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WORLDRADIO

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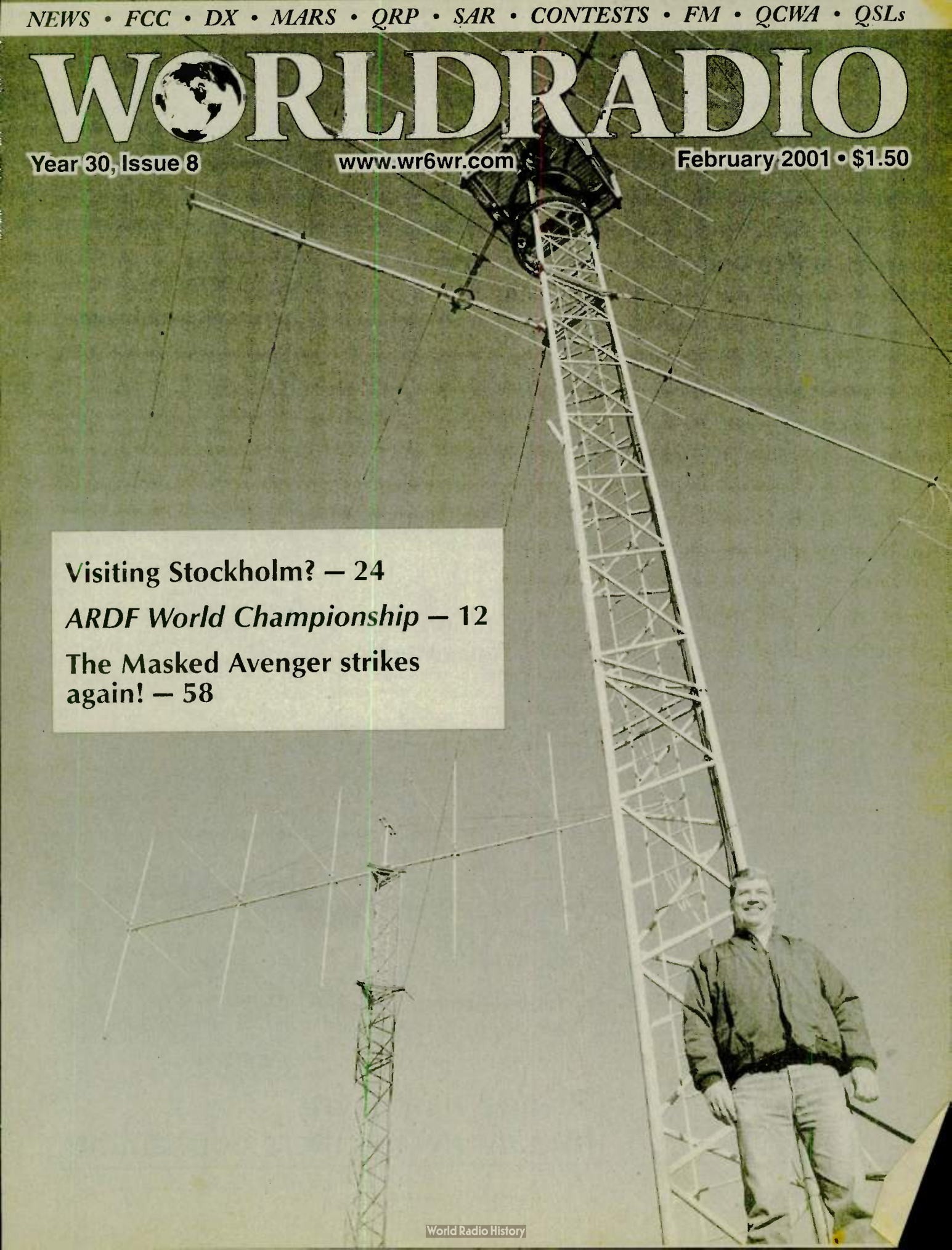

More on postal rates for DXers

The cost of an international Reply Coupon v(IRC) will increase from $1.05 to $1.75 on 7 January. A one-ounce letter sent via air mail to anywhere in the world (except Canada and Mexico) will cost 80 cents. A two-ounce air mail letter will cost anywhere from $1.55 to $1.70, depending on where it's going. The complete rate schedule is available on the USPS web site, www.usps.gov/news/2001rate.htm. — *NB1B, W3UR, ARRL Letter*

AO-40 goes silent

AMSAT reports there's a problem aboard AO-40. The Amateur Radio satellite has not been heard from since 13 December, and for the AO-40 ground crew the silence is deafening. AMSAT says the AO-40 development team is looking into the problem.

"All we know is we've got a problem," said AMSAT-NA President Robin Haighton, VE3FRH. "I've got all my toes and fingers crossed." Haighton said the problem may or may not be related to earlier difficulties getting AO-40's 400-Newton motor to fire properly. Ground controllers adjusted the satellite's orbit, but as a result of fuel-valve problems, AO-40 ended up in a higher-than-planned orbit.

The orbit-adjusting burn lasted three minutes longer than planned, sending AO-40 into a 60,000 km (37,200 mile) apogee rather than the planned 50,000 km (31,000 miles).

AMSAT reports that 2-meter telemetry transmissions from AO-40 stopped 13 December, while work on the 400-Newton propulsion system was in progress. "A lot of people are putting their heads together," Haighton said, but until the telemetry transmission reappears, not much will be known. "It's very frustrating," he said.

Earlier AMSAT reports indicated that the onboard IHU-2 computer could be responsible for the missing telemetry. The IHU-2 has suffered several crashes, and when the computer goes down, so does the telemetry, although a weak, unmodulated carrier should remain. Haighton said the IHU-2 takes a couple of days to time out and reboot, "and then we're in business, we hope."

Monitors around the world are listening for any signal from AO-40. Amateurs have reported hearing a weak, unmodulated carrier on the 145.898 MHz beacon frequency since the telemetry stopped. It's not known for sure if the signals are coming from AO-40, however.

The next-generation Amateur Radio satellite formerly known as Phase 3D was launched in mid-November. For more information on AO-40, visit the AMSAT-NA web site, http://www.amsat.org. — *ARRL Letter*

ISS Expedition 1 crew's tour extended

Space Station Alpha's first resident crew will get to stay in space a couple of weeks longer than planned because of a tight shuttle launch schedule. Expedition 1 crew commander William "Shep" Shepherd, KD5GSL, says he's OK with the extension, however. The launch of the new ISS crew on shuttle *Discovery* has been pushed back from 15 February to 1 March. That's because *Discovery* was delayed in returning from space in October and because NASA needs to replace 10 thrusters. Shepherd and Russian cosmonauts Yuri Gidzenko and Sergei Krikalev, U5MIR, arrived at the station 2 November. Replacing them in space will be Russian cosmonaut Yury Usachev and U.S. astronauts James Voss and Susan Helms, KC7NHZ. Shepherd said he and his crew have more than enough food and water to make it through the additional two weeks. — *ARRL Letter*

Pennsylvania amateur snags ISS contact

It was just a matter of being in the right place at the right time, says Randy Shriver, KG3N, of Hanover, Pennsylvania. He managed to snag the first, and so far only, "informal" contact with ISS Expedition 1 crew commander William "Shep" Shepherd, KD5GSL, early on the morning of 13 November. "I only had 20 seconds or so," said Shriver. Space Station Alpha was over Newfoundland at the time and had just completed an "engineering pass" contact with NN1SS at Goddard Space Flight Center in Maryland when Shriver dropped in a quick call, and Shepherd came back to him using his own call sign. "Well Randy, you are my first contact from the space station," Shepherd responded. A Ham for about 20 years, Shriver says he built his station specifically for SAREX contacts (he's got four stacked 22-element arrays and 100 W). In 1985, Shriver worked Tony England, WØORE, aboard the shuttle *Challenger*.

WGAL-TV, Channel 8 in Lancaster included a report on Shriver's ISS QSO in its newscasts. — *ARRL Letter*

WORLDRADIO

February 2001 Year 30 Issue 8

On the cover: Dave Fraasch, WB6RAB, at the SKOUX club station antenna farm.

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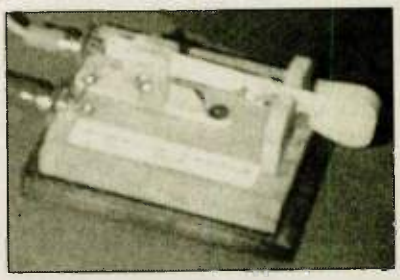

Page 48 — Popsicle stick key

Next month: County Hunter; FM, Repeaters & VHF; Old-time Radio; QCWA; and The Youth Forum

Editor's Log

I am more than pleased to release the names of our latest lifetime subscribers. Each one of you should memorize the name of this list that happens to be in your area. If you run across them, especially in public, you are required to fall to your knees, bow gracefully, and say, "Oh wise one, how great you are. I wish I had also sent in a request for a lifetime subscription to ***Worldradio***." The newest lifetime subscribers are:

- **Bruce Pinto, WD4PAC**
  Springfield, VA
- **Hamilton W. Lord, W7THF**
  Perry, GA
  (A gift from Betty Jean Lord)
  (Ed. — Hang on to her, Hamilton! She is worth her weight in gold!)
- **Calvin D. Curlee, AA8VM**
  Taylor, MI
- **Roger Bailey, ABØKX**
  Greenwood, MO
- **William C. Wells, K6MBA**
  Cupertino, CA
- **Jay Yake, W6JDB**
  Madera, CA

•

If you haven't heard yet, the U.S. Postal Service not only raised the cost of first-class letter postage from 33 cents to 34 cents, they also raised the cost of sending a letter overseas. The cost of sending an envelope weighing half an ounce went from .60 cents to .80 cents. They also raised the price of an IRC from $1.05 to $1.75. So now, sending a direct request for a QSL card to a DX station will cost you a minimum of .80 cents, plus either a "green stamp" or an IRC.

This makes the outgoing QSL service provided by the ARRL much more attractive. With these new postal rates you would spend $50 if you send out 25 cards in a year. Considering an ARRL membership only costs $34 per year, you would pay for the cost of sending the cards AND you get the other services provided by the ARRL — including monthly issues of *QST*. Sure sounds like a bargain, doesn't it?

•

You have all heard about my quest for DX QSL cards and my dismal results. I was in both the CW and SSB *CQ* WW DX contests, and I have selected 20 DX entities that I still need for DXCC. I have mailed all of the requests. Some went to stateside QSL managers, but most were mailed direct to the address listed in QRZ.com.

Each stateside manager received a QSL card and an SASE. Each of the DX stations received an IRC, my QSL card, and an SAE. The card going to Germany had my QSL card, an SAE and two "green stamps." The list of stations, and how they were sent is:

Station	Direct/Mgr
A61AJ	W3UR/mgr
VP2E	N5AU/mgr
J3E	WA1S/mgr *
J75KG	N2AU/mgr
3E1DX	NØTT/mgr
9G5AA	GM4FDM/mgr
PYØFZ	PY7ZZ/mgr
CN8WW	DL6FBL/mgr
V26B	WT3Q/mgr
OH2U	Direct
LZ5Z	Direct
HSØAC	Direct
GIØKVQ	Direct
G3ZVT	Direct
CE4TA	Direct
4U1VIC	Direct
9A3MA	Direct
ZS6EZ	Direct
VR2BG	Direct
OZ5W	Direct

(* received 14 Dec.)

Each envelope did not have call signs visible, and each envelope was additionally secured at all seams with tape. All of the DX envelopes were mailed by Air Mail. The envelopes were all mailed using an accurate postal scale, and correct postage was placed on all of them.

So the fun begins. These were all mailed on 5 December, and the clock is ticking. If you know any of these managers, please don't tell them what is going on. I don't want them alerted to this exercise. I want to keep close track of these cards, and I will report the results over the next several issues. If any of the cards are received before this issue goes to the printer, the date of receipt will be listed at the bottom of the list. — *WF6O*

Real Performance for the Real World!

Today's elite-class operators demand the best RF weaponry available. Yaesu's exciting new MARK-V FT-1000MP answers the call, with an expanded array of receiver filtering, 200 Watts of power output, and Class-A SSB operation capability for the cleanest signal on the band. Enhanced front-panel ergonomics on the front panel save you seconds in a pile-up or a contest "run," and Yaesu's HF design and manufacturing know-how ensures that no short-cuts have been taken in our effort to bring you the best HF transceiver money can buy. For more QSOs in your log, and more awards on your wall, there is only one choice: the MARK-V FT-1000MP from Yaesu!

I. Interlocked Digital Bandwidth Tracking System (IDBT)

The IDBT feature greatly simplifies SSB operation by matching the bandwidth of the DSP (Digital Signal Processing) system to the net bandwidth of the 8.2 MHz and 455 kHz IF stages. The IDBT system accounts for the settings of the IF WIDTH and SHIFT controls, and automatically sets a DSP bandwidth which matches the analog IF bandwidth.

II. Variable RF Front-End Filter (VRF)

Protecting the MARK-V's receiver components from strong out-of-band signals, the VRF system acts as a high-Q "Preselector" located between the antenna and the main bandpass filter networks, providing additional RF selectivity on the 160-20 meter Amateur bands for multi-operator contest teams, DX-peditions, or for operation near MW/SW broadcast stations.

III. 200 Watts of Transmitter Power Output

Utilizing two Philips BLF147 Power MOSFETs in a 30-Volt push-pull configuration, the MARK-V's transmitter puts out up to 200 Watts of clean output power, thanks to the conservative design of the PA section.

IV. Class-A SSB Operation

Exclusively available on the MARK-V FT-1000MP, a press of a front-panel button engages Class-A SSB operation of the transmitter, at a power output level of 75 Watts. Class-A operation produces incredibly clean signal quality, with 3rd-order IMD typically suppressed 50 dB or more, and 5th- and higher-order products typically down 80 dB or more!

V. Multi-Function Shuttle Jog Tuning/ Control Ring

The immensely-popular Shuttle Jog tuning ring, which is concentric with the Main Tuning Knob, has a new look in the MARK-V. It now includes the activation switches for the VRF (left side) and IDBT (right side) features, so you don't have to move your hand position to activate these important circuits during contest or pile-up situations!

Features

■Frequency Coverage: (RX) 100 kHz–30 MHz; (TX)160–10 m Amateur Bands ■Dual In-band Receive w/Separate "S" Meters ■Ten Pole Collins® Mechanical Filter Built-in ■RX DSP Noise Reduction and CW Peaking Filter ■High-speed Automatic Antenna Tuner ■Two TX/RX Antenna Jacks plus RX-only Jack ■TX Microphone Equalizer ■RF Speech Processor ■Direct Digital Synthesis ■CW Spot and Two Key Jacks ■Two Headphone Jacks (1/4" and 3.5 mm) ■Low-Level Transverter RF Drive Jack ■Separate FP-29 Power Supply (30 V/13.8 V DC Output)

HF 200 W All-Mode Transceiver

MARK-V FT-1000MP

EXPAND YOUR DX HORIZONS WITH THE FTV-1000 50 MHz TRANSVERTER!

- 50 MHz Transverter with 200 W PEP Power Output
- Class-A Bias Selection for Low TX IMD (FC: 50 W)
- High-Performance Receiver Front End
- Automatic, Effortless Operation with MARK-V FT-1000MP
- Upgrade to High Power with VL-1000 Linear Amplifier

Specifications

Frequency Range:	50-54 MHz
Antenna Impedance:	50 Ohms
Power Output:	200 Watts PEP
Spurious Emissions:	At least 60 dB down
Power Source:	DC 30 V and 13.8 V (supplied by FP-29 Power Supply of MARK-V)
Dimensions:	3.6" x 5.4" x 13" WHD (243.5 x 136.5 x 331 mm)

FTV-1000

200 W 50 MHz Transverter

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Ford noise problems revisited

Dave Ertel, KJ8V

Back in October of 1995 I wrote a brief article concerning Ford F-150 pickup noise problems. I feel that it is time to revisit the Ford noise problems in general.

To my amazement (don't know why), Ford still has not fixed the fuel pump noise problem. After talking with the engineers at Ford I have found out that they only fix this problem on a customer-to-customer basis. In other words, if there isn't a complaint they don't bother. More on fuel pumps later.

Where to find help and information.

First off I will say that the guys (engineers) at Ford are way more helpful and accessible than those at GM or Chrysler. These folks will actually help you with your problem. Steve Sageman, WQ8T, is no longer involved in the EMC group at Ford. He has moved on to the new business unit created by Ford. So here are the guys to talk to and their phone numbers. EMC Electromagnetic Group (noise related to engine control modules and other non-fuel system noise problems). Supervisor Thomas Hermann 313/337-5410, Larry Boguslawski (WA8RTP) engineer 313/845-3296, and Pat Quinn (WD8JDZ) Fuel Systems Engineer 313/755-6029. I talked with Larry and he identified my problem as fuel pump related, so I then talked to Pat Quinn. Pat is a great guy. Pat gave me the info on the Technical Service Bulletins (TSB's as your dealer will call them) He also advised me of an excellent article in the August 2000 ***Worldradio*** magazine pages 38-39 by Les Cobb, W6TEE, on how to enhance the performance of the Ford filter and even faxed me a copy of the article. This enhancement consists of placing two ferrite toroids (one on each lead to the filter) on the leads going to the filter and fuel pump. You can read the article or send me an e-mail and I will either fax you a copy or mail you one. I just had this done to my 2000 F-150 and it really works.

Toroids — one of my least favorite subjects. Never could figure out how they code those babies. Anyway, the toroids are a little over an inch OD with at least a 1/4 inch ID. The cost of these toroids is $2.25 ea. This is the first place that I have been able to actually talk to someone who could understand my ignorant request and help me out with toroids.

You can tell if you have fuel pump problems with a very simple test. With your HF radio turned on and tuned to a relatively quiet frequency (I have used 24.900) and your vehicle turned off, turn the ignition to the "on" position but don't start the vehicle. If you have a fuel pump problem you will hear a noise burst for about two seconds and then it will quit. That burst is the fuel pump coming on. Ford has their vehicles fixed so that if you just turn the key to "on" and don't start the engine the fuel pump will bring the system to pressure and then shut off. If you start the engine the fuel pump stays on. If you hear this burst of noise (and you will be able to tell right away) you have a noisy fuel pump that needs a filter installed. Usually, after you start the engine, a certain amount of other noise will cover up the fuel pump noise but it's still there as long as the fuel pump is running and it needs to be fixed as it just adds to the overall unwanted noise. Plus fuel pump noise with some rigs can be enough, by itself, to wreak havoc.

Another not-so-common noise problem is with the engine control module. This one is a little harder to find but it can be found and eliminated. The most common problem with the engine control module happens in the automatic transmission section of the module. Ford has the module fire a pulse to lock up the torque converter at light loads. This problem is, and was, very common on the Taurus model, however, as luck would have it I had the problem in my F-150 truck. If you discover this problem I hope your vehicle is still under warranty — these modules are $900.00 to $1,800.00.

Luckily, mine was still under warranty. You could always push Ford to fix it even if your vehicle is out of the initial warranty period under the emission control warranty — which I believe is still 50,000 miles. To find this type problem simply tune to a nice quiet spot on 20 Meters, or another band that you use, maybe before the band opens, drive at a constant speed and listen to the noise level. If it varies when you let off of or depress the accelerator, then chances are you have an engine control module problem (this noise is very different from ignition noise so don't be fooled), and it will get worse with time and needs to be fixed.

My engine control module put out about a 5 X 9+5 noise on 20 Meters. You can see why I got that puppy fixed. The guys at Ford went out of their way to help, even going as far as arranging the repair at my dealer, writing a letter to the dealer explaining in detail the problem and shipping a new control module to my dealer to install on my truck.

I accidentally found another source of noise via the Power Point receptacles that a lot of new vehicles seem to come equipped with. For some unknown reasons (us Hams do some dumb things now and then), I decided that this would be a very neat place to get power for the 2-meter rig. While I was trying to find some of my noise problems I decided to unplug the 2-meter rig from the power point receptacle. When I did this my noise level dropped about 5 "S" units. Hmm, that was a real shock. After talking with the guys at Ford they advised me that there is quite a bit of noise in the electrical system due to many devices firing and so forth that usually does not bother the standard audio equipment in their vehicles. Again, just my luck it bothered my HF rig. We kind of decided that this was probably due to the length of the power lead to the 2-meter rig and the close proximity of the power lead to the HF rig. As they said at Ford, this is not a quiet electrical system. So I now have the 2-meter rig wired directly to the battery and have eliminated another source of noise. I will still work on getting most of the noise out of the electrical system.

By now my noise level has dropped from about an "S" 9 + to about an "S" 4. Pretty good but not good enough. I am getting an appointment scheduled for the fuel pump filter fix. The trick now will be to talk my dealer into installing the toroids on the leads of the filter while they are installing the filter. There is no way that you can do this without dropping the gas tank on the F-150. So that eliminates installing the toroids yourself, at least on the F-150.

Now that I have a lot of the noise eliminated I have discovered that I also have some ignition noise that was covered up by all of the other noise. This, I feel, is a lot easier to deal with and I will do the usual fixes for it. One product that I have found to be very helpful in dealing with ignition noise is a Silicone Dielectric Compound (NAPA/ECHLIN part number ML-3). You simply place a drop of the compound on each spark plug wire terminal end and the rotor button if you still have one. This will help to suppress ignition noise. I will also install good quality, new resistor plug wires and plugs. I am a firm believer that plug wires do not last very long especially with the temperatures that engines run at today — especially the smaller four cylinder engines. Most all mechanics I have talked to say they should be replaced (if you want to keep the noise level down) every thirty thousand miles and from personal experience, I believe it.

One more important thing to consider when installing your HF rig in your vehicle is to keep the power leads and the coax separated as far as possible when running them from the battery and antenna. Even with 99% shielded coax, having the power lead and coax next to each other can be disastrous when it comes to noise.

There is one other contributing factor to the noise problem that I was made aware of recently. Don't laugh when you read this one cause it is very true and the folks at Ford are very serious when they tell you about it. It will happen on any make of vehicle and most people will overlook it. When you have exhausted all other avenues of noise elimination, check your tires. It has been discovered that steel belted radial tires can emit a certain amount of RFI and can cause very high levels of noise picked up by two way radios. I know, this sounds pretty far fetched, but don't overlook the tires. The noise level and pitch of the noise have been known to change with a change in tire pressure. The only fix that I have heard of is a new set of tires.

This problem can occur with brand new tires as well as older tires. The problem is not specific to one brand nor style or size. Apparently it has something to do with the way the steel belts were laid up in the tire during manufacture. I have not (to my knowledge), experienced this problem but, if after all other avenues of noise elimination have been exhausted and there is still a noise problem, I would certainly look at the tires.

I do not pretend to know that much about noise related problems, however ,I hope this will help anyone out there with a Ford product and maybe some others. Good luck on finding and fixing your noise problems.

David Splitt, KE3VV

FCC preemption in the 21st century

Last fall, during the brouhaha over the Presidential election results in the Sunshine State, Ham radio ops had a leg up on most of our fellow citizens when the issue of federal preemption arose. In the election law context, it was whether Florida election laws (and the interpretation of those laws by the Florida Supreme Court) were valid under the United States Constitution and federal laws that apply to "federal elections." Under the doctrine of preemption, if there was a conflict between the Florida election law and the U.S. Constitution or federal election law, then the federal law would prevail because the U.S. Constitution and federal election laws enacted by Congress would preempt the state laws.

In the context of Ham radio, we have been discussing preemption of local zoning laws affecting Ham radio antennas and tower structures under PRB-1, the rules enacted by the Federal Communications Commission under the authority of the federal Communications Act (which, in turn, is based on the authority of Congress to regulate interstate commerce under the U.S. Constitution). Under the preemption doctrine, if local election officials took an action that was proper under Florida law but contrary to applicable federal election laws, the local action could be overturned in court. The same is true of local zoning laws. Under PRB-1, if local zoning regulations fail to give "reasonable accommodation' to Amateur Radio antennas, then enforcement of the local ordinance could be challenged in court.

There is no doubt going to be a lot of pressure on the Congress to enact legislation that will further preempt local election statutes and regulations by establishing national "standards" for elections that involve federal offices, such as Congressional races and the Presidency. Standardization of ballots and counting procedures will be hotly debated, and state government officials will be resistant to surrendering their prerogatives to Congress. At the same time, there will be tremendous pressure on local officials to bring their local balloting procedures up to snuff with 21st century technology. One of the major reasons why local governments balk at upgrading antiquated and worn-out voting machines is the cost. Most calls for upgrading voting systems have been drowned out by calls for better schools and roads and playgrounds. This time, the memory of the Florida voting debacle may push the need for better voting technology to the forefront.

I predict that state and local officials will lobby for federal funds to upgrade their antiquated voting systems. Congress will be receptive to these requests (like they have been willing to provide funds in the past for local roads, airports, and schools). There will be millions of federal dollars made available for the latest and greatest high tech voting systems. However,

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VE Region under the sequential call system as of 19 December 2000.

For more information about the sequential call sign system, see Fact Sheet PR5000 #206-S dated August 1996 or contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll free 888/225-5322

District	Group C Technician	Group B General	Group A Am Extra
Ø	KCØJEE	++	ABØPM
1	KB1GBI	++	AA1ZZ
2	KC2HGS	++	AB2LD
3	KB3FWM	++	AA3WD
4	KG4KXA	++	AG4EV
5	KD5MOV	++	AD5BE
6	KG6END	++	AD6TX
7	KD7LHR	++	AC7KO
8	KC8PYD	++	AB8JE
9	KB9YOF	++	AB9AR
N. Marianas	KHØLO	++	++
Guam	KH2UZ	++	++
Hawaii	NH7CU	++	++
American Samoa	WH8ABD	KH8DO	AH8T
Alaska	WL7CVE	WLØZA	++
Virgin Island	WP2AIM	NP2LM	++
Puerto Rico	WP3IP	++	WP3T

++ All calls in this group have been assigned

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like most dollars from Uncle Sam, those subsidies will have lots of federal strings attached. In order to get the subsidies from Washington, DC, local governments will have to agree to follow federal guidelines for ballots and ballot counting procedures. Just you watch....

The lesson for Amateur Radio in these election law maneuverings is that the harsh spotlight of public attention can have a major impact on preemption issues. Heavy duty lobbying on Capitol Hill can also result in added pressure on federal regulators to change the way in which federal laws are enforced on the local level. In one recent Congressional action, lawmakers in Washington gave in to local law enforcement pleas that some federal power be shared with them to halt violations of federal regulations governing Citizens Band radio.

Under the U.S. Constitution and federal law, CB radio is just another aspect of the airwaves that are regulated by the feds under the auspices of the Federal Communications Commission. The FCC allocates spectrum to CBers, regulates CB equipment, and prescribes the manner in which CB radio can be properly used. As any Ham who has faced an irate neighbor (whose TV reception is being garbled by a rogue CB operator running an unlawful amplifier) can tell you, there are plenty of bootleg CB operations out there giving Ham radio a bad name. One part of the solution may be the recent enactment of Public Law 106-521, which is entitled, "An Act to authorize the enforcement by State and local governments of certain Federal Communications Commission regulations regarding use of Citizens Band radio equipment."

