



Tower Installation

Jim Harris, AB0UK

About midmorning on July 10, 2004 eleven amateur radio operators arrived at the QTH of Jim Harris, AB0UK. The idea was to install a tower and three antennas.....and might we say have a bit of fun.

This was a project that was nearly two years in the making. First was getting on the Tower Talk email reflector from contesting.com. This has been referred to as "Tower University." Next, was a careful analysis of what was wanted verses all the limitations of a 80 x90 foot city lot. Of course, the XYL played a major part in this. (Without her approval and encouragement the project would have been abandoned long ago.) After the tower was selected the physical planning and work began for installation. Hopefully, few stones were left unturned to get the job done in the best fashion possible. No "that's close enough" here on this tower project.



The hole for the base has begun. (Oh, my aching back!)



Ready for concrete!
(That frame would hold a charging elephant.....make that 7000 pounds of concrete.)



Everything is finally ready to go up on Saturday morning. (As Wilbur Wright said to Orville "this thing will never get off the ground!")

Included are the pictures to briefly illustrate getting the tower with antennas vertical.

The line below the last picture says it all. The most impressive feature is that the noise level is 2-3 "S" units below wire antennas and especially verticals. Signal

(Continued on page 5)

Issue 54
Volume 8
August 2004

Club Information	2
Club and Local News	3
Election Results	5
Satellite Operations	6
John Kraus, SK	7
PPRAA Simplex Net	7
Xword Puzzle	9
Public Service	10
Calendar	12

Please Note:

Please have all content for the Sept issue submitted by August 21.

Articles are needed to keep 0-Beat interesting so submit yours now.

Club and Local News

President's Message

August 2004

Congratulations to our new Treasurer, Kate WB9BAH, and our new Board member, Pat KC0MIR on their election to the club's executive! Both have demonstrated a lot of energy and a willingness to take on extra tasks, so I am looking forward to working their butts off!

After several outstanding club functions in the past two months (Swapfest, Field Day etc.), the next big event will be the club picnic, scheduled for the afternoon of Sunday 8 August. The location is a little unusual. Instead of the club trying to obtain permission to use a public facility for the picnic, Kate WB9BAH has graciously offered her own home and property! Kate lives in Falcon, just off Highway 24, and has several acres of land. It is an excellent place to hold a picnic, and I hope that you will all show up (and bring your families!). And before I hear any complaints from those of you who rarely (if ever!) get out of downtown Colorado Springs, I want to point out that Falcon really isn't in Kansas! I live in Falcon, and it takes me less time to get to work at Peterson AFB than it did when I lived in Briargate. There is a map elsewhere in this month's bulletin, but suffice to say that if you know where Woodman or Hwy 24 are, then you can easily find the picnic. If you need extra guidance, just listen for Kate chasing rabbits out of her garden!

Several of us operated in the CQ Magazine's World Wide VHF Contest a few weeks back. We went to DM77, a relatively rare grid south of Pueblo, and set up our tents, towers, antennas and a generator on a ridge east of Colorado City. Despite the terrible rain on Friday night, and the thunderstorm on Saturday afternoon, we had a good time (Seriously – I'll take Atlantic Canadian weather over what we get in Colorado! Never has the weather in Nova Scotia hampered my radio expeditions as it has here!).

For the first time in our contesting efforts we tried WSJT on meteor scatter during the contest. I have worked meteor scatter on the 6-meter band during meteor showers several times, but this new method was a treat. WSJT is software designed by Joe Taylor, WIJT, a Nobel Prize-winning Physicist and an avid Amateur Radio operator. It controls a trans-

ceiver through the same simple interface used for digital modes such as PSK31, and sends data in the form of four tones. It automatically transmits and receives in 30-second intervals, taking advantage of the probability that one of the millions of meteors that strikes the Earth's atmosphere every day will ionize enough of a path to reflect a radio signal. We had four pre-arranged schedules with other stations, and completed all four – the furthest at 1250 miles! Did I mention that this was on 2 meters? That's right! We worked a station 1250 miles away on 2 meters using the millions of specks of dust that enter the atmosphere every day!

So why am I telling you this? In 27 hours of contesting we worked just 28 stations on 2 meters. Four of those stations were many hundreds of miles away. Where was everyone else? I don't have the exact figures readily available, but I'll bet that there are several thousand hams in Colorado. Why is it that during a major VHF contest only a handful can turn on their radios and operate simplex? Those of you who have only ever operated using 2 meter repeaters, I invite you to try simplex. It's more of a challenge! Those who have already managed to tear themselves away from repeaters might be interested in trying SSB and CW on the VHF bands. You'll be surprised at how far you can work using "line of sight" frequencies!

