



AARC OVER

Bulletin of the Austin Amateur Radio Club

September 1991

Meeting

The next meeting will be Tuesday, September 10, at 8 PM. Featured speaker will be Gene Preston, K5GP, of the City of Austin Electric Utility. Gene's two-phase talk will cover "Locating Power Line Radio Interference" and "Lightning and Radio Grounds." Come learn the shocking news about your ground rods!

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.

QRP Tips

1. Use a real antenna. A beam or full size dipole will put you on par with the stations running much greater power into a stealth antenna.
2. Call the louder stations. They're far more likely to answer.
3. Answer CQ's. Calling CQ is less productive.
4. Be prepared to listen a lot.
5. Use the highest frequency band that's open. A couple watts on 10 will work better and contacts are easier than with a couple watts on 80.
6. Use the QRP freqs: 1.810, 3.560, 7.030-7.040, 10.106, 14.060, 21.060, 28.040 and 28.060 MHz.

No-Code License Class

Have a friend who is interested in getting a ham license? Tell 'em about the No-Code Technician license classes which start Saturday, September 7. Classes will run for eight consecutive Saturdays, from 8:30 until noon, at Murchison Middle School in northwest Austin. This is the same location where ham radio exams are now given.

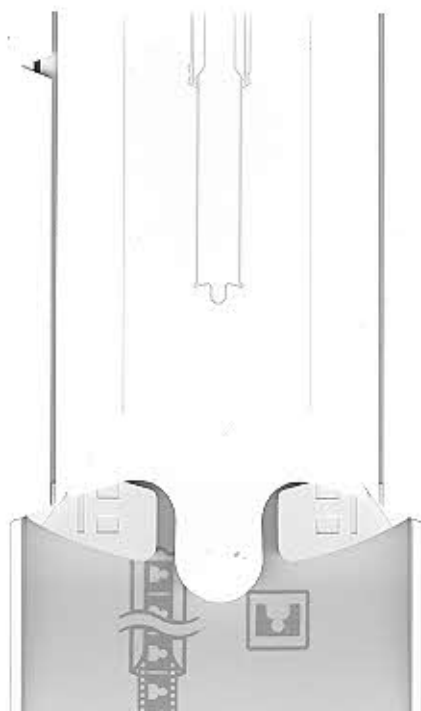
Murchison Middle School is easily accessible from MoPac Expressway (Loop 1), by taking the Far West Blvd. exit. Head west on Far West for about three blocks, and turn left onto Hart Lane. Go a block south on Hart Lane, and turn right onto North Hills Drive. The school is on your right. To put it another way, Murchison School is a block south of the club's Field Day site, at the bottom of the hill.

Class tuition is only \$3, less than 40 cents per session. You will need to get a copy of *Now You're Talking*, available at Austin Amateur Radio Supply and Radio Shacks. Classes will be taught by qualified licensed amateur radio operators, under the sponsorship of the Austin Repeater Organization.

This is a great way for your friends to learn all they need to know to get licensed and on the air! No-code Techs cannot operate on HF, but they have all the VHF and UHF privileges that ham radio has to offer. Amateur TV, moonbounce, autopatch, packet radio, ham balloons and rockets, emergency service, satellites, etc. For more information, you can call Charles Eichenbaum at his work number of 476-6195.

7. Have fun. A contact with a homebrew QRP rig is far more memorable than another "you're 5-9 OM, my hemorrhoids hurt, 73 - gotta go" exchange.

de Bill Vodall, WA7NWP



August W5YI Exams

Here are the results of the morning examination session given during Austin Summerfest. 91. We tested 56 applicants, with 28 upgrading or obtaining new licenses.

