

DXer

N O R T H E R N
C A L I F O R N I A
D X C L U B



Tower Permits Denied!

by Jeffrey Pawlan, WA6KBL

I just learned that, for the past six months, Raffi Sarkisian, the administrator of the Santa Clara County Planning and Land Use Department, has chosen to "interpret" the lack of county restrictions on amateur radio antennas to mean that no amateur radio antennas are allowed in residentially zoned properties in the county.

I moved to the Cambrian Park area three years ago specifically to avoid antenna restrictions. On March 2, 1993, I applied for a building permit for a 71-foot Tri-Ex Sky Needle installation in my back yard. Raffi Sarkisian denied me a permit solely on the basis that it would be used for amateur radio. He told me, "Amateur radio oper-

ation is not permitted in residentially zoned areas of the county; this kind of activity does not belong there."

I asked, "Where do you think it *does* belong? Don't you know how important amateur radio is to your safety and welfare during emergencies such as the Loma Prieta earthquake?"

He replied, "This is not a normal residential use and it belongs in either an industrial zone or, better yet, I recommend you purchase 160 acres of agriculturally zoned land in South County. I will grant you the permit if you move there." Sarkisian also said he would have signed the permit application if the tower were for a TV antenna.

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"Workshop" Scheduled for April 1 on Amateur Antenna Regulation

by Jeffrey Pawlan, WA6KBL

The Santa Clara County Planning Commission will hold an "informal workshop" to begin drafting an ordinance to regulate amateur radio antennas in unincorporated areas of the county. The public is invited.

This "workshop" may be the first shot in a long war. The law remains on the side of amateurs, but recent court cases leave enough room to wiggle and some county planning officials seem willing to take career risks by assuming a strong stance against hams.

A big amateur turnout can prevent the meeting from being one-sided, but amateurs who attend must conduct themselves as

responsible, solid citizens. So please dress conservatively, don't bring your HTs, and don't wear call-letter hats. With a little luck, the "fanatics" will appear shrill and narrow.

Local ARRL officials have been apprised of the situation, but their response so far couldn't be called energetic. Come to the meeting, if only to make an appearance and help nip this in the bud.

The April 1 meeting will begin at 9:30 A.M. in a conference room in the Santa Clara County building at 70 West Hedding Street.

Ask the receptionist for the room number when you arrive. Parking meters are limited to one or two hours, so try to park in the public parking structure on the North side of Hedding across from Superior Court.

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Coming Soon:

- Livermore Swap Meet: 1st Sunday of month, 7 A.M. to noon. Contact N7TVE.
- International DX Convention: April 16-18 at the Visalia Holiday Inn. Contact K6ITL.
- Dayton Hamvention: April 23-25. Call 513/454-1456 or fax 513/890-5464.
- Foothill Swap Meet: 2nd Saturday, March-to-September, Foothill College.
- Fresno Hamfest and Swap Meet: May 1 at Riverland, Highway 99 just south of Kings River at Kingsburg. Contact Fresno ARC, Box 783, Fresno 93712 or call 209/486-5377. Talk-in on 146.94.
- West Coast VHF/UHF Conference: May 21-23, Holiday Inn on the Beach, Ventura.

**There is No
April Meeting
Go to Visalia instead!**

General Meeting

N O R T H E R N
C A L I F O R N I A
D X C L U B

Club Officers:

President: Bob Artigo, KN6J
 Vice President: George Allan, WA6O
 Secretary: Garry Shapiro, NI6T
 Treasurer: Melissa Thomas, AA6TD
 Director: Dewey Churchill, KG6AM
 Director: Ralph Hunt, AG6Q
 Director: Bill Fontes, W6TEX

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 (or via DXPSN)

Membership Data: Garry Shapiro, NI6T

Club Repeater, W6TI/R, (147.36+)

Trustee: Bob Vallio, W6RGG
 Comm. Chairman: Ralph Hunt, AG6Q
 Club simplex: 147.54 (suggested)
 Thurs. Net QTR: 8 p.m. local time.
 Net Manager: Ralph Hunt, AG6Q
 DX News: Dave Pugatch, KI6WF
 Propagation: Al Lotze, W6RQ
 Contest News: Rich Hudgins, WX6M
 Westlink: Craig Smith, N6ITW
 Swap Shop: Ben Deovlet, W6FDU
 933 Robin Lane
 Campbell, CA, 95008
 408-374-0372

QSL Information: Mac McHenry, W6BSY

W6TI DX Bulletins:

W6TI Station Trustee Bob Vallio, W6RGG, transmits DX information at 2:00 zulu every Monday (Sunday evening local time) on both 7.016 and 14.002 MHz.

Club address: Box 608
 Menlo Park, CA
 94026-0608

The DXer is published Monthly by the Northern California DX Club and sent to all club members.

Unless otherwise noted, NCDXC permits re-use of any article in this publication—provided the DXer and the article's author are credited.

The meeting was held at Harry's Hoffbrau in Palo Alto. Bob, KN6J, presided.

- Jim, W6CF, reported DXAC actions:
 - DXAC Awards Committee voted to delete Abu Ail.
 - In the voting on the Czech Republic and Slovakia, the most likely outcome is one deletion.
 - P5RS7 documentation is under review; no decision before April 1.
 - DX QSLing practices are under study.
 - ARRL DX Contests:
 - Bob, N6IP, reported receiving only 15 ARRL DX Contest logs. Bob would like everyone to send him a copy of the summary sheet, by mail or packet. The deadline is April 7, 1993. Ron, W6VG, requested that The DXer editor include mailing info for these summaries in the issue preceding the ARRL contests. (I'll put that monkey on the back of whoever is contest chairman next year—submit a notice, with instructions stating what issue it should appear in, and I'll see that it does—*ed.*)
 - NCDXC QSL cards:
 - Over 25,000 cards remain in stock. We need a manager to continue the effort Uncle Vern, W6ERS, (SK) began.
 - Program:
 - Frank, W6RXU, of Trimble Navigation, made a presentation on global positioning systems. Trimble's civilian products feature location accuracy of 100 to 300 ft. The military version can locate within 15 to 30 ft. Frank showed some of his compact hardware.
 - First readings were held for:
 - Sandy Lynch, WA6BXH, and
 - Bill Hamlin, K6UO.
 - Second readings were held for :
 - Peter Hendler, KE6GG
 - Natalie Mealer, WA6QVM
 - Loyal Mealer, W6RMT, and
 - Larry English, AA6VZ.