That's all for this month. Take care and be Radio-Active!

73

AI, VOINO / W0

Jess Miley

719 W 7th, Florence, CO, 81226

KØTAA

719-784-3040

Amateur & Hobby Radio Products. We Trade
30 day money back guarantee on used equipment.
Excellent Tech @35 per hour,
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Please call before you drive

PPRAA Club Meeting Minutes

7/14/04

The July meeting of PPRAA was called to order at 7:00 pm by President Al Penney VOINO followed by introductions around the room. There were no silent keys noted. The June meeting minutes were approved. John KØAAI gave his final Treasurer's report: For period of 6/9/04 - 7/14/04 income (mostly from Swap Fest) was \$4826.67, expenses was \$1396. For period of 1/1/04 - 7/14/04 income was \$6176.64 and expenses was \$3366.33 reflecting a positive balance of \$2810.31. The President thanked John for his past service followed by a round of applause. Money collected for door prizes are controlled by the Vice President and is not included in the Treasurer's Report. John KCØJFH suggested that the door prize funds be accounted for and reported regularly. Al said the Board would review this situation. Les KCØNC noted that 5 more members joined PPRAA last month with the total membership around 145. Kate WB9BAH gave a final report on the Swap Fest: total income was \$4908.20; expenses were \$2949.81 with a net profit of \$1958.39. Although Swap Fest registrations were higher than last year, raffle sales were down. The club thanked Kate and her Committee for another great Swap Fest! Kate also announced that she would host the PPRAA Picnic at her house on August 8th. It will be potluck style with the club supplying hot-dogs, hamburgers, and sodas. Tom NØNTX announced that ham satellite AO-51 was up and running. Mike WV7T noted that he is getting some Technician students and is conducting a yard sale to support material for the education program. Al gave a Field Day Report: 2712 QSOs, great media coverage, good openings on VHF, the GOTA station did great and great photos and expressed a well done to everyone that participated! Mike WV7T volunteered to answer the FD QSL cards we have received. Al noted that we have a thief among us and we all need to be alert to anyone who may be dishonoring us. (Joanie KCØGMI's HT was stolen from the Food Tent during Field Day.) Al then thanked Jim ABØUK and Pat KCØMIR for activating the Thursday night simplex net. Moe WBØRTF announced that the Colorado YL's will be meeting on Aug 14th at the Home Town Buffet at noon. Al then opened up the meeting to election for Treasurer. Kate WB9BAH was nominated and seconded. Nominations were closed and the Secretary declared Kate elected by acclamation. Kate then resigned her Board Member at Large position and Al opened nominations for Board Member. Pat KCØMIR and Mike WV7T were duly nominated. After a short statement by Mike and Pat, election was by secret ballot. The ballots were counted during break by ADØA and KCØGMI and after the break Pat KCØMIR was declared elected as the new

Board Member. Congratulations Pat! Mike WV7T gave a short Tech Talk on great ham radio websites. The guest speaker was Ann Wright from the Pikes Peak Chapter of the American Red Cross talking about Home Preparedness. Meeting adjourned at 9:15 pm. Respectfully submitted by Joanie VerDuft KCØGMI

