen	6/80
60. K9JS	James V. Smith	6/80
61. W1WKP	Frank R. Soloman	6/80
62. VK6NE	Neil Penfold	6/80
63. N6MB	Milton E. Bramer	7/80
64. W6ILH	Creed R. Hansford	7/80
65. JH4PRU	Jiro Iseya	7/80
66. WA5CST	John J. Uhl	8/80
67. VQ9KK	Bill Hatcher	8/80
68. W6ORD	Norman E. Friedman	8/80
69. EA8TY	Eric Lund	9/80
70. KA8CFW	Joseph A. Palmer	9/80
71. KA6V	Joan E. Branson	9/80
72. WB6DQP	George W. Besley, Jr.	9/80
73. N8AC	Donald E. Schmidt	10/80
74. WA8CAJ	James J. Sebastian	10/80
75. K4LQ	Frederick M. Perkins	11/80
76. N9ALC	Dorothy Truhlar	11/80
77. W9LNQ	Anthony R. Truhlar	11/80
78. WA6DTG	Robert H. Lyon	11/80
79. W7WMO	Eugene P. Bye	11/80
80. WA6LOD	John W. Swancara	11/80
81. W2KVA/6	Thomas L. Geiger	12/80
82. WB6CDM	Scott R. Douglas, Jr.	12/80

Call	Name	Issue listed
83. WB2TKD	Michael Harodecki	12/80
84. N8ARA	Ford L. Cole	12/80
85. K6GXX	Keith D. Hoyt	12/80
86. K9UAA	Philip P. Brankin	12/80
87. K9WG	W.Y. "Bill" Golden	1/81
88. WA6CUP	Gerald W. Boyd	1/81
89. WB3IVL	John F. Zapf	2/81
90. KA2BYC	John J. Cimo	2/81
91. N6APW	Bob Dymond	2/81
92. WB9UKS	James Wild	2/81
93. K6BIA	Orlando Benincasa	2/81
94. VK2FD	Bruce W. Thomas	3/81
95. WD0BNH	Joan Ash	3/81
96. KB0OE	Ray McCarty	3/81
97. K3VY	E. Vernon Young, Jr.	3/81
98. W1JR	Joe Reisert	3/81
99. K6FO	Norman Brooks	3/81
100. N6JM	John F.W. Minke, III	3/81
101. N9AIB	Wanda Hotz	3/81
102. W9CA	Robert E. Hotz	3/81
103. N5ANA	Kenneth Ruffner	4/81
104. VK3NSY	Ron W. O'Grady	4/81
105. WD8CRY	Richard A. Moran	4/81
106. WA6BSS	Bill Boots	4/81
107. WB5CYK	Sanford L. Fortner	5/81
108. VK2DEJ	John Saunders	5/81
109. N6AIT	William C. Gregory	6/81
110. AC7P	Creath D. "Don" Fletcher	6/81
111. WB6OBB	Dennis Schwendtner	6/81
112. N4CSF	Louis J. Raymond	6/81
113. KB7ND	Kenton C. Gassaway	6/81
114. AA6BB	Gerald D. Branson	6/81
115. WA2SRM	James Grandinetti	6/81
116. WD6AQJ	Lenore "Peg" Austin	6/81



The Aokis at the Golden Gate Bridge in San Francisco, August 1986

JA revisits USA

Chuck Louda, WB6HCA

Eisho "Ace" Aoki, JA2HUM (age 38), has been an active radio amateur since his junior high school days ... except when he was relegated to CB because of no JA/W reciprocal licensing when he worked in San Francisco, California and Phoenix, Arizona as a Buddhist minister.

JA2HUM made up for it when he returned to the United States for a visit in late summer of 1986. With him were his lovely wife Eiko and their two daughters, Tomoé (8) and Lisa (6).

After spending two weeks sightseeing in Southern California and visiting friends in Phoenix, Ace settled down to the "serious business" of operating the amateur bands from Chuck Louda,

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WB6HCA's QTH in Livermore, and having eyeball QSO's with hams he had worked in the San Francisco Bay Area.

Now, back at his home QTH in Gifu, Japan, Ace enjoys ragchewing on 15M

SSB with his Kenwood TS-830S and 5-element monoband Yagi (40M high), and on 10M FM — quite popular in Japan. With the XYL's OK, Ace hopes to work OSCAR with a new 144/430 MHz rig. □

Because signals that manage to travel halfway around the world don't necessarily stop there, your spot becomes even more interesting when working or listening on the long-path. The interesting part is that every long-path DX signal you hear traveling more than halfway around the world will have to pass over your spot. It will be traveling in a different direction in each case, but it will pass over your spot.

Of course, the DX station also has his own entirely different spot. In the case of Perth, Australia, his spot is in the Atlantic Ocean near Bermuda. If I work Perth on the long-path, the signals will pass over both my spot in the Indian Ocean and his spot in the Atlantic Ocean. Again, this can be seen with a globe and a piece of string.

The importance of all this may not help you get on the Honor Roll, but it has helped increase my enjoyment of DXing. And besides, maybe you thought China was on the other side of the world. □

Your spot on the other side of the Earth

Ron Reiring, KI6BN

For every one of us in North America, there is a very significant and interesting spot in the south Indian Ocean that is exactly halfway around the world. From my Los Angeles QTH, my spot is about equal distance between Reunion, Crozet and Amsterdam Islands — 12,428 miles away.

Every station in the world has a different spot all to itself. Now, getting a signal to reach this spot is no simple task for the average station, and since there isn't anybody out there in the middle of the Indian Ocean to hear it, what makes it so interesting?

Well, for one thing, there is no one correct beam heading to reach your spot. *Every* beam heading is a correct heading. Travel in any straight-line direction for 12,428 miles and you end up at your spot. Propagation permitting, every signal leaving your antenna — no matter what the beam heading — will bounce around and eventually arrive at your spot.

This fact is due to our living on a globe-shaped planet, and you can verify it with a desktop world globe and a piece of string. But as I said before, since nobody is listening at your spot, what makes it such a big deal?

ANNOUNCING! 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 in time before the contest actually starts to reflect suggestions from potential participants. Send your suggestions to Worldradio at the above address.

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

Midwest students learn Radio at school

George Gruenther, KA0VPM

The Iowa-Illinois ARC is meeting the challenge for bringing more young people into this great hobby. Several projects have been in the works to further the advancement of Amateur Radio.

On May 28, 1987, the James Madison Middle School 6th grade social studies class took the Novice exams. Forty-five students successfully passed. John Lenahan, K0RW, and Larry Newby, WB0BHF, were kept busy administering and grading the tests. A total of 112 students met in three groups in the cafeteria. Those that did not make it were encouraged to do so when school started again in the fall.

Their teacher, George Gruenther, KA0VPM, started the Amateur Radio project in his 6th grade classes the previous year. His principal, John Smull, is just as enthusiastic as the students are. Smull arranged for the

school system's electrician to provide 20 amp service in the classroom specifically for the Amateur Radio equipment. He is now discussing the possibility of adding to the station.

Using the computers in the room and linking them to the radio equipment is in the planning stages. John also designed the James Madison QSL

together. There are no covers for these receivers, so the internal components can be seen.

The students find these very useful for copying code and listening to the phone portions of the bands. Each receiver is different because Paul, Dean and John continually modify them with new and improved designs.



James Madison Middle School Principal John Smull with Novices in spring 1987.

cards and had them printed. George and his students are most appreciative of John Smull's support and help. He has made Amateur Radio possible in the school.

With funds raised by selling honey, the students bought a Kenwood TS-130 transceiver, a Kenwood PS-30 power supply, and a Kenwood AT-230 antenna tuner which is fed into a Butternut HF-6V antenna.

The class has talked with people all over the country. One memorable contact was made with a ham in an aircraft over El Paso. Daily contacts were made with two new-found friends Vern De Witt, KA9TAA, and his wife Nancy, KA9TAV.

During the half-hour homeroom period, the De Witts gave the students helpful hints on studying for the code and theory elements of the test. When the students needed encouragement, Vern and Nancy were always there. Topics ranged from sports to television shows. At first this confused the students because they knew that Vern is blind. So they asked him how he watched TV. Vern just laughed and said he hears TV but Nancy narrates the shows for him.

We were fortunate in finding enough straight keys and oscillators through Fred Maia, W5YI. He made it possible to buy a class set of 30. These were checked out by the students and became an item of high demand.

Three club members — Paul Nees, K0IWA; Dean Sheridan, W0BIN; and John Lenahan, K0RW — have been experimenting with 40 and 80M receivers. They have made a number of these receivers which are powered by two 6V lantern batteries taped

together. These three have also made code oscillators and given us much technical assistance. Discarded parts are magically transformed into functional works of art.

Students earning their licenses is one thing. Getting them on the air and keeping them there is the most important part. The Iowa-Illinois ARC is actively involved in this phase too.

The director of the Burlington Library, Dan Zack, was approached last summer by George Gruenther to see if a station could be set up in the library. Dan Zack was very enthusiastic about this project, and after meeting with the library board he said they were also excited about this radio station.

Terry Johnson, W0JI, was so supportive of this project that he donated a large portion of his existing radio station. The club sold the equipment and with the proceeds bought identical equipment used at James Madison Middle School. Students using the school equipment would be familiar with that found in the library station.

Richard Bischoff, W0GA, who died on June 20, 1986, was continually introducing and bringing people into Amateur Radio. The Burlington Public Library station was dedicated in his name and his spirit. It was made operational in a dedication ceremony on April 27, 1987 at 6:30 p.m. CST. A plaque made by Wilbur Sater, K0CRG, commemorating the W0GA station, was presented to Dan Zack and is now installed at the library site.

Dave Hanks, KA0FWL, and Gary Harms, KA0SBV, designed and printed the QSL cards for the Burl-
(please turn to page 42)

Only One Person in
the World has your call . . .
YOU!



Letter style on shirt is "Ivy Open" and on cap is "Sportswear."

Now you can wear and display your call, name and your club name on a high-quality T-shirt for only \$10.00. Your call, name and A.R.R.L. logo (if desired), printed on shirt front, with club name printed on shirt back. Shirts (sizes S,M, L,XL) are available in light blue, light yellow, beige (tan) or white. A.R.R.L. logo available in 2 1/4" x 5" or 1 3/4" x 3" in red. Lettering is available in two styles — Ivy Open or Sportswear — and the following colors: black, royal blue, maroon, brown, green, red, or orange. For individual orders please add \$1.50 per item for shipping and handling. Club orders (would prefer quantities of 10 or more) are shipped postpaid.

Matching cap printed with your call and name has foam front and mesh back, is adjustable for size, and costs \$5.50.

High quality golf shirts available, printed one side \$14, both sides \$15.

Make checks or M.O. payable to:

Anne Wright, N6BOP
2272 Kellogg Park Drive
Pomona, CA 91768

California residents add 6% sales tax.

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

Birmingham Amateur Radio Club (BARC). Meets at the American Red Cross Bldg., 2225 3rd Ave. North in downtown Birmingham, AL. 1st and 3rd Thursdays/monthly, 7:30 p.m.

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. Net: W7IO Information Net every Thurs., 7:00 p.m. W7WGW/R 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. Communications Bldg., 2545 E. Ajo. Net Thurs. 7:30 p.m. 146.28/88 (146.22/82, 147.68/08, 147.70/10-PKT).

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.

Caltrans RACES Club. Meets at Carrows Restaurant, 1825 10th St., Sacramento, CA, last Friday/monthly, 11:00 a.m. Contact: J.J. West, N6AAD.

Citrus Belt Amateur Radio Club. 777 East Rialto Ave., San Bernardino, CA. P.O. Box 3788, Zip: 92413-3788. Meets: 1st Friday/monthly, 7:00 p.m.

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

Fresno Amateur Radio Club, Inc. P.O. Box 783, Fresno, CA 93712. Meets 2nd Friday/monthly, 8:00 p.m. Manchester School, 2307 E. Dakota, Fresno, CA. W6TO/R 146.34/94.

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.

The Hayward Radio Club, Inc. Fire Station #6, 1401 West Winton Ave., Hayward, CA. Classroom in back of station. Meets: 3rd Friday/monthly, 7:30 p.m. For info contact Mrs. Elfy Griffiths N6DOC.

Hilltop Amateur Masterie 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.

Lee DeForest Radio Club of Hemet. 1930 Local each Third Thursday at 625 Pico, San Jacinto, CA.

Livermore Amateur Radio Klub (LARK). St. Bartholomew's Episcopal Church. Meets: 3rd Saturday/monthly, 9:30 a.m. Net Mondays 7:00 p.m. 147.12 +. For info call WD6J, (415) 829-5229.

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 1304, Moreno Valley, CA 92337. 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

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.

Radio Amateur Mobile Society. Meets: 2nd Tuesday/monthly, 7:30 p.m. Carmichael Elks Bldg., Cypress and Hackberry, Carmichael, CA. Net Saturday a.m. 224.84 8:30/146.79 9:00.

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.

Sacramento "Old Timers" Ham Radio Brkfst Club. Meets 2nd Wednesday/monthly, 8 a.m., Carrows Restaurant near Watt Ave. and Hwy 80 exit. For info contact Paul Wolf, W6RLP (916) 331-1830.

San Fernando Valley ARC, (W6SD). Meets: 3rd Fri./monthly, 7:30 p.m. 261 C.C.G. CA Air Nat'l Guard, 15900 Victory Blvd., Van Nuys, CA 91406-6449. Exams: 8 a.m., 1st Sat./monthly. Pre-reg. via P.O. Box 3151, Van Nuys, CA 91407.

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 Valley Rptr. Society (SCVRS). P.O. Box 3085, Sunnyvale, CA 95087. (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. Office of Education Bldg., 360 Nevada St., Auburn, CA. Meets: 2nd Friday/monthly, 7:30 p.m. Nets: Tues. 7:30 p.m. 28.443 MHz. Thurs. 7:30 p.m. Rptr. 145.43/223.86.

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.

Sonoma County Radio Amateurs, Inc. Meets 1st Wednesday/monthly (except Dec.) at the Emergency Operations Center (behind the County Courthouse), P.O. Box 116, Santa Rosa, CA 95402.

South Bay Amateur Radio Association. Los Cerritos Community Center, Fremont, CA. Dick Melcher, WA6MDI. Call-in 147.615/015. Meets: 3rd Wednesday/monthly, 7:30 p.m.

Southern Calif. Amateur Transmitting Society (SCATS). P.O. Box 1770, Covina, CA 91722. Meets: Cortez School, 2226 E. Rio Verde Dr., West Covina, CA 91791. 1st Monday/monthly, 7 p.m. (coffee 6:30 p.m.)

Southern California Six Meter Club. P.O. Box 448, Cypress, CA 90630. USB Net Tue., 8:00 p.m., 50.150. FM Rpt. Net Thurs., 8:00 p.m., 52.28/88. FM Smplx Net Thur., 9:00 p.m., 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 Inc. Meets: 2nd Thursday/monthly, 7:30 p.m., American Red Cross Bldg., 747 No. Pershing Ave., Stockton, CA. Rptr. 147.165/765. Net Wednesdays, 8 p.m.

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.

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.

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. 1st Tuesday/monthly 7:00 p.m.-145.400.

Yucaipa Valley Amateur Radio Club (YVARC). Gibraltar Saving's Community Room, 34880 Yucaipa Blvd., Yucaipa, CA 92399. Pres: Jack Prather W6KJP (714) 797-1276. Meets: 3rd Monday/monthly, 7:30 p.m.

CONNECTICUT

Tri-City ARC. Groton Public Library, Route 117, Groton, CT 06340. 2nd Tuesday/monthly, 7:30 p.m.

FLORIDA

Indian River ARC, Inc. (IRARC). 597 Capri Rd., Cocoa Beach, FL 32931. Martin Andersen Senior Center, 1025 S. Florida Ave., Rockledge, FL. Meets: 1st Thurs./monthly, 7:30 p.m.

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.

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

Bolingbrook Amateur Radio Society. P.O. Box 1429, Bolingbrook, IL 60439-7429. (312) 759-4747. Call in 147.93/33. Meets: 3rd Monday/monthly 7:30 p.m.

Chicago Suburban Radio Assoc. (CSRA). P.O. Box 88, Lyons, IL 60534. Meets 2nd Wed./monthly, 8 p.m. Community Rm. Clyde Federal Savings & Loan Assoc., 7222 W. Cermak Rd., North Riverside, IL.

Elgin Amateur Radio Society. P.O. Box 1351, Elgin, IL 60120. (WB9EEA President), 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.

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.

INDIANA

Fort Wayne Radio Club. James Wolf, KR9U, P.O. Box 15127, Fort Wayne, IN 46885. The Salem Church. Meets: 3rd Friday/monthly, 7:30 p.m.

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

MARYLAND

The Peninsula Radio Operators Society (PROS). Family oriented activities, training and exams held throughout the year. PROS Rptrs. 146.925 and 146.825. PROS, P.O. Box 2315, Salisbury, MD 21801.

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.

MISSOURI

Heart of America Radio Club. 211 W. Armour, Kansas City, MO. Meets: 3rd Tuesday, 7:30 p.m.

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: 1st Friday at Fly-N-Chef, 7 p.m., Scenic Airlines Terminal, McCarran Airport, Las Vegas, NV. Net Mondays 7:30 p.m. 145.39. Info: Bob Herrell, WB5PTO, 641-6682.

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 Lyle at 456-9510.

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.

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, New Jersey 07002. Rptrs: 145.430 & 224-280. Meets: 2nd Tuesday/monthly, 7:30 p.m.