All were approved for membership. A second reading was scheduled, but not held for Tim Coad, NU6S, whose sponsors, K6TMB and N6TV, were not present.
 - Christmas Party:
 - Craig, N6ITW, plans to return to The Bold Knight in 1993.
 - Knock, K6ITL, reported on the International DX Convention.
 - He said reservations for the Friday night barbeque should be made soon.
 - A "first-timer" welcoming committee was formed to work the convention.
 - There will be a 90-minute lunch break on Saturday between the technical sessions, with informal workshops during the break.
 - The DX Hackers' Golf Tournament will be held Friday morning (call K6ITL).
 - Contributed prizes now include a FT-890, an IC-737, a TS-850, and an FT-990.
- (The minutes this month were submitted by Stan Kuhl, K6MA, who substituted for NI6T.)

Cow Power

by H. Pain, G3ATH

Lars, SM4AQL, had a problem with the solid "exhaust products" of his dairy herd. So, in 1975, he decided to build a methane digester plant. Eighteen months later his entire farm, including his ham station, was "cow powered." His system included three slurry tanks holding a 30-day supply. Every day 800 gallons of new "product" went into the tank and a similar quantity of digested material came out. Lars told me I could visualize the 22,000-gallon tank's capacity by imagining the entire ground floor of a typical house flooded five feet deep.

Back in 1954, Tim, 5Z4BV, recorded his own efforts in harnessing this potentially large fuel source. He started with a 55-gallon oil drum as a digester and a 20-litre drum as a gas holder. Although the local farm mechanic thought the altitude had caught up with "Bwana," Tim succeeded in getting fuel out of the lashup—but only enough to run a one-horsepower engine for 30 seconds.

Encouraged, he built bigger and better, ending with digesters to take the manure and bedding from 100 pigs and, later, the droppings from 100 cows. His daily biogas production eventually grew to 3,300 cubic feet—equivalent to eleven gallons of diesel. Tim cooked with biogas, and ran a converted paraffin (kerosene to Americans—*ed.*) refrigerator. Several stationary engines were also biogas-powered.

His house lighting plant used a modified two-horsepower paraffin engine driving a 1-kW, 32-Volt dynamo (generator—*ed.*). He used a tablespoon of petrol to start it, but then switched to biogas. Tim's dynamo charged a bank of nickle-iron batteries that provided continuous power for lighting and for his ham station.

For many years, Tim's was the only transmitter in East Africa powered by cows. The popular 6L6-807 combination used a war surplus rotary converter for high tension (high voltage—*ed.*). His BC-348 receiver needed no modifications, having been designed to run off 28 Volts DC.

By the time Tim sold his farm, the little electric plant had logged 68,000 hours. He

Roster Changes

New Members:

Peter Hendler, KE6GG (E)
39400 Paseo Padre Parkway
Fremont, CA 94538
H: 510/795-3526
W: 510/795-3526

Natalie Mealer, WA6QUM (T)
Box 202
Walnut Grove, CA 95690
H: 916/776-1615
W: 916/776-1615

Loyal Mealer, W6RMT (A)
Box 202
Walnut Grove, CA 95690
H: 916/776-1615
W: 916/776-1615

Larry L. English, AA6VZ (E)
1168 St. Anthony court
Los Altos, CA 94024
H: 415/956-9682
W: 408/285-8034

Other Changes:

Ken Ruddock, K6HNZ (E)
1015 Martin Road
Santa Cruz, CA 95060
H: 408/459-0504

Ken is once again a Full member

Corrections:

K5YY's zipcode was listed incorrectly in the March issue. Please change San's address in your roster to read:

Dr. San Hutson, K5YY
Box 763
Springdale, AR 72765
H: 501/756-5010

doesn't believe it would have lasted that long on paraffin. He later acquired an eight-horsepower, three kilo-Watt alternator setup, which he started on diesel fuel but then ran on biogas.

Tim mentioned that the greatest benefit of a cow-powered farm may not be the free fuel, but the byproduct, a first-rate organic fertilizer.

excerpted from the Feb. '93 Southwestern Virginia Wireless Assoc. 'Groundwave'—Bill Svec, WA4BKW Editor

You Know You're a Ham When ...

by Alan, VE3XAG

- You mentally undress your rig
- You'd rather turn on your rig than your spouse
- Your idea of high fashion is a baseball cap with call letters
- Your shack looks like a shack
- You say "hi" after you tell a joke
- Your idea of sightseeing is checking roof-tops for antennas

- You consider your HT a better status symbol than a portable cellular phone

from the December '92 Dayton (Ohio) ARA RF Carrier—Jim Nies, WX8F Editor

Ham Pioneer's Other Side

by David M. Barton, AF6S

Only disease brings more human lives to an early end than guns and cars. One man did more than anyone else to make guns and cars quiet killers. Hiram Percy Maxim invented both the silencer and the muffler.

HPM wasn't so silent in his hobby. When World War I ended, he was the driving force behind the effort to re-establish amateur radio. Had he and others not lobbied Congress, our hobby might very well have been strangled in its infancy.

In the midst of all this, "The Old Man" found time to help found the ARRL. (sources: the Jan. 24, 1993 San Francisco Chronicle and the 1988 ARRL Handbook)

from the April '93 Amateur Radio News Service "ARNS Bulletin"—AF6S Editor

High-Return DX QSL'ing

by Rick Glisson, N4XMX

When you contact a faraway ham, chances are high the DX ham already has your state confirmed. So how do you make sure you get his or her card?

First, your card must be made out correctly, with the date and time in UTC. Any wrong information increases the temptation to put your card in the circular file. A lot of cards probably end that way.

Second, include a self-addressed envelope, preferably of the foreign airmail type. (Some foreign QSL cards won't fit inside a standard number-6 envelope.)

Third, supply return postage unless you request the DX card be sent via the bureau system. International reply coupons (IRCs) are the best way in most cases, unless the DX specifically asks for another method. You can buy IRCs at your post office for 95¢ each, but many hams who act as QSL managers sell them for less. (The going rate is 50¢. Ask around.) The callbook lists the number of IRCs required by various countries for an light airmail letter.

If the DX operator requests "a green stamp," send one—a dollar bill. Some countries don't honor IRCs, but the dollar is convertible almost anywhere. But possession of U.S. currency is illegal in some countries, so don't send a green stamp unless the operator requests it or you know it is legal there.

