



# AARCOVER

## Bulletin of the Austin Amateur Radio Club

### August 1991

### WRITE NOW

Senate Bill 1372 and the nearly identical House Bill 73, "The Amateur Radio Spectrum Protection Act of 1991" mandate that the FCC "... shall not diminish existing allocations of spectrum to the Amateur Radio Service after January 1, 1991."

It's time to write our representatives to support these two bills...Senators Phil Gramm and Lloyd Bentsen (The Honorable <name>, U. S. Senate, Washington, DC 20510), and Congressman J. J. "Jake" Pickle (The Honorable <name>, 242 Cannon Building, Washington, DC 20515).



You should recommend that they "go on record as a co-sponsor" of the bill, and that they help get the bill through committee and the Senate (or House).

Senator Bentsen is a member of the Committee on Commerce, Science and Transportation, where the Senate bill is currently lodged. You might mention that in your letter to him.

In the few remaining months before WARC, we need as much support for these bills as possible.

de ARRL Letter and QST

### WHOOOPS!

Once long ago, on voice, I tried to break a QSO that had Arthur Godfrey on one end. I tried to break into this QSO for several minutes, then the old man got out his ukelele, sang a song, and went into a Nestle's chocolate commercial. This ol' fool had been trying to break the third harmonic of a local radio station.

de Wesley, WB5QWT

### MEETING

The next AARC meeting will be Tuesday, August 13, at 8 PM. As a continuation of our series on Troubleshooting, Stu has arranged to borrow a Tektronix video titled "Using Oscilloscope Probes."

The meeting will be at Luby's Cafeteria on North Loop, about a block west of Burnet Road. We meet in the back room. Lots of us like to come at 7 or 7:30 and have supper before the meeting.



A No Smoking policy is in effect at all Austin Amateur Radio Club functions.

### EQUIPMENT THEFT

K9IU, the Indiana University Amateur Radio Club, wishes to report the theft of the bulk of our ham equipment. Stolen were:

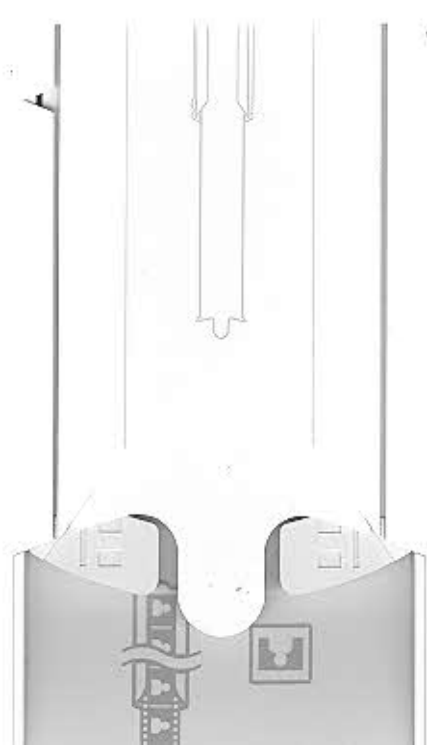
ICOM IC-735 HF transceiver, Serial Number 16514  
Kenwood TR9000 VHF transceiver, Serial #1050531  
MFJ TNC, Serial Number 01010083

This theft effectively puts us out of business. If you have any information regarding this equipment, please call (812) 855-6850.

de Dan Dreyer, president, currently out-of-business K9IU

### MASTHEAD FONT

The word "AARCOVER" in the masthead is done in a new copyrighted typesetter's display font named "Aarcover." The TrueType font was created by David Rakowski of the Department of Music, Columbia University, acting upon an AARC member's request for a font that looked like electric sparks.



## SPACE EXPERIMENT NEEDS HELPERS

Soviet scientists have proposed an experiment to study the plume of an electric rocket engine. It may take place during the International Space Year (1992) and will require the assistance of many amateur radio operators with VHF receiving equipment. Broad interest and support for the experiment is necessary to make it useful.

The goal of the experiment is to map the plume of a Cesium Hall Thruster by correlating the strength of a satellite signal at known locations on the ground. The plume of such a thruster is highly ionized, so it is opaque to radio waves below the plasma cut-off frequency. The specific frequency varies with the local free electron density. A reasonably dense plume has a cut-off frequency in the VHF range.