Barbara Humphries	Extra
Robert Rodriguez	Extra
Bennett Thornton	Advanced
Randolph Carroll	Advanced
Todd Bowen	General
Mark Goldstein	Technician+
Charles Curtiss	Technician+
William Pierson	Technician+
Walter Zack	Technician+
Johanna Preston	Technician+
Darren Woods	Technician+
Bill Farrel	Technician+
Ann Thornton	Technician
Julie Mercer	Technician
Stephen Shultz	Technician
William Poyner	Technician
Lisa DeVane	Technician
Alvin Tillman	Technician
Allan Purcell	Technician
Jimmy Mercer	Technician
I. Mae Duncan	Technician
Brian Cooper	Technician
Gordon Lingle	Technician
Mark Ferguson	Technician
Zach Swenson	Technician
Patrick Albritton	Technician
David Dix	Novice
Peter Reed	Novice

Congratulations to **all** of the above, and to those that passed elements, but did not upgrade. I would like to thank the VE's that helped with the session, as it was at least a full 6 hours before we were finished: Gary Pickens, Charlie Doughtie, Francis Dohanvich, Huck Huckabee, Connie Williamson, Al Van Allen, and Ben Menke.

The next W5YI examinations will be October 5, 1991, at Murchison Middle School, 3700 North Hills Drive, Austin, Texas. If you have any questions please contact me at 272-8233 (home).

de Bill Wehling, KF5NB

August ARRL Exams

The following individuals obtained or upgraded their license at the ARRL/VEC exams at Austin Summerfest on August 3, 1991:

NAME	CALL	UPGRADE
Norman W. Williams	N5RIO	Extra
Lloyd B. Crawford	N5GDB	Advanced
Brian D. McMin	N5PSS	Advanced
Tony Economopoulos	N5OWG	General
James M. Cantu	KB5PTF	Technician +
Peter D. Read	—	Technician +
James A. Schimpf	—	Technician +
Michael J. Arendall	—	Technician
Michael R. Brewster	—	Technician
Russell T. Cox	—	Technician
James B. Cunningham	—	Technician
Jon P. DeShazo	—	Technician
Kim Evans	—	Technician
Bill A. Goff	—	Technician
David S. Hobbs	—	Technician
William A. Kelley	—	Technician
Edgar A. Scurer	—	Technician
James E. Smith	—	Technician
Sandra Timmermann	—	Technician
Vinay Vaishampayan	—	Technician
Jean M. Vanden Bos	—	Technician
William R. Woodlee	—	Technician
Marvin L. Hope	—	Novice

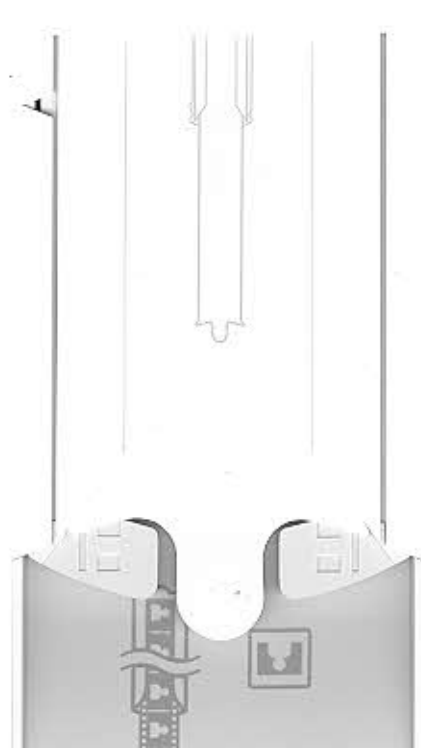
A total of 49 candidates took exams. Besides the above upgrades, 5 candidates passed one or more exam elements, but did not upgrade their license.

VE EXAMINERS

Dick Ber, KB5BBU	John Bogard, KF5RX
Barry Davis, AA5GN	Larry Gunter, WB5BEK
Gene Hinkle, K5PA	Barbara Humphries, KI5EV
Ben Menke, AA5NC	Jack Stankus, W2JS
Alex Vrenios, KX9I	Ron Willingham, KF5QW

The next ARRL/VEC exams will be given at Murchison Middle School, 3700 North Hills Drive, Austin, Texas on September 7, 1991. 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

Meeting of the Austin Amateur Radio Club on August 13, 1991

President Mike Kellam, AA5JP, opened the meeting at 8:00 PM.

VISITORS: Visitors included Jennifer Clayton, no call, and Leon, KB4GCD.

MINUTES: The minutes of the July 9th meeting were approved as printed in the last AARCOVER.

OFFICER REPORTS: Treasurer Amado Ramirez, N5PCP, reports that a balance of \$1994.92 in the checking account after paying all the bills. Field Day expenses were \$55.68.

