

# Worldradio

Year 20, Issue 3

September 1990 • \$1.25

## Wildfire ravages Santa Barbara, hams respond

**BILL HOOVER, KB5AH,**

**ARES Emergency Coordinator, Santa Barbara South County**

For much of the month of June, the city dozed peacefully beneath clear blue skies and a friendly summer sun. Cooled by gentle Pacific breezes, the forested mountain ridges gracing its northern outlook, Santa Barbara went quietly about its business as a world class visitor's paradise.

But behind this beguiling picture postcard lurked an evil, fire-spewing monster. As the stalled high pressure ridge overhead intensified, temperatures crept relentlessly upward, humidity sagged and the "Sundowner" winds began to whisper their evening song down the mountainsides. The parched air pulsed with an ominous foreboding.

Daily the temperatures rose, inching past the 100 degree mark. The searing heat robbed the air of its precious moisture and the downslope breezes freshened into hot evening gales. With the forest at its driest level in history, water-scarce Santa Barbara was fast becoming an uneasy tinderbox fearful of the slightest spark, a fire warden's worst nightmare.

As the firestorm potential worsened hourly, the US Forest Service (USFS), in consultation with area fire agencies, declared a Red Flag Fire Alert in the Los Padres National Forest Santa Barbara District.

A Red Flag Alert puts all citizens on notice that wildfire danger is critical and the forest is closed to all traffic. Open fires are forbidden and all fire fighting agencies are brought up to full alert.

Following standard local Red Flag protocol, USFS also mobilized the Santa Barbara South County SAFE (Special ARES Fire Emergency) Team early in the afternoon on Wednesday, June 27, 1990.

The SAFE Team, a special tactical unit made up of Santa Barbara ARES volunteers, deploys Red Flag fire patrol mobile units bearing USFS identification into the highest fire danger regions of the populated forest areas during Red Flag alerts. Providing sorely-needed additional radio-equipped observers during critical fire

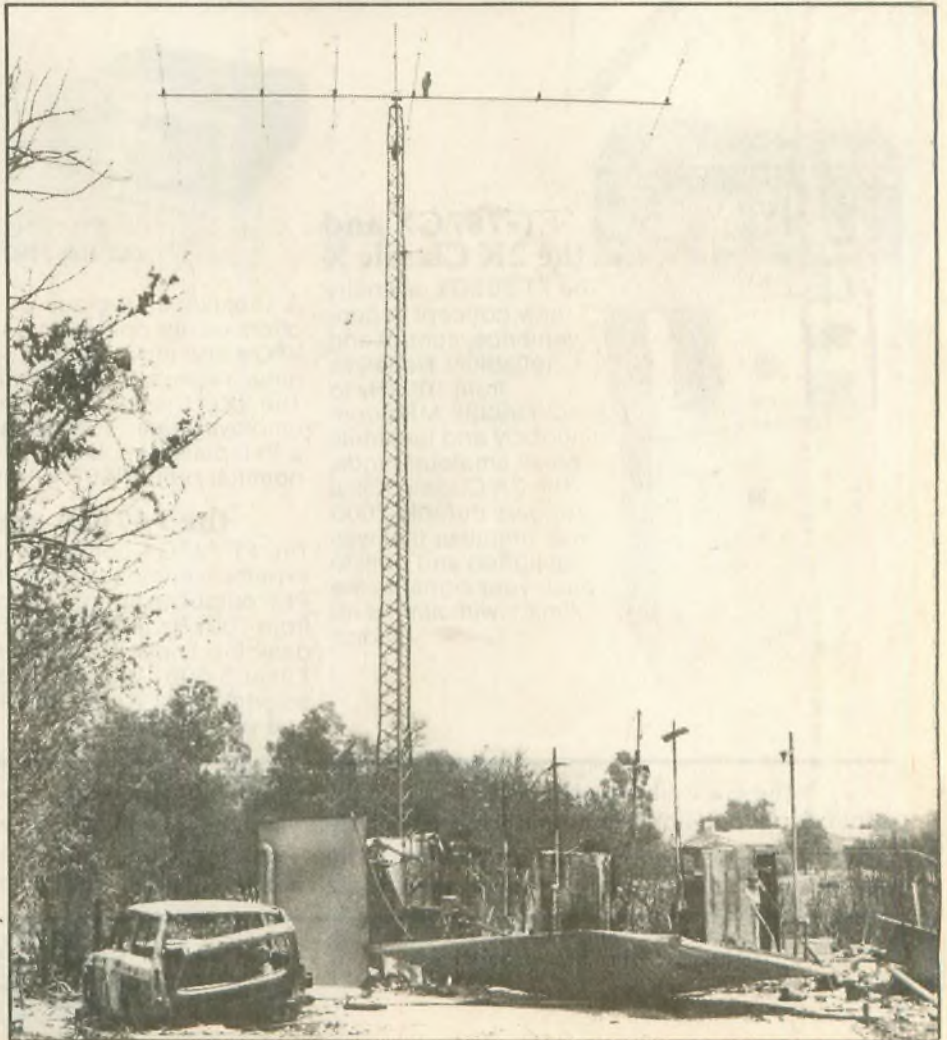
danger periods, the SAFE Team gives the USFS an augmented fire patrol capability it is otherwise denied by tight budgetary restraints.

With the Santa Barbara ARES Emergency Communications van staged at the Forest Service headquarters in Goleta as the mobile operating base/net control for the SAFE Team, the Red Flag patrol got under way smoothly enough.

As some of the teams gingerly

picked their way around the smoldering remains of an earlier nearby fire, the mobile units moved out toward their Red Flag patrol beats just before 1800 hours.

At 1802 fire officials received reports of an innocent-looking thin wisp of smoke in the forest high above Santa Barbara, near the point where Highway 154 crests at San Marcos Pass. Moving along Highway 101 to the patrol area, one of the SAFE (please turn to page 11)



This is all that's left of Dr. John Hobson's, N6EGY, fine home, which was in the path of the Painted Cave fire: the tower, the beam and the faithful bird-chasing owl. (K6IA photos)



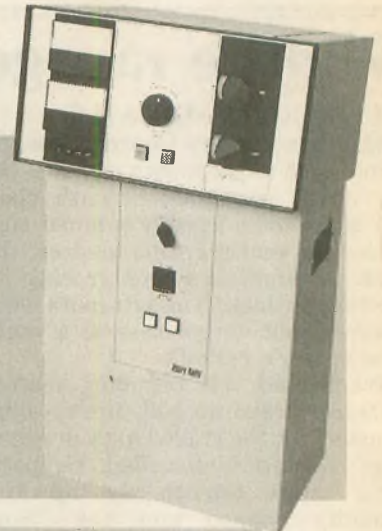
# YAESU & HENRY

## ...a winning team



### the FT-1000 the 3K Classic X

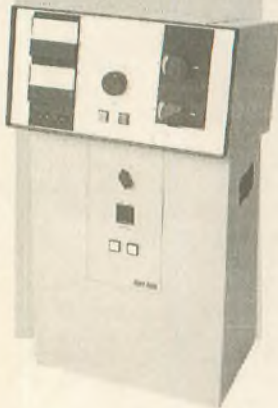
The FT-1000, Yaesu's finest, features Direct Digital Synthesis, continuous adjustable output from 20 to 200 watts, simultaneous reception of two different frequencies, 100 memories, digital voice storage, and so much more. A wonderful partner, the 3K Classic X, Henry's finest, uses Eimac's superb 3CX1200A7 tube... more than 13 db gain, it's an absolute workhorse and every amateur's dream. Operates on all amateur bands\*. Loafs along at full legal power all day.



### FT-767GX and the 2K Classic X

The FT-767GX, a wholly new concept in convenience, control and reliability. Receives from 100kHz to 29.99999 MHz continuously and transmits on all amateur bands.

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The FT-747GX computer aided HF all mode transceiver is extremely compact and light weight. It provides 100 watts of PEP output on all amateur bands and coverage continuously from 100kHz to 30 MHz. The 2KD Classic is a time proven desk top linear providing full legal power. It uses a pair of Eimac 3-500Z glass envelope triodes operating in a grounded grid circuit. A silver plated rotary tank coil creates a simple and very reliable circuit.

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\*10 meters available on Henry Amplifiers export model only.



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# The Experimenter/Homebrewer

BRIAN KASSEL, W5VBO

We are cursed by a devilish spirit that relentlessly drives us to perform idiosyncratic acts at abnormal times. No one outside of this small, decreasing band of afflicted sufferers can possibly understand our plight. We have been called homebrewers, experimenters, builders, tinkerers and now hackers. Our curse includes the unalterable desire never to leave well enough alone.

We are relegated to forever fiddle with every piece of electronic equipment that comes within our reach. We must make it sound better, be more sensitive, increase the selectivity or even build a completely new, superior unit. It is never, ever quite good enough. We are complete malcontents.

What triggers this voodoo-like transformation? Many things. The smell of molten solder or copper etchant. The sight of a new-sprung chip in a catalog or an unusual circuit diagram in one of the myriad of electronic publications for which we sacrifice our social life in order to remain current in a field which mutates dramatically seemingly every month.

We habitate anywhere electronic "junk" can be found: Hamfests; surplus emporiums; military, as well as commercial, surplus auctions; garage and estate sales. We purchase an item that is useless in the eyes of the seller; however, our imaginations run wild with the anticipation of just how perfectly this long sought after component will fit into a project that has not

yet begun, and perhaps will only be completed in our mind's eye. We marvel at the fact that just a few years ago this very unit's original cost was one hundred fold more than the pennies it now barely commands. That fact alone makes this prize worth having!

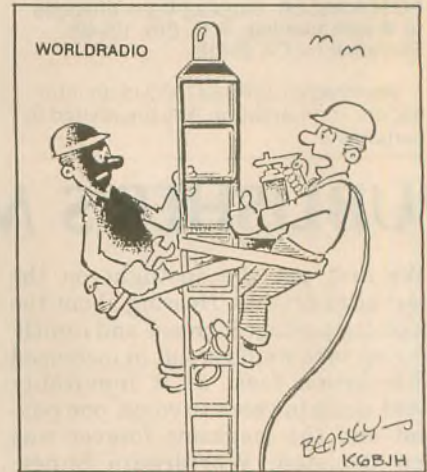
We fear, however, that our numbers are quickly dwindling, for we are an endangered species. As our overwhelming desire to refine has moved technology ahead, that same technology has made it more and more inefficient for hardware-oriented experimenters to ply their trade. Machines now design, fabricate, test and even ship the finished product. We have made ourselves obsolete. Almost every gadget worth having is now available.

Our soldering irons have become dusty, as our fingers no longer show RF or heat burns. They are too busy bouncing merrily over the keyboards of our PCs, as we now satisfy our creative urges on a CRT. We are not fading away after all, just going through another technological transfiguration. We are born again, once again.

You see, spark gap was replaced by tubes, which were replaced by transistors, which were replaced by integrated circuits, which will soon be replaced by the next generation of hardware. Nothing, however, can ever replace the driving force behind it all, the experimenter.

So, next time you happen to be attending an Amateur public meeting, go over and say hello to the experimenter

who built the emergency communications van, etc. You don't know who that happens to be? Just look for the person who has a pen holder, a calculator strapped on their side, or just plain looks a bit different than the other members. That nerd-like person can probably use all of the social encouragement that you can give. We don't get out much. — *Arizona Desert Aire Waves* □



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# Worldradio

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## PUBLISHER'S MICROPHONE

We first put the spotlight on the  
latest ultra-brights. Hearing about the  
upcoming postage increase and rightly  
figuring such would result in increased  
subscription fees, as it inevitably  
would again in years to come, one pay-  
ment and the magazine forever was  
their decision. **Worldradio Super-**  
**Boosters (Lifetime Subscribers)** this  
month are: Ralph Myra, Augusta, ME;  
Bob Golitz, N5OYY, Anguilla, MS;  
Joseph Travis, WU8Z, Allen Park, MI;  
John Haskell, Lansing, KS; Paul  
Vaagen, KA7ILN, Miles City, MT  
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Milton Onaga, KH6US, Kahului, HI;  
Vic Henry, N7KRE, Camano Island,  
WA; F.R. Richmond, W7HMT, Port  
Angeles, WA.

For those smitten by radio nostalgia,  
a fine magazine indeed is *Electric  
Radio*. The history of the Amateur  
tube type gear, repair and restoration  
tips, letters, a huge classified section  
(maybe I'll buy that S-40B), good  
photos and more make up *Electric  
Radio*. Twenty dollars a year to Box  
139, Durango, CO 81302. Barry Wise-  
man, N6CSW/0, is the publisher.

Here's another chapter in the saga of  
whether a greater number of Amateurs  
(of whatever grade license) is the  
reason another country leads in con-  
sumer electronics, as claimed by the  
sage of New Hampshire.

I ran across this advertisement from  
the American Electronics Association  
(which has a couple of thousand com-  
pany members):

"The U.S.A. is locked in a critical

battle with other nations, and we are  
not winning.

"Here are the facts. The US elec-  
tronics industry — an innovative and  
spirited group — is currently waging a  
valiant fight, not with other companies  
and industries, but with other nations  
— nations with aggressive, synchro-  
nized policies.

"The US share of the world elec-  
tronics marketplace is slipping away.  
Those are the hard facts of life.

"To shift the tide of battle and recap-  
ture world market share, the US elec-  
tronics industry needs a unified front  
and a stronger voice — a powerful voice  
of unity.

"Only a strengthened and reener-  
gized industry, acting in unison to  
achieve shared long-term goals, will  
help open markets and create business  
opportunities for you and your  
company.

"Help protect your own interests.  
The future of the electronics industry  
is the future of your company."

I called the Association spokesman  
in Washington, DC, and asked if the  
difference in the number of Amateur

Radio operators had anything to do  
with this. There was a long silence and,  
"That's not a thing we've followed."

The American Electronics Associa-  
tion seems to believe that the dif-  
ference comes from lower interest rates  
in the other country, greater access to  
growth capital and a longer horizon —  
looking beyond the next quarter or this  
year.

More on this topic in a future issue.

While many clubs write in re-  
questing the goodies we send to their  
hamfests, others just sit on their  
hands. Is your club one of the live-wires  
or just run-of-the-mill?

W.V. Barton, NQ0S, says, "Yours is  
a nice, friendly sort of sheet and down  
to earth."

What makes it so is the nice, friendly  
people who read and are a part of it.

We're always open to suggestions  
about what you'd like to see here, and  
even a criticism, if it's constructive.  
And we're always looking for articles.  
If there's something you find of in-  
terest, most likely it will interest  
others also.

We enjoy receiving, and reading, the  
club bulletins. Would like to get more  
of them.

There is a lot of great spirit out there,  
but a comment in one newsletter did  
surprise us. "I hate Field Day."

How can anyone "hate Field Day"?  
Those of us who absolutely relish the  
event find such an attitude puzzling.

—Armond, N6WR

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While the detached transceiver can be installed anywhere — in the trunk or under the seat.

Trust Yaesu to give you the best — powerful transceivers delivering clear communications and trouble-free operation for years to come.

The FT-747GX was made for you. Check these features:

- General coverage: continuous reception from 100 kHz to 30 MHz.
- Ergonomic design includes front panel mounted loudspeaker and unobstructed display/control layout.
- Easy one-touch dual VFO control to select a favorite frequency or operate split with minimum effort.
- 20 memory channels store mode and skip-scan status for auto

resume scanning of selectable memories. (Up to 18 memories can store independent TX and RX frequencies — great for split frequency combinations!)

- 100 watts of PEP output on all HF amateur bands.
- Compact and lightweight SSB, CW, AM and FM (optional) transceiver.

Standard model shown.



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- 10 memory channels which store both frequency and mode for transceiver or general coverage reception — without band switching.
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# Field Day 1990

How do radio Amateurs feel about Field Day?

"Yes, that magic weekend is finally here. That weekend when hams congregate, learn new operating skills, find out how to operate in the field, raise towers and try to make as many contacts as possible in 24 hours. You, too, should not miss this most exciting weekend in Amateur Radio."

That was written by Joy Shelter, N6OYM, and appeared just before Field Day in *Key Klix*, the publication of the Santa Barbara (CA) ARC.

Afterward, Mike Rodgers, WD6-ETK, wrote: "Did we have fun or what?"

One of the best descriptions of the great event was written by Allen Dooley, N6LVA, in the *W6SD Carrier*, of the San Fernando Valley (CA) ARC:

"Field Day was a success for our club. We were able to meet our objectives: setting up a simulated emergency station in the field, making the public more aware of Amateur Radio, having some fun contesting, and enjoying each other's company (and food at the potluck dinner Saturday night). Your club's leaders, especially Willie, Tommy and Jeff, made sure that everything was in place and ready to go for the 11 a.m. start. I was especially impressed with the number of people who came by to help me set up; there were just as many on Sunday to help take down. This group even included some who weren't able to make it in Saturday to operate. That's real dedication. Thank you to all.

"Let's take a quick look at the skills those who helped out gained. They were able to learn first-hand how to take a bend out of a section of a 50 ft. push-up mast! This came about when we tried to raise a previously bent mast from horizontal to vertical. Maybe that's why they call 'em push-up

masts? Hey, I thought the resulting S shape added a little variety to the pure horizontal, vertical and angled lines of the others!

"Onto another mast . . . the sight of a dozen guys holding onto guy lines and antenna wires while the 'chiefs' were yelling directions must have appeared to onlookers like the proverbial joke about how many monkeys it takes to change a lightbulb! But we were operating as a team and ended up with a mast that was as vertical as it could get in the fading light at dusk. Every antenna worked well. That's what counts.

"We ended up with everything operating properly. With the exception of the guy who locked his keys in the car along with an antenna tuner and another who really used his head



John Minke, N6JM, cranks out the SSB contacts.

(literally) to try to crank the generator (both shall remain nameless!), the weekend was great.

"Some of the bands were really hot at times, which added to the enjoyment. We even worked W1AW (ARRL HQ) and a number of DX stations. The location was superb: quiet and shady, yet along biking and jogging paths, which brought a steady stream of onlookers to us. The packet (KK6JD) and ATV

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(N6UII) stations added a nice touch to the event.

"Did you see the articles featuring our club in the *L.A. Times* and the *Daily News* on Sunday (6/24)? Thanks to AA6TH, all of the area media and government leaders were made aware of the event.

"To those who turned out for Field Day, "Good show!" To those who got lost, forgot about it or had to stay home to feed the cat, there's still hope for you! The year isn't over yet!"



**Norm Brooks, K6FO, knocks off, at 30 wpm, those contacts that are worth double the phone kind.**

Linda (AA6MR) and Hugh (AA6-MQ) Stocks, put it this way: "We both enjoyed ourselves immensely. There's a difference between sitting in our own little shack, working by ourselves, and working with congenial folk in a community endeavor. Field Day is fun."

And for the 18th straight year, the Worldradio staff group was also out in the field. John Minke, N6JM; Norm Brooks, K6FO, and Armond Noble, N6WR, came up with 174 CW contacts



**It's called Field Day, so the Worldradio Staff ARC goes to a field. Here's a GAP vertical in use. We were pleased with our score, which included one run of 30 contacts in 30 minutes.**

and 213 SSB contacts. This was with 100W and a vertical.

Thanks to all who said, "Hello, Worldradio". The only sad thing about Field Day is that you have to wait a

whole year to do it again.

This was the 54th running of this summer classic. Sponsor ARRL says it is a drill to "meet the challenge of emergency preparedness." □

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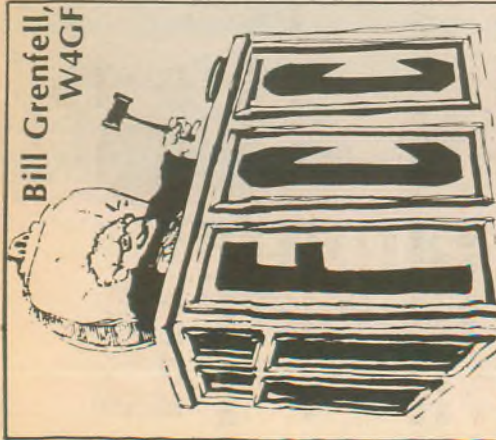


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## HIGHLIGHTS

The ARRL has submitted reply comments to the FCC supporting preemption of local and state laws regulating the use of mobile radios by licensed radio amateurs. The League contends that possession by licensed amateurs of radio receivers that incidentally cover public safety frequencies should not be prohibited by local or state laws. This, the League pointed out, is supported by the Associated Public Safety Communications Officers (APSCO), "the nation's oldest and largest public safety communications organization."

The League requested that "the Commission determine that statutes or local ordinances which preclude the possession of radio equipment by licensed radio amateurs merely because such equipment is capable of reception of police or other public service communications conflict with Federal communications law and policy, and are therefore void." (*The ARRL Letter*, 01/15/90).

On May 23 the governor of Michigan signed into law HR 4750, which makes it a misdemeanor to equip a vehicle with a radio receiver capable of receiving signals on police frequencies, but it

exempts Amateur Radio operators holding Technician or higher class licenses.

The only other people exempted are peace officers or those who obtain a permit. (*W5YI Report* 06/15/90). Possible FCC action regarding PRB-3 and scanner laws in general may take place sometime next year. (*Westlink Report*, 06/08/90).

The FCC has denied a request to establish an Amateur Radio "license" free of any examination. The request for rule making by Donald L. Stoner, W6TNS, was for a "digital communicator class" permit that would have allowed licensed amateurs to grant permission to up to 26 non-licensed persons to be control operators. Proposed operations would have been on the 33 cm Amateur band.

In its denial, dated May 22, the Commission cited federal law precluding operators who have not demonstrated "their qualifications" to the Commission.

Provision for new test procedures for handicapped or the disabled to allow volunteer examiners more flexibility in administering exams was announced by the FCC on June 15.

Given a physician's statement attesting to the handicap or disability, examiners may be able to substitute a Morse sending test for one in receiving, to allow spoken instead of written copy, and to use a Morse code recognition exam. More details on this will be forthcoming.

The FCC recently adopted an order implementing the license fees for most radio services other than Amateur. An unclearly drafted item in that order relating to duplicate licenses has been misinterpreted, leading many amateurs to believe that a \$35 fee is required for duplicate Amateur licenses. This is not true, as the FCC collects no fees for any Amateur license transactions. (*ARRL Letter*, June 29, 1990).

In recent reply comments filed at the FCC, the ARRL sought to disassemble the facade surrounding the reallocation of 220 to 222 MHz from Amateur use to commercial and governmental two-way radio (Docket 87-14). The League said its review of proposals for the band shows that the basis for the reallocation has "... apparently has been abandoned."

To achieve even higher than present (12.5 kHz) spectrum efficiencies, the FCC thought it necessary to shrink channel widths even smaller, such as to ACSSB's 5 kHz width.

ACSSB has not been much of a success because it is hard to mix FM and SSB operations in the current mobile bands, so the FCC wanted 220 to 222 MHz to be a protected preserve for "narrow-band" Amplitude Modulated Single Side Band systems only, even though most new mobile radio technology is based on digital techniques with bandwidths greater than 5 kHz. (*W5YI Report*, 6/15/90).

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## 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 July 1, 1990.

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 AA0BK	Group B Advanced KF0LO	Group C Tech./Gen. N0MDW	Group D Novice KB0HGE
0	W11C	KC1VW	N1HUP	KA1WDM
1	W22R	KE2US	N2KXR	KB2KSD
2	WB3E	KD3SX	N3IHJ	KA3WQL
3	AB4WY	KN4LF	N4ZPI	KC4RUG
4	AA5SZ	KI5GY	N5QYQ	KB5NGK
5	AA6WS	KK6MJ	N6ZNT	KC6MHR
6	AA7FD	KG7GE	N7PCG	KB7LGV
7	AA8BQ	KF8HW	N8MOZ	KB8KKR
8	WT9N	KF9XQ	N9JWP	KB9FFM
9	AH0H	AH0AG	KH0AM	WH0AAL
North Mariana Is.		AH2CG	KH2EM	WH2AMN
Guam	KH2N	AH4AA	KH3AC	WH3AAG
Johnston Is.	AH3C	AH4AA	KH4AD	WH4AAH
Midway Is.		AH6KN	NH6XA	WH6CI
Hawaii			KH7AA	
Kure Is.				
American Samoa	AH8D	AH8AD	KH8AI	WH8AAZ
Wake Wilkes Peale	AH9A	AH9AD	KH9AE	WH9AAH
Alaska		AL7MC	NL7UK	WL7BZC
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# A bolt out of the blue (conclusion)

**JERRY KEISLER, KB7IMX**

On Jan. 28, 1990, KB7IMX was watching television when, at about 12:05 a.m., he heard a loud clap of thunder. Worried about his equipment, he went to disconnect the coax antenna cables.

He began with the 2M rig and got as far as disconnecting the coax from the amplifier when it happened — one of the worst nightmares of any Amateur. He was struck by lightning.

Jerry never lost consciousness and, after overcoming the initial sense of shock and grogginess, decided he'd better get to the hospital, so he drove himself.

He was immediately taken to the intensive care unit and put on a heart monitor, where he was kept for about six hours. He was released from the hospital at about 6:30 a.m.

It took Jerry several days to feel as though he had recovered physically from his experience. He explained that he hadn't taken the full brunt of the strike thanks to having had a free hand in the air and his being well-insulated by his shoes. But charge did spread all over his body and clothes, making them something like a conducting or equipotential surface and discharges took place at the end of his fingertips.

In case you don't know what that means, let me tell you: By holding that piece of coax, I became charged up to a high voltage by the lightning strike and there was an intense electric field or potential gradient in the vicinity of

my thin fingers. Free electrons that just happened to be there, beyond my fingers at the time, were accelerated by the electric field and gained enough energy, tens of electron-volts, to ionize atoms and molecules in the surrounding air.

But those same electrons must have done it time and time again, all along the length of those sparks from my fingers. The excited atoms that resulted gave off light, just like in a neon sign. But just as fast as it happened, it was over, charge leaking off me into the air and the sparks stopping.

As for the damage that was done in my shack, the term "extensive" would be an understatement. Once the lights were on again, I could wander about and really determine the extent of the damage. Thus, there were bits of red plastic spread on the floor, blown right out of a rocker switch on a power-strip. My telephone was out of service and my trusty telephone answering machine was a shambles, examination showing that the primary of its power transformer was devastated, utterly wiped out. My TV seemed to function OK, but the video recorder between it and the antenna was destroyed. My HF rig was dead, the rocker switch for turning on the power was frozen in place. And its 35 amp DC supply was wiped out, probably all the transistors and regulators zapped in the process.

All in all, I don't think there was a single piece of radio or electronic equipment that was not damaged to some extent. Well, the 2M handy-talkie was not connected to the AC power lines nor an antenna, and it seems to be okay now, but just about everything else needs some work.

The good news is that I'm an appliance repairman by trade, and thus I



Though not in a high-incidence area, his QTH being Sedro Woolley, WA, Jerry paid the price for a thunderstorm they experienced.

know how to do all the jobs that are needed. But it is going to take me a lot of time and money, as I was not insured for this sort of disaster.

How did all this happen? Well, you'll recall that I didn't have any grounding system for my antennas. That must have made me vulnerable when I held that coax. But beyond that, I really didn't have any other master grounding system in the shack to carry off to ground the current from the lightning strike once it happened. Thus, I should have been prepared with a stout bus-bar ground system with everything connected to it. As it was, the main part of the lightning discharge probably came in through the power lines (lucky for me!) and found its way to ground through whatever was on the power line (to my great economic loss!)

But what about those circuit breakers? Well, given what I've seen in the way of damage, I have to think they respond slowly, indeed very slowly, at least on the time-scale of a lightning discharge current. So there's no comfort there; you really have to be prepared IN ADVANCE.

Moreover, DON'T do as I did, grabbing a piece of coax once a thunder clap has been heard. That'll be too late, perhaps even for you! Preparation has to be the watch word in this business. In the absence of that, just crawl in bed



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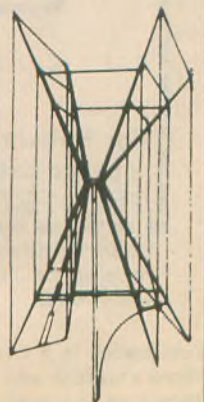
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and pull the covers over your head and wait it out. But keep your hands off anything, especially any antenna coax! OK?