The spreading of the charged particles in the plume is affected by the earth's magnetic field, so predictions are not simple. The shape can be found by examining a signal broadcast from the same satellite that is firing the thruster. The signal can be examined from ground stations. Each station must provide an accurate location and an accurate record of the times the carrier signal is lost or regained. To get an accurate map, however, requires far more ground stations than the Soviets will ever have.

The minimum equipment requirements for the ground stations are a receiver and a digital watch.

If you are interested, you can write to Soviet Agency involved. Write to:

Research Institute of Machine Building  
Internat. Plasma Plume Characterization Experiment  
Attn: Prof. Victor M. Surikov, Deputy Director in  
Science  
Kaliningrad, USSR

Please express an interest in participating and include your name and mailing address. The Research Institute will probably not handle all of the coordination efforts, so you should also ask that they forward your name and address to whoever will handle your region.

de Greg MacRae, NASA Lewis Research Center

## JULY EXAM RESULTS

The following individuals obtained or upgraded their license at the July 6, 1991, ARRL/VEC exam session at Murchison Middle School:

NAME	CALL	UPGRADE
Mark E. Moore	.....	Advanced
Norman W. Williams	..... NSRIO	Advanced
Thomas E. Harkness, Sr.	..... N5NHF	General
Walter R. Evans	.....	Technician +
Linda F. Hamende	..... KA5OAJ	Technician +
Tom S. King	.....	Technician +
Joshua P. Brannon	.....	Technician
James Horvath	.....	Technician
Frances W. Kendall	.....	Technician
Joseph R. Nelson	.....	Technician
Douglas L. New	.....	Technician
Ben Pierson	.....	Technician
Arthur G. Rehmann	.....	Technician
Roger L. Rollie	.....	Technician
James S. Walker	.....	Technician

A total of 19 candidates took exams. One candidate passed one or more exam elements but did not upgrade their license.

### VE EXAMINERS

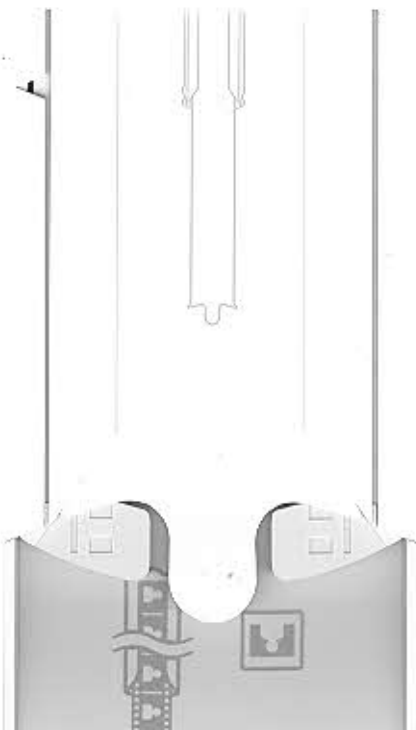
Joe Makeever	WSEBJ
Gene Hinkle	KSPA
Alex Vrenios	KX9I
Roy Miller	W5FOZ
Barry Davis	AA5GN
Larry Gunter	WB5BEK

The next ARRL/VEC exams will be given at: Austin Summerfest, Wyndham Southpark Hotel, IH-35 at Ben White Blvd., on August 3, 1991. Check the Summerfest program for specific information on time and test site room number.



If you have any questions regarding the upcoming exams, please contact me at 473-3526 (work) or 345-7281 (home).

de Larry Gunter, WB5BEK



**MINUTES**

Minutes of the July 9, 1991, meeting of the Austin Amateur Radio Club:

Having found no gold in the Colorado mountains, our President Mike Kellam, AA5JP, has returned (temporarily, however) in order to call tonight's meeting to order.

**MINUTES:**

The minutes of the June 11th meeting were approved as printed in the last AARCOVER.

**VISITORS:**

We had a number of visitors, including Sam, KB5OLA; George, WB5IDZ; John K8NET; and Paul N5SEH. The Secretary refuses to be responsible for any errors here because someone forgot to bring the sound system. (*Ed.: Guess who!*)

**NEW MEMBERS:**

The members present elected 11 new members. These were Brian Cooper, KB5PIA; David Vermooy, KG5EX; Richard Colgan, WD5GWC; Gerald Garcia, N5UMB; Robert Moeser, N5RRL; Thomas Rohrer, N5TUU; Terry Long N5UMU; Art Dunlap, N5ULW; David Keeton WD5AER; plus James Sheffield and David Hickey who are waiting for their calls.