There were no problems reported with the 146.78 repeater.

There are extra copies of the current and back issues of the AARCOVER available at the meeting, see Amado, N5PCP.

Articles for the AARCOVER should be given to the Secretary, Joe, N5HPC. We welcome more first person and technical article submissions.

NEW MEMBERS: The AARC welcomes these new members: Mark, G4ZRT; Bert, N5SY; Paul, N5SBL.

Sam, KB5OLA; and Don KA8MZD. Billy and Margaret, N5TNY and N5TNX, were accepted during the June meeting and Jim, N6OTQ, has renewed his membership.

OLD & NEW BUSINESS: None

ANNOUNCEMENTS: Miles, N5KOB, states that he will be available after the meeting for flogging by ARO members. Miles, in error, wrote that the AARC owned and operated the 146.940 repeater. ARO, we apologize for our poor editing.

Charles, WB5HOI, announced that the Austin Repeater Organization is starting a No-Code License Class starting on Saturday, September 7. It will run for 8 consecutive Saturdays at the Murchison Middle School. Applications will be available at Austin Amateur Radio Supply.

Joe, W5EBJ, summarized the Summerfest activities. There are also some left over T-shirts available, see Joe.

PROGRAM: Stuart, K5KVH, presented a program on oscilloscope probes. This device is a misunderstood and often misused coupling between test gear and equipment being examined. A video by Tektronics was shown.

Respectfully submitted by: Joe Canfield N5HPC, AARC Secretary.



Heartfelt Loss

I have to mournfully announce that I am now two radios less rich. I lost my brand new ICOM 2GAT last Monday and this Monday I lost my 2-year-old ICOM 32AT.

Now for the good news: My daughter Penny, aged 13, KA1VUA, upgraded to Tech Plus last Monday. My son Alex, aged 14, KA1VWX, upgraded to Tech Plus this Monday. They asked me to report that they both are enjoying their new radios very much.

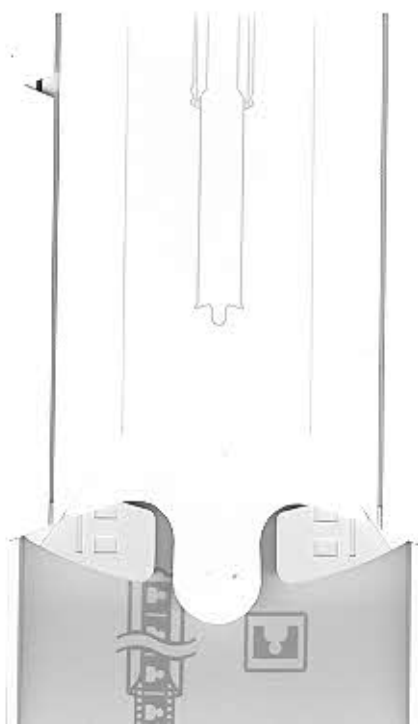
de Diana L. Syriac, KC1SP [author of popular no-cost ham radio study program for Macintosh users]

No-Code Not No-Study

While it is true that some have passed without preparation (at least the Novice part), our VE sessions are discovering lots of sadly disappointed people who thought they could go all the way to Tech without cracking a book.

There are lots of rules, regs, and operating practices, band plans, etc., that can't be known without some study. 73 and good luck!

de Gerry Jurens, N2GJ



FACTOR

A New Digital Mode

Looking for a digital mode suitable for poor HF paths? One that combines the best of packet and AMTOR? It's here, it's called FACTOR, and the controller cards are available in kit or assembled form. FACTOR features:

- Memory-ARQ (Cumulative method for reconstruction of the original packets)
- Online data compression (Huffman coding makes messages smaller, quicker)
- Faster and safer change over (Break-In)
- Complete ASCII character set (Not just capital letters, permits transmission of binary files)
- Safer close down of transmission (Two-sided QRT)

Packet + AMTOR = FACTOR

- Automatic mark space detection (No fixed mark / space rule)
- Optional connection to external frequency standard
- Unambiguous addressing (Your complete callsign, not just a 4 character SELCAL)
- Automatic selection of optimum transmission speed (100 and 200 Baud)
- Powerful Listen Mode

The neatest part of FACTOR is the Memory-ARQ. Let's say your rig and FACTOR controller received only some of the characters in a packet. The controller knows (from the CRC checksum) that there are errors, so it requests a re-transmission. But it **remembers** all it got during the first try, and combines it with what it gets the second time around to piece together a full packet. It ACK's, and the other station starts transmitting



the next packet. Really speeds up throughput in rough conditions!