Board Meeting Minutes

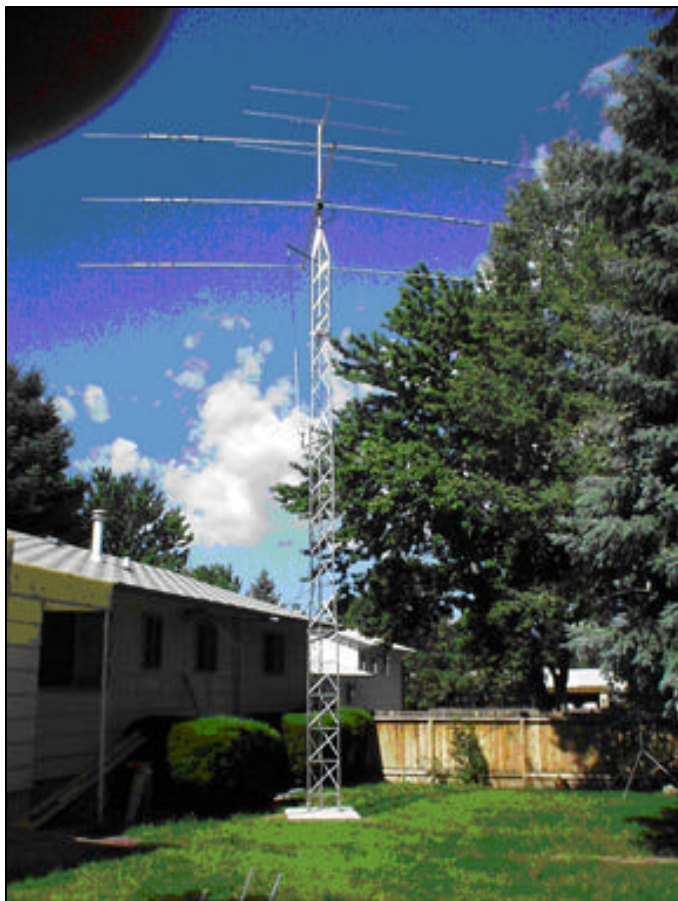
7/19/04

The PPRAA Board of Directors met at the home of Jerry and Joanie VerDuft on 7/19/04. Those attending were President – Al Penney VOINO, VP – Dennis Major NØABC, Secretary – Joanie VerDuft ADØA, Treasurer – Kate Muniz WB9BAH, Jerry VerDuft ADØA, Tom McDaniel NØNTX, Pat Kelly KCØMIR. Absent were Ben Cruise NØLNW and Tom Dawson KCØNRZ. Non-board members attending were Les Borst KCØNC, Jody Borst KAØROZ, and Mike Anderson WV7T. Meeting was called to order at 7:03 pm by President VOINO. Al welcomed our new Treasurer Kate and Board member Pat. It was noted that the June Board Meeting minutes should be revised to state that the Swap Fest table and raffle drum check went directly to Brady's Rental and not to Kate for reimbursement. The June Board meeting minutes were approved with this change. Kate is reviewing the treasury records and suggested that the club acquire a laptop computer for permanent retention of the treasury records and files. The Board thought this was a good recommendation and that it should be at least a Pentium III with CDRW drive. Kate will write a notice for Ø-Beat regarding a potential donation of a laptop computer for this purpose. Jerry ADØA noted that we collected \$151.22 in donations for the Field Day food and this money was passed on to Kate. Jerry also noted a good two-page informational handout on Broadband Over Power line (BPL) is available for downloading on the ARRL webpage. Dennis NØABC noted that the guest speaker for August will be speaking on solar power; September will be NISZ speaking on VHF contesting. Kate reminded the Board that we will need a new Swap Fest Chair for next year. Les KCØNC advised that he had been supplying John KØAAI with Ø-Beat labels (in lieu of Tom KCØNRZ) and John was mailing them. The Board advised Les that this was a Ø-Beat Editor responsibility and the labels should go to him. Mike WV7T reported that he is in need of current technical reference material for his technical training activities and QSL cards for AFØS. Al requested that

(Continued on page 7)

(Continued from page 1)

levels are the same amount above that of these same antennas. DX is heard that simply was not there before. I walk outside and look up at the tower and an-



Finished Product! My friends this adds a whole new dimension to amateur radio.

tennas and it is hard to believe they are really there and are functioning so well. Was the effort and expense worth it? You haven't seen the grin on my face lately.

My thanks to all the guys that helped with technical matters, encouragement and plain ole fashioned muscle work. There are far too many to name here. Without them this would not have happened and I would have been still in the dark ages of amateur radio. By no means am I an expert in tower and antenna matters. But, if you have questions about my installation please email me at ab0uk@yahoo.com.

73,

Jim, AB0UK

Elections Results

There was only one nomination for the position of Treasurer, made vacant by the resignation of John Hasling, K0AAI due to health reasons. Kate WB9BAH was declared elected by acclamation.

Because Kate was already a Board member, her election to the position of Treasurer meant that she had to resign that Board position. Another election was therefore necessary. Pat KC0MIR and Mike WV7T were both nominated, and in a close vote Pat was declared the winner (after a recount in Florida!). Pat will now finish the original term of Kate.

Congratulations to Kate and Pat, and thanks to Mike for providing a nail-biter of an election! Thanks as well to John for an outstanding job as treasurer.

73

AI VOINO / W0

PPRAA Annual Picnic

You are invited to the PPRAA Annual Picnic, this Sunday, August 8th, to be held at my qth: WB9BAH, Kate. (Directions follow). Start time will be 1400, (that's 2:00 pm, I'm told!) If you are working the Race for the Cure Special Event, come afterwards and relax!