**OFFICER REPORTS:**

Treasurer, Amado, N5PCP, is away taking an exam in a computer course. He reports that the bank account has a balance of \$2,114.62.

Ed Golla, the Technical Committee Chairman, reported on a noise problem with the repeater. Ed arranged to get access to the transmitter site, the problem went away the evening before and has not reappeared.

Our Activities Manager, Gary, WX5Z, gave a brief report on Field Day. The score has not been calculated but we made about 800 contacts during the 24 hour exercise. The next planned activity is the October 12 Swapfest at Manchaca.

**ANNOUNCEMENTS:**

Stuart, K5KVH, announced that the Alamo DX Amigos in San Antonio is sponsoring a program by Father Moran, 9N1MM, from Nepal. He will be in San Antonio during October or November. The exact date

*The members present elected  
11 new members...*

is not yet known. For more information, call Milton Haines at 512-494-2468. They are taking reservations until September 1 and expect space to be limited.

Stuart also has a mailing from Handi-Hams, an organization for handicapped amateurs. Those interested in assisting this group may contact Stuart for the information.

Larry, WB5BEK, reported on the last VEC exam. The next exams will be at Summerfest (one in the morning and one in the afternoon).

Bill, K5ARS, reported that Steve Clark, W5FFV, has become a silent key.

A news item read by Mike, AA5JP, reports that the House has passed a bill to free up 200 MHz of unused government frequencies for commercial use. The bill now goes to the Senate.

Mike, AA5JP, also announced that he is in the process of moving his family and his business to Estes Park, Colorado. Messages may be left on his answering machine but he may be a little slow to answer. You may also contact the Vice-President or Secretary.

Joe, W5EJB, gave a quick summary of the Summerfest schedule for Saturday and Sunday, August 3rd and 4th.

Rick, K5FNI, is retiring as AARCOVER Editor. We all owe him our thanks for a job well done.

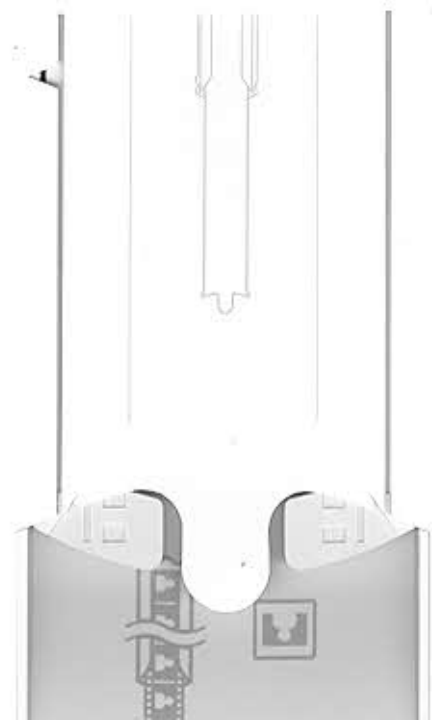
**OLD & NEW BUSINESS:**

None.

**PROGRAM:**

The Vice-President, Stuart, K5KVH, presented two video tapes from Tektronix. The first covered the fundamentals of oscilloscopes and their use, the second covered techniques of looking for trouble with oscilloscopes. This last video featured a hand held digital storage scope.

Respectfully submitted by Joe Canfield N5HPC, AARC Secretary.



## QUA— RANDOM RECEPTIONS

The United States of America and the United States of Mexico have announced reciprocal arrangements to permit amateur operators from each country to operate their stations in the other country. This became effective on July 9th but the formal procedures have not been published. Both countries must publish such rules before the agreement can be used.

We now have a dozen active amateur radio satellites in orbit. OSCAR 22 (aka UoSAT-F, UoSAT-5, UO-22) was successfully launched July 17 from French Guiana. The University of Surrey microsat features a CCD camera and 9600 baud FSK AX.25 store-and-forward packet. OSCARs now in orbit: UO-11, AO-10, AO-13, RS-10/11, AO-16, DO-17, WO-18, LU-19, UO-14, FO-20, AO-21, and UO-22.

