Editor: Dan McCabe WA8YYE

THE LOCAL OSCILLATOR

Vol. 3 No. 11 November 1998

THE PUBLICATION OF THE PANHANDLE AMATEUR RADIO CLUB

Next PARC Meeting: Tuesday, November 3, 1998 at 7:30 pm
Southwest Branch of the Amarillo Public Library
4423 SW 45th Street (just west of Teckla).

VE testing is held at 11:00 a.m. the first Saturday of each month at the Southwest Branch of the Amarillo Public Library.
For more information contact:
George Riley N5WTW / griley@arn.net.

How About "Ham" Instead of Turkey This Year?

Happy Thanksgiving from the Panhandle Amateur Radio Club

WEST TEXAS AMATEUR RADIO CLUB

FIFTEENTH ANNUAL

ODESSA HAMFEST

November 7th & 8th, 1998

ECTOR COUNTY COLISEUM AND FAIR GROUNDS
EXHIBIT BUILDING D
42nd Street & US Hwy 385 (Andrews Hwy)
ODESSA, TEXAS

DISTRIBUTORS • DEALERS • GRAND PRIZES • DOOR PRIZES • HIDDEN TRANSMITTER HUNTS

VE EXAMS ON SATURDAY (1:00 PM)

On-Line Registration:
http://nonprofit.apex2000.net/hamfest/

Look up and listen!

On November 17 and/or 18th, before dawn (wee hours of the morning) the Leonid meteor shower is expected to hit big time. And thus opportunity to do some long distance "DX" communications on VHF and UHF frequencies. These radio waves can bounce off of the ionized meteor trails in the sky.

Could be thousands of meteors per hour at the peak. With this many meteors, one might be able to carry on long QSO's (radio conversations). One could monitor FM broadcast band stations or NOAA weather freqs of distant cities to listen for "openings".

Thanks to wa2ise@netcom.com (Robert Casey) by way of Ronnie Kerr N5ZLU

NET SCHEDULE

PANHANDLE TRAFFIC AND EMERGENCY NET
3933 Khz LSB 00:00 UTC Daily

PANHANDLE AMATEUR INFORMATION NET (P.A.I.N.)
146.660 8:00 PM Sunday

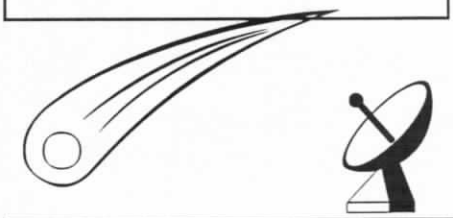
AMSAT
3840 Khz 9:00 PM Tuesday

PAMPA TOP OF TEXAS NET
146.90 8:00 PM Wednesday

FRITCH SIDEWINDERS NET
147.060 8:00 PM Tuesday

GOLDEN SPREAD UHF NET
440.525 + 88.5 (crossband 146.520)
8:00 PM Thursday
Backup for the P.A.I.N. Net

NEWSLINE
146.520 Sunday Evening
Following the P.A.I.N. Net



Will the Lion roar?

In mid-November the Earth will plunge into a cloud of cosmic debris that could cause serious disruption to orbiting satellites and produce a spectacular meteor storm for observers on the ground. NASA has grounded all Shuttle flights for the duration.

If you have nothing better to do on the evening of November 17th, then prepare a flask of hot coffee, wrap up warm, and head off into the countryside for what could be the show of the century. The Earth is expected to plunge into the Leonid meteoroid stream, something it does every 33 years or so, and the result could be a sky full of shooting stars. Or you may see nothing at all. In meteor astronomy, nothing is certain.

A thousand years of meteor storms

The Leonids get their name from the constellation of Leo the Lion and have been known for nearly 1100 years. The Chinese first recorded the shower in AD 902 and reported that Stars fell like rain. The Court Astrologers of the Celestial Empire placed great emphasis on such events, of course, but in the west little attention was paid to the night sky.

The first record of the Leonids in western civilization would appear to be stories of a great meteor storm at Cumana (Venezuela) in 1766. Thirty-three years later the German explorer Baron Alexander von Humboldt was in Cumana and witnessed the return of the shower. He was largely responsible for making the shower more widely known in Europe.

At that time meteor showers were very much a mystery. Scientists and laymen alike knew that, at certain times of the year, the sky would be filled with shooting stars, but they did not understand what meteors were or where they came from. Modern science was still in its infancy. In 1833, however, everything changed.