The purpose of this law is to allow state and local government agencies to become more actively involved in combating interference resulting from illegal CB radio operations. Under this law, state legislatures and local governments may enact laws or ordinances that prohibit the use of unauthorized CB equipment, and subject violators to enforcement by local law enforcement agencies. Local prohibitions could cover two areas. The new statute says, "... a State or local government may enact a statute or ordinance that prohibits a violation of the following regulations of the Commission under this section:

"(A) A regulation that prohibits a use of Citizens Band radio equipment not authorized by the Commission.

"(B) A regulation that prohibits the unauthorized operation of Citizens Band radio equipment on a frequency between 24 MHz and 35 MHz."

This is all fine. When your neighbor comes screaming to your door that he is hearing "10-4 Good Buddy, What is your 20???" on top of Channel 37's "Mud Wrestling Coeds' Tractor Pull and Bake Sale," you can calmly tell him to have the County Mounties check out the 2 Kw CB amp in the semi parked down behind the local K-Mart. But the same assumption that brought your neighbor to your door may create some new problems for legitimate ham operators. While the law was carefully monitored by the ARRL and bill sponsors, the language of the law does not explicitly tell local gendarmes that they have no jurisdiction to deal with Amateur Radio licensees when a CB problem arises.

According to the ARRL, one of the sponsors of the legislation in Congress, Representative Vernon Ehlers of Michigan, says that some Michigan Amateur Radio operators asked him to support the bill because Hams were being blamed for the illegal activities of "CBers using high-power linear amplifiers that resulted in TV and telephone interference while the CBers involved hid behind federal preemption." The ARRL says that Ehlers asked the ARRL to review his measure to ensure that it would not unintentionally harm Amateur Radio. The ARRL was consulted, and the law exempts Ham radio licensees from state and local legislation. However, because the exemption is "in legalese" rather than a plain statement of non-applicability to Hams, the Amateur Radio community needs to be aware of their rights and be ready to educate local law enforcement personnel if a state or local regulation is enacted.

The exemption for duly licensed amateurs under the federal statute is not specific to Ham radio. The actual language of the law says:

"*A station that is licensed by the Commission pursuant to section 301 in any radio service for the operation at issue shall not be subject to action by a State or local government under this subsection. A State or local government statute or ordinance enacted for purposes of this subsection shall identify the exemption available under this paragraph.*"

This language amends Section 302 of the Communications Act of 1934. The actual legal citation to the United States Code is "Title 47, U.S. Code, Section 302a, subsection (f)(2)." This is great for lawyers, but you may have some problem explaining that your Ham license was issued to you "pursu-

ant to Section 301" of the Communications Act of 1934. You may want to keep this handy to prattle off to Smokie the Bear as she hauls you off at gunpoint and confiscates your (completely legal) 1.5 kW mobile rig. Better yet, make sure that any state or local regulations or ordinances that seek to implement this new federal law include a "plain English" statement that the law does NOT apply to Ham radio operators.

Those of you who do a lot of mobile operations like I do are already aware that you must carry your FCC license with you when you are on the road. That is why the FCC sends you a wallet-sized version with your "suitable for framing" version. Look at it. Notice that it does not say that it was issued "under Section 302 of the Communications Act of 1934." While I am not gonna be too harsh with the ARRL reviewers who OK'd this language (it does "legally" exempt Hams), it may not be clear enough to convince local authorities that they have no right to hassle you if they get a complaint about illegal radio signals. The ARRL might want to look into having any state or local laws include some plain English verbiage that tells law enforcement officials that Ham radio operators are off limits when enforcing these laws.

By the way, if you do get "pulled over" by the locals and can't get anyone to believe you or understand that you are exempt under "Section 302," there is some additional help for you in the federal statute. Under Section 302a(f)(4)(A), "... a person affected by the decision of a state or local government agency enforcing a statute or ordinance under paragraph (1) may submit to the Commission [the FCC] an appeal of the decision on the grounds that the state or local government, as the case may be, enacted a statute or ordinance outside the authority provided in this subsection." In plain English, if you get busted for legal operations under your Ham license, you can "make a federal case" out of it and appeal to the FCC. You have to file the appeal within 30 days after the "decision of a state or local government agency " becomes final, but "prior to seeking judicial review of such decision." In other words, appeal to the FCC before appealing to a higher court.

Of course, there is one caveat to all of this. The exemption for licensed Amateur Radio operators does NOT cover a Ham who is illegally operating a CB rig in contravention of applicable laws. This includes full-code Extras.... (hi hi... that is a JOKE, fellas!).

— David Splitt KE3VV, 6111 Utah Avenue, N.W., Washington, DC 20015; email: davidsplitt@erols.com.

Competitors came from around the world to participate in the ARDF World Championships. Team USA proudly displays the colors.

10th ARDF World Championships — Nanjing, China

Marvin Johnston, KE6HTS

Far more popular in Europe, than the U.S., ARDF combines Direction Finding, Orienteering (map and compass), and running. Using direction finding equipment, competitors are given an orienteering map and have a set time, usually 120 or 130 minutes, to find four or five transmitters and return to the finish line. A championship course will be about two square miles in size with five transmitters out on the course. A beacon transmitter on a different frequency is located at the start of the finish corridor to help competitors find the finish line. This is a timed event and winning times are usually in the 45 to 55 minute area for a course length of about 8 kilometers (5 miles.) The competition is an individual effort and competitors are not allowed to give or receive any help from anyone except jury members while out on the course.

The detailed orienteering map will show the topography of the land, vegetation and trees, buildings, trails, landmarks, and anything else that might be significant for navigation. Also shown are the start and finish locations. Direction finding equipment for 2M usually consists of a Yagi antenna and receiver while 80M equipment consists of a receiver and either a loop or ferrite rod antenna.

Starting line for the 2-meter course.

There are five standard classes in ARDF international competition: Women, Juniors, Seniors, Old Timers, and Veterans. Only the Seniors have to find all five transmitters. The Veterans don't need #2, the Juniors don't need #3, the Women don't need #4, and the Old Timers don't need #5.

This year, 242 competitors from 26 countries competed and this was the second time in the history of the ARDF World Championships where the U.S. competed (the first was 1998 in Hungary). U.S. competitors paid their own travel expenses and the ARRL paid the participation fees. Most of us have been training and practicing for at least a year in preparation for this event and doing direction finding and/or orienteering for a much longer time. Representing the U.S. was:

Junior (19 and younger)
Jay Thompson, W6JAY
Senior (20 - 39)
Jack Laughlin, KC7CGK
Gyuri Nagy, KF6YKN
Csaba Tisztarto
Old Timer (40 - 54)
Dick Arnett, WB4SUV
Bob Frey, WA6EZV
Marvin Johnston, KE6HTS
Veteran (55 and older)
Bob Cooley, KF6VSE
Harley Leach, KI7XF
Women (any age)
Karla Leach, KC7BLA
Team Captain
Dale Hunt, WB6BYU
Team Trainer
Richard Thompson, WA6NOL

Dale was also the IARU Region 2 representative for the International Jury that would decide the rules and settle any questions or protests about the competition.

Friday, 13 October 2000

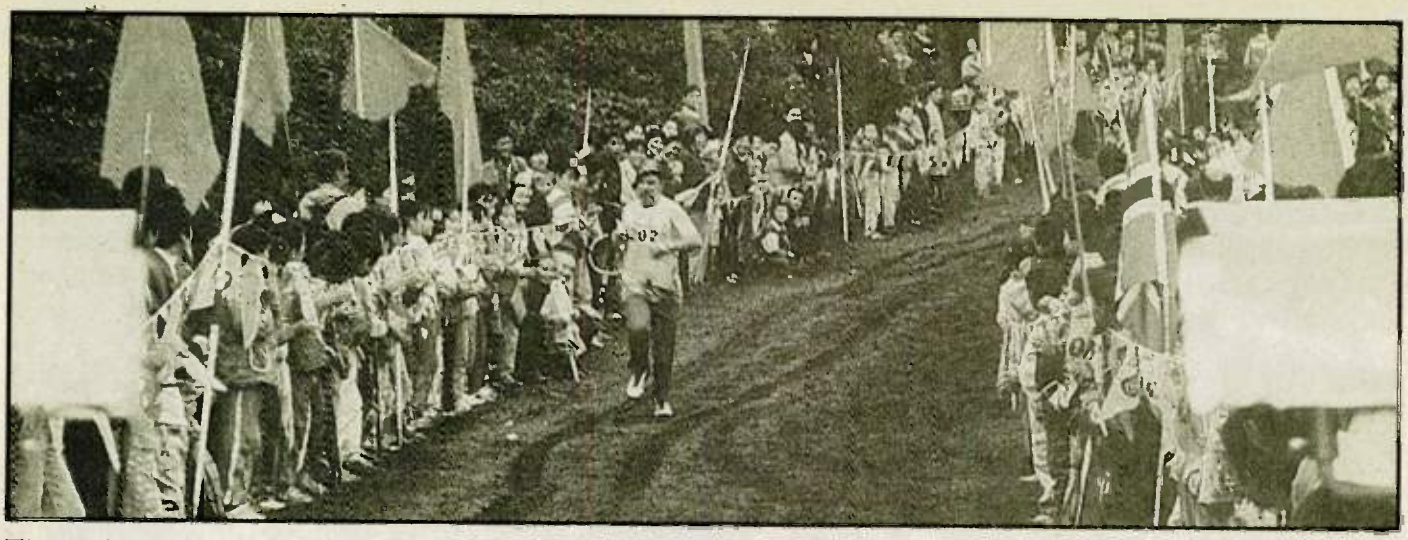
Arriving in Shanghai about 8 p.m.by plane, I found two people waiting at the exit with a sign "10th ARDF World Championships" to pick us up. Two other team members, Richard and Jay Thompson, were also scheduled to arrive shortly, and once they arrived, everyone headed out to the van for the trip to Nanjing. About four hours later we arrived at the New Century Hotel where we were greeted with a snack before heading up to our hotel rooms about 2 a.m.

Saturday, 14 October 2000

Today would be practice sessions and the opening ceremonies.

At 9:45 a.m. everyone gathered downstairs to get on buses for the short trip over to the practice area. The practice area had five transmitters for both 2M and 80M running the same transmit sequence that would be used in the competition. It was fun to watch the reaction of the other people visiting the park as they seemed very interested in our equipment and the practice taking place. When the transmitters began going off the air at 11:30 a.m., everyone headed back to the buses for the short ride back to the hotel where lunch would be served.

We headed down to the buses about 2:45 p.m. for the short ride over to the park where the opening ceremonies



This muddy track is the downhill leg to the finish line of the 80 Meter competition.

would take place. It was a bit breezy and cool but overall, the weather was very nice. As they arrived, teams lined up along the back where there was a good view of the stage. Many pictures were taken and after getting our U.S. team pictures, a number of other team members and spectators had their pictures taken with our team. This part was really fun, and something everyone enjoyed! Shortly thereafter, the opening ceremonies began.

The opening ceremonies had a number of officials and dignitaries speaking and welcoming everyone to the competition. After about 30 minutes of opening speeches, the entertainment began. For approximately one hour, dancing, singing, instrument playing, martial arts, and gymnastic demonstrations took place that were enjoyed by all.

Sunday, 15 October 2000

Today would be the 2M competition. The buses left about 6:45 a.m. for a one-hour trip to the competition area. A police car with lights flashing was escorting the line of buses to the competition site. Officers were stationed at each intersection along the route so the convoy did not have to stop or get split up.

Arriving at the competition site about 7:45 a.m., the first thing we did after finding a place to wait was to get our equipment ready and put it in an area where it would stay until our start time. The first competitors would leave at 8:50 a.m and the maximum time to complete this course would be 130 minutes. Electronic scoring would be used for this competition. Each competitor would insert a credit card sized electronic scoring card into the electronic scoring box located at each transmitter and at the finish where the time and our competitor number would be recorded.

Ten minutes prior to our start time, we were called up to get a map and an electronic scoring card. The 14x16-inch maps were trimmed and put in the map holders we had brought along. Until our actual start time, we would be studying the map deciding probable routes and getting familiar with the location of the roads and trails.

Five minutes before our start time, we went up to the actual starting line. As usual, there were two exit corridors; one for the Seniors, Old Timers, and Veterans, and a second for the Women and Juniors. At the appointed time, the whistle blew and we were off. In a departure from other meets, we left with transmitter #5 on instead of #1.

The first several hundred meters were a slight uphill climb along a trail at the top of a hill. Since the Old Timers class didn't have to find transmitter #5, I just took note of the direction. When transmitter #1 came on, I got a northern bearing at about 10 degrees that looked like it was north of the finish area. A minute later, transmitter #2 came on at a bearing of about 30 degrees. Judging by the signal strength, I felt it would be the farthest one away. Transmitter #3 came on at about 40 degrees but the signal strength was much stronger and #4 came on from a direction just south of the finish area. The best course looked like #4, #3, #2, #1, and into the finish. Unfortunately, I had overrun the trail heading towards #4 and it seemed the best recovery was to go after #3 first.

With a very strong signal, I thought #3 was close by but after two cycles (10 minutes) of not finding it, decided it was further away and not seeing a trail, headed through the brush and down the hill. The signal kept getting stronger and as I continued, I could see other competitors off in the distance climbing a fairly steep hill. Since my bearings indicated that was the proper direction for #3, I kept going for the 75 meter climb up the hill. Arriving at the top, I punched my first transmitter at about one hour.

Opening and closing ceremonies were spectacular.

Heading back down the hill towards #4, I arrived at a trail and followed it through a small village towards transmitter #4. Since I didn't have good enough bearings at that point to know where to go, I waited for #4 to go back on. When it started transmitting, I found I had overshot the trail heading up to #4 and ran back to the trail. By this time, the signal had gone off the air, but I knew I was close to the transmitter. Continuing up the trail, I located #4 up about 100 meters just off to the right of the trail. Two down and two to go!

I headed back down the trail and through the village to a trail heading north to where transmitter #2 seemed to be. Continuing along, I was running downhill and took a spill that slowed things up a bit as I had a bloody mess with my right hand. Somehow, I had managed to create a small gash that produced no particular pain but most definitely a lot of blood; it looked far worse than it was. Continuing on slower and much more carefully, I arrived at the area about 15 minutes later. Another climb of about 75 meters brought me to transmitter #2.

Walking down the fairly steep hill, I arrived back at the trail and headed in the direction of #1 and the finish. With about 15 minutes to go, I headed along the trail and found the probable location of #1 about 100 meters off the trail. With only about seven minutes left to get to the finish without being disqualified, I chose not to get #1 and headed towards the finish. Rounding a bend in the trail, I could see the finish corridor lined with a crowd of cheering spectators. Running through the finish corridor, I clocked in to finish the course with a time of two Hours, nine minutes and 45 seconds, just 15 seconds away from being disqualified.

This turned out to be a fairly difficult course that caused almost everyone some problems. The biggest problem seemed to be trails shown on the map but not readily found. We had about half the U.S. team disqualified for being overtime. The winning times were 62:16 in the Women's Division, 65:31 in the Junior Division, 56:49 in the Senior Division, 57:43 in the Old Timers Division, and 74:48 in the Veterans Division.

Tuesday, 17 October 2000

Today would be the 80M competition. After breakfast, we picked up a box lunch and climbed aboard the buses at 6:30 a.m. to leave for the competition site. During the one hour trip, there were intermittent light showers and it was still misting lightly when we arrived at the competition site. The few tents and beach umbrellas were quickly grabbed by those teams arriving first. A tarp was put on the ground and overhead to provide some protection from the rain for the rest of us.

The competition began at 8:50 a.m. and because of the rain, the course

Competitors were allowed to practice prior to the actual competitions.

time was increased to 140 minutes. As usual, people began warming up about 20 minutes before they would start. Ten minutes before the start time, we were called to the starting area and given the electronic score card and a map. The starting procedure was identical to the 2M competition and at the appointed time, we got the starting whistle and were off.

Transmitter #5 was on at the starting time and even though as an Old Timer I didn't need to find it, I took a bearing on it since it would help eliminate some area on the course for the other transmitters. Heading north, transmitter #1 came on from the west and #2 to the southwest. Having a choice of either going west or north at this point, I chose to continue north up a road. Transmitter #3 came on to the northwest followed by transmitter #4 more to the north making it look like I had made the correct choice. At this point, the correct order appeared to be #4 followed by #3 with not enough information available yet to decide the order for #1 and #2.

Farther up the road, it became apparent transmitter #4 was to the west and I headed up a trail in that direction. The difficulties began when the trail disappeared and it was mostly fight (thick vegetation very difficult and slow to navigate through) from that point on. It took about 30 minutes or so to break through the vegetation to a point where I could move a bit more quickly. Ten minutes later, I was most happy to see the control flag for transmitter #4 at about one hour (45 minutes longer than it should have taken!) After putting my card in the electronic reader, I headed off to find transmitter #3.

Because of all the fight on the way to transmitter #4, I didn't trust the map and headed down to a road to get to transmitter #3. This would result in a longer run, but would also make it unlikely I would get stuck again. Running south to the road, west, and back north along another road, transmitter #3 was pretty easy to get a bearing on. Seeing a trail that headed in the right direction, I followed it up to another trail where I should be able to easily find the transmitter. Getting to the top, the receiver was wet and the sense antenna did not work. Having a 180 degree guess to make, I chose wrong and headed off in the opposite direction. So much for easy. Five minutes later when the signal went off again, I still made the wrong decision. On the third cycle, it became apparent the signal was getting weaker so I turned around and headed in the correct direction. Five minutes later, I could tell I was going the right direction. Getting a good bearing, I continued down a hill after the transmitter was off the air, and found it off cycle. Going the wrong direction ended up costing almost 20 minutes. My time was now around 1:40 and I had 40 minutes to find the other two transmitters.

Heading back towards the other two transmitters, I had somewhat over a one mile run to get to the general area. It should be added that there were still occasional light misting and the trails were very muddy and slippery making for slow going. Twenty minutes and a number of falls later, I was close to the finish area and turned south towards transmitter #1 and #2. As I went around a lake, I had 20 minutes to find whatever transmitters I could and get to the finish. Getting a strong signal for number one, I headed for it. With 10 minutes left, I was close to #1 and was waiting for it to come on. At this point, I decided to head back to the start for a sure two transmitters rather than risk finding #1 and finishing overtime.

The final 300 meters were a very muddy downhill run. I ran down the road into the finish corridor lined with people and it was rather fun being cheered on while heading to the finish line. Crossing the finish line at close to full speed, I put my card in the electronic punch and handed in my electronic punch card thus completing

the course. Since it was late in the day and I was one of the last competitors finishing, everyone headed to the buses for the trip back to Nanjing.

This also turned out to be a difficult course. The biggest problem seemed to be equipment problems probably caused by the wet weather. Fortunately, everyone on the U.S. team finished within the allotted time. The winning times were 67:02 in the Women's Division, 55:22 in the Junior Division, 59:41 in the Senior Division, 54:38 in the Old Timers Division, and 67:37 in the Veterans Division. Typically, the times are faster in the 80M course than the 2M course.

The Closing Ceremonies started at 7:00 p.m. During these ceremonies, the gold, silver, and bronze medals were awarded to both the individual and team winners of the 2M and 80M competitions. The team scores were calculated by adding up the individual scores of team members.

The banquet followed the closing ceremonies and it provided a chance to talk with and exchange small gifts with other competitors. Typical gifts that were exchanged included QSL cards, pins, small country flags, and similar souvenirs. A table was set up just outside the room where people could buy souvenir shirts, maps, pins, etc. from the competition. I was fortunate in being able to talk with Tcherman Gouliev, UA3BL, and winner of the 80M Silver medal from the USSR in the 80M competition. He went over the 80M course in some detail describing his route choice, his speed of travel over the different portions of the course, and the mistakes he made. His course time was 62 minutes and he made the comment that he should have done it in about 47 minutes.

Richard Thompson, WA6NOL, operating at the special event station, BT4ARDF, located on the 29th floor of the New Century Hotel where everyone stayed.

Wednesday, 18 October 2000

Breakfast started being served at 5:00 a.m and the bus would leave for Shanghai airport at 9:00 a.m. thus ending another ARDF World Championship competition. For an inexperienced team, we did quite well and most of us are already starting to prepare for the next competitions. The next U.S. competition will be held around 01 August 2001 and the next World Championships will be held in Slovakia in 2002. While it takes training and preparation to get ready for these events, it's a lot of fun! Anyone interested in finding out more about ARDF and/or in joining Team USA can get more information at the Homingin web site at http://www.homingin.com.

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***Only* MFJ gives you 5 *tunable* DSP filters. You can tune each lowpass, highpass, notch, and bandpass filter including optimized SSB and CW filters. You can *vary* the bandwidth to pinpoint and eliminate interference.**

***Only* MFJ gives you 5 *factory* pre-set filters and 10 *programmable* pre-set filters that you can customize. Instantly remove QRM with a turn of a switch!**

MFJ's *automatic notch* filter searches for and eliminates *multiple* heterodynes.

You also get MFJ's advanced *adaptive noise reduction*. It silences background noise and QRN so much that SSB signals sound like FM.

The *automatic* notch and *adaptive* noise reduction can be used with *all* relevant tunable pre-set filters.

***Automatic gain control* (AGC) keeps audio level constant during signal fade.**

Tunable bandpass filters

Narrow band signals like CW and RTTY jump out of QRM when you switch in MFJ's exclusive *tunable* FIR bandpass filters.

You can tune the center frequency from 300 to 3400 Hz, and vary the bandwidth from 30 Hz to 2100 Hz -- from super-tight CW filters to wide razor-sharp Data filters.

You can use two tunable filters together. For example, tune one to mark, one to space and set bandwidth tight for a super sharp RTTY filter.

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You can tune the lower cutoff frequency 200 to 2200 Hz and the upper cutoff frequency 1400 to 3400 Hz. This lets you create custom filters for voice, data and other modes.

Signals just 75 Hz away literally disappear -- they are reduced 57 dB!

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Noise reduction works in all filter modes and on all random noise -- white noise, static, impulse, ignition noise, power line noise, hiss.

The LMS algorithm gives you up to 20 dB of noise reduction. Noise reduction is adjustable to prevent signal distortion.

15 *pre-set* filters -- factory set or you custom program

You can select from 15 *pre-set* filters. Use for SSB, AM, CW, packet, AMTOR, PACTOR, RTTY, SSTV, WeFAX, FAX or any mode.

If you don't like our pre-set filters, you can program your own -- an MFJ exclusive! Save center frequency/bandwidth, lowpass/highpass cutoffs, auto/manual notch, noise reduction -- all filter settings -- in 10 programmable filters.

Plus more . . .

A push-button bypasses your filter -- lets you hear the *entire* unfiltered signal.

2½ Watt amplifier, volume control, input level control, speaker jack, PTT sense line, line level output. 9½x2½x6 inches.

Plugs between your transceiver or receiver and external speaker or headphones. use 12 VDC or 110 VAC with MFJ-1315, $14.95. Cable Pack, MFJ-5184, $7.95, includes receiver cable, DC cable, 2 open-end TNC cables.

New Features

MFJ's exclusive *tunable Spotting Tone*™ -- accurately tunes even the narrowest CW filter.

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MFJ's exclusive *FilterTalk*™ -- sends precise filter settings in Morse code.

Has automatic notch with variable aggressiveness, new quieter 2½ Watt audio amplifier, new speaker switch keeps phones always active.

Manual and automatic notch can be used together. Noise reduction, automatic notch and custom filter you saved in memory is selected.

You get an accurate easy-to-use input level indicator, improved manual notch in the CW mode, adjustable line level output, more Mark-Space frequencies and baud rates for data filters and automatic bypass during transmit for monitoring CW sidetone, voice or data by sensing the PTT line.

Firmware Upgrade

For MFJ-784, order **MFJ-55, $29.95**. Gives you most features of the MFJ-784B.

60 dB Null *wipes out* noise and interference

MFJ-1026
$179.95

Wipe out noise and interference *before* it gets into your receiver with a 60 dB null!

Eliminate all types of noise -- severe power line noise from arcing transformers and insulators, fluorescent lamps, light dimmers, touch controlled lamps, computers, TV birdies, lightning crashes from distant thunderstorms, electric drills, motors, industrial processes . . .

It's *more effective* than a noise blanker because interference much stronger than your desired signal can be completely removed without affecting your signal.

It works on *all modes* -- SSB, AM, CW, FM -- and frequences from BCB to lower VHF.

You can null out strong QRM on top of weak rare DX and then work him! You can null out a strong local ham or AM broadcast station to prevent your receiver from overloading.

Use the MFJ-1026 as an *adjustable phasing network*. You can combine two antennas to give you various directional patterns. You can null out a strong interfering signal or peak a weak signal at a push of a button.

Easy-to-use! Plugs between transmitting antenna and transceiver. To null, adjust amplitude and phase controls for minimum S-meter reading or lowest noise. To peak, push reverse button. Use built-in active antenna or an external one. MFJ's exclusive *Constant Amplitude Phase Control*™ makes nulling easy.

RF sense T/R switch automatically bypasses your transceiver when you transmit. Adjustable delay time. Uses 12 VDC or 110 VAC with MFJ-1312B, $14.95. 6½x1½x6¼ inches.

MFJ-1025, $159.95. Like MFJ-1026 less built-in active antenna, use external antenna.

Add DSP to any Multimode

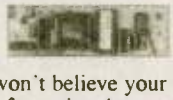
MFJ-781
$129.95

Add "brick wall" DSP filtering to any TNC or multi-mode data controller. Copy signals buried in noise and QRM. Under severe QRM, DSP greatly improves copy of Packet, AMTOR, PACTOR, GTOR, Clover, RTTY, SSTV, WeFAX, FAX, CW -- nearly any digital mode. Automatic gain control, On/Off Bypass switch. Plugs between transceiver and multi-mode. Uses 10-16 VDC or 110 VAC with MFJ-1312B, $14.95. 4½x2½x5 inches.

DSP for your MFJ-1278/B

Plug a MFJ-780 "brick wall" DSP filter into your MFJ-1278/B multi-mode and you won't believe your eyes when you see solid copy from signals completely buried in QRM! MFJ-1278/B automatically selects the correct DSP filter for Packet, AMTOR, Pactor, RTTY, ASCII, FAX, Color SSTV, Navtex or CW. Plug in a MFJ-780 and copy signals that other multi-modes can't. *Some soldering needed.*

MFJ-780
$99.95



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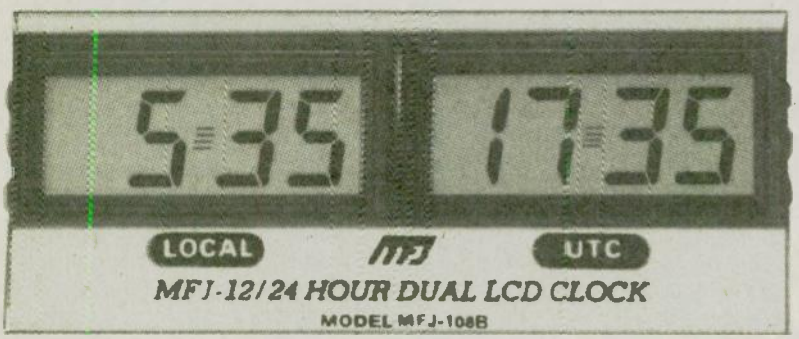
MFJ 24/12 Hour Clocks



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$19.95 plus s&h

MFJ-108B dual clock has separate 24 hour and 12 hour displays. Lets you read both UTC and local time simultaneously. Features huge high-contrast 5/8 inch LCD numerals that makes it easy to read across the room. Mounted in solid brushed aluminum frame with sloped face for easy viewing. Synchronizable to WWV for split-second timing. Quartz controlled for excellent accuracy. Long life battery included. 4½Wx1D x2H in. MFJ's famous *No Matter What*™ one year limited warranty. *$6 s&h.*

DXer's Wall Clocks

MFJ-125, $29.95. 12 inch DXer's Quartz wall clock gives 24 hour time plus more. Has three smaller independently settable dials for 12 hour time, day of week and date. No more day/date confusion when logging DX! Highly visible, easy-to-read dials! Has Seconds hand.