Gloucester County Amateur Radio Club (GCARC). Woodbury V.F.W. 1st Wednesday/monthly, 8:00 p.m., Woodbury, NJ. Talk-in 147.1878. 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 rptr. Club call K2AA.

NEW YORK

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

Genesee Radio Amateurs (G.R.A.M.).

N.Y.S. Civil Defense Center, State St., Batavia, NY 14020. Meets: 3rd Friday/monthly, 7:30 p.m. 147.255 + 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 rptr. system 144.300 S/223.600 - 1445.225 - .

Radio Club of Junior High School 22 N.Y.C. 111 Columbia St., New York, NY 10002. "At The Core of The Big Apple," QSLs invited. For info contact WB2KJ and "The Crew" learning English thru Ham Radio at (516) 674-4072, 24 hrs.

Westchester Amateur Radio Assoc. (WARA). Scarsdale Village Hall, Scarsdale, New York. Meets: 1st Wednesday/monthly, 8:00 p.m. For info call B. Dubbs, Pres. (WA2FSR). (914) 725-1191.

NORTH CAROLINA

Raleigh Amateur Radio Society, Inc. (RARS). P.O. Box 17124, Raleigh, NC 27619. Meets: 1st Wed./monthly, 7:30 p.m., First Presb. Church. Club net daily, 8 p.m. on RARS 04/64, W4DW. Annual Hamfest, 2nd Sunday in April.

NORTH DAKOTA

Fox Amateur Radio Club. United Hospital, Grand Forks, N.D. Call-in 34/94. Meets last Tuesday/monthly, 7:30 p.m.

OHIO

Amateur Radio Fellowship (ARF). N8HUN, Linda Delugach, Sec. P.O. Box 2486, Streetsboro, OH 44241. Meets: 1st Sat./monthly at Kent Wally Waflife. KA8PHO rptr. 147.675/075.

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

Northern Ohio Amateur Radio Society (NOARS). K8KRG/WB8JBM, P.O. Box 354, Lorain, OH 44052. Meets 3rd Mondays/monthly, 8 p.m. at Gargus Hall. Info: George, WBANM, (216) 933-2841. Ohio's largest general interest club.

OREGON

Salem Amateur Radio Club (SARC). Northwest Natural Gas Auditorium, 3123 Broadway N.E., Salem, Oregon 97303. Talk-in 146.86. Meets 4th Tuesday/monthly, 7:30 p.m.

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. P.O. Box 113, Warminster, PA 18974. Meets: 1st Wednesday/monthly, 8:00 p.m. at St. Johns Lutheran Church, Hatboro, PA. Net Wednesdays, 8:30, 147.09/69.

VIRGINIA

Southern Peninsula Amateur Radio Klub (SPARK). Meets: 1st and 3rd Tuesdays, Salvation Army Community Bldg., Hampton, VA. Operates 148/13 147/73 Rptr., VEC Information (804) 851-5573.

WEST VIRGINIA

Jackson County Amateur Radio Club. D. General Bailey, NKBP, Sec.-Treas. 113 Winters Dr., Ripley, WV 25271. First National Bank of Ripley. Meets: 1st Thursday/monthly, 7:30 p.m.

WASHINGTON

Mike & Key ARC K7LED. Good Neighbor Center, 305 So. 43rd Street, Renton, WA 98055. Meets monthly on 3rd St., 10 a.m.

North Seattle Amateur Radio Club (NSARC). Meets: 3rd Tuesday, 7:30 p.m., (except Jul. & Aug.) at the First Interstate Bank, 30th Ave. NE and NE 125th St. (Lake City) in basement. Info: Mike Jr., W7WHT, (206) 282-1438 or P.O. Box 20279, Seattle, WA 98102.

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.

WEST GERMANY

Wiesbaden Amateur Radio Club (WIESARC), DA1WA. Meets 2nd Tuesday/monthly at Stadion Restaurant, Wiesbaden. Steve Hutchins, DA2HS, Box 4205, APO NY 09633. PH: (011) (49)-6725-3462. American and German members.

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.

Midwest

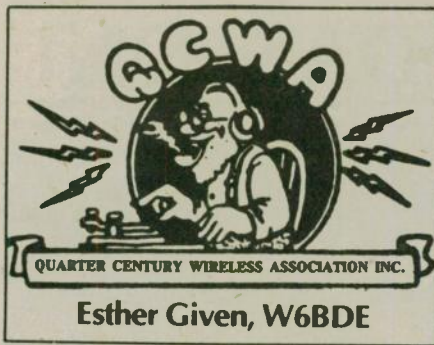
(continued from page 40)

ington Public Library radio station.

A Novice Advisory Group (NAG)

headed by Donna Higby, KE0NZ, is in the process of setting up two stations in the homes of students that scored highest on the Novice test. Corey Weeklund and Sarah Rapp were the

two top scorers in last year's 6th grade social studies class. Ray Reineke, NO0V, and Wilbur Sater, K0CRG, donated the equipment for these two stations. □



The Quarter Century Wireless Association now boasts 165 chapters. Most are in the United States, five are in other countries. Chapters make it possible for QCWA members in a specific geographical area to enjoy fellowship, share knowledge and experiences, and participate in promoting and preserving Amateur Radio.

In the *PUBLISHER'S MICROPHONE* in last month's *Worldradio*, publisher Armond Noble, N6WR, expressed a wish that a QCWA chapter could be formed in the Sacramento, California area. It's easy, here's how:

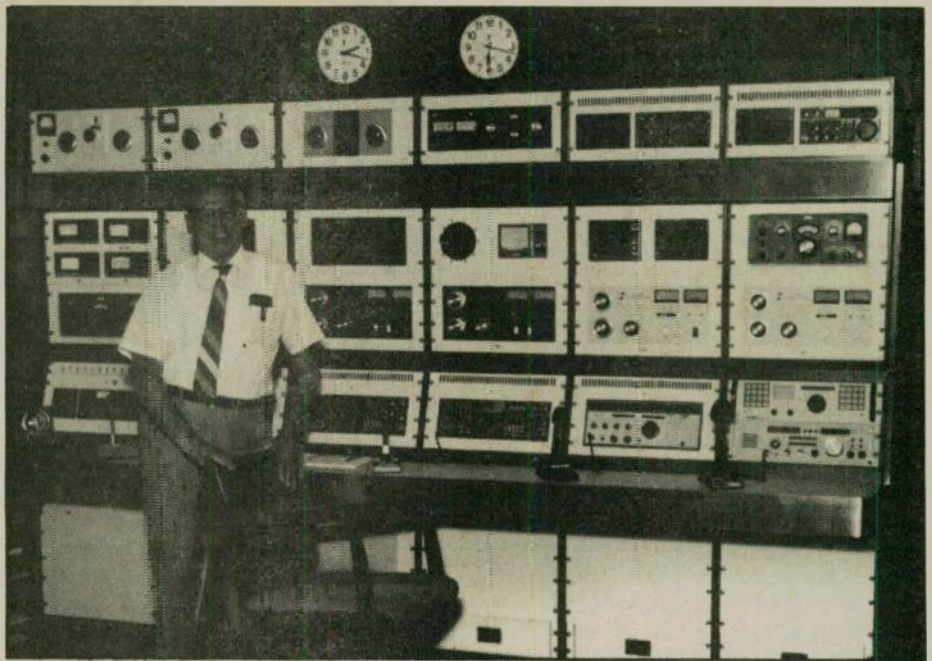
A QCWA chapter may be formed when at least 10 QCWA members living in the same geographical area petition to charter a local chapter. Each petitioner and all members of the chapter must be and continue to be members in good standing in the national association.

Prior to submitting a petition, the group should elect a president, vice president, secretary and treasurer. (The offices of secretary and treasurer may be combined.) The constitution and bylaws of each chapter must be consistent with the principles of those of the national association. Each chapter should have a minimum of two meetings per year, one of which would be an Annual Meeting. Additional educational, business or social meetings are encouraged.

Chapter charters are granted by the QCWA Board of Directors. "Petition For Charter" forms may be obtained by writing QCWA Headquarters, 1409 Cooper Dr., Irving, TX 75061.

QCWA is proud to announce that two of its directors were honored at Dayton's HamVention Banquet.

The HamVention's Special Achievement Award was presented to Fred Hammond, VE3HC, for his contributions and efforts in serving as Canada's "Hambassador" of good will especially in China, Australia and Jamaica. Another of Hammond's major endeavors is his establishment of an antique radio museum in his home town of Guelph, Ontario. Many items date back to the beginnings of the



Recipient of Dayton HamVention's 1988 Special Achievement Award, QCWA Director Fred Hammond, VE3HC, in his shack.

miracle of radio and the museum is of world renown.

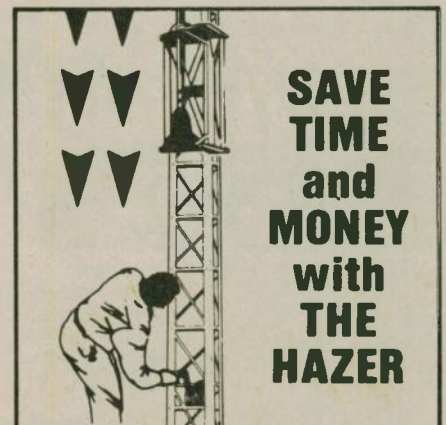
The Technical Excellence Award went to Lew McCoy, W1ICP. In addition to his 31 years on the staff at ARRL, McCoy has served in many technical capacities, and is recognized as an outstanding authority on TVI. He perfected and developed the first simple standing wave indicator, the "Monimatch."

In addition to his technical writing, McCoy was — for many years — Novice Editor for *QST*, contributing articles aimed at the incoming ham. Now retired, McCoy currently writes for *CQ Magazine*. He is one of the few hams who has attended every Dayton HamVention to date.

Each year, Dayton-Cincinnati Chapter 9 arranges a QCWA banquet on the Friday evening of the HamVention, for which there is always an excellent turnout and program. The 1988 event was no exception. Guest speaker at the QCWA Banquet was Carole Perry, WB2MGP, who last year received the Dayton HamVention Ham of the Year Award.

A science teacher for many years in

the Staten Island, New York area, Perry has also been teaching Amateur Radio courses since 1982. This activity became so popular that she has prepared and marketed a curriculum



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to be used by professional or volunteer teachers of Amateur Radio, enabling newcomers to pass FCC exams.

Perry is especially gifted in motivating young people and exhibited this talent a few years ago by getting teenagers to attend summer courses in preparation for radio contacts with Dr. Tony England aboard the space shuttle *Challenger*.

Onie Woodward, W1ZEN—QCWA's Activities Manager—reports that logs of participants in the QCWA QSO parties have been tallied and verified. The CW party was held in early February.

The top five winners in the United States in order of placement are: Gerard Bouvier, K1IU, who receives a plaque; Bill Branche, K9CLO; John Zwaska, W4WKQ; Walter Read, W6ASH; and Arthur DeVinney, W2RRY. High scorers outside the United States are VE3KK for North America and DL6NB for Europe. CW logs totaled 143 with members of 59 different chapters participating.

In the phone portion held in March, 130 participants entered logs with 67 different chapters being represented. Top five winners in the phone party are W4WKQ plaque; K9CLO; Guy Blencoe, W4HVU; Ralph Cabanillas, W6IL; and Jim Wilcox, K4JAP.

North America—Dave Benton, VP2-MDB, and Europe—Hans Werner Liebig, DL6NB. Members of the QCWA Chapter 109 in Baton Rouge, Louisiana, served as tabulators for the 1988 events.

The QCWA booth at the Dayton HamVention proved again the importance of being able to greet the thousands who attend that largest of all ham events. Many are QCWA members; many others are eligible but have not yet joined the QCWA ranks. Thousands more not yet reaching that mark of 25 or more years since obtaining their first license, need to know of the organization's existence and requirements.

Among those who spent many hours manning the booth were QCWA President Leland Smith, W5KL.

Smith reports the booth operation set a new record by enlisting 73 new members. Many had recently reached eligibility and were able to establish this due to the presence of a Fall edition of a 1963 Callbook in the booth. Dues were accepted from several members reaching renewal time and from a few delinquent drop-outs who reinstated. In addition, the booth's supply of QCWA patches and caps sold out completely. □

DAYTON!



When Jack Althouse of Palomar Engineers is asked, "Is the Noise Bridge the best way to go?" he replies, "That's what Kurt N. Sterba says, which is the best endorsement I can think of."



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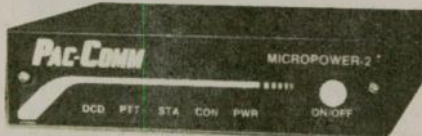


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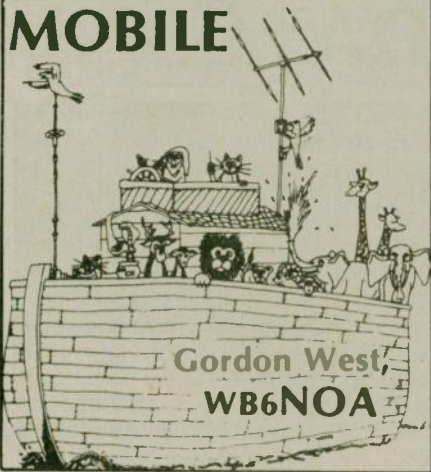
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To heck with Moonbounce; I'm going for Jupiter bounce.



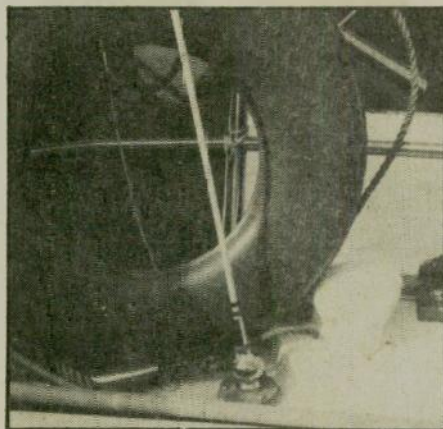
Mobile whips

I don't think I've ever seen a "defective" mobile whip, new, out of the box. Yet, weekly, I receive phone calls from RVers, mariners and car-mobilers that their newly purchased HF whip doesn't work on 15M, or maybe 20M, or maybe 40 or 80M. It's always the same story — they have metered out the mount, and it's good at both ends, and the whip pulls in stations — but on transmit the SWR is wacko, and tuning the tip makes no difference.

Sound familiar? Chances are there's absolutely nothing wrong with the mobile whip. The problem is with the installation.

Your coax run from your high frequency Kenwood, ICOM, Yaesu or Ten-Tec transceiver is straightforward. Run top-quality RG-8X coax and make absolutely sure you solder the coax plug properly.

Run the cable back so it's not ex-



Ball mount on fiberglass. This will NOT load up.

posed to the street or likely to get cut by any sharp piece of metal. Terminate the coax at the mount, and seal it up well. If you are going to a ball mount, make absolutely sure there is plenty of coax sealant where the center conductor and braid spread apart for the ball-mount connection.

If you terminate to a PL-259 that screws into some sort of an angle bracket or mirror mount, make sure that outside PL-259 is covered completely with some sort of coaxial cable sealant. I like Coax-Seal™ the best because it goes on like Silly Putty and may be removed in cool weather at any time to change connections if necessary.

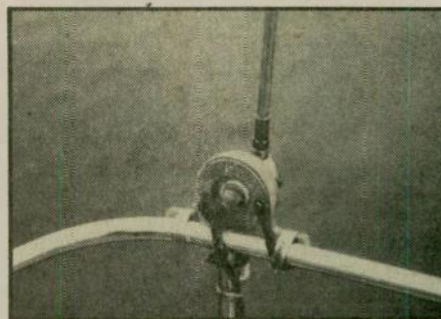
If you leave your connection exposed to the elements, your coax cable plug is eventually going to fill up with water, or the inside of the ball mount is going to get soaked, and the foam dielectric of your coax will wick up the

water and eventually drip moisture out the other end!

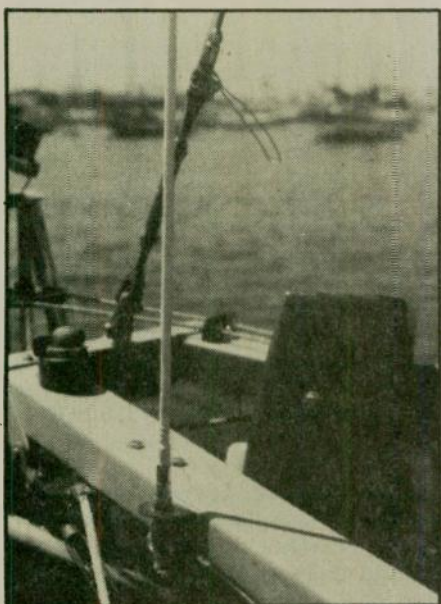
Now let's look at the greatest single cause for a mobile whip not to work — POOR PLACEMENT. Ideally, you would screw the mobile whip into a ball mount that is right in the center of your automobile roof or your motorhome roof. On a boat, the mobile whip would best be mounted on a stainless steel plate that is just making water-contact with the ocean. Obviously, on a boat this wouldn't work. Nor would putting a mobile whip smack dab in the center of your vehicle work, either — too tall!

The idea is the same — you need a large surface area groundplane directly below the whip that extends out to each side. It's imperative that the groundplane extend out from each side of the whip between 45° and 90°. As an example, here are groundplane situations that just won't work with a mobile whip:

- Mobile whip on a ball mount, on the side of a fiberglass boat.