FACTOR automatically changes speed to suit propagation. Slow for bad conditions, fast for good conditions. At slow speed (100 baud) packets are 10 bytes (characters) long, at high speed (200 baud) they are 24 bytes long.

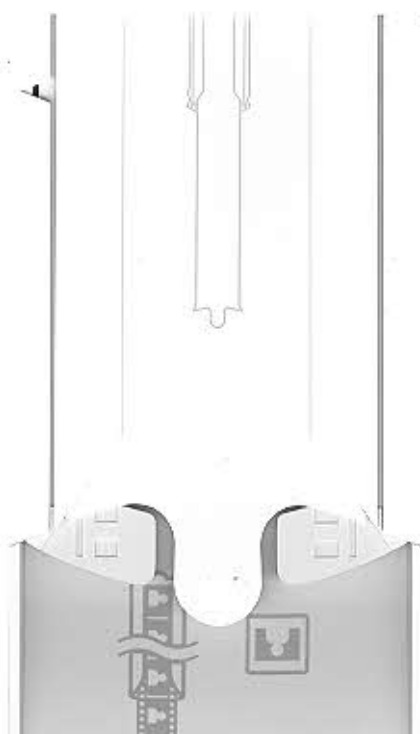
If you would like 6 pages of information about the FACTOR controller, send a self-addressed business envelope and \$1 to Dr. Thomas Rink, Roentgenstrasse 36, 6450 Hanau 1, GERMANY. If you are ready to buy a FACTOR / AMTOR / RTTY controller, you can send \$320 (for kit) or \$390 (assembled) to the above address. Note: Verify the current legality of use of this new mode before transmitting.

de Miles Abernathy, N5KOB, & Internet

(I will have a few copies of the information packet at the meeting - N5KOB)

ARNS Contest

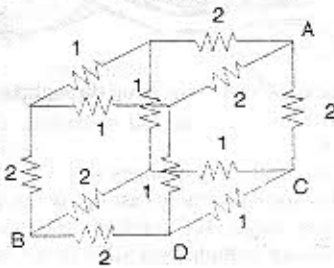
The Amateur Radio News Service has announced its 1992 Publication Contest, open to any ham radio club bulletin. The ARNS is an organization dedicated to improving the quality of club newsletters. Membership in the ARNS is \$5 / year, with a \$1 extra fee the first year (for which newcomers receive a special information packet). Anyone can be a member of ARNS; all club editors **should** be. For further information about the ARNS please contact Pam Myers, N8IAK, 510 West Harrison, Alliance, Ohio 44601.



Mind Twister Solution

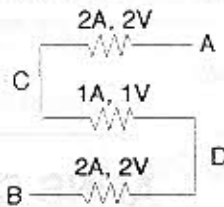
Here is the solution to last month's mind twister. Remember that the problem was to find the resistance across the diagonal of a cube made of 1-ohm resistors.

Start by assuming that a current of 6 amps flows into point A.



Because of symmetry, the current will divide into three equal currents of 2 amps each. Each of these currents will then divide into two currents of 1 amp each. The currents then recombine into three 2-amp currents, then meet at point B and the 6 amps flows out of the array.

Now we can use Ohm's law to find the voltages on each leg. Here is a typical path A-C-D-B:



$$(V_{A-C} = 2) + (V_{C-D} = 1) + (V_{D-B} = 2)$$

Therefore the total voltage from A to B is 5 volts. Remember that the current is 6 amps. Therefore the resistance from A to B is $R = E / I = 5 / 6$ ohms.