MFJ-115, $24.95. Set this 24 hour clock to UTC/ GMT and you can determine the time in any time zone of the world at any time of the day. Premier world cities encircle its colorful world map face to indicate time zone. 12 inch face is easy to see across room. Has Seconds hand.

MFJ-105C, $19.95. *World's most popular ham radio wall clock!* True 24 hour Quartz movement. Huge 12 inch black face with large white numerals give excellent visibility across room. Attractive gold colored hour, minute and seconds hands.

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MFJ-119B, $49.95. Giant LCD Display 24/12 Hour Clock. Has *giant* see-across-the-shack 2¼ inch time digits. Digital calendar or clock modes. Displays inside temperature (F/C), relative humidity, month, date and day of week. Handsome hunter green and tan color. Wall mount. 8½x9 inches.

MFJ-118, $24.95. 24/12 hour clock has jumbo 1¼ inch LCD digits. Displays 24 or 12 hour time, year, month, date, and day of week. 100 year full calendar. Hang on wall or desk mount. 5¾Wx2½Hx1½D in.

MFJ-107B, $9.95. 24 hour UTC Clock has large 5/8 inch LCD numerals. Synchronizable to WWV. Solid brushed aluminum frame lasts for years. Long life battery included. 2¼x1x2 in.

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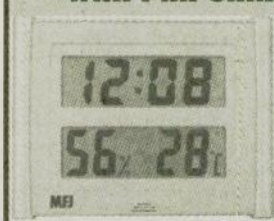

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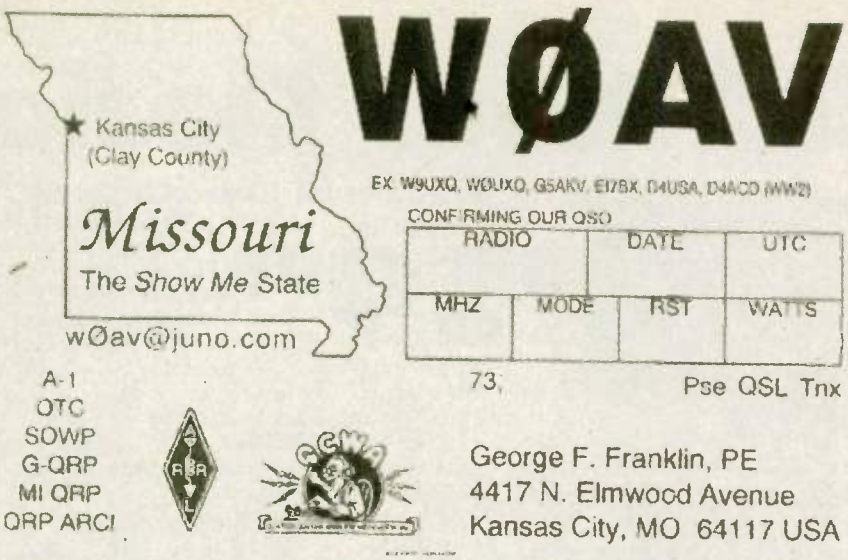


Jumping the gun

George Franklin, WØAV

The year was 1945, Germany had just surrendered, ending WW2 and I was a sergeant with the U.S. Army in occupied Germany. My wartime combat unit was being demobilized, so I sought and found a new home with the 3rd Mobile Radio Broadcasting Company, attached to Military Government Detachment E-6, Frankfurt, Germany. Our urgent mission was to get some sort of broadcast station back on the air in Frankfurt without delay, in order to disseminate vitally needed information to the locals. Their Radio Frankfurt had been totally destroyed by allied bombs.

As a dyed-in-the-wool Ham, my number two priority was to get on the air. In fact, it soon climbed to number one (at least during off-duty hours).

With a bit of judicious GI scrounging, I soon came up with a Hallicrafters SX-28 receiver, a 5-watt audio amplifier with a dynamic microphone and a number of crystals which would multiply into the 20-meter band. More conversations with other GI's in the right positions yielded a power supply, a collection of receiving-type tubes and an Eimac 100TH tube, along with a high-quality junk box of miscellaneous capacitors, resistors, tube sockets and the like. I found a local sheet metal shop which gladly fabricated a 19-inch aluminum chassis in exchange for a few packs of cigarettes. My home-brew 20M rig (built from fond memories of similar rigs built back at home pre-WW2), took shape almost overnight. At the old Radio Frankfurt transmitter site where I was billeted, a fifty foot high wooden cooling tower (for the defunct BC transmitter's final and modulator tubes) still stood and became a wonderful support for a vertical 20M half-wave antenna, center fed with open wire line. I was just about ready to burst forth upon the post-war Ham scene when I heard what was obviously a GI Ham in Spain signing EA1D. This really spurred me on to be the first one to put Germany back on the air.

There was the matter of obtaining a license to operate in Germany. This was an interesting question, as the German government at the time was hardly functional and the U. S. authorities had not yet addressed the problem. I knew better than to ask the Army for permission; the answer would undoubtedly be a resounding "no!"

I decided to "jump the gun" and see what would happen. I "self-assigned" myself the prestigious call

D4USA; Amateur Radio in Germany resumed with a bang. I was the first of a dozen or so GI Hams in Germany, all using self-assigned calls, up to D4USJ, as I recall.

Things went great for several months on 20M CW and phone. I worked my new friend Johnny at EA1D, along with many strange stations, such as LZ1XX in Bulgaria, "3A," obviously a pre-war amateur somewhere in Europe and British and American GI's scattered all over the world. I made WAC on phone and CW several times over when the inevitable occurred. The Army authorities monitored my operations, in response to a complaint from the UK that I was bothering one of their military nets. I was ordered off the air, with a stern warning not to operate again until I was properly licensed. The Signal Corps Lt. Col. who paid me the visit turned out to be a Ham himself. This fact, plus the fact that I had a copy of my USA Ham ticket (W9UXQ), no doubt kept me from being thrown into the slammer for illegally operating a transmitter in an occupied enemy country.

During my unauthorized operation as D4USA, I had many contacts on 20M CW, and on phone, grid modulating the 100TH. One of my greatest thrills was a three-way QSO on 20M CW one Sunday afternoon with two of my Ham buddies from St. Louis, my home town. Both were operating from merchant marine vessels, one in the Pacific and the other somewhere in the Indian ocean. What a reunion that was!

Shortly after the demise of D4USA (and all the other bogus D4 stations), the Signal Corps in 1946 began issuing

D4 calls to GI Hams who could prove that they held valid FCC tickets. In short order, I became D4ACD and was back on the air, legally this time.

At first, we were authorized only one band, 10 Meters, and only the portion above 29 MHz. I quickly modified my trusty rig and antenna for 10 Meters, but experienced some difficulty in making contacts as all stations other than the new D4's were operating down around 28.1 MHz and rarely listened up above 29 MHz. They finally discovered us, of course, and many fine DX contacts were made. I heard later that most other amateurs worldwide could only listen to us and drool, as very few countries had reinstated Ham operations.

A few months later, GI amateurs in Germany were given 20 Meters and other bands, but still there was no USA activity. I recall one very interesting QSO a day or two before U.S. and Canadian stations were authorized to resume operations. I was delighted to hear a VE3 station reply to my CQ on 20-meter AM. He told me that he was "jumping the gun," since VE's would not be notified until the following day that they were allowed back on the air. It seems that he was a Canadian official, and "just happened" to get the word before anyone else did! In the course of our ragchew across the Atlantic, I mentioned my home call and the fact that my mother and brother still resided at my pre-war callbook address in St. Louis. Evidently many U.S. amateurs were listening to that QSO, as my mother was deluged with phone calls, letters and cards telling her that I had been heard from Germany. Later, when U.S. amateurs were authorized to resume 10-meter operation, I was able to talk with my mother and brother in St. Louis numerous times via phone patch, through the courtesy of several of my pre-war ham buddies.

I have lost touch with the GI D4 Ham friends who were licensed in Germany. My friend, the Signal Corps Lt. Col. has long since joined the ranks of Silent Keys. So has one of my two pals of the memorable three-way QSO on that Sunday afternoon long ago.

Although I certainly don't now advocate "jumping the gun," with regard to Amateur Radio operation, my experience many years ago remains a very vivid and pleasant memory.

Two neighbors, two destinies

Rick McCusker. WF6O

The Point Reyes National Seashore features some of the most impressive scenery in North America. There are mountains, seashore and gently rolling hills, covered with grass, trees and a vast assortment of wildlife. Also located within the park are two radio stations — one very active, and the other sleeping silently, awaiting resurrection.

NMC

In the late 1960's the U.S. Coast Guard wanted to move their radio station from the hills above San Bruno to a better location. The area around the station had become a crowded area with lots of electrical noise, so the search was on for a more "radio friendly" location. Taking a cue from nearby commerical maritime stations, a site was selected in Marin County, some 40 miles north of San Francisco.

The site selected was in the Point Reyes National Seashore, and ground was broken in 1971. Communication Station (COMMSTA) San Francisco went on the air on 12 October 1972 taking over duties from the former station at San Bruno.

Housing for the crew is located in Point Reyes Station, a sleepy little town noted for the flood of tourists that visit the area during the mild weather periods of spring, summer and fall. When the housing area was constructed, the population of Point Reyes Station doubled.

NMC revisited

I recently inquired about a tour of NMC. Cliff Simonsen is the operations officer, and was my host during the tour. He also is a Ham with the call sign AD6BS. During my tour I was shocked at the changes that had taken place. Every piece of equipment I was familiar with was gone!

While I was stationed there, we used Collins 651-S receivers on the HF bands. This receiver was a dream to use, extremely simple to operate and featured a digital readout and a built-in scan mode. Each operator had four of these receivers at the console, and during the day it was common to monitor all four at the same time. There were two consoles dedicated to HF CW communications — with one exception. A close vigil was maintained on 500 kHz at at all times on the third console in the HF booth.

Because of the massive antenna farm at the receiver site, it was not uncommon to work a commercial ship in the Indian Ocean if propagation was good. Military communications were maintained with cutters throughout the Pacific — including icebreakers working in Antarctica.

Another booth was familiar, but not the gear. In what used to be the booth for voice radio where the operator would monitor 2182 kHz, was a console full of computers. The display on the screen look very familiar — e-mail! I asked Cliff about the e-mail and he replied, "E-mail is relayed from us to the cutters at sea." I asked if this was done on HF, and he said, "No, it's done using satellites. A loved one can send an e-mail to a Coast Guardsman on a cutter, and with the automatic relay system, it will be delivered to the cutter in less than five minutes." I couldn't help but think what a boost to morale that would be for a crew member out at sea!

As we wandered around looking at all the wonderful equipment now in use, we stumbled upon what used to be my booth — "tech control." The console is no longer there! It has been replaced with racks of receivers, with all of them remoted to other booths in the operations center.

Continuing around the operations center, I saw the only console where there is actually a "live" operator — the air-to-ground console where NMC stays in constant contact with Coast Guard aircraft out on patrol or during search and rescue operations.

The Coast Guard ceased CW operations in 1995, and much to my surprise, the transmitters now used are not capable of CW operation. When I asked about this, Cliff said, "The only way we could work CW is to hold a microphone to a speaker on a practice oscillator — if we could find one around here."

The only modes NMC now uses are NAVTEX, SITOR, and satellite communications. GMDSS is maintained on a constant basis.

After thanking Cliff for the excellent visit, I left the station. Unfortunately, CAMSPAC San Francisco is not open

for tours to the general public. There is sensitive cryptographic gear located in the operations area, so public access is not allowed.

As I drove down the twisting road to the main "highway" I admired the massive antenna farm that pulls in those far-off signals. When I reached the end of the access road to NMC, I had the choice to turn left and head back to Sacramento, or to turn right and visit the "neighbor."

KPH

What a contrast! NMC is alive and well, and KPH was downright eerie! As I drove up the driveway to the KPH receiver site, I couldn't help but notice the neglected landscaping along both sides of the road.

KPH was one of the first commercial maritime stations in the U.S. It was established early in the 1900's when radio was first introduced as a means to communicate between ship and shore. RCA built the station and operated it for many, many years. It was sold to communications giant MCI, and then sold again to Globe Wireless. Since Globe Wireless also owned KFS, located just down the coast in Half Moon Bay, California, it was decided to remote the KPH transmitters to KFS and close the receiver site.

I was met by a fierce-looking security guard, Bilal Azam. He informed me that no one was allowed to enter the building except employees of the current owner, Globe Wireless. I was successful in my attempt to gain access to the building after explaining I just wanted a few photographs of what I thought would be a completely vacant building. I certainly was wrong!

The main operations area at KPH had several consoles for CW operators while SITOR operation was in a separate room next door. What really surprised me was the ghost-town like setting in the operations area. All of the equipment is in place, and I got the feeling the last watch went out for a coffee break and forgot to come back!

There are wooden carousels at each of the consoles with paper cards inserted in slots listing the call signs of the ships the station held traffic for. In two of the carousels I spotted undelivered messages that were still awaiting delivery when the station closed. At one of the consoles, a Kenwood receiver is still on, tuned to the 8 MHz CW band for commercial vessels.

One of the CW consoles at KPH — all the equipment is still in place, and there are undelivered messages in the rack on the left.

I got the feeling that I could sit down, flip a few switches and put KPH back on the air. It was a truly ghostly experience when I thought of all the operators that spent a good portion of their lives operating at those consoles.

All of the equipment is still there, although each piece of gear had an inventory tag. I wasn't able to determine if the gear is being disposed of, or if it is going to be preserved. Because KPH is located within the boundaries of the park, its future is uncertain.

An effort is underway by the California Historical Radio Society to preserve the receiver and transmitter sites, and to operate them as an Amateur Radio station. The group is working with the National Park Service to make this a dream come true for Hams. Until that happens, KPH sits there, like a lonely, abandoned sentinel, waiting for someone to come in and throw the switch to the "on" position. With any kind of luck, Hams will be there when and if that happens. It would certainly be an excellent contest station!

Visiting Stockholm?

Henryk Kotowski, SMØJHF

We have heard a number of complaints from Hams visiting Stockholm that it's difficult to find the most interesting club station in this area. In order to faciliate this and spread more information about our club station, let me present some facts.

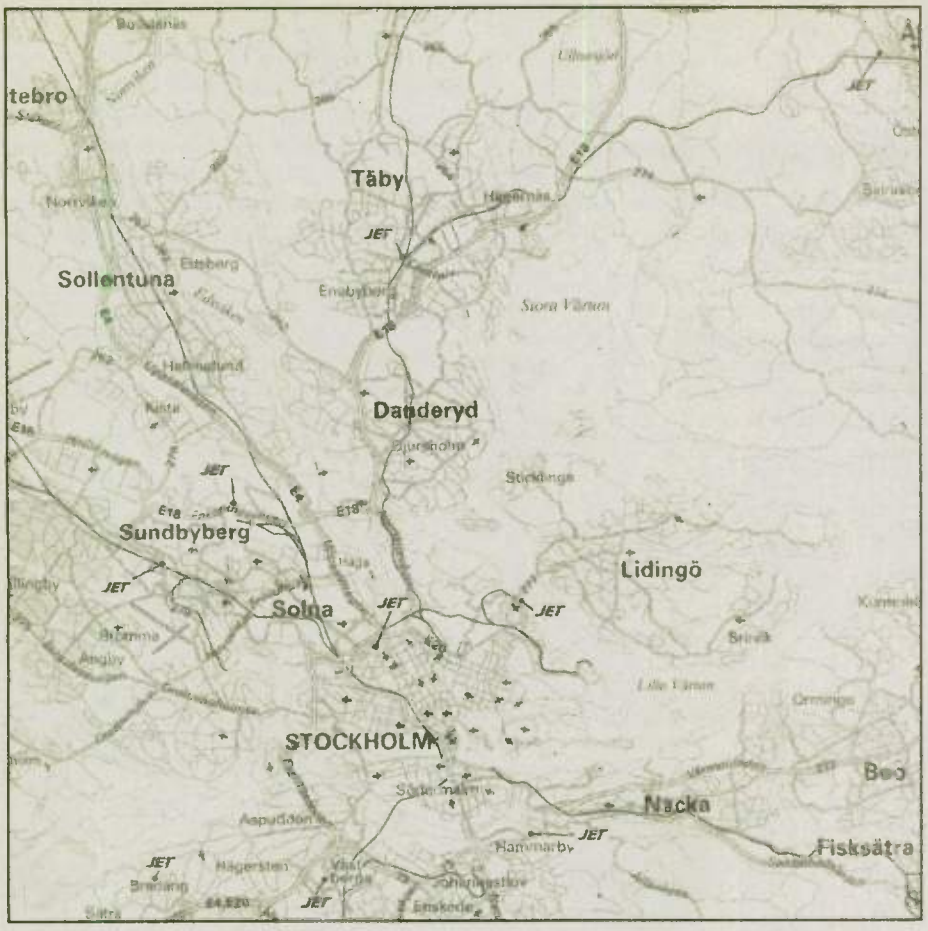
The club, called Kvarnberget Amatörradioförening, was founded in 1993 and took over the call sign SKØUX and the present site from a local club of a Stockholm suburb of Täby. Since then a number of new towers and antennas have been raised and through a unique agreement with a few other clubs, hundreds of their members have access to our club station. Our club has some 35 members, profoundly interested in all aspects of Amateur Radio and willing to share their knowledge, experience and facilities with anyone attracted by our hobby. We welcome anyone visiting Stockholm for long or short periods to join the club or just use the station. We have antennas covering almost the whole spectrum allocated to Amateur Radio. There are nine towers at the club station — some of them with very impressive arrays. Still, there is room for more antennas, permanent or experimental.

Access is restricted, so it's wise to contact me by telephone (+46 707 561493), e-mail: sm0jhf@chello.se or send a message to the club's reflector at: sk0ux@sk7do.te.hik.se. The club is located just above Ullnasjön (Ullna Lake, 30 km north of Stockholm, along the E18 motorway.

Above left: Waldemar Kuna, SNØTQX, and Goran Fagerstrom, SNØDRD, operating during a contest at SKØUX.

Left: Fabian, Kurz, DJ1YFX, is our youngest contester. He's only 16.

Above right: Map of the Stockholm area shows the suburb of Taby



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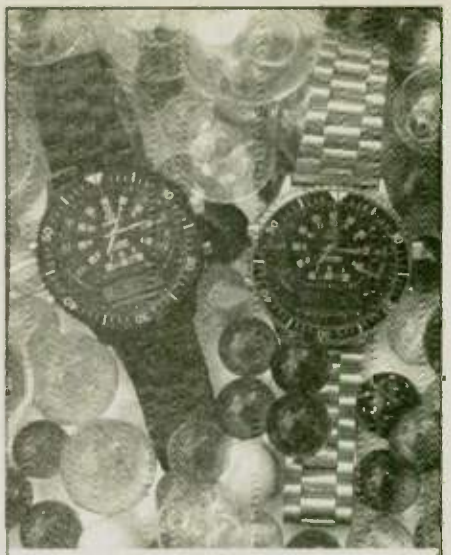

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Worldradio is now offering the new "31 on 31 Award" to our readers. How do you earn this new, highly coveted and prestigious award? Work 31 countries on PSK31! It's easy!

Of course, there are rules.

1. The 31 countries must be soverign nations. No teeny little possessions of another country.

2. The countries contacted must be on ***Worldradio's*** list of nations. No, you can't send in a list of DXCC countries. There are some similar countries, but believe us, our list is different than the League's list.

3. Send us a list of your contacts, by call sign, date and time, and band. If you want to send some commentary along, we just might put it in the magazine. We trust our esteemed readers, so we aren't asking for verification from other amateurs, your letter carrier, the local CIA office or the IRS. Just send your list. That's it! We don't even want your hard-to-get QSL cards.

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Coming soon — I Worked All 50 on 31 Award.

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In commemoration of ***Worldradio's*** 25th Anniversary in 1996, we first offered the "Contact All Time Zones" (CATZ) award.

• Rules

The start date for valid contacts is 01 July 1996 at 0000Z.

The world is divided into 24 time zones. Each time zone is 15 degrees wide. For the sake of this award, half-hourly zones and out-of-zone artificial time changes will be ignored.

This award is based on the true 15 degrees each, world map 24 time zones.

The applying station must have one (two-way) contact on Amateur Radio allocated frequencies with a station in each of the world's 24 time zones. Contact with one's own nation does not count.

The operator applying for the award must have made all 24 contacts from a location within the same country.

The award may be endorsed as the applicant wishes in regard to band and/or modes.

• Application

The applying radio operator must be in possession of 24 QSL cards, one from each of the time zones.

A list shall be made showing each contact's call sign, date, band, mode and the time zone starting with the prime meridian (0°) and moving eastward.

There is a fee of $5 to cover the cost and mailing of the 8 x 10 certificate (mailed unfolded).

It is not necessary to mail your QSL cards to ***Worldradio***. Send a statement signed by two other licensed radio amateurs (General Class or above) that they have inspected and verified the required QSL cards.

Address applications to CATZ Award, ***Worldradio***, 2120 28th St., Sacramento, CA 95818.

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Letters to the Editor

Field Day Safety...

I would like to make a few comments regarding the article "Field Day Safety" pp 13 December 2000. The author makes reference to the safety of personnel during an electrical storm while operating radio equipment on Field Day. In his approach towards a safe operating environment he violated several rules in the National Electrical code. The most important one being:

Article 250-34 Portable and Vehcile Mounted Generators.

A) Portable generators.

The frame of a portable generator shall not be required to be grounded and shall be permitted to serve as the GROUNDING ELECTRODE for a system supplied by the generator under the following conditions:

1) The generator supplies only equipment MOUNTED on the generator or cord - and PLUG connected equipment through receptacles MOUNTED on the generator, or both, and

2) The non current-carrying metal parts of equipment and the EQUIPMENT GROUNDING TERMINALS OF THE RECEPTACLES ARE BONDED TO THE GENERATORS FRAME.

I further direct Mr. Pierpont's attention to N.E.C. article 250 on "grounding" and art. 250-114: "Equipment connected by Cord and Plug" for his review before next Field Day.

By disconnecting the "green" wire in a 3 wire GROUNDED cord, one removes the cord's U.L. safety rating.

Secondly, installing 6-foot "ground" rods (5/8" x 8' copper rods are the U.L. standard), at opposite ends of the circuit creates an unwanted parallel path to ground in the event of a ground fault condition. This condition is especially hazardous when the earth is wet. A low impedance path back to the source of power, in our case the portable generator, guarantees that the over current device protecting the power cords will open quickly to protect the cord and the user. The longer the circuit distance, the more important this becomes. Ground Fault Circuit Interrupters (GFCI's) should not be considered as a substitute for grounding. Precautions and common sense must be used when an electrical storm is nearby. Cease operation until the storm passes!

I hope, through this letter, SPARK will have a safer Field Day.

Jack Fisher, K2JX
Huntington, NY

HT hint...

I thought I would share one of the many ways an HT can really be handy. When it is cold in the garage/work shop, some times my florescent shop lights won't light up. I key up my HT on an unused simplex frequency while holding the end of the rubber duckie near the lamp tubes, and the lamps light right up.

I would like to wish the staff at *Worldradio* a well earned happy holiday season.

Gary Steinhour, N6DZA
(via e-mail)

(Ed. Thanks for the hint, Gary... On that subject, there is a lady here in Sacramento that I have been kidding for a long time. She is single, and I have her wedding all planned out. The ceremony will be held in a church with flourescent lights. When the ceremony starts, all the Hams in attendance will key their HT's at the same time, thus lighting the lights and saving some energy. They may offer a discount for saving some money on their electric bills! Then there's the four portable towers with HF beams, two on each side of the walkway out of the church. The beams on each side will be pointed towards the other side for the "RF flyby" as they leave the church...)

Silent Keys

Steve Affens, K3SA

Well-known contester and DXer Steve Affens, K3SA (ex-K3ZAW), of Olney, Maryland, died 28 November after suffering a heart attack in the Cayman Islands. He was 52. Affens and his wife were celebrating their 30th anniversary in the Caymans.

Affens operated from the Caymans as ZF2SA during the *CQ* World Wide CW DX Contest and had been active in the ARRL November Sweepstakes. Affens was first licensed in 1963. He was an active member of the Potomac Valley Radio Club and the club's webmaster. Affens was a videographer for WJLA in Washington, DC, which described him as "one of the nation's most distinguished photojournalists." Affens won the White House News Photographers' Association award for Cameraman of the Year five times. He also was the recipient of several Emmy Awards and numerous other photography citations. — *W3UR, WB3GXW, WJLA, ARRL Letter*

Jack D. Gant, W5GM

Former ARRL West Gulf Director Jack D. Gant, W5GM, of Ardmore, Oklahoma, died 6 December. Gant served as West Gulf Division Vice Director from 1972 to 1976 and as Director from 1977 to 1980.

Licensed for 66 years, Gant was an ARRL member for most of those years. He also belonged to the Quarter Century Wireless Association.

ARRL Executive Vice President David Sumner, K1ZZ, remembered Gant as "a real gentleman." ARRL President Jim Haynie, W5JBP, said Gant mentored him when Haynie first joined the Board as West Gulf Director in 1982. — *ARRL Letter*

Millard L. "Gib" Gibson, W7JIE

Former ARRL Northwestern Division Vice Director Millard L. "Gib" Gibson, W7JIE, of Seattle, Washington, died 1 December.

Gibson served as Northwestern Division Vice Director in 1983 and 1984 after being appointed by then-ARRL President Vic Clark, W4KFC, to fill an unexpired term. Gibson had served as director of the IARU Region 2 Intruder Watch program and also was active as an Official Observer.

Gibson was a member of the QCQA. On the air, he had been an active CW QRP operator. — *ARRL Letter*

Joe Carr, K4IPV

Amateur Radio author Joseph J. "Joe" Carr, K4IPV, of Annandale, Virginia, died 25 November. Carr reportedly died at home in his sleep.

Carr had contributed hundreds of articles over the years to various publications, including *QST, Popular Electronics, 73, Nuts and Volts* and others. At the time of his death, Carr was the "Antennas & Things" columnist for *Popular Communications.*

Carr was a prolific author and had written more than 100 books, including "Joe Carr's Loop Antenna Handbook," "Practical Antenna Handbook," "Receiving Antenna Handbook" and "Practical Radio Frequency Test & Measurement — A Technician's Handbook." Carr also authored numerous non-Amateur Radio related books as well. — *ARRL Letter*

Station Appearance

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

Glenn M. Wade, N7JWF & Julie Wade, KC7FQI

Glenn was first licensed in 1986 as a Novice, (KA7ZTO). He upgraded one step at a time, becoming a Tech in 1987, and then, General, Advanced and Extra in 1993 after he retired. Julie was first licensed in 1994 as a Technician.

The station consists of a Kenwood TS-950S DX, SM 250 Scope, MFJ 962C, an Ameritron AL811 amplifier, and a Kenwood TM 741 2-meter transceiver.