Also, don't send green stamps to countries with poorly supervised mail systems. They may be stolen. Several third-world countries, particularly in East Africa, have high levels of mail theft, as does Ukraine and some of the other former-Soviet states.

Another good practice is sending foreign airmail stamps. This works unless the postal rates in the country change while your QSL is in transit.

Fourth, use a "security envelope" to enclose anything valuable. Opaque envelopes prevent someone from seeing inside by holding them up to a light. It's a good idea to put anything of value inside the return envelope or between it and the card.

One QSL card, several IRCs, a return envelope, and the outside envelope should total less than one-half ounce—the limit for one 50¢ U.S. airmail stamp. If you send more than one card, you may need more stamps. Each additional half ounce currently costs 45¢.

If your card is too heavy, you may want to consider printing special DX cards. For QSLing any DXpedition station, use a card with all the information on one side—including your callsign. Fancy graphics, special paper, glossy finishes, or arty type-fonts don't help one iota. They just add cost and weight.

Most DXpedition stations use QSL managers and, fortunately, many are in North America, saving postage and time.

Don't be in a hurry to QSL a DXpedition. Wait until it ends, and be sure all your cards are sent together. Typically, the logs take a while to reach the QSL manager, and your cards end up in a huge mail bag with thousands of others. There's no advantage in getting them in early. (It's not a "first-in-first-out" system.)

The most important aspect of QSLing is patience. Don't re-QSL for at least six months. It's usually a waste of your money and of the DX station or manager's time.

from the November '92 Atlanta RC 'The Atlanta Ham,' with added info by AF6S. (Rick edits the Southeastern DX Club newsletter)

Getting QSL Info:

by Dave Barton, AF6S

Never ask for QSL information on a DXpedition's transmit frequency. It will be available long before you need it, in DX bulletins, on-the-air nets, DX packet, and from other DXers.

Disruption of a DXpedition's QSO rate costs "deserving" DXers their contacts. Frustrations born of such disruptions cause some of the friction that so often mars DXing these days.

DXing is for fun. Let's keep it that way by being courteous, even in the heat of battle. Remember, the other guy deserves to enjoy the hobby too.

"The Voice of the A Profile of NCDXC Member

by H. Ward Silver, NØAX

What's the rarest Sweepstakes section for a West Coast station? Maine maybe, or Delaware? North Dakota? More often than not, it's San Francisco! A lot of 6 and 7-land contestants find ourselves relying on ever-reliable Wilbur Bachman, W6BIP.

Bip has activated SF since the first Sweepstakes in 1932, making the 1992 SS his 60th anniversary in contesting. In those early days, Sweepstakes ran for 9 days and nights. If you got 300 QSOs, you were a big gun, and there was no phone weekend.

W6BIP has put a lot of QSOs into a lot of logs, beginning as nu6BI P ("n" for North America, "u" for United States) in 1928. Bip was a ground radar engineer during World War II with the Signal Corps and Air Force. After the war he became foreman of GE's West Coast TV and Radio Service Center and later a field engineer for military aircraft electronics.

In May 1959, Bip joined Philco/Ford (later Ford Aerospace and Communications). He developed modifications for Air Force satellite-tracking stations. A memorable trip in 1974 took Bip to the Seychelles, where he won the Worked All Europe contest for Africa. On another trip, he activated XP1AA (Greenland) for the first time on CW.

Bip shares hamming with wife Elsie, WA6GQC, and sons Robert, K6DJC, and Larry, KA6EZP. Bip's tastes run to DXing now, with participation in SS, QCWA, and DX contests.

All his hamming takes place from a 25 by 70 lot on a rise west of Candlestick Park. Bip uses a TA-33 on a 72-foot crank-up tower. His innovative, rotatable 40-meter wire beam and his 80-meter Zepp—running across the street—show what skill and ingenuity can accomplish. Bip has tackled urban interference hazards with good-neighbor skills and filters.

Bip was SCM of the ARRL San Francisco Section from 1961 through 1963 and Assistant Director of the Pacific Division from 1961 through 1978. His accomplishments

3F Section™

“Bip” Bachman, W6BIP



“Bip,” W6BIP

include shepherding the first OSCAR satellite through the political and technical minefields at Philco/Ford during his presidency of the South Peninsula ARC.

Guest ops at W6BIP have included N1EE, K3TW/5H3TW, K1DG, and K5RC. Others of us are just glad to put Bip in the log each fall. I marvel at his brisk fist, rapping it out on the twenty-year-old custom keyer he designed and built.

Surely this “contester emeritus” deserves a tip of the cap from contesters and DXers everywhere. Way to go, Bip!

from the March/April ARRL “National Contest Journal”—Tom Taormina, K5RC, Editor

Dit Bits

by Susan Barton, KA6SEH

If you continue to do
what you’ve always done,
You’ll continue to get
what you’ve always gotten.

—anonymous

Q: Who was Alexander Graham Bellski?

A: The first telephone Pole.



Modes of Joy: Digital HF

by Omri Serlin, AA6TA

The strange chirps at the high ends of the CW bands had long fascinated me, and I anticipated trying those exotic modes.

Having given myself a Kantronics KAM—the smallest “all-mode” TNC—for Christmas, I was ready. Uniquely, it can run its HF and VHF ports concurrently.

An HF rig is as easy to connect to a TNC as a VHF one. Four wires do the job: transmit audio (AFSK), push-to-talk (PTT), receive audio, and ground. For AFSK, you can pick up AFSK, PTT, and ground on the mike connector. Receive audio for the TNC comes from the external speaker jack (Kantronics supplies the cable).

“All-mode” TNCs offer “true FSK,” and upscale rigs provide an RTTY jack. Being equivalent, AFSK and “true FSK” are indistinguishable at the other end.

After a few TS-840 manual ambiguities, I was ready. Dave, WØRNL, provided my “shake down” contact. When he was satisfied with my RTTY signals, Dave demonstrated AMTOR. It was awesome. The rig acquired a life of its own, executing rapid-fire transmit-receive cycles like a crazed robot. The first time you see AMTOR, you’ll be dazzled, believe me.

RTTY is the most popular digital mode for DXing. Most run at 45 baud, but you encounter more 75-baud signals all the time. The RTTY character set, Baudot, includes capital letters only. And RTTY lacks error correction, so weak signals “print” poorly.

