Sinbad Desert Amateur Radio Club

Summer 2007 9/26/2007

SDARC Newsletter

Special points of interest:

- Bruin Point Struck By Lightning
- Bruin Point Repair Party
- Propagation summaries of popular bands
- Field Day 2007

Inside this issue:

Bruin Point Struck by Lightning

As you may have heard the Bruin Point repeater was struck by lightning at the end of July which done extensive damage to the repeater.

Jim Anderson (KJ7S) and Bret Mills (WX7Y) took a trip up to the repeater site and found that at least the Link Communications RLC-3 repeater controller was damaged. It was unknown if anything else was damaged.

When they got off the mountain Bret repaired the power supply for the controller but it still did not work. It was then decided to send the controller back to Link Communications for repair.

Then next day Jim Anderson (KJ7S), Bret Mills (WX7Y), Bryan Anderson (KD7HSG), and Jim Anderson (KA7YIV) took a UHF repeater on loan back up to the mountain top to at least tie the repeater system together again. This temporary repeater was tied to the remote base antenna due to the unknown status of the main repeater antenna.

We will know what else became damage once the repeater is repaired.

Bryan (KD7HSG)

Bruin Point Repeater Site

Bruin Point Repeater Repaired

The Bruin Point repeater is repaired and back on the air. It took two trips to the mountain top to repair the repeater.

Bret Mills (WX7Y), Jim Anderson (KJ7S), Bryan Anderson (KD7HSG), Tim Dart (KD7MPY) and his fiancé, Allan Orton (KA7LEG), Jim Anderson (KA7YIV), JJ Grant (KE7HJE), and Max Kroger were in the first repair party. This trip repaired the antennas and checked all of the feed lines. It was during this trip that we found that the main repeater antenna was struck by lightning but the feed line checked out ok. Thanks for those that climbed the tower.

The second trip involved the replacement of the actual repeater with new commercial Kenwood repeaters. Most of the repeater is new with the exception with the repaired controller, the Doug Hall Remote Base interface, and the two remote base radios. This repair party consisted of Bret Mills (WX7Y), Jim Anderson (KJ7S), Scott Lott (KB7YOT), Bryan Anderson (KD7HSG), Rick Cook (KE7NBB), and Ross Sacco (KB7UZX) with two of his students.

A special Thank You for all of those that contributed in any way to make this repair possible, especially those that contributed financially. Thank You.

Bryan (KD7HSG)

Pictures from Bruin Point

SDARC Bruin Repeater Rack

Kenwood UHF Repeaters (Link Radios)

Kenwood VHF Repeater

To all of those who contributed to get Bruin Point back on the air, Thank You very much.

Sinbad Desert ARC

Tower Climbers replacing the dual-band antenna with separate VHF and UHF antennas

Propagation Summaries *(Courtesy from the ARRL 2007 Handbook)*

Here are some propagation summaries for the more popular bands for those new upgrades or even for those that would like a refresher.

3.5 - 4.0 MHz (80 m)

The lowest HF band is similar to 160 m in many respects. Daytime absorption is significant, but not quite as extreme as at 1.8 MHz. High-angle signals may penetrate to the E and F layers. Daytime communication range is typically limited to 400 km (250 mi) by ground-wave and skywave propagation. At night, signals are often propagated halfway around the world. As at 1.8 MHz, atmospheric noise is a nuisance, making winter the most attractive season for the 80-m DXer.

7.0 - 7.3 MHz (40 m)

The popular 40-m band has a clearly defined skip zone during the day. D-layer absorption is not as severe as on the lower bands, so short-distance skip via the E and F layers is possible. During the day, a typical station can cover a radius of approximately 800 km (500 mi). Ground-wave propagation is not important. At night, reliable worldwide communication via F2 is common on the 40-m band.

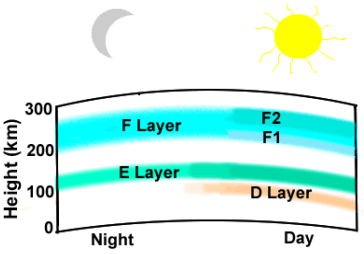
14.0 - 14.35 MHz (20 m)

The 20-m band is traditionally regarded as the amateurs' primary long-haul DX favorite. Regardless of the 11-year solar cycle, 20 m can be depended on for at least a few hours of worldwide F2 propagation during the day. During solar-maximum periods, 20 m will often stay open to distant locations throughout the night. Skip distance is usually appreciable and is always present to some degree. Daytime E-layer propagation may be detected along very short paths. Atmospheric noise is not a serious consideration, even in the summer. Because of its popularity, 20 m tends to be very congested during the daylight hours.