The antenna is a Mosley 67B at 60 feet. We also have a homemade extended Zepp at 50 feet that slopes down to 25 feet, with a "homebrew" 2-inch spaced ladder line.

Julie is the editor of our club newsletter. She works 2 Meters. Glen works 20/40/75/160 and 2 Meters, and occasional 10 Meters AM.

Glenn has spent many hours in the "shack," either talking "around the world" (as you can tell by all the QSL cards on the wall), just listening to others, helping countless friends with radio problems, or being a great "Elmer" by helping friends study for their upgrade, or by just encouraging others who want to upgrade or who are just starting out in the hobby.

He has assisted so many folks in our group with radio problems, that a few years ago, he was awarded a "golden screwdriver," which hangs over the desk.

Glenn loves being a "Ham" so much, he named his dog "CQ!"

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John F.W. Minke, III, N6JM

W-100-N

The following DXers completed the requirements for *Worldradio*'s Worked 100 Nations Award:

585. Joel D. Goings AA4P
586. Glenn E. Barnes KD4FN
587. Charles H. Brudtkuhl WAØROI
588. Jeff M. Poston WØIKD (All 10M CW)

Notice that Jeff made all his contacts on 10 Meters, indicating that CW is alive and well on that band.

CATZ

32. Richard A. Perkins WA7SNY (All CW)

Agalega (3B6RF)

Hans-Peter Blaettler, HB9BXE, has released the following announcement:

"At the beginning of September unexpected early elections of the parliament of Mauritius took place. Surprisingly, the opposition won these elections. Without any justification and at short notice, two days before the former government at Mauritius was dissolved, our landing permit was canceled. This was the situation when our members Karl, HB9JAI, and Jack, F6HMJ, arrived as advance crew at Mauritius. They traveled one week ahead of the main party to make the final preparations for the expedition. Both stayed two weeks at Port Louis and were asked to file a new license and landing permit and to deliver this request personally to the responsible government departments. Thanks to the good relations which they established with the new government a new general license, including both landing permit and radio amateur license has been promised.

"Our revised plan is to depart from Port Louis on 1 or 2 May 2001 for Agalega. The voyage will last two days. We expect to be QRV on 5 or 6 May for a total of 16 days.

"We are very sorry that we cannot fulfil the request of many U.S. amateurs. However, as we will become active for a total 16 days the pileup will be less dense during the second half or our stay on Agalega. This will give a fair chance to the less fortunate U.S. Hams. In addition, our antenna layout as well as our frequency plan are optimised for the U.S. amateurs. Conditions are ideal for other continents like Europe and Asia.

"Unfortunately, some members of the Agalega 2000 crew cannot participate in May 2001 for various reasons. Therefore, we have some open operator positions. Experienced operators who would like to participate are kindly requested to contact our leader Hans-Peter, HB9BXE at hb9bxe@pilatusnet.ch.

"Both the freight and tickets to Mauritius were canceled in time so we didn't lose too much money. The loss is limited and a major part of the expenses are covered through the membership contributions. This should demonstrate to the Ham community that we use the contributions and donations very carefully and that we try to reduce the expenses as much as possible.

"Fortunately, we are not alone in being heavily burdened because many YLs and OMs felt and feel with us. They encourage us to continue the planning of a successful 3B6 expedition in 2001."

Mauritania (5T)

According to *425 DX News*, an excellent weekly on-line DX publication edited by Mauro Pregliasco, I1JQJ, Yannick, F6FYD, is to be based in Nouakchott, Mauritania, for at least six months and will be active on all bands. Look for Yannick signing with 5T5YD, effective 14 November 2000. All QSL requests should be sent via his home call.

Iran (EP)

Bernie McClelly, W3UR, of *The Daily DX*, says EP4PTT is the newest club station located in Shiraz, Iran. The station is currently active on 20 Meters SSB operated by Hamid Rahimi, EP3HR, and Yar Pasyar, EP3SP. QSL requests for this station should be sent only to the Iranian QSL Bureau, c/o Directorate of Telecommunications, Box 11365-931, Tehran, IRAN.

Unfortunately there has been some pirate activity with this call, Hamid reports. There also has been some reported activity saying to QSL via RZ6LS. From what Hamid says, this is a pirate!

French Polynesia (FO)

According to *425 DX News* Alain Claverie, F2HE, plans activity from French Polynesia for eight months beginning in December. Look for him signing with FOØCLA on Rangiroa Island (OC-066). He might also operate from Rurutu Island (OC-050) in

the Austral Islands, a separate DXCC entity.

Palmyra Island (KH5)

Mike Gibson, KH6ND, has left Palmyra Atoll (OC-085) and returned to Honolulu.

Gary Shapiro, NI6T, reports that the Nature Conservancy's (TNC) acitivities on Palmyra have ceased for the winter. And, given the imminent change in ownership, it is unknown what operating opportunities will be available in the future. However, Gary says that Mike and the Kingman Reef/Palmyra DX Group (KRPDXG) hope to be involved in future amateur activity from there.

During his volunteer stay on Palmyra, Mike, when not involved with work assignments, handed out more than 25,000 contacts on 10 bands and three modes, signing with KH6ND/KH5. The final count may be closer to 27,000. Mike's efforts, and those of N4BQW, WB4JTT, NH6UY and KH7U were part of KRPDXG's overall efforts to assist TNC on Palmyra Atoll.

The Palmyra effort was in turn an integral part of the Kingman Reef project. The Kingman Reef DXpedition concluded its operational phase on the last day of October with almost 82,000 contacts in the log.

IOTA

Roger Balister, G3KMA, RSGB IOTA Manager, lists the following IOTA operations that have provided acceptable validation material to the IOTA committee:

AF-029 ZD9/ZS1B Tristan da Cunha Island (Sep/Oct 1999)
AF-030 ZD9/ZS1B Gough Island (Sep/Oct 1999)
AF-088 C91RF/P Mocambique Island (Sep 2000)
AS-041 JI3DST/4 Nakano Island, Oki Islands (Jul & Aug 2000) AS-117 JI3DST/3 O Island (Sep 2000)
AS-147 JI3DST/8 Okushiri Island (Sep 2000)
AS-152 RØ/UR8LV Bol'shoy Begichev Island (Sep 2000)
EU-181 LZ2FV/1 Sveti Anastasiya Island (Aug 2000)
EU-181 LZ3FN/1 Sveti Anastasiya Island (Aug 2000)
EU-181 LZ3SM/1 Sveti Anastasiya Island (Aug 2000)
EU-185 UE6AAD Dzendzik Island (Sep 2000)
NA-011 FOØAAA Clipperton Island (Mar 2000)
NA-064 AL7RB/P Attu Island, Near Islands (Sep 1999)
OC-063 FOØ/F5JJW Mangareva Island, Gambier Islands (Oct 2000)
OC-063 FOØMOT Aukena Island, Gambier Islands (Jul 2000)
OC-114 FOØMOT/P Raivavae Island (Sep 2000)
OC-150 YC9ID Lombok Island (resident)
OC-235 DU9BCD Camiguin Island (resident)
OC-235 W3PID/DU9 Camiguin Island (resident)

Note: This list includes operations where validation material was volunteered, ie., not specifically required for credit to be given. In all cases, cards now submitted will be accepted by checkpoints if they meet normal standards. This means that the island name must be on the card.

There are several other IOTA operations that the committee is still awaiting as of 3 November 2000, such as the KL7/W6IXP and KL7/K6ST operations in July, and others.

Roger also reminds all those who reside on islands to now include the island name on your QSL cards. In other words, if you reside on Long Island include such a reference. Such communities as Brooklyn or Hicksville will no longer be enough. Also, the IOTA reference number by itself is not enough.

As we are now in the winter months much of the summer IOTA activity is gone for the season. However, as you can see there is still a lot to choose from. If you were active in Sweepstakes and worked VE7TLL, that's the Charlottes (NA-051).

Our monthly selection of IOTA includes the following found during the month of November 2000:

AF-073 TS7N	Kerkennah Island	15-24 Nov
AF-086 D44AC	Sao Vicente Island	02-08 Nov
AN-006 EM1KY	Galindez Island	02-21 Nov
AS-017 JR6EA	Okinawa Island	10-12 Nov
AS-017 JS6PXB	Okinawajima	01 Nov
AS-023 JE6EMW	Amani Archipelago	09 Nov
AS-028 UAØQBA	Kotelny Island	03 Nov
AS-032 JA6CTW	Yaku Island	09-30 Nov
AS-036 JA6LCJ/6	Tsushima Islands	17-19 Nov
AS-040 JH6TYD	Goto Island	12 Nov
AS-043 JQ1USM/1	Hachijoshima	03-05 Nov
AS-043 JAØAB/1	Hachijoshima	05 Nov
AS-043 JI1PLF/1	Hachijoshima	03-05 Nov
AS-045 HL5FUA	Ullang Island	10-18 Nov
AS-049 JI3DST/6	Kuchinoshima	23-24 Nov
AS-053 HSØ/IK4MRH	Phuket Island	04-30 Nov
AS-056 JA6GXK	Mejima	15-18 Nov
AS-058 9M2/G3PMR	Langkawi Island	09-14 Nov
AS-062 RUØLM/Ø	Shitotan Island	12-23 Nov
AS-117 JH4TEW/4	Honshu Coastal	06-29 Nov
EU-008 GMØEWX	Isle of Skye	12 Nov
EU-009 GMØHTT	Orkney Islands	03-27 Nov
EU-009 GM3IBU	Orkney Islands	04 Nov
EU-010 GM3PWS	Isle of Lewis	06 Nov
EU-010 MMØBJG	South Uist Island	05-12 Nov
EU-012 GM4LBE	Shetland Islands	11 Nov
EU-016 9A2GF	Brac Island	11 Nov
EU-016 9A4KF	Hvar Island	19-21 Nov
EU-016 9A4W	Brac Island	01 Nov
EU-028 IA5CNE	Elba Island	17 Nov
EU-029 OZ/DK9LO	Lolland Island	18-30 Nov
EU-031 IC8WIC	Isle of Capri	10 Nov
EU-042 DK8OL	Isle of Sylt	17 Nov
EU-042 DK7OK/P	Amrum Island	02-03 Nov
EU-047 DL5SE/P	Norderney Island	18-19 Nov
EU-047 DJ9IN	Norderney Island	03-24 Nov
EU-049 SV8DCY	Lesvos Island	28 Nov
EU-055 LB8RE	Sotra Island	26 Nov
EU-055 LA2BKA	Reksteren Island	05-22 Nov
EU-057 DL4PM	Ruegen Island	05 Nov
EU-063 JW5RIA	Hopen Island	05-30 Nov
EU-096 OH1LU/P	Kustavi Island	05 Nov
EU-120 MØBTP	Isle of Wight	22 Nov
EU-120 GXØBAR	Isle of Wight	04 Nov
EU-124 GWØHGN/P	Anglesey Island	17-21 Nov
EU-130 IV3KTY	Grado Island	19 Nov
EU-131 IK3PQH	Lido Island	01-27 Nov
EU-138 SM/DL7VAF	Hassloe Island	01-05 Nov
EU-138 SM/DL5RFF	Hassloe Island	01-05 Nov
EU-138 SM/DL2JFN	Hassloe Island	01-05 Nov
EU-151 EA5KB	Penyeta'del Moro	01-19 Nov
EU-171 OZ4PAX	Vendsyssel Island	04-19 Nov

EU-171 OZ1IIT	Mors Island	01-29 Nov
EU-171 OZ1GKU	Mors Island	04-30 Nov
EU-173 OH1LU/P	Lampaluoto Island	02-04 Nov
EU-177 SK5BN	Arko Island	08-09 Nov
OC-022 YC9BU	Bali Island	02 Nov
OC-027 FOØPOM	Marquesas Island	06-10 Nov
OC-033 FK8HZ	Lifou Island	05-18 Nov
OC-035 YJØPD	Efate Island	19-28 Nov
OC-063 FOØDER	Mangareva Island	16-22 Nov
OC-066 FO/TK5PB	Hao Atoll	23 Nov
OC-067 FOØSCH	Bora Bora Island	01-09 Nov
OC-082 ZK1NJC	Penrhyn Island	04 Nov
OC-082 ZK1NDK	Penrhyn Island	01-04 Nov
OC-129 DU6RCR	Negros Island	07 Nov
OC-130 DU8DJ	Mindanao Island	29 Nov
OC-137 VK4LV	Bribie Island	14-21 Nov
OC-137 VK4YI	MacLeay Island	19-20 Nov
OC-140 VK6DIR	Direction Island	05-12 Nov
OC-146 YC8UFF	Sulawesi Island	19 Nov
OC-148 YC9BU/P	Timor Island	22-24 Nov
OC-148 YC9MKF	Timor Island	02-12 Nov
OC-149 H44NC	New Georgia Is.	16-18 Nov
OC-152 FOØWEG	Tubuai Island	01 Nov
OC-159 ZK1YRE	Mangaia Island	02-08 Nov
OC-159 ZK1AGL	Mangaia Island	02-08 Nov
OC-166 YC7IPZ	Tarakan Island	05-17 Nov
OC-169 A35ZG	Lifuka Island	01-07 Nov
OC-169 A35YL	Lifuka Island	01-04 Nov
OC-201 ZL1DD	Waiheke Island	05-06 Nov
OC-233 VK7TS/P	Bruny Island	14-22 Nov
OC-238 FOØDEH	Reao Atoll	09-19 Nov
OC-239 YC9WZJ/P	Irian Jaya Coastal	18-24 Nov
OC-240 P29VPY	Loloata Island	22-27 Nov
OC-241 YC9BU/P	Semau Island	27-30 Nov
OC-241 YC9MKF/P	Semau Island	27 Nov
SA-008 LU3XX	Terra del Fuego	04 Nov
SA-016 PR8CBS	Sao Luis Island	04 Nov
SA-018 CE7OXZ	Chiloe Island	05 Nov
SA-026 PP5TO	Santa Catarina Island	22 Nov
SA-050 CE8/KD6WW	Navarino Island	02-04 Nov

DXCC FAQ #8

Bill Moore, NC1L, of the DXCC Desk says that DXCC will be posting a list of applications received and logged into the computer on the DXCC web site. Just go to the DXCC website and click on List of DXCC Applications Received and a page will appear with the listings in order by call sign. The period covered by this report will be shown in the paragraph at the top of the page. Also shown at the top of the page will be the period DXCC is entering applications. If you have an application at DXCC and you find your call sign here, it's not necessary to follow up with a request to DXCC.

Cards for Chesterfield Islands (TXØ) and East Timor (4W) may now be submitted. If these new entities caused you to drop off the Honor Roll, now at 325 current, you will need to bring your totals to 325 by 31 March 2001 — the cutoff for the Honor Roll list.

Bill goes on to report on further developments of the DXCC program, and says, "Part of the new capital appropriation includes money for a complete upgrade for DXCC. We will be upgrading the software and hardware and this is due to be in place by the third quarter of 2001. Included in this change will be the ability for DXCC to receive, process and return DXCC submissions electronically.

When sending e-mail questions to DXCC please use only the address dxcc@arrl.org.

WPX

Another aspect of DXing is that of collecting QSL cards for awards. Such is *CQ*'s WPX Awards Program, for working different Amateur Radio prefixes. For example, that famous call sign WR6WR. The prefix here is WR6, (not the other WR which is a suffix). And N6WR is another prefix.

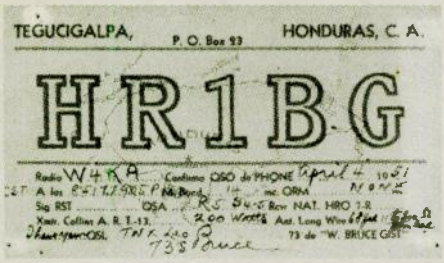
One nice thing about this award system is all you need is the QSL card. You don't need your list to be certified by others nor do you need to include other log data. In your submitted list only the calls are listed. Entry level into the program is 300 prefixes for either CW or SSB. If your desire is of mixed modes, then the minimum requirement is 400 prefixes.

In addition to the basic award there are endorsements in steps of 50 prefixes, plus continental and band endorsements. True-blue deserving DXers would soon get all these endorsements, except for the prefix steps of 50, which apparently never ceases! I have topped 2,600 and am far behind many of the leaders.

For complete details send a self-addressed stamped business sized envelope to the WPX Award Manager, Norm Koch, WN5N, P.O. Box 593, Clovis, NM 88101, requesting the latest rules, effective August 2000.

Antique QSL Department

Our first old-time QSL card this month is that of ZC6DZ from the deleted entity of Palestine, provided by Vern Dameron, K7DRN, of Henderson, Nevada. Operated by Dick Lennon, the date of this contact was 9 January 1950 and was with Vern's dad, W8HGA, of Hinton, West Virginia. His dad, also of the same name, had been licensed since 1932 and became a



Silent Key in 1987. There is presently a Richard H. Lennon with the call N2BL who was born in 1927 so I assume he is the same person.

The station equipment ZC6DZ consisted of a BC-610-E transmitter running 350 watts input and a Hammarlund HQ129X receiver.

The next two come from Leo Haijsman, W4KA, whose collection has spanned the pages of ***Worldradio*** often. The first is that of a 1951 contact with HR1BG, operated by W. Bruce Gist, who was using a Collins ART13, another famous military radio. You might say those rigs were early runners of auto-tune! There is presently a W. Bruce Gist with the call N4EKO. However, this Bruce would have been 12 years old at the time of the contact and the handwriting looks that of a much older person. Bruce told me he has no idea who the other Bruce was.

The VK4LM card is that of Les Mallinson, of South Brisbane, who Leo worked back on 25 September 1949 on 20 Meters. The card indicates that Les was using a four-stage transmitter with a pair of 807 tubes in the final running push-pull. Obviously, this was a homebrew rig, as most rigs were in those days. The call VK4LM has since been reissued to another party.

Thanks go to the following contributors for this month's column: F6JSZ, HB9BXE, NC1L, W4KA, N4XP, NI6T, K7DRN, Western Washington DX Club (WAØRJY), WebCluster (OH2AQ), *425 DX News* (I1JQJ,), *The OPDX Bulletin* (KB8NW), DX-News (NJDXA), The Low Band Monitor (KØCS), *The Daily DX* (W3UR), and QRZ DX (N4AA).

Long time readers will notice my interest in the IOTA program. I began covering this aspect of DXing when the program was still administered by the late Geoff Watts. Soon the RSGB assumed control of this progam, did some house cleaning, and the program has gained popularity continuously.

Anyone who has DXCC probably has enough islands to qualify for the entry level of this progam which is 100 different islands from all seven continents, (WAC continents, plus Antartica).

Hope your final year of the millennium was good one and now we begin the next one thousand years!

—John F.W. Minke, III, N6JM, can be contacted by sending a letter to: 6230 Rio Bonito Drive, Carmichael, CA 95608. You can also reach him by e-mail at: n6jm@pacbell.net

DX Prediction — February 2001

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 1934, Middleburg, VA 20118). 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. Smoothed sunspot number = 129. 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.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(14)*	*12	*20	*12	*20
10	*(13)*	12	*19	11	*19
12	27	11	*18	17	*26
14	31	*12	*27	*24	*35
16	33	*(12)*	24	*23	*39
18	*33	*(11)*	*(21)*	*20	*41
20	*32	*(18)*	30	14	*42
22	*27	24	*36	13	*42
24	*18	24	*40	*12	*35
2	*16	18	32	*12	*30
4	*15	14	*26	*11	*25
6	*(14)*	13	22	*11	*22

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(14)*	*12	*21	*(12)*	*19
12	*(13)*	*12	*19	*(11)*	*18
14	*26*	*11	*18	*(17)*	*34
16	30	*15	*25	22	*39
18	*32	14	*22*	19	*41
20	*32	*22	25	14	*42
22	*27	*28	33	*(13)*	*42
24	23	*27	*38	*(12)*	*38
2	*18	*25	*39	12	*30
4	*16	19	*31	11	*26
6	*(15)*	14	*26	11	*22
8	*(14)*	*13	23	*12	*20

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	17	*(12)*	20	*11	*21
9	17	11	*18	11	*19
11	*34	11	*18	*22	*25
13	*40	*12	*28	*25	*33
15	*43	*(12)*	25	*25	*37
17	*43	*(11)*	22	*23	*40
19	*40	*(11)*	26	17	*42
21	*33	22	34	14	*40
23	*23	22	39	*13	*37
1	*21	15	32	*12	*32
3	*19	13	25	*12	*27
5	*18	*(12)*	22	*11	*23

QSL Managers

3B8/SM6JBC	SM6JBC
3DAØNL	ZS6ANL
3E1DX	NØJT
3V8ST	DL1BDF
3W2AN	F6FNU
3W2FM	UAØFM
3W2LWS	WA1LWS
4D68HBC	JA1HBC
4S7WHG/A	G3SWH
4X3A	WA4WTG
5B4/RA3ZZ	RA3ZZ
5B4/RW3GW	RW3GW
5C8M	DL6FBL
5N2BHF	OE6LAG
5R8FU	SM5DJZ
5R8GT	DK8ZD
5R8O	5R8FL
5X1Z	SM6CAS
7Q7KZ	JA2LZF
8P9HT	K4BAI
8P9Z	K4BAI
8Q7TX	DL5XAT
8Q7WW	DL5XAT
9G1MR	IK3HHK
9G5AA	GM4FDM
9G5RF	GM3YTS
9K2/SP5UAM	SP5PBE
9M6AAC	N2OO
9M6NA	JE1JKL
9M6SMT	JF1SQC
9M8TG	JH3GAH
9M8YY	JH3GAH
A22ZS	ZS6ZS
A35MO	OM2SA
A35RK	W7TSQ
A52AP	N2OO
A52UD	K4VUD
A61AJ	W3UR
A61AO	N1DG
A61AT	IT9ZGY
BA2BI	W3HC
BW2ØØØ	JA1JKG
C56VB	OH2VB
C6A/WA3WSJ	WA3WSJ
C6AKP	N4RP
C6AKW	K3TEJ
CN2MP	EA9AM
CN8NK	EA5XX
CN8WW	DL6FBL
CO8ZZ	DK1WI
CP6XE	IK6SNR
CT3/DL2RUM	DL2RUM
D2BB	W3HNK
D44BS	CBA
D4A	I2MQP
DL2DXA/HI9	DL2DXA
DO8DM	DL5DSH
E21AOY	7L1MFS
E21CJN	W3PP
E22AAA	HS1CHB
EA8/DJ1OJ	DJ1OJ
EA8/GØIAS	GØIAS dir
EA8BH	OH2BH
ED9DSB	EA9BK
EGØXXV	EA4URE
EP2MKO	UA6HCW
ER2ØØØA	ER1DA
ER2ØØØB	ER1BF
ER2ØØØC	ER5AA
ER2ØØØD	ER4DX
ER2ØØØF	ER1FF
ER2ØØØL	ER1LW
ER2ØØØO	ER1OO
ER2ØØØU	ER1AU
ER2ØØØZ	ER1ZZ
EX8NP	IK2QPR
EY8MM	K1BV
FO/TK5PB	TK5PB
FOØDER	3D2AG
FOØPOM	SP9FIH
FOØWEG	SP9FIH
FY5FU	F5PAC
GD4UOL	G4UOL
HC1MD	K8LJG
HC8N	AA5BT
HFØPOL	SP3WVL
HI3K	AD4Z
HSØAC	G3NOM
HSØZAR	K3ZO
HZ1AB	K8PYD
J3/G3TBK	GØIAS dir
J3/G3TBK	G3TBK bur
J3/K2TE	K2TE
J37ZA	K2KQ
J38AA	WA1S
J3A	WA1S
J45KLN	SMØCMH
J75KG	N2AU
JD1BCK	JM1TUK
JW4KQ	LA4KQ
JW5DW	LA5DW
JW9OI	LA9OI
JX7DFA	LA2KD
JY9NX	JH7FQK
KHØ/JQ1UKK	JQ1UKK
KHØ/KD6CJF	JH5OXF
KHØ/WH7C	JG1OUT
KHØAC	K7ZA
LZ2K	LZ2MP
MJØAWR	K2WR
MU/OH9MM	OH3LQK
NHØS	JF2SKV
NHØV	JG3VEI
NP2KY/KH5	RZ3AA
NP2KY/NH6	RZ3AA
OHØB	OH2BH
OL6R	OK2KLI dir
OL6R	OK2ZR bur
OZ/DK9LO	DK9LO
P29VPY	KQ1F
P4ØE	W3HNK
P4ØRB	W9RB
PB6X	PA3HBB
PJ2MI	W2CQ
PJ2T	KN7Y
PJ5/K7NAA	K7NAA
PP4F	PY4FQ
PU3A	PY3PAZ
PYØFZ	PY4KL bur
PYØFZ	PY7ZZ dir
PZ5CM	K3BYV
PZ5DX	K3BYV
PZ5JR	K3BYV
S21YE	G4VLV
S21YH	7M4PTE
S21YJ	SM4AIO
SO9NX	LX1NX
SP2ØØØS	SP5ZCC
SU9ZZ	OM3TZZ
SY2A	SV2ASP
T88CQ	JAØDCQ
TA7I	IZ8AJQ
TI5/K9NW	WW9DX
TS7N	DL6BCF
TZ6DX	K4DX
UN7EG	DL8KAC
V26JT	K3JT
V26K	AA3B
V29TBK	GØIAS dir
V29TBK	G3TBK bur
V31DI	F5JY
V31FH	F6BFH
V31YW	F5TYY
V44KJ	WB2TSL
V63PA	JA4RF
V73JK	V73AX
V85TG	JH3GAH
V8PNA	N4PN
VE2IM	VA3UZ
VI2FFG	VK2FFG
VP2EST	KT8Y
VP2MDC	GØIAS dir
VP2MDC	G3TBK bur
VP5/K9RS	K9QVB
VP5GN	K5GN
VP8DCD	GØJLE
VP9/NC8V	NC8V
VP9/W9AEB	W9AEB
VP9KK	K1EFI
XT2AW	DF2WO
XV3AA	JA6UGH
XV9SW	SM3CXS
YBØABB	MØCMK
YC9WZJ/P	YC9BU
YI9KU	DL9KU
YI9OM	OM6TX
YJØPD	N9PD
YJØV	N9PD
ZB2CN	DJ9WH
ZB2X	OH2KI
ZF2AM	K6AM
ZF2LA	K9LA
ZF2MU	K4BI
ZF2RR	N9XX
ZF2YL	AE9YL
ZK1ABR	KG6ABR
ZK1VVV	W7VV
ZK2VF	W7TVF
ZM8CW	ZL3CW

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E21EJCKrissada Futrakul, POB 20, Bangkok 10163, Thailand

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E21HJZKrongyote Glinfuang, 177 Phaholyothin 51, Bangkok 10220, Thailand

E21HXBPrasit Neera, 196 Moo 1, Mung, Singburi 16000, Thailand

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E21SMNPheraph 313/359 Sukhapibal 1 Rd, Beungkum, Bangkok 10240, Thailand

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ER1FFAlexei, P.O. Box 1514, MD-2043 Kishinev, Moldova

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ER1OOVlad, P.O. Box 328, MD-2002 Kishinev, Moldova

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Jerry Wellman, W7SAR

What's in your "shack?"