The League has filed a petition for rulemaking with the FCC asking for access, on a secondary basis, to the 216 to 220 MHz band. In separate actions, the League will ask for Novice access to the entire 222 to 225 MHz band and for a shift of the repeater band to 222.150 to 225.000 MHz.

Icom America has moved its service center from Irvine, Texas to Irvine, California. The new address is: Icom America, Inc.; 18102 Sky Park South, Suite 52-B; Irvine, CA 92714. Phone 714-852-8026, FAX 714-852-8716.

The Houston Area Ham Helpline is sponsored by several Houston area clubs. Call 713-488-4HAM. To obtain a really comprehensive booklet about getting-started in ham radio, write the Houston Area Ham Helpline at 16410 Havenhurst, Houston, TX 77059. A couple of bucks and a large envelope with SASE would help. It'll tell you everything a beginner needs to know.

"Invisible airwaves crackle with life,  
Bright antenna bristles with the energy.  
Emotional feedback on timeless wavelength,  
Bearing a gift beyond price....  
Almost free."

© by the rock group "Rush," from their song entitled "Spirit of Radio"

CNN Anchor David French, is N4KET

AMSAT-DL received confirmation from the European Space Agency that a launch vehicle and a slot has been identified for Phase 3D to ride aboard an ARIANE-5 rocket tentatively in October 1995. The satellite must be in the shape of a "doughnut" 12 feet in diameter and about 2 feet tall. The projected weight is 1,100 lb. This will be the most advanced and largest OSCAR ever built.

Three nations still officially use the English system of weights and measures: Liberia, Burma (Myanmar), and the United States.

de many sources, including ARRL Letter, AMSAT and the InterNet

## ARE WE HAVING FUN YET?

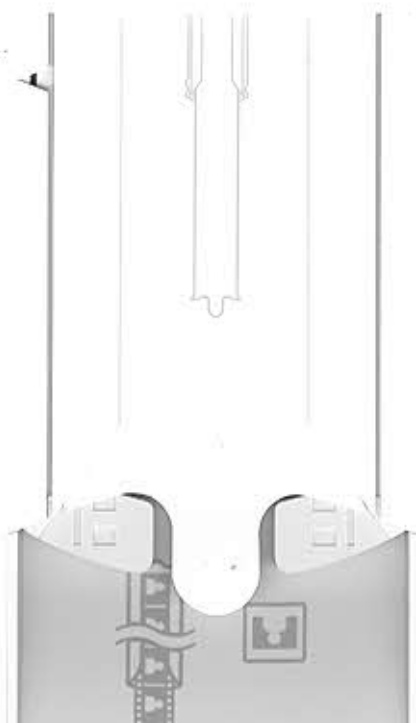
Well, I joined with the local club this Field Day, and it wasn't a good experience. The rain was terrible, and the lightning was rather alarming, especially to us in our tent. We were freezing, at least until the generator caught fire, and then there was a bit too much warmth. Attempts at temporarily setting up car batteries resulted in Dave (who will be quite ashamed if I mention his call), splattering battery acid all over himself, causing him to run out naked in the rain in an attempt to clean himself off. Needless to say, he was picked up by a police officer.

We did actually manage to snag some reasonable DX even under the terrible solar flare conditions, including a Yugoslavian station whom we could hardly hear under the combination of the pileup and the birdie from the local AM station which seemed to play nothing but Grateful Dead tunes. In the middle of a good QSO with a KH0, the makeshift inverted-V was knocked down by a falling tree, causing transmitter failure when it fell into the water.

And of course, the next morning we had neglected to remember the importance of leaving at least one battery in good enough condition to start one of the cars, so we wound up having to call for help.