AMTOR uses Baudot too, but it has multiple operating modes. The most sophisticated, ARQ, performs a handshake in which the sending station repeats each 3-character group until the receiving station acknowledges error-free receipt. Poor propagation doesn’t introduce many errors, but the number of retries increases.

FEC mode, which you use to call CQ, omits the handshake. Some operators prefer FEC, despite the errors, for its speed.

Confident my station was in order, I tuned 14.080-14.090 until I found an RTTY QSO. Presently I called W8HYG—in Cleveland. To my delight, Al gave me my first RTTY

contact! That short chat launched my new sub-hobby. My next contact was DX, AL7BB, but I worked my first real DX a few days later—JA3DLE/1.

The worldwide RTTY Roundup could hardly have had better timing—one week after I went digital. During that contest I worked 36 states and six DX countries. Within two months, I could claim 47 states and 20 countries, including the AH1A operation, VR6BB, and two V73s.

“One that got away” was VP8VN in Stanley. I established an AMTOR ARQ link with him twice, but an aggressive LU interrupted each time before we could complete an exchange.

The dearth of RTTY stations may have been responsible for a new experience: a DU sent me his QSL direct—with a “green stamp!” I’m still recovering from the shock.

I keep discovering new aspects of the digital modes! I made several contacts with APLINK stations. You can access these by AMTOR, and they are linked to the VHF packet system. An AMTOR station (say, aboard a sailboat on the Pacific) can exchange packet traffic with VHF packet stations via an APLINK station. APLINK and VHF packet BBS protocols are similar.

MSOs are RTTY stations that provide HF BBS services. Two stations that cannot communicate directly can leave messages on an MSO for each other. The MSO protocol is unusual. To log on, you send, on a new line, .MSOxxx—where the xxx is the last three characters of the MSO’s callsign.

PACTOR, another new HF digital mode, combines the error detection of AMTOR with the ASCII character set of packet. PACTOR features automatic speed adjustment, to accommodate variations in propagation. PACTOR remains experimental, but commercial gear is available already, including the 6.0 PROM version for the KAM TNC. Another sophisticated scheme, CLOVER, is not yet commercial.

I no longer chase DX on SSB and rarely on CW. Why? I’ve become addicted to the HF digital modes. Why not give digital a try? Come on in; the water’s fine!



A Letter to Sam, W6TSQ, from Sin, JA1NUT

Sam sent a letter he recently received from JA1NUT, to Josephine, WB6ZUC, who forwarded it to the DXer. The following was excerpted from that letter.—ed.)

Sam, here is the translation of my short write-up in the Japanese DX magazine I sent you several weeks ago:

Samuel Canter, W6TSQ, has chased DX since the 1950s, mainly on the low bands. His hermitage, where he devotes himself to DXing, is on the western slope of a hill north of San Francisco. It took a quarter hour to drive there from San Francisco. It is a quiet place surrounded with high redwood trees.

Since he lost his wife some years ago—Sam is nearly 80 years old—he has found a way to enjoy life. He recently replaced an S-Line with a TS850S and a Ten Tec Titan amplifier. His antennas are a half-wave dipole for 40 meters, a 30-meter-long dipole with open-wire feeders, and a TA33 mounted on the roof. The dipoles are set between redwood trees rising in a valley in front of the house.

It's amazing how Sam, with such simple antennas, has achieved 257 countries on 80 meters, 317 on 40 meters and 356 on all bands (possibly in Mixed category).

He is a kind of stubborn cynic regarding DX. On the other hand, he is a romanticist, loving the genuine music of the pan pipe. If you find the CW from his old bug sounding like a dance, give him a shout.

Well, Sam, I am still busy with dozens of kids with the flu. It may be weeks before real spring comes here and I am free from this outbreak.

I am also feeling a bit depressed lately at amateur radio—I don't know why. Maybe I have expected too much from it in my life. Possibly I must learn to love it as it is.

How was the doctor telling you about your eye problem? It's too bad you will have difficulty with it. However, I know you are wise enough to get them compensating your loss in the future.

So that's about all for now. Good luck to you, Sam. See you soon again.

73, Sin Onisawa, M.D., JA1NUT



The Little Red Hen

Once upon a time, a little red hen scratched about the barnyard until she found some grains of wheat. She called her neighbors and said, "If we plant this wheat, we have enough to make bread. Who will help me?"

"Not I," said the cow.

"Not I," said the duck.

"Not I," said the pig.

"Not I," said the goose.

"Then I will," said the little red hen.

The wheat grew tall and ripened into golden grain. "Who will help me reap the wheat," asked the little red hen.

"Not I," said the duck.

"Out of my classification," said the pig.

"I'd lose my seniority," said the cow.

"I'd lose my unemployment compensation," said the goose.

"Then I will," said the little red hen.

At last it was time to bake the bread. "Who will help me bake bread?" asked the little red hen.

"That would be overtime," said the cow.

"I'd lose welfare benefits," said the duck.

"I'm a dropout and never learned how," said the pig.

"If I'm the only helper, that's discrimination," said the goose.

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New CIS Prefixes Proposed

by Ed Kritsky, NT2X

The ITU has received a proposal by R.S.S., the Russian administrative unit responsible for such matters, without any consultation with the amateurs of CIS countries other than Russia. The proposal reflects the desire to allocate callsign blocks for the Russian government and for Russian commercial communications.

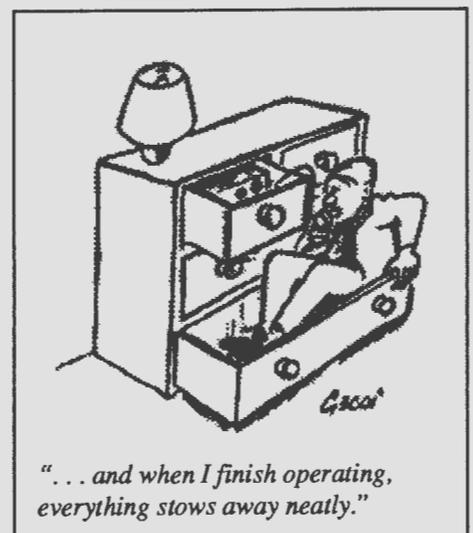
The proposed system would change 95 percent of Ukrainian calls, and many in other republics. The best CIS hams can hope for is a moratorium on re-issuing existing calls for five to ten years.