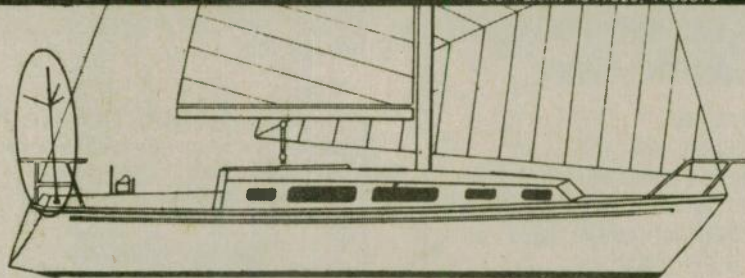
Ball mount on stainless rail. This WILL work well, but needs coax sealant to keep out moisture.



Whip on L bracket, mounted on a wooden platform. This will NOT load up.

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- Mobile whip on a ball mount, on a fiberglass vehicle roof.

- Mobile whip, mirror mount, separated away from vehicle top.

- Mobile antenna, L-bracket, single stainless stanchion of a boat.

- Mobile antenna, ball mount, down low on the side of a camper.

- Mobile antenna, bumper mount, down low on an isolated bumper.

You get the idea — the groundplane must begin directly at the coaxial cable feedpoint, not a foot or so away! Also, the mobile whip may not be run alongside a large piece of metal, such as the aluminum side of your mobile home or parallel to rigging aboard a sailboat.

In marine installations, you can always get a mobile whip "to work" by taking plain old Reynolds Wrap aluminum foil and scrunching it around the L-bracket, and then letting the other end drop into the ocean.

As soon as this large surface area foil makes contact with the sea water, your whip pops into resonance and you have isolated your earlier "no-load" problem as a bum groundplane.

Same thing in vehicular installations where you haven't got a good ground system directly below the whip. Simply attach aluminum foil to the outside of the coax connector, spread the foil out, and see whether or not that allows you to now tune up the mobile whip. Usually it will, in a poor ground situation. The aluminum foil is a great trick for trial-and-error tests of groundplanes.

The important thing to remember is that a mobile whip's groundplane must be directly below the whip — not somewhere else. Try this simple test — water your lawn, and then run a mobile whip, stuck in a pipe in the ground, 1" above your freshly wet soil.



MOBILE columnist Gordon West, WB6NOA, teaching a class.

Chances are it will work great, providing it's not near anything metal. Now elevate your mobile whip to 24 inches above the wet ground on a metal pipe.

Although you're still connected to the ground, you will find that your resonant point will change almost out of band. Now elevate the whip another 12 inches above the wet ground, and you will find that the mobile whip simply won't tune inside your band limits.

Even though you are still connected to the ground, the ground is now too far away from the feedpoint, and does not act as a good counterpoise. Drop the whip back down so it's just above the wet grass, and it should tune up fine.

Enuf said? Next time you try a new mobile whip and it doesn't work, don't blame the whip — blame a badly chosen spot that does not have enough surface area counterpoise, directly below the whip. □

'Crew at 22' fights AIDS on the air

Mike Miller, N4JPG, is not an AIDS sufferer but an AIDS fighter. Mike is also a charter member of "The Classroom Net" which meets daily on 7.238 MHz at 7 a.m. Eastern Time, and has as its purpose a better life and education for young people, using the theme of Amateur Radio.

A mild hemophiliac, he contracted the disease several years ago after receiving Factor 8, which facilitates the clotting of blood, that had been made from some AIDS-contaminated blood. At that point in time, donated blood was not routinely checked for the presence of the AIDS virus; now it is.

What is important to Miller now, though, he said, is making sure people know about AIDS and that some of the many myths surrounding it are dispelled. Enter WB2JKJ, the crew at the Radio Club of Junior High School 22 on Manhattan's Lower East Side, and The Classroom Net.

For those of you not familiar with the Big Apple, the Lower East Side of Manhattan Island is a conglomeration of tiny streets, larger boulevards, teeming multi-story housing projects, and tenements left over from the turn of the century. Surrounded by areas of unreal wealth, Loisada — or Alphabet City, as it is called by its residents — is home to some of the poorest inhabitants of the city, plus has the second highest concentration of AIDS cases in the nation.

Junior High 22 is in the midst of all this, or as we like to say, "at the core of the Big Apple." The youngsters are amidst problems, yet, but also amidst possibilities for a better life — especially if they attend and are involved with ham Amateur Radio in the classroom — Education Thru Communication.

It's true that our unique program at 22 is designed to promote learning among youngsters that have not been academically successful. However, one must survive to learn. For years, kids going through the program have known Mike on the air and heard stories about his trips, as a sea captain, to far-off places. Many have even spoken to him while he was at sea. They know he supports the program both with friendship and finances, and now their friend has this disease that everyone can talk about, but yet have different answers to the same urgent questions.

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Scenes from Dayton (more next month)



Mike Miller, N4JPG, operating from his shack in Oriental, North Carolina. He's shown fielding questions put to him about AIDS from the "Crew at 22."

That's right: smack on 7.238. The "crew" knows and trusts Mike. They will open up and get the right answers to real questions, and at the same time educate those listening on their ham or shortwave radios.

Let the kids ask anything and everything in their own language, and open the session up to friends and community members not in the program but brought in by the "crew" for this special event.

Amateur Radio is on the scene at the time of disaster. Truly, the alarming spread of AIDS through this one New York community is a disaster of monumental proportion.

Sounds like a great idea, a life-saving idea and wonderful use of Amateur Radio — but will it work? After the first 67 8th and 9th graders had their first session with N4JPG in early March of this year, we knew we had something. Every type of question you could imagine, from how to why to where, all in the language of the street, was skillfully handled by Captain Mike. The unanimous comment from the kids was, "At last we got somebody that knows the real answers!" Those answers will keep coming.

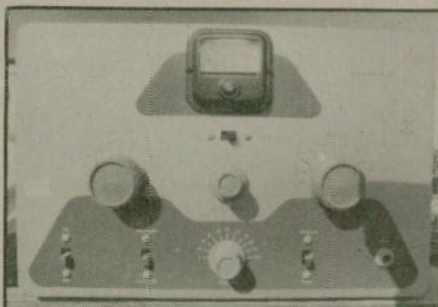
Joe Fairclough, WB2JKJ, originator of "Education Thru Communication," and Mike Miller, N4JPG, are planning now for the fall '88 term. They want to reach all 200-plus who learn via Amateur Radio at 22, and also bring in the other schools around the country that work with our group.

We want to go into Loisada and meet with kids younger and older than the "crew," introducing them to Amateur Radio, then N4JPG and the message he has to deliver.

Our service has saved many lives over the years. Hopefully, we can use it now to educate and save an infinite number more. □



That's one great thing about the largest gathering of the clan . . . all the manufacturers are there and you get to see everything up close.



OK, how many cut their ham radio teeth on this transmitter from yesterday? Into such cabinet you place a couple of today's transceivers!

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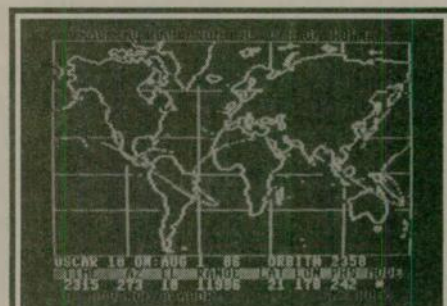
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Computers and Amateur Radio

Part III

Purchasing software

Vern Valero, ND1Z

Apparently, not many people have the time and energy to write their own sophisticated hobby software these days. There are many programs available for purchase and some are quite useful.

When a program is purchased, one can usually be sure it has been tested and refined. Further, the author may have special knowledge and experience that enables him or her to choose the best algorithm for the program.

It may also be possible to find others who have purchased the same program. They could pass on advice on how to best run the program for optimum results or how to get around certain problems.

The primary advice for buying software is Caveat Emptor ("Buyer Beware"). Unfortunately, it is too easy to buy programs that sound great in advertising, but either do not perform as expected, or worse, will not run at all on your computer. That is

why the purchaser must do a little homework before spending some hard-earned cash.

The first and most obvious question is: "Do I need this program?" Evaluate the functions that the advertising claims. Back this up with the opinions of actual users. There are special clubs, newsletters and nets that allow participants to share experiences. Try listening into a computer net, such as the Monday evening net on the Cranston, RI (147-6700/147.6100) repeater.

The second question is: "Will this program work on my computer?" Programs are written for specific computer systems. If run on a different type of system, the program may not run correctly. Ask the salesperson if the software package that interests you is guaranteed for your system.

The third important question is: "Will I be able to load or get this program into my system?" The program will be stored on some medium. Programs are stored either on floppy disk, cartridge or cassette tape. If you purchase a program that is written on a floppy disk and you do not have a disk drive, you will be in trouble.

The fourth question that is sometimes not asked is: "What special hardware is needed to run the program?" Some programs assume that the computer system has certain hardware options such as extra memory or a second disk drive. Communications software, in particular, might require the purchase of a modem for converting digital data to analog signals for transmission on telephone lines or Amateur Radio bands.

There are also a few considerations that, although not critical, may affect your satisfaction. Ease of use is quite important. Are the operation procedures smooth and sensible, or does the program require you to bend over backwards just to perform simple operations? Here, experiences of others are helpful.

The speed of program execution is another important parameter. In general, programs that have been written in assembly language run much faster than those written in a higher language such as BASIC. Some speed problems can actually be traced back to the design of the program. Programs that go through lengthy processing to determine certain facts will run slower than those that make a few intelligent assumptions. Waiting several seconds for a computer to process an action can be most frustrating.

When in doubt, read the instructions. That old motto is true for software, provided there are instructions to read. Every software package should contain a useful instruction booklet (known in the computer industry as "the documentation").

The instructions should clearly describe the procedures for running the program and the expected results. There should be an entire section that lists the error messages and what they actually mean. After reading the booklet, you should feel confident about using the product. Some programs do not have instruction booklets. Instead, they may be a "Help" command or file with an abbreviated version of the instructions. "Help" services are useful for running the program, but should not be considered adequate on their own.

Many software companies will ship new versions of the program for a fee. These new versions will contain problem fixes or new features. Ask the salesperson if updates can be purchased at a discount rate.

So where does one purchase software? There are many sources and generally (but not always), you get what you pay for. Some programs are available for free, either from friends or computer clubs. Frequently an individual will write a program and be

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happy to pass it on to friends.

There are books that can be purchased, listing many interesting programs. This option is less expensive than purchasing a program separately, but the user must type the source lines into the system and perhaps correct problems introduced in that process. Finally, one may buy software from Amateur Radio outlets (such as the mail order stores).

A word is in order about copyrighting. If you buy a program for, say \$50, and make a duplicate copy to give or sell to someone else (say, for \$5), you are in violation of the copyright laws. Most programs are copy-protected, but some are not. If you find that it is possible to make a complete copy of a purchased program, consider that making illegal copies amounts to stealing someone's work. Enough said.

After the floppy disk (or cassette, or cartridge) arrives, resist the temptation to try it out. Instead, sit down, relax, and spend time with the instruction booklet. Read through the instructions until you have a good sense of how to operate the program.

Now is the time to "play" with the program. Exercise all the options, and make sure it works the way you expect. Make notes about items that are either confusing or look like problems. You will want to compare these notes with those of your friends on the computer net.

Below is a list of some of the current Amateur Radio software available. It is not a complete list. This author does not own or endorse any of these packages. Perhaps some of our readers do have experiences with these programs and would like to share them.

Program Name	Purpose	Publisher
Contest Log		CaGen
Super Duper	contest log duplicator	CaGen
Universal Log	general log	CaGen
DX Edge	MUF & Great Circle bearings	CaGen
Morse Univ.	CW training for Comm-64	AEA
Codeprac	CW training for IBM PC	???
Prop. Chart Super Log	MUF general logging	NN4U NN4U
Contest Log	contest logging	NN4U
Master Log	general logging	NN4U
DX Toolkit	beam headings	NN4U
Antenna Design		NN4U
LADPAC	ladder circuit analysis	NN4U

RF Notes	circuit design	W6MDI
RF-CAD	circuit design	W1JR/ WA1GRC
Data Base	loggings awards grids	N6NB/ KC6A
Latitude/Longitude	beam headings greyline	N6NB/ KC6A
Contest/Dup		N6NB/ KC6A
Antenna	imped. match phased vert.	N6NB/ KC6A
EME	moon tracker	N6NB/ KC6A

There are many software packages to choose from, and prices range from \$19.95 for the N6NB/KC6A software to \$200 for some of the W6MDI programs. Good luck, have fun and Caveat Emptor! □

Advertise your hobby

Len Bodman, K1NBG, of Gardiner, Maine has created something for radio amateurs to use when assisting others in times of roadside emergency — an Emergency Format Card. The size of the card, Len says, can be either postcard or business card size.

Centered on one side of the card would be the following:

My call is . . .

You are invited to attend one of our meetings on the 3rd Thursday of the month at (time) at (name of restaurant, etc.) in (city, state).

Safe Motoring

Len proposed the printing of this type of card to his group, the Augusta Emergency Amateur Radio Unit, as a type of public relations effort for the hobby. When stopping to assist a stranded motorist, a club member could hand one of these cards to the motorist. It might get someone new interested in Amateur Radio! □

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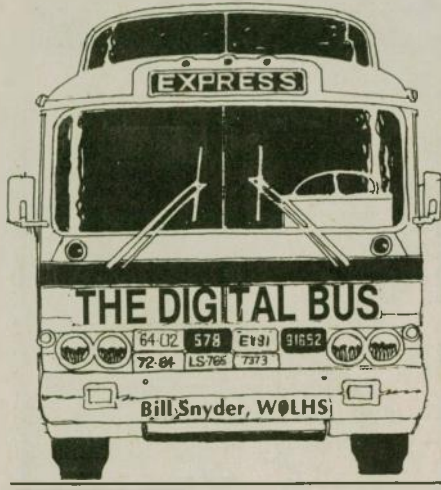
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When I sat down to write this column, I was in an ugly mood. I had just experienced a double blast of misfortune. My TNC-2, which was running the VHF side of my public bulletin board, had gone into orbit and had filled the screen with graphic jibberish.

The second thing that ripped my psyche was the Russian woodpecker. The hated Woody was on and was just about eliminating the 20M RTTY band from the face of the earth.

I had just checked WWV, and the numbers indicated excellent conditions for DX. The flux was 145 and the geo-mag indices were both low, indicating good conditions. 145 is the highest flux I had seen in years!

So, I tuned the band and discovered V85WS working a Japanese station. Hooray! I had been laying for the Brunei station for some time, with no luck.

One of the things about good DX conditions is that Woody's rat-tat-tat will nearly pin the needle on the S meter. And this morning he was well over 9. I cut in the blanker on the ICOM-761, but the megawatts of the Soviet radar kept right on punching holes in every RTTY signal coming into the shack. And I was calling Woody everything from "Evil Empire" to things you don't print in Worldradio.

So, I gave up in disgust, left the shack and went up to the living room where the TV was running. What do you think I saw? There was our president, Ronnie Reagan, standing with his arm around General Secretary Gorbachev in Moscow.

I couldn't figure out why the Russians were running that loudenboomer radar when they had our head man right smack in their midst. I don't think Commander-in-Chief Reagan would press the big nuke button while he is standing on the bullseye. The Russians could have saved a bunch of power for other purposes by leaving the Woodpecker turned off while the summit was on. But then again, nobody asked me for advice.

So, that brings up an idea. Why don't all the hams around the world write to the General Secretary and enclose a plea for the Russians to move old Woody off the ham bands. Amateur Radio is a first-rate friendship device and it helps to create a better world for all mankind. So why shouldn't the Russians show a little affection for us by taking the band-shattering, back-scattering radar and moving it off our frequencies?

One of the nice things about living in North Dakota is having the Minuteman missiles close at hand. In case of a nuclear war, we'll be the first to get it — no waiting, no suffering.

up 2 or so, and he clicked the QSO's off like a millionaire grandmother at a Las Vegas slot machine. No fooling around; it was all business. I would like to commend the operator(s) for a fine job.

One of the nice things about having a DXpedition station work split is this: the long-winded callers can have their day and not hurt too many other callers. I still remember that ZL station that ran four lines of calls right on the DX station's frequency during the Kingman Reed "hour of charm." I also recall thinking that the New Zealander had a malfunction and that his TU had locked up in the calling mode.

So, that brings up this harangue for the 99th time. When are we going to realize that the way to catch DX is a lot of short calls, not RYRYRYRYRYRYR DXCALL DXCALL DXCALL DE URCALL URCALL URCALL URCALL . . . ETC.

George Hitts, Jr., W1DA — the first RTTY op to WAZ and prove it — is a proponent of short calls. He practices it, and he is going through the country list like nickels in that lady's slot machine. Long calls sometimes make the DX station mad. I have seen rare stations quit when the pile-up gets full of tail-ender senders. Sure, you'll get the station if you are the last one in a pile, but you slow down everything, you aggravate the DX station, and you also get everyone else in the hog-pile mad at you.

This is a favorite topic for RTTY DXers when they meet over coffee. You short call on CW, you yell the last two letters of your call on SSB, then why do you have to call so long on RTTY? And why run RYRYRYRYRYRY?

Stamp out RY keys

I told the equipment manufacturers at Dayton a year ago to make the RY and QBF keys a \$500 option. I don't even like RY's on CQ calls. The CQ, if properly sent, has a musical swing that anyone can learn to recognize in about 20 minutes, so why use RY's with it to advertise you are looking for a contact?