Never again....at least not until next year.

de Scott Dorsey



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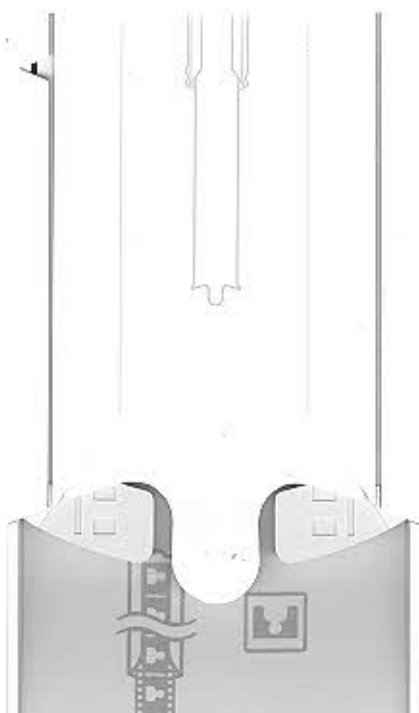
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de Scott Dorsey



## COMMERCIAL TESTING IN HAM BANDS

I have received copies of 5 experimental licenses, issued by the FCC for commercial testing in our amateur bands. Could this be the thin end of the wedge?

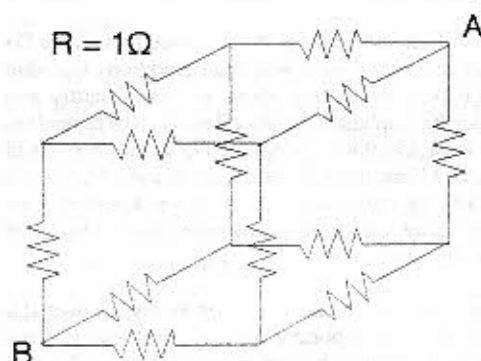
Two are issued to American Telezone, for 2400-2483.50 MHz with 10 watts ERP, for experiments in East Texas and Southern California.

The third was issued to Omni-Point Data Company, for 902-928, 2400-2483.50, & 5725-5850 MHz with 1 watt of power, for use all over the continental United States. The fourth was issued to Geosyna Satellite Service for 915 and 925 MHz, 1/2 watt ERP, for tests in New Jersey. The final license was issued to Westinghouse Communication Services, for experiments between 1250 and 1350 MHz using 126 kW of ERP (radar?), in Anne Arundel, Maryland.

de Brian Kantor, N6BVU

## MIND TWISTER

Given a cube made of twelve 1 ohm resistors, what is the resistance from one corner (A on the drawing) to the diagonal corner (B)?



(answer next month)

de Bill Lucklow, KE7DQ, and ARNS

## THE AARCOVER

Monthly Newsletter of the Austin Amateur Radio Club

### Officers

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

### Committees

Ed Golla, K3AHS, Technical ..... 255-4818, 111  
 Joe Fisher, K5EJL, Emerg Coord'tor ..... 926-4689, 119  
 Joe Fisher, K5EJL, W5KA Trustee ..... 926-4689, 119  
 <your name here>, AARCOVER Editor 555-1212  
 Pete Jordahl, K5GM, Labels & Roster ... 454-7889, 913

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

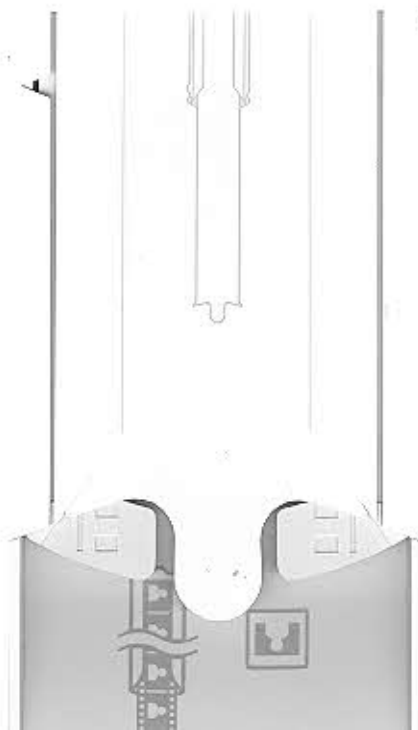
Address submissions to The AARCOVER, POB 13473, Austin, Texas 78711, or transfer by modem to Joe Canfield, 258-4761.

Deadline for the next issue is the middle of this month. Late material will be saved for the following month.

We grant permission to reprint AARCOVER articles provided that you credit the author, reference AARCOVER as your source, and mail two copies to the Austin ARC (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.

