



# The AARC OVER

Bulletin of the Austin Amateur Radio Club  
February 1991

---

## W5CN on Reported Risks of Electromagnetic Fields

The February 12 AARC meeting features Marcus Barnes, W5CN, on "60 Hertz and Magnetic Fields-Is There a Health Risk?"



W5CN has been an operator since 1951, with earlier calls of W5TJV and VP5ME. He is a member of ARRL and The Quarter Century Wireless club. He is special projects engineer for the Lower Colorado River Authority.

Tuesday, February 12, at 8:00 PM.

Luby's Cafeteria (on North Loop, a block west of Burnet Road)



Until such time as The Tobacco Institute offers a very substantial bribe, there will continue to be a No Smoking policy at AARC events.

---

## N5OWD Special Event

Special Events Station N5OWD, here in Austin, on Feb. 9 from 1400 to 2300 UTC, on 10 meter Novice/Tech phone band. N5OWD celebrates the 10th anniversary of The Armadillo BBS.

## Local Volunteer Examiners Ready for Codeless Exams

By now you have probably heard that the FCC has approved a new, codeless license class to stimulate interest in ham radio among those who don't want to learn Samuel Morse's code.

The new class is equivalent to the existing technician class, except that it does not include any privileges on the HF bands below 30 MHz. Like all technician class operators, aspirants to the codeless class must take written elements 2 and 3(A).

The first codeless exam to be offered in the Austin area will be at the Bastrop Swap Meet on February 23 (see *QUA*, page 5). The ARRL exam on March 9 will also offer a codeless test. As we go to press, it does not appear that the W5YI exams on February 9 will include the codeless test because it pre-dates the February 14 start of the new class.

Technician class operators licensed before the new class becomes effective, on February 14, will not be affected. The previous Tech class with code and its HF privileges remains available. February QST Magazine has full details.

Expectations run high for a whole new crop of hams, not only because of the new *sans* code class, but because the Persian Gulf conflict and its accompanying media blitz has drawn a great deal of attention to shortwave listening and amateur radio operation.

## Some Thoughts from an Anonymous DXer

I hate list operations • or, as we say on the DX Cluster: LIDST operations!

What's a list operation? It's when a DX station requests (or is persuaded that he needs) the help of a far wiser and stronger "Master of Ceremonies." Often, though not always, the emcee is in the U.S. Sound like a good idea? Read on.

On or near the frequency, the emcee asks for call signs of those who want to work the rare one. Problem #1: You had no chance to find XZ5AA before the mob did • the emcee made sure of that by widely publicizing the schedule five days ago.

Problem #2: You have propagation to XZ5AA, but none to the emcee in Florida! In 15 minutes the bedlam subsides, and the chosen ones are permitted, in turn, to have the honor of calling the rare one.

Problem #3: Did you offend the emcee by using only the last two letters of your call (or by not doing that), and get scrubbed from his list? No? Great! You proved that you can fight through an immense pile-up to work Florida, and will now get a virtually guaranteed QSO with XZ5AA. By the way, you have the second number in your report wrong. We'll get XZ5AA to repeat it until the emcee tells you that you guessed right.

Is a list operation ever justified? Only very rarely, when the DX station is very inexperienced, has a language problem, or does not have the equipment to work split. Any other time, the egotism of most well-known emcees in cornering rare ones for "their" net can make country-chasing a very depressing experience.

*P.S. Why do I remain anonymous? I have to get on the XZ5AA list, too!*

## Frequency Magic

A new idea may permit digital audio broadcasting (DAB) on the same frequencies as existing FM stations, with no interference. DAB and FM could co-exist with no new spectrum required.

