The Monitor

July 2006

Upcoming Events

TSRC Meeting July 15, 2006, 9:00 am
EBA's, Hanover, NH

TSRC Meeting August 12, 2006, 9:00 am
EBA's, Hanover, NH

Message from the President

Congratulations go out to our 2006/2007 club officers. New to the group is Chuck Sherman, N3WTO, who will fill the office of treasurer. Nancy Maynard, N1QW, Ken Tentarelli, AC1H and myself are returning to our previous positions. Many thanks go out to David Haseman, KE1IW, who filled the position of treasurer for some time. The officers assumed their positions at Field Day as is our club tradition. Speaking of Field Day…

TSRC Field Day 2006 was held over the weekend of June 24th, 2006 and was highly successful. With over 25 people participating we had a very good turnout. FD saw our first use of the new club communications trailer. We had a screen tent directly abutting the trailer and the setup worked very well. We did learn that two operators inside the trailer will need some kind of sound isolation. Even with headphones it was hard to concentrate with operators only four or five feet apart. Ultimately we will have a permanent setup that will address this issue.

While everyone contributed generously of their time, energy and equipment, there are several people who should be mentioned here. First is Dan Martin, K1DAN, without whom we simply would not have been able to erect the antenna towers. Not only that but Dan proceeded to make more contacts than anyone else during the event. Thanks Dan!

Chris Leister, N1CCL, was also invaluable in his assistance over the course of the event. He performed a great deal of setup then came back at 5 am Sunday and banged out a large number of contacts.

Last but certainly not least is the father/son team of Dean and Parker Sorenson, WB9MHI and KB1MRB respectively. These fellows showed up Saturday and convinced us to switch to 3A. They set up there own operating position in a tent with a 706MkIIg, Buddipole and batteries. Dean worked mostly CW while Parker worked phone. Their station contributed over 1500 points! With over 1000 QSOs total I think we did quite well for our relatively modest efforts.

I think it is also important to note that all four club officers participated this year, as did David Landry, KA1CRP, our club repeater trustee. I will bring a copy of this newsletter to Bob Townsend whose generous offer of the use of his fields made the event possible.

Again, thanks to everyone involved. It was a great opportunity to get to know folks better and have fun with HAM radio!

Our next club meeting will be a week later than normal due to the Prouty Bike Ride on July 8th. The club meeting will be held July 15th at Everything But Anchovies (EBA) restaurant in Hanover, NH at 9 am.

73 de N8RPD
William Daugherty, TSRC President

Field Day from the other side of the country

This year I was fortunate to be able to see firsthand how some of our ham friends on the west coast participate in Field Day. Due to the distances between the half dozen or so formal Field Day events in the San Diego area, I was only able to visit two of them over the Field Day weekend. Both were unique in how they did things and both were as different from each other as they could be. The two Field Day sites I visited were operated by the Amateur Radio Club of El Cajon (WA6BGS) and by the San Diego Six Shooters Amateur Radio Club (KI6BJN). The former has been in existence for decades, the latter for about six years. Until this year, the Six Shooters had always joined the El Cajon Club during Field Day but they decided they had finally attained membership and interest levels sufficient to support their own Field Day effort. Both clubs appeared to be having successful Field Day events and both ran into the occasional problem.

Six meters is quite active in the Southern California area. The San Diego Six Shooters ARC is dedicated to promoting 6-meter amateur radio operations. The club runs at least three weekly nets on 6 meters and operates a number of 6-meter repeaters in the surrounding area. Their web site can be found at www.n6six.50megs.com.

As their first club Field Day effort, the Six Shooters ran a 3A operation. They used only battery and generator power. Their venue was an empty field high in the Crest area east of San Diego, a region that had been devastated by the infamous "Cedar" fires in 2003 in which 300 homes were lost. Perhaps partly because of that recent tragedy the club enjoyed tremendous support from the local community in organizing their Field Day effort. They told me that local officials had cut through the usual red tape involved in using public facilities and grounds for private events and had even picked up the tab for advertising the event in the local community. That resulted in a very busy first few hours as many locals turned out to visit the site, learn about amateur radio and even operate some of the rigs. The 40-meter station, in fact, was operated by children as young as seven years old for large blocks of time.

As a first effort, the Six Shooters missed a few things that TSRC has come to consider essential to safe Field Day operations. They had no designated safety officer on the grounds, even during site set-up. Hard hats were neither required nor provided and, in fact, had not been used even during tower erection. Generators were not grounded. Guy wire stakes were marginal and might have failed if high winds had been encountered. However, I was pleased to note that the club officers and event organizers were anxious to discuss these and other safety issues and to include them in their planning notes for next year's Field Day.