That brings up another point. Send your CQ like this: CQ CQ CQ CQ CQ — not CQCQCQCQCQCQ, or some other derivation of that style. Doing that destroys the musical sound we have all learned to recognize. Avoid RY's; they ain't needed!

Hamdom's little dramas

Steam RTTY fan Bob Stanek, W0HAH, chuckled over this exchange he witnessed on 20M.

An Italian station was sending long strings of RY and QUICK BROWN FOX tests, and in between, he was calling another Italian station. An

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DXpeditions

After the Kingman Reef and Palmyra Island RTTY fiasco (and a batch of steam RTTY fans I know have dubbed it that), it was nice to see the way KC6TM operated from the Eastern Carolines. He worked split,

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anonymous RTTY fan called the RY/QBF fiend and complained. The Italian station promptly came back and said, "I WON'T TAKE YOUR CRITICISM UNLESS YOU SIGN YOUR FULL CALL. I'VE BEEN A HAM FOR 17 YEARS. I'M ONLY RUNNING ONE WATT QRP, AND MY ANTENNA REALLY WORKS GOOD."

The anonymous operator snapped back with his full call sign, and then added, "I'VE BEEN LICENSED FOR 63 YEARS AND THE INK ON YOUR LICENSE WASN'T DRY WHEN I GOT ON RTTY. I KNOW WHO I CAN WRITE TO AND COMPLAIN TO ABOUT YOUR POOR OPERATING PRACTICE."

The Italian station promptly came back with this rejoinder: "I DON'T CARE WHO YOU WRITE TO. TRY GOD FOR STARTERS. HA, HA, HA!"

Eavesdroppings

THIS IS A PROMISE — ANY MORE BREAKERS AND I AM GONE! ... MY WIFE DOESN'T LIKE TO HEAR HOW MUCH MONEY HAM GEAR COSTS, SO I KEEP QUIET, REAL QUIET ... I LIKE TO CALL CQ DX, BUT NOBODY EVER ANSWERS ME ... MY WIFE WANTS TO HAVE A GARAGE SALE OF HAM EQUIPMENT — MINE! ... SEEMS ERROR MESSAGES COME THROUGH MY COMPUTER BETTER THAN THE MESSAGES I WANT TO GET ... IF YOU SEND YOUR QSL BY THE BURO, I WON'T SEE IT FOR A COUPLE YEARS ... THE AGE HERE IS A VERY EFFICIENT 42 YEARS ... I AM JUST GETTING AROUND TO BUYING A RIG WITH FEATURES LIKE TRANSISTORS ... MY WIFE WANTS ME TO SET HER WRIST WATCH, SO I HAD BETTER QRT AND GET THE INSTRUCTION BOOK ... THE BAND SEEMS TO BE OPEN FROM YOUR END ONLY ... W8LNJ DE W8LNK ... I AM A MEMBER OF THE CIRCUS FANS ASSOCIATION, THE NATIONAL RAIL FANS AND A FREQUENT FLYER ... RUNNING A DUMB TERMINAL WITH DUMBER FINGERS ... THIS TV COMES FROM A LONG LINE OF RY'S ... I HEARD TWO GUYS TALKING ABOUT XR4TI, BUT IT'S AN AUTO NOT A DX STATION ... TORE AN OLD TRI-BANDER APART AND MADE A MONO-BANDER OUT OF IT, AND AM I GLAD ... I WISH YOU WOULD MAIL ME YOUR ANTENNA FARM ... SORRY ABOUT THE

QRM FROM THE WOODPECKER ... HAPPY TO MEET YOU. DO YOU WISH TO QSO OR REMAIN SILENT? ... THE PRINT WAS ONLY PARTIALLY SOLID ... CU IN THE PILE-UP, I'LL BE ON THE BOTTOM ... HAVE A NICE DAY AND A NICE GOLF AND A NICE DX ... I NEVER GOT INTO PACKET BECAUSE I HATE TO READ INSTRUCTIONS ... COMPUTER HERE HAS A 0 MEGABYTE HARD DISK ... I SURE WOULD LIKE TO SEE A DX STATION CALL CQ — BAREFEET STATIONS ONLY ... MY HANDLE IS BERT, MY NAME IS BERT, AND PEOPLE CALL ME BUD ... ONE OF THE THINGS ABOUT CYCLE 22 IS THE WOODPECKER COMES IN MUCH BETTER. SO FOR NOW SAYONARA, CIAO AND TOODLE-OOOO.

Thanks to W2WCE, KT7H, KL7-IJG, KF5RD, DK7XG, K0GP, WA6YNT, W0BOH, and all those stations we watched having fun on RTTY, AMTOR and packet. If you sent me a packet message recently, it could have been lost when my system crashed. That does happen, you know. 73 de Bill Snyder, W0LHS @ 58103. DIT DIT. □

Daffynitions

Balun: A North Carolinian balloon
 DED: Dark Emitting Diode (a burnt-out LED)
 Full Wave: "Surf's up!"
 Ohm: Where the art is.
 QSL Bureau: A piece of furniture used to store acknowledgement cards
 Watt: A unit of power. Watt? I said, a unit of power. WATT? I SAID ...
 — Submitted by Richard Stuart, WF7A □

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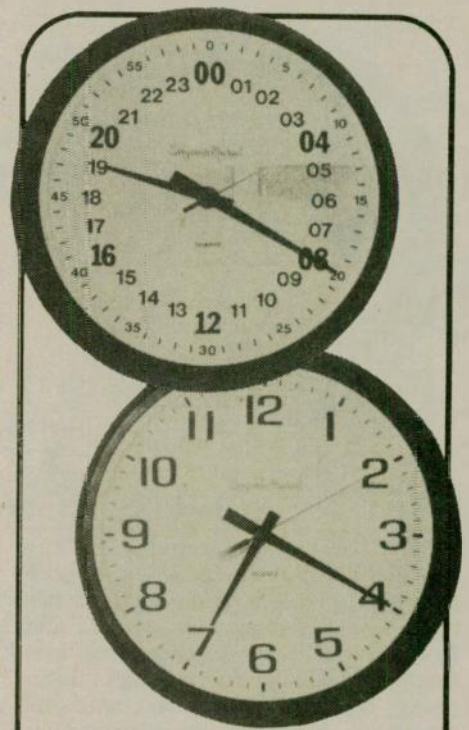
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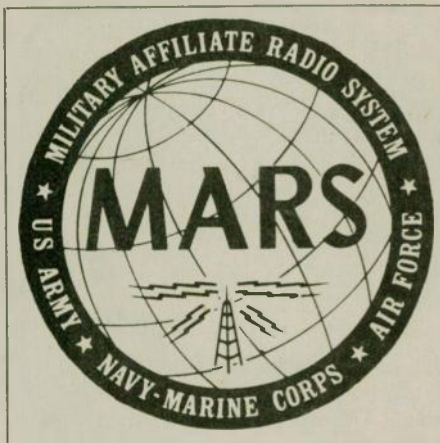
• **The Rules:** Orders must be received before Oct. 31, 1988. All orders must include a check or money order for \$74.95 plus \$3 shipping and handling per set. Illinois residents add 7% sales tax. Allow four weeks for delivery.

• **Support Your Local Dealer:** This offer also extends to units purchased from your local dealer. Simply purchase your Model 973A 24Hr Clock from him and send us the receipt dated between July 10, 1988 and Oct. 31, 1988 along with \$18 per unit ordered (\$15 + \$3 shipping).

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MARS—what is it?

MARS is the acronym for the Military Affiliate Radio System, a three-pronged network organized primarily for handling messages to and from American service personnel stationed overseas. Because of third-party traffic restrictions in many countries, MARS provides a service that is usually not permitted on the Amateur Radio frequencies.

Thousands of amateurs participate in MARS (a separate license and authorization is required) on numerous nets, all of which are outside the Amateur Radio band on military frequencies.

Many amateur messages find their way into MARS circuits, and MARS messages find their way into Amateur Radio (usually National Traffic System) nets, as a result of those amateurs who provide a liaison between the two circuits.

Traffic for points overseas at which U.S. military personnel are stationed can be introduced into NTS and ultimately handled via MARS, provided a complete military address is given. Third-party traffic coming from the MARS network into NTS nets for delivery by Amateur Radio is converted from MARS to ham format and handled as any other message.

When the traffic originates overseas, the name of the country from which it originates, followed by "via MARS," appears as the place of origin in the message preamble.

Information concerning MARS can be obtained directly from the individual branches at these addresses:

Air Force MARS: Chief, Air Force MARS, HQ. AFCC/DOOCC, Scott AFB, IL 62225. **Army MARS:** HQ. Army Info. Sys. Comm., AS-OPS-OA, Ft. Huachuca, AZ 85613. **Navy-Marine Corps MARS:** Naval Communication Unit, Washington, D.C. 20390-5161.

—ARRL Section Leader

10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

It's official . . .

At a recent Board of Directors meeting, the official OK was given for the 10-10 1989 National Convention to be held in Milwaukee, Wisconsin. The convention, celebrating the 27th anniversary of 10-10, will be held at the Red Carpet Hotel, classified as Milwaukee's finest hotel and convention center. The dates are Friday, Saturday and Sunday, August 11-13, 1989.

Joe Williams, WA9TSG, 10-10 #310, Convention Chairman, states that plans are well underway for 10-10 Forums, a flea market, license exams, manufacturer and vendor displays, and a gala 10-10 banquet on Saturday night. There will also be activities for non-ham family members attending the convention.

The convention is being hosted by the Milwaukee Chapter, with assistance from the other chapters in the area. Watch this column and the *10-10 International News* for more news about this exciting 10-10 event and where to write for a convention packet.

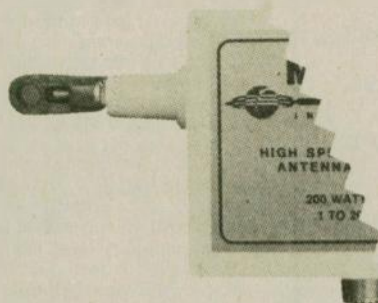
Summer Phone QSO Party

Harry Syring, WB1FTQ, 10-10 #23934, has announced the Summer Phone QSO Party will be held the weekend of August 6-7, beginning at 0000Z, August 6, and ending at 2400Z, August 7. 10-10 QSO parties are open to all amateurs, but only 10-10 members with paid-up dues are eligible for awards.

10-10 contests (or QSO parties) are conducted to encourage 10M operation and interest in the 10-10 Net. Non-members may use numbers collected to qualify for membership in 10-10, and members may use them for obtaining awards.

Contest rules are simple: 1) All contacts must take place on the 10M phone band; 2) Exchange: Call sign, Name, State (or location) and 10-10 number; 3) A station may be counted only once; 4) Single operator stations only are acceptable; 5) SSB, AM and FM modes are acceptable; 6) Logs

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must be kept in UTC time; 7) A dupe sheet is required.

Scoring is 2 points for contact with a 10-10 member and 1 point for contact without a 10-10 number. Logs should be sent to the City of Lights Chapter, c/o Jerry Frieders, W9ZGP, 1501 Molitor Rd., Aurora, IL 60505, and must be postmarked no later than September 1, 1988.

You will notice that a "dupe sheet" is required. For our new 10-10 members, a dupe sheet is a simple method of insuring that there are no duplicate contacts counted in your score. If you would like a sample copy of a dupe sheet with instructions on how to "dupe" your log, send me a #10 SASE (25¢ postage) to the address below for your copy.



Cypress Chapter Head Bill Evans, KA4OFG, 10-10 #33276

Cypress Chapter

Back on July 30, 1975, a group of 10-10'ers in central Florida formed the Central Florida Cypress Chapter, the name later being changed to the Cypress Chapter. The first Chapter Head was Dexter French, K4TSY, 10-10 #8427. The current Chapter Head is Bill Evans, KA4OFG, 10-10 #33276.

The Cypress Chapter has issued 83 local member certificates and a total of 1,585 certificates. This active group has two picnics a year and luncheons at the Orlando and Melbourne ham-fests. Look for this active 10-10 chapter twice each week on 28.665 at 0100Z Thursdays and on 28.465 at 0100Z Fridays. To obtain a Cypress Certificate, work on local number under 100 or five Cypress numbers from anywhere. The fee is \$1, and your log info goes to Bob Lucas, K4HTU, 10-10 #5723.

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

New 10-10 bylaws

The new 10-10 bylaws were reviewed at the last 10-10 Membership Meeting on May 15, and several clarifications and corrections were discussed for inclusion in a "final version." This final version will be published in the Summer issue of the *10-10 International News* and will be voted on at the next Membership Meeting, to be held in August.

As there were no serious changes, it is expected that the version to be published will be approved at the August meeting.

Briefly

As I was sitting at the computer typing this column, I heard a strong signal on 28.445, just where the receiver happened to be tuned from the last contact I made. It was W1EQ. and that call sounded familiar to me. So, from the computer to the radio and a call "W1EQ this is W6YLF, do you copy?" Back came W1EQ. It was George from Danielson, Connecticut. 10-10 #4566.

A quick check of my 10-10 contacts showed that George and I had first made contact on January 17, 1983, and he was my 160th 10-10 contact.

As we talked, George told me he was 89 years old and has been a ham for 74 years. George tells me that he has had some heart problems in the past, but he is back on the radio and going strong. George will be 90 in October, so if you hear W1EQ from Danielson, CT in October, wish him "Happy Birthday."

It's good to hear people like George on 10M. This is what Amateur Radio and 10-10 is all about.

Received a nice note from Mel Dunbrack, W1BHD, 10-10 #1905, who says he has passed his 10-10 number around for years and has just recently got back on the air again after some medical problems.

Mel says he is only 82 years old, but still going strong. He just received his 65 Year Award from QCWA for having the same call for all of these years. Mel started out with the call 1BHD and when letters were assigned to calls, he received the call W1BHD.

In addition to 10-10 activities, Mel also works RTTY, FAX, WX satellite and ATV repeaters. That's enough to keep anyone busy!

10-10 #50000 soon?

According to Lee Pasewalk, WB6-MGM, 10-10 #213, 10-10's Records Manager, numbers in the high 48000 series are now being issued by District Managers. Soon we will be hitting that magic number of 50000 members.

Finally

If you are interested in learning more about the 10-10 International Net, send me a business-size (#10) SAE with 25¢ postage for an information package, including an application for joining 10-10.

If you would like to receive the latest copy of the quarterly *10-10 International News*, the 10-10 official magazine, send me \$1 (a green stamp), and you will receive the info pack and the magazine (no SASE required when you send a green stamp). My address is 18130 Bromley St., Tarzana, CA 91356-1701.

Best 73 es cu next month. □

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SMIRK activities

SMIRK is proud to announce that Lisa Lowell, KA0NNO, has taken on the additional responsibility of Technical Tips Chairperson. We wish to thank Spencer Ritchie, KC2TX, for his past service.

Lisa sent me a copy of the computerized listing of technical tips she has compiled. To receive a copy, send her a business-size SASE. Her QTH is: Lisa Lowell, KA0NNO, P.O. Box 547, Hugo, CO 80821.

After many years of holding the line at \$3 annual dues, the Board of Directors of SMIRK — at the urging of many of our members — has increased the dues to \$6 a year, effective immediately. Dues will still become due in January of each year. We hope this increase will allow us to continue serving you.

Finland to be on 6 soon!

Jan Hubach, OH1ZAA, states that Finland should soon be active on 6M. He reports that they have asked for 63 applications. They hope for SSB and CW operating privileges in the 50-50.5



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MHz section of the band, with tens of watts of power without antenna restrictions. It is hoped that Aland Island and Market Reef will be included.

Congratulations to Jan for his efforts over the past few years. I just received news in the Hal Lund, ZS6WB, VHF News that OH 6M operation went into effect June 1, 1988!

Beacons

The U.K. Six Metre Group has provided information concerning the new Icelandic and Gibraltar 6M beacons. The Icelandic beacon will sign TF3SIX on 50.057 with 50W of FSK RF output power. The antenna is a G3JVL-designed $\frac{1}{4}$ -wavelength vertical. The keyer PCB is made on a board to G4FRE's design and is published in the November 1986 issue of *Radio Communication* magazine.

The keyer sends the call sign, followed by Iceland, then locator HP-94CC. This sequence is followed by six letter "I's (Iceland) before the call sign is sent again.

The Gibraltar beacon signs ZB2-VHF on 50.035 MHz. It replaces the SMIRK-donated beacon transmitter provided many years ago by Tex Kennedy, N5TX, SMIRK President. The new beacon is nearly identical in design to the TF3SIX beacon. The antenna is a 5-element Yagi. The keyer sends the call sign followed by Gibraltar, then locator IM76HE. This sequence is followed by six letter "G's (Gibraltar) before the call sign is sent again.

Michael Michaeledes, KH6JJK, runs his beacon on 50.080 from Honolulu, Grid BL11. It operates from 0300 to 1200 UTC. It is located 35 feet above ground on a ridge 325 feet above sea level, overlooking the Pacific Ocean.

Eric Roy, TI2NA, has been running his beacon for years, 24 hours a day. The call sign is TI2NA, on 50.078; Grid EK70, output, 20W to a dipole, north/south. Antenna height, 40 feet. CW ID: TI2NA TI Dash Dash Dash Dash Dash. Eric is on every day, listening to 50.110, with an IC-551D and 5-element Yagi. His QTH: P.O. Box 661, San Jose, COSTA RICA.