Old-timers, particularly those from the Midwest and Southeast, will read what I've said and chuckle; they're out there on the firing-line, year after year, while it's a rare thing for us to have thunderstorms up here in the Northwest. Just to see what I mean, look at the figure, a map showing the annual thunderstorm frequency in the United States. Here in the upper corner of our state, Washington, we have one of the very lowest thunderstorm frequencies in the country, 10 to 20 times less than in the most active areas. But I am telling you, pure and simple, don't be lulled into complacency or put your faith in statistics! It could happen to you, just like it did to me. Better safe than sorry! The Boy Scouts had the right idea, "Be Prepared!" □

## Santa Barbara fire

(continued from page 1)

Teams also noticed the smoke and reported it to Net Control.

Moments later, the same SAFE Team glanced up the mountain again. This time that lazy little wisp was no longer just a minor smoke stain against the sky. Fanned by screaming, super-heated Sundowner winds and with leaping flames now visible, it was growing hungrily, ransacking its way down the mountainside.

Suddenly a routine SAFE Team patrol exploded into a full-fledged wildfire emergency as the ravenous, fast-moving firestorm veered down into the heavily populated residential area along Old San Marcos Road, destroying homes and burning out stunned families.

Confronted with an instant long-term requirement for communicators, Net Control hurriedly began reaching out for volunteers to operate the van. We also had to staff all the other stations this terrifying fire disaster would surely demand throughout the exhausting, heart-breaking days and nights that lay ahead.

Along with the pressing need for operators was a major concern for the safety of the Red Flag patrol units in the fire area. One daring team had to make a dash through the edge of the flames to escape encirclement, the rest checked in one by one, clear of the highest fire danger areas.

Rerouted to various new assignments, the SAFE Team became the core group of the first shift of operators covering the rising tide of official sites clamoring for communications.


Already running a low level Health & Welfare and evacuation shelter 2M net for the earlier fire, the Red Cross was forced to reach out to ARES for more personnel, as more shelters were opened hastily to accommodate the growing flood of people displaced by what was now being dubbed the "Painted Cave Fire."

The ARES managers and the ECs in the Net Control van, their hands already full trying to sort out the confusion that accompanies the early hours of any fast-growing disaster, had to begin an intricate shuffling game of "which operators go where?"

The excess volunteer ops available

to ARES in the opening stages of the fire began to dwindle as the night wore on, until by dawn the next morning the ARES and Red Cross nets had absorbed, used up and worn out much of the ready duty roster.

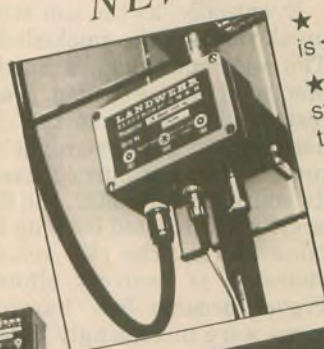
At the height of its nighttime rampage, the wildfire raged up and down the mountains and into the city, laying waste to more than three and one half miles of forest and populated areas in little more than 80 minutes. Driven by winds sometimes exceeding 80 knots and scorning a previously-thought unpassable fire break, the inferno stormed southward across Highway 101 into the outskirts of



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Beset by a constantly shifting scenario, the ARES ECs had to deal with yet another complication that made a mockery of personnel movement to the various official posts calling for Amateur Radio communications. Much as might happen in the aftermath of an earthquake, the fire, blazing capriciously in many directions burned much of Santa Barbara into scorched isolated islands and normal travel became almost impossible. With major power outages blacking out traffic signals, live power lines down across roads and highways,

The remains of the SBARC "logistic trailer" and its diesel engine-generator set. Just days before it had purred faithfully throughout the Field Day weekend.



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police and fire blockades denying access to much of the city, moving communicators around became a difficult task.

If a ham was able to move about it was not unusual for the assigned post itself either to have burned, been evacuated or moved to who knows where. Disaster officials were equally as hobbled as ARES, their Emergency Operations Centers (EOCs) cut off, threatened by fire or set up under a tree somewhere.

Eventually, as the sun struggled to break through the smoke-laden clouds Thursday morning, a modest semblance of sanity began gradually to restore some order to the chaos that had marked the first night's frenzied tumult. Having burned itself out on its southern perimeter, the fire turned angrily and started back up the mountains leaving the city relatively unmolested as recovery efforts began. Travel became less hazardous and hams were increasingly able to reach their stations.

As the second day tried to brighten, the ARES tactical net settled into a workable routine with an EC and net

controllers at the van. Overnight outstations had been established at both the city and county EOCs, as well as County Fire. One more station was set up at the Forest Service fire camp base.

ARES and Red Cross staffing requirements were scrutinized and it became apparent that there remained an insufficient pool of fresh, local communicators to fill all the upcoming shifts. We were using up our people faster than we could replace them.

Now, almost miraculously, we began to reap the benefits of recent joint operations with neighboring ham clubs and ARES/RACES groups. Emergency Coordinators from surrounding cities and counties began rounding up available operators. Individual hams from distant places offered their services and club groups checked in to find out what was needed.

In almost every instance Santa Barbara ARES was able to accept these welcome offers of help. In fact, without them, it would have been virtually impossible to complete our mission. We offer our grateful thanks to all the hams who responded when we needed them so desperately.

Of the 98 calls on the final list of hams who worked this horrifying disaster, more than one third came from outside the Santa Barbara South County ARES area, a most remarkable response, but typical of Amateur Radio operators who dedicate



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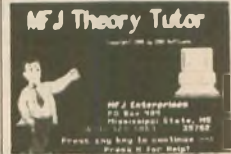
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## MFJ Speaker Mics

MFJ-284 or MFJ-286 \$24<sup>95</sup>

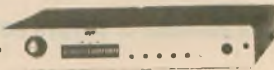
MFJ's compact Speaker/Mics let you carry your HT on your belt and never have to remove it to monitor calls or talk. You get a wide range speaker and first-rate electret mic element for superb audio on both transmit and receive.

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## 12/24 Hour LCD Clocks



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Huge 5/8 inch bold LCD digits let you see the time from anywhere in your shack. Choose from the dual clock that has separate UTC/local time display or the single 24 hour ham clock.

Mounted in a brushed aluminum frame. Easy to set. The world's most popular ham clock for accurate logs. MFJ-108B 4 1/2x1x2; MFJ-107B 2 1/4x1x2 in.

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themselves to public service.

### Lessons learned

Every wide-area disaster response as extensive as the Painted Cave Fire leaves in its wake endless clues that suggest better ways to do it next time. We tracked down these clues in post-operation debriefings, both among the ECs and again in open meeting with the hams who performed so well during the fire. Here are some of the lessons learned:

**Confusion in the early hours** — Any natural disaster of such major proportions in which the affected area is split apart into unapproachable sections is going to cause massive confusion. Disaster officials often can't get where they normally convene during the practice drills, neither can the hams. **Have A Plan!**

**Staffing** — Assign the personnel duties to dependable people who can serve the effort from home by telephoning all the hams on your duty roster to set up operating shifts. Don't try to do it on the air unless a spare repeater is available. Never tie up the main tactical frequency chasing help. **Have A Plan!**

**Frequencies** — During the Painted Cave Fire operation, we used one 2M repeater for the ARES tactical net, another for the Red Cross H&W and

What it means to lose everything — and the ham shack too! This was the N6EGY HF rig. John had just enough time to grab a few things and get out. Within minutes homes on his street were engulfed in flame.



evacuation shelter net and a mountaintop 220 repeater for liaison with North County operations.

We had available, and should have used, a fourth repeater for our personnel crew. Unfortunately, given the chaotic conditions we faced, we used the main tactical frequency for this purpose. It was a mistake we won't repeat. **Have A Plan!**

**Standing orders** — In many cases, even though mutual response agreements exist, disaster agencies forget to mobilize Amateur radio in the early, most critical hours. As these agreements now stand, we do not respond until asked. This has to change.

In every instance, once reminded, these agencies did in fact request our services, often well after we might have been of vital use to them. Our DEC is now revising all our response plans, basing them on standing orders. A standing order causes us to respond without invitation. **Have A Plan!**

**Identification** — Fortunately, most of our ARES people carry the Santa Barbara County Sheriff ID card which allows passage through otherwise impenetrable police lines. Those who didn't couldn't. If your people can't get to their assignments, they are of no use to your effort. **Have A Plan!**

**Who's where?** — When Santa Barbara was torn into inaccessible pieces, we had a very difficult time getting hams from one place to another. It became apparent early on that we needed to know who lived where so communicators could be dispatched to sites they could reach. When the main thoroughfares are closed for many hours, personnel troubles multiply. **Have A Plan!**

**Personnel** — The most vital component in any disaster response is people — trained people who will answer the call and perform well for long hours under abnormal stress. Train your disaster workers, know where they live, know their operating and equip-

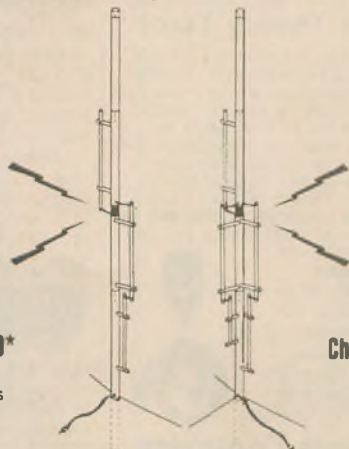
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ment capabilities, understand them as individuals and respect their own needs and priorities. Have A Plan!

*Training* — It was pointed out over and over that our ARES troops wanted and needed more training. Perhaps I have overlooked that obvious aspect of preparedness, because we respond to so many emergency callouts over the years. It's easy to become complacent. It's also a prelude to inadequate response.

There is absolutely no substitute for continuous and extensive training, if we are to perform up to our capabilities when a true wide-area disaster such as the Painted Cave fire explodes in our face. Have A Plan!

### Have A Plan!

Without a well conceived and executed plan your response can start in disarray and go downhill from there. Then Have A Plan, but don't let it get in the way of flexibility. A Plan is a guide, not a "must do" list.

We performed well under pressure for many days. We could have done much better had we prepared our own plans more extensively and then followed them. It is essentially impossible to be over-prepared for that real disaster. Have A Plan! □

## How to give a novice ham test

It is important that every General class (and higher) Amateur be fully aware of what the requirements are to administer a Novice examination. They are as follows:

It now takes *two* General (or higher) class VE Amateurs to conduct Novice examinations (they do not have to be a VEC accredited examiner). They must be at least 18-years-old, not related to the applicant, not have a significant interest in the Amateur license preparation or equipment business. . .and have a clean Amateur Radio record.

Both examiners must sign and complete the 610 form. The current form does not have space for two examiners. See the April *QST* as to how to modify the 610 for two examiners.

No longer do you request the written examination from the FCC. As of 1983 the VE constructs the Novice written examination by selecting questions according to a formula from the Element

2 question pool. Effective March 21, 1987, the Novice question pool contains 302 questions and the test itself must be made up of at least 30 questions (these questions were printed in April *QST*).

The two member VE team need not use multiple choice answers. The answer can be in any form. The only requirement is that the questions be properly selected from each of the sub-elements. You can even construct the test so that true/false answers are used.

The examination can even be given orally. You ask the question and if you are convinced the applicant knows the material, you can pass him on the question. —*Spurious Emissions*



NOW DON'T GO LOOKING FOR TROUBLE-- SEEMS LIKE EVERY TIME WE GO WALKING, YOU GET ME IN A JAM!

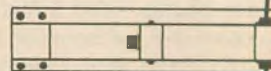
What lies behind us and what lies before us are tiny matters compared to what lies within us.

RE-USE PLASTIC CABLE TIES. IF THE TIE IS LONG ENOUGH, MAKE TWO WRAPS BEFORE CINCHING. WHEN NECESSARY TO CUT FOR MODIFICATIONS OR REPAIRS, THE REMAINING PIECE CAN BE USED AGAIN FOR A SINGLE WRAP IN THE SAME POSITION. —DAVID GUIMONT, WB6LLO; NSARC, SAN DIEGO, CA

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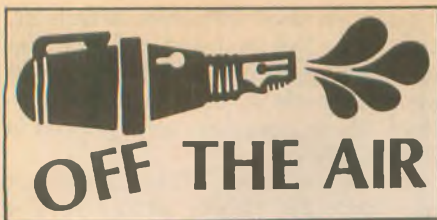
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## Good operating

Following the October 1989 Bay Area earthquake, I did a lot of listening. There was a new and much improved mode in the way H&W traffic was being handled. It was done by individuals, not "nets."

These operators were spread up and down the 40M band and did some of the best movement of traffic I have heard. It was ordered and impressive. The usual net-haters must have been unable to cover the many spots. There was practically no intentional QRM!

The method used was to call for area code and prefix of the desired traffic destination, the name of the addressed and that of the inquirer. Simple and fast!

Four of the outstanding operators I heard were: AA6LY, Cupertino; N6ADJ, San Diego; KK6H, Point Reyes and WI6N, Martinez.

This performance must have served

thousands of worried friends and relatives throughout the country. It was certainly another good plus for Amateur Radio.

DAVE ATKINS, W6VX  
Los Angeles, CA

## Better late than never!

...49 years after our QSO on 160M in November 1940, what should arrive in my mailbox but a QSL from W9SCN! Guess the motto is to never quit waiting. . .some QSLs take a bit longer to receive. . .that's for sure.

A few days after I received my first Amateur Radio operator and station licenses on Nov. 5, 1940, I had one of those thrilling first QSOs as newly licensed operator W9NQT. This QSO was with Carl Swanson, W9SCN, on 160M AM phone.

At the time of our QSO, both Carl and I lived in Chicago. This was the beginning of a remarkably identical string of events which occurred independently in each of our lives.

1. We attended the same Lane Tech High School in Chicago, but during different years.

2. We both worked in the engineering department of the Rauland Cor-

poration, again in different years.

3. We both were employed by Zenith Radio in Chicago, yep, different years.

4. Each of our wives are employed in the field of medicine.

5. And today both Carl and I are professionally, and independently of each other, active in the field of radio frequency interference and electromagnetic compatibility measurement techniques.

We just learned a few days ago how much common ground each of us has passed over. Talk about a small world. . .and a 49 year wait for a QSL! WOW!

KENNETH MILLER, K6IR  
Rockville, MD

## Money-back guarantee useless

Your April Publisher's Microphone sent out a CQ for "nontechnical reviews of new equipment." The following is my almost review.

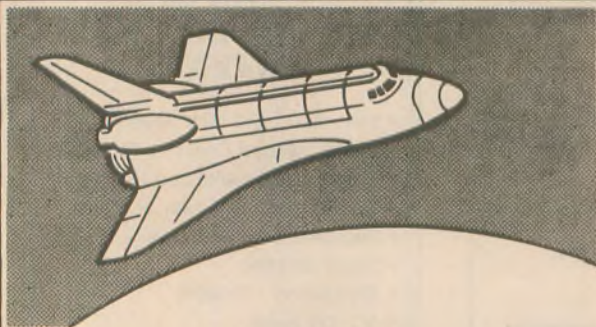
Garant Enterprises of Canada makes bold claims concerning their Garant Window antenna. These claims are backed up by numerous letters of praise and a 10-day money-back guarantee. Being impressed and having nothing to lose — after all there was the advertised guarantee — the wire was ordered.

"If something sounds too good to be true, it probably is," describes what happened next — or have you been there before? You can't read the ad in this periodical, so you will have to look elsewhere for verification.

When the antenna arrived there was a pink slip (how unique) enclosed, which stated that if the plastic wrapping of the antenna was removed, the 10-day money-back guarantee was voided. Garant was called to verify this fact.

The lame explanation was that "everyone wants a new antenna" and if the package was opened, the antenna would no longer be new. Again I stated

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my concern about how the antenna might perform and I was referred by Garant to the enclosed list of happy customers.

The Garant Windom antenna may very well work as claimed, but Garant will not allow the buyer to do anything but visually inspect the antenna. On this basis I returned the antenna and my money was refunded. I am out \$20 in shipping costs, but I am more comfortable with this loss than the ownership of another wire antenna that performs only on paper.

DENNIS AGIN, N8ILN  
Columbus, OH

□

## Hobby losing finer points

The FCC proposal for a codeless license, as reported in the April 1990 issue of *Worldradio*, is a classic example of mindless double-think so prevalent in government agencies today. To the FCC's credit, the ARRL's distinguished (?) "no-code" committee started the brain-mush ball rolling, in its wisdom to make the "enlightened" proposal in the first place.

Let's see if I have this straight. They are proposing to delete the Novice entry level license, which grants a very nicely enhanced opportunity for the newcomer to work HF (DX possibilities as well as a possible method of increasing code speed), VHF and UHF. The Technical class is slated for a deep six (goodbye to 6M, 2M and HF privileges). Stuff the satellite work in your ears guys (yes, I know all about microsats), you can now have tons of fun working BBS on packet and hopefully have access to lots of

repeaters to check in with the XYL on your way to/from work.

As I understand this proposal, newcomers who have absolutely no use for CW, can't/don't want to learn it as a part of becoming an Amateur, are now expected, after learning what a wonderful opportunity they have in front of them, to become real Amateurs and suddenly will be compelled to go from 0 to 65 characters per minute. Is there something I'm missing? Why do I smell rodent here?

I assume the next step is for the ARRL to go the WARC and beg(?) for HF privileges for (gag) Communicators in order to help Amateur Radio survive and grow . . . or a proposal to the FCC to lower the CW requirement for higher license classes to encourage the whiz kids to upgrade.

I have belonged to and supported the ARRL for many years. I have also written to Mr. Icenbice, W6BF, prior to the ARRL proposal and stated that if the ARRL committee submitted a code free proposal to the FCC, I would regretfully and reluctantly terminate my membership at the expiration of my current term. I allowed my subscriptions to *73* and the *W5YI* newsletter to expire because they championed the code free license. Do what you feel you must, folks, but



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you're not using my money to do it.

Soon I will have completed 30 years in Amateur Radio. It has provided me with friends without equal and experiences that I will treasure until my key goes silent. Always encouraging others to use the modes they feel is best for them, I was and am only concerned that Amateurs do not close the door to ALL that Amateur Radio offers.

Rather than help Amateur Radio grow, I believe the proposed new license structure will sound the death-knell. The important qualities that make Amateur Radio what it is are to

be stripped away, leaving an "enlightened" shell, without challenges, without the time-honored traditions of service to country and without the realization that we as Amateurs are being manipulated.

Our spectrum privileges may be sold to the highest bidder. With the difficult transition from communicator to upgrade licenses, a new elite will be formed by those "smart" enough to upgrade and the voice of the "ordinary" Amateur will grow weaker. High membership fees in Amateur "organizations" will further weed out

the "undesirables" and create a mindless mass guided by the new "elite."

Sound like the ravings of an old-timer? I resent it if that's the way a reader feels. Think for yourself, vote with your wallet and write your feelings to the FCC and our Amateur press. If you can't do any of these things, you deserve all of the bad things that will come your way.

For whom does the bell toll? It shouldn't take a mental giant to figure out the answer to that question.

JERRY N. VENTRE, AA6EN  
Diamond Bar, CA



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IC-275A/H 50/100w All Mode Base	1299/1399	Call \$
IC-28A/H 25/45w, FM Mobiles	469/499	Call \$
IC-2GAT, New 7w HT	429.95	Call \$
IC-2SAT Micro Sized HT	439.00	Call \$
IC-901 New Remote Mount Mobile	1199.00	Call \$
<b>UHF</b>		
IC-475A/H 25/75w All Modes	1399/1599	Call \$
IC-48A FM Mobile 25w	509.00	Call \$
IC-4SAT Micro Sized HT	449.00	Call \$
IC-4GAT, New 6w HT	449.95	Call \$
IC-04AT FM HT	449.00	Call \$
IC-32AT Dual Band Handheld	629.95	Call \$
IC-3210 Dual Band Mobile	739.00	Call \$
IC-2500A FM, 440/1.2 GHz Mobile	999.00	Call \$
IC-24AT New 2m/440 mini HT	629.95	Call \$
IC-2400 144/440 FM	899.00	Call \$
<b>220 MHz</b>		
IC-3SAT Micro Sized HT	449.99	Call \$
IC-375A All-Mode, 25w, Base Sta	1399.00	Call \$
<b>1.2 GHz</b>		
IC-12GAT Super HT	529.95	Call \$

### KENWOOD TS-950SD



HF Equipment	List	Jun's
TS-950SD New Digital Processor HF	\$4399.95	Call \$
TS-940S/AT Gen Cvg Xcvr	2499.95	Call \$
TS-440S/AT Gen Cvg Xcvr	1449.95	Call \$
TS-140S Compact, Gen Cvg Xcvr	949.95	Call \$
TS-680S HF Plus 6m Xcvr	1149.95	Call \$
TL-922A HF Amp	1982.95	Call \$
<b>Receivers</b>		
R-5000 100 kHz - 30 MHz	1049.95	Call \$
R-2000 150 kHz - 30 MHz	799.95	Call \$
RZ-1 Compact Scanning Rcvr	599.95	Call \$
<b>VHF</b>		
TS-711A All Mode Base 25w	1059.95	Call \$
TR-751A All Mode Mobile 25w	669.95	Call \$
TM-231A Mobile 50w FM (459.95)	Call for special price!	
TH-225A New 2m HT	399.95	Call \$
TH-26AT Compact 2m HT	369.95	Call \$
TM-731A 2m/70cm, FM, Mobile	749.95	Call \$
TM-701A 25w, 2m/440 Mobile	599.95	Call \$
TH-75A 2m/70cm HT	449.95	Call \$
<b>UHF</b>		
TS-811A All Mode Base 25w	1265.95	Call \$
TR-851A 25w SSB/FM	771.95	Call \$
TM-431A Compact FM 35w Mobile	469.95	Call \$
TH-46AT Compact 440 FM, HT	399.95	Call \$
TH-45AT 5w Pocket HT NEW	389.95	Call \$
TH-55 AT 1.2 GHz HT	524.95	Call \$
TM-531A Compact 1.2 GHz Mobile	569.95	Call \$
<b>220 MHz</b>		
TM-3530A FM 220 MHz 25w	519.95	Call \$
TM-331A Compact Mobile	469.95	Call \$
TH-315A Full Featured 2.5w HT	419.95	Call \$

### YAESU FT-1000D



HF Equipment	List	Jun's
FT-1000D Top Performer	\$4399.00	Call \$
FT-747 GX Economical Performer	889.00	Call \$
FT-757 GX II Gen Cvg Xcvr	1280.00	Call \$
FT-767 4 Band New	2299.00	Call \$
FL-7000 15m-160m Solid State Amp	2279.00	Call \$
<b>Receivers</b>		
FRG-8800 150 kHz - 30 MHz	784.00	Call \$
FRG-9600 60-905 MHz	808.00	Call \$
<b>VHF</b>		
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FT-212RH New 2m, 45w Mobile	499.00	Call \$
FT-290R All Mode Portable	610.00	Call \$
FT-23 R/TT Mini HT (351.00)	Call for special price!	
<b>UHF</b>		
FT-712RH, 70cm, 35w Mobile	536.00	Call \$
FT-811 70cm built-in DTMF HT	410.00	Call \$
FT-790 R/II 70cm/25w Mobile	681.00	Call \$
<b>VHF/UHF Full Duplex</b>		
FT-736R, New All Mode, 2m/70cm	2025.00	Call \$
FEX-736-50 6m, 10w Module	294.00	Call \$
FEX-736-220 220 MHz, 25w Module	322.00	Call \$
FEX-736-1.2 1.2 GHz, 10w Module	589.00	Call \$
FT-690R MKII, 6m, All Mode port.	752.00	Call \$
<b>Dual Banders</b>		
FT-4700RH, 2m/440 Mobile	996.00	Call \$
FT-470 Compact 2m/70cm HT	576.00	Call \$
<b>Repeaters</b>		
FTR-2410 2m Repeaters	1154.00	Call \$
FTR-5410 70cm Repeaters	1154.00	Call \$
<b>Rotators</b>		
G-400RC light/med duty 11 sq. ft.	242.00	Call \$
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G-800S same/G-800SDX w/o presets	322.00	Call \$



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# SPECIAL EVENTS

## USS Silversides

The Muskegon Area Amateur Radio Council will operate special event station W8ZHO from 1300Z Sept. 15 until 1700Z Sept. 16, from on board the WW II submarine *USS Silversides*, docked in Muskegon, MI. Suggested frequencies: 3.855, 7.255, 14.255, 21.320, 28.460 and W8ZHO repeater 146.34/94 for local contacts.

For a certificate send a QSL and 9 x 12 SASE to William Bowman, KB8ARY, 1870 Francis, Muskegon, MI 49442. □

## 'Back' in time

The Palmer College of Chiropractic Amateur Radio Club (Davenport, IA), in cooperation with the Davenport RAC, will sponsor a Special Events Day on Sept. 16, commemorating Chiropractic Founders Day, at Palmer College, the original site of broadcast station WOC, which was Amateur Radio 9BY in the early 1900s.

Operation will be from 1300Z to 0100Z, 10kc up from the bottom of General portions of each band.

For a certificate send a QSL and a no. 10 SASE to Dr. Wayne Henry Zemelka, KB0-CIO, 1000 Brady St., Davenport, IA 52803. □

## Community day

The Wood County Amateur Radio Club (Bowling Green, OH) will operate special event station K8TIH to celebrate Bowling Green Community Day on Sept. 16, from 1200 to 1800 EDST. Suggested frequencies — SSB lower 25 MHz of the General bands.

For QSL send your QSL and an SASE to WCARC, P.O. Box 534, Bowling Green, OH 43402. □

## For county hunters

The Calaveras Amateur Radio Society, of San Andreas, CA, will operate special event station WA6YGA on Sept. 22 and 23, from Alpine County California. There are no active Amateurs known in that county.

As a service to those who are county hunters, they will be operating from 1700 to 0100 UTC, on 20 to 10M. The operating frequencies will be 14.300, 21.300 and 28.350. For a QSL card send your QSL and an SASE to CARS, P.O. Box 122, San Andreas, CA 95249.

## Jeep anniversary

The Butler County ARA (Pennsylvania) will operate special event station W3UDX from approximately 1300 to 0400Z Sept. 22 and from approximately 1800 to 0000Z Sept. 23 to commemorate the 50th anniversary of the first general purpose vehicle, commonly called the Jeep.

Operation will be on the lower portion of the 80, 40, 20 and 15M General phone bands and

on Novice 10M phone and CW. Also on 147.96/36 and 146.52.

For an unfolded certificate send a QSL and 9 x 12 SASE to Butler County ARA, Box 1787, Butler, PA 16003. □

## Buckwheat Festival

Preston County (Kingwood, WV) Amateur Radio operators will operate special event station WM8E from 1400Z Sept. 28 to 0200Z Sept. 30, in celebration of the 49th annual Preston County Buckwheat Festival. Operation modes will be phone or CW on 40, 20, 15 and 10M. Contact may be made approximately 25 kHz up from the bottom of General phone bands or Novice CW bands.

For a certificate, send a QSL and SASE to John Wills, KE8NO, 104 Swartz Rd., Kingwood, WV 26537. □

## James Madison Days

The Hopkins Co. Amateur Radio Assoc. will operate a special event station from 1400Z to 2400Z, Sept. 29, to celebrate the 4th Annual James Madison Days in Madisonville, KY. Operation will be on 40, 20 and 15M plus 10M Novice.

For a certificate send an SASE to Dwight Orten, KM4FO, 4785 Nebo Rd., Madisonville, KY 42431. □

## Railroad terminal

The Edisto Amateur Radio Society (Branchville, SC) will operate special event station AD4U on Sept. 29 and 30 to celebrate the Raylrode Daze Festival, commemorating the oldest railroad terminal in the United States.

Operation will take place on 28.400, 14.285 and 21.375 (+ or -) from 10:00 to 22:00 EDST on Saturday and 13:00 to 1800 EDST on Sunday.

Send a QSL and SASE for an 8½×11 certificate to: AD4U, P.O. Box 117, Branchville, SC 29432-0117. □

## Tribute station

On Sept. 29 and 30 the Hualapai Amateur Radio Club, of Kingman, AZ, will operate special event station WA7LAZ, to celebrate "Andy Devine Days," between 1500 and 2400 UTC.

Andy Devine Days is an annual celebration in Kingman. Andy, who is best remembered for his character "Jingles" in many western movies, was born in Prescott, AZ, and raised in Kingman, which he called home. He was licensed as W6RER (Red Eyed Rooster) and some of his Amateur equipment, along with other memorabilia, is on display at the Mohave Museum, where WA7LAZ will be located.

Operation will be on 7.250, 14.325, 21.325 and 28.325 MHz. For a QSL send your QSL and an SASE to Hualapai ARC, P.O. Box 4364, Kingman, AZ 86402. □

## Columbus Day

The Columbus Amateur Radio Association will conduct the 7th annual Columbus Day Special Event in conjunction with the Columbus USA Festival from 0000Z Saturday, Oct. 6, to 2400Z Oct. 7. The festival salutes the city of Columbus and the explorer Christopher Columbus.