Another proposal, unofficial so far, would keep current suffixes, to provide at least some identification with old callsigns.

Republic	Old Prefix	New Prefix
Azerbaijan	UD, RD	4J
Georgia	UF, RF	4L
Armenia	UG, RG	EK
Belarus	UC, RC	EU, EV, EW
Kazakh	UL, RL	UN-UQ
Kyrgyz	UM, RM	EX
Moldova	UO, RO	ER
Tadzhik	UJ, RJ	EY
Turkoman	UH, RH	EZ
Uzbek	UI, RI	UJ-UM
Ukraine	UB, RB	UR-UZ, EM-EO
Russia	UA-RA	UA-UI, RA-RI

(For Russia, the single-R prefix may be allocated also.)

from the March '93 "North Jersey DXA Newsletter"—Ron Levy, K2AIO, Editor



"... and when I finish operating, everything stows away neatly."

from the Jan. '93 Mobile ARC "County Lin Roadrunner"—R. Dyson, KØAYO Editor

The Old Man and the Paper Boy

by Scott B. Laughlin, N7NET © 1992

"He's only a boy. My friend Louise says he's only nine years old," cautioned Martha, as I arose to face Detroit's predawn fog.

"It doesn't matter," I complained, pulling on my trousers, "He's operating a small business and he may just as well learn how to do it correctly."

Moments later I stood in the dense fog waiting for the youngster who delivered the Detroit News. Austin, something or other, was his name. Retrieving my paper from the wet lawn had become all too common, and I was determined to not be further inconvenienced.

Each morning for a week I had waited inside, at the front window, not wishing to endure the dripping fog. But my efforts had been fruitless. This Austin boy was just too quick for me. In what seemed the blink of an eye, he appeared from nowhere, sent my paper skidding across the wet grass and then melted back into the fog.

As I stood there recalling the previous week, he suddenly appeared, ghost-like, his yellow slicker materializing from the gray mist. But, before I could muster a shout the neatly folded paper skipped across the wet grass like a stale waffle, coming to rest against the concrete, porch steps.

"Hey!" I finally bellowed.

"Yes sir, Mister Babbit," answered the boy, the rear tire sliding as he brought his bike to a halt.

"My newspaper is soaked, young man. You should be more careful with it. I had an arrangement with the young man preceding you. He had agreed to place the paper on the porch, where it would stay dry."

"Yes sir, I can do that," answered Austin, laying his bike on its side. Racing across the lawn, he grabbed my paper and handed it to me.

"Very well. Your name's Austin, isn't it?"

"Yes sir."

"Austin what?"

"Austin Reed, sir."

"How old are you?"

"Nine, sir."

"Nine. Hmmm. Well, Master Reed, I'm seventy-nine and I'm not a patient man anymore. I shall hold you to this agreement, young man. If I find my newspaper in the grass again I'll contact your supervisor. Is that clear?"

"Yes sir," he answered. He started to leave, then turned back. "May I asked you a question?"

"Maybe."

"Do you still have a ham station in your attic?"

"How'd you know I had a radio station?"

"I saw the ladder-line coming from the window and going to the antenna," he answered.

"What do you know about ham radio?" I asked, the question reviving faded, but warm memories.

"Not very much, he stammered, "but I've been reading about it in a magazine I found."

"I used to operate a station in the attic, but I switched it off several years ago. It's all locked up now."

"Why?"

"Personal reasons, young man, reasons I doubt you would understand." Without another word I pushed my way into the house and closed the door behind me.

"I'm glad you were nice to him. He's such a courteous young man," Martha chuckled, moving aside to let me in.

"Well, he agreed to place the paper on the porch. What more was there to say?" I dropping into an overstuffed chair to sort through my wet newspaper. I watched her move into the kitchen to start breakfast, then stared at the paper in my lap.

Trying to put my old radio days out of my mind was hopeless. The vivid memories overpowered everything else in my mind. I slipped into a daydream, reliving the long, splendid nights of pounding the brass, chatting with my dear friend Carl. His fist had a signature all its own—a unique "Lake Erie Swing"—so much so that I could have instantly identified his fist anywhere, any time, even though half the North American continent lay between our stations.

I couldn't remember where Carl said he got his old Greely Speed Key, but by the time I met him, he and the bug had been through a great deal together. Carl had brought it with him when he served as Chief Wireless Operator aboard ship during the First World War, when amateur wireless operators were so desperately needed to handle war-time communications.

We had met after the war, when the ham frequencies were once again open to amateurs. Though we never met in person, a bond formed and our friendship flourished for nearly fifty years. I grew to know Carl as well as I might have known a brother.

Four years ago a telegram arrived, announcing that he had passed on. The thought of him becoming a silent key had devastated me and, without a moment's hesitation, I had thrown the master switch, cutting power to the station, and locked the door behind me. I had not set foot in my hamshack since.

Jolted from my daydream by a call to breakfast, I made my way into the kitchen.

"I overheard Austin say he wants to become a ham," Martha said, setting a bowl of steaming oatmeal before me.

"He seems interested and certainly has a keen eye for detail," I said, pulling myself up to the table.

"So when are you going to help him get his license?"

"That's his dad's job, not mine."

"Perhaps it's not that simple," Martha said. "According to Louise, the boy's father walked out before Austin was born. His mother has raised him by herself."

"Well, there's too much age difference between young Austin and me. I couldn't teach him anything."

She watched me over the rim of her cup, her dark eyes shining. "Tell me again how you first learned about ham radio."

"One of my grandfather's friends was a wireless operator. Those were the Spark Gap days—before radio. When I showed interest in Morse code, he invited me into his shack and helped me get started."

continued on page 10

How Wireless Changed the World

by Wayne Thalls, KB6KN

Ask who invented radio and most people who answer at all will say, "Marconi." Guglielmo Marconi did first demonstrate intercontinental wireless, when he sent the letter 'S' across the Atlantic in 1899.

But radio, like other major developments, can't be credited entirely to one inventor. Marconi's fame resulted from his competence in business, and in the laboratory. He quickly established leadership in wireless equipment and in services.

Radio Goes to Sea

Marconi convinced ship owners of the safety value of wireless. Owners also saw commercial value in keeping in touch with their captains. Ships crossing the Atlantic soon installed Marconi equipment. The company even supplied operators.