28.0-29.7 MHz (10 m)

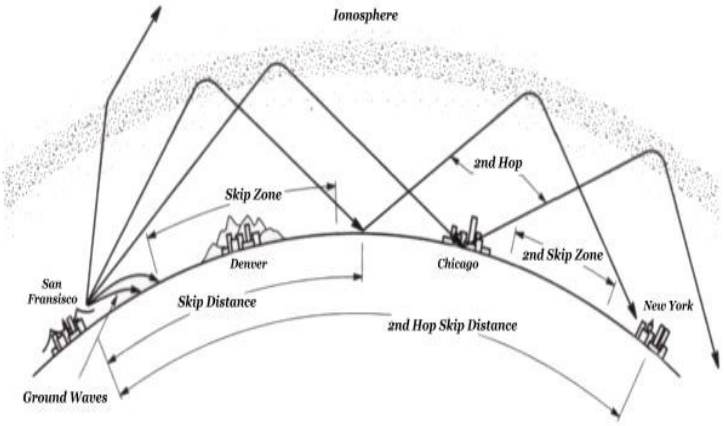
The 10-m band is well known for extreme variations in characteristics and variety of propagation modes. During solar maxima, long-distance F2 propagation is so efficient that very low power can produce loud signals halfway around the globe. DX is abundant with modest equipment. Under these conditions, the band is usually open from sunrise to a few hours past sunset. During periods of moderate solar activity, 10 m usually opens only to low and transequatorial latitudes around noon. During the solar minimum, there may be no F2 propagation at any time during the day or night. Sporadic E is fairly common on 10 m, especially May through August, although it may appear at any time. Short skip, as sporadic E is sometimes called on the HF bands, has little relation to the solar cycle and occurs regardless of F-layer conditions. It provides single-hop communication from 300 to 2300 km (190 to 1400 mi) and multiple hop opportunities of 4500 km (2800 mi) and farther. Ten meters is a transitional band in that it also shares some of the propagation modes more characteristic of VHF. Meteor scatter, aurora, auroral E and transequatorial spread-F provide the means of making contacts out to 2300 km (1400 mi) and farther, but these modes often go unnoticed at 28 MHz. Techniques similar to those used at VHF can be very effective on 10 m, as signals are usually stronger and more persistent. These exotic modes can be more fully exploited, especially during the solar minimum when F2 DXing has waned.

Continued



Earth's Ionospheric layers

"At night, signals are often propagated halfway around the world."



Skywave propagation

Propagation Summaries (continued)

50-54 MHz (6 m)

The lowest amateur VHF band shares many of the characteristics of both lower and higher frequencies. In the absence of any favorable ionospheric propagation conditions, well-equipped 50-MHz stations work regularly over a radius of 300 km (190 mi) via tropospheric scatter, depending on terrain, power, receiver capabilities and antenna. Weak-signal tropo-scatter allows the best stations to make 500-km (310-mi) contacts nearly any time. Weather effects may extend the normal range by a few hundred km, especially during the summer months, but true tropospheric ducting is rare.

During the peak of the 11-year sunspot cycle, worldwide 50-MHz DX is possible via the F_2 layer during daylight hours. F_2 backscatter provides an additional propagation mode for contacts as far as 4000 km (2500 mi) when the MUF is just below 50 MHz. TE paths as long as 8000 km (5000 mi) across the magnetic equator are common around the spring and fall equinoxes of peak solar cycle years. Sporadic E is probably the most common and certainly the most popular form of propagation on the 6-m band. Single-hop E-skip openings may last many hours for contacts from 600 to 2300-km (370 to 1400 mi), primarily during the spring and early summer. Multiple-hop E_s provides transcontinental contacts several times a year, and contacts between the US and South America, Europe and Japan via multiple-hop E-skip occur nearly every summer. Other types of E-layer ionospheric propagation make 6 m an exciting band. Maximum distances of about 2300 km (1400 mi) are typical for all types of E -layer modes. Propagation via FAI often provides additional hours of contacts immediately following sporadic E events. Auroral propagation often makes its appearance in late afternoon when the geomagnetic field is disturbed. Closely related auroral-E propagation may extend the 6-m range to 4000 km (2500 mi) and sometimes farther across the northern states and Canada, usually after midnight. Meteor scatter provides brief contacts during the early morning hours, especially during one of the dozen or so prominent annual meteor showers.

Field Day 2007

This year the SDARC held Field Day activities up Cottonwood Canyon within the Manti-La Sal National Forest. Club members used the weekend to get away from the daily grind to relax and to get on the air.

Field day was also the first time that the Emergency Operation Center trailer was used. The trailer has three VHF/UHF dual-band radios consisting of two Kenwood TM-V708 and one Kenwood TM-D700A. There is also one HF/6M a Kenwood TS-480SAT and a HF/VHF/UHF radio a Yaesu FT-897D installed.