Club station W8TO will operate SSB from the festival from 1500Z, Oct. 6 to 0300Z, Oct. 7, and from 1500Z to 2400Z on the 7th.

Suggested frequencies are 7.240, 14.340, 21.375 and 28.500 MHz (all frequencies + - 10 kHz).

A commemorative QSL is offered to those stations worldwide who confirm a contact with W8TO. A Special Event certificate will be sent to those stations who contact at least 10 Columbus stations. Working W8TO counts for six contacts. A plaque will be given to the station outside the Columbus area which makes the most number of contacts with Columbus stations. A second plaque will be awarded to the Columbus station with the highest total number of contacts.

Exchange your name, QTH and signal report. Contacts with the same station on different bands count separately.

Submit an SASE (\$1 postage) or return envelope plus IRC for a QSL and a certificate. Use a 9×12 inch envelope to receive an unfolded certificate. Otherwise use a #10 envelope.

Send QSLs and logs to Roger Dzwonczyk, WB2EIG, 283 E. Longview Ave., Columbus, OH 43202. □

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## Product Review

# AEA MMDC

RICHARD ARLAND, K7YHA

What measures 11×8.25×2.5 inches, weighs three pounds and has 31 LEDs on the front panel? Give up? The AEA Pakratt PK-232 multi-mode data controller (MMDC), that's what!

The folks at AEA have put together a real winner in the PK-232. This particular MMDC is not only the largest, but the most costly of the trio recently tested at K7YHA. The PK-232 is a hefty piece of hardware.

The power requirements are also hefty: 12-16VDC at 700mA. I tried several heavy-duty wall-block power supplies, but was forced to tie into my 12 DC battery buss to adequately power the PK-232. AEA offers an AC-4 wall adapter as an option.

The PK-232 comes with a choice of software (as an option) for the Commodore 64 (including a TTL to RS-232 adapter for the computer) and IBM compatible. Both include cables with the software (IBM software is on a 5.25 inch floppy disk, while the Commodore software is in a plug-in cartridge). Fax software is also included in both packages. The software documentation is very well done.

The IBM program (I used both, but

prefer the IBM version) is window driven and is very easy to use. The PK-232 will work with CoCoPact (Ver 5.0), but in order to make life easy on the user, the AEA software should be utilized.

The documentation on the unit itself is also very impressive. The PAK-RATT PK-232 manual is almost one inch thick and has approximately 386 pages of useful information, appendices and tables. The manual is easy to read and understand. While you should read the entire manual, it is only necessary to familiarize yourself with a couple of chapters to start enjoying the unit.

There is no doubt about it... the PK-232 has the most bells, whistles and LEDs per square inch than any of the other MMDCs. The front panel consists of a 10 segment tuning LED bar. To the left of the tuning indicator is the threshold control and the DCD LED. To the right of the indicator are STATUS & MODE indicator LEDs (all 20 of them!). These LEDs tell the operator at a glance what the MMDC is doing (or not doing, as the case may be). To the extreme right, there are two push button switches which control radio port selection and on/off power.

The back of the unit has all the necessary connections for the power,

receiver audio, MMDC-to-radio ports, scope outputs (for precise tuning of received signals), external modem connector, CW keying output, RS-232 port and AFSK level adjustment. Lithium batteries are now included on all PK-232s (which replace the three "AA" cells in earlier models).

The PK-232 will operate in the following modes: CW, Baudot and ASCII RTTY, AMTOR/SITOR, WeaFax and HF and VHF packet radio. With the proper software package and IBM graphics compatible printer, you can also receive and transmit FAX pictures.

The newer software will also allow NAVTEXT reception on 518 kHz, which is great if you live near a coast line. The potential to keep abreast of hurricanes and heavy weather while living on the coast makes this mode very attractive to the disaster/emergency communicator.

In addition, the new software upgrade will support the PakMail mailbox with third party traffic, Time Division Multiplexed (TDM) signals and expanded statements for the WHY-NOT and CUSTOM commands. (Current PK-232 owners can upgrade their PK-232s with PakMail and the daughter-board for \$65 or firmware only without PakMail and TDM for only \$30.)

The PK-232 was put through its paces at K7YHA, using a Ten-Tec Argonaut 509 for an HF transceiver and a Kenwood TR-2200A 2M rig for VHF operation. All modes were tested and the PK-232 performed flawlessly across the board.

CW reception was on a par with the majority of the PLL controlled CW detection systems currently on the market. Unfortunately, CW reception can best be done by an experienced operator without machine assistance. The problem stems from the inability of the MMDC demodulator to distinguish dots and dashes sent in anything but 3 to 1 spacing.

Noise also figures into the equation. Poor fists on straight keys, bugs (Lake Erie Swingers) and keyers with the skewed weighting do not copy well at all. The receive signal must be well above the band noise.

Static crashes and QSB will further (please turn to page 22)

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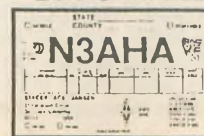
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- FEATURES**
- **Simultaneous**  
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  - **Detachable**  
With the optional remoting kit, the front panel can be separated from the main unit.
  - **DSQ (DTMF Squelch) Function**
  - **Code Squelch Function**  
You can program a 3 digit code that will open the squelch only when the same code signal is received from another transceiver. This allows for selective receiving. Additionally, with the optional tone squelch unit, the

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- **Remote Control Microphone**  
With this microphone there are several functions that can be controlled remotely:
  1. Direct setting of frequencies in VFO mode
  2. Up/Down of memory channels in memory mode
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  4. ARM (Automatic Repeater Mode)
  5. VHF/UHF Switching
  6. Up/Down by 1 Mhz steps
  7. Setting and Selecting DSQ codes
  8. Setting and Automatic Dialer
- **Scanning Features**  
Memory Scan, Program Scan, ARM Scan, Band Scan, and more Scan.
- **Memory Channels**  
The unit has 28 memory channels, one independent "Call" channel, and 10 ARM memory channels (40 channels in total). You can program set tones, shift frequencies, shift directions, and channel steps in each of the 28 memory channels.
- **ARM (Automatic Repeater Memory) Function**  
10 repeater channels can be memorized automatically. While ARM mode is active, scanning stops at vacant channels and pauses, then starts again automatically. This function is useful to find vacant repeaters.
- **ABX (Automatic Band Exchange) Function**
- **Bell Function**
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- **Three Priority Functions**  
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- **Repeater Operation**  
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- **Full Duplex Cross band Operation**
- **Others**
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# Product Review

(continued from page 20)

serve to disrupt the delicate reception criteria needed to adequately decipher CW. Thank goodness the human brain can be "programmed" to copy really terrible garbage under adverse band conditions, otherwise we'd all be SSB operators!

QRP RTTY and AMTOR were tried with great success. Of the two modes, ASCII RTTY was the most reliable under stressed band conditions. The PK-232 will send and receive Baudot RTTY at standard speeds of 45, 50, 57, 75 and 100 baud (60, 66, 75, 100 and 132 wpm). ASCII RTTY speeds are: 45, 50, 57, 75, 100, 110, 150, 200 and 300 bauds.

AMTOR was fun to play with, too. AMTOR modes ARQ (Mode-A), FEC (Mode-B), ARQ "Listen" (Mode-L) and Selective FEC (SELFEC) are supported by the unit. Unfortunately, packet radio happened along prior to AMTOR really making it big. Had packet been a couple of years further down the road, AMTOR would most likely be the preferred data mode on HF. AMTOR does have its devoted following, but HF packet has taken over the majority of the transcon message traffic to date.

QRP RTTY and AMTOR QSOs were relatively easy to make. I was amazed that my 2W output from the Argo was effective on these modes.

HF and VHF packet operation was great. The PK-232 supports KISS TNC mode (for TCP/IP packet protocol) and Host Mode, including raw HDLC mode. Several HF connects were made and lots of "reading the mail" on transcon traffic was done. VHF packet is the mainstay of 2M. Packet operation was "textbook" by all standards.

So what is my opinion of the PK-232? In a word: spectacular! There are a few things about the PK-232 that are worth discussing. First, there is the SIAM operating mode. Signal Identification and Acquisition Mode is rather spectacular. In this mode the MMDC looks at the incoming signal, identifies it and TELLS the operator what it is, including baud speed, mode (ASCII, Baudot, etc.), reversed or inverted signal and a guesstimate of accuracy! This is great if you are a dedicated RTTY buff. If you are a utility SW listener or a person who likes to listen to HF RTTY signals, this mode is a godsend.

Once identified, the MMDC will start printing it on the screen by typing "OK" on the keyboard. This mode will not copy synchronous encrypted modes (mainly used for sensitive military and diplomatic traffic). However, "simple encryption" consisting of flipped-bits in the data stream can be overcome by telling the PK-232 to flip bits (one at a time) until solid copy is obtained on the CRT. The other neat thing about the PK-232 is the ability of the firmware to translate Cyrillic (Russian) and Katakana (Japanese) characters. I guess we can consider the PK-232 "multi-lingual"!

Bottom line on the PK-232: impressive. BIG, HEAVY, POWER-HUNGRY and PRICEY, nonetheless it is an outstanding piece of hardware. Is it worth the extra money? Depends

upon your applications. Obviously, the PK-232 (with its heavy power requirements) is not going to be the first choice of disaster communicators. For fixed station use and general SW applications, it will work extremely well. If ya got it, flaunt it! When you compare the PK-232 to the Universal M-7000 MMDC (which starts at \$999), there is no question, the better value for money is the PK-232.

The SIAM feature on the PK-232 is fantastic and I think that we shall be seeing more of this kind of feature on the second generation of MMDCs that are in prototype now by other manufacturers. If you are going to have one box to do it all, why not include a contest quality memory keyer that is paddle controllable?

In addition, CW programmable buffers and keyboard selectable filtration (like on the Kantronics KAM) would be a nice touch on the PK-232. Power requirements on this unit are nothing to write home about. I don't see why the PK-232 couldn't be retro-fitted with low power CMOS chips to bring the overall power consumption down to a reasonable level for the disaster/emergency communicator.

I would like to thank Emile Alline, NE5S, and Debbie Davis, N7IHY, of AEA (Box C 2160, Bldg O&P - 2006 196th SW, Lynnwood, WA 98036-0918) for the use of the PK-232 for this review. Price of the PK-232 is \$349.95. Contact AEA for further information on their fine line of accessories for Amateur Radio and shortwave listening. □

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# There will be hidden transmitter hunts in Heaven

## MARION STONER

Twenty-five years ago, while Beverly and I lived near Detroit, we were involved, along with many other hams in the area, in hidden transmitter hunts. Several of the hunters of our acquaintance developed hunting, as well as hiding, the transmitters to a fine art.

Hidden transmitter hunts became an almost consuming passion with two of our friends, I will call them Burt and Wally, although those were not their names. They are both silent keys now, but I wouldn't want you bothering their families to verify the story I am about to tell you. You will have to take my word for it.

Burt and Wally were both retired, so they had plenty of time for their ham radio hobby. In the early sixties, they got involved in the hidden transmitter hunts and worked as a team for a number of years. I think they took part in every hunt ever sponsored by their own radio club. They also showed up at most hunts put on by other clubs in the area. I even knew of several occasions when they traveled clear across the

state for a transmitter hunt.

When no organized hunts were scheduled for a week or two, one or the other of them would hide a transmitter and the other would hunt it; just the two of them.

When the weather was too bad for a hunt, Burt and Wally would get together for coffee and talk about the many hunts they had been on. Instead of losing interest after a while, as many others have done, they seemed to become more involved. Sometimes it seemed like they talked of nothing else.

As the years passed, age began to catch up with our two friends. They had fewer one-on-one hunts and met for coffee a little more often.

It was at one of their meetings over coffee that they got to talking about the "hereafter," and Wally said he wondered if hams in heaven have hidden transmitter hunts.

They kidded about it at first, but both of them recognized that their time in this life was growing short, and they talked more seriously. Finally they agreed that whichever one of them

went first would try to get word back to the other if there are transmitter hunts in heaven.

Well, Burt and Wally went on a few more transmitter hunts together, but Burt's health started failing and on the first day of April, 1971, he became a silent key. Wally never went on another hunt that we know of.

Along in August of that year, Wally received a telephone call from a ham in one of the northern suburbs. He had taken a message off an evening traffic net for Wally.

The preamble was kind of garbled, but the address and text were clear. We tried later to trace the message but, while several traffic handlers remembered it, no one seemed to know where the message came from or how it got into the National Traffic System.

Here is what it said:

I HAVE GOOD NEWS AND BAD NEWS X THE GOOD NEWS IS WE HAVE WONDERFUL TRANSMITTER HUNTS HERE IN HEAVEN X THE BAD NEWS IS THAT YOU ARE SCHEDULED TO HIDE IT NEXT MONTH

(signed) BURT

—Central Michigan ARC, Lansing, MI

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# YL Roundup



I am Connie Dunn, KB5LES, a Technician and student of the General class theory and code. I am a member of YLRL (Young Ladies' Radio League), ARRL, RACES, ARES, 10-10 International and YL Roses of Texas (a local YL club) and founder of the YL Roses 10M Net.

For more than 10 years, I have operated a writing and editing service with my OM, Si Dunn, K5JRN. I have written for newspapers and magazines and have published a recipe book and a collection of children's stories.

To me, the most fascinating aspects of Amateur Radio are the people — YLs in particular. As they participate in a male-dominated hobby, YLs tend to work diligently to get to know one another, encourage others to stay active, play important roles during disasters, become role models for our country's young people and promote Amateur Radio and goodwill throughout the world.

There are many outstanding YLs, such as Harryette Barker, W6QGX, the focus of this month's column, who have forged the way for women in non-

standard employment fields. And as one of the fastest growing segments in Amateur Radio, YLs tend to be active in virtually every aspect of the hobby. YL Roundup will introduce some of these extraordinary women, their brand of hamming and YL activities.

For more than half a century, Harryette Barker has enjoyed her adventures in Amateur Radio. What began in the summer of 1939, while her cousin, Edna, was visiting has turned into a lifelong enterprise.

While the girls were tuning around the top of the broadcast dial, Harryette says, "we accidentally tuned in some hams. Just by listening, we learned that the activity was called 'Amateur Radio.'

"One day, Bob, W9FBM, a man who was very ill, said: 'I wonder if anyone listens?' He gave his telephone number, so my cousin called. He invited us to come over. We did and we talked to new friends from his station. When Bob said, 'Why don't you get a license?', we both were anxious to do just that."

There were code lessons on the 160M band, and Harryette's dad built a code practice oscillator. She bought a License Manual and a Radio Amateur's Handbook.

"My dad was almost as excited about ham radio as I was, but he never learned the code," she explains. "My cousin also lost interest. But I kept going with Bob's encouragement."

The month before Harryette got her license, Bob became a Silent Key. She almost gave up the idea of becoming an Amateur Radio operator. Instead, she went to the Kansas City FCC office in March 1940.

"Somehow I passed the 13 wpm code and the theory tests. That beautiful piece of cardboard with W9KSA on it arrived, and I got on the air," Harryette said.

In fact it took her several days to get on the air. Finally, another Amateur

helped her smooth out the kinks and get her rig working. It was a breadboard setup with 6L6s in the final amplifier. And "there was no TVI," she quips. "Of course, there was no TV."

In those days, a pioneering YL net was on 160M phone at 5 a.m. It permitted the YLs to talk on the radio before they went to work during the day.

"We all used crystals, no VFOs, so if someone got on our frequency, we just used a little Bon Ami and ground the crystal a little to move it to a higher frequency," she said.

Harryette averaged five contacts a day for a year and a half before WW II. When the war started, she began attending radio classes. And because of her Amateur Radio experience, she was hired as an engineering aide trainee.

"It was a chance to be on my own and to go to school in a far away place. Cleveland, OH, was a long way from North Kansas City, MO, especially in those days," she explains. "We had eight hours (for a six-day work week) of electricity, physics, math, electronics, machinery, etc. It was interesting, but very hard work.

"Our homework took every evening until midnight. I didn't mind, because I was determined to be in the top third." The select group would be promoted to engineering aide and the others would be sent home.

After eight months, Harryette was sent to Wright Field in Dayton, OH, for more training. There she was to meet her OM, an engineer and, of course, a ham.

"Most of the girls were placed to desk jobs, but I was the exception. I simply objected. And they didn't know what to do with me. The men did not want a woman in their labs. Their excuse was that men cannot speak freely with a woman in the lab. Finally, an engineer, a ham from Chicago, agreed to take me," Harryette explains.

She forged the way for other women to enter the engineering field. After Harryette began building and testing equipment, they hired others. And in the mid-1960s, when she decided to return to work after her kids were grown, she would again cross the barriers to enter a "man's" career. She returned to school, took drafting classes and set out to find a job as a (please turn to page 26)



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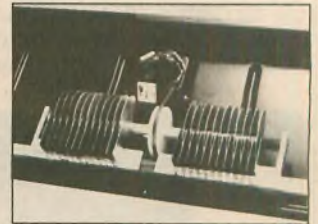
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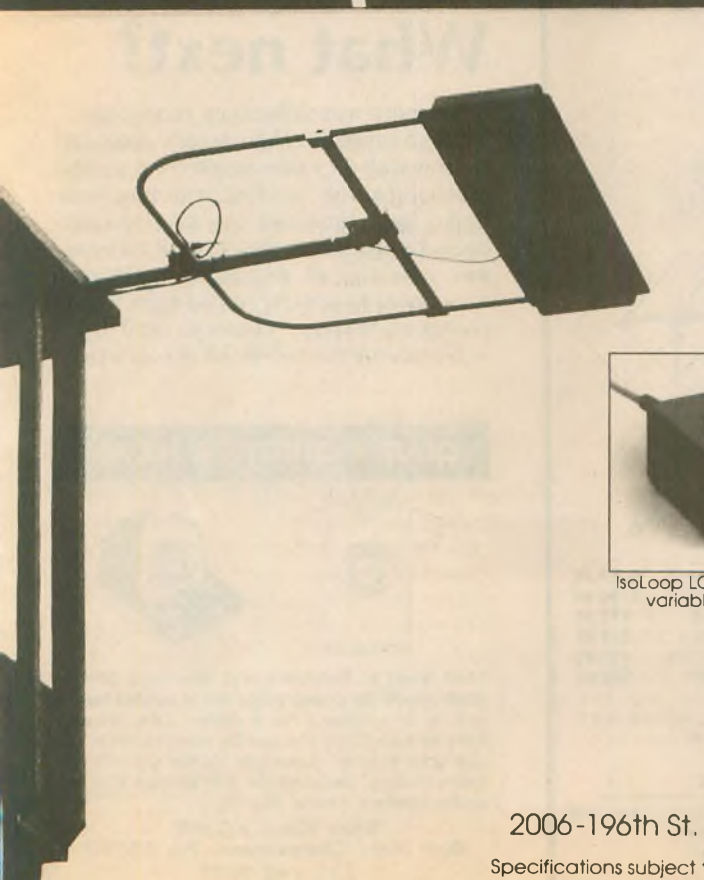
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IsoLoop LC-1 control box with variable speed tuning.



# YL Roundup

(continued from page 24)

junior draftsman.

"By then, they were hiring a few women. When I had taken mechanical drawing in high school and in evening classes at Dayton Technical College, I knew there were no openings in this line of work, but times had changed," Harryette said. "As the years passed, I became more and more involved in the design of printed circuit boards, a field that I loved."

Harryette had been a ham for about five years by the time she and Baron,

W6QGP (then W9UOF), got married in August 1945. The war had ended only days before their wedding. So . . . on their honeymoon in Baron's home in Wisconsin, they shopped for surplus parts — "a 125 pound surplus transformer, a six foot rack and the things we would need for a one kilowatt transmitter," she remembered.

"On the way (to Wisconsin) we found a beautiful city of 10,000 people on the Rock River and decided to make Sterling, IL, our home. We invested our savings in a small radio sales and service business and drove back to Dayton to resign from our jobs.

"It was during the six years we spent in Illinois that I got a Class A (now Advanced class) license, which was required to operate phone on 40M. Besides, I figured I might forget everything I had learned in school. When you have three small baby girls one and a half years apart, you tend to forget most technical things," Harryette said.

In 1951 the Barkers moved back to Dayton and then on to Pomona, CA.

"The 1950s became my most active hamming years," she explained, "with traffic nets, DX, contests, special events, the YL field days, Powder Puff Derbies and YL nets on 10, 15, 40, 75 and 2M. The contests were the most

fun. On chilly winter nights my feet were resting in a cardboard box, which helped keep them warm in the unheated shack (our garage).

"I set up stations in Oakland and twice in Bakersfield to relay positions of the gals in the Powder Puff Derby races," she said. "That's when I decided flying would be an interesting hobby — perhaps I could work aeronautical mobile. Baron said, 'Why don't you take flying lessons,' so I did. We bought a plane, and then Baron took flying lessons too."

The ham couple have helped local kids get Novice licenses and have given Amateur Radio demonstrations to school children.

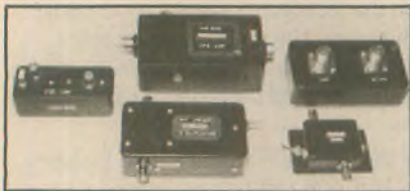
"Baron is interested in mechanics, packet radio and computers. I still love ham radio, old friends, new friends, contests, YL nets and conventions." For 49 years Harryette has been a YLRL member — and never misses a YL convention.

The Barkers retired to Mountainburg, AR, in 1980. "We looked first for a good ham location," she said. "We found one with a new house and put up a tower and a 5-element beam. And we hope to have many more years to enjoy our home and our hobby in lovely Arkansas."

If you have suggestions for columns, write to me at 1916 Parkside Dr., Denton, TX 76201. □

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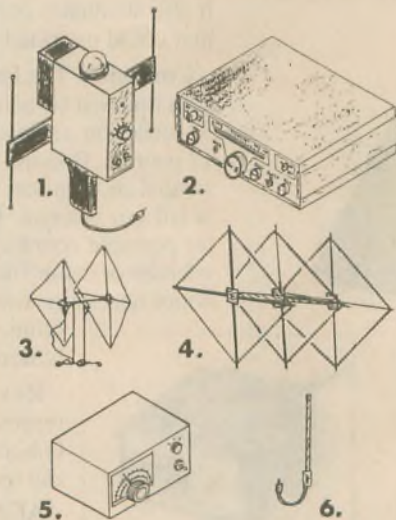
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## Search And Rescue Communications

**Jerry Wellman, WB7ULH**  
 P.O. Box 11445  
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Nationwide there are many groups that wave the search and rescue flag and to each flag rally large numbers of volunteers. The lure of "public service" draws us into an organization for many reasons.

To some it is being an important person. To others, it is being in command. Students of "group behavior" will recognize almost all the classic reasons within the volunteer ranks for why people join any of the many SAR or public service groups.

Some time ago I got an invitation to join a nationwide SAR group. I was to be the first member in my area and I was to recruit volunteers who would be part of this group. It was an interesting concept, flawed, however, because each new member would pay \$30 or so in dues that would go to the group's president, who would spend the money as he wished. There was no national charter, no tax exempt status, no accountability.

Many local groups get started in much the same way. It begins as a great idea, with some praiseworthy goals on paper, but lacking any charter of accountability. The charter of accountability means your group answers to someone. When the local sheriff sponsors an SAR team, that team is accountable. When your local ARES group inks an agreement to support the local Red Cross or police department, you become accountable.

If you perform you get called again. If you don't perform you're history. Get involved! Just be careful that you're involved with a reputable group.

### Civil Air Patrol

As promised last month, I'll do some public relations for the CAP. Many of you who have written are familiar with CAP. Some of you are members.

Briefly. The CAP's roots date back to 1941, when an aviation-minded group thought that the country could

make good use of thousands of civilian pilots and others with aviation "know-how." These thousands of individuals could, they proposed, be of great military value to the country.

The concept of the CAP was presented to the Office of Civilian Defense, which approved the plan to organize the CAP, and on Dec. 1, 1941, a formal order was signed under presidential executive authority. This order outlined the structure of the CAP and designated Maj. Gen. John F. Curry, US Army Air Forces, as the first national commander. Several days later, Pearl Harbor was attacked and the CAP began several years of gallant service as WW II ensued. (There are two great books about CAP: *Flying Minute Men*, by Robert E. Neprud, and *Aerial Search*, by Frank A. Burnham. Both are available from the Civil Air Patrol.)

The CAP became an auxiliary of the US Air Force in 1943, and that status was made official in May 1948, by federal statute. As the war effort came to an end, the CAP leaders met to define their future role and in July 1946 President Harry S Truman signed Public Law 476, which incorporated CAP as a benevolent, non-profit organization.

Among the stated objectives were to inform the general public about aviation, provide its members with aviation education, provide emergency service, establish a nationwide radio network and establish cadet flight scholarships. As the CAP evolved and programs became established, the mission of the program was defined to voluntarily use its resources to meet emergencies, to encourage aerospace education of the general public and to motivate young men and women to ideals of leadership and service through aerospace education and training.

In a nutshell, CAP has three major programs: Emergency Services, Aerospace Education and Cadet

Program.

Before I go further, let's look at the CAP structure. CAP is organized along military lines. Members wear a uniform similar to the US Air Force and, because of their auxiliary status, enjoy some benefits by way of membership. Each member also earns awards (ribbons) and advancement through promotions (all the way to Lt. Col.).

CAP headquarters is located at Maxwell AFB, AL (temporarily at Gunter AFS due to remodeling). On the CAP side of things, there is a national commander (a two-star CAP general), a vice commander and other national officers. The US is divided into eight regions, each headed by a region commander (with staff officers). Within each region are various "wings." A wing represents the state-level. Each region and wing commander are CAP colonels.

Wings are then made up of squadrons and flights. It is the squadron and flight organizations that are the workhorses of the program. Most CAP members begin membership in a squadron or a flight.

The Air Force side includes a national headquarters support, as well as regional and wing liaison officers. The Air Force also picks up the tab for aircraft and vehicle fuel for actual and practice missions. (There is a lot more

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### The CAP program

Because the mission of CAP has three objectives, you could join a squadron and work only with youth as a cadet program leader. The cadet program provides youth leadership instruction, aerospace education and often some involvement in emergency services. The CAP's aerospace education program includes member instruction, as well as support for many public school programs. Aviation-related conferences and workshops help public school teachers bring flights alive in the classroom.

While these two programs are major parts of the CAP, perhaps the best known program is emergency services. Often local news media will contain reports of CAP efforts looking for missing persons or overdue aircraft. CAP members are often involved in disaster recovery support as well.

Weekly squadron meetings will often focus on SAR training, as CAP members serve as pilots, observers, radio operators, flight line officers, data collection members, ground team members, etc., and each job requires a trained individual.

### CAP communications

You're reading this because you're interested in communications and, yes, the CAP has a large communications organization — people who support all programs of the CAP.

Communicators often work with the cadets and put on programs at local schools and play a critical role during SAR missions. The CAP conducts formal nets, often daily, at most levels. There will be squadron nets, wing nets,

regional nets and national nets. These nets will handle daily traffic or be held during missions to pass "REDCAP" (or emergency services) traffic.

Many frequencies are assigned for the CAP's use. Most common are VHF-FM frequencies used for repeaters. If you listen on 148.15 MHz or 149.929 MHz, chances are you'll hear the CAP in action. Many units are using RTTY and packet as well.

The CAP often uses 123.1 MHz for actual missions and 122.9 MHz for simulated missions. These two frequencies are in the aviation AM band and facilitate air/ground coordination.

The first (123.1 MHz) is the international on-scene command frequency. Emergency locator transmitters can be heard on 121.5 MHz — and many CAP members have specialized in direction finding techniques on the ground or in the air.

There are also quite a few "low band" frequencies in use by the CAP. The low band makes up the backbone of the nationwide network and includes frequencies from 2.7 MHz to 26.620 MHz. Each wing and region hold nightly or weekly nets. Each day there is a national command net. These are basically traffic nets and chances for members to ensure that their equipment is working and ready.

### Where to write

It would be a disservice to CAP to try to detail their whole program in a few short lines of this column. If you're interested in contacting the CAP, try your local phone directory and give them a call. If you cannot locate a local unit, write the Civil Air Patrol, National Headquarters, Maxwell AFB, AL 36112.

If you're interested in purchasing books about the CAP or obtaining their communications or emergency services manuals, you can write the CAP Bookstore, Building 749, Maxwell AFB, AL 36112. They'll send you a catalog.