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 & Positions

- Ed Golla, K3AHS, Technical 255-4818, 111
- Joe Fisher, K5EJL, Emerg Coord'tor 926-4689, 119
- <your name here>, AARCOVER Editor 555-1212, 914
- Pete Jordahl, K5GM, Labels & Roster ... 454-7889, 913
- <your name here>, Public Info Officer .. 555-1212

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

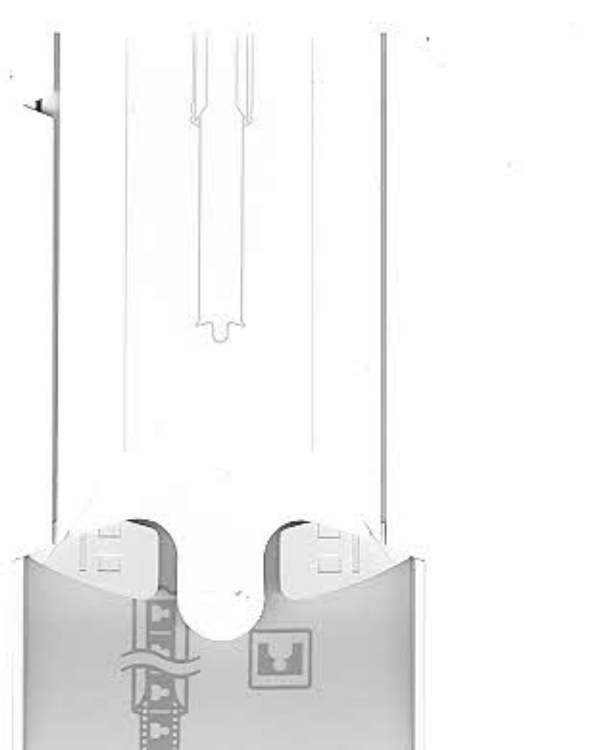
Address submissions to The AARCOVER, POB 13473, Austin, Texas 78711, or transfer by modem to Joe Canfield, 258-4761.

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 a copy to the Austin ARC (we will forward it on to the article's author).

The Austin Amateur Radio Club, Inc., maintains a repeater with open autopatch and emergency power on 146.78 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 family). Please contact an officer if you would like to join, or come to the meeting.

Anyone having equipment suitable for use by a school amateur radio club, or knowing of a club needing such equipment, please contact the AARC vice president or secretary.



A Full Gallon

When I first got into VHF FM stuff back in the early 70's the only rig I could afford was an old Motorola 80D — which had been pre-owned by about every other ham in town before I got it. This hefty critter had both a vibrator for the receiver, and a dynamotor for the transmitter supply.

Vibrators, being sort of sealed, were pretty tame, but that dynamotor had a nice arc show going on which could be seen through the slots. The story that came with the radio was that about 3 owners back the fellow had done the installation right and drilled 4 nice mounting holes through the floor of the trunk to set the mounting cradle, but unknowingly he also drilled one a little too deep - into the top of his gas tank. One day after topping off his tank and forcing the vapors up into the trunk, he keyed up the rig as he got ready to go back into traffic. There was a loud "WHUMP!" from behind, and then a loud clatter as the trunk lid came back down.

Sorta makes you appreciate something like a 2SAT don't it.

de Kevin Feeny via Antenna Farm BBS



Pickle Undecided

AARC member Richard Ber, KB5BBU, sent a letter to U. S. Representative J. J. "Jake" Pickle, urging him to co-sponsor the Amateur Radio Spectrum Protection Act of 1991 (House Resolution 73). The reply from



Pickle was non-committal, although it did acknowledge that ham radio operators provide "valuable public safety and emergency assistance." The Representative's letter concludes: "Rest assured, I will follow the [Energy and Commerce Subcommittee on Telecommunications and Finance] subcommittee's action closely and if H.R. 73 does come to the full House for consideration, I will help as much as I can." The letter never indicates whom he intends to help, and it does not indicate a willingness to become a co-sponsor.

It looks like a lot more Austin hams are going to have to write to "Jake" to cause him to have a change of heart. We also need to persuade Senators Phil Gramm and Lloyd Bentsen to support and co-sponsor matching Senate Bill 1372. We certainly cannot expect any help from the broadcast and commercial-communications industry.