My son Adam, KC7WFX, and I are in the process of building a portable operating table for field use. We found a piano keyboard stand (like you would see in a band performance) in a pawn shop and are adding some lightweight plastic tops to make a nice operating station. The great thing about this stand is that it comes apart quickly and stores in a small space. It's all aluminum and plastic (and well constructed) so as to be durable in inclement weather. (When we finish, I'll include some photos in a future column.)

As we were putting this all together, Adam asked me, "Why are we building this?" and also asked, "Why do you have a whole room for your radio stuff?" It got me thinking about the hobby we call Amateur Radio. Years ago as a kid, the visit to someone's "shack" was a trip to be remembered. I cannot recall doing much more than gawking at all the stuff and absorbing the ambiance of being in a real "shack."

Several "old timers" have, over the years, written to inquire as to what role they might play in emergency communications. They tell me they're older and not so agile as the younger fellows, that they don't have all the latest rigs and toys, and may be unable to get out into the field and be of great value. They're feeling pressured to respond to the scene of the event and, in essence, compete with the younger folks. This caused me to reflect on my past advice that Amateur Radio must be ready to respond to a command post environment and be flexible enough to adapt to the situation at hand. I still hold by that advice, but would add that one strong component of any response is a "fixed" station as anchor for the operations.

Let's face it. There are some things best done at an established base location. And this is where the "shack" plays an important role. The home station is a known and ready resource. You have phone connections, antennas, a variety of rigs connected and ready to use, you have warmth and comfort for the long haul, and you have access to support services. Where the mobile (or field) location operates more or less "in the rough" it's the base location that puts the shine on an operation.

And here's my concern. Are we promoting the "shack" among our ranks? One of the neatest features in ***Worldradio*** is the monthly photo of someone's operating station. I scour each photo and description in an attempt to refine my own shack — but this is an obsession that, I fear, is not shared by operators such as my son or my neighbor. Quizzing my son, he looks at the hobby as more of a "utility" than as a passion. If he is going to a Scout camp, he takes his radio to enable him to contact home in an emergency. He enjoys participating in public service events, but his closet is not packed with spare batteries, portable antennas, radio books, and the like. His "shack" is the handheld and a charger and some other goodies we've collected as a grab and go bag.

In the past month I've made the point of asking folks on the air to tell me about their shack and how it's set up. I'm surprised that many of the "new" folks (how I would adequately define that, I have no concrete idea) simply don't know how to construct or don't see the need for a "shack." Local contacts on repeaters often end when they get home because they don't have a radio in the house. There are some I regularly hear who operate from a "base" station, but the majority seem to use a portable or mobile and their radio passion begins and ends as they drive to work each day.

Let's explore how several established fixed stations can assist your emergency response. I have a large collection of computer gear. Most of it could be used for packet radio, but I'd take little of it into a field location simply because of the cost should it get damaged. (And it's not built for an outside, during a snowstorm, environment!) If I needed to have several packet links to EOCs or to data collection systems, the logical thing would be to feed data to a central point and have the data disseminated from there. So my first argument would be for data collection via packet.

It's critical that we keep track of our volunteers and other resources. This is something that need not happen at the command post and is ideally suited for a base station. I have several portable "white boards" in my shack that can be set up to keep track of resources. I also have a number of large map boards I can use to record strategy options or resource deployment. If I act as net control for the resource net, I can easily keep track of operators and resources either in use or on standby — and I can do it from a large operating area that does not impact the often limited space at a field command post.

A final (and by no means the last) function of a fixed station is that it's a known commodity. You know what's there and what capability it has. There's frequency mobility at a fixed station because many radios can be ready to use on a variety of antennas that are in place, tested, and on the air immediately. There's no setup time. If the station is well-planned, there are alternate power sources to allow uninterrupted operation.

If I were planning to support a community disaster operation, one of the first things I'd do is plot all the known fixed stations and list the known capabilities. I'd then work with these operators in particular to ensure connectivity among each fixed station. This connectivity would include a packet link and a discrete simplex frequency so these stations could coordinate actions among themselves. I would envision each fixed station as a potential "mini-hub" for its area. Itcould become an immediate "on scene command" if needed or a prime relay for events happening nearby.

I live near a rocket motor plant. There are several railroad tracks nearby as well as some chemical manufacturing and other potential hazard sites. I also have a great simplex view of the Salt Lake Valley. So here's a planning scenario

for my "mini-hub." My station could be immediately used for communications involving a hazardous material spill or a rail spill in my quadrant of the valley — with the caveat that if it's threatening to me or my family, we're out of there!

Would I become a "command" center? No! I would be a resource for immediate communications needs and support for the established response agencies and could use my home radio resources to compliment a volunteer response. What about my simplex view of the valley? Let's say a major hospital across the valley experiences an evacuation emergency or an event that might cause many injured to be taken to the facility. With a simplex view of the area, a variety of relay possibilities come to mind as well as packet data collection, relay from other EOCs, etc.

In a test, I discovered that I could, from my home station, copy simplex transmissions better from two portables on various floors of a building (many miles across the valley) than either could copy each other inside the building. I believe it was the distance and the ability to point a beam at the side of the building rather than try to hear a signal blocked by the floors within the building. So my location may be an advantage to, for example, a search team in a collapsed building by having reception of better quality than an on-scene station.

As an aside, I often hear sheriff SAR teams from Salt Lake and surrounding counties better than they hear each other or their field command post. These folks are often in mountain and canyon terrain and the signal is best heard across the valley than it is at the scene. Once in a while I'll relay for them and it's worked well having a distant simplex vantage point.

My point this month is to plan with all the resources you have available. I would also encourage your group's members to establish and use fixed stations as part of your emergency preparation and planning. There are many who, for better words, have a passion for the hobby to the extreme of building some mighty fine operating stations. I believe it's a strong selling point that Amateur Radio can point to our home stations as resources for emergency events. I'm not sure how best to impart this "passion" to my son for a home station other than to involve him as we put up antennas or install equipment in the shack. I do recall that it was a significant when, as a youth, someone would invite me over to visit the shack or to build something, so I would encourage those of you with home stations to talk them up, invite others over, explain how it works, and emphasize that it's not only fun, but that it's not always a great financial burden.

Incident Command System

Several days ago there was a large fire in the county and it was great to hear all of the incident command procedures take place. I recall several years ago when ICS was new and often rebuffed by agencies, but they stuck with it and it now works well. It seemed to be a well-polished operation as a command post was established, resources deployed, and various frequencies assigned for use.

This reminded me that continued practice is key to an efficient and proper response. I often hear the argument that someone who has been licensed for a number of years has no need of regular education or training. But that's not true. An emergency response requires a knowledge of how resources fit together and what is expected of each operator. While some education always happens "on scene," the basics are best taught in advance.

Don't fool yourself into thinking that the number of years licensed or the number of radios owned equates with experience. In the past several years some of my volunteer endeavors have been away from SAR operations and my skills are rusty. I was asked recently to be available as backup for a search coordinator and it was somewhat unnerving to realize my skills were not as sharp as they once were. Once the mission ended, I needed to negotiate my future role so I'd not be in such a position, for mistakes happen when you're not well-practiced in your assigned duty.

What I had to do is "re-educate" the alerting office as to what my capabilities currently are and where I can effectively serve. I often think this goes against human nature because we don't want to admit that we've become "untrained" or are rusty. So go with my example and be willing to admit that you're in need of a refresher course if other activities have kept you out of the action. It's OK to admit you're not as well-honed as you once were. The bottom line is service to others without causing harm to yourself or to another. Rusty skills in critical places often lead to people getting hurt.

Each of us has the same amount of time each day and demands often change how we would or should spend our hours. As demands on your time or change or as your life situation changes, keep your group leadership appraised so the best resources can be used for the best good.

Until next month, be good. Best wishes from Salt Lake City.

— Jerry Wellman, W7SAR, can be reached by snail mail at: P.O. Box 11445, Salt Lake City, UT 84147, or by e-mail at: jw@desnews.com

Les Cobb, W6TEE

Time for desert fun!

Quartzsite — (the mineral, "Quartzite," misspelled) is a small desert town 18 miles inside Arizona from California on I-10. Every winter it becomes the destination for 100,000 or more RVs, including a lot of Amateur Radio operators. If you question the number of Hams among the RVs scattered out on the desert for about six miles in each direction, listen to the Quartzsite nightly net on the 145.50(-) repeater. A good many HF nets also have Hams checking in from Quartzsite during this season.

Of interest to Hams is the "Quartzsite Campout 2001," this year's version of the Quartzfest that I have reported on the past two years. The dates this year are 24-31 January, shortly after you receive this magazine. Camping and the meeting of Hams from all over the country are still basic to this popular event. But organized activities are being left to the attendees this year. At this writing, people have stepped forward to run the popular Ham Swap Meet, on Saturday, 27 January, at 9 a.m., VE sessions, and a 75-meter mobile antenna shootout. See http://cactuscountry.home.mindspring.com for the latest activities and their times and dates. The location is six miles south of Quartzsite on U.S. 95 near milepost 99. This is land designated by the BLM for camping with fully self-contained recreational vehicles only. There are NO facilities. See the web page to find maps, GPS readings, and instructions. The camp frequency is 146.55 MHz. FM simplex.

The Antenna Shootout at this event should be of interest to mobile readers. Here's a condensation of the rules posted at the end of November:

All antennas should be tested on the same vehicle. 14 ft. max height above ground. Operating frequency 3.9 MHz. However, if someone has an antenna on a vehicle that can not be separated, he/she should be allowed to use that system as is. The 14 ft. limit applies. Added for 2001: Top hats can not extend beyond the vehicle. Antenna and vehicle must be capable of being driven around the camping area and legal to operate on highways. Also must be capable of operating in motion on highways. (True mobile.)

Measurements last year were made by adjusting the transmitter power to a reference field strength at a fixed distance and reading this power on a Bird Wattmeter. In case you think this is just for super antennas, we measured all our garden variety antennas last year just to see how they ranked. Check the web page above to see what day this will be on and for any changes.

Other Hams that will be elsewhere at Quartzsite with their own groups include the very active Sam's Radio Hams, 24-27 Jan., and my friend Vern McGlynn, W3DLY, leading the Lake Havasu Moose RV group that includes several Hams, 23-27 Jan. I will try to be with all three simultaneously.

HF mobile nets

In the last column (December), I answered a query about nets useful for HF mobile operating by asking for your contributions. What open nets do you use when operating HF mobile? I guess that December was a bad time to ask a travel related question. But I did get some new listings. My last list was only about RV nets and ran in November 1998. How time flies!. Ed Pfeifer, W9JHS, sent me some new nets. I merged them with the previous list, and added a few other nets.

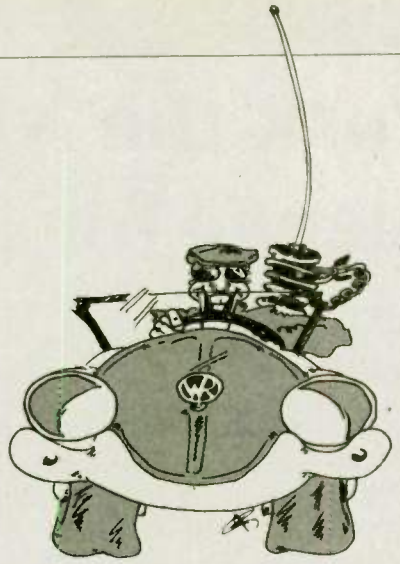
Sam's Radio Hams 3.9185 2000P M-F
RV Service Net-E 7.2333 0700E Day
County Hunters 7.238

North CARS 7.240
South CARS 7.251
East CARS 7.255
Mid CARS 7.2575
RV Service Net-M 7.263 0600M M-F
RV Service Net-W 7.2685 0800P M-F
Sam's Radio Hams 7.2685 0830P Sun
Frick and Frack 7.273 0830P M-S
Semis 7.275
Good Sam RV Net 7.2815 1930C Day
FMCA-Motor Coach 14.263 1400E Day
Int Handicap Net 14.287 0900C
Truckers net 14.3025
RV Service Net 14.3075 1200E M-F
RV Service Net 14.3075 1700E M-F
YL net 14.332
County Hunters 14.336

The RV Service Net, FMCA, and the Good Sam RV Radio Net can all be found listed in more detail at http://www.rvweb.net/club/. This address changed since our last listing, as have some frequencies. Send me any additions and corrections and I'll pass them along.

For a more complete mobile net list, see the "Amateur Radio Mobile Communications Guide," by Roger Krautkremer, KØYY. He has lots of useful mobile info in his book. Look for his FMS Services ad.

Harry Rouse, K6PDQ, asked about placing his DK-3 scredriver antenna on his pickup that sometimes tows his 5th wheel trailer. You can never get what is best, but you should know what you are compromising. For operation on all HF bands the base of an antenna should be in the highest, flattest area of the sheet metal, and centered. Lacking that, if the antenna is mounted on a vertical panel, which is almost inescapable on a pickup, the coil should be well clear of any adjacent metal. A frequent mounting on pickups is on the side of the pickup bed, but not with a 5th wheel. This leaves the rear corner of the cab, or the front bumper, a not too pleasing location. If the 5th wheel comes close to the cab when hitched, the front bumper may be the only location available. But many Ham RVers do not operate HF mobile-in-motion. They wait until they are in camp and then raise an antenna such as a trap vertical on the roof of their RV. Consider the best place to mount the screwdriver without the 5th wheel and remove it when RVing.



Mobile HF noise

I get a lot of e-mail from amateurs specifying particular makes and models of vehicles, asking how to eliminate HF noise. My usual answer is that there is no one answer since there are so many possible causes. There are a number of electrical sources on any vehicle that can generate noise, and the most important one can change from band to band. There are also several things to check in the bonding of the vehicle sheet metal, the grounding of the rig, and the mounting and grounding of the antenna. Bonding and grounding problems can amplify an otherwise minor noise. I would recommend one of the Ham mobile books that have been published, such as KØYY's, cited above. A good one will help you identify the type of noise and the source.

Dave Ertel, KJ8V, has written an excellent update on the Ford noise situation, including who the current contacts are at Ford and Amidon. It's in this issue of ***Worldradio*** and I recommend reading it.

Let me hear from you on any HF mobile subject! Send e-mail to lcobb@compuserve.com, or write: Les Cobb, 4114 Horgan Way, Sacramento CA 95821. More at http://home.pacbell.net/lcobb/.

Chuck Imsande, W6YLJ

New "Work the Numbers" challenge for 2001

Due to the fact that the "2K in Y2K" Challenges were so successful during the year 2000, the Membership Committee has come up with a new Challenge for the year 2001. This new challenge, called "Work the Numbers" is another simple challenge for the membership. Just make a contact with as many of the 10-10 numbers between 28000 and 29700 as possible from 01 January 2001 through 31 December 2001. That's right, contact any of the 1,700 10-10 numbers between the 10-meter band edges (28000 and 29700) once during the year. Log the contact and submit your log by 15 January 15, 2002.

Of the 1,700 numbers in the block of 28000 through 29700, there are 153 known SK's making a maximum of 1,513 possible contacts. There may be a few additional SK's in the block that are unknown to 10-10, so the possible number of good contacts may be a few less than 1,513.

Log requirements are simple too. Just log the 10-10 number, Call, Name, State (or Country) and Date of Contact in that order. Computer logs or hand written logs are acceptable. Jim Hardy, K4HAV #17605, is providing a module to log and print out the "Work the Numbers" Challenge. If you use WIN1010, the 10-10 logging program, check Jim's web site for a download of this new file. Check at: http://hds.net/win1010dl.htm. For more information on the WIN1010 logging and record keeping program Jim can be reached at: P.O. Box 7304, Tifton, GA 31793.

An attractive mounted certificate will be awarded to the first, second and third place winners. Good luck and have fun looking for the special numbers good for the "Work the Numbers" Challenge.

10-10 Convention

Plans for the 8th Biennial 10-10 Convention in Worcester, MA on 12-14 July 2001 are in final stages of preparation. A great program of activities have been planned with chapter tables, manned by chapter members, to discuss chapter activities, a Board of Directors question and answer forum, Saturday forums and a gala banquet on Saturday night. A full day trip for the ladies is scheduled to tour the area, which is rich in historic significance.

Pre-registrations are now being accepted and information can be obtained from President Tom Henderson, K4CIH #33233, 4901 15th Place East, Tuscaloosa, AL 35404-4522. Pre-registration is $10 per person. There will be a TS-50S as the pre-registration prize. You must make your own reservations at the Holiday Inn in Worcester, MA at 508/852-4000. Be sure to mention 10-10 International Net to obtain the convention room rate. As of the date of this writing, there have been over 100 registrations received, representing 29 states and 4 DX countries. There have also been 36 Chapters who have committed to have chapter tables.

This biennial convention is being hosted by the Battle Road Chapter of 10-10 and is being dedicated to the memory of Rich Parent, KC1FV #45274, a member of the Battle Road Chapter, who recently became a SK.The number of prizes is outstanding with several radios and other impressive Amateur Radio items including a number of great surprises.

Plan to vacation in this historic area and attend the 10-10 convention. You will enjoy the area and above all the convention. A good time and a great program is waiting for you. Make your reservations today!

2K in Y2K Challenge over

The challenge to make 2,000 contacts during the year 2000 on 10 Meters is over. There was a lot of activity and at this writing (late November) the 2000 ANYONE Challenge has produced 40 logs. The 2000 MEMBERS ONLY Challenge has produce only 2 logs to date. These two challenges were well received by the membership and provided another interesting project for the membership which continued throughout the year.

Now it is time to begin the hunt for those special numbers in the 10-10 frequency block of 28000 through 29700. The "Work the Numbers" Challenge has begun. Who will have the most numbers on 31 December 2001?

2000 New Members in 2000

The "2K in Y2K" (2000 new members in the year 2000) Challenge has also ended. Although the final listing is not complete due to the fact that this is being written in late November 2000, the following listing is the top scorers as of this date: The leaders in the 2K in Y2K Challenge at this writing is not much different than the last report. WB4FBS #48461, is still the leader and now has a total of 119 listings. KCØCNZ #70882, is still in second place with 110 listings. The rest of the top 10 are listed below:

No.	times listed	Call	10-10 #
1	119	WB4FBS	48461
2	110	KCØCMZ	70882
3	75	VP2VF	63440
3	75	N5MT	24949
4	73	KC7DH	52099
5	66	K5GAY	11825
6	64	K7XM	41486
7	53	W6YLJ	19636
	53	DK3DK	58990
8	49	LU3CT	68907
9	46	LU6HSV	66021
10	45	N6OPR	45715

The above list includes new member applications received through early November. The next report will show the final numbers and will be published in the April *Worldradio*.

The projection is that we will top out at about 1,200 new members for the year 2000. Not the 2,000 that we had hoped for, but not a bad year all in all.

New DX Members

We welcome 14 new DX members in this issue. They are: ZL2LDX #71808, VE9TER #71817, DJ5BWD #71818, MI5DAW #71819, ZS6EGB #71820, DJ3WW #71821, OH1BOI #71822, VE1CDA #71823, GMØVPG #71824, GØBKB 72100, F8BGV #72101, HB9AVT #72102, VA3NDB #72103 and VE7SFS #72104. Note the number of different countries represented in this listing. 10-10 continues to expand membership in the DX world and we welcome these new DX members into the 10-10 family.

Chuck Imsande, W6YLJ #19636, Riley Hollingsworth, K4ZDH, and Tom Henderson,, K4CIH, discuss 10-meter illegal operations with the FCC Special Counsel for Amateur Radio Enforcement at the Scottsdale, AZ ARRL SW Division Convention.

ARRL Southwest Division Convention

Ten-Ten was at the ARRL SW Division Convention in Scottsdale, AZ in October, 2000. President Tom Henderson, K4CIH #33233; Vice President Chuck Imsande, W6YLJ #19636; and Treasurer Keith Schlottman, KR7RK #63324; manned a booth and talked to a lot of 10-10 members and discussed 10-10 memberships with non-members. A 10-10 forum was given by Chuck and Keith, which was well attended by about 50 people.

The Banquet Keynote Speaker was none other than FCC's Riley Hollingsworth, K4ZDH, Special Councel for Amateur Radio Enforcement. To the surprise of both Tom and Chuck, Riley visited the 10-10 booth and wanted to learn more about the 10-10 organization. Discussions centered on the role 10-10 could play in helping the FCC enforce legal operation in the 10-meter band. Suggestions were made on how 10-10 felt the FCC could reduce the interference being caused by the illegal operators in the 10-meter band. Mr. Hollingsworth was very receptive to the suggestions made and promised to continue the fight to clean up the illegal operations on the 10 and 11-meter bands.

Information about 10-10?

If you would like information about 10-10, and how you can become a member and receive your very own unique 10-10 number, send $2.00 and an address label for the return of your information package to: 10-10 International Net, Inc., Attention: Information Package, 643 N. 98th Street - PMB #142, Omaha, NE 68114-2342. No SASE please as the information package requires a 9 x 12 envelope. You will receive a copy of the 10-10 Information Brochure, which contains everything you want to know about the 10-10 organization, a listing of all 10-10 Chapters, their day, time, and frequency of net operation and an application form. Also enclosed will be a copy of the QSO Party Information Brochure and a copy of the latest issue of the *10-10 International News*, the 32 page 10-10 quarterly magazine.

You can also find just about anything that you need to know about 10-10 on the 10-10 web site. The address is www.ten-ten.org

If your membership in 10-10 has expired and you would like to renew your dues, send your dues ($10.00/year or $25.00 for 3-years) to: 10-10 International Net, Inc., Attention: Dues Renewal, 643 N. 98th Street - PMB #142, Omaha, NE 68114-2342. You will become an "ACTIVE" member again and receive all of the benefits of 10-10 including the quarterly *10-10 International News*. And, please do not forget to include a donation to the Scholarship Fund along with your due renewal.

Remember 10-10 numbers are issued for life and your originally issued number is always yours. If you have lost, or forgotten, your 10-10 number, send a #10 SASE to the above address marked to: Attention: 10-10 Number, and your original 10-10 number will be sent back to you.

— Chuck Imsande, W6YLJ #19636, 10-10 Vice President, 20815 Desert Sands Drive, Sun City AZ 85375-5443 or e-mail at: w6ylj@arrl.net

Chuck Imsande, W6YLJ

What is message traffic?

Several of my columns have attempted to answer the question, "Why handle traffic?" One of the reasons often given is the training it provides for emergency communications. The skills developed while handling NTS messages readily translate to other communications networks.

For example, many Skywarn Networks utilize a standardized format for transmitting their weather observations via a VHF or UHF FM Net. An example of such a standard format is the "TEL" System, which is widely utilized throughout the country:

T=Time
E=Effect
L=Location

Some examples of reports transmitted using the TEL system might be:

"W5WE at 3:15 PM Wall Cloud at 6th and Congress."

"WB8SIW at 5:45 PM 2-inch hail at I-35 and Fourth Street."

The use of the "TEL" format allows a control operator or key station operator to record the message traffic quickly and readily on a standardized form. In addition, the ability to anticipate the order in which information will be received allows a radio operator to process the information with minimal confusion. This ability to anticipate the order of transmission can contribute significantly to accuracy under stressful conditions. It also decreases the number of requests for repeats or "fills."

I am willing to bet there are quite a few radio amateurs out there regularly participating in Skywarn Nets who would honestly state "No. I don't handle traffic." Yet, the TEL system (and others like it) is a standard message format with many of the same components as NTS messages, such as a "Station of Origin," a "Time of Origin," a "Place of Origin," and a "Text."

Time spent participating in traffic nets does much to prepare an operator for participation in any public service net requiring a standardized format for originated messages.

Originating meaningful traffic

Much has been written over the years about various methods utilized to generate meaningful NTS message traffic. We have heard from radio amateurs who place message forms at hotels, hospitals, and similar facilities (with management's permission, of course). Some radio amateurs set up demonstration stations at public events and solicit a large quantity of messages. Regardless of the method utilized, few would argue with the suggestion that meaningful message traffic in reasonable quantities is necessary to maintain a healthy viable traffic net.

It seems reasonable to suggest that a significant amount of Amateur Radio business could be transmitted via NTS as opposed to the Internet. Many ARRL officials, such as Emergency Coordinators, Official Emergency Stations, and so forth are required to transmit a monthly report to the Section Manager or Section Emergency Coordinator. While it may be quick and convenient to place such monthly reports on e-mail, it nonetheless seems a shame to pass up the opportunity to support one's local or section traffic nets. When such reports are transmitted via NTS, liaison is established between NTS and ARES at the local level. This contact between local traffic handlers and ARES officials may prove useful in an emergency, in addition to educating the user on the nature of NTS operations.

The best way to insure the continued growth and evolution of NTS and traffic handling is simply through ongoing use of the system. Let's not rely entirely on commercial interests (many of whom want our radio spectrum) to transmit routine amateur business.

Radiotelephone nets

Unlike CW nets, which naturally encourage brief, concise communications, the use of radiotelephone seems to do little to discourage unnecessary language. This is problematic because phone nets actually have little more circuit capacity than their CW counterparts. As a result, much valuable time is lost while operators transmit unnecessary phrases and comments.

The goal of every phone net — encourage brief, concise, communications. A net control station or net manager can do little to achieve this goal. Ultimately, the efficiency of a phone net depends entirely on the self-discipline of each operator present. Far too many radio amateurs transfer their daily operating techniques to the local ARES or traffic net. The result is an inefficient net that handles little traffic in a timely manner.

Phone operators are encouraged to utilize proper prowords and limit their comments to brief concise statements. There 's no problem if the net culture is such that individuals want to socialize. However, it is recommended that the traffic be handled first with as much efficiency as possible. After the business is completed, the net can encourage as many monologues as the members want.

We are interested in hearing from those who are active in public service communications. Perhaps you have an idea for improving traffic nets or public service communications. Let us know!