On the morning of November 23rd the predawn skies of North America were ablaze with brilliant, swift shooting stars. To some, the Day of Judgement was at hand. To others, particularly .American scientist Denison Olmsted, the storm was a revelation. He noted that the shower was of short duration it had not been seen in Europe and that the meteors all appeared to radiate from a point in the constellation of Leo. These two vital clues led Olmsted to propose that the meteors were due to a cloud of particles orbiting the Sun. The "radiant" was simply an optical illusion. The meteors were passing through the atmosphere on parallel trajectories but appeared to converge to a point in the sky in much the same way as parallel railway lines appear to converge to a point on the horizon.

During the following decades astronomers were able to determine the orbit of the meteoroid stream and show a relationship with the comet TempelTuttle. They also discovered that the Earth would encounter a dense cloud of meteoroids every 33 years or so.

The last time the Earth and the Leonid cloud met was in 1966. Again, it was the Americas that saw the best of the display. Observers estimated that meteors fell like snow at a rate of about 140,000 an hour far higher than the usual 10 meteors an hour the shower produces in normal years.

This year's display

Although the stream has a period of about 33 years, there is some degree of error in the calculations. Most astronomers are expecting a strong shower this year. Rates have been picking up during the past few years with the main storm occurring next year. But there are no certainties in this game.

If a storm does occur this year, as some believe, then it may be around midnight on November 17/18th. At that time Leo will just be rising in the east but the best place to look for

Continued on page 3

Will the Lion roar? *Continued from page 2*

meteors will be in the northeast or southeast. Meteors close to the radiant appear short and are difficult to see. Further from the radiant they will lengthen and appear brighter.

Should you decide to burn the midnight oil and watch the shower, then head off into the countryside, well away from city lights, and make sure you are warmly wrapped up: it can be bitterly cold in mid-November! Use a light covered with red cellophane (white light bleaches the eyes, so you'll miss many of the fainter meteors) and make sure you have a lawn chair to relax in or you'll end up with a stiff neck!

The hazards of the storm

Leonid meteoroids enter the atmosphere at about 72 kilometers per second and have a consistency not unlike instant coffee granules. Although it may seem that the sky is falling in, and that the meteors are just above your head, they actually "burn up" at altitudes of about 90 kilometers, so there's no need to wear a crash helmet! Yet whilst the Leonids pose no threat to ground based observers, the story is different in space.

When a meteoroid hits a spacecraft at such high velocities it can cause considerable damage. Despite their fragility, even small meteoroids have the potential of disabling an Earth orbiting satellite. "The problem," explains Dr. Bill Ailor, Director of the Center for Orbital and Reentry Debris Studies established last year by the Aerospace Corporation, "will not be from a rock blasting a hole in a satellite, but rather from the creation of a plasma, or free electric charge on the spacecraft. The charge could cause damage to computers and other sensitive electronic circuits on board the spacecraft, and ultimately cause the spacecraft to fail." Ailor points out that the Olympus communications satellite went off air in 1993 during the August Perseid shower.

Despite the potential hazards, Ailor doesn't believe there is a great threat to the thousands of satellites currently in Earth orbit. Most satellites have some form of protection against meteoroid strikes, while others can be oriented so that sensitive components are shielded from the oncoming stream of particles. Even so, NASA is not taking any risks. They have grounded all Shuttle missions for the duration of the shower both this year and next.

Meteor storms are rare events, and the Leonid storm is the only one we can predict with any degree of certainty. If you miss the storm this time around you will have to wait until 2032 before you get a second chance.

New Amateur Satellite Package Launched

from ARRL Headquarters

SEDSAT1, Amateur Radio's newest satellite, launched successfully October 24 from Cape Canaveral. However, after fewer than two dozen orbits around Earth, reports indicated problems with the spacecraft's batteries and solar panels. SEDSAT1 was fabricated by students at the University of Alabama Huntsville. It was boosted into space by the same Delta II rocket that carried the Deep Space One probe. The package contains a Mode L digital store and forward transponder and a Mode A analog transponder.

Chris Lewicki, KC7NYV, of the University of Arizona Student Satellite Project, reported earlier today that telemetry from SEDSAT1 indicated the spacecraft's power had dropped to zero at one point and the satellite reset itself. Intermittent telemetry suggests the batteries are not storing their specified 8 Ah. Lewicki said the satellite went quiet halfway through a pass over Tucson on orbit 27, indicating it had gone into its "power cycle" mode. Lewicki said in this state, the satellite notices that it is in extremely low power conditions and waits 10 hours until attempting to transmit again.