Active Greek stations

Tom Bishop, K0TLM, reports that Mike Vestal, SV0FE, and Yanni (John) Kalatzis, SV1DO, have both received permission to operate 6M. Mike will have an FTV107 with 6M module, and Yanni will have a Yaesu FT-625RD. That is very good news. If you work them, QSL via K0TLM.

DX reports

DX activity has dropped off as we approach the summer Es season. Es have been somewhat missing recently, down quite a bit from last year. As we approached the last of May, however, I noticed that things were improving.

Ross Ramm, VK4RO, reports working JA, HL9, KG6, KH6, WY5L/KH3 and VK9NL/KH1 so far this year.

Hal Lund, ZS6WB, reports that much the same type of activity between 9H1, SZ2, 5B4 and CT0WW continued into April, with many ZS's making contacts with SZ2DH and 9H1's. On the 23rd, a new 9H1 (ES) running 200mW worked a number of ZS6's! At 1645, ZR6ADY QSO'd KP2AH on 50.133 LSB!

I don't know why the KP2 was on LSB, as the norm is USB on 6M. The 25th brought three 9H1's QSOing ZS's.

Apparently, the 6M transmitting permission of TR8DX has been suspended, hopefully only for a short time. He did hear the FY7THF beacon and ZD8MB several times in March.

TEP or F2?

There has been some confusion concerning the mode of propagation in effect during these spring South American openings we have been experiencing. Pat Dyer, WA5IYX, for years has maintained that those in the southern latitudes are experiencing F2, which has also been prevalent on 10M. The signals NEVER have TEP characteristics. Others call it TEP.

I have been corresponding with Al Laimgruber, PY2BBL, who wrote an interesting article in *Antenna-Electronic Popular* magazine (Brazil) on TEP. He has been working TE for many years.

Al says that those 1900-2230 UTC contacts with LU, HC, HC8, CE and CX are F2 contacts for several reasons: 1) this is the same UTC time that the United States has been working F2 into South America on 10M; 2) if it were TE, we would be hearing the PY stations also; 3) TEP never occurs during the daytime; 4) TEP is always accompanied by scintillation, faint as it may sometimes be (this is an inherent part of its nature); 5) depending on the location of some of the U.S. stations, TEP will never reach them (distance from geomagnetic equator).

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Al says it is probably FF2 (double hop F2), with signals being reflected first halfway south of the equator, bounced off to Earth (somewhere near the equator), then back up to the ionosphere (halfway north of the equator) and down to the U.S. receiving station. (This may explain why the HC and HC8 signals are often so much stronger here than the LU, CE, CX signals). Besides, HC cannot be TEP anyway, because it lies far north of the geomagnetic equator.

Al said it is true that flux numbers have to reach 200 or more to carry 50 MHz F2 (on east-west paths), but north-south is another matter. Flux numbers do not show what is going on exactly around the geomagnetic equator, where ionization is always much more intense (and north-south axis is polarized by the Earth's field). So, again, the F2 layer can have sufficient refraction capability for 50 MHz around the geomagnetic equator during the afternoon hours, without "bulging." F2 again!

Still another aspect: Brazilians do not hear U.S. stations during the period — clearly an indication that they are sitting in the skip zone! As for Type 1 and Type 2 TEP, Al thinks the JA, ZL and VK label is stuck on the wrong propagation. He thinks everything reasonable points to their afternoon propagation as being FF2, also.

If you would like to know more about what Al wrote, provide me with \$1 to cover copy expenses and a business-size SASE.

Al reports that Bert Ingalls, KH6HI, says KH6JJK, JJI, FLD, VP, IAA, FQ, BZF, IJ, W6DMJ/KH6 and K6GSS/KH6 are all active on 6M, with AH6IO to follow. Darrol, ex-CP8AZ, is now active as OA8ABT in Pucallpa, Peru (Box 52), with an IC-551 and 5-element Yagi. Arnold, PZ1AP, (Box 566) is new on 6M. Mike, ZD8MB, has been worked by a number of northern Brazilians. Robert, J88AR, is active, as is Joe, 9Y4VAN.

Equipment reviews

I had planned on reviewing the Yaesu FT-690RII this month, but have received some interesting information concerning the Kenwood TS-680S reviewed last month. One of the things I learned is that some TS-140S and 680S models will say "Hello" to you, using the digital readout, when you push the A/B, A=B and power-on buttons.

My 680S won't do this. Richard Goehl, N4NDR, says he finds his 680S easily overloaded by a strong adjacent signal with the NB1 noise blanker on. I have found that you can combat this

by turning off NB1 and/or the preamp. We both like the way it works on 6 and 10M FM.

The rig is not designed to work into high SWR and will shut itself down, which is good. If it gets too hot — even with internal fan, it will shut down without harming the rig.

He seems to have had a problem with intermittent display lights: all display lights on, but no tuning available. Kenwood advised him to reseat all the connectors to the controller board, and to reseat all the PROMS. This seems to have cured that problem. He says when the woodpecker is real strong on HF, the NB2 does not seem to have any effect.

His recommendation regarding the

processor is to leave it on at all times and use the hand mike. He did extensive testing locally and working DX, and found that it is better with the processor in than out. He, like others, wishes they had put a separate 6M output coax connector and a low drive out for using transverters.

We do not care for the slide switch. It is hard to adjust to a particular setting.

Except for those negative comments, we love it. See the product review of the TS-140S in June *QST*. Much of what is said there also applies to the 680S.

Remember, it feels better when you do it on 6! See you on the Magic Band all of a sudden! □

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In other words, say what you mean. (*Editor's Note:* Now test yourself and send the above in code.)

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I was standing next to the cellular telephone demo, talking to a customer, when the explosion occurred. The ceiling tile lifted a good 6 to 8 inches off of the drop-ceiling rails then settled back down, most of them a bit skewed. The air filled with fine bits of dust, and small fragments of ceiling tile settled over the various displays of electronic equipment within the store. Robin, the store manager, turned very pale and ran out into the mall to find out what had happened. My customer quickly excused himself and scurried out the door toward the parking lot.

Robin returned saying that it was the nuclear power plant at Berwick, PA, about 30 miles away. She was on the verge of hysteria and about ready to lose it. After quietly reassuring Robin that nuclear power facilities were not prone to blowing up, I excused myself and made a bee-line into the parking lot. Climbing aboard my van, I grabbed the 2M mic and raised Bob Michael, WB3FAA, in Pringle (PA) on the 01/61 repeater.

Bob had also felt the shock wave. We discussed the matter briefly and concluded that neither of us had enough data to make an educated guess as to what was going on. Another ham near Dupont (about 5 miles away from my location at the Pittson Mall) said he had seen the explosion and it was the powder factory (which made gunpowder and fireworks) in Dupont that had exploded.

Clearing with Bob, and the Dupont station, I reentered the store to relate

the events to Robin. Color started to return to Robin's face. She began to settle down and things started to return to normal.

Robin's mention of the Berwick nuclear power facility instantly made me wish that I had done more homework on escape routes, portable radio gear, a family evac plan, etc. This started me thinking about my own plans for emergency communications and preparedness.

I started reading various articles on emergency planning and communications. As duly licensed amateurs, we have — in our charter with the FCC — a clause which states that we *will* be available to provide emergency communications when needed. This means

gers do not agree. Matter of fact, some feel that the Amateur Radio community is so unresponsive to their needs that they have written amateurs out of their disaster planning altogether!

All my Amateur Radio life, I'd been led to believe that hams were always at the forefront of the action when it came to disaster communications. Nobody but an Amateur Radio operator could be trusted to furnish the needed communications links during an emergency or disaster! Now, here I was reading material published by professional disaster managers, stating that Amateur Radio was not up to the task!

Further research indicated that there was nothing particularly sacred

One disturbing fact that I kept coming across was the perception by disaster managers that the Amateur Radio disaster communicators would not be able to handle the amount of traffic generated by a major disaster.

we must be ready with the equipment and training necessary to fulfill this obligation.

One disturbing fact that I kept coming across was the perception by disaster managers that the Amateur Radio disaster communicators would not be able to handle the amount of traffic generated by a major disaster.

Anyone who has been involved with the National Traffic System (NTS) or MARS will tell you how labor-intensive and time-consuming sending voice traffic can be, especially under the pressure of an emergency. Since this method is so slow, it easily bogs down in the face of several hundred messages originating during a localized emergency. Multiply this by a factor of several thousand for a major disaster, and you can plainly see that the current traffic handling abilities of the NTS and MARS are hopelessly unable to pass the volume of traffic that a major emergency would generate.

Right now, I can imagine a whole bunch of you out there are getting ready to write me and "set me straight" on how the NTS can handle any emergency traffic scenario. Unfortunately, professional disaster mana-

about how hams were being utilized. It takes no intelligence to key a mic and talk. (Doubt that? Take a listen on CB channel 19 some time . . . then you tell me.)

Basically, hams have been used in the past as portable telephones and/or morale and welfare traffic handlers. Neither is particularly suited to the expertise and abilities possessed by most hams. The real area where Amateur Radio operators could be utilized most effectively is in command and control communications (C3).

Radio amateurs are in a unique position to offer the professional disaster management teams years of expertise and electronic know-how with which to construct and maintain a *MODERN* emergency communications network. The emphasis here is on modern. Just as CW replaced spark and SSB overshadowed AM, packet is destined to be the replacement for most voice traffic in a C3. Why?

Simple. Packet is error-free and very, very fast: Try sending 100 messages, one after the other, using the standard NTS voice traffic format (and saying "over" all the time). Then type the same 100 messages into your lap-top computer and push them out at 1200 baud over a VHF packet network. See which one is quicker, more accurate and less prone to retransmission. Get the picture?

Portable HF/VHF packet

This month's QRP column starts a multi-part series on emergency communications and the QRPer. We will start by showing how easily one can put together a portable HF/VHF

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packet system that is transportable to almost any location.

QRP is a natural for emergency communications. Low-power transmitters require less battery power to keep them running (this is a major factor for extended operation in a disaster area). Their small size is a boon to portability. QRP and packet radio are a natural marriage. Since digipeaters are very common, power outputs of 3-5W should work very well when coupled to even a modest antenna. Portable digipeaters are not out of the question either. Several portable digis scattered around the disaster area would insure the massive traffic load would be handled in a timely, error-free manner.

We've all seen the "bread-truck" approach to providing a mobile Amateur Radio station for disaster communications. While these big, slab-sided beasties are a great way to advertise the local Amateur Radio club, they fall far short of the main goal of an easily transportable communications system.

All too often, the idea of a mobile communications command post is overshadowed by the lust to have a mobile multi-kilowatt bread truck that waddles down the highway without enough speed to get out of its own way. While the bread trucks look impressive, they are totally unsuited for off-the-road use in a disaster area.

A much better approach is small, man-portable (sorry about that girls ... slip of the old tongue), solar-powered, low power (3-10W) radio systems that can be humped into the bush by one person. My personal briefcase portable packet station is capable of working as either a terminal station or an unattended digipeater for at least 10 days (the minimum accepted time by disaster managers). The configuration is right off the shelf:

Tandy Model 102 laptop (expanded to 352K by a Traveling Software Booster Pack); Alinco ALX-2T 2M Micro-HT with dual battery packs, charger and DC charging cord; GLB-PK1-L portable packet TNC; Globe CG-1245 4.5 amp hour gel-cell battery (powers the TNC, recharges the HT batteries, and the Model 102 NiCad pack). All of this, including cables, antenna (VAK-TENNA by Electron Processing) and papers/crib sheet for the TNC and Model 102 fit into a standard briefcase!

A Sovonics Battery-Topper* solar module also is included to recharge the gel-cell battery. Total weight is about 16 lbs. and is easily carried by anyone. The Alinco Micro-HT will also double as a voice radio if needed. Within three minutes of arriving at the designated area, I am on the air — either voice or

packet. Try that with your bread truck!

HF packet operation is almost as cut and dried: the faithful Argonaut 509 for the HF rig, and a Pac-Comm TNC-220 dual port TNC for the digital interface. I used the Tandy Model 102 again for the terminal. Actually, I wanted to use the Pac-Comm TNC-220 for both the VHF and HF portable packet stations, but that TNC draws a healthy 500mA — not the kind of thing you would want to use with a small gel-cell battery.

Power for the HF station is via a deep-cycle battery and Sovonics marine solar module.* The output of this module is about 10W, and it can be rolled up for transportation. (Try that with your conventional Arco panel!)

I do not use the charge controller with the marine solar module since the output from it is low enough that, under constant use, the deep cycle battery won't be overcharged. A controller can be used if the installation is permanent or the battery is not exercised often. This will prevent overcharging during periods of non-use.

Antenna for the HF station is the Antennas West QRV 160-10 emergency pack (G5RV dipole variant with quick launch system). I also included a set of headphones, mic and keyer in

the event that we need to be involved with passing voice or CW traffic.

As you can readily see, putting together an HF/VHF portable emergency packet station is not that difficult at all. Packet lends itself so well to C3 applications that it will, over the next few years, all but replace voice transmission for disaster communications. The ability to field a group of small, portable, solar-powered QRP packet stations will greatly enhance the standing of radio amateurs within the disaster preparedness community. Additionally, being able to pass a massive amount of traffic in a timely manner will assure that we, as radio amateurs, are fulfilling our charter with the FCC.

That's all for this month, gang. Next month we will take a close look at why we need to build these QRP portable packet stations, their place in the overall scheme of things, and some important reading that will spur your imagination and get you thinking about how you can become more actively involved with emergency/disaster C3 on the local level. 73, de Rich Arland, K7YHA, 9 Vine St., Shavertown, PA 18708.

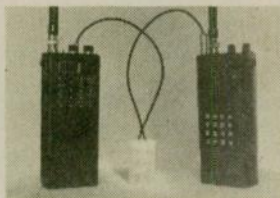
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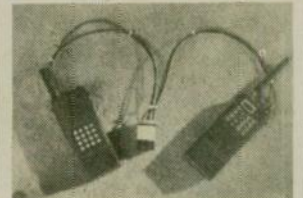
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Product Review 2M micro-hand-held

Rich Arland, K7YHA

We have all heard the old saying about "good things . . . small packages." The folks at Alinco Electronics, Inc., 20705 S. Western Ave., Ste. 104, Torrance, CA 90501, really took that lesson to heart when they designed the ALX-2T 2M micro-hand-held.

This tiny radio is a second-generation micro-HT that has finally elevated the micro-hand-held radio from a "cute toy" to a real workhorse. Packed with features and a host of options, this little rig really has a place in the shack inventory.

The ALX-2T is small — very small. The radio portion measures 3¼" H x 2¾" W x 1⅝" D. The EBP-3N (7.2V 450MAH) battery pack measures 2½" H x 2¼" W x ⅞" D. This makes a very small package: 5¾" high, 2¾" wide and 1⅝" thick.

The radio comes from the factory with the following: stubby duck antenna, EBP-3N battery pack, hand strap with tool for setting memory, EDC-7 12V charging stand, ECD-4 12V wall charger and an 1C-1 CTCSS tone encoder board (user-installed).

Options include three other battery packs ranging in size from 7.2V at 160MAH to the big 9.6V at 450MAH. Power output with the standard EBP-3N battery pack is 4W. If the EBP-6N (9.6V) battery pack is used, power output soars to 6W. Extended use at 4W will cause heating of the case on the right side (where the PA sits). Therefore, Alinco cautions that when using 6W output, transmissions should be kept short to reduce heating. Low power is 400mW output.

I won't bore you with details of the general operating controls on the

ALX-2T. Instead, I will highlight the unique features that really make this micro-HT a winner.

First there is the "Battery Save" function. This feature (which is selectable on both high and low power) turns the receiver off for a specified time when no signal is received. The receiver is off for two seconds, then sampled for .5 seconds, and then is turned off again. This reduces the standby current drain to a mere 8mA, greatly extending battery life. As a matter of fact, I used the ALX-2T for three days straight at my work QTH and did not run out of battery power!

The only other HT I have seen this battery save feature on was a Heathkit 2mHT, marketed about eight years ago. The battery save feature is really a help when you are trying to get the maximum life out of your battery pack (like in the middle of an emergency, maybe?).

The ALX-2T has one memory channel that is selectable on the front panel. A small switch on the top of the rig selects the operating frequency from either the digital readout on the thumbwheels or the user-programmed memory channel. A priority button allows the memory channel to be sampled for .5 seconds every 1.5 seconds. When something is heard on the priority channel, a "beep" sounds. This alerts you to the fact that something is happening on the priority channel, and you can switch over and monitor the activity. Through the prudent use of the memory- and the thumbwheel-selected channels, odd splits can be utilized, including MARS and CAP repeaters.

Anyone who has used any of the speaker/mics available for other HT's will attest to the poor receive audio quality. In addition, speaker/mics tend to pick up a lot of background noise which goes out over the air.

The novel earphone/mic option is a vast improvement over the speak-

er/mic. A small earphone, like on a "walkman-type" stereo, hangs in your ear (notice I said hangs in your ear, not plugs into the ear). This earphone has EXCELLENT audio reproduction, is extremely comfortable to wear for long periods and allows listening in noisy environments.

The mic is actually a clip-on arrangement that clips to your lapel, tie, collar, etc. To transmit, just press the button on the mic (or lock it down for long transmissions) and speak normally. Trials in my car indicate that there is no difference speaking across the mic element or directly into the mic. Background noise from the car was not picked up, indicating that there are some noise-cancelling effects built into the mic. The earphone/mic is a nice option that I highly recommend.