I'm proud to say it has been nearly 20 years since I first joined and paid my dues (and hey, gang, I'm not even close to retirement age). Over the years I've seen many people come and go. I recommend it to you as a great program. Find the local squadron and check it out! It's fun to fly, to attend annual cadet encampments and rewarding to be in on a rescue. You'll make life-long friends and enjoy many challenges as you progress through and participate in the program.

The program has accountability. The regulations and programs represent many years of fine tuning. As with any volunteer program, you get members with many reasons for joining. Some will lust for the uniform and medals. Some like to be in charge and give orders and issue directives. Some think it is a flying club. Others long for the social aspect of belonging to a group. Many will join seeking a chance to serve and be of some value.

To this latter group I would urge you not to get discouraged. Look into the program. Read the regulations. Participate in the training opportunities. Since people make up CAP, it won't be perfect. It has flaws. There are disagreements. Some will take advantage of their membership. Find your own niche and contribute. Join it because you want to be a volunteer professional — not a professional volunteer.

### Summer ends!

Yep, it's true. You've lounged around all summer and it is now time to get serious.

Take some time to check your coax connections. Replace that 30-year-old coax run. Check the tower and tighten the beam. Make sure your mobile installation isn't rusted and that the connections are tight. Check on the batteries. Run the generator. Public service communication means you're ready NOW.

Thanks for your continuing comments. I appreciate hearing what's on your mind concerning public service and Amateur Radio. □

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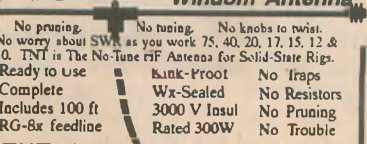
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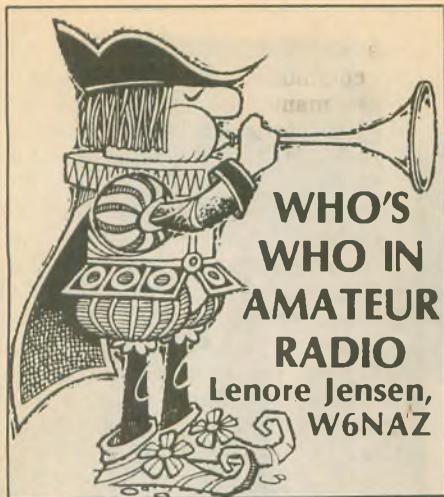
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When a patient admires his skill and asks how he happened to choose orthopedics, Dr. David Cook, N6EHM, is apt to explain, "Oh, I'm just a carpenter."

As a surgeon in Southern California, he enjoys newly developed materials and technologies. He finds the work fascinating, such as ways to use the arthroscope, which makes it possible to look into knee joints, removing or repairing torn cartilage, etc.

As with his Amateur gear, he enjoys tinkering with gadgets, devising new ways to use them.

"One can do several thousand joint replacements and no two fractures ever seem to be exactly alike; there's always a challenge. After all," he'll smile and say, "anatomy hasn't changed, so I don't have to take a course in that every year! Most of my patients aren't sick, just broken."

Because he's mechanically inclined, working with fiber-optic sources of light, new tiny lens systems and even video cameras small enough for surgery is a continual source of pleasure to Dr. Dave.

Recently, his friend, electronics consultant Bob Ripley, W6OSM, was painfully injured when his station wagon struck a center divider on a strange road late at night. He didn't realize he was badly hurt until he attempted to walk. Fortunately, he had autopatch in his car. Paramedics finally arrived and took him to a hospital.

Bob insisted that his wife Michelle, N6KAT, call Dave, who agreed to meet him at Los Alamitos General. Dave determined that both of Bob's heels

were badly injured, so surgery was done promptly. The heels were repaired and secured with steel pins and casts. By now Bob should be out of the wheelchair and is doing well and is very grateful to Dave.

"He's great; he has a warm personality but frankly tells you exactly what the situation is, explains the x-rays and draws diagrams," Bob said of the doctor.

Dave's office is a joy to Amateur pals and astonishing to patients, as it's a treasure-trove of electronic gear, complete with Amateur Radio stations, low-band and VHF, plus ample test equipment and computers. (It's across the street from the hospital, where he's often on call, so he can tinker all he likes but is ready, if needed, to work.)

Dave maintains a 440 MHz repeater on Santiago Peak, which requires trips up the mountain for servicing.

"Of course I belong to other repeater groups and we like to help each other. By the way, my repeater is used in conjunction with the Sheriff's Aero Squadron, which allows a combination of air enforcement, search and rescue and flying." (He's an instrument-rated pilot.)

Making videos is another of Dave's hobbies. He's produced a 40 year history of the Aero Squadron, as well

as training films for hospitals and patients.

How long an Amateur? "Well, in the early fifties I was W7VOM. My first rig was a converted ARC 5. Then I built a multi-band transmitter with 813s, using a power supply with transformers from an old diathermy machine."

However, all sorts of things interfered, such as college, teaching high school chemistry, general science and English.

"Because I was the only person around in Caldwell, ID, with a First Class Radiotelephone license, I was hired as a broadcast announcer and engineer at KCID. I sold medical drugs for a while and later worked for a mortuary and its ambulance service. That led me to medicine."

Dave attended the University of California at Irvine. Practicing since 1970, he is Board Certified in his field and is now on staff at Long Beach Memorial, as well as Los Alamitos General. Friends say of him that he's never happy unless he has 10 times more things scheduled than necessary. Happily for us, Amateur Radio is one of them. □

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QCWA President Harry Dannals, W2HD, attended the 6th Annual VEC Conference in Gettysburg, PA, on June 15. President Dannals addressed the conference, giving QCWA's position, which was adopted unanimously by its Board of Directors in April.

QCWA supports the new Communicator entry level, but favors retention of the present Novice Class, perhaps renamed since a "beginners" license should not have a 10 year duration. QCWA feels that restricting Communicator licensees to 222 MHz and above, where activity is rare to non-existent, would be tantamount to dooming that license program to failure. Instead, the Communicator should have all privileges accorded the Technician class on frequencies above 30 MHz.

QCWA believes that no-code licensees should then be encouraged to embrace Morse code requirements and mainstream into the higher levels of Amateur Radio as quickly as possible.

Irving R. Groves, K4HT, QCWA Charter Member #7, now resides in Bend, OR, and was recently presented with QCWA's DiBlasi award, by director Jim Walsh, W7LVN.

Starting with a Ford spark coil and galena crystal detector in 1915, K4HT attained DX of two blocks. In 1916 he "upgraded" to a two inch spark coil with fixed gap and Leyden jar, thus in-



QCWA Director Jim Walsh, W7LVN, presents the DiBlasi Award to Irving Groves, K4HT, as Frank Buhman, W7CVL, President of Beaver State Chapter #108, looks on.

creasing his DX capabilities to about 10 miles.

WW I necessitated a three year holiday from this exciting hobby, but in October 1919, on the first day Amateur licenses became available following the war, he was early in line at the NYC Custom House, where he passed the exam. A month later, he was issued 2DX as his call.

In 1920 Irving acquired a 1kW Thorardson, Benwood rotary gap, from John DiBlasi, owner of Continental Electric Company. He described his homebrew array as "Osc., Trans., Home made Condenser. Antenna 8 wires on 20 ft. spreaders 100 ft. long 60 ft. high." This rig really allowed 2DX to live up to his call letters.

In 1923 he received a 1st grade commercial ticket and went to sea. Among his many assignments were the *S/S Reliance*, the last liner to operate on spark.

Irving is the only survivor of the five fellows in the 97 minute QSO that gave birth to QCWA on Nov. 14, 1947. Following a quarter century of sea duty, he traveled the world as a senior engineer for the CIA, working at propaganda broadcast stations in Japan,

Taiwan, Turkey and Iran. He retired in 1964.

Mid-Continent Chapter 35 awaits the arrival of QCWA members, as they descend on Kansas City Oct. 12 to 14, for their 1990 convention.

The program consists of the annual meeting of QCWA's Board of Directors, plus a weekend of inspiring convention activities. To correct an error in this column last month: The convention committee is headed by co-chairmen Bill McGrannahan, K0ORB, and Larry Staples, W0AIB. Bill Cramer, W0ZL, President Emeritus of the host chapter, is treasurer of the committee.

QCWA has lost another charter member. David Talley, W2PF, member #4, became a silent key from a heart attack following an injury.

Licensed in 1917 at age 13, David received 2PF (later made W2PF), which he held for 73 years. He was a telecommunications engineer, served in the Army Signal Corps in Europe during WW II and for 45 years was employed in New York City by various telephone companies. He retired in 1980 and moved to Florida. □

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# DX WORLD

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## Activities Calendar

- 02 Sept. BFRA Bulgarian DX Contest
- 08-09 Sept. DARC European DX Contest (SSB)
- 15-16 Sept. Scandinavian Activities Contest (CW)
- 15-16 Sept. CRRL Can-Am Contest
- 22-23 Sept. Scandinavian Activities Contest (SSB)

For details on contest activity, consult your favorite contest column. We have no advanced notice on some of the above and are basing the dates on those from previous years.

### W-100-N

The following DXer recently completed the requirements for World-radio's Worked 100 Nations Award:

380. KA1TFU Edward W. Midura (All 10M SSB)

As a matter of interest, all of the qualifying contacts for Ed's award were made in less than a year, beginning in June of last year. Of that, 29 of those contacts were made this year.

What next Ed? Don't forget Armond's DXathon. You already have a good start on it and with a little CW work, you can really add on the points.

### Armond's DXathon

Although we have modified this year's DXathon rules by allowing multipliers for different bands used, there is an exception. In respect to Resolution 88-2 of the International Amateur Radio Union, concerning the use of the 10 MHz band (30M), contacts made on that band will not count for this award.

### Andorra (C3)

Summer vacationers often bring on some activity from this one. Reported very active on 17M is C31LBB. He has been on both CW and SSB. Try listening for him from about 2300 UTC.

Other calls reported during June and July include the following:

C30AAN	14.028 MHz	0030 UTC
C30CAG	21.010 MHz	1400 UTC
C30EJA	21.336 MHz	1500 UTC
C31LHK/M	21.335 MHz	1600 UTC
C31PA	14.245 MHz	0400 UTC
C31RI	14.002 MHz	2230 UTC

In addition, *The DX Bulletin*

reports that C31UA is a regular check-in on the net that meets on 21.335 MHz.

### Crozet Island (FT4W)

The early part of June there was some activity from FT4WB on Crozet Island. He was reported on 10M near 28.440 MHz around 0930 UTC. Nothing has been reported from him since.

However, *Long Skip* reports that this operator will be on the island for about two years. He may also report into the DX net on 14.222 MHz. Try looking for him around 0500 UTC — if he shows up.

### Kerguelen Islands (FT5X)

According to *DX News Sheet*, FT5XA and FT5XH use the same station. FT5XH has been very active, working into Europe on 14.114 MHz around 1600 UTC, 21.153 MHz around 1400 UTC and 28.440 MHz at 0700 UTC.

Additional reports have been numerous for these two stations. On 40M FT5XA has been found near 7.003 MHz at 0100 UTC in early June. For a CW contact on 20M check between 14.010 and 14.025 MHz around 1300 UTC or for SSB check between 14.180 and 14.222 MHz about the

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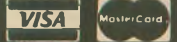
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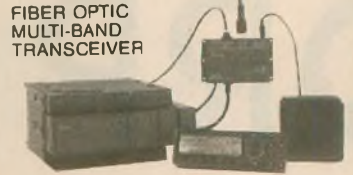
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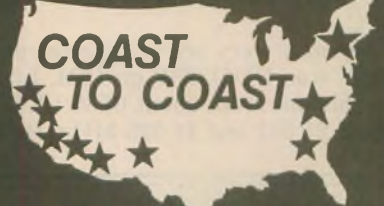
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same time. The same applies for FT5XH.

These stations have also shown up on 10M when the conditions were good. Listen near 28.440 to 28.470 MHz. The times for this were around 0900 UTC, which does not favor the deserving DXer in the western reaches of North America.

Also reported from Kerguelen was FT4XG. Listen for him near 14.162 MHz around 1100 UTC, 21.281 MHz at 1300 UTC or 28.569 to 28.572 MHz after 0830 UTC.

## Azerbaijan (UD6)

Several reports of stations using the RD70 or UD70 prefix have been reported. Unfortunately, I do not know the significance and assume that they are for commemorating a special event. I have checked over the DX bulletins and have found nothing.

The calls reported include RD70DC near 18.074 MHz at 0330 UTC, UD70DC on 21.024 MHz at 1130 UTC, UD70DE on 18.075 MHz at 2200 UTC, UD70DKZ on 18.078 MHz at 0015 UTC, UD70DWZ on 21.020 MHz at 1215 UTC, UD70GF on 21.033 MHz at 0300 UTC and UD70LE on 18.084 MHz at 2100 UTC.

Reported very active with the usual prefix was UD6DKW on 15M. Listen for this one from about 0230 UTC between 21.007 and 21.025 MHz. He has

also been on 17M near 18.083 MHz at 0345 UTC.

Other calls reported include the following:

UD6AI	14.025 MHz	0145 UTC
UD6BD	21.283 MHz	0430 UTC
UD6DFF	21.021 MHz	0245 UTC
UD6DKP	21.018 MHz	0245 UTC
UD6DPF	21.025 MHz	0215 UTC
UD6DR	14.227 MHz	0230 UTC
UD6UR	14.227 MHz	0130 UTC
UD7KWB	18.070 MHz	1300 UTC

## Kenya (5Z4)

According to *The DX Bulletin*, the Kenya authorities will no longer be licensing foreign Amateurs until proper reciprocal licensing arrangements have been concluded between respective countries. However, those already holding such Kenya calls will be allowed to use them until the end of this calendar year.

Check the bands for the following calls while they are still there:

5Z4BH	14.226 MHz	1330 UTC
5Z4BI	14.210 MHz	1945 UTC
5Z4PB	14.222 MHz	0230 UTC
5Z4BG	21.023 MHz	1845 UTC
5Z4BI	21.295 MHz	2045 UTC
5Z4BP	21.320 MHz	1930 UTC
5Z4FH	21.231 MHz	1900 UTC
5Z4FO	21.242 MHz	1845 UTC
5Z4FU	21.222 MHz	0230 UTC
5Z4FN	28.024 MHz	1345 UTC
5Z4FO	28.497 MHz	1800 UTC

## Senegal (6W)

According to *The Long Island DX Bulletin*, 6W1AAD may be found on weekends from 0130 UTC near 21.030

## DX Prediction — September 1990

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.

### SEPTEMBER 1990 WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(15)	18	25	(12)	22
12	(21)	16	22	(18)	(18)
14	(29)	19	18	24	31
16	33	17	21	25	38
18	34	16	(17)	23	42
20	33	26	32	(18)	42
22	27	32	39	(14)	44
24	24	35	43	(13)	36
2	21	33	43	12	30
4	20	27	39	16	25
6	(18)	23	35	14	22
8	(16)	20	29	13	20

### CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	19	(13)	24	13	20
10	(24)	12	21	(12)	21
12	36	17	18	22	25
14	41	18	23	26	34
16	40	17	21	26	40
18	40	(15)	(17)	23	42
20	33	27	32	(17)	42
22	27	28	39	(14)	44
24	24	26	42	(13)	36
2	21	(21)	37	12	30
4	21	17	34	15	25
6	21	(15)	28	14	22

### EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	20	(13)	24	12	21
9	(22)	12	21	17	21
11	35	17	19	24	24
13	40	(15)	24	27	33
15	41	(14)	(21)	27	39
17	40	(12)	(19)	25	41
19	36	(17)	(27)	20	42
21	30	24	37	14	41
23	25	25	42	13	40
1	22	(20)	37	12	33
3	18	16	33	12	27
5	22	(14)	28	13	24



MHz. This station also signs 6V1A in the contests. I have found no other reports for this one. Perhaps the correct call is 6W1AD.

Found almost on any mode is 6W6JX. The following is a selection of this station's activity:

RTTY	14.082 MHz	0600 UTC
WARC	18.082 MHz	1530 UTC
SSB	14.222 MHz	0600 UTC
CW	21.032 MHz	1800 UTC

Another active station is 6W1QB, who has been worked on 7.021 MHz in Newfoundland around 2345 UTC, 18.074 MHz in New England at 2345 UTC, 21.276 MHz in Maryland at 1700 UTC and 28.007 MHz in Ontario at 1545 UTC.

Other calls reported include:

6W1QC	14.160 MHz	0230 UTC
6W2EX	21.241 MHz	0845 UTC
6W7OG	21.279 MHz	2145 UTC
6W8ANF	28.467 MHz	1245 UTC

### National Contest Journal

John Attaway, K4IIF, is now the DX contest editor of the *National Contest Journal*, published by the ARRL. John requests that you include him in your correspondence regarding information on DX contest operations and matters affecting DX contests. John was for many years the DX editor of *CQ* and their various awards programs. His address is P.O. Box 205, Winter Haven, FL 33882.

### Northern California DX Foundation

The Northern California DX Foundation recently elected its directors and officers for the 1990-1991 term. Elected as directors were Eric Edberg, W6DU; Rusty Epps, W6OAT; Bruce Butler, W6OSP; Dave Leeson, W6QHS; Steve Thomas, N6ST; Kip Edwards, W6SZN; Lou Beudet, K6TMB; Stan Kiesel, K6UD; Rich Stempien, WA9WYB; Howard Brainen, WZ6Z; and Josephine Clarke, WB6ZUC. N6ST, WA9WYB and WZ6Z are new board members, replacing N6HR, K6HR, K6LLK and KA6W, who had asked to be relieved because of other commitments. The new NCDXF officers are W6OAT, President; K6TMB, Vice President; W6DU, Secretary; and W6OSP, Treasurer.

As a DXer and also a member of the NCDXF, I strongly recommend supporting this fine organization. The best way is to join, at a mere \$25 per

year. How many of the above calls did you work? Send your check and application to NCDXF, P.O. Box 2368, Stanford, CA 94309-2368, today!

The NCDXF has also committed \$3000 in support of the World Radiosport Championship that was held in cooperation with the Goodwill Exchange Program of the 1990 Goodwill Games in Seattle, although this is a departure from the type of activity normally supported by the Foundation, the directors believe the potential this event has for generating worldwide positive publicity for Amateur Radio in general, and for contesting and DXing in particular, justifies making the exception.

### Goodwill Games

The results of the World Radiosport Team Championship, held July 20-21 during the Goodwill Games in Seattle, WA, are in, and the US had teams placing First, Second and Third.

The First place team obtained over 1,400 contacts in 10 hours.

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Last month we had a card for Pierre Wilson, FR7DX, from his old days 55 years ago, in 1935 as FB8AD in Madagascar.

Cam Marie, W3EPR, provides us with some more on Madagascar activity in the 1930s. In the photo of the locals included with last month's column, one of the operators was F.P. Bour, who signed *FB8C* and later *FB8AB*. Cam had worked him under both calls.

On Aug. 27, 1935, W3ERJ (Cam's old call) worked *FB8C* on 20M CW and received an RST 449. I don't know what became of *FB8AB*. Perhaps one of our readers might know.

### QSL information

*QRZ DX* reports that Stu Honeysett, H44SH, has left the Solomon Islands and will be transferring to the Ivory Coast. Anyone still needing a confirmation from H44SH or H44R should contact him at the following address: Serebou Seed Project, Commonwealth Development Corporation, O4 B.P. 161, Abijan 04, Ivory Coast, WEST AFRICA. Be sure to include an SASE and sufficient IRCs.

Igor Kuzhelev, UQ2GJR, reports that the Latvian club station YL1AA is very active on all bands, along with the calls RQ9W, RQ7W, EK2Q and

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9117	17 meters		

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the former UQ1GWW. Igor requests that contacts with these stations be confirmed through him.

### QSL routes

A61AD	-WB2DND	GB0WPX	-G0MFO
A71RU	-DJ92B	HCBJG	-WA6ZEF
C30CAG	-F6BKP	HL9KL	-KA6V
C53GB	-FD1MXH	HP1XXC	-K9APW
C6AFR	-K4MQG	HY6JUN	-FF1PFW
CN8GH	-K1SE	IA2PA	-12YAE
CO2HQ	-XE1XF	IB8T	-11RBJ
CT0B	-CT1CWT	IE1A	-11RBJ
DA0YGP	-DF8WS	IE0CM	-10GEJ
DK9KX/ZS1	-DK9KX	IH1A	-11RBJ
DL8CM/ZS1	-DL8CM	IH8ITU	-1K8DO1
ED1RSO	-EA1ETO	I17SOM	-17OYT
ED5MUV	-EA5BW	IL1A	-11RBJ
ED9CI	-EA9KQ	IM1A	-11RBJ
ED9FAS	-EA9KQ	IX2A	-12YAE
EG8CAC	-EA8ZX	IY9CM	-1K0MBB
EJ1D	-E16EW	J21CD	-DJ6SL
EJ2GB	-E12GB		(See Note 2)
EK1NWB	-UA1NEJ	J28SI	-DJ6SI
EK2Q	-UQ2GJR		(See Note 2)
	(See Note 1)	J28YL	-DJ6SI
			(See Note 2)
EK3ACC	-UV3ACQ		
EK3ACQ	-UV3ACQ	J37ZY	-NS8G
EK5ZI	-R05OC	J79CW	-WA5Y
EK0KBZ	-UA0KBZ	J8AA	-JJ1TZK
EK0UT	-UB5UT	JA9IAX/JD1	-JJ1TBB
EL2WK	-G3OCA	JD1YAA	-JA10GE
EM3AYV	-UZ3YWH	JW1MFA	-LA1MFA
EN1AM	-UA1ZX	JW/DL3LAB	-DL3LAB
EX0S	-UA0SAU	JX1XA	-W1AF
EX1AN	-UA1NEJ	JY8AU	-G3ZYE
EJ5BL	-F6AJA	JY8KP	-G3ZYE
F00JA	-JA3EGE	KA1BWF/	
FT4WB	-F61TD	9M6	-DJ92B
FT5XH	-F6GYV	KA21J	-WB3EXR
FV51TU	-F1DBT	KC6CW	-JA2NQG
FV6PAX	-F8BO	KC6DX	-JH2BNL
GB2RBC	-GM31TN	KC6MZ	-JI2UAY
GB4JUL	-KE2AE	KC6TH	-JA0DCQ
GB60SUN	-G30PL	KG41S	-WA61SL
GB6MX	-G3MXJ	LP3F	-LU6FAZ
GB8FX	-G3FXB	LX0SAR	-DL5VU
GB0DX	-G4BUE	NH8RT/KH8	-JH41FF

OH0BT	-OH3FP	VK9LI	-VK2SG
OM7CQR	-OK3CQR	VK9LV	-K1JB
P29PL	-VK9NS	VK9WB	-W6EW
RB5ES/UA0X	-UB5EFW	VK0JR	-VK9NS
RB5WA/		VP2EXX	-KC8JH
RB9P	-RB9WA	VQ9RB	-WA4DPU
RH0E	-UH8EA	VU2NBT	-WA4FVT
RQ7W	-UQ2GJR	XJ4G	-VE4XX
	(See Note 1)	YB3ASQ	(See Note 3)
RQ9W	-UQ2GJR	YL1WW	-UQ2GJR
	(See Note 1)		(See Note 1)
RT0U	-RT5UN	YL20LSF	-UQ1GWW
RU3Y/UJ8JW	-RA3YF		(See Note 1)
S77A/J6L	-JJ1TZK	ZB2JC	-DJ8MT
S79CW	-WA5Y	ZC4BS	-G4KIV
SK0ITU	-SK0CC	ZD9CN	-W4FRU
SU1EE	-K1RH	ZF2PB/ZF8	-N7ARO
SV0M0/SV8	-K7MO	ZK1XP	-AA6LF
SV1ACL/SV8	-SV1YH	ZK3EKY	-WA3HUP
T30NAD	-JO1CRA	ZY0TK	-PS7KM
T32B1	-KH6DFW	ZY0TW	-PT7AA
T32LB	-JH1BSE	3A2DL	-DL7TA
T47FK	-CO6CD	3A/K4UEE	-K4UEE
T5RM	-HB9RTR	3D2AN	-YASME
T5RR	-12JSB	3X1SG	-ON6BV
TK8UFT	-F2DE	4F3BAA	-NR8Y
TK/PA3EBT/P		4J6X	-KC3VO
	-DA10W	4K30DX	-RA10A
TN1AT	-F6FNU	4K4BAN	-RB5FO
TR8/FD1OGL	-F6IXI	4K4BCN	-RA3YG
TU2UI	-WA8ZWR	4K4POL	-UA0KCL
TZ6BHV	-IK3GES	4K4QQ	-RA1QX
TZ6CX	-NP2CX	4K5Z	-R05OC
U5WF/UB9P	-RB5WA	5C3CDN	-VE6ATZ
US1N	-UA1NEJ	5N8ALE	-DJ3VZ
UF7VWA	-NA30	5V7RF	-NC6A
US4P	-W7FR	5Z4B1	-W4FRU
V31GFP	-W0GFQ	6W1QB	-DK3NP
V31JP	-K0GHK	7Q7JA	-JH8BKL
V31KA	-KB5LVH	7Q7JM	-NK2T
V31OA	-W41BS	8B71YU	-YB7BC
V31RR	-WN4KKK	8P9AS	-G4PEL
V31SQ	-K5TSQ	8P9AP	-WG5J
V31VX	-W5VX	8P9AQ	-N5RM
V63AN	-JA2NQG	8P9FS	-G4BKI
V63JA	-JJ1TZK	8P9FT	-G3DLH
VK9AE	-K1JB	8S01TU	-SK0CC
VK9EW	-W6EW	9Q6EE	-K1RH
VK9LE	-VK30T	9Y4SF	-WA4JTK

UD70GF	-P.O. Box 169, Baku 370 000, USSR
UJ5K	-P.O. Box 1102, Dushanbe 734 082, USSR
XE2UGG	-P.O. Box 807, Nogales, Sonora 84000, MEXICO
1S0XV	-P.O. Box 308, Moscow 103 009, USSR
3D2XV	-P.O. Box 344, Forster 2428, NSW, AUSTRALIA
701AA	-Mohammed al Sabah, P.O. Box 8944, 22060 Salmiyah, KUWAIT
9Q5DX	-Jim Kessler, KQ3S, 8 Preakness Way, Marstons Mills, MA 02648

### Notes

1. Suggested route for the calls via UQ1GWW and UQ2GJR is Igor Kuzhevlev, P.O. Box 418, Riga 226 001, Latvia, USSR.
2. Send your QSL direct only.
3. QSL Manager Bob Preston, W7TSQ, says that this station's QSL card is over-sized. Please provide a business-sized SASE to Bob's address at 809 Cary Rd., Edmonds, WA 98020.

Many thanks to the following contributors: K1RH, W3EPR, K4IIF, W6IGK, W6TUR, W6VG, N7ARO, UA1NDR, UQ2GJR, VE3PRW, VK6NE, International Amateur Radio Union (W4RA), International DX Association (W4WMQ), Northern California DX Foundation, Salt City DX Association (KB6G), Southern California DX Club (WB6PSY), Western Washington DX Club (KS7L), CQ Ham Radio (DX News JA3BG), The DX Magazine (VP2ML), Long Skip (VE3IPR), DX News Sheet (G4DY0), The Long Island DX Bulletin (W2IYX), Inside DX (N2AU), QRZ DX (W5KNE) and The DX Bulletin (VP2ML).

Hope your summer is a good one. Best of DX es 73! de John N6JM. □

When looking for a clue as to why something goes wrong, never rule out sheer stupidity. —The Yarn, Norway, ME □



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# TRAFFIC

Geri Sweeney, N4GHI

## Monthly activity reports

It is once again the first of the month. Nets swell with traffic as everyone involved in traffic and ARES sends their Section Traffic Manager (STM) and their Section Emergency Coordinator (SEC) their monthly activity report. The STM needs to receive these reports in the first few days of the month so they can be compiled and sent on to ARRL for publication in *QST*, as part of the "Field Organization Reports" and/or the "Section News."

There are many reasons why people feel that a monthly activity report is not necessary. Some excuses that have been heard are: The traffic is on packet, it's on an independent net, no wish to compete with others in the section, don't care if their call is in *QST*, don't think about sending a report, not very active... and on and on. It's the STM's job to collect a report from everyone who handles any traffic in the section. This includes those who check into nets, but rarely or never handle traffic.