The solar panels appear to be producing as much power as expected, but Lewicki said they are "slow to react when exiting an eclipse period," so charging does not start until at least 10 minutes into a daylight cycle. As a result of the power cycling, images of the satellite's deployment from the booster were lost.

Lewicki is seeking monitors to listen and decode telemetry for periods when the spacecraft is nearing the end of its day cycle and entering eclipse. The downlink is 437.91 MHz, 9600 baud FSK (with adjustment for Doppler shift). A telemetry program is available at the SEDSAT Web site, http://www.seds.org/sedsat/tracking. "To use it, you must put your TNC in KISS mode and must set the appropriate COM port parameters," Lewicki said. Current twoline Keplerian elements also are available at the SEDSAT Web site. Email telemetry reports including the orbit number, your latitude/longitude, UTC, and brief description of hardware used to telemetry@seds.org.

Lewicki said nothing was heard from the spacecraft in Phoenix at 1200 UTC October 26, nor was it heard in London on a later orbital pass.

SEDSAT coordinator Mark Maier, KF4YGR, at the University of Alabama Huntsville said the satellite's initial telemetry was nominal except that power numbers were below prediction on earlier orbits. He said the satellite's orbit "processes out of North America for fairly long periods"a half a day or more at a time.

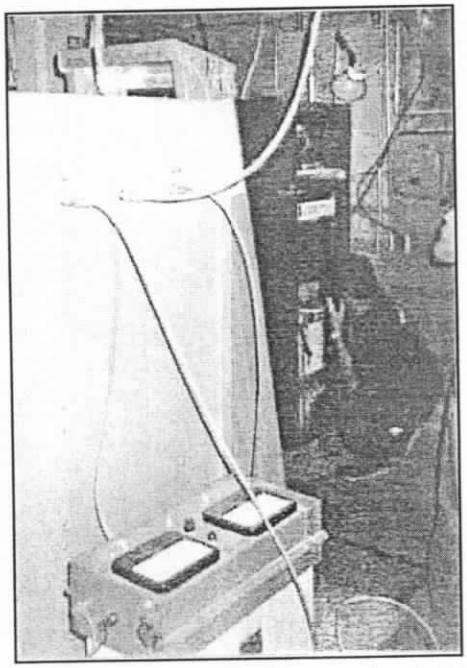
For more information, visit the SEDSAT Web site at www.seds.org/sedsat/.

146.94 Club Repeater Update

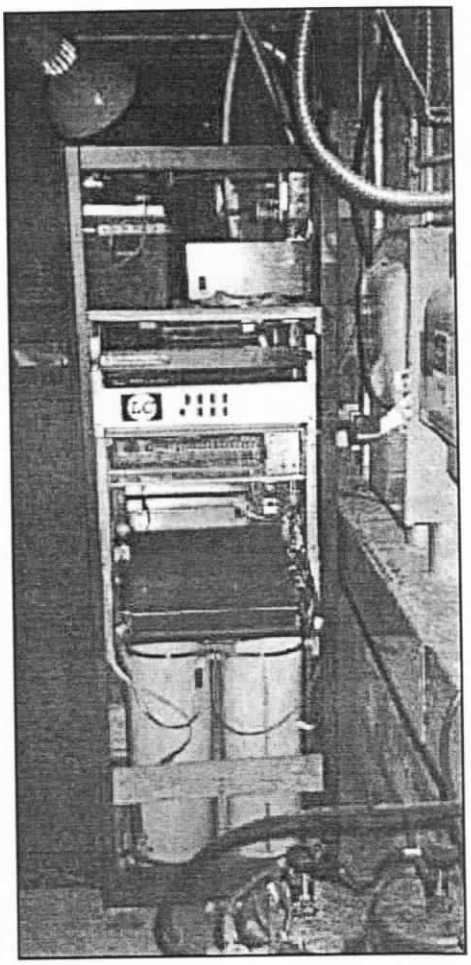
The 146.94 Club Repeater was put back into service on Sunday, October 25. Assisting with the project were Charlie (KB5VLV), Robert (KC5DKQ), Don (KC5EZO), Brad (N5LUL), Dan (WA8YYE), Howard (KD5CEM), Eddie (KD5BUG), and Jon (Howard's brother).

The repeater appears to working fine, although it is currently transmitting on low power (10 watts). Power will be increased after a two week test period if all goes well.

Special thanks to Charlie and Robert for their efforts. It's great to have the repeater on the air again!



Robert in background doing on-the-air test of the 94 machine. Six meter repeater in foreground with backup power supply.



The 146.94 repeater with doors removed. Backup battery and power supply are visible on the top shelf. LC Controller, modem, and radio gear are in the center. Duplexers can be seen at the bottom of cabinet.

Robert (left) inspecting machine, Eddie (right) installing backup battery.

FAMOUS HAMS

KB2GSD - Walter Cronkite
WA4CZD - Chet Atkins
WB4KCG - Ronnie Milsap
WB6ACU - Joe Walsh
KD6OY - Garry Shandling
FO5GJ - Marlon Brando
EA0JC - Juan Carlos
W6EZV - Gen. Curtis LeMay SK
KD4WUJ - Patty Loveless
K7UGA - Barry Goldwater SK
JY1 - King Hussein
JY2 - Queen Noor

HAMS ON THE NET

E-Mail Addresses

Looking for information? Need help? Or just want to e-mail a recent contact?

The following is a growing list of local hams. If you'd like your email address here, drop us a line at danmc@arn.net

WA5CBS, KC5PEG: gtwest@arn.net
KA4MKD: bmwbikecrz@aol.com
KC5JIF: dr.biggs@usa.net
KC5OMK: denney@arn.net
N5ZLU: rkerr@arn.net
N4BZ: wally@n4bz.org
W5UGO: msproul@arn.net
W5FBQ: bobhill@arn.net or bohill@fia.net
KC5KCA: dennisg@fia.net
N5TOY: jcyjr@arn.net
N5AE: jbreimund@juno.com
KK5IH: lams@arn.net
W5CKR: w5ckr@juno.com
K5IS: k5is@arn.net
N5IS: bdoerrie@tenet.edu
W5RXC: w5rxc@iloc.net
KC5UUZ: kylevan@arn.net
WA8YYE: danmc@arn.net
KD5CEM: kd5cem@arn.net
KC5PIM: kc5pim@juno.com
WA5LFH: rigsby@arn.net
KD5BUG: mokester@arn.net
KC5VGW: kcwvgw@amaonline.com
KD5EUR: advisor@arn.net
KD5DYP: kd5dyp@qs1.net
N5LUL: n5lul@juno.com
WB2UZT: wb2uzt@juno.com
WB5T: cnroyall@wcc.net

★★★★★

WANTED

Owner's Manual for Yaesu FT-227R. Please contact Victor N5YOX at 806-352-5455.

★★★★★

Brain Dead Radios?

From an article by Gordon West WB6NOA

In the real world of television, when you buy a TV with Channels 2 through 83, each channel has been factory preprogrammed for the precise video frequency, as well as the precise audio frequency. It is preset.

When you buy a CB radio for the kid's offroad vehicle, all 40 channels are factory preprogrammed, right?

And that new KenYaeCom HF transceiver already has the upper and lower hambands limits preprogrammed in it, doesn't it?

Then why do all VHF/UHF FM handheld transceivers and mobile equipment ship from the factory absolutely unchannelized? Why not preload the most common ham repeaters, and the most common ham simplex frequencies, and the most common public safety and weather frequencies into it so that hams can begin enjoying some interesting channels straight out of the box? What's the harm?

"Every ham needs to learn how to program frequencies into his/her handheld or mobile radio." I agree. But why not give them a head start with some pre-loaded channels?

"That's not OUR job. It might be better done at the dealer level," comments one well-known ham radio equipment manufacturer. Okay, I agree with this too.

Down at the dealer level, I recently supplied 20 dealers with the top 30 VHF and top 30 UHF frequencies most common throughout the United States. This list is comprised of surveys conducted by the American Radio Relay League to find out what repeater channels are most often used across the nation. I also included the national weather channels, common police and fire VHF and UHF receive channels, a couple of marine channels, a business band itinerant channel, and eight paramedic channels assigned throughout the United States.

As a test of my top 30 VHF and top 30 UHF frequencies, I recently finished a tour of the country where I tried out my handheld on just these 30 plus 30 frequencies, and without exception, heard plenty of activity and made many repeater and simplex contacts. All this without having to do any initial programming.

Will dealers disagree with what frequencies have been programmed into this equipment? I doubt it. The ham dealers won't even clone new radio equipment at their store for popular local channels unless you absolutely twist their arms. I mean, if I were selling at the dealer level, I would have one each of every radio loaded with local frequencies, just ready for a quick clone, in order to keep the customer coming back to ME at the store.