The club will provide Hamburgers, hot dogs, and soft drinks, along with paper products. Bring a dish to pass as follows:

Call signs A-K: Side Dish

Call Signs L-Z: Dessert

However, if your call sign starts with a D, and you make a wonderful dessert, no one will turn you away!

It will be a very informal picnic, with horse shoes, bocce ball, and rag chewing! Please bring lawn chairs or blankets for relaxing, as we are a bit limited in seating.

I have listed that Les and Al are bringing grills: Please bring them Saturday afternoon or Sunday am.

Tables: If anyone has any tables that are portable, that can be used, please let me know, (at wb9bah@elpasotel.com). Bringing them out early would be greatly appreciated.

We are going to be quite busy this weekend setting up, so if anyone can help by picking up tables, and bringing them out, it would be appreciated.

(Continued on page 6)

Satellite Update

ARRL, Space Bulletin 011
From ARRL Headquarters
To all radio amateurs

"Echo" Satellite to Open for FM Voice Trial Run

AMSAT-NA's new "Echo" satellite (AO-51) will be turned on for general use in FM repeat mode Friday, July 30, at about 0215z, for a trial period of about three weeks. During that time, command stations on Earth will monitor AO-51's power budget and adjust the UHF Transmitter B (TX B) power as needed for good battery management. They'll also be watching the AMSAT Bulletin Board e-mail reflector, amsat-bb@amsat.org, for reports of how Echo is working.

"We are most interested in hearing about how well Echo hears you and how well you hear it," said the Echo Command Team--Jim White, WD0E, and Mike Kingery, KE4AZN--in an AMSAT bulletin. The digital transponder and the store-and-forward BBS, are not yet open for general use.

Initially, the AO-51 downlink transmitter will be running at about 1 W. At that power level, AMSAT says, Earth stations will need a small directional antenna to hear it. If onboard power permits, ground controllers will slowly increase the transmitter's output during the trial period.

The Echo FM voice uplink frequency is 145.920 MHz, and the downlink is 435.300 MHz. The downlink transmitter will come on when it hears an uplink signal with a 67 Hz CTCSS (PL) tone for about 1 second, and it will stay on for 10 seconds after that signal goes away. "This operation is just like a terrestrial FM repeater with a 1 second 'kerchunk' filter and a 10 second hang time," AMSAT noted. Transmitter A (TX A), now sending telemetry, generally will continue to operate on 435.150 MHz.

AMSAT points out that Echo, which launched June 29, is still "wobbling a great deal," so the downlink polarization sense will vary.

The Echo Command Team says it expects Echo will be heavily used during the first few days of the trial period. "Many stations will be trying to make a contact through Echo," they said. "It is good amateur practice and common courtesy to let everyone have a chance. Echo will hear you as well as or better than any previous amateur FM repeater satellite."

There's more information on the AMSAT Web site at, <http://www.amsat.org>.

(Continued from page 5)

Volunteers: I do need someone to pickup the extra food and drinks left over from field day, from Jerry and Joannie's QTH. Please let me know asap who can do that.

Why am I asking for so much help? I am unable to lift, twist or bend, and am still nursing my body back to better health after several weeks of being sick! I can smile and have fun, but am quite unable to do normal tasks.....

I DO have my IC706 hooked up and running....anyone want to operate a PPRAA special event? Can we do that??

So it's time to party!!!

Everyone come! Bring carrots for your kids to feed the horses next door.

Directions

From Woodman: East on Woodman until it deadends on Hwy 24. Go Left (North? East?) on 24. Take the third right on Cottontail. (South?) Head 1.5 miles or so until 13360 Cottontail, on the Left side. My R-8 Vertical is up and visible.

From Constitution: East on Constitution until it deadends on Hwy 24. Go Left (North? East?) on 24. Proceed about 8 miles, through Falcon. When you get to the Woodman Light, take the third right after it, on Cottontail. (South?) (If you get to Judge Orr Rd, turn around...you missed it!) Head 1.5 miles or so until 13360 Cottontail, on the Left side. My R-8 Vertical is up and visible.

From Platte or downtown: Go East on Platte, which turns into Hwy 24. Proceed through Falcon, and through the Woodman light. Take the third right after it, on Cottontail. (South?) (If you get to Judge Orr Rd, turn around...you missed it!) Head 1.5 miles or so until 13360 Cottontail, on the Left side. My R-8 Vertical is up and visible.

Clear enough? Someone will have their radio tuned to 146.97 repeater for talk in.

Park along side the road, and driveway. I will have a designated area for handicapped parking, and we will have a handicapped porta-john there. We'll cut a path in the grass low, for handicapped access. (Not many ADA approved sidewalks out here!)