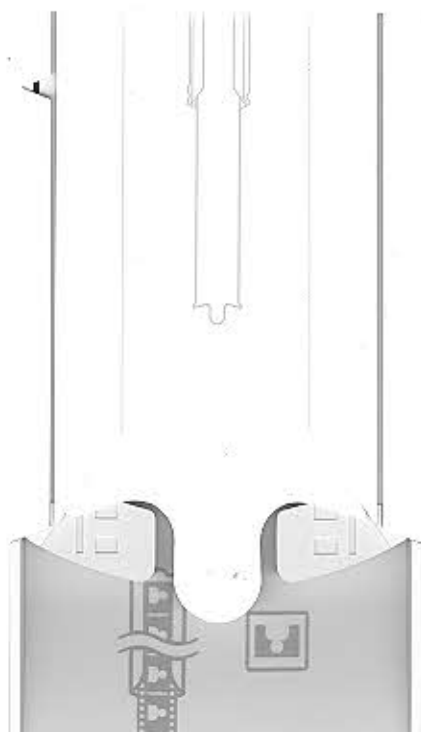
de Miles Abernathy, N5KOB

Addresses:

Senator Phil Gramm, U. S. Senate, Washington, DC 20510

Senator Lloyd Bentsen, U. S. Senate, Washington, DC 20510

Congressman J. J. "Jake" Pickle, 242 Cannon Building, Washington, DC 20515



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Public Indifferent to H.R.

I know of a large electronics manufacturer that had a national research company do a large statistical sample survey of the general public in 1990. They wanted to know what people knew of ham radio and what it would take to get them into it and what it would take for



them to buy radios. This was based on the [then] possible new no-code license, to see if a critical mass for manufacturing and marketing could be reached. The company and the results were confidential, but I did find that the survey even went as far as saying, "If you were issued a license with no test, would you accept and use it."

What if you could be issued a license with no test at all?

They came away deciding to do nothing with ham gear. If the worst case was used (give away the license) the ham population would be 10 times it's 1990 level, and critical mass for mass marketing has to be a potential market of 10% of the population.

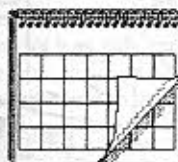
So if we are going to have a political voice to survive, each one of us has to do our part to be heard. The rigs will be a side line with the large manufacturers or the result of dedicated small manufacturers (struggling to stay in business). I'm more optimistic, I think we can grow if we do a good job working with high schools and getting kids back to an interest in science and technology.

de Larry Herring, W5VAL

Watch for a possible announcement that the 5-area incoming QSL bureau will move from Oklahoma to Midland, Texas.

- Sept. 7 No-Code Ham class, 8:30 AM, session #1
- Sept. 7 Amateur Radio Public Awareness Day
- Sept. 7 Ham exams at Murchison School
- Sept. 10 Austin Amateur Radio Club Meeting
- Sept. 14 No-Code Ham class, 8:30 AM, session #2
- Sept. 14-16 VHF QSO Party
- Sept. 17 Austin Amateur TV Club meeting
- Sept. 21 No-Code Ham class, 8:30 AM, session #3
- Sept. 21 QCWA Meeting
- Sept. 21-22 10 GHz Cumulative Contest
- Sept. 27-29 ARRL Ham Radio / Computer Networking Conference, San Jose
- Sept. 27-29 Harley-Davidson 88th Yr. S.E.S.
- Sept. 28 No-Code Ham class, 8:30 AM, session #4
- Oct. 1 Austin Repeater Organization Meeting
- Oct. 5 Ham exams @ Murchison Middle School
- Oct. 8 Austin Amateur Radio Club Meeting
- Oct. 12 Manchaca Swapfest
- Oct. 12? ARO Transmitter Hunt
- Oct. 15 Austin Amateur TV Club meeting
- Oct. 19-20 Jamboree on the Air
- Oct. 19-20 Simulated Emergency Test
- Oct. 26-27 Texoma Hamarama
- Oct. 26-27 CQ Worldwide DX Contest, phone
- Nov. 2-4 Sweepstakes, cw
- Nov. 5 Austin Repeater Organization Meeting
- Nov. 12 Austin Amateur Radio Club Meeting
- Nov. 16-18 Sweepstakes, phone
- Nov. 19 Austin Amateur TV Club meeting
- Dec. 6-8 160 meter contest
- Dec. 14-15 10 meter contest
- Jan. 25 San Antonio Hamfest

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



Weekly Events

- SwapNet & Newsline...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