The STM then works with the data collected to assist the section to become the best it can be. Trends are plotted, such as: How is each mode (SSB, CW, data - packet and/or AMTOR) being utilized? Is traffic training being accomplished for each mode? Each mode has a unique set of problems which needs to be worked into a

master section plan. Is traffic falling off, increasing, or remaining about the same over the years? Is traffic moving from one mode to another? This incoming data can only be analyzed if everyone in the section sends the STM a monthly traffic activity report. This includes every packet sysops whose PBBS handles traffic in an NTS format.

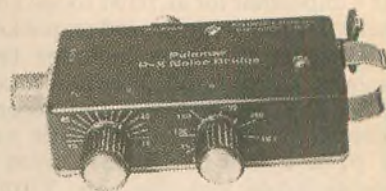
Only NTS traffic should be counted (no bulletins, etc). It also includes every person who checks into any traffic net or PBBS (to handle traffic). Those who check into a net but handle no traffic are still a resource. By being on the net, they increase the personnel data pool by one.

What does the monthly activity report look like? You only need five words: O/ R/ S/ D/ T/ (O = originated, R = received, S = sent, D = delivered, T = total). Add an NTS preamble to these five words, sign it and send it next month to your STM.

In the text of a message, a letter/number group separated with a slash counts as one word. Thus, O/3 (originated 3) counts as one word.

After each slash the number of pieces of traffic you handled is inserted. If you handled none for a letter, you either leave the letter out or insert a zero. If you send your STM a report each month, you will always have S/1 T/1. Some clarification may be needed. If you are a Net Control Station and send your net manager an NCS report, does that count as one originated? No. It counts as one sent. Originated traffic must have been received from some source other than you. Perhaps some-

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one called you on the phone, or you may be at a special event station. Many originations come when traffic is delivered to someone and they are then asked if they wish to send a reply.

It's important for an STM to see how much traffic is being passed on packet. In Virginia, the total includes two numbers. The first indicates how much traffic was handled and the second denotes how much of that traffic was via packet. Thus, a report from a member might look like this: T/10/3. Three of the total of 10 pieces were via packet. A packet sysops report generally looks like this: T/80/80.

Please help your STM to try and figure out what is happening in your section by sending him/her a monthly activity report. If you don't know who that is, check QST. Each Section has a column written by the Section Manager. The columns are grouped under divisions which are listed alphabetically. All section appointees are listed at the top of the column.

### Packet

Packet users should employ the NTS format when sending traffic. The text of a message is written in lines. In SSB/CW each line should contain five words. Why? The answer involves the message check in the preamble. It is a question of accuracy. When you finish copying the text, you glance at the message check in the preamble to see if they agree. If they do not, it's a rudimentary clue that some of the text is garbled.

Generally text is missing. Occasionally you end up with more text than the check. This is a clue that the text has been altered somewhere along the way. Sometimes it's something easy to discern, such as counting a telephone number with three number groups as one word instead of as three.

But, why write in word groups of five to a line? It's recommended because it is about the right number to get on a line (some people write very large,

especially when they write fast as in copying a message). Five words to a line is fairly easy to keep track of visually without counting. At the end of the message then, you need only count the lines and the leftover words on the last line to arrive at the message count. This can be done almost instinctively with a glance.

As people started sending messages on packet, many followed the five words to a line practice. Some, whether because of inexperience, lack of training or because they send their non-NTS messages without using this format, make the lines longer and never put in a carriage return. Perhaps those who understood the reasoning of why we write five words to a line figured that since packet is "error checking," it was no longer important.

Packet messages can be picked up in two ways. One way is to read the message directly to a printer. You now have a copy of the message. Another way is to create a file on your computer and read the message to the file. You can print the message as you store it on the computer. This makes for a fine backup when needed. But, it also takes space on the computer. At some future time you must go through your files and delete as needed.

Since it does involve extra work, many of us just read the message directly to the printer. A quick check is made of the printer to be sure it was printing and the paper was advancing. The message is then killed on the PBBS. Later the paper is removed from the printer and taken to the phone to dial and deliver. And, *voila!* Parts of lines are missing. Why?

Packets come in character groups (the TNC can be set to different packet lengths). A lack of carriage returns in your packet message could result in lost words when the message is read directly to a printer on the other end. An example is a wide body printer using a 8½ X 11 paper, but set at 132 characters. With no carriage returns in the message, the printer would just print off the end of the paper onto the roller. At 132 characters it would automatically return. Thus each line would lose words.

How many words would depend on the length of the packets and the printer configuration? If the message

had been stored to a file on the computer and then printed, it would look normal and no text would have been lost. This is because whatever word processor your computer is using has been matched with whatever printer you are using. Most printers print in lines of about 80 characters. You may feel it a waste of space to continue to use five word groups per line, but at least give a carriage return at the end of each line on your screen as you type your message. ARRL advises when typing traffic to use line groups of 10 words.

### Foreign/domestic traffic

Most foreign countries with which we have third party traffic do not have nets. Traffic is passed to interested, independent operators in foreign countries. These ops may or may not have had training in passing traffic as per ARRL standards.

When international traffic goes SSB/CW, it ends up on the International Assistance and Traffic Net. The IATN is a "gateway." The transmit station evaluates who is picking up the traffic and whether a translation is needed for any ARL message numbers (ARL SEVEN & ARL FORTY SIX).

Packet presents a problem. When a packet message reaches its destination, you have no idea if the person in that country will understand an ARL coded message. Therefore, it would be a better procedure to send clear text to foreign countries on packet.

### Dan MacDonald, W1PEX

Thanks to the *EMRI Traffic Handler's Newsletter* for its profile of Dan. His traffic to members on the QCWA roster helps to give us traffic handlers something to do.

Dan was originally licensed in 1941 as W6UIT. After the war, he settled in Massachusetts. At that time he received his present call.

Dan started checking into nets in 1950. He became an outlet for Mae and Al Burke in Seminole, FL, seven days a week. Not only did he check into NETS nets, but also four independent nets: The Hit and Bounce Net, Clearing House Net, 20 Meter Interstate Net and the 75 Meter Interstate Net.

Dan relocated in Nashua, NH, and is now on CW, SSB, FM and packet radio. He has earned 134 Brass Pounder League awards (500 or more points in a calendar month). Keep that traffic flowing, Dan. □

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One of the most difficult things to give away is kindness — it is usually returned. — Cort R. Flint.





Welcome back. It has been one heck of a couple of months. Unfortunately, I was so backlogged with family and job-related items, that it left no time for writing about QRP. Now that the dust has settled, I hope to be back in the pages of *Worldradio* on a regular basis.

This month's column centers on the conversion of one of Heath's most popular HF transceivers, the HW-8, to work on 160, 30, 17 and 12M.

This tiny QRP transceiver has been one of the most highly successful radios ever to come out of Benton Harbor. More modifications have been done to this rig than any other radio produced by Heath.

As originally designed, the HW-8 covered the 80/40/20/15M ham bands. It featured a direct conversion (DC) receiver, about 2W output on the bands and semi-break-in keying. This CW-only QRP transceiver can be picked up at hamfests or via the "Yellow Sheets" for between \$50 and \$85, depending upon condition and modifications.

The basis for the conversions described herein originally came from the G-QRP Club's quarterly magazine, *SPRAT*. Bob Fowler, G3IQF, was the author of these mods and has done a fine job of documenting the conversions, which can be done one band at a time or all at once.

160M will replace the 80M band, 30M will replace the 40M band, 17M will replace the 20M band and, finally, 12M will replace the 15M band. All four of the HFO crystals (Y1-4) will have to be replaced to move the frequencies of operation to the desired bands. When ordering new crystals, specify 30pF load capacitance and an HC6-U holder. You WILL need the *Heath Assembly Manual* for these mods. Replacement capacitors can be polystyrene or silver mica.

In addition, *The Hot Water Handbook*, by Mike Bryce, WB8VGE, will be indispensable. Unfortunately, it is long out of print.

It would be best to completely disassemble the rig down to the bare circuit board so access to the toroidal inductors and other parts can be realized. If you are inexperienced in performing equipment modifications, PLEASE contact your local Amateur Radio club

and find someone who will assist you. Take your time and work slowly. Solder carefully and enjoy the trip!

One of my favorite bands has always been 160M. It is a good QRP band when the static and noise are at a minimum, during the winter months. So, let's start with the 160M mods:

1. Replace Y1 (12.395 MHz) with a crystal cut for 10.695 MHz (this puts the band edge at "10" on the tuning dial).
2. Replace C116 with a 150pF cap.
3. C64: Add a 400pF in parallel on foil side of PCB.
4. Replace C1 with a 560pF cap.
5. Replace C15 with a 330pF cap.
6. C78: Add a 330pF in parallel on foil side of PCB.
7. L22: Remove all turns on the toroid and rewind with 34 turns of #32 gauge wire and add a 230pF in parallel with L22 on the foil side of the PCB.
8. Replace C94 with a 470pF cap.
9. C96: Add 470pF in parallel on foil side of PCB.
10. C97: Add 680pF in parallel on foil side of PCB.
11. C303: Add 220pF in parallel, which is switched in when 160M bandswitch position is depressed (a. Connect one end of the 220pF cap to C303/R304 junction. b. Connect the other end to pin 14 of the bandswitch. c. Jumper a short lead between pins 11 and 15 of the bandswitch.
12. For maximum performance in the CW segment of the band, set the tuning dial to 40 (1.840 MHz) and allow the set to warm up for 30 minutes. Realign the 160M circuits following the 3.5 MHz instructions in the Heath manual. Transmitter output power is around 2W.

Now let's proceed to the 30M modification. 30M is a great QRP band. Propagation is much like 40M and this band will be "open" round the clock.

1. Replace Y2 (15.895 MHz) with a new crystal cut for 18.895 MHz (this puts the band edge at the "100" mark on the tuning dial).
2. Replace C118 with a 100pF cap.
3. Replace C66 with a 68pF cap.
4. Replace C4 with a 27pF cap.
5. Remove C18.
6. Replace C81 with a 150pF cap.
7. Replace C82 with a 150pF cap.
8. L23: Remove two turns (one from each end of the toroidal inductor).
9. Remove C98.
10. Replace C101 with a 80pF cap.
11. Replace C102 with a 270pF cap.
12. L28 and L29: Remove eight turns from both inductors (four turns from each end and

respace remaining turns evenly around toroidal form).

13. Set main tuning dial to "125" (10.125 MHz) and allow the HW-8 to warm up for 30 minutes. Realign the 30M circuits (except VFO) following the 7 MHz instructions in the Heath manual. Transmitter output is about 2.2W.

Now on to 17M:

1. Replace Y3 (22.895 MHz) with a crystal cut for 26.895 MHz (this puts the band edge at "68" on the dial).
2. Replace C121 with a 33pF cap.
3. Replace C68 with a 68pF cap.
4. C7: Add a 22pF cap across foil side of the PCB.
5. Replace C84 with a 68pF cap.
6. Replace C85 with a 68pF cap.
7. L24: Remove two turns (one from each end of the toroidal coil).
8. Replace C105 with a 180pF cap.
9. L31 and L32: Remove eight turns each inductor (four turns from each end, respace the turns evenly around each toroidal coil form).
10. For maximum performance in the CW segment of the band, set the main tuning dial to "100" (18.100 MHz) and allow the rig to warm up for about 30 minutes. Realign all 17M circuits, using the 14 MHz instructions in the Heath manual. Transmitter power output is about 1.3W.

Finally we'll convert 15M to 12M.

1. Replace Y4 (29.895 MHz) with a crystal cut for 33.695 MHz. This puts the band edge at "90" on the tuning dial.
2. Replace C123 with a 15pF cap.
3. Replace C71 with a 33pF cap.
4. Replace C87 with a 33pF cap.
5. Replace C88 with a 33pF cap.
6. L25: Remove three turns (one from one end and two from the other end of the toroidal inductor) and respace turns evenly around the form.
7. Replace C107 with a 75pF cap.
8. Replace C108 with a 100pF cap.
9. L33 and L34: as L25 above.
10. For maximum performance in the CW segment of the band, set the main tuning dial to "110" (24.190 MHz) and allow the set to warm up for about 30 minutes. Realign the 12M circuits following the 21 MHz instructions in the Heath manual. Transmitter power output is about 700mW.

An additional modification that will prove useful and enhance performance is replacement of Q1 (MPF 105) with a 2N4416. This will really make the receiver section perk up. Addition of an S-meter will give you the feel of a "big" rig. Several AF filter mods are also presented in the *Hot Water Handbook*, which will definitely improve the receiver's audio section.

I would like to express my appreciation to The Rev. George Dobbs, G3RJV, of the G-QRP-Club, who has graciously given his permission to reprint these modifications, and to Bob Fowler, for doing the pioneering effort on the mods. □

If at first you don't succeed, try looking in the wastebasket for the directions. —

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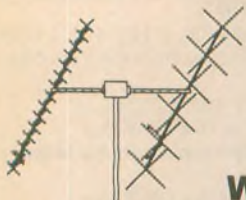
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# Amateur Satellites



**WB5ZDP**  
**Keith Berglund**

I hope that I'm not beating a dead horse, but I want to summarize Mode A operation in this article, before we graduate to mode B topics. There are still some of you out there — and you know who you are — who are interested in getting on the birds, but you've still not made that first Mode A QSO.

## Back to basics

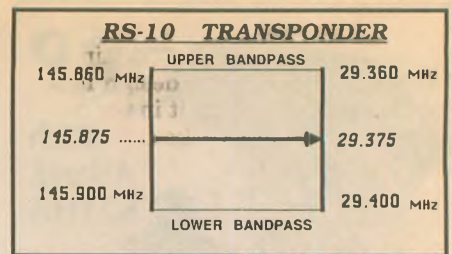
An Amateur communications satellite is just a repeater in the sky. It has many similarities to your typical 2M repeater. There are input frequencies (known as uplinks) and output frequencies (known as downlinks). And, like the 2M repeater, the higher it is, the

better the area of coverage. Imagine the area of coverage of a repeater 600 miles up!

There are, however, just a few things that make our satellite repeater a little different from 2M repeater analogy. First, the inputs and outputs are not channelized. The satellite will listen over a whole segment of one band and repeat it to a similar sized segment of another band. So, for example, on RS-10, the satellite listens to all frequencies from 145.860 to 146.900 MHz and "translates" this segment of the band to 29.360 to 29.400 MHz.

This "translating - repeater," or "transponder," has the advantage of being completely linear. That is, whatever modulation technique that you send to it will be faithfully repeated. So, if you uplink USB the downlink from the satellite will be USB. CW = CW, RTTY = RTTY, etc.

The bad news is that even FM will be repeated by the satellite. As you know, a typical FM signal is about 15 kHz wide and, as can be seen by the RS-10 frequencies in Figure 1, only two, or at the most three, simultaneous QSOs can occur. FM is very wasteful in terms of bandwidth and power required for the amount of information that is conveyed. The bottom line is that FM voice is not allowed on any present Amateur satellite. Only narrow band,



**Figure 1. Block diagram of satellite RS-10 transponder**

low duty cycle modulation formats should be used.

## Modes

In satellite lingo a "mode" is a shorthand method of describing the uplink and downlink bands (see Figure 2). For example, The Mode "A" transponder

MODE	UPLINK	DOWNLINK
A	145.9 MHz	29.4 MHz
B	435.5 MHz	145.9 MHz
J	144.3 MHz	435.9 MHz
L	1.269 GHz	435.8 MHz
S	435.5 MHz	2.400 GHz
K	21.2 MHz	29.4 MHz
T	21.1 MHz	145.9 MHz

**Figure 2. Amateur satellite modes**

of satellite RS-10/11 has its uplink on 2M and its downlink on 10M. I suppose that they initially called it the mode "A" transponder because it was the first widely used Amateur satellite transponder. Also, it is a good first transponder for the beginner in Amateur satellites.

## Satellite tracking

Another difference between your local 2M repeater and a satellite transponder is that the satellite moves! Since the satellite is in an orbit that is non-geosynchronous, its position moves around in the sky. When the satellite is in view, you need to know where to point your antennas, and if the satellite is not in view, it's nice to know when it next will be.

Finding RS-10/11 or any of the other satellites can sometimes be a bit tricky unless you have the right equipment. The vast majority track the satellites using a computer. AMSAT has software for almost every computer you can imagine, from the Sinclair/Timex to the IBM PC. I have personally used tracking programs written for the Apple, Commodore 64, Macintosh and the IBM PC and found that all are menu driven, user friendly and very accurate.

Sorry if you missed the column for the past three months, but you can imagine how changing jobs and moving

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to a new QTH might tend to put a damper on spare article writing time.

I'm still doing antenna design for a living, but now I'm doing it in the corn field on the Iowa-Nebraska border. If you're interested in writing to me concerning Amateur satellite matters, feel free. I'll still get the mail if you send it to the old CBA or, if you prefer, the new address is RR#1 Box 123A, Hubbard, NE 68741.

### A new OSCAR planned

For the last three months, the world of Amateur satellites has not stood still. The Russians have announced that RS-14 is to be launched soon. This bird will contain two Mode B analog (voice) transponders and a third digital transponder called RUDAK II. RUDAK is the replacement digital transponder that is not feeling too well right now on OSCAR-13. The transponder format is AX.25 1200 Baud QPSK and is, unfortunately, not compatible with standard terrestrial AFSK packet radio.

### Dove update

AMSAT's Bob McGuire, N4HY, is still working to get DOVE-OSCAR-17 back on 2M.

As you probably know, DO-17 experienced major problems with its 2M transmitter severely desensitizing its 2M receiver. At the moment, it is only transmitting on 2400 MHz.

Bob and Bill McCaa, KØRZ, are doing a super job of uploading new software to DO-17, and it is hoped that they will have Dove's digitized voice transmitter on 145.825 MHz FM on by the end of July. Stay tuned to AMSAT nets and bulletins for further details.

### Did you do it?

I hope by now that, at the very least, you've listened to a few passes of RS-10/11 on 29.350 to 29.450 MHz USB. If all you own is a 2M HT or FM only rig, at least you can listen to a few passes of UO-11 and DO-17 (when fixed) on 145.825 FM using any ordinary 2M antenna.

I've received a few letters from some of you concerning your first mode A

QSO. Most are really surprised that Amateur satellite work can be done with simple antennas and rigs and without two or three kilobucks of high tech gear.

The function of all of the satellite tracking programs is basically the same. They give you a predicted satellite position at a given time and tell you where to point your antennas based on your longitude and latitude. All programs give you this data in numerical or tabular form and many will also show you where the satellite is graphically on a world map.

### Antennas

Antennas for Mode A are not as critical as antennas required for some of the other satellite modes. The reason for this is that the present active Mode A satellite (RS-10/11) is in a 100 KM circular polar orbit. In other words, the satellite orbit takes it over the north and south pole at a virtually constant height above the earth. Not only is the satellite not extremely high, the receivers aboard the satellite are extremely sensitive. The reason for this is that the Russians are only allowed 5W on 2 Meters (Why? I don't know.) and, in order to access the bird, they must point some sort of directional antenna as the satellite passes over.

In this country, however, you and I are allowed to transmit considerably more than 5W. So, instead of using 5W and a steerable, directional antenna, you can use an omni-directional antenna and 25 to 75W. The effective radiated power toward the satellite will be the same.

In the past I have made many successful satellite QSOs, using mobile ships, J-Poles and Ringo-Rangers. The advantage of using linear, omni-directional antennas is that you don't have to point them and the tracking of the satellite is not nearly as important.

On the receive side, you can use virtually any antenna capable of receiving 10M energy. I have used long wires, mobile whips, dipoles, ground-

mounted verticals and tri-banders. The antenna that I usually use is my HF Yagi at 50 ft., mainly because it is the antenna already in place. This past Field Day, I used a 10M dipole only eight feet above the ground strung between two trees (eight feet because that's how high I could tie the strings).

### The receiver

If you have an HF rig or general coverage receiver capable of receiving 10M, your halfway there. The internationally allocated sub-band for satellites in the 10M band is 29.300 to 29.500 MHz. There should be no transmitting of SSB or FM there, because of interference to weak signal satellite downlinks (FMers take note!). What you'll hear is just normal SSB or CW QSOs, except they'll be calling "CQ satellite" or "CQ RS-10," and there will be a noticeable doppler shift (sounds like drifting) on the signal.

### The transmitter

The uplink of Mode A (and J) requires some sort of 2M transmitter capable of a few watts of SSB or CW. The vast majority use an all mode 2M rig. The term "all mode" implies that the rig is capable of transmitting and receiving CW, USB, LSB and FM.

The advantages of owning an all mode 2M rig is that you can use it on a variety of modes. It can be used as the uplink for Mode A and Mode J. The receive portion can be used as the downlink for Mode B and Mode T. In addition, the rig can be used as a driver stage for a 1269 MHz Mode L transmitter or as a receive IF for a 2400 MHz Mode S receiver.

### Next month

Next time we'll sum up how to tie all of this equipment together and make a QSO or two. As you've seen, the antennas don't have to be directional, you probably have the receiver already and the transmitter is certainly not exotic. After that, I think we will move on to Mode B and J topics. □

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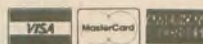
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# 10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ  
10-10 19636

## Meet Donald Ashdown, 6Y5DA

When you hear that signal from Mandeville, Jamaica, in the West Indies, with the call of 6Y5DA, it will be Don Ashdown, 10-10 #17404.

Don was first licensed in 1972, joined 10-10 in 1977 and has lived in Jamaica since 1952. He is a retired engineer and became interested in ham radio through a friend who set up a station at his QTH one weekend. That was it! Ham radio was for Don.

Don is English and went to Jamaica in 1952 for a two year job constructing a chemical process plant. His XYL is Leonie and they have been married for 36 years.

The station at 6Y5DA is a Kenwood TS520, with a TH3 MK3 for 10M. Being retired, Don spends seven to 10 hours or more a week on the radio, so

those needing Jamaica should be able to find him on 10M without too much trouble. He also operates in most 10-10 contests. If you need a QSL card from Don, his stateside QSL Manager is Joe Knowles, VE4JK (10-10 #20744), Box 365, Carman, Manitoba, R0G 0J0, CANADA.

## From the mailbag

*Pietro Fiortio, IN3ANE, 10-10 27960.* Pietro says he is interested in a 10-10 Counties Award and also a 10-10 WPX Award. He has over 2,250 different prefixes for his regular WPX Award, which is administered by CQ.

I have been working on a 10-10 Counties Award for some time and have it just about ready to propose to the 10-10 Board of Directors. But what about a 10-10 WPX Award? Would someone like to get that started? The rules could be basically the same as the CQ WPX Award, except contacts would be on 10M and would have to be with another 10-10 member. I would be glad to send you a copy of the CQ rules for their WPX if you are interested in proposing such an award for 10-10.

How about some of you WPX collectors? 10-10 operates on volunteers, so someone has to get the ball rolling.

*Tom Gallagher, KB5KIX, 10-10 54017.* Tom is 13-years-old and he just received his 10-10 Worked All Continents Award, #248. When I told him I still did not have Africa for my own 10-10 WAC, he advised that the Citrus Belt Net is on week days on 28.414 at 1830 UTC and ZS6CGS, 10-10 #55558, is there most days. From all of us who need Africa, thanks Tom.

*Larry, K9PSV, and Hellen Delaney, N4VXG.* They sent in for an Information Pack to join 10-10. Their address? 1010 Harris Trail. How about that?

Who has 10-10 #1010? It is issued to

WB4NVI. Wonder how many 10-10 members have 1010 as the last four digits of their phone number? Have you one to top these?

## With sympathy

It is with sadness that we announce that Mae, the XYL of our 6th District Manager, Dick Rouscher, W6ANK, 10-10 #1931, passed away recently.

Dick and Mae were married for 64 years. Dick has been a hard working 10-10 volunteer for low these many years and is not only the 6th District Manager, but also the Monday Net Control Station.

## It takes time

I have gotten several letters recently from new members stating that they have not received their copy of the official 10-10 magazine, *The 10-10 International News*. It takes time to process new members. First your District Manager assigns your number. Then he sends his report to the Records Manager, Lee Pasewalk, WB6MGM, who prepares the information for our computer service to enter all of your data into the computer records. And finally, we only publish *The News* quarterly. If you just missed an issue, it could take as long as four or five months to receive your first issue.

If you have recently joined and did not receive the Summer 1990 issue by the middle to the end of August, I will be happy to send you a copy. Send me two first class stamps (fifty cents) for postage, plus an address label. The address label is a *must*.

## Finally

If you are not a member of 10-10 and wonder what this 10-10 number thing is all about, an SASE will get you an Information Package, with all of the necessary information about 10-10 and an application for membership. If you would like a copy of the latest issue of the *10-10 International News*, the 32 page official 10-10 magazine, send me a green stamp (\$1) and you will receive both the *News* and the Info Pak. No SASE if you send a buck! My address is 18130 Bromley St., Tarzana, CA 91356-1701.

If you are one of the "lost sheep," that is one who has lost his 10-10 number, send me your current call and *all* previous calls for a computer check of your previously issued number. An SASE will be appreciated. □

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## Visit Your Local RADIO CLUB

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

### ALABAMA

**Montgomery Amateur Radio Club (W4AP).** Alabama State Trooper Dist. Office. Intersection of Coliseum Blvd. & Federal Dr. Fred Springall, KB4EGH, (205) 288-5831. Meets 3rd Mon./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 Fri./monthly, 7:30 p.m.

### ARIZONA

**Cochise Amateur Radio Assn.** Meets 1st Mon./monthly, 7:30 p.m. Located 3 mi. East of Sierra Vista and 3 mi. South of HWY 90 on Moson Rd., Sierra Vista, AZ. Net each Thur. at 7 p.m. on 146.16/76. Further info call Rich (602) 458-3928.

**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. 146.22/82 (146.88-, 147.08+, 145.01s & 15-PKT), 448.550.

**Western Arizona Radio Club.** Meets 2nd & 4th Thurs./monthly, 7:30 p.m., First Baptist Church, 1700 Palma Rd., Bullhead City, AZ. Net Tues. 7 p.m. on 147.12 + 600. Info call Dave Adams, W6DRM, (602) 758-5171.

### CALIFORNIA

**Amador County Amateur Radio Club.** P.O. Box 1094, Pine Grove, CA 95665. Senior Citizens Center, Jackson, CA. Meets: first Thur./monthly, 7:30 p.m. WA6WYI Rptr., 146.835, 146.235. Net Tues. 7:30 p.m.

**Amateur Radio Club of El Cajon, (WA6BGS).** P.O. Box 50, El Cajon, CA 92022. Meets 2nd Thur./monthly, 7:30 p.m. at Buck Knives, 1900 Weld Ave., El Cajon, CA. Club Rptr. 147.675 (-); Nets Sat. & Wed. 7 p.m. on 147.570 simplex. Info (619) 698-6644.

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

**Butte Amateur Radio Club.** Meets 1st Fri./monthly, Loma Vista School, 8:00 p.m. Marigold and East Avenue, Chico, CA. For info KE6EP or KB6COH, 893-5208.

**Contra Costa Communications Club WD6EJC/R.** P.O. Box 661, San Pablo, CA 94806. Meets 2nd Sun. at 9:00 a.m. Hickory Post Restaurant/Lucky Lanes. For info call Don K6DPQ, (415) 222-2449.

**Downey Amateur Radio Club.** 12708 Glynn Ave., Downey, CA 90242. Meets 1st Thur./monthly, 7:30 p.m., South Middle School, 12500 S. Birchdale, Downey, CA. Weekly nets Thurs. - except 1st, 7:30 p.m. 144.930 (S) Voice - Tues., 8:00 p.m. 145.700 (S) RTTY.

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

**The Electronic Museum ARC.** Meets 1st Fri./monthly, 7:30 p.m., Electronic Museum at Foothill College, Los Altos, CA 94022. Call-in 145.27/145.67.

**Escondido Amateur Radio Society (E.A.R.S.).** Meets 4th Thurs./monthly, 7:30 p.m., New Life in Christ Church, 300 N. Redway, Escondido, CA 92025. Info Net Sat. days, 8:00 p.m., 146.88 (-) or 743-4212.

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

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

**Gabilan Amateur Radio Club GARC.** P.O. Box 2178, Gilroy, CA 95020-2178. Meets: South Valley Jr. High School, 385 I.O.O.F. Ave., Gilroy. 2nd Thur./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 Fri./monthly, 8 p.m. at 1528 Esplanado, Room 110B, Chico.

**Hilltop Amateur Mastertie System (HAMS).** Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza, 12924 Washington Blvd., Mar Vista, CA, except 3rd Mon. Call for location. 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 WB6ODZ Rptr. 224.50 down 1.6 low-level, 144.50 simplex.

**Livermore Amateur Radio Klub, (LARK).** Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12+. Elizabeth Zalaznik, KB6DLT, (415) 455-0361.