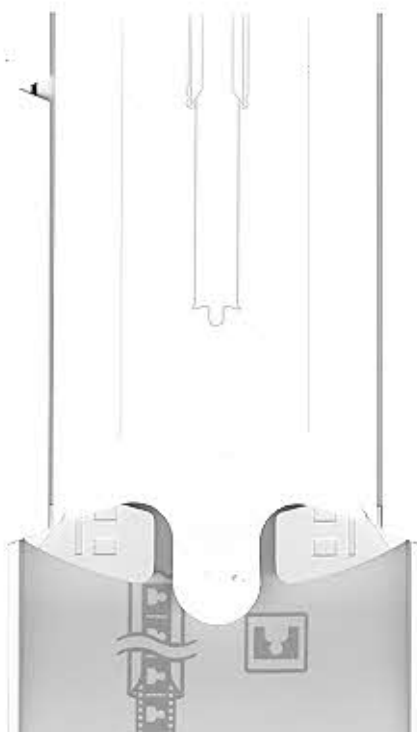
DAB is the hottest new idea in commercial radio. In tests in Canada last summer, it was shown to provide CD-quality audio with immunity to fading and multipath distortion. It is widely assumed that DAB will eventually be as common as analog FM is today.

Two engineers, John Leonard and Glen Myers, have developed the concept of Power Multiplexing, in which a standard FM signal and a DAB signal are broadcast on the same frequency from the same antenna. The DAB signal will be of much lower power (20 dB down), which is acceptable since digital receivers can decode weak signals without difficulty. Folks with standard FM receivers will not notice any difference, because their radios will "capture" only the normal analog FM signal.

But, new DAB receivers would have a special demodulator developed by Myers. It creates a replica of the analog FM signal, turns it 180 degrees out of phase, and adds it to the received signal. The difference output is the digital signal, which can then be further processed by the receiver and converted to audio.

If Power Multiplexing is adopted it will be of great benefit to hams, since there will be that much less fighting for our VHF and UHF allocations at WARC 92.

de Judith Gross, Radio World magazine; and Miles Abernathy, NSKOB



## LFMFT • Low Frequency and Medium Frequency Tuning

This holiday season I checked out the bands below 550 KHz on an IC-735 HF transceiver I've had for several years.

First I disconnected my 80 meter dipole and shorted out the PL259 plug to create a "T" antenna. I plugged in only the center conductor of the cable. I switched my antenna tuner out of the circuit, because it was not designed for this frequency range and it did no good there.

The first problem I encountered was a deafening, hum-modulated signal every 210 KHz through to 30 MHz. I traced it upstairs to my wife's touch-actuated lamp. Unplugging the lamp (and later disconnecting the touch feature entirely inside the base of the lamp) was the only solution, as the upper push-push power switch turned off only the power to the bulb. The touch module was on and oscillating as long as the lamp was plugged in. (Boycott this style of lamp and encourage your neighbors to do so!)

Bad pulse noise from power-related sources required the noise blanker (NB) to remain on for the entire listening session. Completely unreadable signals became readable when the NB was adjusted properly. The best way to adjust it was to tune in a 530 KHz Dallas AM station and adjust it for best compromise between readability and noise reduction. About 50 to 60% of the range was best.

The frequencies I monitored between 2100-

## Book Review

*The Art of Electronics* (Second Edition), by Paul Horowitz and Winfield Hill, Cambridge University Press, ISBN 0-521-37095-7.

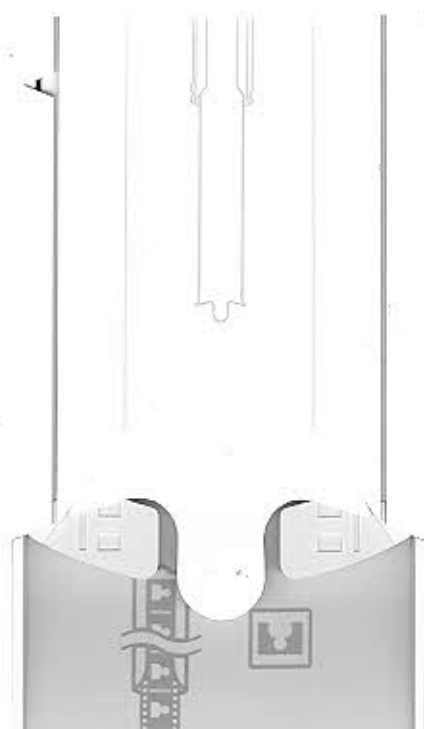
*The Art of Electronics* is somewhat like *The ARRL Handbook*, but is more up to date on basic circuit technology and topologies, and has more "under your fingernails" theory. The 1,125 page tome tells how to build good circuits and points out