Looking forward to a relaxing afternoon! Thanks, in advance, for all who help!!!

Kate WB9BAH

683-7702 home
499-9161 cell
636-2444 work

John D. Kraus, W8JK, SK

Special Bulletin 6 ARLX006

From ARRL Headquarters

Radio astronomer, antenna designer, cosmic explorer and author John D. Kraus, W8JK, of Delaware, Ohio, died July 18. He was 94. While he enjoyed a worldwide reputation, Kraus is perhaps best known in Amateur Radio circles for his bi-directional wire beam antenna—often dubbed the '8JK array. Other important Kraus designs include the corner reflector and helix antennas. The Michigan native was a pioneer of radiotelescope design and the father of the "Big Ear" radiotelescope.

Following an early fascination with radio, Kraus first became licensed as 8AFJ. He later was granted the now-famous W8JK call sign. A graduate of Michigan State University, he joined the faculty of the Ohio State University 1946, serving as a professor of electrical engineering and astronomy and founding and directing the OSU Radio Observatory. In that capacity, Kraus designed and oversaw construction of the Big Ear on the campus of nearby Ohio Wesleyan University.

Kraus's classic textbook *Antennas*, now in its second edition, has been an engineering school staple for decades and can be found in virtually every antenna engineer's library. Among his other titles are *Electromagnetics*, *Radio Astronomy*, *Big Ear*, *Big Ear Two* and *Our Cosmic Universe*. Kraus also wrote several articles for *QST* from the 1930s until the 1980s, including a "recap and update" of his W8JK antenna in the June 1982 issue.

Kraus was a fellow of the IEEE and a member of the National Academy of Engineering. In 1996, Dayton Hamvention honored Kraus as the recipient of its Special Achievement Award. In 2001, *CQ* named Kraus to the inaugural class of its Amateur Radio Hall of Fame.

In 1978, after the "Big Ear" detected the still-unidentified "Wow!" signal that suggested the possibility of intelligent life elsewhere in the universe, Kraus launched *Cosmic Search*, a magazine devoted to the search for extraterrestrial intelligence. The Big Ear fell victim to development pressures and was torn down in 1998.

Arrangements are incomplete.

PPRAA Simplex Net

A friendly reminder of the PPRAA Simplex Net every Thursday at 7PM MDT on 146.58 MHZ. Please

take a few minutes and check-in. We have announcements, a short quiz or technical article and maybe other items depending on what you bring to the net.

Any licensed ham is welcome to check-in. You do NOT need to be a member of the PPRAA to participate. Spread the word to anyone not on the above reflectors.

The net is growing. So please stop by and enjoy the fun. So, mark your calendar and join in.

If you are interested in being a guest Net Control Station (NCS) please contact me at ab0uk@yahoo.com or Patrick Kelly at pwkellysr@juno.com.

Mike provide a list to the Board of his needs and the Board would act on it. The Club picnic was discussed to be held August 8th at 2pm at Kate's home. The Board authorized Kate to rent a porta-potty for the picnic and authorized \$50 for purchase of meat/sodas (in addition to what is left over from Field Day). It will be a family potluck activity and all club members and their families are invited. Al discussed the need for a club dues increase based upon our current expenses to produce Ø-Beat. Al asked Kate to bring a proposal to the next Board meeting as to what the increase should be based upon current and projected expense. Al asked Pat KCØMIR to review the Club By-Laws and provide the Board recommended changes to take before the membership. All Board members should also review the By-Laws and be prepared for Pat's recommendations. The issue of club meeting door prize money was discussed; the Board felt that the Vice President was keeping adequate records of this and that it need not be tracked by the Treasurer since it was basically a breakeven situation. Al noted that the OEM (our current meeting place) should be considered permanent and Ø-Beat should be changed accordingly. Meeting adjourned at 9:15 pm.

Respectfully submitted by Joanie KCØGMI, Secretary.

Amateur Radio Fun in the Colorado Mountains

Sunday, August 15, 2004

www.Colorado14erEvent.org

Amateur Radio operators from around Colorado will be climbing many of Colorado's 14,000-foot mountains to set up amateur radio stations in an effort to communicate with other radio amateurs across the state and around the world. Join in on the fun Sunday, August 15th and see how many of the mountaintop stations you can contact. The prime operating hours are from approximately 9 AM to noon local time (1500 to 1800 UTC), but activity may occur at other times during the day. Most mountaintop stations will be running low power handheld radios. Stations running high power need to keep in mind that they can interfere with stations they cannot hear.