Another feature of this micro-HT is the dual color LED set over the thumbwheels. On transmit it glows red. You can see it readily because the LED is at eye level. It gives a positive indication that you are on the air. The transmit LED also gives an indication of battery condition. On receive, if you press a small momentary contact switch next to the LED, a green light is emitted and illuminates the thumbwheels for low-light situations. In reality, the green LED is not really bright enough to read the numbers well, but it is a nice touch.

The CTCSS encoder is a user-installed PC board. Instructions are included for installation and selection of the desired tone. Be advised: *do not attempt this installation unless you are qualified to perform soldering operations in very small spaces.* One slip of the old iron will spell disaster inside the tiny ALX-2T case.

The squelch circuitry deserves mention. There is no squelch control on the radio. Squelch level is constantly monitored inside the radio, and the level is adjusted for ambient noise. If you want to break squelch, there is a small momentary-contact switch behind the volume control that, when held down, will un-squelch the receiver. Let up, and the receiver goes back into the squelched condition. Neat, huh?

The ALX-2T is a great little radio. I use it constantly in my wife's Honda (she says "No radios!!" in her car) coupled to a Ramsey 15W 2M amp. This combo performs very well, except for high RF areas (due to the 16dB pre-amp in the Ramsey amp) when some receiver overloading is observed. The amp, when driven by the ALX-2T at 4W, produces about 25W output. This is plenty of RF for mobile applications.

On its own, the ALX-2T is a travel-

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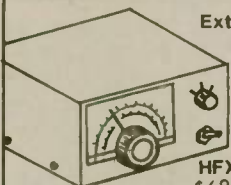
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
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Weight: 10 oz. (with the standard EBP-3N battery pack).

TX power output: Hi — 4W, Lo — 400mW.

Current drain on receive: B. Save off — 25mA, B. Save on — 8mA.

Current drain on transmit: Hi power (4W) — 750mA, Lo Power (400mW) — 350mA.

Receive sensitivity: 1.6uV for 20dB of quieting

The 12-button DTMF tone pad is standard. Also, a *TWO-YEAR FACTORY WARRANTY!!*

Other options include: a DC charg-

ing stand (charges NiCads from a DC source), DC/DC converter for mobile operation, RCA to BNC antenna adapter, belt clip and service manual.

My next application for the ALX-2T is to use it in a briefcase portable packet radio station. Shortly, I'll have a GLB PK1-L TNC to play with. Mating the ALX-2T and the PK1-L along with my Tandy Model 102 (expanded to 250K) and my portable printer, will be a challenge. However, the results will be worth the effort. More on my portable packet efforts at a later date.

Bottom line on the Alinco ALX-2T: it is a rugged little radio that is not a "cute toy." It is a workhorse and well worth the purchase price. Suggested retail price is \$235. Check your local dealer for further details. Tell them you heard about it in *Worldradio*. □

Silent Keys

John Watson, W4GD

John R. Watson, W4GD, an Amateur Radio operator for almost 60 years, died May 16, at the age of 82.

"There was not much a ham operator could do that Johnny hadn't done," said a local ham. "He did so much for so many. He wound transformers and helped neophytes build power supplies for their radios.

"He did a lot of coordinator work in the 1937 Mississippi River flood, helping people get to safety from farm-lands under water."

A ham operator since 1920, Watson

had the designation WAC and was a member of the Mid-South ARA.

—Submitted by Jim Alexander, AA4OU □

Donald Lamb, WB6VLJ

On Wednesday, May 11, Donald Lee Lamb, WB6VLJ, of Paradise, California, became a Silent Key at the age of 70.

A native of Pueblo, Colorado, Lamb has shared his love of Amateur Radio with others in the Oroville area by becoming an "Elmer" to many. He also enjoyed photography and owned/operated a grocery store for 10 years.

—Submitted by Gordon Olson □

'Goodbye' to an old friend

Rich Arland, K7YHA

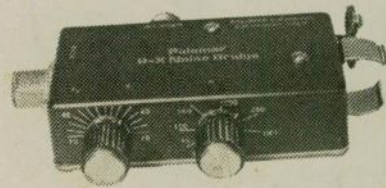
For the last several years, *CTM Magazine* — published by Chet Lambert, 1704 Sam Drive, Birmingham, Alabama — has been the source of packet radio, computer-in-ham radio, information for the amateur community.

Sadly, today I had a call from Chet telling me that, due to the lack of subscribers and failing advertising, *CTM* would be defunct with the June '88 issue. Needless to say, I was stunned. Not only did I like the magazine and many of the writers, *CTM* had become — for me — *THE* place to find articles on packet radio, emergency communications, solar power, battery information for emergency power and many other areas of interest. Every issue was read cover-to-cover.

The *CTM* story is a sad one for several reasons. First, *CTM* was being run on a shoestring budget by Chet and his wife, Teenie. Literally everything to do with publishing *CTM* was done in the Lambert household, by either Chet or Teenie. There was no staff to oversee the day-to-day operation of the magazine. Publishing *CTM* was, quite literally, a labor of love for the Lamberts.

Secondly, the subscriber base for *CTM* never climbed above 4,000. To put out a monthly magazine of the quality of *CTM* with only 4,000 subscribers is an overwhelming task. The problem here was that while the actual subscriber base was small, the readership (thanks to the hams who decided to "do a good deed" by photocopying articles appearing in *CTM* and please turn to page 71)

R-X Noise Bridge



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The big night has come. The class of 12 Novice candidates is eagerly awaiting with nervous anxiety to take the code and theory tests. Results are in: out of a dozen candidates, nine people have successfully completed both elements. The others are close and will be signing up for the next class session or continuing to study on their own.

Your work is over with, right? Now these nine candidates will go home, buy equipment, get on the air and be all set. You have trained them to get on the air and you envision them making contacts, right?

I would like to say this is the way it goes, but I am afraid that's not true. Recently, while doing some HANDI-HAM follow-up with some of our students who have not been very active with us during the last year, I found some very startling results — at least surprising for me.

While I expected some of the unlicensed students who were working for their Novices to decide that the hobby was not for them because "they don't like the code" or were "too busy

to study," this was not the case. Most of the unlicensed people dropped out because their health was not allowing them to feel well enough to continue in the program, or because they had moved and we had simply lost contact with them. The people who did drop out due to lack of interest were, in fact, the people who had already obtained their Novice licenses.

I began to think about what happens when a person gets their Novice and why some of these people who have already spent the time and effort to pass the code and theory — who had equipment available to them through the HANDI-HAM loan program if they needed it, and had volunteers and study materials — were deciding not to continue in the hobby.

These, I think, are some of the reasons why perhaps only four or five of those nine who passed the Novice test that night will remain on the air and upgrade. We at HANDI-HAMS are going to be taking a hard look at this to see if there is some way we can help those Novices who are choosing not to be active to remain in the hobby. But I don't think this is a problem unique to HANDI-HAMS; it is a problem throughout Amateur Radio.

According to the FCC Rules and Regulations, when a person takes a Novice exam they have two options. They can either copy 25 characters consecutively or answer questions about a QSO.

We at HANDI-HAMS always encourage our students to be able to pass the test by answering the QSO questions. We have found that people who pass the test simply by recognizing 25 characters, do not often have the ability to successfully get on the air at 5 wpm. However, because 10M is available, we would much rather see someone passing the test and getting some enjoyment out of 10M because they could recognize 25 characters, than leaving the hobby all together.

But perhaps an "After you pass" class might be in order, in which a student could continue working on their code until their license arrives. A class where perhaps once a week a radio amateur could have a practice QSO with the new Novice candidate. A class where the student could visit a ham shack and, with that ham's assistance in interpreting code, actually make a couple of QSO's as a third party.

Besides just barely knowing the code, I think another reason Novices drop out is that they are really uncomfortable with on-the-air procedures. It is one thing to learn that RST means readability, strength and tone, and another thing to learn that DE means the word "from," but a bad experience in those first one or two contacts can sometimes turn people off or frighten them so badly that they never get back on the air.

Perhaps having another amateur with the individual during those first crucial contacts would be a way to give the person more self-confidence so that they feel more comfortable about being on the air themselves. I have known people who have gotten their Novices, bought equipment, and then never had quite enough nerve to get on the air. Having someone either with them when they make their first contact or arranging a schedule with their one-to-one might be most helpful.

As a Novice, I only had six contacts (because I immediately upgraded to General). Four of them were with my teacher who had assisted me in obtaining the license.

Last of all, I think follow-up — like the type we do with HANDI-HAMS, to determine the problem and the reasons for deciding to leave the hobby — is of vital importance. Too often, people pass their Amateur Radio exams and are never heard from again.

Is there someone in your Amateur Radio club who calls these people, say, six weeks after they have been to the class? Questions to ask could be: "Did you get your license yet? Can we set up a schedule to get on the air? Do you want me to go to the hamfest with you and help look for equipment?"

If someone has not been heard on the air much by the time they've had their license six months, perhaps a follow-up call would keep that person active in the hobby. I know that at HANDI-HAMS, we are certainly going to try harder to keep in touch with our Novices so that they will decide to continue and enjoy their on-the-air experiences. □

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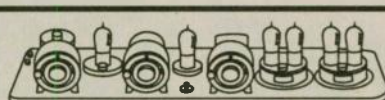
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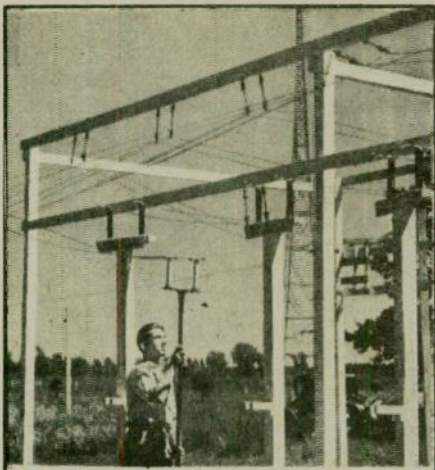
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AERIALS

KURT N. STERBA

Just got off the phone, talking to Worldradio's Chief Op N6WR. He told me that, while working in his booth at Dayton, he took some heat about things I had written.

One amateur got all over him about a book review I had done some years ago and that I had done a terrible thing, I was all wrong, and on. The angry amateur said the book's writer was brilliant and was a person of accomplishment, etc.

The writer of that book also, confronting Noble years back, said I was nitpicking.

Well, this was the book that told Ned Novice that on Day #1 he should dig a 50 cubic foot hole in his back yard for a ground system. The effect this would have on dipole radiation is absolutely zip.

Anyway, thinking that maybe I had been too harsh, I looked through the book again. I found more weird things that I missed the first time through.

For example: Fast Scan TV on 20M! Bud, let Ol' Kurt warn you, if you put a Fast Scan TV signal on 20M, hams will stop talking about the Woodpecker and start talking about you. You'll have a signal 2 MHz above and 2 MHz below the 20M band.

The FCC, with your violation notice and handcuffs, will land their helicopter in your front yard, and the KGB will be assaulting your house from the back because you are messing up Radio Moscow.

Then there was the statement that if you don't have a perfect match between feedline and antenna, "you will waste a tremendous amount of power in the form of heat at the feedpoint." **WRONG!**

The loss is not at the feedpoint at all, but rather, distributed along the feedline.

I also saw that the Yagi reflector

was $\frac{3}{4}$ of a wave in front of the driven element. Not so. One-quarter at most.

I don't care if it was Dr. Jonas Salk writing a book with bum antenna dope, I'd say so. Twaddle is twaddle.

I've mentioned this before, and I'll do so again. If anyone writes a book on antennas, send it to me first and I'll look it over so you don't embarrass yourself.

Why do I write the way I do, about the things I do? Because I don't want to see any of my reader-friends getting a hernia trying to put up a 3L 20M Yagi with a 44' boom, which is what would happen if you followed the spacings in the book spoken of.

And how can I say the things I do? Well, I put up my first vertical long before that December day that the JA's went Maritime Mobile in Zone 31.

I'll share with you something that was the most fun I had last month. I got one of those letters telling me I'm all wrong, etc.; then he said it's a good thing there are ARRL publications to refer to instead.

So, I just photocopied the pages from the *ARRL Antenna Book* that agreed with me and sent it to him. No reply.

But, so people don't get their noses all twisted out of joint when I point out silly stuff in books, from now on I'll just write the corrected version and never mention the book's title or author.

The Bobbsey Twins (real clue) have a book out in which they claim that after you run all your radials out (like spokes from a hub), you should connect them all in an outer ring. This is a total waste of time, money and effort.

Then there was some stuff about hammering 4' ground rods into the earth at the ends of the radials. This is great, but only for the purpose of getting some exercise.

Speaking of exercise, a great deal (and rightly so) has been made of how during the Big One, hams went into communications in the service as an already trained pool. The story not told much is that a lot of them, the victims of smokes and coffee, up all night working DX and no exercise, were in such bad shape that not even the Army would take them.

Anyway, this book with the yellow cover says that between your tuner and the transmitter you should run another wire, not depending on the shield of the coax. **WRONG!** Because then you'd have an RF loop like the audio loop that some may be familiar with. If the shield is bad, replace it.

If you have the condition described in the book, pray tell, just what would be the impedance presented by the center conductor and this other wire a foot away???

And fellas, you don't "resonate an antenna with a dip meter." You resonate an antenna by lengthening or shortening it.

One last word on this subject. When you read anywhere that you should bury the radials for a vertical about 2 feet under ground or so, that tells you that the writer has never figured out what radials are really there for!

Radials are there as RF catchers. The current in radials flows back toward the vertical and is reradiated. Logic would tell one that the lower (or deeper) the radials are, the less RF that will reach them. □

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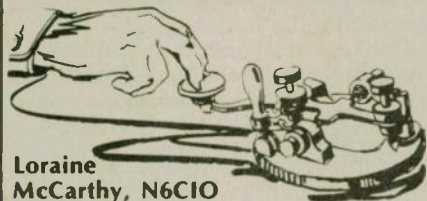
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Code Matters



Loraine
McCarthy, N6CIO
315 1/2 Ruby, Balboa Island, CA 92662

Six out of 10!

How many of you recently have taken a code exam and did not achieve a passing score by just that one point? You needed 70% but attained a score of 60%. At one time or another, such an exam score has probably happened to most of us.

While you may be temporarily frustrated, you might use that score to your advantage in planning your study for your next attendance at an exam session.

Look at some circumstances that cause the 60% score:

- 1) The student is not quite strong enough on basic code copy.
- 2) Test anxiety may have caused the student to lose copy he may not lose in regular practice.
- 3) The student was unable to fully use (read) the material s/he copied to find the answers to the questions asked.
- 4) Careless errors were made in recording answers such as in spelling, transfer errors, unnecessary omissions, etc.

Items (3) and (4) are the most common causes of the 60% score. If you are in an area where you can test regularly, plan to put in about two more weeks of good practice and then retest. If you're in an area where exams are given less often, schedule yourself for the next available test.

Here's what to study in your upcoming practice and review:

- 1) Read and work through your own copy as if you were taking the test. **SIMULATE EXAM CONDITIONS!**
- 2) Remember — if you can't read a sentence in your practice, something isn't correct.
- 3) Learn to look for key words and phrases in your copy to help guide you to answers (i.e., class of license, temperature, receiver, QTH or location, or watts of power). Underline these words in your copy.
- 4) Find "phrase joiners" such as the word "and" in long sentences, and

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draw vertical lines around it to split a sentence in half.

My rig is an/ICOM 735/and antenna is a 5-band trap vertical up 51 feet.

The student who practices these skills will avoid an incomplete answer such as just ICOM or vertical, because s/he has read the *entire* sentence and has identified the beginning and end of each answer. Occasional missing letters can be identified by this procedure also.

Don't let good code copy go unused because you thought there was nothing there and didn't take the time to carefully work through your copy.

At your next exam session, work back and forth between your answer sheet and code copy. Answer one question at a time. Remember: words are important. They make up the sentences that form the test QSO. Answer one question at a time. **PRINT** your answers. When you are done, *recheck your work!*

To help you avoid repeating the 60% score, do the careful work described above. Do not let it frustrate you! Avoid the tendency to put the code aside, saying, "I'll come back to it in a couple of months." Do your work now, and you will achieve your success sooner!

If you have recently passed one of your code exams, write me a note and send along a copy of your license, and I'll send you a certificate from Radio School for your ham shack.

Here at Radio School, we have theory upgrade courses available for Technician, Technician/General, Advanced and Extra. Each is \$19.95 plus \$3 p&h. 5, 13 and 20 wpm sample exam tapes are also available, as are 5-7, 13-15 and 20-22 wpm random tapes. Each is \$9.95 plus 75¢ p&h.

You can order these items directly from me: Loraine McCarthy, N6CIO, Code Instructor, 315 1/2 Ruby, Balboa Island, CA 92662. □

MORSE CODE

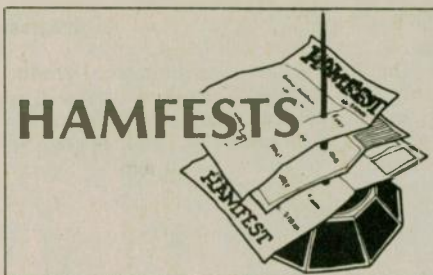
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Alabama

The HUNTSVILLE ARC will hold the Annual Huntsville Hamfest at the Von Braun Civic Center in downtown Huntsville, August 20-21.

Hours are 9 a.m. to 4 p.m. on Saturday and 9 a.m. to 3 p.m. on Sunday. Activities include dealer show, flea market, forums, walk-in license exams by CAVEC at 9 a.m. Saturday, and numerous activities for non-hams.