Disaster

A 1912 event forever changed the role of wireless—and altered maritime safety worldwide. On April 14, the liner Titanic,

the largest ship afloat, collided with an iceberg during its maiden voyage from Southampton to New York.

Eighty-one years later, people remain fascinated by its sinking—the greatest marine disaster in history. Here was an "unsinkable" ship, sailing smooth seas on a starlit night. Though other ships reported icebergs and Titanic posted watches, the great ship struck a berg at 11:40 P.M.

Help

The first lifeboats splashed into the cold sea just past midnight, and the first wireless distress signal went out at 12:15—both the standard *CQD* and the newly adopted *SOS*. The freighter California was just ten miles away, but its wireless operator was off duty. Fifty-eight miles away, the Carpathia heard the distress call and changed course. During the next several hours, her crew located all Titanic's lifeboats.

Tragically, Titanic carried boats for only one-third of her passengers and crew. More than 1500 people perished in the icy sea.

Managed News

The disaster profoundly affected the new wireless industry. In the days following the sinking, Marconi limited access to the news being transmitted by his operators, coercing newspapers to run stories emphasizing the need for mandatory wireless installation aboard all ships.

Feds Act

The Senate held hearings, and Congress imposed regulations requiring wireless on all U.S. ships, and staffing at all hours.

The increased sales boosted Marconi company earnings. Also, those with wireless experience, including many amateurs, found jobs as operators.

Soon most countries required ships to provide lifeboats for *all* aboard their ships, rather than just the first-class passengers.

from the March '93 San Lorenzo Valley Repeater Club 'Downlink'—Leon Fletcher, AA6ZG, Editor

Wee Bits of Wisdom

by Missy Stone, KB5DBX

I enjoy finding "wee bits of wisdom" in magazines. Here are some of my favorites:

"I wish I were what I was when I wanted to be what I am now."

"If you think you're green, you're growing; if you think you're ripe, you're rotten."

"Small deeds done are greater than great deeds planned."

"Worry is interest paid in advance on debt you may never owe."

"Money will buy a fine dog, but only love will make its tail wag."

"Life was simpler when anyone who could tie a knot could repair a clothes dryer."

"Laughter is a tranquilizer with no side effects."

"Blowing out someone else's candle does not make yours shine brighter."

"An apology is the best last word."

"Time you enjoy wasting is not wasted."

"You can remember the past, but you can't live in it."

"Life happens while we make other plans."

"Patience is the ability to idle your motor when you feel like stripping your gears."

"None are so old as those who have outlived their enthusiasm."

"If a man has the horse-sense to treat his wife like a thoroughbred, she'll never turn into an old nag."

"I have time to do it right; I don't have time to do it over."

"Things turn out best for those who make the best of the way things turn out."

"Hardship is when we have to do without things our grandparents never heard of."

"Utopia is the good old days plus all the modern conveniences."

"Never regret growing old; many are denied the privilege."

from the January '93 Temple (TX) ARC 'TARC Bulletin'—WA5EQQ Editor

Tower Permits from page 1

Clearly, the issue is intended use—not height, aesthetics, or setback.

The Planning Department's new "interpretation" first surfaced last September, when residents of Los Altos began complaining to the Planning Department about a ham antenna that had been up for more than ten years.

The Los Altos ham was subsequently cited for building without a permit, but when he tried to obtain one, it was denied.

The Los Altos ham and I were each told by the Planning Department that we would have to cease activity and re-apply for a permit *after* a new ordinance is drafted and approved—perhaps by late this year.

Raffi Sarkisian offered me another unacceptable alternative: to apply for a public utility use permit. "Amateur radio is not a hobby; it is a public utility," he said.

See the related story on page 1, and come to the "workshop" meeting.



Why I'm Hooked on Contesting

by Gene Walsh, N2AA

Trey Garlough, WN4KKN, once asked me, "Why do you contest?" This is my answer.

Back in 1956, when I started DXing, I stumbled into a DX contest on 40 meters. There was lots of DX and folks seemed to be having a wonderful time, so I joined in.

You start contesting thinking it will be a good way to work new countries. But soon you find yourself comparing what you can do with what you've got against what other guys do with what they have. I soon lost my soul to contesting, and I've been an addict ever since.

Contesters are different from other hams; they strive harder. Some non-contesters say they want to develop friendships via ham radio, and exchanging signal reports can't accomplish that. Huey! Friendships among contesters sometimes have more depth and common interest than those from random contacts. Surely no other ham activity fosters as much international friendship and cooperation as contesting. When you meet another contester anywhere in the world—even a casual contester—you have grounds for understanding.

That's not why we contest, but it's a fine side-effect. I contest because I enjoy it. Nothing I know compares with working through a morning 20-meter opening—with all the DX calling—while the grey-line marches across the globe. I love 20 meters, live for it. For me, building multipliers from every direction is a religious experience.

I've been lucky enough to win the CQWW (single-op) a couple of times. I was in a good place at a good time, and young enough to stay the course and still go to work the morning after. But I agree with KM3T that multi-op is the best contest experience one can have. Nothing equals being a part of a competitive multi-multi station, whether you win or lose—though it's far better to win!

Once, at K2GL, in the wee hours when 20 meters was dead, I leaned over to

K3EST—who was in the next position, cranking away on 40 meters. I asked, "Bob, do you ever tire of this?"

"No," he said. "It's a mystic experience. I do it whenever I can."

Why contest? If you are lucky enough to know about it and have access to a station, you can't not!

from the January '93 Northern California Contest Club 'Jug'—W6ISQ and KC6NFE Coeditors

(WN4KKN is the new editor of the National Contest Journal.)

Little Red Hen

from page 6

"Then I will," said the little red hen, and she baked five loaves. They each demanded a share, but the little red hen refused.

"Excess profits," cried the cow.

"Capitalist leech," screamed the duck.

"I demand equal rights," yelled the goose.

They painted picket signs and marched round and round, shouting obscenities.

A government agent came and told the little red hen, "You must not be greedy."

"But I earned the bread," she said.

"Exactly," said the agent. "In our free enterprise system, anyone can earn as much as he wants? Of course, the productive workers must share with the idle."

The animals lived happily ever after—even the little red hen. But she never again baked bread.

from the April '93 Delaware-Lehigh Valley ARC "W3OK Corral"—Clarence Snyder, W3PYF, Editor (no author given)

The Origin of "73"

This account by L.R. Moreau first appeared in the SPARK GAP TIMES, the journal of the Old Timers Club of the USA. I feel it might help put an end to those "73's," "Very best 73's," and "Seventy-thirds" used on the bands by "them wot don't know no better."