New: Two awards to encourage mountaintop operating throughout the year are available. The **Summit Award** is given to radio amateurs that contact 10 or more peaks and the **Pinnacle Award** is for operating from 5 or more peaks. See the event web site for complete rules.

Radio operators with 14er climbing experience who plan to climb a 14er should register their name and intended peak at the web site, send an e-mail to info@Colorado14erEvent.org or contact Bob KØNR, (719) 488-0859. To subscribe to the event mailing list, visit the yahoo groups site at <http://groups.yahoo.com/group/ham14er/>. Also, be sure to check out the event information at <http://www.Colorado14erEvent.org>

Frequencies used during the event

Activity can occur on any amateur band including HF and VHF. The 2M FM band plan uses a "primary frequency and QSY up" approach. The primary 2M FM frequency is 147.42 MHz. At the beginning of the event, operators should try calling on 147.42 MHz. As activity increases on that frequency, operators should move up the frequency using the standard channel spacing used in Colorado (15 kHz). The next standard simplex frequency up from 147.42 MHz is 147.435 MHz, followed by 147.45, 147.465, 147.480, 147.495, 147.51, 147.525, 147.54, 147.555, 147.57 MHz. As activity increases, operators should spread out on the band. As activity decreases, operators should move back closer to the primary simplex frequency.

Warning: Climbing mountains is inherently a dangerous activity.
Do not attempt this without proper training, equipment and preparation.

Sponsored by The Colorado 14er Event Task Force

Frequency (MHz)	Comments
147.42	Primary 2M FM Frequency, then up in 15 kHz steps
223.5	Primary 222 MHz FM frequency
446.000	Primary 70 cm FM frequency
446.025	Alternate 70 cm FM frequency
52.525	Primary 6M FM frequency
1294.5	Primary 1.2 GHz FM frequency
144.200	2M SSB calling frequency
50.125	6M SSB calling frequency
14.060	20M CW Frequency
21.060	15M CW Frequency
28.060	10M CW Frequency
14.260	20M SSB Frequency
21.330	15M SSB Frequency
28.350	10M SSB Frequency
Other Bands/Modes	Standard calling frequencies and/or band plans apply.

The Amateur Radio Crossword Puzzler— Units, Units Everywhere!

By H. Ward Silver, N0AX— June 20, 2003

If the ministrations of the local meteorologist is keeping you under the weather, here's a good opportunity to meter your mastery of metrology instead. This quiz is full of units, their abbreviations, and combinations thereof. How do you measure up?

Across

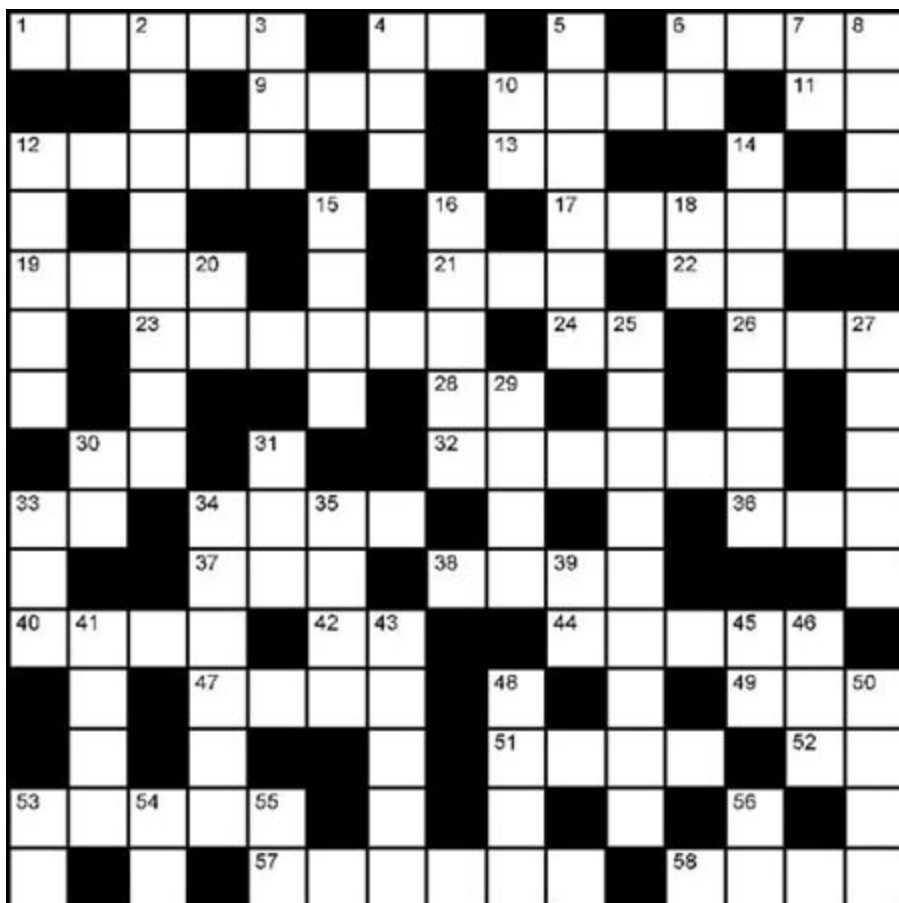
1. one-thousandth
4. transmitter (abbr.)
6. one-billionth
9. unit of reactive power
10. rush
11. 1 across times 12 across
12. unit of inductance
13. metal used in wires (chemical symbol)
17. units of light intensity
19. number of events per unit time
21. ambulance medical personnel
22. weight of one microliter of water
23. distance from bottom to top
24. prefix of Middle Eastern country
26. type of ac voltage measurement
28. prefix of neighbor to 25 across