Overall, the Six Shooters put on a Field Day event that seemed to be fun for everyone, including the local community members who showed up, was very relaxed and that drew effectively on the expertise and experience of the membership.

The Amateur Radio Club of El Cajon mounted a much more ambitious, though still very relaxed, Field Day effort, running in the 7A category. They were also able to bring substantially more resources to the effort than the Six Shooters. Most notable of these was the location itself, which is an absolutely spectacular lodge and recreation area, located high in the Cleveland National Forest near Mount Laguna in southern California. Situated at an altitude of 6000 feet, the lodge is part of the Al Bahr Shrine Camp. The views from the lodge itself are breathtaking. I was told that when the bands were dead, the protocol was to put your feet up, lean back in your chair and enjoy the incredible scenery.

The lodge parking lot was populated by a number of fully equipped RVs, all sporting ham band antennas of one kind or another. Field Day participants had ready access to indoor kitchen facilities, running water and bathrooms. Mains power was also available and was used to power the radio equipment as well as the lights and coffee pots.

The operating stations were arranged in a single line along the front deck of the "grand lodge", beginning with the GOTA station and progressing through positions for different bands and modes. It seemed to work quite well and permitted easy communication between the various stations and operators. Logging computers were all networked using both hardwired and wireless connections.

A safety officer roamed the site and was easily identifiable by his blaze orange vest. Areas around towers and generators were clearly marked and roped off. Although antennas for all operating positions were located relatively close to each other this did not appear to cause any problems. Even though the club was running a 7A operation, all equipment and all personnel could be seen from each operating position.

As different as each of the Field day operations mentioned above were from each other, I also noticed a number of similarities. Most noticeable to me was the fact that both groups used the same military surplus "push-up" towers that TSRC and some of its members also use. Both clubs spoke very highly of them and were impressed with their ease of use, reliability, sturdiness and economy of cost. Curiously, the tower used by the Six Shooters ARC was gray instead of the olive drab of the TSRC and the El Cajon club towers. I asked about this and it was speculated that the gray tower had probably been issued to a Navy unit rather than an Army unit.

Another common denominator was the logging software that both clubs used. This was the "Field Day Contest Log software" designed by N3FIP. I watched this software in action and was even put to work using it to log contacts for the El Cajon club. I will say that I was very impressed with it! It seems to have a host of very useful features that I have not seen in other logging software I have used or seen others use. It is also easily networked and appears to be very stable. A couple problems did occur but none seemed to be problems with the software itself. The Six Shooters did not network their stations but had trouble with one computer on which the software would crash every time a duplicate entry was encountered. This seemed to happen only on that specific computer, though, and it was written off as either an O/S or a machine problem. I also had a problem with the El Cajon computer I was using to helping to log contacts. Every now and then it would simply lose contact with the network, requiring a restart of the program. This proved to be a very elusive problem but was finally diagnosed as a problem with the Ethernet cable connecting the laptop to the network. This cable had been run in close proximity to a power supply and it was suggested that the power supply might

be emitting enough RF to cause problems. We removed the suspect cable and connected the laptop to the network with an 802.11b wireless card and had no more failures. All in all, the N3FIP software seemed very robust and capable. I was told that the registration fee for the software is six dollars. It might be worth looking into. More information about it can be found at <www.n3fjp.com>.

As always seems to be the case, the local hams in both clubs were invariably friendly and made me feel quite welcome. Both clubs invited me to participate in any capacity I wished. Although I did not operate at either location, I did get the chance to meet many of the members, engage in some very interesting conversations and do a bit of contest logging. It was a day well spent and one that reminded me what attracted me to amateur radio in the first place.

73,
Charlie, N1AOK

Amateur Radio CubeSat launch postponed

The launch and deployment 13 Amateur Radio "CubeSats," originally set for June 28, has been postponed until July 26 (UTC), reportedly due to a technical issue during launch vehicle preparation. The backup date is July 27, one CubeSat group told ARRL. A Dnepr-1LV rocket is scheduled to carry the CubeSats into space from the Baikonur Cosmodrome in Kazakhstan. A fourteenth satellite in the package will not carry an Amateur Radio payload. The CubeSat project is a collaboration between California Polytechnic State University-San Luis Obispo and Stanford University's Space Systems Development Laboratory. All of the CubeSats were designed and built by students at various universities in the US and elsewhere in the world. Twelve of the satellites have downlinks in the Amateur Radio satellite allocation between 435 and 438 MHz, and one will operate on 145.980 MHz. None of the spacecraft will carry a transponder. Transmitter power outputs range from 10 mW to 2 W

University of Illinois Provides Details of ION Cubesat

Purvesh Thakker, the Program Manager of the Illinois Observing Nanosatellite (ION), provided additional details of this cubesat which will be launched on June 28, 2006 (rescheduled for July 26, 2006).