Admission is free, and ample parking is available in the parking garage across the street at \$2/day. Full access for disabled individuals is provided. All events are indoors and air-conditioned.

Talk-in on 146.34/94, K4BFT.

For more information, contact David L. Reasoner, N4KTY, 3103 Holly Hill Rd., Huntsville, AL 35802; (205) 883-7629. Or Don Tunstill, WB4HOK, 1215 Dale Dr., Huntsville, AL 35801; (205) 536-3904. □

California

The TRI-COUNTY ARA will be sponsoring Hamfest '88 on Saturday, August 20, from 8 a.m. to 2 p.m., at Palomares Park Recreation Hall, 491 E. Arrow Hwy., Pomona.

The event will be all indoors. Free parking, refreshments, prizes and a program on Tesla, which includes an exciting, hair-raising demonstration. VE exam check-in at 8 a.m.; code at 9 a.m., theory at 10 a.m. To register for VE exams, send completed 610 form, original and copy of current license (permit disallowed), photo I.D. and SASE. Mail to: TCARA, P.O. Box 142, Pomona, CA 91769, ATTN: VEC (enclose \$4 donation).

A limited number of 2 1/2' x 8' tables are available; they must be reserved in advance with a donation of \$3 per table for members or \$5 for non-members. Table set-up begins at 7 a.m. Contact Ruth Warburg at (714) 946-5404 for reservations.

Hamfest admission tickets are \$1 each; three or more are required to enter. To register in advance, make checks payable to TCARA, and mail with SASE to: Don Warburg, WA6HNC, 2481 Highland Rd., Upland, CA 91786.

Talk-in on 146.025 (+600). □

The SANTA BARBARA ARC will hold a hamfest on Sunday, August 21, at the Santa Barbara Elks Lodge #613, 150 N. Kellogg Avenue, Goleta. Hamfest begins at 9 a.m.

Among the features will be a Navy-Marine MARS/HF demonstration, an ARRL book store, ARES emergency van display, ATV display and prize drawings. Beginning at 11 a.m. will be several fun activities: 2M handi-talkie T-hunt, Best QSL (bring yours), QLF contest, transformer toss, games for kids and prizes for the winners. Special attraction will

be Ken Tagami, WA6BCC, and his bluegrass music group from San Diego.

The flea market — for commercial vendors only — is \$15/space. Prior registration requested. Barbecué starts at 1:30 p.m. — adults \$7, kids under 10 \$4.50. Special VE session for all grades at 10 a.m. — reservations at (805) 966-6620.

Talk-in on 146.79.

For more information, contact Santa Barbara ARC, P.O. Box 3232, Santa Barbara, CA 93130-3232. □

Hamcon 88, sponsored by the ORANGE COUNTY COUNCIL OF AMATEUR RADIO ORGANIZATIONS, will be held September 2-4, at the Disneyland Hotel in Anaheim, California. The convention includes technical sessions and forums, VE exams, Wouff Hong, Saturday night banquet, ladies programs, Sunday T-hunt and Friday night "Meet and Greet."

Hamcon 88 will feature the newest Amateur Radio equipment, related electronics and computer peripherals. Convention registration also includes validated parking and special hotel rates.

We invite you to attend and reserve these dates on your convention calendar. For further information, contact HAMCON INC., P.O. Box 3695, Huntington Beach, CA 92605. □

Florida

On August 6-7, the 15th Annual Greater Jacksonville Hamfest (sponsored by the GREATER JACKSONVILLE HAMFEST ASSOCIATION) will be held at the Prime Osborn Convention Center, Jacksonville.

Hours are 9 a.m. to 5 p.m., Saturday and 9 a.m. to 3 p.m., Sunday. Friday swap table and exhibitor set-up 2-6 p.m. Forums, huge indoor swap area, major exhibitors and prizes. "Boat anchor" auction on Sunday, 2-3 p.m.

Swap tables are \$15 both days, \$12 Saturday only, or \$6 Sunday only. Admission is \$5. Walk-in FCC exams Saturday at 1 p.m. FCC Forum 610's provided. Bring copy of license and any credits. Novice exam free; all other exams \$4.

Headquarters hotel is Jacksonville Hotel, located on the riverfront boardwalk. A special room rate of \$39 single or double — just mention the hamfest. The hotel can be contacted at (904) 398-8800.

Talk-in on 146.16/76.

For more information, contact the Greater Jacksonville Hamfest, P.O. Box 10623, Jacksonville, FL 32207; (904) 350-9193. □

The 23rd Annual Melbourne Hamfest, sponsored by the PLATINUM COAST ARS, will be held August 29-30 at the Melbourne Auditorium, just off U.S. 1 in downtown Melbourne, with meetings and rooms available at the Melbourne Ramada Inn.

Hours are 9 a.m. to 5 p.m., Saturday, and 9 a.m. to 4 p.m., Sunday. Featured will be commercial exhibits, swap tables, ARRL Forum, QCWA, technical, MARS and net meetings. Tickets are \$3 in advance, \$4 at the door. When ordering tickets, mark envelope "Tickets." For swap table reservations, limited to two adjacent tables per request, mark "Swap Tables."

Talk-in on 146.25/85.

For tickets, reservations and/or information, contact PCARS, P.O. Box 1004, Melbourne, FL 32901. □

Indiana

The PORTER COUNTY ARC, INC. presents the Annual Northwest Indiana Hamfest & Computer Fair at the Porter County Fairgrounds & Expo Center, Rt. 49, south of U.S. 30, just east of Valparaiso. The date is Sunday, August 7.

Gates open at 7 a.m. (6 a.m. for vendors). Vendors will have the option of inside or outside locations. Walk-in VE testing for all, license classes from 8 a.m. to 10 a.m. General admission is \$3.50; under 12 free.

Talk-in on 146.774/175 or 146.52.

For more information, contact Jamie Veiner, NS9A, P.O. Box 1782, Valparaiso, IN 46384. □

Iowa

The CEDAR VALLEY ARC, Inc. is sponsoring their "Summerfest 88" at the Teamsters Hall, 5000 J Street SW, Cedar Rapids. The hamfest will last from 8 a.m. to 5 p.m., August 13, and from 8 a.m. to 3 p.m., August 14.

There will be Amateur Radio and computer seminars, FCC exams, a large variety of commercial vendors, flea market, free outside tailgating, and ladies' hospitality room — all in indoors air-conditioning. Saturday night buffet dinner, too.

Special hotel rates at Sheraton Inn can be obtained by calling (319) 366-8671 and asking for Summerfest 88. There are also economy motels and shopping malls nearby.

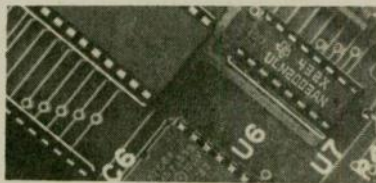
Tables (8') are \$8 each. Commercial \$15/booth, \$10 each thereafter; phone (319) 377-3829. Admission: \$3 advance, \$4 at the door; 12 and under free. Banquet buffet tickets are \$10; \$13 at the door, if available.

Talk-in on 16/76 and 52.

For advance registration, write to Summerfest 88, 2139 Randolph Rd., Marion, IA 52302; or phone (319) 377-7187 or 362-3602. □

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(303) 434-9405



Kentucky

The Central Kentucky ARRL Hamfest, sponsored by the BLUEGRASS AMATEUR RADIO SOCIETY, will be held Sunday, August 14, 8 a.m. to 4 p.m., at Scott County High School, Longlick Road and U.S. Route 25, Georgetown.

Technical forums, license exams, awards and exhibits in air-conditioned facilities. Tickets \$5 in advance, \$6 at the gate. Outside flea market space — no extra charge.

Talk-in on 16/76.

For more information or tickets, send SASE to Ed Bono, WA4ONE, 2077 Dogwood Dr., Lexington, KY 40504. Telephone (606) 277-3768. □

Minnesota

The ST. CLOUD ARC Hamfest will be held at Whitney Senior Center in St. Cloud on Sunday, August 14. Ticket donations are \$3 each; extra tickets are \$2. Lunch counter and prizes.

Talk-in on 34/94 primary, 615/015 secondary.

For information, contact SCARC, Box 141, St. Cloud, MN 56302. □

Missouri

The St. Charles ARC will sponsor HAMFEST 88 on August 28 at Blanchette Park in St. Charles, from 6:30 a.m. to 2:30 p.m.

There will be forums, family activities and license exams (10 a.m.). Admission and parking are free. Handicapped parking will be

HAMFESTERS RC 54th Annual HAMFEST Formerly at Santa Fe Park

NEW LOCATION:
Will County Fairgrounds
Peotone, Illinois
access from I-57, exit 327

NEW DATE:
Sunday, July 31, 1988

*Convenient Parking
Indoor Dealer Display
Huge Flea Market*

**TICKETS: \$3.00 advance
\$4.00 at gate**

SASE to: Hamfesters
13058 Finch Ct., Lockport, IL 60441

Info: 312-403-1043

Talk-in: 146.52 • 146.16/.76

available. A \$2/space donation is requested for the tailgate flea market. The club will run a food concession for early morning coffee and lunch. Dealers are welcome in non-air-conditioned hall.

Talk-in on 146.07/67 and 146.52.

For further details, contact Eric Koch, NFOQ, 2805 Westminster, St. Charles, MO 63301; (314) 946-0948. □

Nevada

The combined radio clubs of Reno are sponsoring RENO HAMFEST '88, to be held Saturday, August 20, from 9 a.m. to 5 p.m. in the California Building at Idlewild Park in Reno. The Reno Hamfest '88 will present a ham swap, prizes, refreshments and a VE exam.

Admission is \$3 including a free beverage. 6' swap tables are \$7 each. Pre-registration is required for the swap tables and VE exams.

Talk-in will be on 146.61- and 147.30+.

For information, registration and VE exam, send an SASE to Curley Silva, K7HRW, 3780 Hummingbird Dr., Reno, NV 89506. Persons wishing to take the VE exam should also include a completed FCC Form 610 and \$4.55 check payable to ARRL/VEC. □

Ohio

The UNION COUNTY ARC is sponsoring their 12th annual Marysville Hamfest and Computer Show at the Union County Fairgrounds, Sunday, August 28. Doors open from 6 a.m. to 4 p.m. Admission \$4; advance \$3. Activities include giant flea market, FCC exams, free camping, ARES and ARRL meetings, and much more.

Talk-in on 146.52 and 147.99/39.

For more info, contact Gene Kirby, W8BJN, 13613 U.S. 36, Marysville, OH 43040; (513) 644-0468. □

Oregon

The NORTHWEST AMATEUR RADIO COUNCIL will be sponsoring the Portland '88 ARRL National Convention on September 9-11, at the Red Lion Motor Inn, Jantzen Beach.

Most of the companies and importers you find advertising within these pages of *Worldradio* each month plan to be there. Having such a good cross-section of manufacturers exhibiting at the convention is paying off in the seminar department.

On the program this year are Yaesu's Chip Margelli, KJ7A, who will talk about computer control of radio gear; Dr. Phil Anderson of Kantronics on digital communication and the amateur; ETO's Mark Forbes on HF amplifiers; Dr. Alan Chandler, K6RFK, of AEA on proper grounding; and *QST* Editor Paul Rinaldo, W4AI, on packet radio.

Lew McCoy, W1ICP — *CQ Magazine's* Technical Editor, inventor of the "ultimate transmatch" antenna tuner-coupler while with the ARRL staff, and this year's recipient of the 1988 Dayton Hamvention's Technical Excellence Award — will address RFI. During the 1950's, Lou toured all 48 states and Canada with demonstrations and cures for interference.

Sandy Mikalow, K7OOZ, will demonstrate radio astronomy; Greg Milnes, W7AGQ, will share his experiences with antenna and tower

restrictions, from the viewpoint of lawyer and Oregon circuit court judge.

On the banquet program is Dr. Tony England, W0ORE, retired NASA astronaut ham-in-space. Tony is now on the faculty of the University of Michigan at Ann Arbor, and will conduct the convention's Youth Forum, teaming with *Worldradio* columnist and instructor Gordon West, WB6NOA. Gordon's partner-in-code, Loraine McCarthy, N6CIO, will show the typical CW exam and how to learn code so you can pass it the first time.

Beat the code

Over 50 years ago, Ted McElroy established himself as the speed champion of Morse code. Since then, the record 75 wpm has stood, with nobody attempting a serious challenge. The Portland '88 Convention planners hope to see a new champion.

Eliminations for the world CW championship start Friday afternoon, September 9.

In addition to the International Morse Code Speed Championship, attractions will include: Old West Casino Night (for info, contact AEA, P.O. Box C2160, Lynnwood, WA 98036-0918); Wouff Hong, a DX breakfast, QCWA events, tailgate flea market, and tours of Portland, Mt. St. Helens and the Columbia River.

Registration is \$7 in advance, with special early bird incentives; \$9 at the door. Saturday banquet (filet of salmon or top sirloin) is \$20. Plenty of parking, nearby RV accommodations and recreational activities. (The hotel is located on a large island in the scenic Columbia River, next to a shopping center.)

Talk-in on 147.04/64, 449.325 and 39.15.

For information, contact Portland '88 Con-

vention, P.O. Box 25088, Portland, OR 97225; (503) 640-5456. For special airline fares, call United Airlines at (800) 521-4041 and ask for ARRL account #8055N. — Bob Kuhn, KC7YN □

Pennsylvania

The MID-ATLANTIC ARC (MARC) will hold its annual hamfest on August 7, at the Bucks County Drive-In Theatre, Route 611, Warrington.

There will be door prizes, ARRL representatives, refreshments, and exhibits on packet radio, AMSAT and ARES. The event will last from 8 a.m. to 3 p.m., with tailgate set-up at 7 a.m.

Talk-in on 147.66/06 and 146.52.

Admission is \$3; tailgating space is \$2. For more information contact John Bartolomew at (215) 356-7197 or write MARC, 203 Second Ave., Broomall, PA 19008. □

Texas

The PANHANDLE ARC will be sponsoring the annual Golden Spread Hamfest on August 13-14, in Amarillo. The hamfest will be held at the Camelot Inn, 2508 I-40 East.

Pre-registration is \$6, with a deadline of August 11. Tables are \$4 each, available on a first-come basis. Discount motel rates available, but you must specify "Golden Spread Hamfest" when you make reservations at (806) 373-3600. Send pre-registrations to: Golden Spread Hamfest, P.O. Box 1524, Amarillo, TX 79105-1524.

Talk-in on 146.94- and 146.67- □

Virginia

The SHENANDOAH VALLEY ARC presents the 38th Annual Winchester Hamfest on Sunday, August 7, at Clarke County Ruritan Fairgrounds, Berryville.

Grounds open at 7 a.m.; set-up begins at 6 a.m. Tailgaters or tables in Building B (first-come basis) — \$5. Tailgaters' prize drawing and hourly drawings. VE exams at 9 a.m. Registration is \$4; XYL's and children free. Breakfast, snack bar, and Ruritan's famous chicken and beef barbecue. Ladies' activities.

Talk-in on 146.22/82 and 52 simplex.

For more information, write to: SVARC, 367 Buckingham Dr., Stephens City, VA 22655. □

West Virginia

The JACKSON COUNTY ARC 11th Annual Hamfest will be held Saturday, August 13, at Ripley Middle School in Ripley. There will be a flea market, VE testing and ladies' activities.

Talk-in on 146.07/67.

For information, contact Robert DeHart, N8GKJ, RFD #3, Box 229, Ripley, WV 25271. □

If you are involved in any emergency communications incident, send story and photos to *Worldradio*, 2021-28th St., Sacramento, CA 95818.

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YL/OM Summer SSB Sprint

The Young Ladies' Radio League will be sponsoring the YL/OM Summer SSB Sprint on Saturday, August 6, 1800-2200 UTC. All licensed men and women throughout the world are invited to participate.

Procedure: OM's call "CQ YL" and YL's call "CQ OM."

Operation: All HF bands may be used. No crossband operation. Net contacts and repeater contacts do not count. Stations may be worked and counted once on each band. The maximum power output that may be used at any time during the contest is 1500W PEP.

Exchange: Station worked, RS, name and state/province/country. Entries in log must also show date, time, band and power.

Suggested frequencies: (80M) 3.940-3970, (40M) 7.240-7.270, (20M) 14.250-14.280, (15M) 21.380-21.410, (10M) 28.380-28.410 MHz.

Scoring: YL's may count only OM's and OM's may count only YL's for QSO points.

A) QSO points — A station may be worked once on each band. For each band, count the number of different stations worked. Add the QSO points for each band together for the total QSO points.

B) Alpha-numeric multiplier — Using the last number and the first letter following that number of a call sign, there are a total of 260 combinations possible (i.e., a possibility of 26 letters with each of 10 numbers 1-0. W1XZ is a 1X, W2GLB/7 is a 2G, and 9Y4A is a 4A, etc.). Add the number of different alpha-numeric combinations worked on each band. Add the total for each band together for your alpha-numeric multiplier.

C) Total score — Total QSO points × alpha-numeric multiplier × low-power multiplier (if applicable).

Awards: Certificates will be awarded to the three highest scoring OM's and the three highest scoring YL's. The top-scoring OM and YL from each district/province/country will also receive certificates, providing there are at least 10 valid contacts on the log.