Visit Your Local RADIO CLUB

ARIZONA

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-) rptr. PL162.2. 5/01

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., Tucson Med. Cntr., Grant & Beverly St. in the AZ Rm. of the Volunteer's Bldg. (1st bldg. on the left going north off Grant). 2/01

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: 146.835(-). 5/01

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m., VFW #9650, 3210 W. Center St., Anderson, CA. Net every Tues., 7:30 p.m. on 146.640 freq. Website: www.snowcrest.net/bgorski/index.html 2/01

Clairemont Rpt. Assoc. Meets bimonthly brkfst mtg, 3rd Sat./odd no. months, Westminster, CA. Info: send SASE to P.O. Box 7675 Huntington Bch, CA 92615 or W6UTE in Call Bk. Net ea. Tue., 7 p.m. 145.220(-)PL 103.5 in So. CA 3/01

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 6:30 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/01

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 08:00, Denny's, El Cerrito, CA. 145.110 PL 82.5 Info: S. Clark, KB6SEI (510) 724-0158. 2/01

Cupertino ARES (CARES). Meets 1st Thurs./monthly, 7:30 p.m., Cupertino City Hall, CA. Net each. Tues. 7:45 p.m. on 147.57 simplex. EC - Jim Oberhofer, KN6PE. www.zoy.net/CARES 6/01

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m. http://www.downeyarc.org. Info L. Vaughn, kd6nzw at kd6nzw@downeyarc.org 6/01

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Albany Sr. Cntr., 846 Masonic Ave., Albany, CA. Info: S. Primbsch, (510) 741-8227. 145.11(-) MHz. 9/01

El Dorado County Amateur Radio Club. P.O. Box 451, Placerville, CA 95667. Meets 4th Tues./monthly, 7:15 p.m., Federated Church, 1031 Thompson Way, Placer- ville. Web: hhp://edcarc.tripod.com. Net: Thurs., 7:30 p.m. 147.825(-) PL 82.5 6/01

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 1/02

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 7:30 p.m. at 345 Cherry St. (Library Rm.), Chico. 5/01

Golden Triangle Amateur Radio Club. P.O. Box 1335, Wildomar, CA 92595. Meets 4th Mon./monthly, 7:30 p.m., Rancho Water Dist., 42135 Winchester Rd., Temecula, CA. Rptr: W6GTR 146.805 (-) PL 100. Info: H. Wijma, AC6VN, (909) 693-2383. E-mail: ac6vn@cs.com. Web: http://www.qsl.net/gtarc 9/01

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(+). Info: LARK Sec., P.O. Box 3190, Livermore, CA 94551-3190. (925) 373-1386. 2/01

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Los Banos Police Admin. Annex Bldg., 535 J St. Info: M. Germino, AD6AA, (209) 826-0903, E-mail: AD6AA@arrl.net. Net 147.060(+) PL 107.2 every Thur. 7 p.m. Rpt. KB6NMP 147.06(+) PL 107.2 & 444.00(+) PL 241.8. http://www.qsl.net/lbarc/ 6/01

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, 91 Fwy/Lakeview. Info: R. Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/01

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 7:30 p.m., Our Savior's Lutheran Ch., 1035 Carol Ln, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/01

North Hills Radio Club. Meets 2nd Tue./monthly, 7:30 p.m., SMUD Bldg., Don Julio & Elkhorn, Sacramento, CA. Nets 8 p.m. Tue., (except 2nd Tue.) & Thur., 145.190(-) PL 162.2 Hz. Info: B. Griffin, (916) 729-7117. E-mail: dixdood@aol.com or nhrc@k6is.org 4/01

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. Talk-in 146.550 (S). Contact Parry Hoffman, K6LDC, (714) 636-4345 WWW.W6ZE.ORG 2/01

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Ch., Telegraph Rd. & Teloma Dr., Ventura, CA. Info: J. Casper, N6PIQ, (805) 649-1445. 6/01

River City A.R.C.S. Meets 1st Tues./monthly, 7:30 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. Info: (916) 492-6115. 10/01

Sacramento ARC. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net, noon on rptr. W6AK/R 146.91(-). T. Preston, KC6EO, (916) 722-9358 or L. Ballinger, WA6EQQ, (916) 393-4775. 4/01

Shasta Cascade Amateur Radio Society, (SCARS). P.O. Box 493549, Redding, CA 96003. Meets: 3rd Wed./monthly (Sep-May), 7:30 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 3/01

Sierra Foothills ARC. P.O. Box 1005, Newcastle, CA 95658. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 94.8. 6/01

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 8/01

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 3rd Tues./monthly, 7:30 p.m., NE area Modesto Police Substation, Oakdale Rd. Modesto. Net 1.2+4 Tues. 7:30 p.m. 145.390(-) PL 136.5 2/01

Tehachapi-Southern Sierra ARS. Meets 2nd Thurs./monthly, 7 p.m., except July, 125 East F St., Tehachapi, CA (Veteran's Hall). Info: KD6KMN, (661) 822-5995. www.ssars. net, 147.06(+), 224.42(-) PL 156.7. Pkt 145.090(S) connect to W6PVG-7. ARES nets 7 p.m. 147.51(S) Mon. 1/02

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School. Adm. Buillding, Weaverville, 7:30 p.m. Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. http://www.tcoe.trinity.k12.ca.us/~tcarc 2/01

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th, San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m. 8/01

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St., Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Jim Bullington, (707) 446-4347 8/01

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., The Lewis Cntr, 20702 Thinderbird Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 3/01

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley School District Office, 17210 Oak Street, Fountain Valley, CA. Info: Jane, KD6ODV, (714) 531-6707 2/01

Westside Amateur Radio Club - Los Angeles. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., ARC Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 147.195+, PL100, except mtg. night. Website: http://www.qsl.net/wa6rc Messages: (310) 848-1354 11/01

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. 2 NW Willits http://www.saber.net/wars. Talk-in: 145.13(-), PL 103.5. 12/01

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Davis Explorit! Science Cntr, 3141 5th St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 3/01

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:00 p.m., NIST room 1107, 325 So. Broadway, Boulder, CO. Talk-in:146.70(-). Information: (303) 380-6540, e-mail: BARC5Ø@arrl.net or www.thisistrue.com/barc.html 8/01

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: B. Dargel, KA1BB, (860) 739-8016. 8/01

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Marchman Tech. Ed. Cntr., 7825 Campus Dr., Bldg. C, Rm C122, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 1/02

GEORGIA

Cherokee Capital ARS. Meets 3rd Mon.monthly, 7 p.m., Trinity Baptist Church, 1170 Rome Road, SW (GA Hwy 53) Calhoun, GA. 146.745(-). Info: Felton Floyd, AF4DN, (706) 629-0369. www.qsl.net/k4woc 1/02

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4BD, 706/673-2291. 5/01

Gwinnett Amateur Radio Society, (GARS). P.O. Box 88, Lilburn, GA 30048. Meets 3rd Thurs./monthly, 7:30 p.m., Gwinnett Central Baptist Church on Gwinnett Dr., Lawrenceville, GA. 147.075+ PL 82.5. Contact: Mike Swiderski, K4HBI, (770) 449-0369. 8/01

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721. Meets 2nd Sat./monthly, 2 p.m., Keaau Community Ctr., behind Fire Station on Old Volcano Rd., Keaau. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Hilo Hawaiian Hotel - Queen's Court Restaurant. 11/01

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Botanical Garden., Kaneohe, Hawaii. Information: (808) 235-3042. http://www.chem.hawaii.edu/karc/ 8/01

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 8/01

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Fire Stn. #3, 6015 S. Cass Ave, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP rpts., 145.25(-) 107.2PL, 442.55(+), 114.8PL, 224.68(-). www.w9dup.org 11/01

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 8/01

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 7:30 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.65 MHz. Info: (708) 226-1570. 10/01

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 8/01

Schaumburg ARC. P.O. Box 68251, Schaumburg, IL. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (847) 798-5248. http://members.aol.com/sarcradio 11/01

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+) PL 103.5. Web: http://www.qsl.net/w9mks E-mail: w9mks@qsl.net 6/01

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699.7/01

MARYLAND

Maryland Mobileers ARC (MMARC). P.O. Box 935, Severn, MD 21144. Meets 1st Fri./monthly, 7:30 p.m., Baldwin Hall, Generals HWY, Millersville. Info net ea. Mon. 8:30 p.m. on 146.805(-), tone 107.2 Hz. http://www.qth.com/mobileers 7/01

MASSACHUSETTS

Genesis Amateur Radio Society. P.O. Box 1234 Plymouth, MA 02362. Meets last Mon./monthly, 7:30 p.m. at Plymouth Airport, So. Meadow Rd. Tues. net: 146.685, W1LM, 8 p.m. 7/01

MICHIGAN

Chelsea Amateur Radio Club, Inc., WD8IEL Meets 4th Tues./monthly, 7 p.m., Key Bank, 1478 Old Chelsea-Manchester Rd., Chelsea. Info: Bill Altenberndt, WB8HSN, (734) 475-7938 Rpt: 145.450(-). 5/01

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/01

Hiawatha Amateur Radio Assoc. of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m., 108 Stratofort, K.I. Sawyer AFB, MI. For info contact: Richard Schwenke, N8GBA, (906) 249-3837. 11/01

NEBRASKA

Ak-Sar-Ben ARC of Omaha. P.O. Box 24551, Omaha, NE 68124-1551. Meets 2nd Fri./monthly, 7:30 p.m., Red Cross, 81st & Spring Sreet. http://www.qsl.net/k0usa 7/01

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 9 a.m., Country Inn, 1990 West Sunset, corner of Valle Verde, Henderson, NV. Info: J. Frye, NW7O, (702) 456-5396 or B. Scan- borough, WA6ASI, (702) 269-9551 8/01

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Minden Med. Cntr, Hwy 395 & Ironwood Dr., Minden, NV. Info: George Uebele, WW7E, (775) 265-4278, ww7e@arrl.net, Rpt. 147.330 MHz. 1/02

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed. 6/01

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/01

NEW YORK

Amateur Radio Association of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2SEX. 2/01

Genesee Radio Amateurs, (GRAM). P.O. Box 572, Batavia, NY 14021-0572. Meets 3rd Thurs./monthly, 7:30 p.m. (except Jul Aug Dec), Salvation Army Com. Cntr, 529 East Main St., Batavia, NY. URL: http://hamgate.sunyerie.edu/~gram 6/01

Hall of Science ARC. P.O. Box 150131, Kew Gardens, NY 11415. Meets 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Voice mail (718) 760-2022. 3/01

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. K. Moon, N2IFG, (716) 652-0923. 6/01

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Info: W. Black, KB2YAP, (631) 289-5587 7/01

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 11/01

Westchester FM Repeater Ass'n. K2JQB Rptr. 146.91 MHz. Meets 3rd Thurs./monthly, 7-9 p.m., Yonkers Pub. Lib., 1500 Central Pk. Ave., Yonkers, NY, near S.E. cornor of Tucahoe Rd. Free Parking. Info: M. Grossman, K2CON at (718) 544-2370 or E-mail: K2CON@ hotmail.com 6/01

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 2/01

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Ph: (704) 888-4815. www.mdsmm.com/scarc/ 5/01

OHIO

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 1/02

OREGON

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 2nd Sat./monthly, at Bliss' Route 66 Restaurant at Hwy 101 & 12th St. Net Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 6/01

Hoodview ARC. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Com. College/Gresham, Rm 1001. Rptrs: 147.28(+), 448.475(-5) (tone 167.9) http://www.wb7qiw.org 5/01

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Court House, Rm. 310, Roseburg, OR. Info: K6AZW/R 146.90(-) (PL100) or (541) 784-3621. 8/01

PENNSYLVANIA

Mercer County ARC, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.Ø5. 6/01

VIRGINIA

Mt. Vernon ARC, (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., INOVA Mount Vernon Hospital, 2nd floor, ENG Conference Cntr. Rm. Info: Bob, KT4KS, (703) 765-2313. E-mail: mvarc@juno.com. Web: www.mvarc. org/. Net: Tue., 8:30 p.m. 146.655-. 10/01

Ole Virginia Hams ARC, (OVH). Meets 3rd Mon./monthly, 8 p.m., Northern Virginia Electric Coop. Tech Cntr., 5399 Wellington Rd., Gainesville, VA. Info: Mary Lu, KB4EFP, (703) 369-2877. http://www.qsl.net/olevahams 3/01

Portsmouth ARC. Meets 4th Thur./monthly, 7:30 p.m., Am. Red Cross Chapter house, 700 London Blvd., Portsmouth, VA. Talk-in 146.850. Info: C.I Clements, Pres. (757) 484-0569. http://www.series 2000.com/users/wa4nvi/parc.htm 6/01

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Rptrs 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 3/01

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Drive off North Hampton, Village 2 Commons, Graybeale Bldg., Virginia Beach, VA. 2/01

Woodbridge Wireless, Inc. (WWI). Meets 2nd Tues./monthly, 7:30 p.m., Canteberry Woods Comm. Cntr.(corner of Springwoods & Chaucer), Lake Rige, VA. Talk-in 147.24(+). For info: http://www.pwcweb.com/wwi/ 7/01

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) (103.5 CTCSS) rptr. Doors open 9:30 a.m. 5/01

WEST VIRGINIA

Jackson County ARC. Meets 1st Thurs./monthly, 7:30 p.m., St. John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) Info: Valerie Hunter, WB8ZOC. P.O. Box 62 Cottageville, WV 25239. 7/01

Tri-State Amateur Radio Association. Meets 3rd Tues./monthly, 7p.m., Museum of Radio & Tech., 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890. 6/01

WYOMING

Sheridan ARC. Meets every Sat. at Bubba's, 7:30 a.m. exit 23 off HYW I-90, Sheridan, WY. Club call: W7GUX, 146.22/82. Info: G. Roelfsem, K7GR 8/01

University ARC. Meets 1st Tues./monthly, 7:30 p.m., Univ. of WY, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61. 12/01

NATIONAL

Bicycle Mobile Hams of America. 46 states/6 nations membership. Annual Forum at Hamvention. Info, sample newsletter, e-mail address to: hartleyal @aol. com or, SASE to BMHA, Box 4009-W, Boulder, CO 80306-4009. 2/01

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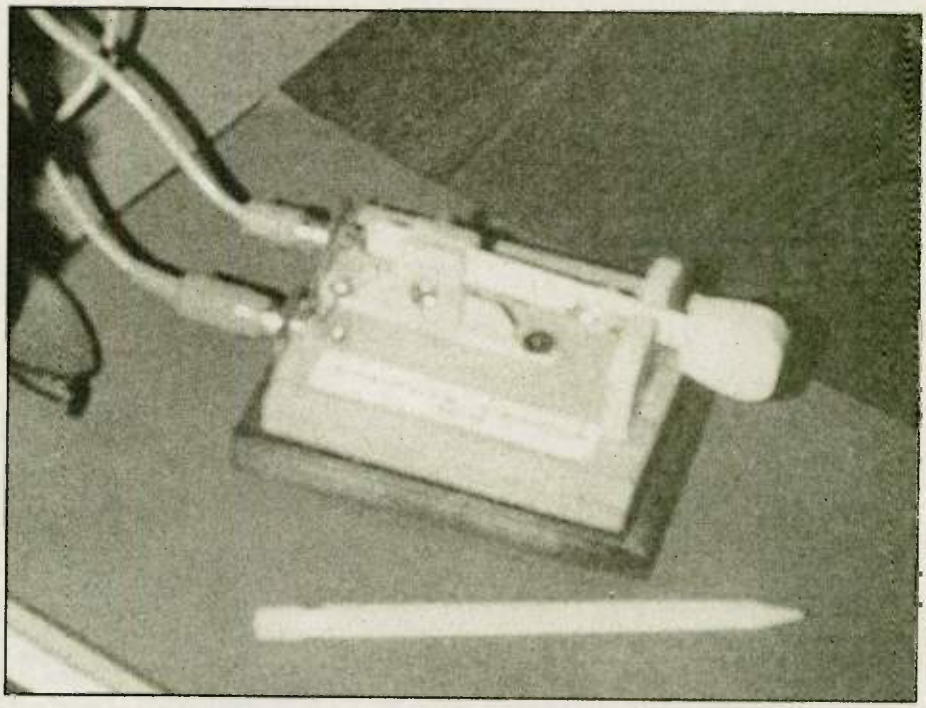
Paddle-Pop sidewinder

Fred Willett, KA1YM



During the summer, I was 'into' crafts. I had a lot of popsicle stick projects, after which I had many left over. I thought I might use the leftovers for something useful. Noticing that one of these little sticks seemed a bit springy, I thought of a temporary key for my remote Ham 'back-up' rig in the outside shed.

My 'in-house' main rig was already equipped with a keyer, but I needed just a paddle for the other location. So this little brainstorm project was born. It's quite simple and fun to make — I've made a few already. I liked the 'action' of this little paddle so much that I am still using the first one, saving myself the price of an expensive new one. I can adjust the tension the way I want it, and I can space the contacts to suit my fancy. I did glue a small piece of popsicle stick just under the paddle itself so that it wouldn't slide down and off the contacts with use. Two craft discs or wafers might be more comfortable to the fingers, one on each side of the swiper stick. And last, it may be painted (all but the paddle shaft) to look metallic or in your favorite color.

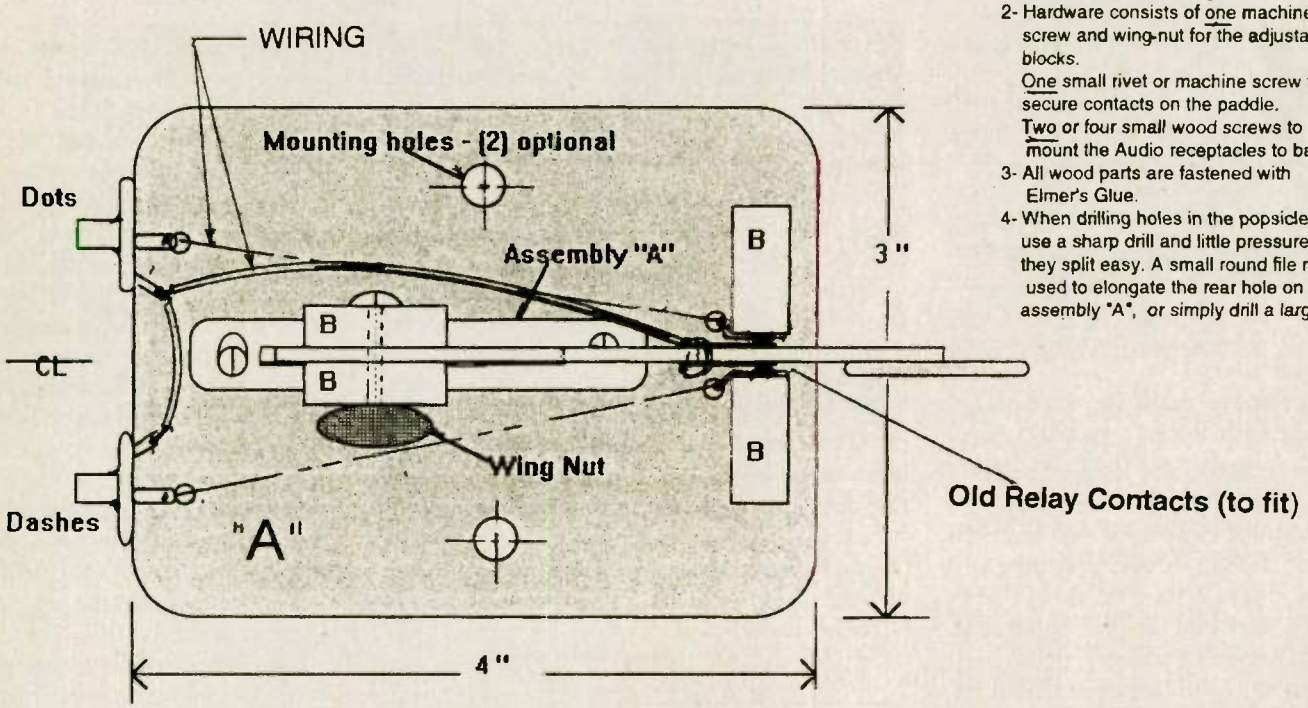
It'll work with any keyer, and mine is 'tied' down to the bench with double sided tape. There are many ways to mount it, perhaps taping it to a small block of steel with a felt bottom, so it can be moved around.

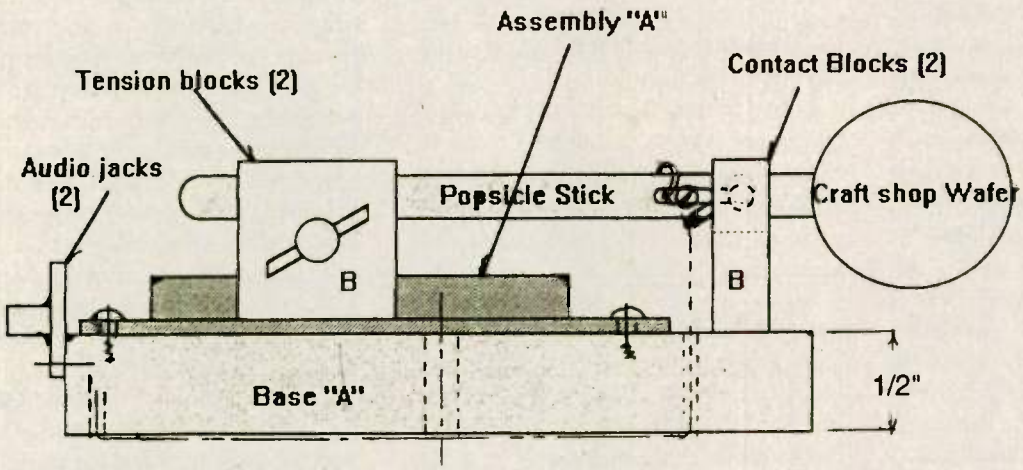
This is presented as a 'fun project' for the novice who is still short on funds, or for anyone who likes to build little things on the work bench. One may merely be used as a fancy paper weight with your call label stuck on it, as a conversation piece when you have a curious visitor.

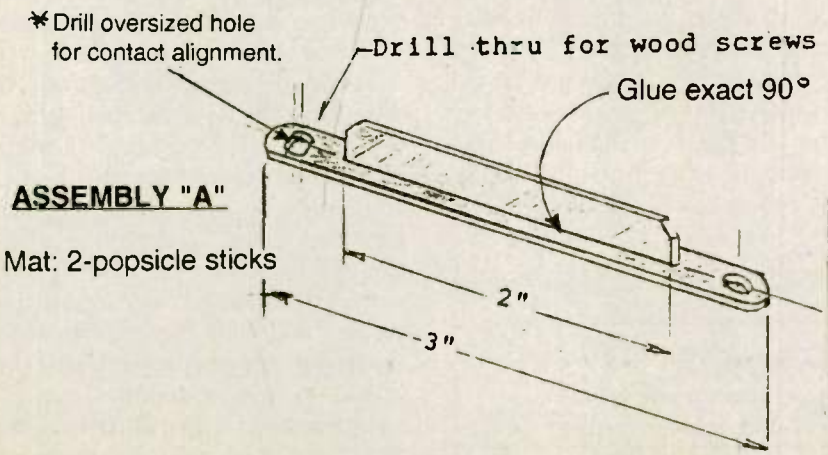
It's fun to build — try it, you'll like it!

NOTES:

1- Assembly may be painted your favorite color, all except the paddle stick. Paint will make it less springy.
2- Hardware consists of one machine screw and wing-nut for the adjustable blocks.
One small rivet or machine screw to secure contacts on the paddle.
Two or four small wood screws to mount the Audio receptacles to base.
3- All wood parts are fastened with Elmer's Glue.
4- When drilling holes in the popsicle sticks, use a sharp drill and little pressure, since they split easy. A small round file may be used to elongate the rear hole on assembly "A", or simply drill a large hole.







ASSEMBLY "A"

Mat: 2-popsicle sticks

"PADDLE-POP" SIDE SWIPER		
Scale: None	Date: Sept.'96	By: KA1YM

MATERIAL:
A- Paddle Base- 3 x 4 x 1/2"
B- Tension and Contact Blocks 1 x 3/4 x 1/2 " (4-blocks)
C. Popsicle Sticks (3)
D- Audio type jacks (2)
E- Old Relay contacts (to fit)

FUN PROJECT FOR THE NOVICE	DWG NO: YM200

Terry Douds, N8KI

Phase 3D is now AO-40!

Hello everyone! Well, it's finally happened — pull out the champagne and fill some glasses! After a long, long wait, Phase 3D was launched successfully from the European Space Agency's spaceport in Kourou, French Guiana on 16 November 2000. The launch team went to Kourou in September to begin the various tasks necessary to prepare the satellite for launch.

AMSAT-DL Executive Vice President and P3D Mission Director Peter Guelzow, DB2OS, said, "It was a textbook launch from the first minute of flight, until P3D separated from the Ariane 5 launch vehicle. All received telemetry indicates the launch went perfectly and our satellite appears to be in very good health."

The satellite was launched with three other satellites — the large PAS-1R communications satellite and the smaller STVR-1C and 1D satellites. Phase 3D was placed into geostationary transfer orbit, from where it will be nudged into its final elliptical orbit.

The Ariane 5 flight proved to be a record setting mission as it marked the first use of the ASAP-5 platform. The ASAP-5 enables the launcher to carry auxiliary micro and mini satellite payloads. By coincidence, P3D was married to the PanAm-1R satellite on the Ariane 5, similar to the scenario that existed when the first Ariane 4 (flight 401) rocket also launched both an AMSAT and a PanAm satellite.

On this launch, PAS-1R became the largest commercial satellite ever put into orbit, and P3D the largest Amateur Radio satellite ever built and launched. At liftoff the Ariane 5 launch vehicle mass was over 6,200 kg (almost 13,700 lbs)! This included the mass of the PanAmSat primary payload and the three auxiliary satellites (of which P3D was one), as well as the mass of the ASAP-5 platform and the other payload mounting and interface hardware.

Of course, after the excitement of the successful launch came the quotes from the multitudes of happy and excited leaders of AMSAT all over the world. AMSAT-NA President Robin Haighton, VE3FRH, welcomed the news of the launch, noting "that the design, building and financing of P3D by international volunteers is a great achievement."

Immediate AMSAT-NA past President Keith Baker, KB1SF, said that he was "delighted" by the news of the Phase 3D launch. "Obviously this is a big thrill for all of us who have spent the better part of our lives over the past ten years bringing the satellite to fruition. I have no doubt that today will be regarded as one of the greatest days in the history of Amateur Radio."

Additionally, AMSAT-NA Board of Directors Chairman (and past AMSAT-NA President) Bill Tynan, W3XO, said, "I can't begin to tell you how happy I am to see P3D in orbit. As I followed the launch sequence, I thought of the many people who have been involved with this project from the very beginning and how pleased everyone must be to see the reward of such hard work."

At press time, there was still a 50 second video of the launch that could be seen at http://arianespace.com/interior/v135better.mov.

Many amateurs around the world have been following the bird since launch, working to decode the telemetry that the bird is sending down. For a while, that will be it for use of the satellite. Although safely in orbit, there is much work to be done with Phase 3D before the satellite is opened for general Amateur Radio use. Initial housekeeping tasks are now underway to verify the health of the many complex systems onboard, followed by bringing these systems online.

As previously noted, P3D is now in a transfer orbit used for geosynchronous satellites. To move P3D from this orbit the arcjet motor will burn intermittently (at perigee) over a 270-day period, with final inclination and apogee adjustments made by the spacecraft's 400 Newton motor. When those maneuvers are completed and three-axis stabilization is achieved, the satellite solar panels will then be spread out to receive full sunlight. At that time, the satellite should be fully operational for use by Amateur Radio operators around the world.

Many have noted that nine months is a long time to wait for commissioning. However, considering that we've waited an extra three years to get the bird in the air, a wait like this is really nothing. Also, realize that this wait would have occurred regardless of the launch date — and the delay is truly necessary. Some have brought up that since the telemetry is as strong as it appears coming from the bird, could the bird be opened before the solar panels are deployed? Although this is certainly a possibility, it is important to note that the P3D team is very closely monitoring the power budget of this new satellite, both in available battery voltage and current orbital parameters. These two areas will be among the most important factors that determine what happens with P3D in the near future. We wouldn't want to overload the batteries with heavy use of the bird before the solar panels are fully extended, since recharging capacities would be reduced.

The P3D command team said that after the initial establishment of communication following launch, a number of systems have been checked out and found to be working perfectly. Presently, Phase 3D's attitude is being changed to prepare for the first motor burn. This maneuver is currently proceeding according to expectations and should be completed shortly after press time.

Both S-band transmitters have been tested (S-1 and S-2), and both have

been found to work properly. With P3D's dish-antennas (for now) pointing away from Earth, signals were weak as expected.

The V-band beacon is currently transmitting PSK telemetry on 145.898 MHz. Many Hams are reporting the signal to be very strong, even using omnidirectional antennas. Along with telemetry, P3D is currently transmitting the following messages:

"This is AMSAT OSCAR-40, the international satellite to support science and education, Amateur Radio space communications and above all, international friendship."