**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 N61YU, 924-1578). Sun. AM Club at Red Cross, San Rafael.

**Moreno Valley Amateur Radio Assoc. P.O.** Box 7642 Moreno Valley, CA 92303. Meets 4th Mon./monthly 7 p.m., Park & Rec. Bldg., 13671 Frederick Ave. Net: Tues. 8 p.m. 146.655- (PL 1A) & 224.460-. Info: Larry KA6GND (714) 656-1643.

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

**North Hills Radio Club.** P.O. Box 41635, Sacramento, CA 95841. 3rd Tue./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) 272-1409 So. Clairemont Recreation Center, 3605 Clairemont Dr., San Diego, CA. 1st Tue./monthly, 7:30 p.m.

**Radio Amateur Mobile Society.** P.O. Box 214091, Sacramento, CA 95821-10091. Meets 2nd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress Ave., Carmichael, CA. Net Saturday a.m., 224.84 at 8:30 & 146.79 at 9:00.

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

**Riverside County Amateur Radio Assoc. c/o** County Emergency Services Div., 4080 Lemon St., Ste. 8, Riverside, CA 92501. Meets: 2nd Thur./monthly, 7:30 p.m., Riverside County Office of Ed., 3958 12th St. Nets: Mon., 7:15 p.m., 222.860/224.46 and 7:30 p.m., 146.28/88. Info, call Mike Burton, N6KZB, (714) 682-6212.

**Sacramento Amateur Radio Club.** Contact: Gary Bryant, KB6KZZ, (916) 646-1171. Meets Sacramento Blood Bank, 32nd St. & Stockton Blvd., Sacramento, CA, 2nd Wednesday/monthly, 7 p.m. Info net every noon on Rptr. W6AK/R 146.910.

**Sacramento "Old Timers" Ham Radio Brkfst. Club and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.).** Meets 2nd Wed./monthly, 8 a.m., Lyon's Restaurant, 1000 Howe Ave. For info contact Paul Wolf, W6RLP (916) 331-1830.

**San Gabriel Valley ARC.** P.O. Box 88, Monrovia, CA 91017-0088. Meets 1st Tues./monthly, 7:30 p.m. (except Dec.) at Bowling Green Clubhouse, 405 S. Santa Anita Ave., Arcadia, CA 91006. W6QFK, Rptr. 147.165/765.

**Santa Clara County Amateur Radio Assoc. (SCCARA) W6UW & W6UU.** P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets: 2nd Mon./monthly, 7:30 p.m. at Agnews Developmental Center Aud., corner of Circle Dr. & Palm Dr., Santa Clara. Net all other Mon., 7:30 p.m. W6UUR 146.385 + PL 100.0 / 442.425 + PL 107.2

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

**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 Parkway Ave., Redding, CA. Net 146.64, Wed., 8 p.m.

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

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

**Solano County Amateur Radio Society.** P.O. Box 457, Fairfield, CA 94533. Meets: 3rd Wed. 7:30 p.m., Vanden High School. 441.150+5 (Remote 145.69 simplex) PL 77Hz, (707) 448-1461.

**Southern California Amateur Transmitting Society, SCATS, WB6LRU.** P.O. Box 1770, Covina, CA 91722. Meets 1st Mon./monthly, Community Presbyterian Church, 540 E. Vine St., West Covina, CA. Net, Sun., 7 p.m. 147.765-, W6QFK/R. Classes. Contact: Pat McNulty, N6GXZ (714) 622-8315.

**Southern California Six Meter Club.** P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150 and 8:30 p.m., 28.400. FM Rpt. Net Wed., 7 p.m., 52.18/98 and Thur., 8 p.m., 52.28/88. FM Smlpx call freq. 50.300.

**Southern Humboldt Amateur Radio Club, (SHARC).** P.O. Box 701, Redway, CA 95560-0701. Meets 4th Mon./monthly, 8 p.m. SHARC Clubhouse, Garberville. Rptr. 146.19/79. Info (707) 923-2373.

**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.

**The Trinity County ARC.** P.O. Box 228, Weaverville, CA 96093. Meets 2nd Wed./monthly, at the CD Hall in Weaverville, 7:30 p.m. WA6BXN Rptr. 146.13/73.

**Tri-County Amateur Radio Assoc.** P.O. Box 142, Pomona, CA 91769. Meets: 2nd Mon./monthly, 7:30 p.m., 703 N. College Way, "The Faculty House," (lower level), Claremont, CA.

**United Radio Amateur Club K6AA.** L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly except Dec., 8:00 p.m. Talk-in 145.58 Simplex.

**Vaca Valley Radio Club Inc.** Meets 2nd Wed./monthly, 7 p.m. at Vacaville Fire Dist. Station, 420 Vine St., Vacaville, CA. Net: WX6F club net every Tues., 7:30 p.m. 147.475/146.475 rptr. (1MHz split) PL removed during nets.

**West Coast Amateur Radio Club.** Fountain Valley School. Talbert/Bushard. Fountain Valley, CA. Meets 3rd Thur./monthly. 145.44-42.

**Western Amateur Radio Assoc.** Meets 1st Tues./monthly, 7:00 p.m., Cerritos Park East, 166th St. and Carmenita Ave., Cerritos, CA. Rptr., N6ME 145.400-/224.180MHz.

**Westside Amateur Radio Club.** Meets 3rd Thurs./monthly, 7:30 p.m., Santa Monica Red Cross, 1450 11th St., Santa Monica, CA. Info Net every Tues., 8 p.m., 146.670, -600.

**West Valley Amateur Radio Assoc.** 18011 Saratoga - Los Gatos Road, Los Gatos, CA 95030. Meets: 3rd Wed./monthly, 7:30 p.m. W6P1Y/R. Net Tue., 8:30 p.m., 147.39 +, 223.96 -.

**Yucaipa Valley Amateur Radio Club (YVARC).** Meets 3rd Mon./monthly, 7:30 p.m. Far West Savings & Loan Community Rm., 1195 Calimesa Blvd., Calimesa, CA 92320. Pres: Don Ames W6RTM, (714) 795-5743.

### CONNECTICUT

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

### DELAWARE/PENNSYLVANIA

**Penn-Del Amateur Radio Club.** P.O. Box 1964, Boothwyn, PA 19061. Sponsor of KA3TGW/Rptr. on 224.220 serving all of S.E. Penn. and Northern Del. Info/net every Thurs. at 20:00 hrs. or call Hal Frantz (302) 798-7270.

### FLORIDA

**Gulf Coast ARC, Inc.** P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Colonial Hills Civic Ctr., 87 Peacock Dr., New Port Richey. WA4GDN Rptr. 146.67/07.

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

**South Brevard Amateur Radio Club.** P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Melbourne Public Library, 540 Fee Ave., Melbourne, FL.

**West Palm Beach Amateur Radio Club, Inc.** P.O. Box 6834, Southboro Station, W. Palm Beach, FL 33405. Meets: 2nd Tue./monthly, 7:30 p.m., Palm Beach Emergency Op. Cntr., 3723 Beveledere Rd., W. Palm Beach. Info: Jeff, WB2OUK, 586-5120, Henry, WA4HXZ, 655-4632 or Hyacinth, N4QWN, 848-0513.

### GEORGIA

**Dalton Amateur Radio Club (DARC).** P.O. Box 143, Dalton, GA 30722-0143. Meets 4 Mon./monthly, 7:30 p.m., Dalton College Voc. Tech. Bldg., Dalton, GA. Info net: Sun. 9:30 p.m., 145.230 MHz; Wed. 9 p.m., 147.135 MHz.

### HAWAII

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

### ILLINOIS

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



**Boltingbrook Amateur Radio Club.** Meets 3rd Mon./monthly, 7:30 p.m., Boltingbrook Pk. Dist. Rec. Ctr., Briarcliff Rd., Boltingbrook, IL. Info net Thursdays, 8 p.m., WD9AKO/R 147.33 MHz + 600 and WA9DIP/R 224.54 MHz - 1.6. Info hotline (708) 759-7005. ARRL affiliated club.

**Central Illinois Radio Club, W9AML.** Meets 4th Wed./monthly, 7:30 p.m. (from Sept. to May), McLean Co. Law & Justice Center, ESDA Rm., Bloomington, IL. Club Rptr. 146.94 - 600kHz.

**Chicago Amateur Radio Club.** Founded 1926. Meets 1st and 3rd Wed./monthly on Northside of Chicago, 7:30 p.m. Info call (708) 869-HAMS or (312) 545-3622.

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

**Elgin Amateur Radio Society, P.O. Box 1351, Elgin, IL 60120.** Meets in EOC Rm. of Elgin Municipal Bldg. 2nd Fri./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 Tue./monthly, 7:30 p.m.

**Hamfesters Radio Club, W9AA.** P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m., Crestwood Civic Center, 139th & Kostner Ave., Crestwood, IL. Nets: Sun. 8 p.m., 28410 MHz and Mon. 9 p.m., 146.43 MHz.

**Metro DX Club.** Meets 3rd Fri./monthly (except Dec.), at Oak Forest Hospital, (employee quarters), 159th St. and Cicero, Oak Forest, IL, at 8 p.m. Christmas party in Dec. Net: DX/Club info, every Tues., 8 p.m., 146.46 Simplex.

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

**Peoria Area Amateur Radio Club.** Meets 2nd Fri./monthly, 7 p.m., Red Cross Bldg., corner of Knoxville & Armstrong, Peoria, IL. Info on W9UVI rptr. 146.250/146.850.

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

**Six Meter Club of Chicago K9ONA.** Bank of Lyons, Lower Level, 8601 West Ogden Ave., Lyons, IL. 2nd Fri./monthly, 7:30 p.m. Club Rptrs: 146.37/97, 448.30/443.30.

**Wheaton Community Radio Amateurs, (WCRA), P.O. Box QSL, Wheaton, IL 60189.** Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Glen Ellyn, IL. Nets Sun. & Tue. 8:00 p.m., 145.39 MHz.

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

## KANSAS

**Pilot Knob Amateur Radio Club.** Meets 1st Thurs./monthly, 7 p.m., 525 Shawnee St., Leavenworth, KS. ARES net every Thurs., 7:30 p.m. 147.60/147.00. For info call (913) 682-6904.

## LOUISIANA

**Baton Rouge Amateur Radio Club W5GIX.** P.O. Box 4004 Baton Rouge, LA 70821. Meets last Tue./monthly, 7 p.m., Catholic High School cafeteria, 855 Hearshstone Dr., Baton Rouge, LA. Net 8:30 p.m. each Sun. on 146.79.

## MARYLAND

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

## MASSACHUSETTS

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

## MICHIGAN

**Black River A.R.C.** Meets 2nd Sat./monthly, 7 p.m., Chicken Chalet, Hwy 43 East, Bangor, MI. Contact Wm. Lee, KBBDWQ, (616) 764-8480. Rptr. 147.360 +.

**Farmington Amateur Radio Club.** Meets 2nd Wed./monthly, 7:30 p.m., Wheeler Street Fire Station, Farmington Hills, MI. Contact: Jim, WA8SEL, 474-8765. Talkin: 146.49MHz.

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

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

**Top-Of-Michigan A.R.C.** Meets 2nd Thurs./monthly, 7 p.m. at the State Police Pst., Gaylord, MI. Net Tue., 9 p.m. EDT 146.82/22.

## MINNESOTA

**Minneapolis Radio Club.** P.O. Box 25167, Minneapolis, MN 55458. Meets 3rd Fri. (exc. June, July, Aug.), Mpls. Red Cross, 11 Dell Place, Mpls, 7:30 p.m. Making waves since 1916.

## MISSOURI

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

## NEVADA

**Frontier Amateur Radio Society, (FARS).** Meets: 3rd Mon./monthly, 7 p.m. Denny's Restaurant across from Nevada Palace, 5318 Boulder Hwy, Las Vegas, NV. Net Mon. 7:30 p.m., 145.39 Rptr. on Black Mountain. Club info, Tom Bull, NW7S, 642-5033.

**Las Vegas Radio Amateur Club (LVRAC).** Meets: 2nd Tue./monthly at 7 p.m., Nevada Power Bldg. Wengert Rm., 6226 W. Sahara Ave. (Near Jones), Net Tue. 8:00 p.m. on 146.94 MHz. Info: Call George at 459-2586.

**Sierra Intermountain Emergency Radio Assoc. (SIERA).** P.O. Box 2348, Minden, NV 89423. (702) 782-8266. Meets: 2nd Tue./monthly, 7:30 p.m., Douglas County Lib., Minden, NV. Talk-in: 147.330.

## NEW HAMPSHIRE

**Great Bay Radio Assn., WB1CAG.** P.O. Box 911, Dover NH 03820. (603) 742-0130/742-1374. 2nd Sun./monthly, 7:00 p.m. Dover City Hall. Talk-in 147.57.

## NEW JERSEY

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

**Jersey Shore Chaverim.** Meets 1st Sun./monthly, 9:30 a.m., JCC, 100 Grant Ave., Deal, NJ, Sept. thru June. Net 1st Thurs./monthly, 9 p.m. local on 145.110, KC2Q. For info call (201) 222-3009.

**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. Richa Sandell, WK6R, (914) 834-2322. Meets: 3rd Mon./monthly, 8 p.m.

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

**Hall of Science Amateur Radio Club.** P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./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 -/445.225 -.

**Lancaster Amateur Radio Club (LARC).** Meets 1st Tues./monthly, 7:30 p.m., Aurora Middle School, 147 Aurora St., Lancaster, NY. Net: W2UJR every Monday, 7:30 p.m. 146.55. Contact Luke Caliano, N2GDU, (716) 683-8880.

**Orleans County Amateur Radio Club (WA2DQL).** Meets: Office of Disaster Preparedness (CD), West County House Rd., Albion, NY 14411, 4th Wed./monthly, 7:30 p.m., 145.270 - WA2DQL.

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

**The Radio Club of J.H.S. 22, N.Y.C., Inc.** WB2JKJ, P.O. Box 1052, New York, NY 10002. 24-hr. hotline, (516) 674-4072, FAX, (516) 674-9600. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us - "Classroom Net", 7.238 MHz, 7 a.m. E.S.T. PSE QSL!

**Suffolk County Radio Club.** 3rd Tue./monthly, 8 p.m. Bohemia Rec. Ctr., Ruzicka Wy. W2DQR/144.610/145.210, 223.080/224.680 rptr. Info call Jim Heacock (516) 473-7529.

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

## NORTH CAROLINA

**North Carolina Chapter TSRA.** Meets: Mondays, 28.350 on the air, 8:30 p.m. local time. "The Alligators" - all mouth, no ears. **Raleigh Amateur Radio Society, Inc.** P.O. Box 17124, Raleigh, NC 27619. Clubs net nightly, 8 p.m., W4DW, 04/64. Meets: 1st Wed./monthly, 7:30 p.m., YMCA. 18th Annual Hamfest, April 8, 1990.

## OHIO

**Amateur Radio Fellowship (ARF).** Greg Ash, KA8TOA, Sec. 423 Pioneer Ave., Kent, OH 44240. Meets: 1st Sat./monthly at Kent Walky Waffle. KA8YKT rptr. 147.075.

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

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

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

**Lancaster & Fairfield County A.R.C.** Meets 1st Thur./monthly, 7:30 p.m., City Hall, Basement Club Rm., Broad & Main. Info Net every Mon., 8 p.m. K8QIK/R 147.63/03 Rptr.

**North Coast Amateur Radio Club.** P.O. Box 30529, Cleveland, OH 44130. Meets 2nd Thurs./monthly at the Old North Olmsted Town Hall, at Dover Center and Lorain Roads, between City Hall and the Police Station. Repeaters - (all K8SCI/R) 145.29, 224.76, & 443.15.

**Silvercreek Amateur Radio Assn. (SARA)** Meets 3rd Thur./monthly, 7:30 p.m., Doylestown Village Hall, Doylestown OH. WD9PNF/R 147.99/39 rptr. For info call 216-925-2363.

**Triple States Radio Amateur Club.** Meets Wed./weekly on 28.480 at 9 p.m. Rptrs. 146.31/91 and 146.115/715. P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

## OREGON

**Keno Amateur Radio Club.** P.O. Box 678, Keno, OR 97627. Meets 3rd Thur./monthly, 7 p.m., Keno Fire Station. Rptr. 147.32 + W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736.

## PENNSYLVANIA

**Butler County Amateur Radio Club.** P.O. Box 1787, Butler, PA 16003-1787. Meets 1st Tue./monthly, 7:30 p.m. at Red Cross Bldg., 312 Mercer St., Butler PA 16001. Call-in: W3UDX 147.96/36. Net 10:10 p.m. nightly.

**Mercer County Amateur Radio Club W3LIF.** P.O. Box 996, Sharon, PA 16146. Meets: 4th Tue./monthly at 7:30 p.m. at Shenango Valley Medical Center, Farrell, PA. Net, Thur. 9 p.m. on 147.75/15 W3LIF/R.

**Warminster Amateur Radio Club, WA3DFU.** P.O. Box 113, Warminster, PA 18754. (215) 443-5428. Meets 1st Wed./monthly, 8 p.m., St. John's Evangelical Lutheran Church, Hatboro, PA. Net on 147.690/147.090 Wed., 8:30 p.m.

## TENNESSEE

**Nashville Amateur Radio Club.** Meets 3rd Thurs./monthly at Lock 2 Metro Park off Pennington Bend Rd. Grilled hamburgers at 6 p.m., mtg. at 7 p.m. Call Jerry, KK4TV, at 754-2326 for info.

## TEXAS

**Beaumont Amateur Radio Club.** Meets last Tues. of each month at the GSU Aud., South and Oxford Streets, Beaumont, TX, 7:30 p.m. Talk-in on 146.16/76 or 146.10/70. Join the fun!

**Sun City Amateur Radio Club.** Meets 1st and 3rd Fri./monthly, 7:30 p.m., 3709 Wickham Ave., El Paso, TX. K5WPH 147.240/147.840 Rptr. with remote operation on 220, 440, 6M, and 10M.

## VIRGINIA

**Southern Peninsula Amateur Radio Klub (SPARK).** Meets: 1st and 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Operates 146.13/73 Rptr., VEC Information (804) 898-8031.

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

## WEST VIRGINIA

**Jackson County Amateur Radio Club.** Robert D. Morris, WA8CTO, Sec. Treas. 308 Edgewood Circle, Ripley, WV 25271. Meets 1st Thur./monthly, 7:30 p.m., United National Bank of Ripley. Net Mon. 9 p.m. on 146.67/07 W8JUN/R.

**Tri-state Amateur Radio Assn.** Meets: 3rd Tue./monthly, 7 p.m., Green Valley Vol. Fire Dept., Norwood Rd. & 16th Street Rd., Huntington, WV. ARES net Thur. 9 p.m. on 146.76(-) W8VA/R. Info KB8EHJ (304) 824-5958.

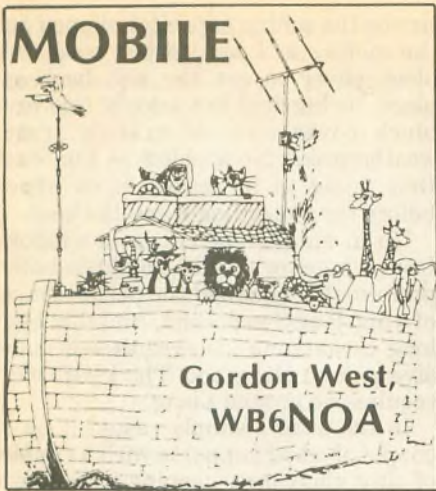
## WASHINGTON

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

## WYOMING

**University ARC.** 146.01/61 Meets: 1st Tue., 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 Wed.





## Reviewing the AEA ISOLOOP

Big antennas, big signals. Little tiny antennas, little tiny signals. This is why I always recommend insulated backstays for sailboats, 23 ft. non-resonant whips for power boats and big tall center-loaded whips for RVers and mobile stations. The bigger the radiator, the lower the IR losses and the better the signal. That simple.

When I received the latest offering from AEA (Lynnwood, WA; 206/775-7373), I was a bit skeptical that the rather small loop-type antenna found within the shipping box would be a significant performer in my ever-increasing arsenal of tuned and tested mobile antennas. But knowing Mike Lamb's on-the-air style with ear-splitting signal strengths from unique antennas, I figured he must have something special here, so I proceeded to unpack this loop-affair with interest.

I also noticed, in the packing material, some notations referring to the antenna design to Mike Staal, M2 Electronics. Mike is also well-respected in delivering big signals from unique antenna designs.

The AEA ISOLOOP went together in exactly six minutes. Everything slips together in seconds and the remainder of the time is spent putting the loop on the support mast that you supply. A simple Radio Shack support mast may be all you will need for a temporary test of the setup.

The electronic control unit simply plugs in with the supplied cable. AEA

gives you about 50 ft. of control wire and the plugs are already attached — so all you need to do is plug it in and you are on the air. The control box runs off of a little tiny transformer that plugs into a wall socket. The box runs on 12-volts DC, so you can supply your own if you are mobile or mobile marine.

This AEA loop affair runs on any frequency between 14 to 30 MHz. It also runs on any marine frequency between 16 and 22 MHz. It involves continuous tuning. No, it won't work on 7 MHz, 40M — or 3.8 MHz, 75M.

Best of all, the AEA ISOLOOP does not require a ground plane or ground radials. It does its thing, all within itself, so all you need to do is ground the tail of your transceiver as you normally would.

Inside the black plastic cover (a rather flimsy cover at that) is a huge, variable, multi-plate capacitor that is remotely tuned from the little control box. A little stepping motor, variable-speed controlled, runs the capacitor back and forth and tuning is quickly accomplished — all electronically, inside the little black cover.

For car installations, you would really need to come up with an ingenious way of mounting this to your bumper. It needs to be at least three or four feet above the trunk or roof in order to perform properly. So again, mobile at rest would be the best way to run this marine mobile, RV mobile or auto mobile. I'm not sure that I wouldn't rather just run whips or the multi-band Spider set-up when mobile underway or running down the road.

I liked the ISOLOOP best for attic installations. Since it requires no ground plane, it allows me to maneuver it around the attic for minimum TVI and BCI and maximum incoming signal strength.

There are hot spots and not so hot spots to mount it in an attic. Get it up as high as possible and as far away from telephone lines, burglary alarm

wiring and common attic TV antennas. If you can mount it above your roof, all the better.

It's also ideal for balcony installations. I ran it vertical and nulled out the natural interference from the side of the condo. When mounted vertically, it radiates vertically in a figure-8 pattern, with best signal broadside to the loop. And when I did mount it vertically, I sure noticed an increase in QRN. This is why I would suggest always trying to mount it horizontally for minimum QRN and omni-directional transmission and reception.



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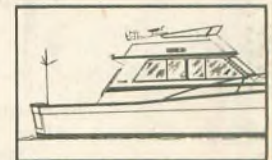


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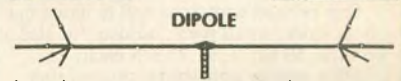
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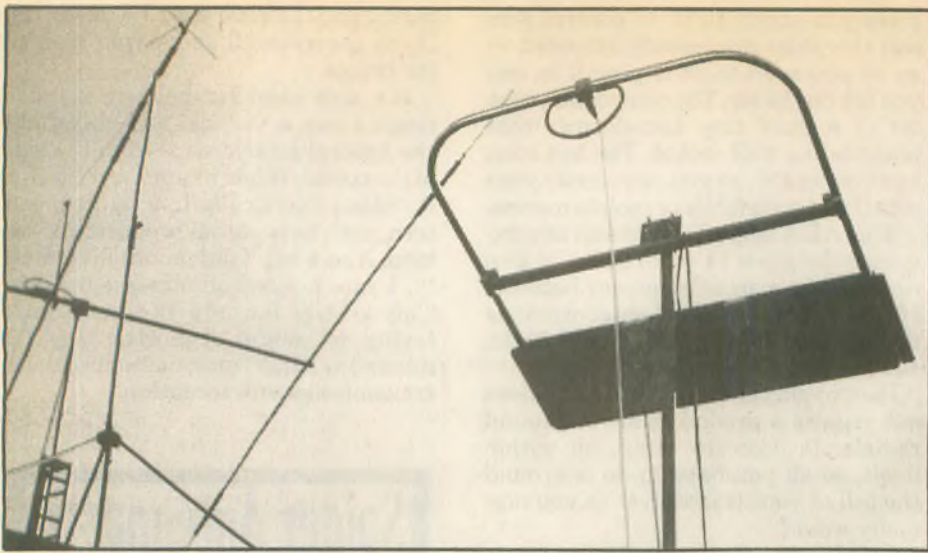
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When compared to Gordo's 3-element beam, the ISOLOOP did "Very OK!"

So the ISOLOOP I have tried and I like for mobile at rest or attic installations. The black cover is a bit flimsy for "in motion" situations, so consider this as a nice antenna system when you're not supposed to have one at your dwelling. And since it doesn't require a ground plane, it's ideal for emergency setups where you need to get a signal on the air, fast. And the new solid-state rigs will love this antenna — by slightly moving the coax matching loop, you can tweak down the SWR to a perfect match.

And after a little while, you'll be able to get the hang of adjusting the remote control unit so you can quickly find the resonant frequency of the antenna and

then slowly peak for maximum output, minimum reflected. The antenna is also portable enough to move around the attic to minimize BCI on transmit.

Its surprisingly simple design may make you cough when you first see the simple innards and then see the suggested retail price — but if you truly evaluate its great capability of going up without messing with ground plane radials, you'll begin to appreciate what AEA has done to get all the signal up in the antenna and out into the ionosphere, where signals belong.

Check it out, in action, mobile at rest or in an attic, if you ever get a chance. Listen for me on 28.333 if you want to hear one in action, too, most weekends.

Unfortunately, the little belt that

drives the tuning capacitor slipped off the motor, so I had to pry open the black cover to get the belt back in place. No big deal, but I doubt that my black cover was, or still is, truly weatherproof. No problem — this was first going to be tested in an attic, before the motor home and the boat.

Up in an attic or out on a window from a hotel or condo, this little baby performs! It equalled the performance of a big, long Swantenna. And that big, long Swantenna also requires a massive ground plane, too. The ISOLOOP requires no ground plane.

In the attic I simply rested it on a couple of wood supports with a couple of tiny glass jars, keeping it isolated from burning the wood, and the thing tuned up like a champ. I worked stations all over on 20M, 15M and 10M. On receive you tune for maximum noise, then go to transmit, switch over to slow tuning and then tune for minimum SWR. A little coax pigtail allows you to fine tune the SWR down to a perfect match. The pigtail you adjust manually and once in place, you won't need to touch it again.

I then tried the ISOLOOP out on my Radio Shack pipe and compared it to the beams. No, it didn't do as well as a 3-element beam, but I wouldn't expect it to, either. Surprisingly, it held its own against a traditional five band trap vertical. When compared to my Swantenna stuck out the window, it worked slightly better! That was a shock — but the Swantenna was down lower and counterpoised to the aluminum around the window.

I next tried this out on a boat. No, it didn't do quite as well as an insulated backstay, but it did better than traditional mobile whips. That surprised me — I expected the mobile whips to have a longer angle of radiation because of the massive sea water ground plane. Mike tells me this has a very low angle of radiation because of its design and its self-resonant counterpoise system. The antenna needed to be about four feet above anything metal for best results.

Aboard the boat, it was fine around the harbor, but a bit unwieldy in heavy seas. So for boat and motor home applications, the best place to run this unit is mobile at rest. Too delicate otherwise.

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### The DX report

Most of the sporadic Es activity around here for the month of June has been of the cross-country US variety, with some activity into the Caribbean and South American areas. June 3 brought W1, 2 and 3s into Europe, June 5 had Lefty Clements, K1TOL, working 9H1. The latter part of the month brought European openings for those in the Northeast US on the 26th, 27th and 28th. About 10 European countries were worked.

Many have characterized this season as being a poor one, but that depends on what part of the country you live in. The ARRL and SMIRK Party Contests both left a lot to be desired this year, and again, that depends on which part of the country you were in. Some areas reported very good conditions.

The first known San Marino to United States contact took place on June 28, when Tony Ceccoli, T77C, worked Al Squires, K4CKS, in Georgia! The interesting part about this contact is that both sides of it were being listened to by SMIRK European Regional Coordinator Ted Collins, G4UPS!

### DXpeditions and results

Until just recently it was thought that the UA0/GB4MSS DXpedition had experienced NO activity on 6M at all. However, Lawrence Howell, G4DMA, did report several auroral Es QSOs from Sredniy Island. April 11 brought the first contacts after several days of Norwegian TV reception. 1632 to 1633Z brought an ON contact. The UA0 beacon was heard on April 10 on 50.110, but was covered up by operation by others on the frequency!