Club members spent most the time getting on the air to exchange pertinent information with other operators.

While not on the air people relaxed and visited with others that made the trip to the campsite.

See you at Field Day next year.

EmComm - Part 1. Attitude *(Courtesy of the ARRL)*

"What does my attitude have to do with emergency communications?" In a word, everything! It is even more important than you radio skills. Historically speaking, the attitude of some Amateur Radio volunteers has been our weakest point.

In situations where a professional and helpful attitude is maintained, served agencies point with pride to ham's efforts and accomplishments. The opposite situation is clearly illustrated in the words of one emergency management official who said "Working with ham radio operators is like herding cats--get them the heck out of here!" This man was clearly frustrated with the attitude of his volunteers.

No matter which agency you serve--emergency management, the Red Cross, or others, it is helpful to remember that emcomm-- emergency communication-- volunteers are like unpaid employees. If you maintain the attitude that you are an employee of the agency that you are serving, with all that employee status implies, there is little chance for you to go astray. You are there to help solve their communication problems. Do whatever you can, within reason, to accomplish that goal, and avoid becoming part of the problem.

The relationship between the volunteer communicator and served agency will vary somewhat form situation to situation. But the fact is that *you work for them.* It doesn't matter whether you are part of a separate radio group like ARES, or part of the agency's regular volunteer force. *You still work for them.* Your job is to meet the communication needs of the served agency. Period. It is not to show off your fancy equipment, nor to impress anyone with your knowledge of radio and electronics. A "know it all" or "I will show you how good I am and how inadequate you are" attitude will end your--and our--relationship with the served agency in a hurry.

It's often said that volunteers don't have to take orders, and we don't. However, when you volunteer your services to an organization, you implicitly agree to accept and comply with reasonable orders and requests from your "employer". If you do not feel comfortable with doing this, you shouldn't volunteer. ---End pt.1

This and future excerpts will likely come from ARRL books like "The ARRL Emergency Communications Handbook" --- available from ARRL www.arrl.org

Contributed by Jim Anderson (KJ7S)

Upcoming Events and Reminders

Here is a list of known upcoming events.

November 1, 2007

SDARC Club Meeting in Price at Los Two Amigos Mexican Restaurant. Nominations will be taken for 2008 Club Officers.

December 6, 2007 *(tentative)*

SDARC Club Meeting. Voting for Club Officers will occur at this club meeting. We would like all that can attend to come and cast their vote. Place will be decided at November's Club Meeting.

Reminders

The SDARC holds a weekly club net on the club's linked repeater system every Tuesday at 8:00 pm.

Club Meetings are held the first Thursday of every month alternating between Carbon and Emery Counties starting around 6:30 pm. Occasionally a meeting will get changed. For the latest information about the next meeting please check in on the Sinbad Desert Amateur Radio Club Net.

Also the Boarderline Amateur Radio Club links onto the clubs system for their weekly club net. There net is held every Wednesday at 8:00 pm during Mountain Standard Time and 9:00 pm during Mountain Daylight Time.

Hope to hear you on the air or see you at the meetings.

73

Bryan Anderson

KD7HSG

CEU's Amateur Radio Club is at it again!

As the school year begins, Ross (KB7UZX) is busy training folks to get there ticket into amateur radio. He and the students are having tons of fun. So if you know of anyone who likes to have fun, play with and talk on the radio, send them our way so we can help them get there ticket into this wonderful hobby.

We are holding the classes on Tuesday nights from 8:00 p.m. -to- whenever we get tired of having fun! The atmosphere is very relaxed and informal. We check into Net at 8 p.m. then cover topics relative to amateur radio.

If anyone has questions please have them contact Ross at (435)613-5201 or by email at ross.sacco@ceu.edu.

We are on the web!

http://www.ecso.com/sdarc.html

We are including this form to make it easier to pay club membership dues. Just fill out the form and return it to the supplied address.

Also we are updating our contact information. Please fill out the left side of the form with your current mailing address, phone numbers, and email address.

And finally please check the box on the form if you would prefer to receive the newsletter via email.

SDARC
P.O. Box 1073
Castle Dale, UT 84513

Thank you,

Bryan Anderson

KD7HSG

Please use the following form to pay dues, to give a donation, and/or to update your contact information.

Please update your contact information below.

Address

City State Zip

Daytime Telephone

Evening Telephone

E-mail Address

Dues—$25.00 (per year, per member)	$
Donations (If any)	$
Total	$

Please make checks payable to below and send to:

Sinbad Desert Amateur Radio Club

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Castle Dale, UT 84513

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