Down

30. bipolar junction materials
32. ac variation on power supply output
33. thread direction
34. unit of power
36. measure of impedance match
37. make a mistake
38. draw power from
40. prefix meaning all or every
42. OD minus twice wall thickness
44. unit of capacitance
47. a billion
49. units of weight
51. a speed that rhymes with race
52. not you
53. units of electromotive force
57. divide in two
58. units of current

Down

2. make longer
3. don't let this grow on your tower
4. attempt
5. not working properly
6. 6 across times 12 across
7. billionth of a meter
8. units of resistance
10. unidirectional current
12. unit of frequency
14. 360 of these in a circle
15. a million
16. measures with a moving needle
18. one-tenth of 56 down
20. type of engineer
25. resistance to ac current
27. earliest mode of transmission
29. 1 across squared squared
30. measure of acidity
31. unit of pressure
33. greek letter that moves your boat
34. how heavy an object is
35. slang for math of angles
39. audio frequency
41. opposite of stereo
43. to quench oscillations
45. light, common metal (chemical symbol)
46. power ratio to one milliwatt
48. written description of performance standard
50. units of time
53. voice unit (abbr.)
54. between QRP and HP
55. Antimony (chemical symbol)
56. 2.5 of these make an inch



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Public Service Communications



ARES

<http://www.qsl.net/ppares/>

VHF Net Tuesdays at 1900 on the 146.97 MHz
PPFMA repeater

Dean Haskins KA0PII, PPARES EC

No update this month.

AMSAT-UK announces new amateur satellite project

Space Bulletin 012

From ARRL Headquarters

Newington, CT August 4, 2004

To all radio amateurs

AMSAT-UK Chairman Martin Sweeting, G3YJO, has announced that an Amateur Radio transponder will be part of the European Space Agency's (ESA) Student Space Exploration and Technology Initiative (SSETI) "Express" satellite. Onboard will be a 2.4 GHz transmitter and a 437 MHz receiver. The pair will be turned into an amateur FM voice transponder after the transmitter serves initial telemetry duty.

"These frequencies will enable the many amateurs who already have AMSAT OSCAR 40 equipment to use it in an exciting new way," Sweeting said. Sweeting told participants at the 2004 AMSAT-UK Colloquium July 30-August 1 that AMSAT-UK has arranged with the ESA to provide--at very short notice--an S band transmitter for the SSETI Express. The 2.4 GHz transmitter will become the downlink of the single-channel FM U/S transponder. Holger Eckart, DF2FQ, will provide the UHF receiver.

An AMSAT-UK team is developing the 2.4 GHz



RACES

<http://www.qsl.net/epcraces/>

VHF Net Tuesdays at 1930 on the 146.76 MHz
CMRG repeater

Les Borst KCØNC, RACES Officer

was hit by lightning. Their antenna was destroyed and the feed line damaged beyond repair.

Sense they will be rebuilding their antenna; it will be a good time for the ERCRACES to get an amateur antenna placed for our use. The county is currently hampered by money problems so our group is in the process of obtaining the necessary equipment to do the job.

The next RACES meeting will be on 19th of August at the county OEM at 7:00 PM.

downlink exciter, switching-mode power supply and control interfaces. A 3 W 2.4 GHz power amplifier--identical to the one flying in the recently launched AO-51 "Echo" spacecraft--already has been completed. The S band antennas consist of three flat-plate patches, engineered and produced by Wroclaw University of Technology in Poland.