"QST, QST de AMSAT OSCAR-40 in memory of Werner Haas, DJ5KQ, Vice President, AMSAT-DL, 13-06-00."

NORAD has cataloged AO-40 as #26609.

P3D's orbital elements are available on the AMSAT-NA web page at http://www.amsat.org/amsat/keps/ao40.html

Telemetry files & programs

North American P3D Command Station operator Stacey Mills, W4SM, has placed a zip file containing his P3D telemetry decoding program (P3T.exe) as well as some additional supporting files at http://www.cstone.net/~w4sm2/software2/P3t_AP.zip. The program will run on Windows 95/98/NT/2000 platforms. W4SM reports additional programs are under development for Mac and Linux platforms. A 400 baud PSK demodulator is required. Additional information regarding demodulators, and the telemetry format can be found at http://www.amsat-dl.org/p3d/ .

Note that the telemetry decoding program (P3T.exe) needs decoded telemetry to interpret. Normally you get this via a G3RUH demodulator, the same type used for AO-10 and AO-13 telemetry (400 baud PSK). These were available as raw cards from G3RUH himself, or commercially via Pac-Comm's PSK-1, and many of the various DSP modems that were available a few years ago. However, with the advances in computer technology and soundcards, and an enterprising Ham from Italy, you can now do it with your Soundblaster-equivalent card. IZ8BLY, Nino Porcino, has released a Windows 9x software modem that many are having great luck with! Go to http://iz8bly.sysonline.it and download the software — it is freeware, too! With this and P3T.exe, you can watch the telemetry at home and see just what's going on with the bird.

The complete Phase 3D frequency band plan is available at http://www.amsat-dl.org/p3dqrg.html

AMSAT-NA Board Chairman (and past president) Bill Tynan, W3XO, said Phase 3D will now be known as AMSAT-OSCAR 40, or AO-40. "We have been calling it Phase 3D for far too long, henceforth it will take its place in the long line of OSCAR satellites built by the Amateur Radio community throughout the world."

W3XO reported he received the official go-ahead to name P3D from project leader Karl Meinzer, DJ4ZC. "Under the authority vested in me by Karl and our new AMSAT-NA President Robin Haighton, VE3FRH, and as the 'keeper of OSCAR numbers' — I hereby christen our newest, and proudest bird, AMSAT-OSCAR 40."

AO-40 has been dedicated to the memory of one of its principal builders, Werner Haas, DJ5KQ, and operates under the call sign DPØWH. As many of you know by reading my past columns, Werner was the AMSAT-DL Vice President and longtime P3D supporter who died earlier this year. A plaque aboard AO-40 is dedicated to his memory.

As I expected, I'm rapidly running out of room with all of these exciting details. The good news is, I'll be back sooner. Starting with this column, I'll be back in bi-monthly rather than quarterly. Hopefully this will help me to help you keep up with all the new fun as we begin operating with AO-40. Feel free to e-mail or snail mail to the addresses at the top, and hope to hear you soon on the birds!

— Terry Douds, our Amateur Radio Satellite columnist can be reached by mail at: 344 E. 5th Ave., Lancaster, OH 43130-3143, or by e-mail to: n8ki@amsat.org.

Nancy Kott, WZ8C

Should it be Vail code?

Most of the mail generated by Positively CW is from people who want to learn the code or are interested in improving their code speed. I hate to disappoint you, but there is no magic pill you can take to make you a code whiz. But, don't give up or get disheartened, this just means that you need to realize it is going to take practice, practice and then more practice. The code needs to become second nature to you. You need to develop instant recognition, which is done by overlearning. Once you understand this concept, you will be on the road to mastering the code.

Bobby Hipperson, KH7CM, is a math teacher who is having a hard time getting his speed up. When writing to Bobby, I compared learning the code to learning mathematics. When you are beginning to learn math in school, you don't jump into division and multiplication; you first learn the basics. You DRILL the basics into your head. Remember sitting in the classroom for what seemed an eternity, reciting the multiplication tables? I remember being with my best friend at the kitchen table practicing with flash cards and making a game of quizzing each other. There was no getting around the basic fact that we memorized the multiplication tables until we could recall them without effort. By spending so much time and effort, we gained instant recognition. It's the same principle with mastering the code.

You can buy computer programs that promise results without having to practice the basics. These programs make use of an association technique which, in actuality, simply adds a translation step to the process. You might memorize each code letter easily, but you're going to be in trouble when you have to make that translation step while on the air, under pressure. You do not want to be copying, saying to yourself: dah dit dit — that sounds like 'dog did it' — so it must be a 'D'. Don't fall for shortcuts, there aren't any!

Morse programs

This is not to say that you can't put some fun and variation into the learning process. Using different practice tapes and computer programs can add versitility to your learning regime.

If you have a Mac computer, Morse Mania comes highly recommended from Lee Conkey, KB8WOS. He had trouble downloading it from the web site, but when he received a copy of it on a CD it worked fine. Lee says it has many options and it helped him increase his code speed. You can check out Morse Mania at this web site: www.blackcatsystems.com/software/ham.html.

Another good computer code program is Codemaster V, from Milestone Technologies. My favorite feature of this program is the arcade-style game, wherein you save the town from the invading Morse Monster. It helps you identify Morse characters which are giving you trouble, so you can concentrate on overlearning those characters. I found it helped my ability to type and copy at the same time, too. Codemaster V costs $29.95, but it comes with a money back guarantee — I don't know of any other code learning program that has that claim! You can find Codemaster on the web page of Morse Express at: www.morsex.com.

Morse music

You can jazz up your code practice by listening to a tape called "Rhythm of the Code." I am warning you, you will either love or hate this tape. It sets the code characters to a "boom-chicka-boom" type rhythm that you will find to be catchy and fun, or annoying and irritating. I was given the tape by a friend who bought it at Dayton but couldn't stand it. I played it, and thoroughly enjoy listening to it. I play it in the car while I'm running errands just for the fun of listening to it. Guess there's no accounting for taste! If you go to the web site <http://www.edisongreen.com/kawa/> you will be able to listen to a sample and decide for yourself if it is for you.

Keep your practice sessions short, no more than 15 minutes, and do them several times a day. Vary them with computer programs and audio tapes. Incorporate practicing the code into your everyday life. Spelling out street signs by whistling the code under your

breath will also help reinforce what you've learned. I hope these tips help you — if you have any of your own you would like to share, please send them in for a future column.

Whose code is it?

Another type of letter I receive is from people of the opinion that Morse code should be called the Vail code because Alfred Vail was actually the man who invented it. So, whose code is it anyway? Vail or Morse? As more and more historic documents come to light, there is a growing opinion that Vail is the one who should have the credit. It is a very interesting, but convoluted, long story, so I'll try to summarize it here for you.

Samuel F.B. Morse asked Alfred Vail for assistance when he needed funds to develop his telegraph concept. On 23 September 1837, George and Alfred Vail signed a contract with Morse, where Alfred Vail received a quarter interest, half of which would go to George as a silent partner. In this document, Alfred promised to make, "at his own proper cost and expense," a model of the telegraph to exhibit before officials in Washington. The Vails were to pay for all expenses including the cost of the patent. The agreement was very specific regarding all improvements and new inventions that might arise from the telegraph experiments. All patents were to be "taken out in the name and for the exclusive benefit" of Morse.

Morse's original code assigned a number combination to every word in the dictionary. The operator would transmit these number combinations and the person on the receiving end would translate these combinations into words, making sentences. Morse didn't use the dots and dashes we are familiar with today.

His invention had a scroll of paper underneath a horizontal lever which held a pencil. The pencil would draw a straight line until an electro-magnetic current caused the lever to jerk back and forth, making a spike — sort of the way a lie detector or an EKG machine in a hospital looks. Counting the number of spikes would enable the receiver to translate a message. For example, three spikes would be a three, two spikes would be a two — which would mean 32. The person reading the scroll would then look in the reference dictionary and see what word corresponded with 32, and so on, for the entire message.

Vail found this to be cumbersome and came up with a method of using an arm that moved up and down vertically. This allowed spaces and lines of different lengths (making dots and dashes) to be drawn, instead of just spikes on the scroll of paper. He saw the advantages of assigning different combinations of dots and dashes to individual letters, and actually transmitting language instead of number combinations that had to be translated into words. Vail visited a local typesetter and talked to him about which letters were more commonly used. He assigned the shorter, simpler dot/dash combinations to the more commonly used letters, and developed what we know today as the Morse code. Vail also discovered that this type of code could be translated by ear, where Morse had always insisted on his code being written on ticker-tape type paper.

Why did Morse get credit for creating this code? Why was it named after Morse, not Vail? This question has confounded historians for over 100 years. Some say it was because Vail was a gentleman who felt bound by the original contract he had made with Morse, which made Morse the benefactor of all the glory that resulted from the telegraph. Some say it was because Morse was sixteen years older than Vail, with more experience in the political arena. Morse was also more aggressive and had a strong personality, which eclipsed the more intellectual and unassuming Vail, who didn't care for the spotlight. Whatever the reason, Vail's descendants wanted the world to know that he was the inventor of the code we know today as Morse code — his grandson engraved the words "INVENTOR OF THE TELEGRAPHIC DOT AND DASH ALPHABET" on Vail's tombstone.

— Nancy Kott can be reached by mail at: P.O. Box 47, Hadley, MI 48440-0047 or via e-mail at: nancy@tir.com.

Richard Fisher, KI6SN

QRP to the max with the 'NB6M Miniboots'

As much fun as it is to burst onto the airwaves with just a watt or so, every now and then most low power operators get the hankerin' to run a "QRP gallon" - a hefty five watts.

So it's odd, isn't it, that with the growing number of QRP transceivers on the market in the 1 to 3 watt range, there are hardly any accessory amplifiers to give us QRP to the max?

I've long fantasized about adding boots to a vintage NorCal QRP Club Sierra transceiver kit that, on a good day, delivers only 700 milliwatts to the antenna. And that's with the pedal to the metal.

There's also my NorCal-40, which peaks at just 1.5 watts. Add to these several other candidates in the watt-or-so range from the likes of Oak Hills Research, Small Wonder Labs, Ten-Tec and MFJ.

They're all great rigs, but sometimes it takes a "full QRP gallon" to take care of business.

When the Fall edition of NorCal QRP Club's quarterly journal "*QRPp*" arrived in November, an article by QRP homebrew impersario Wayne McFee, NB6M, of Concord, CA, caught my eye: "A MOSFET QRP Gallon." It has since come to be dubbed the NB6M MiniBoots.

It's a simple add-on RF amplifier that will take rigs like the NorCal-40 to a full five watts without even breaking a sweat. It sounded like a great way to bring a QRP spark to a flame.

An IRF510 transistor is the workhorse of the unit — a widely available MOSFET that for about $2 is as close as your nearest Radio Shack store. The circuit in "*QRPp*" features input from your transceiver into a -3 dB attenuation pad, serving two purposes. First, it prevents your 1+ watts from overdriving the MOSFET. Second, it provides a nice 50-ohm input impedance path into the amplifier.

A half-wave Chebyshev low pass output filter determines what band the amplifier works on. And a double-pole/double-throw toggle switch takes the amplifier IN and OUT of line. Switch to IN when you're transmitting. Switch to OUT when you're receiving, bypassing the amplifier.

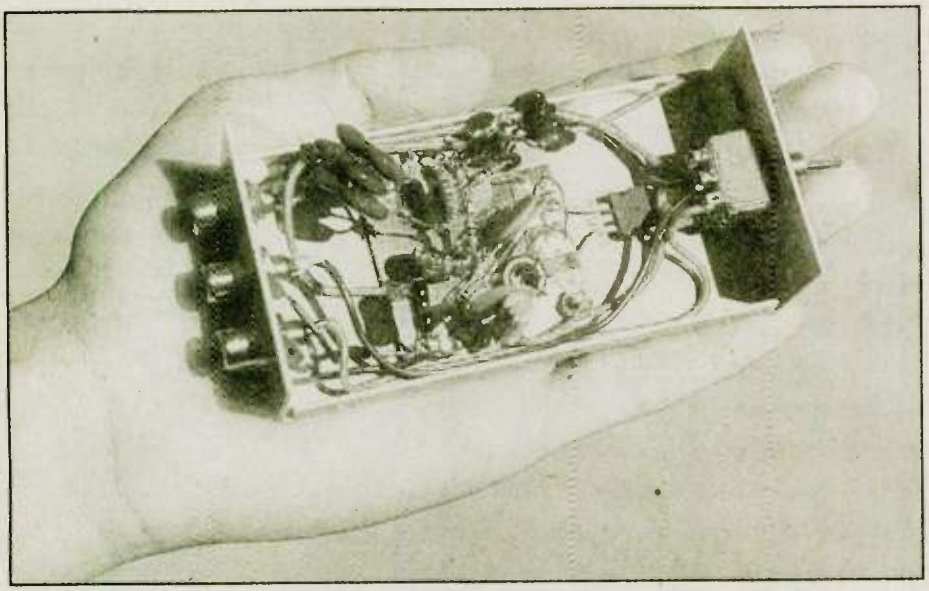
Wayne provides Chebyshev filter output values for both a QRP and QRO version of the amplifier. With QRP values, 5-watt output is possible with 1-watt of drive. With the QRO values 10+ watts is possible with 1-watt of drive.

Using ugly construction, the first attempt to duplicate the QRP version of the circuit at KI6SN was somewhat disappointing. Driving the IRF510 with 1.5 watts from a NorCal-40 transceiver was resulting in amplification to a little more than 3 watts output. Having hastily cobbled the circuit together with parts on hand, I suspected using garden variety disc ceramic capacitors in the output filter, instead of silver micas, might have been the culprit. A flurry of e-mail exchanges with Wayne confirmed the suspicion, and subbing silver micas brought output up to a tad under 5 watts. That's more like it!

Ugly construction techniques make altering circuits or substituting parts so easy that the NB6M MiniBoots cried out for tinkering and experimentation.

While I was trying to get output a bit more in line with NB6M's intent, Wayne was fiddling with an RF sensed transmit/receive switching circuitry. This would eliminate the need to manually switch the amplifier from transmit to receive and back. His inspiration came from a *QST* article on MOSFET amplifiers by Mike Kossor, WA2EBY.

Before I knew it, a new schematic had arrived by e-mail. Electronic T/R had been added, eliminating the need for that DPDT switch for T/R in the original "*QRPp*" article. Now switching



The NB6M MiniBoots RF amplifier can produce a "QRP gallon" with only milliwatts of drive.

was being done by a DPDT relay in measured cadence with pauses in my CW. It's smooth and seamless.

He also added a 100-ohm potentiometer in the gate circuit of the IRF510 as a variable drive control.

A second version of the NB6M MiniBoots at KI6SN employed the RF-sensed T/R circuit, the drive control and the QRO output filter values. Wow. Now, with the NorCal-40 driving the amp at about 1 watt I was getting in the area of 10 watts output. With the drive control I could easily drop to a comfortable 5 watts. As I dropped the drive with the 100-ohm potentiometer, it was clear that the NB6M MiniBoots amplifier could also be used as a heavyweight attenuator: with the drive control at full resistance, output dropped to .00359 watts. That's milliwatting at its finest.

I had expressed concern to Wayne about the circuit's attenuation pad being a disadvantage when driving the amp with milliwatt power. That's maximum output for several QRPppp rigs at KI6SN.

Again, Wayne responded quickly with an updated schematic via e-mail subbing the attenuation pad with a 6-turn primary/4-turn secondary impedance-matching transformer on an FT37-43 core. Now, with the 100-ohm potentiometer as a drive control, and the 50-ohm impedance-matching transformer, driving the NB6M MiniBoots with milliwatts of power for full "QRP gallon" output wasn't a problem.

Any QRPer with a modest junk box will have 99 percent of the parts on hand. The output filter uses T50-2, T50-6, T37-2 or T37-6 toroid cores, depending on which bands you want to operate. At KI6SN, the silver mica capacitors were a challenge to scrounge, but since then I've beefed up my supply with an order to a parts house. Wayne, a first-class designer and true gentleman, was even kind enough to send me some silver micas for experimentation until more could arrive.

Since completing the NB6M MiniBoots I've had dozens of QRP contacts on 40 Meters using the amp. Reports of tone quality and clarity have been superb, and switching the MiniBoots in- and out-of-line have resulted in noticeable differences in signal reports. Driving the amplifier with the NorCal Sierra one evening on 40 Meters I ran some tests with a fellow several hundred miles to the north of me. At 700 milliwatts with the Sierra barefoot I got an RST of 549. With the 'Boots' pumping 5 watts to the antenna, my signal jumped to a solid S-9. Not bad.

If you'd like a copy of the schematic for the NB6M MiniBoots amplifier, send a self-addressed, stamped envelope to me. I'll be happy to get it to you right away.

And if your junk box is a bit on the sparse side, stay tuned: there's a distinct possibility that the NB6M MiniBoots amplifier will be introduced as a kit by one of the country's most active QRP clubs. We'll bring you the details just as soon as they're available.

Make no mistake about it: these 'Boots were made for talkin.'

Carl Luetzelschwab, K9LA

More info, and some web sites too!

This month's column is a potpourri of two subjects. The first is an addendum to my December 1999 column about variability of the ionosphere. The second is a listing of several web sites with extensive solar data and propagation information.

Now for the first subject. The December 1999 column addressed the fact that the ionosphere can vary on a short-term basis, with periods anywhere from several minutes to a couple of hours. An example of this cyclic variation was shown in plots of the F region 3000km MUF (Figure 1 of the December column) and in the height of the F region electron density peak (Figure 2 of the December column). The cause of the variation for this specific data was attributed to a medium scale AGW (atmospheric gravity wave). Dave Fischer, NC7W, sees a cyclic pattern in the QSO rate in his contest logs, and these short-term variations of the ionosphere are the most likely cause.

Subsequent to that December column being published, Dave sent me plots of examples of the cyclic QSO rates. This data came from the 1999 WPX CW contest and the 2000 WPX CW contest. What he did was calculate the moving average throughout the entire contest of how long it took to make 12 QSOs.

I took a portion of his data for the 2000 WPX CW contest and calculated the time between successive maximums in the QSO rate. This is plotted in Figure 1. Note that the time between maximums is from 10 minutes or so to 30 minutes or so for the portion of the log that I looked at.

It's tempting to compare this data to the foF2 and hmF2 data in the December 1999 column. But the QSO rate data is not on the same days (or months, or even years!) as the foF2 and hmF2 data. I have no doubt, though, that there would be some correlation of the cyclic QSO rate to ionospheric data if May 2000 ionospheric data was available on the specific contest dates and it was taken every couple of minutes. Undoubtedly there are other subtle factors involved, but the short-term variation of the ionosphere looks like it's the most important part of cyclic QSO rates.

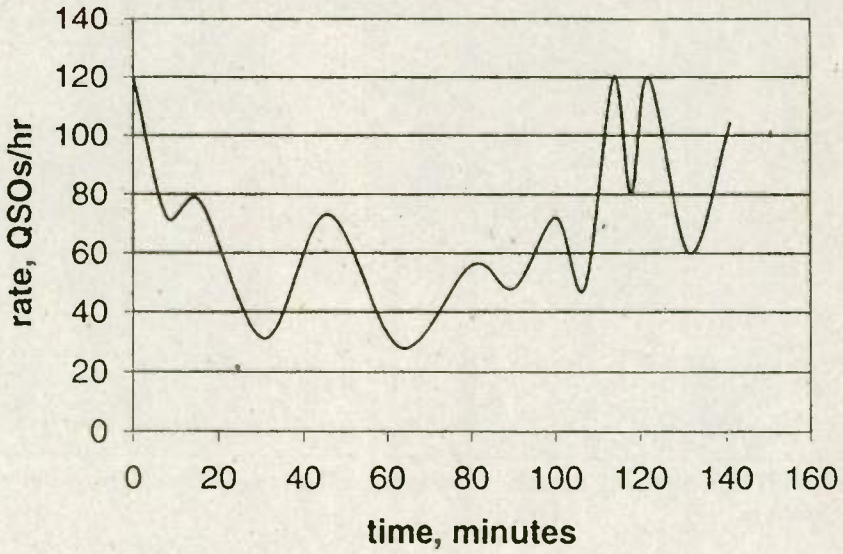


Figure 1 Cyclic QSO Rate, WPX CW 2000, from NC7W

1. http://www.hfradio.org/propagation.html
2. http://dx.qsl.net/propagation/
3. http://www.nol.net/~ids/prop.html
4. http://www.teleport.com/~nb6z/solar.htm

Table I Solar Data and Propagation Web Sites

If you're interested in digging deeper into this to understand all the details of the QSO analysis, please contact Dave at utahfolk@xmission.com.

And now for the second subject. Table I lists four web sites that have extensive solar data and propagation data.

Site #1 belongs to Tomas Hood

NW7US. It has current solar conditions (with an option to have changes e-mailed to you), 3-day and monthly forecasts, a Cycle 23 status, a WWV summary, foF2 contour maps, auroral maps, and links to more solar and propagation data.

Site #2 belongs to Douglas Brandon N6RT. It has current solar conditions, a 3-day forecast, flare activity, auroral maps, GOES x-ray flux plots, a current grayline map, a current MUF(3000)F2 map, and solar images.

Site #3 belongs to Roy Hradilek, AD5Q. It has links to his historical propagation reports, current solar conditions, and many links to other solar and propagation data.

Site #4 belongs to Richard Griffin, NB6Z. It has current warnings and alerts, current solar indices, WWV report details, foF2 maps, hmF2 maps, foE maps, Cycle 23 plot and text, and current auroral maps.

Please take a look at these sites, as my short summaries do not do them justice. As you'll see, there's a lot of information available. But do we understand it all or, more importantly, do we know how to apply it? Those are interesting questions, and I'll discuss that next month.

Inside Amateur Radio

The following story has been excerpted from Inside Amateur Radio, by the late Lenore Jensen, W6NAZ. The book can be purchased from Worldradio Books, P.O. Box 189490, Sacramento, CA 95818. Price is $9.00 plus $2.00 shipping and handling. CA residents please add 70¢ sales tax.

Flying Sams

The Flying Samaritan Amateur Radio Service Network is part of a caring organization dedicated to rendering volunteer medical aid and service to Mexico's remote back country — mainly the Baha peninsula.

Nash Williams, W6HCD, founder and ex-president of the Foothill Chapter, recalls just one of dozens of successes accomplished by the Ham members of the group.

"The amateurs provide communications to expedite the work of our volunteer physicians, nurses, dentists, engineers, pharmacists, etc.

"For instance, we received a message that two young American women, vacationing in Baja California, were critically injured in an auto accident. They were in a small hospital 375 miles south of San Diego and needed more care than was available.

"We all went into action and immediately arranged for a pilot and nurse to fly down. Also we made hospital arrangements up here. It was more complex than usual, as we had to secure permission to over-fly the border and to expedite clearance by U.S. Immigration at Lindberg Field, San Diego.

"There were many Ham contacts to help with all this.

"When the victims had been taken aboard the Piper Comanche in Mexico, they were flown directly to San Diego where the one in most critical condition was removed to a waiting ambulance. Then the plane flew on to Long Beach where the other girl's family took her to a local hospital.

"The entire operation took less than 24 hours, thanks to our previous experience. Usually we serve our Mexican neighbors in matters of health, but this was the first time we had been called upon to save the lives of American tourists.

"We later learned that, in the case of the woman taken to the hospital in La Jolla, any further delay would have cost her life."

Kurt N. Sterba

The Masked Avenger strikes again!

An interested and helpful reader brought to Kurt's attention an advertisement on the Internet. You can see it at http://looknbrowse.com/bcmatcher. This is a mobile antenna matcher used at the antenna to match its impedance to that of the feedline. By placing the matching at the antenna instead of at the rig you can get 1:1 SWR on the feedline. The exact way that the matcher does this is not described but as far as Kurt can see it does exactly what it is claimed to do.

But a problem arises in the claims made for the virtues of technique. Here we find one of the old chestnut incorrect ideas that Kurt sees over and over. The ad states that "The ability to obtain a near perfect match at the antenna means no pickup or radiation from the feedline which in turn reduces vehicle noises that usually enter the system through the feed line."

This is wrong, wrong, wrong! The fact is that pickup or radiation from the feedline has nothing to do with the SWR. There is no more pickup on receiving or radiation when transmitting when the line has 10:1 SWR than when SWR is 1:1. Why should there be? The transmitted power is contained within the coaxial cable as it goes from transmitter to the antenna. Reflected power caused by high SWR also it is contained entirely within the cable as it goes back toward the transmitter. This all takes place within the cable. Nothing comes out through the shield.

If you don't believe Kurt just try this experiment: Connect your transmitter to your antenna and tune to a frequency off the antenna's resonant frequency such that the SWR is, say, 10:1. Apply full power. Now see how much RF is out the outside of the cable by using a RF probe of some kind or maybe just your hand. See if you get a RF burn. You won't!

High SWR does not cause radiation from the coaxial cable. And, by the principle of reciprocity, there will be no pickup of vehicle noises or any other signals due to the SWR. Remember, Kurt told you.

Power loss in the cable

There is, of course, one thing that does happen with high SWR and that is increased loss in the cable. Is this bad? Not really. The increased loss is usually small and, in a HF mobile installation with a short length of cable it is negligible.

The ad, though, tries to scare you: "The notion that SWR ratios of up to 2:1 or 3:1 are acceptable simply does NOT apply to mobile operation. In fact, degredation of performance begins at 1.2 and becomes dysfunctional at 1.5." Kurt can assure you that this is wrong, wrong, wrong!

Let's look at this with an example of a typical mobile installation. Our setup uses RG-8 coax ten feet long going from the rig to the rear mounted antenna. Using the nice chart in the Antenna Book we find that if we use the matcher and have 1:1 SWR the loss in the cable on the 40 meter band will be .055 dB. Not enough to even notice.

But what if we don't use the matcher and have that horrible 1.5 SWR where the system becomes "dysfunctional"? This awful mismatch is going to add almost .003 dB more loss. So now we have a total loss of .058 dB. If you remember that 1 dB is the smallest change in signal strength that a listener can even notice you can see that no one but you and your SWR meter will ever know that you let it go up to 1.5. Your system is not "dysfunctional"; far from it!

There is nothing wrong with even 10:1 SWR on your mobile's transmission line as long as you have a tuner at the rig end of the coax to convert to a low SWR for your transmitter. Kurt told you so.

Coaxial Cables

Kurt has given the impression that there is no signal leakage through the cable's shield. There can be a little because shields aren't always perfect. But don't worry about it if you have good cable. The signal loss and noise pickup is so far down from the radiation and pickup of the antenna itself that it is not a problem.

Of course, there is some bad cable out there where the manufacturer has cut down on the braid coverage to

get a lower priced product. Don't buy unknown brands. If you use MIL-Spec cables you will get 95% to 97% braid coverage. This is plenty to keep HF signals in. But there are cables out there with 75% or less coverage. The popular 9913 cable (50 ohms) has 100% braid coverage. Most cables have single braid shields. Double braid shields give another 30-40 dB attenuation. You don't really need that. Just don't buy junk and you'll be OK. Kurt told you so.

Hydronic radiation

In a recent column Krusty Old Kurt called the 1966 promotion of this underwater transmission scheme fraudulent. Kurt always calls it as he sees it.