Logs: Please print or type logs. Do not send a carbon copy of your log. All logs must be signed by the operator and must state the state/province/country of the operator. Indicate claimed score in the log. No logs will be returned. Logs must be received by September 15, 1987 by Vice President Carol Shrader, W14K, 4744 Thoroughgood Dr., Virginia Beach, VA 23455. □

I resolve never again to use "Q" signals when engaged in on-the-air voice communications. — Sterling Rock Falls ARS, IL

QRP ARCI Summer Daze Sprint — Phone

The QRP ARCI Summer Daze Sprint (Phone) will be held August 14, 2000-2400Z.

Exchange: Member — RS, state/province/country, ARCI number; Non-member — RS, state/province/country, power out.

Suggested frequencies: (kHz): (160M) 1810, (80M) 3985, (40M) 7285, (20M) 14285, (15M) 21285, (10M) 28385 and 28885, and (6M) 50385.

Scoring: Score = points × S-P-C × power multiplier × power supply multiplier.

Points: Member — 5 pts.; Non-member, different continent — 4 pts.; Non-member — 2 pts.

Multipliers: S-P-C total all bands. The same station may be worked on more than one band for points and S-P-C credit.

Power supply multiplier: × 1 — commercial power; × 1.5 — battery; × 2 — solar/natural, or battery-charged only by solar or natural power.

Power multiplier: × 0 — over 5W (check log); × 2 — 4-5W; × 4 — 3-4W; × 6 — 2-3W; × 8 — 1-2W; × 10 — less than 1W.

Call: CQ QRP, CQ QRP, CQ QRP DE K5VOL, K5VOL, QRP TEST K.

Awards: Certificates to the top three scores

overall and to the top score in each S-P-C in which two or more entries are received.

Entries: Include a description of homebrew equipment, commercial equipment and antennas used with each entry. Also include a copy of the logs and a separate summary sheet. All entries must be postmarked 30 days following the end of the contest. Late entries will be counted as check logs.

Logs: Members indicate their membership numbers on all logs. Members and non-members indicate their input or output power for each band. The highest output power level used will determine the power multiplier. Output power is considered as half of the input power.

A summary sheet and sample log sheets are available from the contest manager for an SASE with 1 unit of postage. Include an SASE with 1 unit of postage in the entry for a copy of the contest results. Results will be published in the next issue of the QRP ARCI Quarterly.

All entries are to be sent to: Red Reynolds, K5VOL, QRP ARCI Contest Manager, 835 Surreys Rd., Lake Zurich, IL 60047, USA. □

New Jersey QSO Party

The Englewood Amateur Radio Association, Inc. invites all amateurs the world over to take part in the 29th Annual New Jersey QSO Party. The contest will be held from 2000 UTC, Saturday, August 20 to 0700 UTC, Sunday, August 21; and from 1300 UTC, Sunday, August 21 to 0200 UTC, Monday, August 22.

Operation: Phone and CW are considered the same contest. A station may be contacted once on each band (phone and CW are considered separate bands). CW contacts may not be made in phone band segments. New Jersey stations may work other New Jersey stations.

Call: General call is CQ NEW JERSEY or CQ NJ. NJ 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. Suggest phone activity on the even hours, 15/10M on the odd hours (1500-2100 UTC), and 160M at 0500 UTC.

Exchange: QSO number, RST and QTH (ARRL section or country). NJ stations send county for their QTH.

Scoring: Out-of-state stations multiply number of complete contacts with NJ stations by number of NJ counties worked (max. 21). NJ stations — W-K-VE-VO QSO's count as 1 pt.; DX stations count as 3 pts. Multiply total number of points by 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 NJ county, ARRL section and country. 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/Technician and all other classes).

Logs: Logs must show UTC date, time, band and emission, and be received no later than September 17, 1988. 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, and calls of participating operators listed.

Send logs and comments to: Englewood ARA, Inc., P.O. Box 528, Englewood, NJ 07631-0528. Include #10 SASE for results.

Stations planning active participation in New Jersey are requested to advise EARA by August 1 of their intentions so we may plan for full coverage from all counties. Portable and mobile operation is encouraged.

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

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- Outputs: 2 or 3 latched, 1 or 2 momentary, 1 timed and 1 manually reset group-call latched for remote alarm
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Plus \$3.00 shipping & handling



NEW PRODUCTS

Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

Cassette theory courses

Gordon West Radio School offers cassette theory courses for the following Amateur Radio license categories:

- 1) Novice — two cassette theory and two cassette code
- 2) Technician — four cassette theory and textbook
- 3) General — four cassette theory and textbook
- 4) Combination Tech/General — four cassette theory and textbook
- 5) Advanced — four cassette theory and textbook
- 6) Extra — four cassette theory and textbook

Each theory course features the new revised question pool that parallels the actual VEC-administered examination. Questions are covered on the cassettes in the same order as they are in the book.

"We more fully explain the correct answer on our cassettes. We also play the radio

sounds behind those answers, such as RTTY, 1200 baud, and tropospheric ducting. This lets our students better understand what some of the sounds of ham radio are all about," comments Gordon West.

Handicapped students are especially thankful for "Gordo" to produce these up-to-date cassette training courses. They may be used exclusively without any visual aids, if necessary. However, the included textbook assists in better understanding some schematic diagrams and block diagrams.

Each cassette course, with its accompanying textbook, is \$19.95, plus \$2.50 postage and handling, when ordered directly from Radio School. Participating Amateur Radio dealers also carry these courses in stock.

For more information, contact: Gordon West Radio School, 2414 College Dr., Costa Mesa, CA 92626; (714) 549-5000. □

Surge protector

Spi-Ro Manufacturing is now offering a surge protector that is designed to protect communications equipment, computers, scientific equipment, satellite equipment, etc. from damaging voltage surges and spikes on the incoming power line.

Voltage spikes can originate from appliances, fluorescent lights, power company changes and weather. Daily voltage spikes are normal and shorten electronic equipment useful lifetime.

The SP-6-CB is equipped with an EMIRFI filter and surge suppressor that is UL-listed, rated at 15A/125V/60 Hz. The unit provides Nanosecond switching response, and the maximum spike current is 4,500 amps.

The unit provides six protected outlets, with a resettable circuit breaker, and indicator light that lets the user know the internal filter network is operating.

The price is \$29.95. For information, contact: Spi-Ro Manufacturing, Inc., P.O. Box 1538, Dept. 20, Hendersonville, NC 28793. □



Radio telegraph terminal

ACE Communications, Inc. has introduced the model AR-501, a triple-mode radio telegraph (CW) terminal for Amateur Radio operator and shortwave listeners.

The AR-501 performs as a CW decoder, CW trainer and electronic keyer. Features includes automatic speed follow-up and threshold control, LED tuning indicator, 32-character LCD display, random code generator, and electronic keyer for both standard and iambic.

In all three modes, codes can be monitored by internal speaker and printer through the parallel printer port of the unit. AR-501 measures only 4.5" x 6.25" x 2.25" and is powered by a 12V DC source. The user price for the AR-501 is \$229, including AC power adaptor and parts for hook-up.

For further details, contact ACE Communications, Inc., 22511 Aspan Street, El Toro, CA 92630-6321; (714) 581-4900. □

Analog wall clocks

Benjamin Michael Industries, Inc. has announced the introduction of two analog wall clocks, specifically designed for use at airports, military installations, communications facilities, hospitals, and in other applications where simultaneous reference to local and Greenwich (Zulu, UTC, etc.) time is required.

The model 973A is a true military (24-hour) time format clock utilizing a special analog clock movement to provide one sweep of the hour hand per day. This format has long been used by organizations which cannot afford ambiguities caused by the more standard a.m./p.m. operation of normal movements.

The model 972A is a more standard wall clock which displays time in the 12-hour a.m./p.m. format. It is designed to complement the 973A in style, size and function, and is most often used to present local time where a.m./p.m. ambiguity is not a problem.

Both clocks are housed in 14" cases for easy viewing, even in large rooms or control centers. A clear glass crystal is featured for long life without the yellowing and scratching problems common with the less expensive plastic styles. Each clock operates for over one year on a single AA-size battery. Battery operation eliminates problems caused by power line failures and prevents data leaks in high security applications.

For purchase or further information, contact: Dave Wyatt, Benjamin Michael Industries, Inc., 1139 E. Tower Rd., Schaumburg, IL 60173; (312) 884-7077. □

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Ham Radio Outlet
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San Diego, CA 92123

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Van Nuys, CA 91401

Henry Radio
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Los Angeles, CA 90025
(213) 820-1234

The Radio Place
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Sacramento, CA 95818
(916) 441-7388

Shaver Radio, Inc.
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Campbell, CA 95008
(408) 370-6665

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Atlanta, GA 30340
(404) 263-0700

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(617) 486-3400 or 486-3040

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722/24 Evanston Ave.
Muskegon, MI 49442
(616) 722-2246

MISSOURI

Henry Radio
211 N. Main Street
Butler, MO 64730

NEVADA

Radio World
1656 Nevada Hwy.
Boulder City, NV 89005
(702) 294-2666

OHIO

Universal Amateur Radio, Inc.
1280 Aida Drive
Reynoldsburg (Columbus), OH 43068
(614) 866-4267

TEXAS

Mission Communications
11903 Allief-Clodine Suite 500
Houston, TX 77082
(713) 879-7764

Auto-Kall HF-Alert

The MoTron Auto-Kall HF-Alert is a selective calling or alerting system especially designed to be used with HF SSB/CW Amateur Radio. It will also work on VHF/UHF, SSB/CW/FM/AM, CB, marine HF/VHF, etc.

The encoder sends two strings of "dits" at a precise, crystal-controlled speed. The decoder mutes the speaker until the correct calling sequence is received. That turns on the internal (or external) speaker for an adjustable time period, sets a red call LED and enables an alarm output. 225 code combinations are possible. The calling/decoding codes are set via rotary switches accessible through the front panel.



The HF-Alert allows the user to be contacted by radio without having to constantly monitor. It is ideally suited to activate emergency nets, signal geographic areas on HF traffic nets, alert between mobile and base stations, to signal other ham family members or friends, across the country or around the world.

The HF-Alert comes with mobile mounting bracket, 117VAC power supply for base operation, and an audio patch-cord. It is easily set up by connecting the patch-cord from the radio's external speaker jack to the HF-Alert's audio input. A built-in speaker is provided, or an external speaker can be used. The calling signal is sent either by directly keying a CW transmitter, or by placing the microphone next to the speaker.

The HF-Alert is available from MoTron Electronics, 695 W. 21st Ave., Eugene, OR 97405; (1-800) 338-9058 or (503) 687-2118. Price: \$129.95. □

DTMF-encoder, keyboard

Pipo Communications announces a high-quality DTMF-encoder and keyboard, designed exclusively for land mobile applications.

The reputation for quality and reliability continues. Pipo Communications addresses land mobile applications with the P-7 and P-8 series. These units have been fully tested and are ready for a custom installation on radios or systems that are exposed to harsh or abusive environments.

These units are the first of their kind to be specifically designed with steel keys and sealed gold dome contacts to insure reliability and long life. Each of the three models are small enough to fit most radios, and are template-supplied for mounting position. They also have a wide operating voltage range (4-16VDC). Available in dark brown for Standard Communications HX Series.

Prices are: P-7V (12-key vertical) — \$53; P-7H (12-key horizontal) — \$53; and P-8V (16-key vertical) — \$57. For information, contact Pipo Communications, P.O. Box 2020, Pollock Pines, CA 95726-2020; (916) 644-5444. □



Rear window signs

SIGN ON, a producer of custom-made call signs for the Amateur Radio community, announces the addition of a new "Rear Window Sign" product.

The flexible custom-made plastic signs are 2" x 8" and adhere to the inside of a vehicle's rear window. They are available in the assorted background colors of black, blue or red. The call lettering is white.

SIGN ON also produces custom-made 2" x 8" magnetic call signs on white vinyl material with magnetic backing. Call sign lettering may be ordered in black, blue or red. Both products may be instantly removed for transfer from one vehicle to another.

The price of each sign is \$8.50 ppd., with club discounts available. Further information is available from SIGN ON, Dept. WP, 1923 Edward Ln., Merrick, NY 11566. □



Already know the code? Start copying words instead of letters! Time-proven, easy-to-learn methods. Increase skills and speed at the same time! 3-step program.

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Start copying words the very first day! Ideal, moderate speed. Two 60-min tapes and complete written instructions. \$14.95 + S&H.

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PTT Watchdog

Kantronics, Inc. is pleased to announce the Kantronics Watchdog circuit for KPC units. The Kantronics Watchdog circuit can be installed inside the KPC-1, KPC-2 and the KPC-400. The circuit monitors the push-to-talk line of the TNC.

If the PTT has been active for approximately two minutes, the Watchdog will be activated and the attached radio will un-key. This prevents a local area network from being disabled to a "hung-up" TNC. After the circuit has been activated, a power ON/OFF will be necessary to restore the KPC to normal operation.

Retail price \$10, shipping U.S./Canada \$2.50, international shipping \$7.50. For more information, contact Kantronics, Inc., 1202 E. 23rd St., Lawrence, KS 66046; (913) 842-7745. □

Alinco hand-helds

It is always a pleasure to introduce a new line of transceivers, especially when it's a line of transceivers like the new Alinco DJ series hand-helds. You will begin seeing ads for the 2M version in the July industry publications. The 440 and 220 MHz bands should follow shortly, both in presence and advertising.

The major selling points are as follows: 10 memories; LCD illumination; dip switch programmable sub-tones (easily accessible dip switch is mounted on the back of the transceiver); offsets will store in memories; built-in DC/DC converter with standard Ni-cd and others; multiple battery packs (2.5W (please turn to page 71))

CMOS KEYS KIT

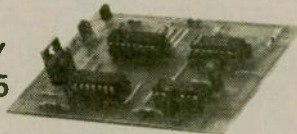
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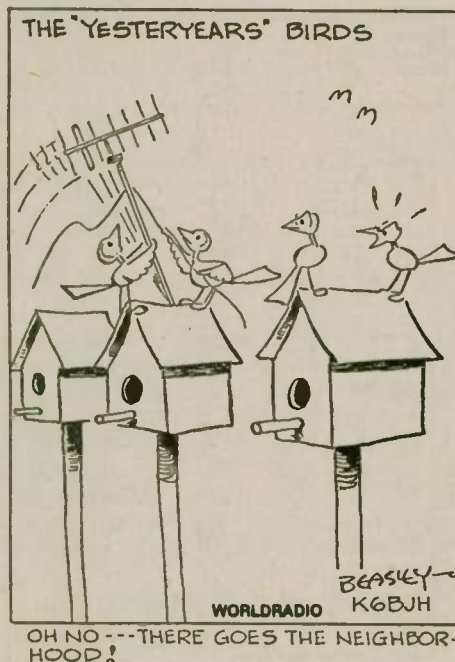
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'Goodbye'

(continued from page 59)

distributing same throughout their local clubs and special interest groups) actually destroyed the magazine!!

Photocopying copyrighted material is against the law!! It also takes needed revenue from the publisher, making his/her job that much more difficult. In the case of *CTM*, it was a prime factor in the magazine's demise.

Thirdly, *CTM* was a quality magazine with a "down home" style of writing by Chet and many of his regular writers. Sure there were misspellings, an occasional omission, and (in one instance) a real FOBAR which cost Chet a great writer, namely Buck Rogers (who now writes for *CQ*), but these were the things that made *CTM* a readable magazine.

There were never any pretentious offerings which so often appear in other amateur publications. *CTM* was *The Mother Earth News* of Amateur Radio. The readable writing style of the contributing editors, coupled with well-thought-out, how-to-do-it types of articles, was what made the magazine unique.

Personally, I am deeply depressed by the death of my "old friend," *CTM Magazine*. No other monthly Amateur Radio publication covers packet radio with the in-depth detail that *CTM* used to. Packet is the "new-wave" mode of Amateur Radio. It is unfortunate that *CTM* won't be around to give those of us who are newcomers to the packet game the needed boost or the helpful hint that will get us on the air.

Chet, you and Teenie did a heck of a job. Thank you both for the many useful articles that have helped me and others who thirsted for information, to become more effective in our Amateur Radio careers. VY 73. As for *CTM Magazine* ... RIP, "Old Friend." □

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IC-4GAT: 6 Watts 440-450MHz

IC-32AT: 5 Watts Rx 138-174MHz/440-450MHz;
Tx 140-150MHz/440-450MHz

A New Generation of Powerful, Versatile Handhelds.

Select a new "G Series" or dual band ICOM transceiver and enjoy full base station luxury in a portable unit designed especially for you!

- **Maximum Frequency Coverage.** The IC-2GAT receives 138-174MHz, including NOAA, and transmits 140-150MHz to include CAP and MARS frequencies. The IC-4GAT operates 440-450MHz, and the IC-32AT receives 138-174MHz and operates 140-150MHz/440-450MHz.
- **Most Powerful Handheld!** The IC-2GAT delivers seven watts! The IC-4GAT is six watts and the IC-32AT is five watts! One watt level selectable for local QSO's.
- **20 Memories.** Store any frequency, Tx offset and subaudible tone in any memory. Total flexibility!
- **Programmable Scanning** of band and memories plus easy lockout and instant memory recall.
- **Additional Features.** Battery saver, call channel, all subaudible tones, multi-function LCD readout and DTMF pad.
- **Compatible Accessories.** All ICOM IC-2AT/02AT series battery packs, headsets and speaker mics are interchangeable.
- **Optional UT-40 Beeper** silently monitors a busy channel for your calls. When the pre-programmed subaudible tone is received, the unit beeps and the LCD flashes.



IC-32AT
2 Meters and
440MHz

IC-2GAT
2 Meters

IC-4GAT
440MHz

ICOM

First in Communications

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All stated specifications are subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emissions. HH488