But most dealers won't clone. Most won't even charge up a brand new handheld battery so that the radio begins playing on turnon. Most won't preprogram some local frequencies so that the new ham goes out with a radio that is tuned into the local repeater.

What's the harm? Will a preloaded radio make the new ham more lazy to learn programming? I don't think so. There will be many local repeaters that have not been preprogrammed into the equipment, and they will need to do this for themselves or have the dealer show them how to get the equipment on the new frequency.

And think of the enjoyment you are going to get out of the handheld that tunes into police, fire, paramedics and other interesting calls straight out of the box. I mean, how many hams could tell you the eight medic channels straight from memory? No way! And what about all of the weather channel frequencies... got those memorized? And for the new ham, the national simplex frequencies are a great way to get started before venturing over to repeaters.

GORDO'S TOP 30

HAM FREQUENCIES FULL TX AND RX

VHF			UHF		
146.520	S	SMPLX	446.000	S	SMPLX
146.940	-	RPTR	444.000	+	RPTR
146.760	-	RPTR	444.950	+	RPTR
146.880	-	RPTR	444.500	+	RPTR
146.640	-	RPTR	444.900	+	RPTR
146.820	-	RPTR	444.800	+	RPTR
146.700	-	RPTR	444.200	+	RPTR
147.300	+	RPTR	444.850	+	RPTR
147.000	+	RPTR	444.100	+	RPTR
147.360	+	RPTR	444.700	+	RPTR
147.060	+	RPTR	444.400	+	RPTR
147.180	+	RPTR	444.925	+	RPTR
147.240	+	RPTR	444.350	+	RPTR
146.790	-	RPTR	443.900	+	RPTR

RECEIVE ONLY

162.550	WX1	450.250	TV NEWS
162.400	WX2	450.450	TV NEWS
162.475	WX3	450.650	TV NEWS
162.450	WX4	460.025	POLICE
156.800	BOAT SOS	460.075	POLICE
155.160	RESCUE	460.100	POLICE
154.830	POLICE	460.275	POLICE
155.220	RESCUE	460.325	POLICE
154.650	POLICE	463.00	POLICE
154.190	FIRE	463.025	MEDICS
157.100	BOATS	463.050	MEDICS
160.560	RAILROAD	463.075	MEDICS
161.700	TV NEWS	463.100	MEDICS
161.760	TV NEWS	463.125	MEDICS
155.205	MEDICAL	463.150	MEDICS
151.625	BUSINESS	463.175	MEDICS

PANHANDLE AMATEUR RADIO CLUB
P.O. BOX 10221
AMARILLO, TX 79116

Hams Defined!

Amateur Radio (n.) Amateur (Ham) radio is a noncommercial radio communication service whose primary aims are public service, technical training and experimentation, and communication between private persons.

Amateur Radio Operators are commonly called "hams". Hams often communicate with each other recreationally but also provide communications for others at public events or in times of emergency or disaster.

While our hobby is technical and has played a key role in advancing communications methods in many ways, hams are also known for friendliness and an uncommon sense for selfless giving of service wherever needed regardless of the conditions!

Global diplomacy via local good will attitudes and actions are at the core of ham radio tradition. The assistance supplied to thousands of people in time of disaster and crisis by hams (for free) is legendary. Newcomers are encouraged to join in the tradition making hams important watchdogs and potential emergency communications suppliers.

You may listen to amateur radio operators with a receiver that tunes bands or frequencies allocated for ham use. But to transmit requires a license (in the US) issued by the FCC. There are designated volunteer examiners that can test you after you study and prepare for the class license you want.

Some frequencies allow crosstown communications with walkietalkie (commonly called "HT" ("handitalkie") and thru repeaters for crossstate. Other frequencies and somewhat larger radios allow global communications, depending on time of day, transmit power, antennas, mode, and operator skill. Many hams enjoy working as far away as possible and collection "QSL cards" from all over the world.

If you want a hobby that really expands your life experiences and connections, strap yourself in for a great ride. This is much wider and deeper than you can possibly imagine. Welcome Aboard!

A Reminder...

Articles, news and information for publication in the Oscillator can be sent to danmc@arn.net or to the Club P.O. Box at the address below.

PARC DUES STRUCTURE

A. Individual Members $25.00
B. Associate Members $9.00
Newsletter only
C. Family Membership $25.00
Individual member and family at one address.

Mail Dues to:
Panhandle Amateur Radio Club
P.O. Box 10221
Amarillo, TX 79116