The Aland Island-OH0 DXpedition netted 648 QSOs in 91 different grids in 20 European countries on 6M. Nice job guys!

*Trials and tribulations of a grid DXpeditioner:* Pat Rose, W5OZI, went to the Big Bend Country of Texas during the SMIRK Party Contest of June 15 to 17. He used an IC-551D, a mag-mount whip and a 5-element Yagi with a 30 foot telescoping mast. On the 15th, on the way out, he had seven QSOs from DM90, 10 from DM80 and 31 in DL89.

After arriving at Big Bend National Park, he was advised by park rangers that he should not travel alone into DL88, because of bad trail conditions. He took their advice and found a good campsite in DL89. By 2345Z he was up and running.

He worked 38 more stations from there until 108 degree temperatures,

next morning he headed home. No QSOs in DM70, five in DM80, four in DL89 and 32 in DL99, before getting home late Sunday night.

He had a total of 127 QSOs during an 864 mile trip, with very brief openings the entire weekend. On the other hand, Pat says he remembers one recent weekend he spent in DL99 with no QSOs at all.

Koror Island, in the Western Caroline Islands, will be activated by JA2NQG as KC6CW, JH2BNL as KC6DX, and JI2UAY as KC6MZ, on 6M from Sept. 12 to 16. QSL to their home calls.

W.R. Hamer, ZL2CD, is reportedly considering a Norfolk Island, VK9 operation sometime in September.

## SMIRK/Worldradio subscription combo

The Six Meter International Radio Klub members whose dues are current (check your address label) are eligible for a combined SMIRK membership and subscription to Worldradio magazine.

Send SMIRK \$16 (make the \$16 check out to SMIRK and send it to SMIRK, 7158 Stone Fence, San Antonio, TX 78227 to cover both your SMIRK dues and a one-year Worldradio subscription — ONLY SINGLE YEAR SUBSCRIPTIONS, PLEASE.

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Put the \$3 savings in your piggy bank for that new rig!

impending thunderstorms, a dead band and boredom suggested a move. He drove west through magnificent desert and mountains along the Rio Grande River into DL79, to Presidio, TX, with the band still dead, no QSOs and the temperature at 116 degrees.

He found an excellent place to camp and set up the beam, but a big down-pour began, which soaked the gear. He began to think seriously of dry motels.

Pat headed north into DM70, but flash-flooding forced him to wait by an arroyo for over an hour, before he was able to get across and find a place in Marfa, TX, to spend the night. The

*VP2VCW BVI DXpedition results.* Terry Baxter, N6CW, operated from the British Virgin Islands from May 22 to 27. He had terrific conditions over the three day weekend, with 12 hours of openings on both weekend days.

He netted 350 QSOs in all US call districts except W6. He also worked several DX stations, though he was stuck on 50.110 because of a problem with the IC-551D and a CO and an LU8 to contend with.

Terry said he had a lot of fun and gave a lot of people a new country. He plans on returning in October or November.

On Memorial Day he operated as N6CW/NP2 from the QTH of KP2A. During the June ARRL Contest he operated as XE2/N6CW from Bahia De Los Angeles in Grid DL39. Due to the poor conditions, he was only able to work W5, 6, 7 and 0s.

On the return trip he worked from Grids DL38, 39, 29, DM10 and DM11 for 15 contacts while mobile. He ran 150W fixed and mobile.

QSL to his Callbook address.

The Natal DX Group plans a DXpedition to St. Peter and St. Paul Rocks (PY0) in May of 1991. They need 6M equipment and SMIRK does not have the gear to loan to them. They are looking for either a 10W SSB/CW rig and a 150W amplifier or a rig with about 100 to 150W output.

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Equipment in their country is very expensive and very difficult to get. Anyone wishing to loan or donate equipment to them for this trip may do so through Karl Mesquita Leite, PS7KM. Any packages sent to them should be marked as a "gift." Their address is The Natal DX Group, Caixa Postal 597, 59.021 Natal, RN BRAZIL.

#### QSL info

If you worked Paul Kokoszyna, KA1TRF, or Jim Ussailis, W1EQO, in Labrador June 22 to 28, QSL to their home calls. If you worked John Currie, VE1BVL, on St. Pierre in August, QSL to his home call.

QSL ZB0T to Dieter Stump, DL1SDN, Schlesierstr 97, Nuertingen, D-7440, West Germany. If you worked TF/PA3DWD, Iceland, from June 15 to July 8, QSL to L. Hollander, PA3DWD, Gele Lis 94, NL-8607 HC Sneek, NETHERLANDS.

QSL ZB2HN to Trevor Day, G3ZYY, 46 Beatrice Ave. Saltash, Cornwall, PL12 4NG, ENGLAND. QSL SV/OE6WIG contacts to Walter Steinwender in care of his Callbook address. He was trying to get 6M permission during a trip to Greece from July 7 to Aug. 18.

If you worked CU3LD try Howie Hatfield, Box 1739, APO New York

90406, for a QSL. QSL CT/G3SDL to his Callbook address.

QSL IS0XV QSOs to Bar Ven Kong, Box 308, Moscow, 103009, USSR. QSL 3W6PY QSOs to UL7PCZ at P.O. Box 43, Temirtau, Kazakhskaya, USSR.

#### Who's on Six!

Brian Otter, 9J2BO, is awaiting the arrival of the 6M transceiver from ZS. A beacon is being built for him by the UK Six Metre Group.

Katsu Kawase, JH8BKL, is active from Malawi with 100W as 7Q7JA. QSL to the JH8 Callbook address. In addition to Katsu, 7Q7RM is also reported to be active soon.

Hatsuo Yoshida, JA1VOK, says that D. Dasan, VU2AID, in a letter to him dated June 15, said that he had again gained 6M operating permission from his authorities. He can operate from 50.070 to 50.130 from June 10 until the end of October. He will have a beacon on 50.110.

QSL to D. Dasan, 8 Angadi St., V.P. Colony, Ayanayaram, Madras 600023, INDIA.

Paul Newcombe, G6YZC, is now active from ZB-Gibraltar, as ZB0W. He will be there for several months and intends to be very active. Hopefully, he will get the ZB2VHF beacon back on the air while he is there. QSL to 30 Hund Oak Dr., Hatfield, Doncaster, S.

Yorks, DN7 6RL, ENGLAND.

There are well over 100 operators now licensed to operate 6M in West Germany. Can the East Germans be far behind, with the upcoming reunion of the country?

Irish Class "B" licensees just recently gained use of the band. There are now four LX stations active from Luxembourg.

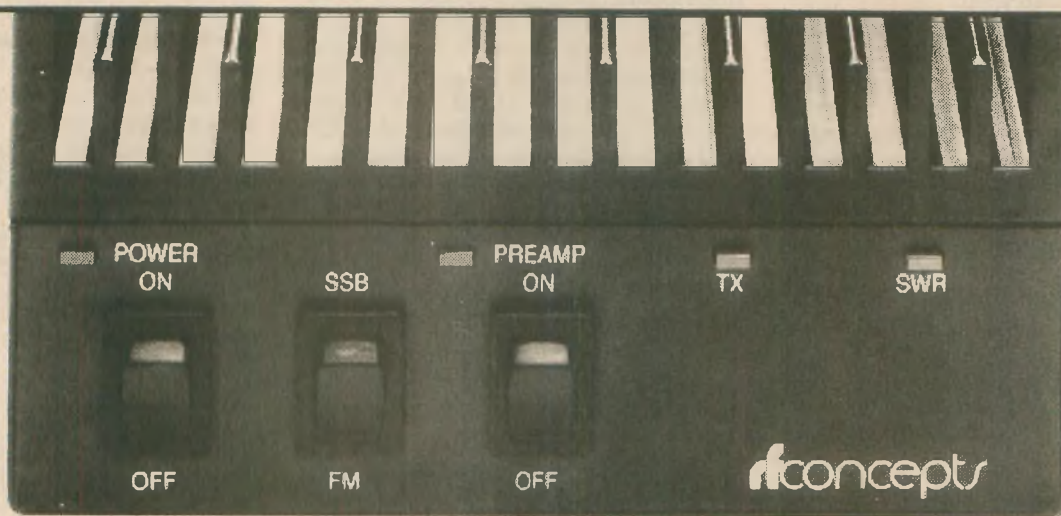
I have received several reports of JE3TXU/JY5CI on 6M. However, I think he is only listening. He reportedly built 6M equipment from spare parts and TV sets, since he could not bring any equipment into the country. In April he was hearing activity around Europe and Africa. I have not received any reports of him being worked.

Don't get too shook up if you hear a 7K or 7N station on 6M! It is only a JA! All the J call signs have been used up.

On the other hand, if you have never worked a JA station, you can get as shook up as you want!

#### Equipment corner

Richard Penc, WK2A/3, P.O. Box 10454, Calder Square Station, State College, PA 16805-0454, is looking for a Yaesu FT-680R in good or repairable condition. Please provide particulars (condition, asking price) to address above. □



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RFC 3-22, 2W in= 20 out  
 RFC 3-211, 2W in=110 out  
 RFC 3-112, 10W in=120 out  
 RFC 3-312, 30W in=120 out

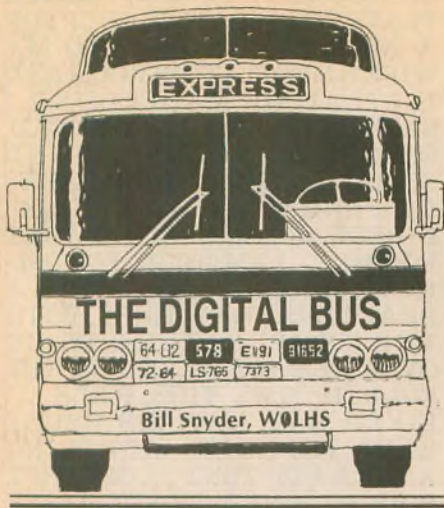
#### 440 MHz Amps

RFC 4-32, 3W in= 20 out  
 RFC 4-310, 30W in=100 out  
 RFC 4-110, 10W in=100 out

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Operating a 2M packet bulletin board in the year 1990 is a very dull hobby. Once it was fun, exciting and rewarding. I enjoyed seeing the packet network grow from zero to 60 in just a year or two. Now I find it boring, tiresome and, for the most part, useless. "Junque mail" makes up the bulk of traffic and the forwarding system plugs up the RF channels, so a personal message is delayed to the point that it loses its time value. So, unless things change, I rate the BBS system as a waste of time, watts and electronic technology.

For a long time I received all incoming packet mail from the Canadian side of North Dakota; my BBS was the last stop on the end of a long slim network. These days a few messages arrive from the South Dakota side, a few more from Minnesota forwarders, but the bulk still inputs from Canada. I have my outgoing forwarding file set to send most outbound traffic to the VE4BBS HF-VHF gateway in Canada. However, with the improvement in my link to Minnesota, I'll be routing more to the east.

I've come to believe that most packet BBS operators route traffic by simply dumping it off on the next guy and letting him worry about it. The result is a random shuffling of messages from station to station all around the world. The overall philosophy of the system must be: "Move it out — get rid of it — anywhere." I feel this way because there seems to be no rhyme or reason to any routing I've seen come through my board.

In the early packet days, forwarding was done by a list of personal call signs and that seemed to work OK until I got about 200 ham calls in my forwarding files. Then came the "hierarchical" system, where state and state subdivisions are used to route traffic. Then things went to pot. I feel this system is the cause of the "wandering message."

As I have said time and time again, it would have been much simpler with zip code routing.

This morning I printed out one of the 363 messages that were on my BBS. It was addressed to the SYSOP (me and my ilk) and it was titled: LET'S BAN "S ALL" MESSAGES. (A very good idea!) The call sign audit-trail list (which appears on every BBS message) contained 39 forwarding stations. In other words the message passed through 39 auto-forwarding BBS operators before it landed in my computer file. When I read the listing of stations, I couldn't figure out how it had ended up at my house.

Packet hierarchical addresses look like this: VE4KV.#WPEG.MB.CAN.NA. Translated: call sign, subdivision, state or province, country, continent. The message example originated with WB9MJN in Illinois. It then moved to Gurnee, IL, before it picked up its first subdivision designator, #NWIN, which I assume means Northwest Indiana. It then jumped through four Indiana stations (plain "IN" stations, no "#" additions to confuse me) before it arrived in the Indiana HF gateway forwarding stations, N8GTC.

Next stop was AA6QN.#SOCAL.CA.USA.NA, which I assume is in Southern California. The message then moved through two #IEBBS.#SOCAL.CA.USA.NA stations (whatever they are), two more #SOCAL BBS, five #NOCAL stations in Northern California and finally arrived in Oregon at AL7IN.#LMT.OR.USA.NA (the #LMT escapes me, I don't know what that means).

The next Oregon forwarding stations included one #ASH, one #GP and four "OR" operators. Interesting to note that one of the "OR" SYSOPs was Hank Oredson, W0RLI. Hank is the author of the widely-used BBS software on the packet network. Hank's board kicked the wandering message over to Pendelton, where it was boosted on to Idaho, where three more "ID" stations added their call signs to the growing heading list.

After Idaho, with just plain ID.USA.NA (for Idaho) in each station listing, the bulletin arrived in Montana. Now, for some more tricky additions: #HLN.MT.USA.NA and #MSO.MT.USA.NA. Next it was via one MT station and then on to Canada, where it

bounced over to Winnipeg and finally down to me. My BBS forwarded it to Minnesota, and from then on I don't know what happened to it. The bulletin had been en route for nine days when it hit my board, and as far as I know, it is still probably touring the world, wandering from BBS to BBS.

Why do I make such a fuss about that little old message? Well, no two bulletins ever seem to take the same route. Many long bulletins are divided into sections to keep the individual message length short. Many times I have received a multi-part bulletin with one or more sections missing. I wait for the lost parts, but most of the time they never show up. If all the parts do arrive at my board, they will usually be out of sequence or take two weeks to complete. I might get the fifth part of a seven part message first, the fourth part next, and so on.

So, what does this indicate? We have a lousy system. If I knew how to fix it, I would. But I'm only a little squeaky voice in the North Dakota wilderness, so, the experts ask, what do I know? I only know that the system is unreliable, slow and without traffic management leadership.

I had one bulletin go through my board that had been through W3IWI's BBS three times in its wandering month-long journey. I sent a copy of it to Paul Rinaldo, W4??, of the ARRL. Paul said he would bring it to the attention of the Digital Committee. I hope they can find a solution.

## CD-ROM stuff

I recently commented on the use of the CD-ROM on my computer for mass storage programs. Now that I have had another month using the Microsoft Bookshelf and the Buckmaster Ham-call files, I find both of them very useful.

I do a lot of writing on my computer. Besides this column, I write for two quarterly publications, one for the Northern Pacific Railway Historical Association and the other for our high school alumni association. For the latter I produce a tabloid newspaper of about 20,000 words, which I layout using Ventura Publisher desktop software. My proofs are made in a Post Script equipped HP laser printer. When the layout is finished I put the whole paper on floppy disks and give them to the printer for final production. Works great.

The Bookshelf program is just what the doctor ordered. For those who do not know what it's about, it's a collection of writer-aid books that fills one 5 1/4 inch CD disk. It contains a large dictionary, a first-rate Thesaurus, a spell checker, *The World Almanac*, *The*

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Chicago Manual of Style, a zip code finder and a few other programs of semi-useful stuff.

Bookshelf is accessed by a memory resident program that you can call up in the middle of a sentence and tap into the data stored on the disk. I hated using the dictionary book to check the meaning of a word because the extra work slowed me down. Now I just leave the cursor on the word, punch three keys and bingo, there's my help. Great! I find myself enjoying it very much.

Same for the Thesaurus. Bingo. I own a printed copy of the Chicago Manual of Style, but like the dictionary, I rarely look at it. Now, if I want to know about capitalization of a geographical feature word, it takes only a few seconds to look up.

Another section of the Bookshelf disk contains 22,500 quotations (Bartlett's) of poetry, plays, the Bible, etc. It, like the other references on CD-ROM, is very easy to use. I just looked up the word "ham" in the quotation section. "And Noah begat Shem, Ham and Japheth," from Genesis 5:32, is the only Bartlett quote featuring the word.

All this has very little to do with ham radio, but if you are a writer, a CD-ROM will make life easier. The USA Hamcall program works fine, but I wish it had all the world Amateurs listed on it. There is plenty of room for

them all on a CD-ROM.

### Eavesdroppings

"MY HAM RADIO IQ (INTEREST QUOTIENT) GOES UP AND DOWN WITH THE DX PROPAGATION NUMBERS... THE ANTENNA HERE IS ON A SLOW CRANK-UP, FAST CRANK-DOWN TOWER... HAM RADIO IS A WONDERFUL HOBBY, BUT IT HELPS SPOIL OUR FOREIGN TRADE BALANCE... IN RTTY YOU RUN ACROSS A LOT OF ROTTEN SPELLERS AND I AM THE CHAMPION OF THEM ALL... WITH HF PACKET FORWARDING MOVING DOWN BELOW 14.100 I'M ABOUT TO ABANDON RTTY FOR BASKET WEAVING OR HUMMING BIRD MUSIC THERAPY... ON PACKET THE ADDRESS SPELLED "ALL-USA" MEANS JUNK MAIL... I UNDERSTAND THAT THE GUINNESS BOOK OF WORLD RECORDS REJECTED A REQUEST TO LOG THE WORLD'S LONGEST PACKET HEADING CALLSIGN LIST BECAUSE IT WAS TOO LONG... I BOUGHT A "LEARN ACUPUNCTURE AT HOME" KIT WHICH WAS NOTHING BUT 50 NEEDLES AND AN INSTRUCTION BOOK WRITTEN IN MANDARIN CHINESE...

MY DOG CHEWED UP MY LOWER PLATE SO I'M EATING SOUP FOR A WHILE... I GO INTO MY WIFE'S MEDITATION ROOM AND INSTEAD OF MEDITATING I SACK OUT... WE'RE NOT DEAD, OUR SMALL PENSION AND SOCIAL SECURITY JUST MAKES US FEEL THAT WAY... QSL DIRECT AS THE BURO NO WORK FOR ME... I AM 100/100 FOR QSLING 100/100... WE HAVE A BEAUTIFUL DAY HERE WITH THE TEMPERATURE TO GO OVER THE 100 MARK FOR THE FOURTH TIME THIS WEEK... FIELD DAY HAD ITS USUAL RAIN, THUNDER, LIGHTNING AND LEAKY TENT... MY WIFE BOUGHT A NEW TV SET SO SHE COULD SEE MY RFI BETTER... MY SON IS THE MARKETING MANAGER FOR AN UNDERTAKER... MY WIFE SAYS ALL HAMS ARE BELOW THE POVERTY LEVEL BECAUSE OF THEIR HOBBY... DX IS POOR TODAY BECAUSE OF POOPAGATION TROUBLES."

Thanks to W0HAH, N0BCW, W0PCI, W7VER and those I watched on the CRT. Write me at 1514 S. 12th St., Fargo, ND 58103, or send a packet addressed to W0LHS @ W0LHS.ND. USA.NA. 73 AND DIT DIT. □

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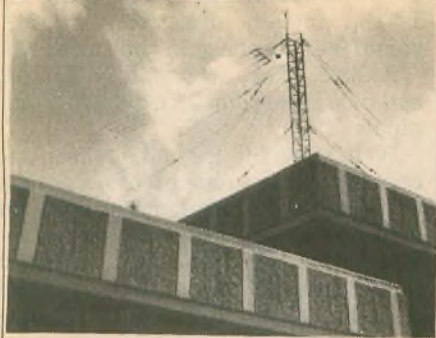
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KURT N. STERBA



# AERIALS

I'm sitting here looking at an advertisement in a ham magazine. I can't believe it. I wonder if that particular magazine is getting as many letters about that ad as Worldradio is getting about me? (More about that later).

This advert, selling antennas for 6, 10, 15 and 20M, also sells stacking kits. As promised (by the manufacturer) you can get from "6 to 12dB" more gain. Also stated is that their customers report that they get 1 to three S units increase.

So, let's look at stacking, what can be obtained and just what is possible.

Starting with one Yagi, if you stack another Yagi (of the same size) you'll pick up 3dB. (There are those, however, who don't believe it is quite that high.)

Now, up in the air, we have two Yagis. You want another 3dB? How many do you have to add? Another two! You must double what you have, to get another 3dB.

Here you are with four Yagis in the air. You feel that another 3dB will make a big difference. How many more Yagis do you need? Another FOUR!

We're now 9dB from where we started. You feel that another 3dB will make you king of the mountain. How many more Yagis do you need?

Up in the air, to reach the 12dB more gain promised, you now have 16 antennas. On what band? 20? Ever seen, or heard, of anything like that? 15? 10? 6?

But wait! We're not through! How about that "three S units"? That's about 18dB. How do we get from 12dB to 18dB?

First step is from 12 up to 15dB,

which means we go from 16 antennas to 32 antennas.

How do we get from 15 to 18dB. Easy. We only have to add another 32 antennas. So we now have 64 antennas up in the air. (Sounds like a Dr. Seuss storybook!)

Just what kind of tower(s) is holding all this up? Since the advertiser suggests that you use a 90 ft. tower for only two antennas on 15M... what are we going to hang the 64 on?

Then there was the magazine that gave the formula for impedance as resistance added to reactance. Not even close.

There's more. Have you seen the company and the magazines printing the product announcement about the "wide band monopole (vertical) antennas"? I can only assume that the people buying that gem are those snake charmers playing a horn, because they're the only ones who are going to get this monopole (vertical) antenna to stand up vertically without some real (and additional) support.

Those who lived through the Depression and thusly still value a buck may find 40M dipoles for \$210 and 80M dipoles for \$250 a bit pricey.

Then we look at a catalog. Won't mention the name of the company, but you don't want to play a game of pool with them. Opposed to proper usage, they keep printing mhz instead of MHz. All sorts of dB gain figures are bandied about without ever telling us dB over what. dBd? dBi? dBic? dBgc1-10? (That's a garbage can lid, 10 ft. under ground.)

We also still have people yelling about Maxcom. Does anybody get wound up about another antenna? (Won't mention the name of the company, but they remind me of an old movie before Ted Turner gets his hands on it.) They claim "SWR less than 2:1 from 3.5 to 30 MHz."

I believe it. I really do. But, hey, just what is in that "balancing network"

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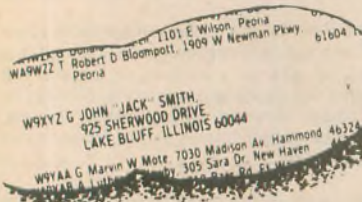
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that makes it all possible? Well, we know the answer to that, don't we?

Hy-Gain (yes, that Hy-Gain) sells to the US Army an antenna that promises a VSWR of 2:1 from 2 to 30 MHz. This is, as they phrase it, a "broadband terminated" center-fed dipole. Terminated is the key word. We all know what you terminate in, don't we? Hy-Gain honestly allows that this antenna has an efficiency of 30 percent from 4 to 30 MHz and 15 percent from 2 to 4 MHz.

Who else are good guys? Larsen! Outstanding and truthful catalog. Who else? That Lakeview Co. of Anderson, SC. The more I read their material and use their product, the more I can say to them: "You can be justly proud of what you have done!"

There is another catalog with so much whacky stuff in it that it deserves a column of its own.

I've been getting a great number of letters and Worldradio has received phone calls. Some, names you would recognize, employed at upper levels, agree with my position. Others, with good qualifications, disagree.

It seems that some, well meaning though they are, have got gain, directivity and efficiency a bit askew.

Let's say you have a normally operating antenna. You then put into

the feedline a 20dB pad. Is the efficiency of the antenna itself the same? Yes. Is the pattern (directivity) still the same? Yes. Is the gain the same? No.

And for those who said no antenna could be more than 2.1dB down from a dipole . . .

Well, since Lil has had so much success in talking to her plants, I decided to talk to the Rubber Duck on my hand-held. I read your letters to the Rubber Duck. I watched the Field Strength Meter. I kept hoping that this antenna was the cousin to The Little Engine That Could. I thought I could hear the little Rubber Duck saying, "I know I can, I know I can."

I kept reading those letters, telling the Rubber Duck that it was impossible for it to be less than 2.1dB lower than a dipole. Then I saw the needle starting to move up. One dB, two dBs, three dBs. Oh, the Power of Positive Thinking.

I ran upstairs to tell Lil. She was talking on her cordless telephone. Oh.

*(Compassionate Kurt, a kind and gentle soul, says his feelings are not hurt by letters calling him an ignorant know-nothing. He is letting his critics step into the web. Answers are going out individually, not in print and identified, so you don't lose your technical jobs. You'll just have to sit at the dinner table and explain to your wife why you are crying.)* □

## Corrected information

In the August 1990 issue, a letter from the manager of the Intercontinent Traffic Net to Robert McNamara, Chief of Special Services of the FCC, was printed.

In the letter several calls were mentioned as having been involved in constantly interrupting and attacking the net. One of those calls was that of W4TAH. However, he was not mentioned in the original letter.

Thank you to N4LMC for bringing this to our attention. □

*One great way to make that old rig operate a lot better is to stop and price new transceivers. — MMARC Sparks*

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## California

The KINGS AMATEUR RADIO CLUB swapmeet will be held Saturday, Sept. 22, at the Hanford Fraternal Hall in Hanford. Seller's fee is \$5, buyer's admission is free and RV parking is free.

Featured will be Amateur gear, computers and electronic items. Talk-in on 147.33 MHz + (W6IYY/R), 145.11 MHz - (WB6VZF/R) or 443-70 MHz + (WA6TJW/R).

For more information contact Rick McIlroy, WB6VZF, at 209/583-9377 or 209/945-2266; Carleton Reed, AA6GZ, at 209/924-4221; Mike Bezera, KK6BW, at 209/924-4676; or write to KARC, P.O. Box 548, Armona, CA 93202. □

## Connecticut

The CANDLEWOOD AMATEUR RADIO ASSOCIATION is sponsoring a hamfest from 8 a.m. to 3 p.m. Sunday, Sept. 23, at the Elk's Club in Danbury. Admission is \$4; children under 12 enter free.

Tables are \$8; tailgating spaces are \$6 (these include one admission). Table set up will begin at 7 a.m.

Talk-in on 147/72-12.

For reservations write to CARA, c/o Bob Elton, 60 Padanaram Rd., #18, Danbury, CT 06810. For further information call 203/790-7987, 203/775-6738 or 203/426-1652. □

## Illinois

The BOLINGBROOK AMATEUR RADIO SOCIETY is sponsoring Ham/Computerfest '90 on Sunday, Sept. 9, at the Inwood Recreation Center. Tickets are \$3 in advance and \$4 at the gate. Gates will open at 6 a.m. and the indoor stadium will open at 8 a.m.

Indoor reserved dealer tables are \$10. Reserved flea market tables (also indoors) are \$5. Any remaining indoor space will be available on a first-come first-served basis.

For table reservations contact Ed Weinstein, WD9AYR, 7511 Walnut Ave., Woodridge, IL 60517; 708/985-0527. Dealer setup will begin Saturday from 3 to 6 p.m. and continue Sunday at 5 a.m.

Door prizes and VE testing will be given. Talk-in on 147.33 +0.6, 224.54 -1.6 and 146.82 -0.6 MHz.

For general information on the festivities, call the BARS Hotline at 708/759-7005. For advanced ticket reservations mail a check to BARS, P.O. Box 1429, Bolingbrook, IL 60439-7429. □

## Indiana

The LAPORTE/MICHIGAN CITY AMATEUR RADIO CLUBS summer hamfest will be Saturday, Sept. 8, at the

Laporte County Fairgrounds.

Forums will include the Midwest Microwave Society's construction exhibit and seminar (bring your SHF projects). Talk-in on 146.52 simplex.

The required donation is \$3.50 as is the table charge, which may be reserved in advance with an SASE to LPARC, P.O. Box 30, Laporte, IN 46350. □

The FORT WAYNE RADIO CLUB is sponsoring a hamfest from 6 a.m. to 3 p.m. Sept. 8 at the 4-H Fairgrounds in Fort Wayne. Advance admission is \$3, \$5 at the door.

Tailgate spaces are \$7; spaces that include a table and chair in an open air building are \$10 (reserve in advance) and spaces that include a table, chair and electricity in an enclosed air conditioned building are \$15 (these are limited, so reserve in advance). Set up will

begin Friday after 6 p.m. Overnight security will be provided.