The traditional expression "73" dates from early land-line telegraph days. You can find it in the earliest editions of the "numerical codes," with definitions that are variations on the same idea. "73" indicated that the end, or signature, was coming up.

The *National Telegraphic Review Operator's Guide*, first published in April 1857, shows "73," meaning, "My love to you"! Succeeding issues continued to give this definition. Yet some of the other numeric codes in use back then had the same meanings as today.

Before long, the meaning of "73" drifted away from "My love to you." Another publication, the *National Telegraphic Convention*, defined "73" as a vague sign of fraternalism—just a friendly greeting between operators. It was so used on all wires for many years.

In 1859, the Western Union Company set up the "92 Code," a list of numerals from 1 to 92 that referred to a series of prepared phrases for use on the wires. In the 92 Code, "73" changes from a fraternal sign to a flowery "Accept my compliments"—in keeping with the florid language of the era.

Telegraphy manuals published between 1859 and 1900 show variations of this more straightforward meaning. Dodge's *The Telegrapher Instructor* shows it as "compliments," but Theodore Edison's *Telegraphy Self-Taught* reports a return to "accept my compliments." Finally, a 1908 edition of the Dodge manual gives today's definition, "best regards," though a backward look in another part of that work also lists "compliments."

"Best regards" has remained the literal definition of "73" ever since, but more recently "73" has re-acquired overtones of a warmer meaning. Amateurs use it today as James Reid intended so long ago—as a friendly word between operators.

submitted by H. Pain, G3ATH to (and appearing in) the Southwestern Virginia Wireless Assoc. March '93 "Groundwave". Bill Svec, WA4BKW, edits "Groundwave."

Surprising IRC Facts

by Joe Staples, W5ASP

Before you step up to the post office window to redeem your IRC's for postage, here are some things you should know—things the postal employee serving you probably doesn't know.

Section 392 of the USPS *International Mail Manual*, Issue 9, dated February 3, 1991 says international reply coupons issued after January 1, 1975 are exchangeable "... at a rate of 50 cents per coupon irrespective of the country in which they were purchased."

That sounds straightforward, doesn't it? But in its infinite wisdom, the USPS has issued a separate directive that defines the redemption values as follows:

IRC issue date	\$Value
before 2/17/75	0.00
2/17/75—5/28/78	0.18
5/29/78—12/31/80	0.20
1/1/81—2/16/85	0.30
2/17/85—4/3/88	0.37
4/4/88—2/2/91	0.40
2/3/91—present	0.50

So you'll be okay if you always turn the oldest ones in first, right? Wrong! Look through your IRC's. Many lack a date stamp. Others have illegible ones. IRC's without date stamps are worthless at the USPS. All they are good for is pawning off on someone else. You can send them to another ham, hoping to get your QSL card and hoping the next IRC holder can do the same thing.

If that doesn't bend your nose, try this. The USPS now sells IRC's with the U.S. purchase price stamped on them. You will be told you can redeem these new IRC's for one cent less than you payed for them. Yes, you guessed it; a hitch. The exchange rate is available only to the original purchaser. Of course, there's no way the post office can tell you weren't the original purchaser—unless the IRC's you try to turn in don't have the U.S. price stamped on them.

IRC's are still useful but, as you can see, the gulf between a good concept and how a government bureaucracy "implements" a policy can be wide indeed.

from the February '93 *Texas DX Society 'The Bullsheet'*—Joe Staples, W5ASP, Editor

Editing Tools

by Dave Barton, AF6S

Technology certainly eases the job of editing a newsletter, and I continue to upgrade the tools that help me produce the DXer.

My computer is an Apple Macintosh IICI with two hard disks, an Apple flatbed scanner, and an Apple LaserWriter IINTX printer. A DaynaFile 5-1/4-inch disk drive allows reading old-style DOS disks (Macs can read 3-1/2-inch DOS disks directly.)

I run Apple's System 7.0 now, and my word processor is Microsoft Word 5.0. I use Aldus PageMaker 4.2 for page composition, placing not only text, but scanned graphics directly in the layout.

Scanner software includes AppleScan, Ofoto, and OmniPage. OmniPage "reads" printed text, converting it to PageMaker-placeable files, so I no longer need type "borrowed" articles.

A second Mac in the hamshack, an SE/30, captures messages from packet, and an AppleTalk network allows file exchange and printer sharing between Macs. 

Paper Boy

from page 7

"And was there an age difference between the two of you?"

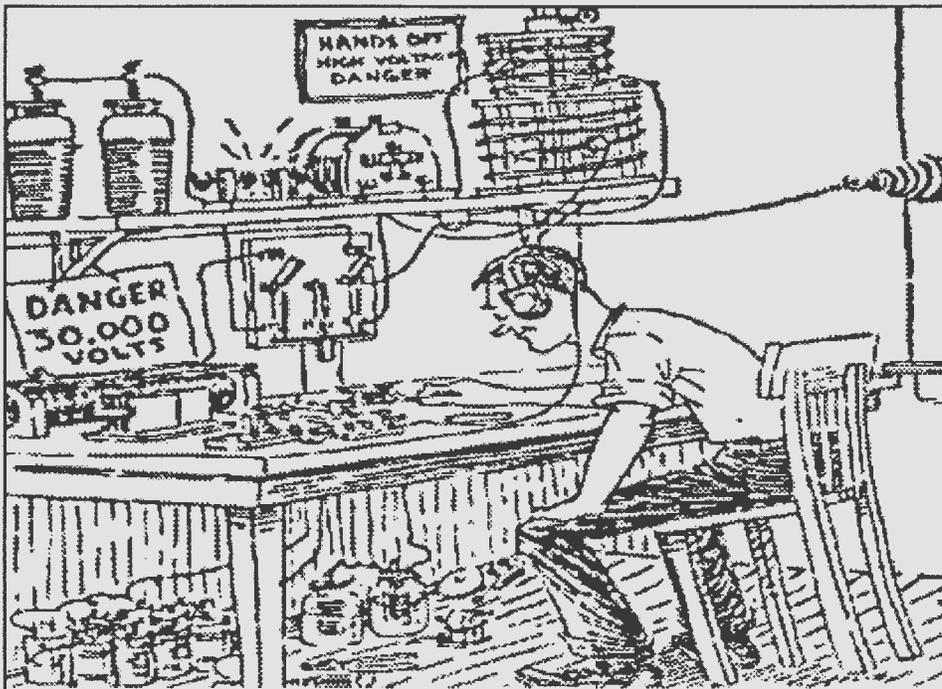
"You bet. Probably sixty yea—"

She was right! The years had made no difference for us. "Your point's well taken," I muttered, setting in on my oatmeal.