A reader came to the defense of the promoter of hydronic radiation stating that he had done excellent experimental work in underwater sound. This is correct. He was a respected and well-known scientist with a number of patents and publications in chemistry and physics.

But in later work he made claims for underwater radio transmission that Kurt did not and does not believe. He claimed to have discovered "hydronic radiation" which was an electromagnetic radiation similar to radio.

He stated that it can be produced by the same equipment that generates radio signals. Depending on the size of the plates on the ends of the dipoles relative to the transmitter power the signal is a radio wave or a hydronic wave.

When connected to a short dipole radio waves propagate at right angles to the wire. hydronic signals propagate off the ends of the wires.

They propagate through water more than 200 times as fast as radio waves and suffer much less attenuation with distance. Copper and aluminum do not make good hydronic antennas. Inert metals such as monel, stainless steel, and gold do work well. Although hydronic signals propagate rapidly through water they do not exist at all in air.

It would appear that hydronic radiation would be much more useful for underwater communication than radio. However, the nature of the specialized receiver required was not revealed so it was not possible for independent observers to verify the claims. Thirty five years have passed and hydronic radiation seems not to have replaced radio in underwater communication. Kurt doubts that it ever will.

Contest Chart

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
Vermont QSO Party (USA)	0000Z 3 Feb 2359Z 4 Feb	160-10m CW & SSB	1pt/QSO Stns in VT work everyone, Others work VT stnts only	VT counties, VT club stations VT stations count VT, NH and ME counties, US states, Canadian provinces and territories, DXCC countries on each band. Bonus QSO points:QSOs with W1OFW 2,000; W1OFW/M 5,000.	RST QTH	Single op high power, Single op QRP Club	1 Mar KE1BV
New Hampshire QSO Party (USA)	0000Z 3 Feb 2359Z 4 Feb	160-2m CW, SSB and FM	1pt/QSO Stns in NH work everyone, Others work NH stnts only	New Hampshire couunties (10) NH stations count NHcouties, US states, Canadian provinces and territories +1 if you work any DX stations	RST QTH	Single tx: High Power, low power, QRP mutli-tx: High Power, low power, QRP 50MHz and above NH Club	1 Mar WB1ASL
Maine QSO Party (USA)	1300Z 3 Feb 0700Z 4 Feb	160M-70cm CW, SSB andFM	1pt/Fone QSO 2pt/CW QSO x5 for QSOs with ME clubs	Maine counties (16) ME stations count ME counties, US states, Canadian provinces and territories, DXCC	RST QTH	Single op: High power, low power Multi-op Club QRP Mobile	30 days Portland AWA Box 1605 Portland ME 04104
Freeze Your B___ Off QRP Field Day	1600Z 3 Feb 0400Z 4 Feb	80-10M CW and SSB	1pt/QSO	US States, Canadian Provinces and Territories, DXCC countries, plus special multipliers: x4 for Field-day-type location, x2 for alternative power, x2 for running less than 1w, x indoor temperature multiplier - x2 from 50-64F, x3 for 40-49F, x4 for 30-39F, x5 for 20-29F, x6 for below 20F	RST QTH Name Power indoor temperature	Single Op: home or field Multi-op: home or field Novice and Technician-class licensees	7 Mar AB7TT
Delaware QSO Party (USA)	1700Z 3 Feb 0100Z 4 Feb 0500-1300 off time for all	160-10M all modes	1pt/Fone 2pt/CW, RTTY, digital	none	RST QTH	one category for all entrants Info by e-mail: n9gg@dxer.com	30 days FSARC, Box 1050 Newark DE 19715 deqsoparty@ fsarc.org
North American Sprint SSB (NCJ)	0000Z 4 Feb 0400Z 4 Feb	80-20M SSB	1pt/QSO	Canadian Provs/Terrs US States NorAm DXCC Countries	Ser# Name QTH	Single op all bands only Entrants may combine their scores to form a "team".	1mo. K7GM or e-mail to ssbsprint@ncjweb.com
Maritime SSB (New Brunswick ARA)	1100Z 4 Feb 2200Z 4 Feb (1500-1800 off time)	80M SSB	1pt/QSO	Counties in New Brunswick (15), Nova Scotia (19) and Prince Edward Island (3)	RS Ser# County Prov Name	Single op only. This contest is open to amateurs in the three Maritime provinces only.	30 days VE9DH
CQ/RJ WW RTTY WPX	0000Z 10 Feb 2359Z 11 Feb	80-10m RTTY	1pt/QSO own country 2pt/QSO own continent 3pt/QSO other continent x2 on 40, 80, 160M	Total of prefixes worked, regardless of band	RST Ser#	Single Op All Bands: High power, Low Power (150w out) Single Op Single Band Multi-op: Single tx, Two tx, Multi-tx SWL All entrants may use DXCluster or other DX alert systems	17 Mar W6/G0AZT 1826 Van Ness San Pablo CA 94806 USA or e-mail to edlyn@global.california.-com
PACC (Netherlands)	1200Z 10 Feb 1200Z 11Feb	160-10M CW & SSB	1pt/QSO Work Neth. only	Neth. provinces (12) on each band	RST Ser#	Single Op: Mixed mode, CW only, SB only, QRP Multi-op: Single or Multi-tx	31 Mar PA3BFM
YLRL YL-OM Contest SSB	1400Z 10 Feb 0200Z 12 Feb	80-10M SSB	1pt/QSO YLs work only OMs OMs work only YLs	ARRL Sections, Canadian Provinces and Territories, DXCC countries worked on each band Total score x1.5 for low-power (200wPEPmax)	RS Ser# QTH	Single operator only	30 days KC4IYD
North American Sprint CW	0000Z 11 Feb 0400Z 11 Feb	80-20M CW	1pt/QSO	Canadian Provs/Terrs US States NorAm DXCC Countries	Ser# Name QTH	Single op all bands only Entrants may combine their scores to form a "team".	1mo. AG9A or e-mail to cwsprint@ncjweb.com
ARRL DX CW	0000Z 17 Feb 2359Z 18 Feb	160-10M CW	3pt/QSO Work stns outside Canada, USA only	DXCC on each band	RST QTH	Single Op: All bands, Single Band Assisted, Low power, QRP Multi-op: one, two or multi-tx	1mo ARRL or e-mail to DXCW@arrl.org
CQ 160M SSB	2200Z 23 Feb 1600Z 25 Feb	160M SSB	2pt/VE 5pt/NA 10pt/DX 5pt/Mar.Mob.	Canadian Call Areas, US States, other DXCC Countries.	RS QTH	Single Op Multi-op	1Mo. K4JRB or CQ mag. E-mail to cq160@contesting.com
REF SSB	0600Z 24 Feb 1800Z 25 Feb	80-10M SSB	15pt/France+terrs 5pt/F.terrs in NA	Departments of France (96), F6REF/00 on each band	RS Ser#	Single op: All bands, single band Multi-op SWL	15 Apr BP 2129 37021 Tours Cedex
North Carolina QSO Party	1200-2359Z 24 Feb 1200-2359Z 25 Feb	160M-microwaves CW and Phone	1pt/Phone QSO 2pt/CW QSO 3pt/Mobile QSO 100pt/QSO with W4NC or K4EG	For stations outside North Carolina: NC Counties NC stations: NC counties, US States, Canadian Provinces and territories, DXCC countries	RST Ser# QTH	Choose any two to make a category: Fixed Station; Mobile; HF Bands; VHF/UHF Bands, HF/VHF/UHF Bands, Club, Team, Single op, Multi-op, Novice, QRP (5w), In-state, OUt-of-state	1 April K4EG
UBA CW (Belgium)	1300Z 24 Feb 1300Z 25 Feb	80-10M CW	10pt/ON 3pt/Eur. Union 1pt/other	ON Provs (8) + ON Prefixes + DXCC countries in European Union	RST Ser#	Single Op: All bands, Single band Multi-op, single tx SWL	30 days ON7LX
YLRL YL-OM Contest CW	1400Z 24 Feb 0200Z 26 Feb	80-10M CW	1pt/QSO YLs work only OMs OMs work only YLs	ARRL Sections, Canadian Provinces and Territories, DXCC countries worked on each band Total score x1.5 for low-power (200wPEPmax)	RST Ser# QTH	Single operator only	30 days KC4IYD
Colorado QRP Club Winter QSO Party	2200Z 25 Feb 0400Z 26 Feb	160-10M CW and SSB	QSOs with members: 6pt/CW QSO 3pt/ SSB QSO QSOs with non-members: 4pt/CW QSO 2pt/SSB QSO	US States, Canadian Provinces and Territories, DXCC countries MULTIPLIED by the number of first names worked, one per letter of the alphabet (26max)	RST QTH, first name and CQRPC membership number or power output	Single Op Single Band Single Op All Bands Novice and Technician-class licensees	1 mo. Box 371883; Denver, CO 80237-1883 or e-mail to contest@cqc.org
ARRL DX SSB	0000Z 3 Mar 2359Z 4 Mar	160-10M SSB	3pt/QSO Work stns outside Canada, USA only	DXCC on each band	RS QTH	Single Op: All bands, Single Band, Assisted, Low power, QRP Multi-op: one, two or Multi-tx	1mo. ARRL or e-mail to DXPhone@arrl.org
CLARA and Family HF	1700Z 13 Mar 1700Z 14 Mar	160-10M	once per band, each mode 5 pts Clara memb. 2 pts CLARA family memb. 3 pts YL non-memb. 1 pt. any OM	Can. Prov., DX countries	name, QTH, member or non-member	CLARA members, YLs, Oms	22 Apr VE2YAK

Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA. ARRL - 225 Main St, Newington CT, 06111 USA. Callsign - Callbook Address
Bands: The 30, 17 and 12m bands are never used in any contest.

Hamfests — February

Orlando ARC Orlando "Hamcation" 1 Feb at Central Florida Fairgrounds, 3 W. Colonial Dr. Orlando, FL. Adm. $9. Three days of tailgating & swa , days of commercial exhibits (Sat. & .). ARRL NFLA section convention. 150 mmercial Booths; 400 tables, VE exa s, hunt, special event station. Overnight RV nections $16. For info: 407/291-2465.

a Porte ARC Cabin Fever Hamfest, 7 . - 1 p.m., 24 Feb. at La Porte Civic Audi- um, 1000 Ridge St., La Porte IN. Adm. tables $10. TI: 146.52, 146.61(- 131.8). info: Neil Straub, WZ9N, P.O. Box 30, La e, IN 46352. E-mail; nstraub@niia.net, page www.geocities.com/k9jsi/.

line Creek ARC La Cygne Hamfest, 9 - 1 p.m. 3 Feb. at La Cygne Com- ity Building on Broadway St. La Cygne, Adm. is free, tables $10. Hourly s and several contests. TI: 147.285(+). info: Ron, KB,DTI, 913/757-4455, il: kb0dti@arrl.net, or Mike, WØXM, 898-4695, e-mail: w0xm@arrl.net.

gonquin ARC Flea Market, 17 Feb. at lboro Middle School, Marlboro, MA. . $3, Tables $12. VE exams 9 a.m. - .m. (walk-ins welcome). For info: Ann lon, KA1PON, 508/481-4988 (before .).

iawatha ARA Swap & Shop, 3 Feb. egaunee Township Hall, 42 M-35, unee, MI. Adm. $2, tables $6. Door s, raffle, food. TI: 147.27. For info: Veiht, N8RSE, 906/228-9417, or Bob s, N8PKN, 906/226-9782. E-mail; n@aol.com.

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Cherryland ARC 28th Annual Swap-n-Shop 8 a.m. - noon 10 Feb. at Immaculate Conception M dle School, Traverse City, MI. VE exan Pre-register or register at the Swap. TI: 146.86. For info: Joe, W8TVT, 231/9 -8555 or Chuck, W8SGR, 231/946-5312.

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Livonia ARC 31st Annual Swap'n Shop 8 a.m. - 13:30 p.m. 18 Feb. at William M. Costick Activities Center, 28600 Eleven Mile Rd (between Middlebelt and Inkster Roads, Farmington hills, MI. Adm. $5, reserved tables $16 (+$5 adm.). TI: 144.75(-) or 146.52 simplex. For info send a 4 X 9 SASE c/o neil Coffin, WA8GWL, Livonia ARC, P.O. Box 51532, Livonia, MI 48151-5532 or call 734/261-5486. Web: www.larc.mi.org or e-mail swap@larc.mi.org.

Amateur Radio Association of the Southern Tier Winterfest, 8 a.m. - 3 p.m. 24 Feb at NYS National Guard Armory, Colonial Dr., Horseheads, NY. Adm. $5/adv, $6/door (under 10 free). VE exams at 9 a.m., breakfast and lunch on the grounds. TI: 146.70(-). Info: Barry, 607/737-0626; Dealers/Tickets: Randy, 607/738-6857; VE exams: John, 607/565-4020. E-mail: winterfest@arast org. Web: www.arast.org.

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Long Island Mobile ARC Winterfest 25 Feb. at Levittown Hall, 201 Levittown Parkway, Hicksville, Long Island, NY. Adm. $6. Tables $20/adv, $25/after 14 Feb. ARRL info table, LIMARC info, VE exams. For info: Ed Muro, K2EPM, e-mail: hamfest@limarc.org. web page: www.limarc.org. or call 24 hour info line: 516/520-9311.

Salem Repeater Association/Oregon Coast Emergency Repeater, Inc., 2001 Salem Hamfair, 9 a.m. - 3 p.m. 17 Feb. at Polk County Fairgrounds, Rickreall, OR. Registration $6/adv, $7/door. Tables $13, $15/with power. Self-contained RV camping $10 per night. Commercial Vendor space #40 (2 tables). No VE tests. For info: Richard Smith, 541/997-4074 or e-mail: kk7ox@presys.com. Web page: http://repeater.homepage.com.

Wireless Association of South Hills Hamfest 8 a.m. - 3 p.m., 25 Feb. at Castle Shannon Fire Department complex. Adm. $4 (under 12 free/with adult). All tables and flea market spaces are indoors. Tables $10, ($15/with power) Forums at 9 a.m. VE exams at noon. ARRL DXCC field checking available. For info: Steve Lane, W@3SRL, 412/341-1043 or Bill Hill, W3SH, 724/746-1776. E-mail reservations or info requests to: washarc@yahoo.com

Charleston ARS Hamfest 8:30 a.m. - 4 p.m. 3 Feb. at Stall High School, in N. Charleston, SC. VE exams at noon. For info: Jenny, WA4NGV, 843/747-2324.

Dixiefest "2001: A Hamfest Odyssey" 10-11 Feb. at Shelby County Building-Mid-South Fairgrounds. Open Sat. 9 a.m. to 5 p.m., Sun. 9 a.m. to 2 p.m. Adm. $5, (under 12 free). Dealer tables $40/adv., $50 after 9 Feb. Flea market tables $20. VE exams Sunday morning. For info: 901/372-8031 or 901/365-8088, or see web page: www.dixiefest.org.

Radio Amateurs of Northern Vermont Winter hamfest/ARRL State Convention 8 a.m. - 1 p.m. at Milton High School, Milton,

(Continued on page 65)

New Products

Information in "New Products" is supplied by the manufacturers to acquaint ***Worldradio*** *readers with new products on the market.*

Alinco DJ-X2000 receiver

Alinco USA has released the DJ-X2000, a 'new generation' wide-range receiver. With continuous coverage from 100 kHz to 2150 MHz (cellular band excluded), the DJ-X2000 offers a broad package of functions and features not found in other scanning receivers. The new unit receives most common modes, including CW (Morse Code), Wide FM, Narrow FM, AM, USB LSB and FM stereo broadcasts.

"Alinco designed this receiver to meet the needs of the listening enthusiast and for professionals in public safety and news gathering operations," said Katsumi Nakata, KE6RD, Branch Manager for Alinco USA. "With 2,000 memories, on-board 'help' navigator, hidden transmitter detection and more, we are confident in saying there is nothing quite like it in the marketplace. It is such a fresh design, we have applied for two patents on new circuits included in this unit."

The DJ-X2000 features alphanumeric channel naming, is computer programmable, receives FM stereo broadcasts, has an instant "Flash Tune™" feature that can lock onto nearby signals, a frequency counter for checking radios in the field and a digital recorder that can record a user voice memo or received audio for over two minutes. The receiver can also decode CTCSS tones commonly used by FM transmitters and can associate a tone associated with a given memory channel.

A Ni-Cd battery ((EBP-37N) and quick charger (EDC-88) are included and the receiver accepts battery packs used in several other Alinco radios. In addition, it can be powered by 12V external DC, found in base or mobile operations.

Some technical highlights include a Digital Temperature Compensated Crystal Oscillator (DTCXO) for frequency stability that is accurate to 1 ppm and technically superior to older TCXO designs. The dot matrix LCD display conveys an amazing amount of information depending on the function the user has selected. From the relative field strength meter to graphic displays of band activity, it keeps the operator informed of its operations. The on-board "Help" navigator guides the user through most functions and features and can instantly refer the user to change settings for the function in question. A new antenna design boasts increased sensitivity, improved low-end performance and a conventional BNC antenna terminal allows easy connection to external antenna systems. A two-level attenuator reduces strong or interfering signals 6 or 20 dB.

Alinco expects a strong demand for the DJ-X2000, saying it may take some time for production to catch up with demand. The DJ-X2000 is the latest wide coverage receiver to come from Alinco, which manufactures other receivers and a wide variety of transceivers for the Amateur Radio marketplace in North America. MSRP for the DJ-X2000 is expected to be $650 but dealers frequently discount from manufacturer's price guides.

For more information contact Alinco USA, 438 Amapola Ave. Suite 130, Torrance, CA 90501, or see their web page: www.alinco.com, or contact your nearest Alinco dealer.

VE Exams

As a service to our readers, ***Worldradio*** presents a feature listing of those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for December, please have the information to us by mid-September. ***Worldradio***, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams." List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

p/r pref=pre-register preferred but w/i OK
p/r=pre-register only—no w/i
w/i=walk-in only
w/i pref.=w/i preferred to p/r

Date	City	Contact	Notes
Arizona			
2/01/01	Tucson	David, K7IOU 520/749-2884	p/r pref
Arkansas			
2/10/01	Harrison	David, K5DEL 870/741-8604	p/r pref
California			
Hotline	Carmichael	Info Hotline: 916/492-6115	w/i
2/11/01	Citrus Heights	Joe, KF6OQY 916-797-3149	p/r
2/22/01	Colton	Harold, AB6RN 909/825-7136	p/r pref.
2/24/01	Culver City	Scott, K6PYP 310/459-0337	w/i
2/18/01	Fresno	Charles, W6DPD 559/431-2038	w/i only
2/17/01	Grass Valley	John Plamer, KK6XJ 530-273-0524	p/r pref.
2/17/01	Long Beach	Don, 562/420-9480	p/r pref.
2/10/01	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
Hotline	Santa Rosa	Hotline - Recording, 707/579-9608	w/i ok
Hotline	Sebastopol	Recording, 707/579-9608	
2/17/01	Stockton	Mark, W6DKI 209/465-7496	w/i
Colorado			
call	All Colorado	Exam recording 303/360-7293	
Florida			
call	St. Pete	Mark, NP3R 727/528-0071	w/i pref.
Idaho			
2/10/01	Boise	Rich Dees, W7BOI 208/888-1343	w/i pref.
2/28/01	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
2/06/01	Lewiston	KB7LTY 509/758-8374	
Illinois			
Anytime!	Burr Ridge	Arbonne Radio Club Deni, W9DS	
630/986-0061	p/r		
2/10/01	Oak Forest	David, NF9N 708/226-1570	p/r pref

State	City	Contact	Notes
New Jersey			
2/10/01	Cranford	W2OU, 732/885-8460	w/i pref
2/14/01	Ft. Monmouth	Mike, KC2Q 732/774-1095	w/i only
New York			
2/04/01	Yonkers	Emily, AC2V 914/237-5589	w/i
North Carolina			
tba	Brevard	Harrison, KO4RV 704/877-4757	
Ohio			
2/03/01	Cincinnati	Herb, WA8PBW 513/891-7556	w/i pref
2/24/01	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref.
Oregon			
Call!!	Astoria	AA7OA, 503/338-3333	p/r
Tuesdays	Bend	Bill, K7ZM 541/389-6258	p/r only
2/10/01	Dallas	Robert, W7LOU, 503/623-1141	p/r
2/14/01	Eugene	Riley, W7EUD 541/345-2407	p/r pref
2/24/01	Gresham	Patsy, W7PAT 503/668-4305	w/i only
2/03/01	Lincoln City	Carl, K7EWG 541/994-3113	p/r pref.
2/14/01	Roseburg	Mel, AB 7DC 541/672-5884	p/r pref.
2/24/01	White City	Paul, K7VO 541/878-3433	p/r pref
Pennsylvania			
2/03/01	Charleroi	Bill, W3EMV 412/751-4373	p/r
2/03/01	Erie	Norma, W3CG 814/665-9124	w/i pref.
2/01/01	Philadelphia	Dusty, ND3Q 215/448-1139	p/r pref
South Dakota			
2/17/01	Rapid City	Frank, NUØF 605/348-6564	w/i ok
Texas			
2/17/01	Austin	Jim, AB5EK 512/327-6184	w/i

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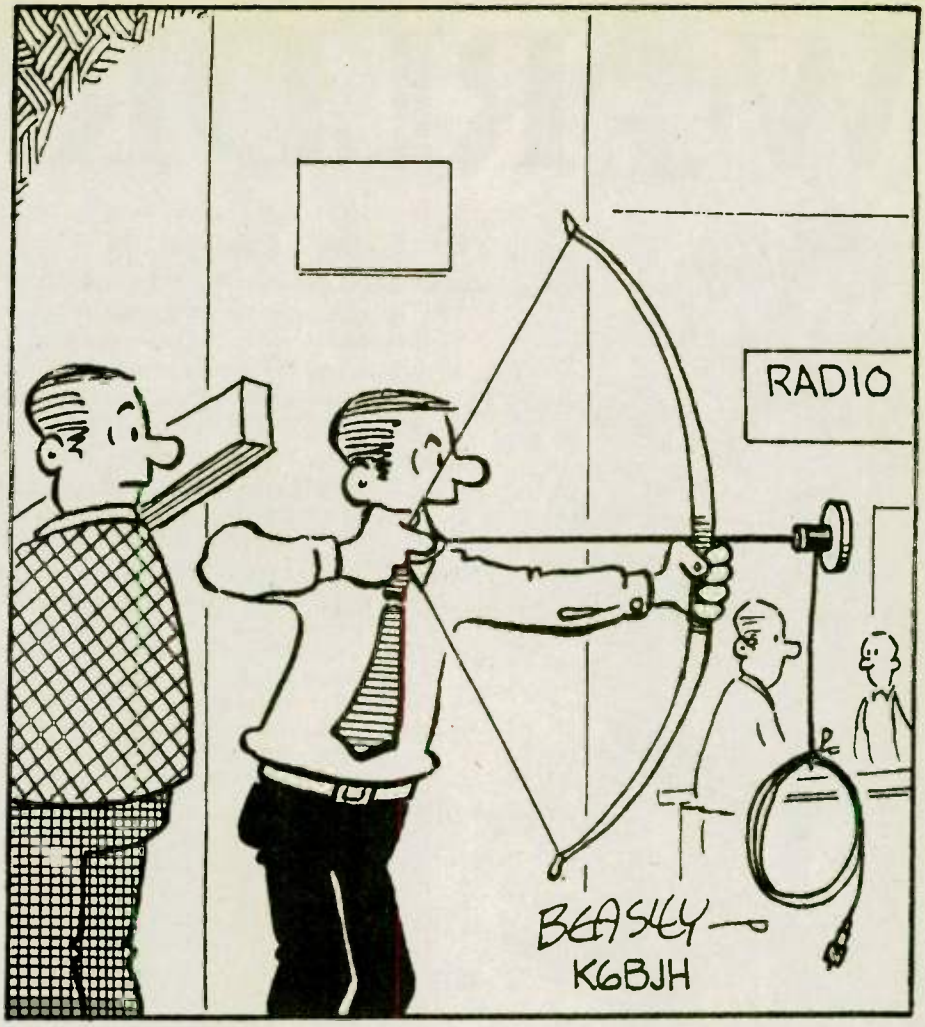
Hamfests

(continued from page 61.)

VT (rte 7 in Milton, 5 mi. north of I-89 exit 17). Adm. $3 (under 18 free). Tables are free (limited supply). VE exams at 9 a.m. and 1 p.m. TI: 145.15, bulletins on 146.67. For info: Mitch Stern, W1SJ, 802/879-6589. E-mail: w1sj@arrl.net, or web page: www.ranv.together.com.

Vienna Wireless Society Hamfest 8 a.m., 25 Feb. at Northern Virginia Community College, (exit I-495 at Little River Turnpike west, after 3 miles, left onto Wakefield Chapel Rd., after 0.2 mile, left into parking lot. GPS coordinates: 38° 49.49'N, 77° 14.28'W) Annadale, VA. Adm. $5 (XYL free). Tailgate spaces $10 (includes one admission). Flea Market open at 6 a.m. Hourly prize drawings. DXCC field checks, featured speaker is FCC enforcement chief Riley Hollingsworth, K4ZDH. VE exams will be held Saturday 24 Feb. at 8 a.m. (walk-ins welcome). TI: 146.31/91. For info: Jim, W4JTP, 703/392-0150, e-mail; winterfest@att.net, web page: http://winterfest.home.att.net.

SEWFARS ARC Swapfest/Computer Expo 8 a.m. - 2 p.m. 4 Mar. at Waukesha County Expo Center Waukesha County, WI. Setup at 6 a.m.. Adm. $5/door. Reserved 4-ft. tables $6. Electical outlet $7.50. VE exams. TI: 146.820 (pl 127.3). Send check and SASE payable to SEWFARS, Inc. P.O. Box 102, Delafield, WI 53018. Phone: 262/835-7035.



IS THAT THE GUY WHO TELLS EVERYONE OUR MAG MOUNTS AREN'T ANY GOOD?

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Throw me somethin'

Jackie Price, KA5LMZ

Everyone knows about the big Mardi Gras celebration in New Orleans, but few know about the events taking place in Morgan City, Louisiana. The Krewe of Galatea, a ladies' carnival group, relies on Amateur Radio operators each year to help with communications during their parade.

Mardi Gras is on a different day each year, depending on the lunar calendar and occurs six weeks prior to Easter. The actual day of Mardi Gras is always the Tuesday immediately preceeding Ash Wednesday. This year Mardi Gras Day is 27 February. But the celebration commences several days before Mardi Gras. There are three different parades. The parade our group helps with is a yearly event, occuring on the Sunday prior to Mardi Gras Day.

Hams helping during the parade are paired off with a driver who is pulling one of the floats, and a Ham is assigned to operations central at the reviewing stand. The amateurs actually get to ride in the parade and see the throngs of people lined up along the parade route. It's a very colorful event, and the cries of "Throw me somethin, mister," echo in their ears for hours after the parade.

The celebration is a very colorful event with a different theme each year, and identities of the king, queen and the court members is not revealed until the end of the pageant. There are two other balls held a couple of weeks prior to Mardi Gras weekend.

Amateur Radio operators interested in visiting can have a lot of fun. There's lots of activities going on and the local Krewe keeps our volunteers busy and entertained.

If you're interested helping as a volunteer, or just want some more information about the event, contact our club president, Bob Bazet, N5CKZ, by e-mail at: bazet@petronet.net

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