Talk-in on 146.16/76, 222.88/224.48 or 449.875/444.875. For more information contact Frank Jaworski, K1JF, 3923 Oakleaf Dr., Fort Wayne, IN 46815; 219/485-2634. □

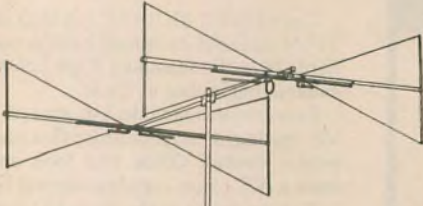
## Michigan

The CHAIN OF CLUBS will be hosting the 1990 ARRL State Convention from Sept. 21 to 23 at the County Fairgrounds in Gaylord. Admission is \$3 in advance, \$5 at the door.

Features will include Wouff Hong, forums, exhibits, a flea market, net meetings and VE exams. For reservations for VE exams contact Jim Toler, WM8T, 3070 Van Tyle, Gaylord, MI 49735; 517/732-7748. Special events featured will be a golf challenge, Mackinac Island trip and a computer fair.

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Operates as a dipole  
on 17 meters.**



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

**Model HF2V**

- Designed for the low-band DXer
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- Add-on units for 160 and 30 or 20 meters
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For dipoles. 1.7-30 MHz, 6-Kw PEP 1:1 or 4:1 ratio. Model 2K \$74.95.



1.7-30 MHz, 1:1 or 4:1 ratio. Model 1K \$49.95.

1.7-30 MHz, 350-w PEP. Ratios from 1:1 to 16:1. Model PB \$26.95.



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Phone: (619) 747-3343

Commercial vendor spaces are \$15 for the first table and \$10 for the second. Non-commercial spaces are \$5 and tailgate spaces are \$3.

Talk-in on 147.120+.

For further information contact the Chain of Clubs, P.O. Box 4073, Gaylord, MI 49735. □

## Missouri

The OZARKS AMATEUR RADIO SOCIETY will hold its Annual Club Congress and Swapfest at the Monett City Park Sunday, Sept. 9, beginning at 9 a.m. There will be bingo at 10 a.m. and a Pot-luck Dinner at 12:30 p.m.

Talk-in on 146.37/97. □

## New Hampshire

The CONTOOCCOOK VALLEY RADIO CLUB is sponsoring its Fall Ham Radio and Electronic Flea Market on Sunday, Sept. 16, in Contoocook. Admission is \$1.

Over five acres of flat, grassy selling space is available. Sellers set up is at 8 a.m. The cost is \$5.

For more information contact K1OPQ at WA1WOK-2/BBSWOK or 603/746-5090. □

## New Jersey

The SOUTH JERSEY RADIO ASSOCIATION will hold its annual hamfest on Sunday, Sept. 16, at Pennsauken High School in Pennsauken, beginning at 8 a.m.

Features will include, but are not limited to: VE testing, a large outdoor flea market, door prizes, eyeball QSOs and food and refreshments. VE exam registration will be at 9:30.

Tickets are \$4 at the door, \$3.50 in advance. Vendor tickets are \$5 per table, plus the cost of an admission ticket.

Talk-in on the K2AA repeater, 145.29/144.69.

For more information and advance tickets, please contact: Jim McGrath, KB2IYS, 2 Dickens Lane, Mt. Laurel, NJ 08054; 609/866-0890 after 6 p.m. EDT. □

## Ohio

A computer/electronics/flea market will be held from 9 a.m. to 4 p.m. Sunday, Sept. 16, at the Joint Vocational School in Canfield. Dealer and flea market setup will begin at 6:30 a.m.

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Paved flea market spaces are \$1; dealer tables are available for \$6 per eight foot table (tables and space guaranteed with reservation and fee in advance). The required donation for admission is \$2 at the gate; this is good for all hourly prize drawings. Main prize tickets are \$1 each or six for \$5.

The main prizes include: 1. TS140 Kenwood (all mode) 2. Uniden HR 2600 (10M) 3. Antron 99 10M vertical antenna 4. 8 amp power supply. The drawing will be at 3 p.m.

Check-in mobile until 1 p.m. on 147.315 or 145.270. For information contact Paul Resch, N8GKE, 600 S. Hazelwood, Youngstown, OH 44450; 216/793-8352. □

## Pennsylvania

Come to a super ham auction Saturday morning, Sept. 22. Sponsored by the VENANGO MIKE AND KEY CLUB, auction doors will open at nine and bidding starts at 10 a.m. Sellers of goods, both hamgear and computer goods, may register at 8 a.m.

The auction will be held in the main auditorium of the 4-H Club, located along route 62, just southwest of Franklin.

For more information, phone N3BAT evenings at 814/437-1781, or K3MHB at 814/677-8694; or write the Fort Venango Mike And Key Club, at Box 591 R.D.1, Cranberry, PA 16319. □

## Vermont

The second annual Fall Foliage Hamfest and Fleamarket will be held at the National Guard Armory in Berlin on Sept. 22 from 9 a.m. to 3 p.m. Sponsored by the CENTRAL VERMONT AMATEUR RADIO CLUB, features at the festivities will include Rivendel and other dealer displays, ARRL VE exams at 1 p.m. (walk-ins welcomed) and refreshments. The facility is handicapped accessible.

Talk-in on 146.625. Admission is \$2, tailgating \$4; tables (provided) \$6 in advance, \$8 at the door.

For more information contact Todd Bigelow, P.O. Box 524, Williamstown, VT 05679; 802/433-5587. □

## Virginia

TIDEWATER RADIO CONVENTIONS INC. is sponsoring a hamfest from 9 a.m. to 5 p.m. Sept. 15 and 16 at the Virginia Beach Pavilion in Virginia Beach. Admission is \$5 in advance, \$6 at the door.

Features will include the ARRL Roanoke Division Convention, the ANARC 1990 SWL Convention, ARRL and FCC forums, computer exhibitions, outdoor tailgating and movies for the kids and spouses. Talk-in on 146.970/300.

For more information contact Manny Steiner, K4DOR, 3512 Olympic Lane, Virginia Beach, VA 23452; 814/340-6105. □

A shy young man was too timid to ask a father for his daughter's hand, so he telephoned.

"Is it all right for Janet and I to get married?"

"Yes," replied the father. "Who's calling?"

WVARA, Terre Haute, IN





## YLRL Howdy Days

This contest will take place from 1400 UTC Wednesday, Sept. 5, to 1359 UTC Sept. 6.

**Eligibility:** All licensed women operators throughout the world are invited to participate.

**Procedure:** Call "CQ YL."

**Operation:** All bands and modes of emission may be used. A station may be worked and counted once on each band and mode for QSO points. The maximum power output that may be used at any time during the contest is 750W on CW and 1,500W PEP on SSB.

**Exchange:** YLRL member or non-YLRL member. Entries in log must also show date, time, band and call of station worked.

**Scoring:** Score two points for each YLRL member worked and one point for each non-YLRL member worked. NO MULTIPLIERS.

**Logs:** All logs must show if the operator is a YLRL member or non-YLRL member to be eligible for awards. Logs must show score and be postmarked by Oct. 6.

**Awards:** Top scoring YLRL Member will receive her choice of a YLRL pin, charm or stationery. Top scoring non-YLRL member will receive a one year membership in YLRL. □

## Fall Classic and Homebrew Radio Exchange

Sponsored by the *Classic Radio Newsletter*, this event will take place from 2000Z Sept. 30 to 0400Z Oct. 1. The object is to restore, operate and enjoy homebrew equipment and equipment at least 10 years old, but it is not required for entry.

**Exchange:** name, RS(T), QTH, receiver and transmitter type (homebrew send final amp tube or transistor). The same station may be worked multiple times, with different equipment combinations on each band/mode.

**Suggested frequencies:** phone — 3880, 7290, 14280, 21380 and 28320; CW — 60 kHz up from the lower band edges; *Novice/Tech* — 3720, 21120 and 28320. (Most of the action is on 7060 and 3560.)

**Scoring:** Add the number of all the different transmitters and receivers worked plus the different states/provinces/countries worked

per band/mode. Multiply that by the total years old of all transmitters and receivers used (minimum three QSOs per unit). For transceivers, multiply age by two. For homebrew, count as 25-years-old unless older.

Mail logs and comments, plus an SASE for the newsletter, to Jim Hanlon, W8KGI, P.O. Box 581, Sandia Park, NM 87047. □

## 1990 California QSO Party

Sponsored by the Northern California Contest Club, this event will be held from 1600 UTC Oct. 6 to 2200 UTC Oct. 7.

**Rules:** Single operator entries may operate only 24 hours; off times must be clearly marked in the log and must be at least 15 minutes long. Multi-operator entries may operate the full 30 hours. Stations may be worked once on CW and phone on each band. All contacts must be simplex; no MCW. Single-op and multi-single entries are allowed only one transmitted signal. All CW contacts must be made in the CW sub-band, except for 160M. California stations that change counties are considered to be new stations and may be contacted again for point and multiplier credit. CA stations operating from a county line may be counted only as one QSO.

**Object:** Stations outside California work as many California stations in as many CA counties as possible; stations in California work anyone.

**Exchange:** California stations send QSO number and county; stations outside California send QSO number and state/province/country.

**QSO points:** Each complete phone contact is worth two QSO points. Each complete CW contact is worth three QSO points.

**Multipliers:** California stations use states and VO/VE1-7 and VY1/VE8 for a possible total of 58. Out-of-state stations use the number of different California counties for a possible total of 58. CA stations on a county line may be claimed as a multiplier for any or all of the counties they give in their exchange.

**Total score:** The total score is the number of QSO points multiplied by the total number of multipliers.

**Frequencies:** 160 through 2M excluding all WARC bands. CW on 1805 and 40 kHz up from the band edge. Phone on 1815, 3850, 7230, 14250, 21300 and 28450. Novices 10 kHz up from the band edge and 28450. Try CW on the half hour; 147.54 MHz at 2000, 0000 and 0400Z; 160M at 0500Z and 80/75M at 0300 and 0700Z.

**Score submission:** All logs and summary sheets must be sent to NCCC c/o Jim Duffy, WA6AUE, POB 8820, Truckee, CA 95737, by Nov. 15. Include a business sized SASE for results. Entries of more than 200 QSOs must include duplicate sheets.

For a CQP paperwork packet containing log and summary sheets, county abbreviations and contest records, send a business sized SASE to the above address.

**Awards:** certificates to the highest scoring single operator entry in each CA county, state/province and country and each station that scores 100 or more QSOs.

Trophies will be awarded to the top three out-of-state single ops; the top three California single ops; the top multi-single and multi-multi in California; and the high scoring single op and multi-op California county DXpeditions.

The Special CQP Wine Award will be awarded to the top 20 single operators in California, along with the top 20 single ops out of state. They will receive a personalized bottle of Northern California Contest Club Private Reserve California wine. Wine winners who are under legal drinking age will receive a non-alcoholic personalized award.

Special trophies will go to the CA single op and out-of-state single-op with the most CW QSOs; the mobile single op or team with the most total QSOs; the high scoring low power entry (200W or less) in CA and out of state; the top Novice/Technician entry in CA and out of state; the top scorer outside the United States and Canada; and the top club in California (five entries minimum — Northern and Southern Cal contest clubs are ineligible). □

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LOGic, which has received excellent reviews, is now better than ever. If you have been thinking about trying a computer logging system, or are looking for a program that is better than your current one, we invite you to try LOGic. An inexpensive demo is available. We think you'll agree that it would be hard to buy more for your ham radio equipment dollar. Please ask for our free 10-page info pack.

**New features:** •auto logging of country, zones •auto logging of name, QTH, contest exchange from previous QSOs •auto contest scoring with online multiplier display •online DXCC progress check •gray line propagation aid •automatic antenna rotor control •QSL manager screen •metric/English conversion calculator •automatically track progress for any award. reports confirmed, unconfirmed, and not worked •convenient backup facility. See previous ads in this magazine for more features. **Now available for Amiga, Atari ST, and IBM PC. \$79 ppd. MC/Visa accepted. Hours 4-9 PM eastern, M-Th. 404-242-0887. Hard drive reqd. Describe equipment.**

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munications Inc., 9600 Aldrich Ave. South, Minneapolis, MN 55420; 612/884-4051; telex: 6879045 Telexcom; FAX: 612/884-0043. □

## All mode transceiver

ICOM is offering the IC-726, a small, lightweight and easy to operate HF transceiver big on performance, with band operation from 500 kHz to 30 MHz and 50 to 54 MHz.

Some features include:

- 100W power output. A full 100W output on all HF bands and 10W output on 6M
- Wide dynamic range. Imagine working DX, then switching to 6M in the touch of a button. With the IC-726 everything from 1.8 to 50 MHz is possible!
- Compact. The IC-726 is designed to meet the demands of mobile users. It's compact and easy to operate while in your shack or on the road.
- 26 memory channels. The IC-726 has 22 regular memory channels, two split memory channels and two programmed scan edge channels.

• All mode operation. This radio has the optional UI-7 FM/AM board built in. All modes built-in!

• Band stacking registers. The IC-726 has band stacking registers for remembering your favorite frequencies and modes for each band.

The IC-726 has all this, and includes 10 HZ digit readout, a variety of scan functions and CI-V system for computer control. Many options are available, such as the optional HF automatic antenna tuner and CW narrow filter. The suggested retail price is \$1299.

For information contact ICOM America Inc., 2380 116th Ave. NE/P.O. Box C-90029, Bellevue, WA 98009-9029; 206/454-8155; Customer Service 206/454-7619; Telex 152210; FAX 206/454-1509. □

## Morse Code Tutor

MFJ Enterprises Inc. is offering the MFJ-1269 "SAM" Morse Code Tutor for only ... \$19.95. It was written by a Master of

Education and professional teacher to get your speed up fast so you put in less work for your new license or upgrade.

You get random QSOs with screen blanking, just like in the FCC test. The instructions give you a sample FCC code test, so you'll know what to expect when the big day arrives. Timing analysis grades your progress and shows you how many you've gotten right on each session.

A colorful "Jumbo" characters option makes your Morse code classroom fun. (SAM also works with mono-graphics.)

Set "Stop Watch" option and copy code against the clock — a great way to find out how well you really know your code. You can set WPM or tone from the opening menu or dynamically as code is being sent. This lets you increase your speed after warming up.

Unmatched sending practice flashes a character on the screen that you send using shift keys as paddle — it times your sending and shows what characters you sent correctly or incorrectly.

All this plus everything the other code tutors give you: You can copy select or random characters, copy text files, prosigns, send from keyboard and more. There is also a Farnsworth spacing option.

The excellent manual includes a sample FCC test, "Q" signals and common Morse abbreviations. There is onscreen help with the function key.

For more information contact any MFJ dealer or MFJ Enterprises Inc., P.O. Box 494, Mississippi State, MS 39762; 601/323-5869; Telex: 53 4590 MFJSTKV; FAX: 601/323-6551; or order toll free at 800/647-1800. □

## Multi-mode decoder

Somerset Electronics has introduced their MICRODEC™ multi-mode decoder, with advanced features and options. The MICRODEC™ decodes Morse code, radioteletype (all standard shifts) and ASCII.

MICRODEC™ comes with these standard features: an intelligent, eight segment, LED dot matrix display with intensity controls; ASCII serial computer/printer interface; in-

## HF vertical antenna

Telex Hy-Gain has available a vertical antenna for Amateur, MARS and SWL use. It is the first tunable omni-directional antenna designed for use by all three types of radio users.

The DX88 can be tuned to eight Amateur bands between 10 and 80M or to any eight of the 12 international SWL bands between 11 and 90M or to any of the Air Force, Army or Navy MARS frequencies adjacent to the Amateur bands. The DX88 can even be set to any combination of Amateur, SWL, utility or MARS bands. The antenna is suitable for limited space installations, with a nominal height of 25 ft. (7.5m) and with ground radials of 14 ft. (4.3 m).

The DX88 is constructed of thick-wall aluminum tubing and stainless steel hardware and withstands 80 mph (130 km/hr) winds, ungyued. According to Hy-Gain, the antenna can handle full legal Amateur Radio power.

The DX88 was introduced at the Dayton Hamvention with a suggested list price of \$299. Radial kits are optional as is a 160 m loading coil.

For more information contact Telex Com-

## RADIO STORE

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Burlingame, CA 94010  
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Oakland, CA 94606  
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San Diego, CA 92123  
(619) 560-4900

Ham Radio Outlet  
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Van Nuys, CA 91411  
(818) 988-2212

Henry Radio  
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Los Angeles, CA 90025  
(213) 820-1234

Jun's Electronics  
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Culver City, CA 90230  
(213) 390-8003

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Sacramento, CA 95818  
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Southington, CT 06489  
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Vero Beach, FL 32961  
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Mike's Electronics  
1001 N.W. 52nd St.  
Fort Lauderdale, FL 33309  
(305) 491-7110

### GEORGIA

Doc's Communication &  
Electronics, Inc.  
702 Chickamauga Ave.  
Rossville, GA 30741  
(404) 866-2302 or 861-5610

Ham Radio Outlet  
6071 Buford Hwy.  
Atlanta, GA 30340  
(404) 263-0700

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Butler, MO 64730

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ternal practice code oscillator; internal speaker with volume control; simplified push button operation; operates on DC voltages from 9 to 15VDC.

Standard display color is high efficiency green with optional high efficiency red and yellow displays available. Display intensity controls provide exceptional readability and clarity under various light conditions. A 120VAC/12VDC power adaptor is standard. Because of the wide DC voltage range, the MICRODEC™ can be powered by a car, boat or any type of negative ground DC power source.

The MICRODEC™ is the only self-powered, portable decoder available. The optional battery pack/charging circuit makes MICRODEC™ the perfect accessory for portable shortwave receivers. Excellent for vacations, camping or DX field trips. (Save with introductory sale price: \$29.95; list price: \$49.95. Optional display red or yellow, sale price: \$15; list price: \$30.)

Introductory sale price for the standard MICRODEC™ is \$199 (list price is \$229.95), plus \$8.50 for domestic ground shipping and handling. Express and international shipping cost will be quoted upon request.

To place an order direct, via FAX or via our credit order purchase program, write or call: Somerset Electronics Inc., 1290 Highway A1A, Satellite Beach, FL 32937; phone / FAX 407/773-8097. □

## Braille DX manual

A Braille reference manual, entitled *DX Around the World*, is now available for the blind. The book is edited by Larry Cox, WA6AIL, and made available through the San Diego Braille Transcribers Guild Inc., 1807 Upas St., San Diego, CA 92103.

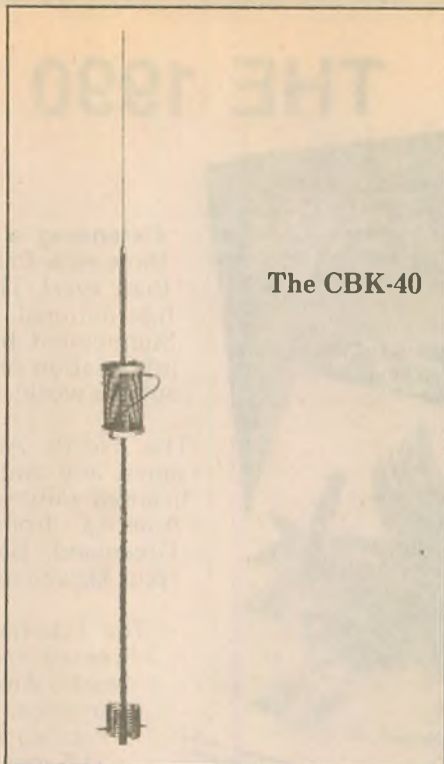
The 55 page manual contains the 324 countries in the ARRL current countries list, alphabetically listed by both prefix and country; also the beam headings in *True Degrees* and mileage in statute miles from the geographical centers of the West Coast, Midwest and East Coast of the United States. Then the approximate time plus or minus Universal Coordinated Time and the country's zone are listed. There is also a brief discussion of the Solar Index and Sunspot Cycle and how they affect the DXer.

This book may be obtained for the cost of materials, \$4.15 on paper and \$7.40 on plastic pages. □

## Mobile antenna

The Lakeview Co. Inc. has introduced their new Carolina Bug Katcher (CBK-40) mobile antenna, available after several months of testing.

The CBK-40 utilizes the company's proven "Ham Stick" technology, combined with a very Hi Q, air wound, center loading coil that will operate from 7.000 MHz to 30 MHz with



The CBK-40

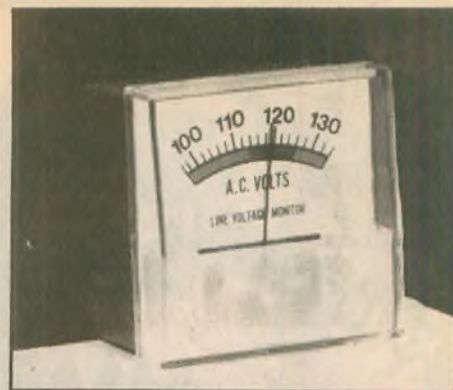
outstanding performance. Overall length is under eight feet. After the initial set up, band changes require only moving an alligator clip from one established point to another.

These antennas come equipped with a Heavy Duty Quick Disconnect and Lakeview's IM-1, to insure a 50 ohm match at the feed point. Price is \$79.50, plus \$4 S&H (continental US) from Lakeview Co. Inc., Rt. #7, Box 258, Anderson, SC 29624, or from their many dealers. A catalog listing the CBK-40 and other mobile antenna products is available on request from 803/226-6990. □

## Line voltage monitor

The MFJ-850 is one of the easiest protections you can get against low voltage "brown-out" conditions that can damage your expensive electrical equipment.

All you have to do is plug it in and it tells you at a glance when your line voltage is at a low "brown-out" level. The expanded scale reads from 95 to 135 volts. Color coding makes across the room reading easy. Just plug it into



any AC outlet for plus/minus two percent accuracy along the entire expanded scale. You can leave it plugged in permanently for constant monitoring — it comes with MFJ's one year unconditional guarantee.

The 850 measure a compact 2 1/4 x 2 1/4 x 1 1/2 inches. You can use it anywhere — around the house, in your shack, on your boat or in your RV — or use it to check your valuable computer/peripheral or video setup. It is especially useful for checking portable generators and all kinds of temporary electrical setups.

For more information contact any MFJ dealer or MFJ Enterprises Inc., P.O. Box 494, Mississippi State, MS 39762; 601/323-5869; FAX: 601/323-6551; TELEX: 53 4590 MFJ STKV; or order toll free at 800/647-1800. □

Days are short in winter and long in summer because cold contracts and heat expands — very simple. —Arrowhead RAC, Duluth, MN

## Bandmaster Quads

**QSO more for greater distance with higher gain and less interference with AAE Bandmaster Quads.**

- All-fiberglass construction
- Rugged engineering/all weather
- Highly directional/excellent F/B
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# VE exam schedules

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

Please mark the envelope "VE Exams."

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

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

p/r = pre-register

w/i = walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
<b>Alabama</b>				<b>Massachusetts</b>			
Sept 29	Montgomery	Leroy Bell Jr. (205) 269-4201	w/i	Oct 13	Boxborough	KA1AE (508) 887-2658	p/r by 9/10; ltd w/i
<b>California</b>				Oct 14	Boxborough	KA1AE (508) 887-2658	p/r by 9/10; ltd w/i
Sept 1	Burbank	KE6AR (818) 349-0927	w/i OK	<b>Minnesota</b>			
	San Dimas	K6THQ (714) 596-9383	p/r	Sept 8	Bloomington	KD0CL (612) 881-7181	p/r pref
Sept 6	Modesto	W6XK (209) 883-2968	w/i OK	<b>Nevada</b>			
Sept 8	Apple Valley	NF6I (619) 241-4732;		Sept 8	Minden	W7QO (702) 265-3430	w/i
		K6BET (619) 244-6080	w/i OK	<b>New Jersey</b>			
	Novato	N6AQY (415) 897-8950;	w/i	Sept 8	Cranford	N2XJ (201) 635-7686	
	Redding	NT6E (916) 243-REVA	w/i OK	Sept 12	Fort Monmouth	KZ2P (201) 905-3146 or (201) 370-8055	w/i
	San Pedro	N6DYZ (213) 325-2965	ltd w/i	Sept 15	Bayonne	WA2QYX (201) 451-9471	w/i OK
	Santa Barbara	KB5AH (805) 682-2665	w/i OK		Pennington	AA2F (609) 737-1723	p/r pref; w/i OK
Sept 15	San Dimas	K6THQ (714) 596-9383	p/r	Sept 20	Bellmawr	WA2VQG (609) 546-7710	no p/r
Sept 19	Eureka	KB6FIW (707) 442-9245	p/r pref by 9/17	<b>New York</b>			
Sept 20	Fountain Valley	KI6WK (714) 846-6984		Sept 21	Verona	KA2NIL (315) 363-4297	w/i
Sept 27	Long Beach	KA6HOQ (714) 897-6331;		Sept 23	North Babylon	KA2RGI (516) 957-0218	w/i OK
		NF6X (213) 434-8278	w/i	<b>North Carolina</b>			
Sept 29	Eagle Rock	KB6RXE (818) 791-1779;		Sept 8	Yadkinville	N4AAD (919) 679-8059;	
		AA6HI (213) 256-2904				N4UAN (919) 679-8954	p/r; w/i
	Hawthorne	NO6I (714) 823-7158;				AB4TF (919) 838-9109;	
		WS6T (213) 600-4160	w/i OK			N4XRY (919) 699-8469	w/i
	Stockton	AA6NO (916) 662-0810	w/i	<b>Ohio</b>			
<b>Colorado</b>				Sept 9	Independence	WT8A or WT8B (216) 526-3807	w/i OK
Sept 8	Denver	W0LJR (303) 366-9689	w/i OK	Sept 30	Norton	KA8MPH (216) 882-6387	p/r pref; w/i OK
Sept 15	Westminster	N0HNR (303) 451-1231; (303) 278-4280	p/r or w/i	<b>Pennsylvania</b>			
<b>Connecticut</b>				Sept 1	Erie	W3CG (814) 665-9124	w/i OK
Sept 30	Milford	NB1M (203) 933-5125; WA1YQE (203) 874-1014	w/i	Sept 17	Perkasie	Warren Erdman (215) 679-5764	p/r; w/i
<b>District of Columbia</b>				Sept 22	McKeesport	KQ3W (412) 466-5204	p/r 2 days prior
Sept 13	Washington	David G. Boyd (703) 659-6241 or (202) 695-2020	w/i OK	<b>South Carolina</b>			
<b>Florida</b>				Sept 15	North Charleston	AA4IX (803) 873-2465	w/i OK
Sept 15	Melbourne	WB9IVR (407) 724-6183	w/i OK	<b>Texas</b>			
	W. Palm Beach	W4SS (407) 967-1477; KG4U (407) 582-7617	w/i	Sept 8	Eddy	N5KZD (817) 859-5374	w/i
<b>Illinois</b>					Midland	KT5G (915) 694-9450	
Sept 8	Bloomington	KM9L (309) 662-1230;			San Antonio	AA5HG (512) 680-2371	w/i
		NO9W (309) 378-4032	w/i OK	Sept 18	Sherman	AA5PP (214) 786-2644	w/i OK
	Galesburg	KA9PCU (309) 342-5977		<b>Vermont</b>			
	Oak Forest	KA9HDN (312) 247-0650	w/i	Sept 22	Berlin	WB1AJG (802) 433-6172	p/r pref; w/i OK
Sept 9	Danville	KC9V (317) 793-3573;		<b>Virginia</b>			
		WA9Z (217) 442-8949	w/i	Sept 28	Stafford	David G. Boyd (703) 659-6241 or (202) 695-2020	w/i OK
Sept 15	Loves Park	W9SS (815) 877-6768	p/r; w/i				
<b>Indiana</b>							
Sept 1	South Bend	N19Y (219) 255-4455	w/i OK				
Sept 15	Rushville	N6RS (317) 763-6090	w/i				
<b>Iowa</b>							
Sept 16	Des Moines	NA0R (515) 964-0900 or (515) 967-3890	w/i				
<b>Maryland</b>							
Sept 22	Laurel	(301) 572-5124	ltd w/i				

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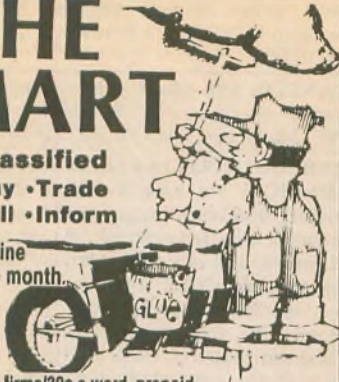




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