Later, at the head of the stairs, I dropped the tarnished door key into my pocket and let the radio shack door swing open. As if by magic, the old rush returned and I felt the urge to transmit. I ached to see the orange glow of the tube filaments and let my fingers feel the worn handles of the Vibroplex. I longed to hear the "echo" of a signal distorted by the magnetic forces of the North Pole.

Excitement welled up inside me and I found myself rushing down the stairs in search of the vacuum cleaner. I wanted Austin's first impression of ham radio to be favorable.

from the Autumn '92 *QNC!*—N7NET Editor. Subscriptions cost \$8.75 in the U.S. and \$14.45 elsewhere, payable by check at 85000 Laughlin Road, Eugene, OR 97405.



from the Feb. '93 *Shore Points ARC (Absecon, NJ) 'The SPARC Gap'*—N2JTD Editor

Electrons: Particles or Waves?

by C.F. Rockett, W9SCH

One cannot be a serious radio amateur without dealing with electrons. Yet balderdash surrounds the topic. And why do we assume electrons exist? Because their existence provides the best and most convenient explanation for so many electrical and chemical phenomena.

You cannot see or feel electrons, and you cannot buy them by the peck in a store. Yet most of us experience them in quantities of billions of billions.

A few years ago, a group of us at a summer science teacher's institute cornered a nice old visiting Danish physicist at the campus coffee shop. We badgered him about electromagnetic waves, the electron, and other recondite matters. Finally he blurted out, "Ve gif you nummers yet. Vat you vant—blud already?" He was *so* right. In the words of his beloved old teacher, Dr. Niels Bohr, "Physics is not about the world, but only what we can say about the world."

Everything we can say with certainty about electrons, we say with mathematics. Most of us don't think about electrons about the little cusses themselves. We use the mental pictures, or models, physicists have devised to help understand electrons.

Yet all models are intrinsically faulty. Despite years of mathematics training and more years working in the laboratory, we have no recourse. The models remain the best way of understanding and predicting electron behavior.

Let's look at one of the models, the concept of a hard, little, negatively charged green "pill" that we encounter in ham radio courses. (Why green? That's the color electrons made when they hit the screen of early oscilloscopes. The color was from the "phosphor," of course—an old joke.)

The delightful picture of "little green pebbles" shooting around the electrodes of vacuum tubes, orbiting atoms, or moving between atoms along wires remains enthralling. Indeed, it is indispensable in explaining devices like klystrons, magnetrons, and traveling-wave tubes, even today.

But a bit of thought might make you suspicious of the "pill" model. We know from lab experiments that electric forces are frightfully powerful—a 40-digit number times more powerful than gravity! For its size, an electron has an amazing amount of charge. So why doesn't the repulsive tension of this closely-packed charge blow it to micro-smithereens?

Also, the electron "pill" model requires it to spin at a rate so high that its "surface" exceeds the speed of light. "Papa" Einstein said that couldn't happen, and no one has found any flaws in his reasoning. So score another black mark against the "little green pill" model. Other valid but complex quantum-mechanical objections have been made, but we have enough difficulty without following that thread.

In 1926, two scientists shot a stream of electrons at a block of nickel—in a vacuum, of course. Drs. Germer and Davisson set up their experiment so the "bounced" electrons would strike some photographic film. Oddly, instead of ripe-tomato-like "splats," interference patterns formed—concentric rings like archery targets. Any modern physics text shows that interference effects can only result from waves. So does this prove electrons are waves? Sometimes.

A wave model does a fine job describing the arrangement of electrons around an atom's nucleus, and it describes the behavior of electrons in some superconductors reasonably well. But a wave model gets unwieldy explaining the phenomena in vacuum tubes.

Examine the anode of an ordinary X-ray tube under a microscope, and you will find pock-marks—impact craters. Waves don't make impact craters.

After a century of mathematics and experimentation, physicist have concluded that electrons are not exclusively particle-like or wave-like. Rather, "they are their own thing" and how they behave depends on circumstances—on the experiment. When you look for waves, you find waves. Look for particles and you find particles. (Incidentally, it's the same with all forms of

electromagnetic radiation too—light and even radio signals.—*ed.*)

Electrons may act like waves or particles, but the numbers that describe them remain constant. An electron's "rest mass" is about ten to the minus twenty-seven grams. Its charge is roughly minus two times ten to the minus nineteen Coulombs and its "spin" is "quantized." Its motional energy and wavelength are related by a constant.

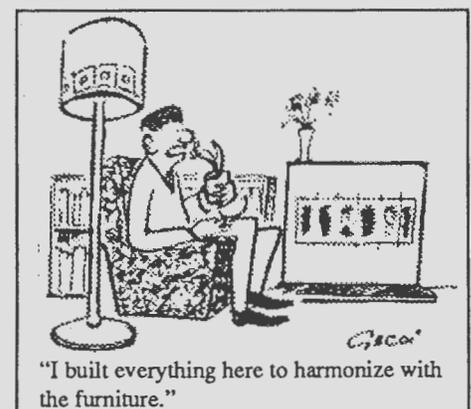
Scientists choose the model that best fits whatever they are investigating, and you can do the same. If it suits your purpose to think of electrons as little green balls scooting around in semiconductors (and leaving holes behind), go ahead. If you like them dashing back and forth between the copper atoms in a dipole, that's fine too. But never forget it's a model, not the electrons themselves. They remain a mysterious part of nature—and they do what they will, whether you can predict their behavior or not.

As Robert Frost wrote:

We dance around in circles—
and suppose.
But the secret sits in the middle—
and knows.

It's fun to try to understand nature and we can, a little. But we never will understand everything. She keeps her mysteries too well hidden.

from the December '92 Michigan QRP Club 'The Five-Watter'—Emory R. Schley, N4NCU Editor



"I built everything here to harmonize with the furniture."

from the Jan. '93 Mobile ARC "County Line Roadrunner"—R. Dyson, K0AYO Editor



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