The University of Illinois is looking for amateur radio operators who can listen for ION's beacon, which will begin transmission on 437.505 Mhz immediately after launch. The beacon is sent in plain text over AX.25 every 5 minutes. A TNC in monitoring in connectionless mode should be able to copy the beacon. Send beacon reports to cubesat@ece.uiuc.edu with your name/location, any data that you receive, time of contact, and signal strength.

The ION cubesat's scientific mission includes:

+ An experiment to measure oxygen airglow emissions from the Earth's Mesosphere to helps scientists understand how energy transfers across large regions of the atmosphere.

+ A new MicroVacuum Arc Thruster (μVAT) with high dynamic range. This will provide the satellite with a versatile low mass satellite propulsion system capable of lateral movement and finely controlling attitude.

+ Testing of a new utilizing a Commercial Off the Shelf (COTS) processor that is radiation hardened through system design techniques.

+ Testing of a small CMOS camera for Earth imaging.

+ Testing of ground based attitude stabilization.

Interested amateurs are invited to subscribe to a low volume ION e-mail list by sending a message to: cubesat-l-subscribe-request@listserv.uiuc.edu The ION website can be found at: http://cubesat.ece.uiuc.edu

[ANS thanks Purvesh Thakker for the above information]

SSETI Moon Orbiter - Call for Proposals

The SSETI Association - Student Space Exploration & Technology Initiative, together with ESA - the European Space Agency, have just published a Call for Proposals for a Moon orbiter mission planned for launch around 2011.

The call is open to any University student or team from one of the ESA member states or one of the ESA cooperating states. The SSETO ESEO project, which is currently underway, already has at least three radio amateur students involved in addition to the AMSAT-UK team so it would be exciting if amateurs could become involved with the new lunar project.

The ESMO spacecraft would be launched in 2011 as an auxiliary payload into a highly elliptical, low inclination Geostationary Transfer Orbit (GTO) on the new Arianespace Support for Auxiliary Payloads (ASAP) by either Ariane 5 or Soyuz from Kourou. From GTO, the 200 kg spacecraft would use its on-board propulsion system for lunar transfer, lunar orbit insertion and orbit transfer to its final low altitude polar orbit around the Moon.

A 10 kg miniaturised suite of scientific instruments (also to be provided by student teams) would perform measurements during the lunar transfer and lunar orbit phases. The core payload would be a high-resolution narrow angle CCD camera for optical imaging of lunar surface. Optional payload items being considered include a sub-surface sounding radar for polar ice detection, and a Cubesat subsatellite for precision gravity field mapping via accurate ranging of the subsatellite from the main spacecraft.

Two different propulsion designs are being studied in parallel by the students:

+ one based on a hybrid solid/liquid propulsion system

+ one relying upon solar electric propulsion.

The deadline for submission of proposals to the SSETI association is 15th August 2006. The full document is available for download from the http://www.sseti.net website. This gives full details of the planned mission, its scientific aims and communications needs.

[ANS thanks Graham, G3VZV for the above information]

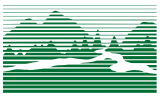
CLUB OFFICERS

President: William Daugherty, N8RPD (603) 359-3745
william@will-do.com
VP: Ken Tentarelli, AC1H (603) 763-9296
Secretary: Nancy Maynard N1QW (802) 295-6080
Lensmaam@mindpictures.com
Treasurer: Chuck Sherman N3WTO
Trustee: Dave Landry KA1CRP (603) 448-5788
JDLandry@innevi.com
Editor: Mike Maynard, K1IH (802) 295-2650
Lensman@mindpictures.com

ELECTRONIC ADDRESSES

*ARRL Website http://www.arrl.org/
*NH ARRL Home Page: http://www.arrlnh.org/
*Tom Frenaye K1KI-NE Div. Dir. k1ki@arrl.org
*R. Sterling Eanes, AK1K, NH SM ak1k@arrl.org
*Dale Drake, AA1QD, NH ACC aa1qd@arrl.net
Part 97 http://www.arrl.org/field/regulations/news/part97/

Don't forget to check the TSRC Home Page!
Make it your default start page!
http://www.w1fn.org



Twin State Radio Club, Inc.
PO Box 5078
Hanover, NH 03755