The Austin Amateur Radio Club, Inc., maintains repeaters on 146.78 and 146.94 MHz, and an emergency station at the American Red Cross Building. Membership dues are \$6 per calendar year (\$10 for a family), pro-rated for those joining during the year. Membership for the rest of 1991 is only \$3 / \$5. Please contact an officer if you would like to join, or come to the meeting.



**AARCOVER AWARD**

ATV Club

There was a bit of a delay learning the results of the 1990 Amateur Radio News Service club bulletin contest, but the wait was worth it.

**Camera Amateurs**



In the previous year's contest your club's bulletin received a Good rating. This time, the AARCOVER under the editorship of Rick Herndon, K5FNI, moved up to **Excellent**.



At the July 16th meeting of the Austin Amateur Television Club, Bob-W8ZSX gave us an update on the ATV repeater. He described that when more than 5 watts of power was put into the transmitter filter, the SWR went berserk and basically shorted out. Opening the filter revealed a crystalline growth on the silver plating that shorted out easily. The manufacturer agreed to replace it with a new one; other people have had similar problems. The new one is supposed to be shipped in the next two weeks.

The 3 judges liked best the general format, use of pictures and graphics, cover sheet, club activity coverage, and use of humor & entertainment.

They cared less for a shortage of articles in the training, general amateur coverage, technical and operating categories.

For show-and-tell, Bob brought in a 440 MHz ATV amplifier he had built up using the design out of ATV Quarterly with a Mitsubishi AB1 linear amplifier brick; 5 watts in 50 out. Basically, it consisted of a large heatsink with the 1" x 3" chip bolted to it and a small pc board with some power and input/output circuitry.

If you have anything to share with your fellow club members, please put it in writing and mail or modem it in. You may even become known nationally, since those AARCOVER articles of potentially widespread interest are modem'd to the ARRL computer bulletin board. In turn, editors of club bulletins all over the country download the articles for inclusion in their newsletters. Each collection of AARCOVER articles is generally downloaded about 20 times, and one individual article originating in the AARCOVER had been downloaded 52 times at last count!

Jon-MHI reported that he was keeping a mostly weekly schedule with Frank-VDS in Wimberly with some great pictures; Pat-PLR even shows up sometimes with his roving 1296 MHz camera linked to a 440 MHz transmitter in his truck. Last week Pat was even able to see Jon using a Sony Walkman with only the built in antenna; about a 10 mile trip.

de Miles Abernathy, N5KOB

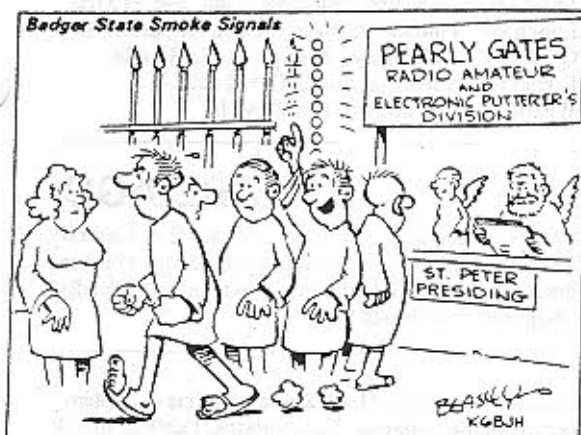
Pat-PLR phoned in that the City was planning to move the Emergency Management Office out of the Brown Building and they had delayed the ordering on some of the ATV receive equipment although he thinks he convinced them to at least get the antenna and rotator ordered since that is the hardest part to get set up quickly in the case of disaster.

For ATV info, contact W8ZSX, WA8PLR or N5MHI. Next ATV Meeting: August 20th, 7:30 PM, Sirtom Stockade, 8828 Research Boulevard.

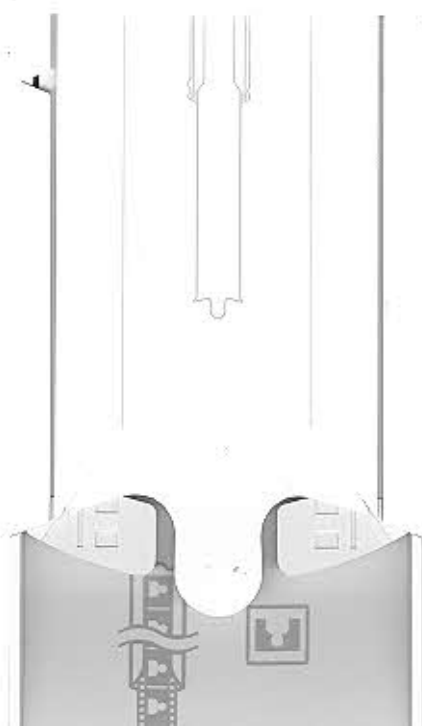
de Jon Penner, N5MHI, tel. 335-0220.

Sign seen on laser equipment:

**WARNING!**  
Do not stare into beam with remaining eyeball!



HE WANTED TO GO UP FOR BETTER RADIO PROPAGATION, BUT OL' ST PETE TOLD HIM WHERE HE'S GOING, HE'LL HAVE AN EXCELLENT GROUND!



## NEITHER QRP NOR QRO

I've written the *National Contest Journal* & other publications, to let them know that I think they should



denote who the 100 watt stations are in all contests. If not creating a 100W category in results, they should at least put an asterisk (\*) or something to mark who we are, so we can compare our performance to similar stations. They just throw the results in with the "big guns" and pretend that there is no difference now & this is part of the reason for this "the big - guns - dominate

- the - contests" feeling that we small stations have.

---

*What are they afraid of?*


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More power (no pun intended) to the big guns. They contribute lots to contesting and are due much credit for innovations, etc. I hope they continue to do so. At least 50% of contest participants are stations that are not big guns (maybe more than 50%). It's really ignorant of sponsors to continue ignoring us!

What are they afraid of? In the formation and results of most other sports, there are classes and leagues to denote handicapping, why not in contesting? Are the sponsors in magazines that sell linear amplifiers dictating contest policy? Maybe it's time we make our own 100W contests, and let the big guns and sponsors go the road on their own. If half the participants drop out of their contests, I bet that would get their attention!

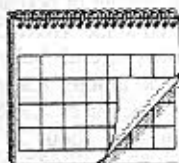
Every time I suggest that they merely denote who the hundred-watters are, all I hear is the rhetoric about how "another category would degrade the tradition and history" of a particular contest. Then a discussion ensues about reorganizing contest rules, etc..... Then what happens? **nothing!** We get ignored again.

Let me repeat myself: **All I ask is that all contests put an asterisk (\*) by the calls that used 100 watts! That's all.** What's the matter contest sponsors?

de Don Singletary, AA4VD

- Aug. 9-11 "Hot Humid Dog Days of Summer" S.E.S.
- Aug. 10 Gabby Hayes Days S.E.S.
- Aug. 10 Transmitter hunt (ARO)
- Aug. 13 AARC meeting**
- Aug. 17 Victoria, TX, Swapfest (147.16 MHz)
- Aug. 17-18 10 GHz Cumulative. Contest
- Aug. 20 AATVC meeting
- Aug. 23-25 ARRL Nat. Convention, Saginaw, MI
- Aug. 27 Hams must vacate 220-222 MHz
- Aug. 31 Everly Brothers Festival S.E.S.
- Sept. 3 ARO Meeting
- Sept. 7 Amateur Radio Public Awareness Day
- Sept. 7 Ham exams at Murchison School
- Sept. 10 AARC Meeting
- Sept. 14-16 VHF QSO Party
- Sept. 27-29 ARRL Ham Radio / Computer Networking Conference, San Jose
- Oct. 12 Manchaca Swapfest
- Oct. 19-20 Simulated Emergency Test

[S.E.S. signifies Special Event Station]



## WEEKLY EVENTS

- SwapNet & Newslines...Sundays, 9 pm, 146.94 MHz
- LunchNet...Thursdays, BurgerTex on Airport Blvd.
- QCWA Net...Thursdays, 8:15 pm, 147.18 MHz
- Breakfast...Saturdays, Simon David deli.
- WeatherNet...as needed, 146.94 MHz

## 10 YEARS AGO

From the August 1981 AARCOVER: "The Central Texas Weather Net has certainly proved its worth in the recent Spring flooding." (This was after the deadly Memorial-Day floods.)

Expect a new Radio Shack 2m handi-talkie in September, made by Standard. 12 memories, 1 calling and 3 priority channels, MultiFunction scanning, tone DTMF squelch built in, \$259.95