*continued on page 7*

2200 UTC on New Year's Eve follow:

KHz	Call	Notes
206	GLS	call in A2 male & female voices with weather
296		in A2 there were 28 G's followed by a long dah
320	GR	in A2
330	GUO	in A2
347	GDT	in A2 with unintelligible male voice
353	AU	in A2 [maybe Austin?]
362		in A2, could not copy call sign
365		ceilings and WX male voice
382	GYB	in A2
391	RKP	in A2
398	CRS	in A2 on LSB, ROB in A2 on USB
404	MFS	copied on narrow CW
500	KLC	CW
516	PKV	CW with some hum modulation

Although this is not exactly a ham topic, I thought this might open up some new listening territory for amateurs with equipment covering this band. Any help with identifying these stations' locations and other data would be appreciated.



## QUA: Random Receptions

The annual Bastrop County Swap Meet, sponsored by the Bastrop Amateur Radio Club, will be February 23 at Alum Creek Antique Center on Highway 71 between Bastrop and Smithville. Swappers and shoppers may "talk in" on 145.35 and 443.75 MHz. The swap fest also features the first no-code technician class exams in the Central Texas area at 11 a.m. Tables for vendors are available on a first come, first served basis.

In the CW Department, QST reports several good reasons to dust off your keys and warm up your fist: In honor of the bicentennial of Samuel Morse's birth on April 27, ARRL will offer a special Code Proficiency Certificate for anyone who submits one minute of solid code from any W1AW qualifying run. Broadcasts of 10 to 60 WPM begin on April 27 at 2300Z and continue throughout 1991.

Forthcoming CW operating events include ARRL's International DX Contest (CW) on February 16 and 17; the Union of Belgium Amateurs contest (CW) on February 23 and 24; and Japan International DX Contest (CW) on March 8 through 10

Even contests that are not exclusively CW, such as the Wisconsin QSO Party, March 10 and 11, give extra points for CW QSOs. We expect the contests to work up to a fever pitch as Morse's birthday draws near.

Effective January 2, 1991, W1AW changed the frequencies of its code practice transmissions in the 15- and 10-meter bands. The new frequencies are 21.0675 and 28.0675, 10 KHz lower than the old frequencies.

Interested in trying CW QRP? Turn your power down to 5 watts and make friends for life with some of the best operators. The popular frequencies are: 3.560, 7.030, 14.060, 21.060 and 28.060 MHz. The majority of these people will make you very welcome, are happy to help you or just plain ragchew. QRP signals will be

small, but they will be quite prepared to work locals. These frequencies are oases, away from the worst of the go-away-you-are-not-DX mentality.

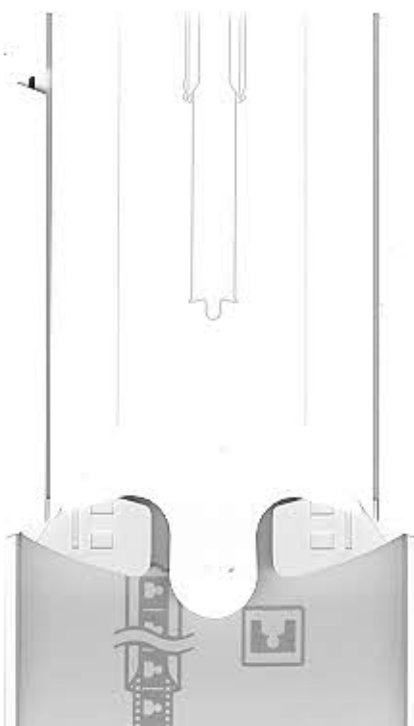
The awards manager of the QRP Amateur Radio Club International (QRP ARCI) is right here in Austin: Leo Delaney, KC5EV, 2106A Courtney, 78745. (As always, send a self-addressed, stamped envelope with any inquiries.) The QRP ARCI offers awards for working their members, Worked All States and Worked All Continents awards, and a 1000 Mile per Watt award.

Radio Shack reportedly has decided not to discontinue its popular DX-440 receiver, at least for now. Local Shack personnel report they are "going straight digital" and phasing out analog models. The digital DX-440, which made its appearance in the 1991 catalog, is really a Sangean in Realistic packaging, and will continue to be available with the Sangean brand (and several other brands) for some time, no matter what Radio Shack decides to do. Sales of all shortwave receivers are way up, due to the war with Iraq.

USENET scuttlebutt reports that Representative Cooper (D-Tenn.) has introduced a House Resolution to be called the Amateur Radio Spectrum Protection Act of 1991. If adopted, it would preclude the FCC from the reallocation of any spectrum from amateur radio service without providing for replacement spectrum. It has been assigned H.R. 73.

A retired police dispatcher assures us that it is common for officers to run radar with the intent of tripping fuzzbusters to slow things down. Sometimes on holidays, this is the sole purpose of radar. When one of the local officers (who is also a ham) spots a car with a radar detector in the window, he likes to track the car, with the speed gun off! He likes to watch the reactions of the drivers trying to figure out why their detectors

*continued on page 8*



## The AARC Over

### Monthly Newsletter of the Austin Amateur Radio Club

#### Officers

Mike Kellam, AA5JP, President ..... 836-7688, 919  
 Stuart Rohre, K5KVH, Vice President ..... 255-3932, 918  
 Amado Ramirez, N5PCP, Treasurer ..... 280-1879, 916  
 Joe Canfield, N5HPC, Secretary ..... 258-4761, 917  
 Gary Pickens, WX5Z, Activity Manager .... 454-3230, 915

#### Committees

Ed Golla, K3AHS, Technical ..... 255-4818, 111  
 Joe Fisher, K5EJL, Emergency Coordinator 926-4689, 119  
 Joe Fisher, K5EJL, W5KA Trustee ..... 926-4689, 119  
 Dwight West, N5xxx, Editor ..... 323-6915, 914  
 Pete Jordahl, K5GM, Labels and Roster .... 454-7889, 913

Numbers after the call signs are phone number and autodial number on the 146.78 MHz repeater.

Address submissions to Dwight West, Box 9705, Austin, Texas 78766. Phone number for the editor is 323-6915. Submissions are also accepted through the Mind's Eye BBS at 323-9111.

Deadline for the March issue is February 21. Late material will be saved for the following month.

We grant permission to reprint AARC Over articles provided that you credit the author, reference AARC Over as your source, and mail two copies to the editor (we will forward one copy on to the article's author).

We cheerfully accept commercial ads for only \$15 for a full page or \$10 for a half page. Members may advertise ham-related *For Sale* or *Wanted* ads free if space is available.

#### Publications Coordinator

The AARC is looking for a point of light, a volunteer to provide valuable assistance in the preparation of AARC publications. Contact any club officer to become a lead player in your club's productions.

## From the (New) Editor

I step lightly into former editor Rick Herndon's shoes with respect for the good job he has done, and hope that I can live up to the reputation of previous editors as I pursue my interest in writing.

I am grateful to the many people who have helped me in my new position, especially to those who have contributed articles.

My computer bulletin board, The Mind's Eye (323-9111, 1200 baud), will provide 24-hour access for contributors and readers with modems. Mind's Eye has the FIDO node number 1:382/76, and carries the Ham, Ham-for-Sale, Shortwave Listening, and FCC message areas, as well as the new, 42 Net's Ham Radio message link to Hawaii.

de Mason West (Advanced class license *still pending*)

Ten years ago in the February, 1981, issue of The AARC Over, Doug Holder wrote an introduction to working DX: "The cheapest and best power boost you can purchase is a good antenna system. You need a good tower, rotor, and a good beam. A start is 50 feet (70 feet or more, ideal) tower with a Tri-band beam. The Tri-band is a compromise. A serious DXer uses one or more monoband beams. The Quad is a very effective antenna, but requires more maintenance."

#### Classified Ads

- WANTED - Plans for building or equipment to purchase - Audio meter capable of SINAD, audio distortion, and audio output measurements with dB scales. Add-on circuitry to existing audio voltmeter okay. Rick Herndon K5FNI, 454-1670, work 465-6338, or Bastrop County Swap Meet
- Professional writer, computer expert, and tutor for hire. Mason West, 323-6915.
- For Sale - Yaesu FT208R 2 meter HT w/manual and 2 new nicads. Mint condition. \$300. Don N9AMB - 345-6468 eves.



## January ARRL/VEC Exam Results

Here are the results of the ARRL VEC exams at the Texas School for the Blind on January 12, 1991.

Name	Call	Upgrade
Calvin P. Barton, Jr.	N5RNL	Advanced
Todd P. Bowen	None	Novice
George M. Calhoun	KB5NVO	General
Leonard L. Carter, Jr.	None	Novice
Robert D. Chisholm	KB5OBI	Technician
Jon C. Detjen	KB5OEM	Technician
John W. Giles	None	Technician
Darral W. Heustis	None	Technician
Roy H. McCauley	KB5OJN	Technician
Kenneth E. Nordhauser	None	Novice
Paul A. Rehmann	None	Technician
Leonard W. Riley, Jr.	N5MLR	Advanced
Geoffrey G. Stephens	None	Technician
James Turner	None	Novice
Dwight M. West	None	Advanced

There were a total of 19 candidates taking exams.

The VE Examiners were Neil Eisner, N5KEA; Joe Makeever, W5EBJ; Curt Goodson, W4QBU; Roy Miller, W5FOZ; Larry Gunter, WB5BEK; Bob Redouty, KF5KF; Gene Hinkle, K5PA; and Steve Runyon; WQ5G.

The February W5YI exam will be at the Texas School for the Blind, 1100 W 45th Street, at 10:30 am on February 9, 1991. Please arrive by 10:15 am and be prepared for the exams to last until 2:00-3:00 pm. **Reminder: The cost for exams increased to \$5.25 for 1991.** If you have any questions regarding the upcoming exam, please contact Mike Kellam, AA5JP, at 836-7688.

de Larry Gunter, WB5BEK

## AARC Publication Clearinghouse

Beginning with this issue, we will list various handouts, sheets, and operating aids available from the AARC Over editor for a nominal charge to cover postage and printing. While these handouts are of interest to hams, they are too specialized to print every month in a newsletter already pressed for space. This will also provide an excellent means for those without computers to receive printed information previously available only from bulletin board systems in electronic form.

### Operating Aids Available from The AARC Over

Operating Aid	Number of Sheets
Q Signals, Prosigns, Abbrs.	1
Detailed Frequency Guide	2

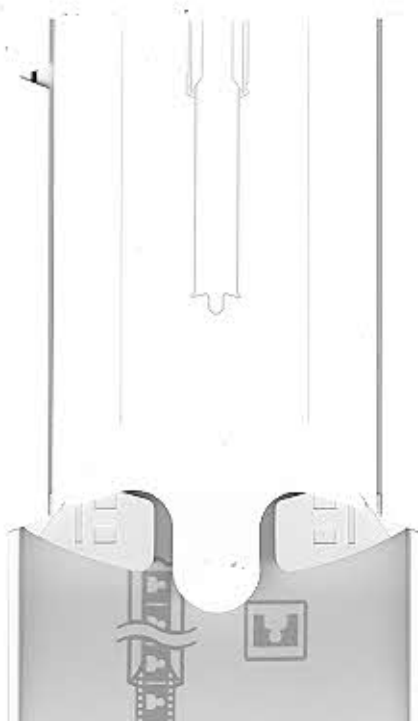
To order operating aids, send a self-addressed, stamped envelope and a list of the desired titles to: Mason West, Box 9705, Austin, Texas 78766. Include printing charges of 5 cents per sheet.

### Book Review from page 4

some of the common pitfalls that should be avoided. You'll be very surprised at how many of these pitfalls you've seen published over the years in the magazines. This book is a rare gem indeed!

de Michael O'Dell

[The Bookstop carries this book for \$39.60 with Reader's Choice card, \$44.55 without. • ED.]



## Weekly Events

**SwapNet**, Sunday, 9 pm, 146.94 MHz,  
immediately followed by W5RON  
Ron Johnson's Newsline.

**LunchNet**, Thursday at BurgerTex,  
5420 Airport Blvd.

**Quarter Century Wireless Assn. Net**,  
Thursday, 8:15 pm, 147.18 MHz.

**DX Net**, Thursday, 9 pm, 147.08 MHz.

**Saturday Breakfast**, Simon David Deli  
at the Arboretum.

## QUA from page 4

didn't alert them to his radar!

Speaking of QRM, Larry Larson, KI5KE, of the AISD Transportation Department recently sought help in tracking down a jammer of the school bus radio frequency. While Larson did not catch the culprit with his thumb on PTT, he was able to get close enough to spook the trickster and the interference has stopped. Larson sends his thanks on to all who offered their expertise.

License plates bearing the calls WB5QXT and N5NFC have been stolen off their owner's cars.

Miles Abernathy, N5KOB, is collecting stories of how folks got into amateur radio. Some might find their way into The AARC Over some day. Please let him know how your story, either in writing (3216 Park Hills Drive, 78746), by telephone (327-1310), or in person.

If you need a 24-hour clock for the shack, there is an inexpensive 24 hour clock kit including a battery driven quartz movement, 24 hour (military style) dial and hands for about \$12.00. A sweep second hand is \$0.40 extra. You can call Klockit at 1-800-556-2548.

Austin Amateur Radio Supply, Radio Shack, and Brookstone sell assembled digital clocks about the size of electronic calculators for about \$20. Brookstone also sells a pleasant and decorative clock with both 12-hour local time and 24-hour world time for less than \$30.

Contributors to QUA: David, GM4ZNX; Jim Grubs, W8GRT; Miles Abernathy, N5KOB; Doug, N4UVH; Jay Godwin, KB5LET; Minor, KD7YJ; Larry Larson, KI5KE.

## AARC's Annual Banquet Delicious Success

AARC executive committee's worries about slow ticket sales for the January meeting disappeared Saturday, January 19, as a large crowd of 62 gathered for delicious barbecue, a wonderful array of doorprizes, and eye-to-eye QSOs. It was a pleasant evening outside, and many enjoyed the beautiful view of the Austin skyline from the vantage point of the Zilker Park Clubhouse.

AARC President, Mike Kellam, AA5JP, continues in office another year. Mike introduced the other officers and then turned the meeting over to our outgoing Activities Manager, Darrell Dawson, WD5CDY, after thanking him for a job well done over the past two years. Darrell continued the tradition of drawing for door prizes. These included two ARRL Handbooks, two magnetic mount 2-meter antennas, an ICOM handi-talkie antenna, and several books. Our thanks to the Austin Amateur Radio Supply for assisting and adding to our purchase of these items.

de Joe Canfield N5HPC