The SSETI Express is believed to be the first-ever pan-European student satellite with more than 100 students and their teachers at several European universities working on the project. The 2.4 GHz downlink transmitter will send satellite telemetry and data at 38.4 kb/s before being switched over to voice transponder operation once onboard experiments have been completed.

Spacecraft integration is due to start this month at the ESTEC laboratories in the Netherlands. Plans call for launching the 80 kg spacecraft into a 680 km sun-synchronous orbit next April from Plestek, Russia.

Membership Committee Report

Membership committee report.

Please welcome these New Members

WILLIAM	FRENCH	W2SRQ
KARL	NIELSEN	KC0NPQ
DIANA	NIELSEN	KC0NPP
DOUGLAS	NIELSEN	N7LEM
LUKE	PERKINS	KB0YCM
DAVE	SLOAN	N0EOP

Total Number of Members **151**

Pikes Peak Region Ham Radio Events

Date	Event
Aug 08	PSE: Race for the Cure
Aug 18	MARC Club Meeting
Aug 21	PSE: Pikes Peak Ascent
Aug 22	PSE: Pikes Peak Marathon
Aug 22	Denver Radio Club Hamfest
Aug 27-29	MARC Campfest
Aug 29	PSE: Emily Griffith Center Road Ramble
Sep 4	MARC VE Session, 10am
Sep 06	American Discovery Trail Marathon

PSE—ARES Public Service Event

Luci Stansberry - PPARES Public Service Event Coordinator

Mike Stansberry - PPARES Asst. Public Service Event Coor-

Membership Application for the Pikes Peak Radio Amateur Association, Inc.

P.O. Box 16521, Colorado Springs, CO 80935-6521

Date: _____ ☐ New Member ☐ Renewal

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Call: _____ Class: N T + G A E Phone: _____

Mbr of ARRL? ☐ Yes ☐ No E-mail: _____

Additional Family Members to Join/Renew:

Name: _____ Call: _____ Class: _____ ARRL? _____

Name: _____ Call: _____ Class: _____ ARRL? _____

Name: _____ Call: _____ Class: _____ ARRL? _____

In which activities would you like to participate?

Field Day ☐

Demonstrations ☐

Nets or round tables ☐

Organize activities ☐

Teach ham classes ☐

Full Member \$15: ☐

Family Membership \$18: ☐

Over 65 \$10: ☐

Over 65 Family \$12: ☐

Associate \$12: ☐

Ø-Beat Only \$12: ☐

Donation to Club: \$ _____

Total Enclosed: _____

MAKE ALL CHECKS PAYABLE TO "PPRAA"

Please indicate how you'd like your Ø-Beat delivered:

(Defaults to standard hard copy in the event that NO check boxes are checked)

☐ Standard hardcopy via U.S. Mail

☐ As a PDF file attachment via e-mail, to help save a few bucks

☐ I'll save the club a few bucks and download it from the Web!

Circle your interests ☐ HF / ☐ V/UHF / ☐ FM / ☐ SSB / ☐ Digital / ☐ DX / ☐ Contests / ☐ Technical / ☐ Hardware / ☐ Other _____

New and renewing members must submit a completed application form along with your check to the Treasurer.

Please Type or Print Clearly!

ALL NEW MEMBERSHIPS AND RENEWALS WILL BE PRORATED TO EXPIRE IN DECEMBER!!

FOR SALE: KENWOOD TS-830S, H.F. Transceiver with KENWOOD MC-50 Microphone & Manual.

Great rig for that new General Class operator. \$450.00. KENWOOD TS-700S, 2 meter All Mode Transceiver (144- 148 MHz covg.) with KENWOOD VFO-700S, operating manuals & service manual for TS-700S. \$250.00.

COLLINS 30L-1, 1 Kilowatt Amplifier (4-811As in grounded grid) with spare set of tubes & operating manual.

\$500.00. All equipment in MINT CONDITION!

Dave at 473-4135 or w0mey@arrl.net

FCC Sets New Vanity Fee

The FCC has announced that the new Amateur Radio vanity call sign regulatory fee of \$20.80 for the 10-year license term will go into effect August 6. Applicants for amateur vanity call signs will continue to pay the \$16.30 fee per vanity call sign application received by FCC until the new fee goes into effect. The FCC says it expects to collect close to \$162,000 from 7800 Amateur Radio vanity call sign applicants during Fiscal Year 2004.



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First Class Mail

To: