BARC
BRIDGERLAND AMATEUR RADIO CLUB

# THE OHM TOWN NEWS

*Voice of the Bridgerland Amateur Radio Club*

>>>>>>>> http://www.barconline.org <<<<<<<<

# June, July, August
# Summer 2010

***Some Contents…***



# PRESIDENT'S MESSAGE

It's June and BARC will have its annual Field Day event at the end of the month. Our club will be participating in the American Radio Relay League (ARRL) 2010 Field Day event on Saturday June 26th and Sunday June 27th. Field Day is an annual amateur radio exercise, encouraging emergency communications preparedness among amateur radio operators. It is typically the largest single emergency preparedness exercise in the country, with over 30,000 operators participating each year. Field Day is part educational event, part operating event, part public relations event. But most of all, we have a fun and enjoyable time operating the radios. Anyone can attend and participate, licensed or not, club member or not. You can operate a radio (with a control operator present) in making contacts to other amateur radio operators. If you want to just listen and help with the contest, you can help with logging the radio contacts on a computer. We use this opportunity to let everyone try HF. We will have several radios setup, with one radio for digital mode, PSK and RTTY.

Our location for Field Day will be at the Cheney Creek area on the Sinks road which is at the top of Logan Canyon. This is the same area where we had Field Day last year. The Cheney Creek area is open camping so there will be a few of us that will go up early in the week to claim a spot. Others are welcome who would like to arrive early for some radio camping. We should have a radio set up to use so we can enjoy the airwaves with less man made interference that in the valley.

So here is the Field Day schedule:

**Friday**

**Noon** – Those that can, arrive at site to help set up antennas until about 6 PM. It takes about 4 to 6 people to set up the antennas.

**Saturday**

**Morning** – Setup remaining antennas and radios. Check everything; radios, antennas, computers, etc.

**Noon** – Contest starts. Anybody who wants to can get on the air or help with logging contacts.

**Afternoon** – Bunny Hunt. We will have a short class and demonstration. Later, the bunny will be hidden and anyone who would like to can try to find it. Hunters don't even need a license to participate.

**Evening** – Pot Luck Dinner at about 6 PM. The Club will provide hamburgers, hotdogs, and drinks. Please bring a pot luck food item to share.

**Sunday**

**Noon** – contest ends. Start taking down antennas, put stuff away, and clean up the camp site.

Come on up, bring your camp chair, stay as long as you can, and enjoy the good food and the fun of Field Day.

July Event:

There will be a Bunny Hunt Social on the afternoon of July 17th. Those that participate in the hunt will be rewarded with some summer time treats. More details will be sent out later on the BARC Yahoo! Groups and on our web site barconline.org.

Here are some pictures from our last year's Field Day event.


Some more pictures from last year's Field Day.

# HAM PROFILE

Dr. Clayton Clark AC7O, 1912 - 1996
By Jared Luther and Bob Wood

Many members of BARC probably do not know where our repeater system's call sign, AC7O, came from. AC7O (ex-W7FFV) was the call sign of Dr. Clayton Clark. He did a lot to help establish and support the amateur radio community in Cache Valley.

The space program at USU, which evolved into the Space Dynamics Laboratory, started on June 1, 1959, when the Electro-Dynamics Laboratories in the Electrical Engineering Department, College of Engineering was founded. It would not have been possible without the support of Dr. Clark, who initiated a graduate program in Electrical Engineering and other fields. One of the first graduate students was Clair Wyatt, NV7B a local ham that recently passed away. Dr. Clark had a distinguished career in Radio Engineering starting in the 1940's teaching radio classes to Army Air Corps pilots for use in World War II airplanes. He remained in the radio industry doing engineering for many radio stations in the area and he and Larry Cole had a frequency measuring service for commercial radios stations that he kept running until the early 1970's. He taught antennas and RF classes at USU until his retirement. In all, he taught for nearly 40 years at Utah State.

Sometime after 1983, when Dr. Clark retired from full time work at the University, he took the tests and became an extra class ham radio operator. He was active on HF but he seemed to be more interested in VHF communications. At the time, there was only one repeater available to the hams locally and it was located in Box Elder county. Dr. Clark worked on getting the county to support a new repeater to be located on Logan Peak where the State of Utah was preparing to build a new microwave and public safety radio site. He assisted in financing some of the equipment necessary to put the repeater on the air. The original autopatch system was installed in his house and operated from that location until his death. Dr. Clark was involved in reviving the activity in the Bridgerland Amateur Radio Club and he was very involved in ham radio testing under the ARRL Volunteer Examination program. He arranged for classrooms in the engineering building on the USU campus to hold those exams for many years. He was always available for technical support to all of the hams in the valley. He would assist with antenna designs, matching those antennas to the transmitters and he would also assist in designing and building home brew radio and electronic projects. He was active on the repeater systems in the area and when he was in town he would almost always answer a call for a chat. He continued to help support and fund repeater projects for the Bridgerland club and would Elmer anyone interested in learning the radio art.

Soon after Dr. Clark's passing in 1996, the BARC Repeater Association applied to keep his call sign for the repeater system in honor of his work and service to both past and future ham radio operators of Cache Valley.

# UPCOMING ACTIVITIES

Rocket Recovery - 16-18 June, in Green River, Utah

RACES VHF Net - 17 June, 8:00 PM

Wasatch Back Relay - 18 June

Field Day/Club Meeting - 26-27 June

MS 150 - 26-27 June

Bunny Hunt Social - 17 July, afternoon

RACES HF Net - 17 July, 8:00 AM 3920 KHz

Bike the Bear Bicycle Race - 14 August

RACES VHF Net - 14 August, 8:00 PM

Denver Radio Club Hamfest - 22 August

LOTOJA Bicycle Race - 11 September

Top Of Utah Marathon - 18 September

RACES HF Net - 18 September, 8:00 AM 3920 KHz

Bear 100 - 24-25 September

Swaptoberfest - 9 October

Jamboree on the Air - 16-17 October

RACES VHF Net - 21 October, 8:00 PM

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BARC Club Meetings are normally on the 2nd Saturday
of the month at 10:00 A.M. on the 3rd floor of the Cache County Sheriffs Complex
on 200 North and 1225 West, Logan, Utah.
However, due to the many activities during the summer the regular
club meetings are not held in the months of June, July and August.

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ARES Meetings are usually held on the Third Wednesday
of each month at 7 P.M. at the Cache County Sheriffs Complex.
Contact Tyler Griffiths for more information.

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The City of River Heights will be sponsoring a class for the Technician Amateur Radio License. The class starts July 14th at 7:00 - 9:00 pm continuing on for 5 weeks. Classes will be held at the River Heights City offices located at 520 South 500 East, River Heights. The class is free but there is a study manual that is recommended for $24.95.
To get signed up call 752-2646 M - F from 10am to 2pm.
or for more information contact Quentin WQ7G at 752-5022 or 752-3753

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Tyler Griffiths N7UWX

# The ARRL Letter for May 13, 2010

## *FCC News*: FCC Proposes Additions, Changes to Amateur 5 MHz Allocation

Acting on a 2006 *Petition for Rulemaking* filed by the ARRL, the FCC has issued a *Notice of Proposed Rule Making* (*NPRM*), ET Docket No 10-98 to modify the rules that govern amateurs' secondary use of five channels in the 5 MHz frequency range known as 60 meters. The proposed changes would substitute a new channel for one that is seldom available because of occupancy by the fixed service, which is primary in this range. Also proposed is an increase in power from 50 to 100 W effective radiated power (ERP) and the addition of CW, PSK31 and PACTOR-III modes with provisions to ensure that such operations would be compatible with the primary service. Read more here.

# The ARRL Letter for May 20, 2010

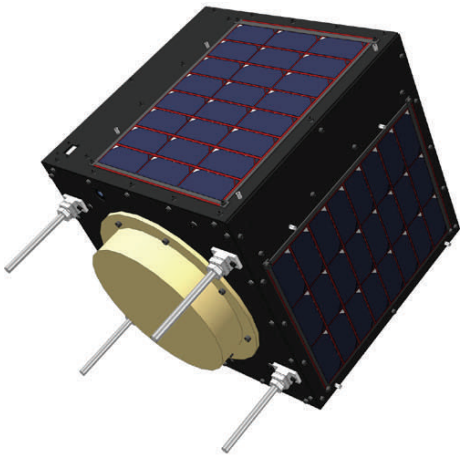
## *FCC News*: FCC Again Denies Amateur's *Petition* Regarding Station Identification

On May 18, the FCC denied a *Petition for Reconsideration* filed by Glen Zook, K9STH, that asked for changes in Part 97 regarding how often amateurs must identify themselves on the air. This action follows the Commission's denial of Zook's April 2009 *Petition for Rulemaking* requesting that the Commission amend Section 97.119(a) to change how often amateur stations must identify themselves, specifically "to require that an amateur station transmit its call sign during the first transmission of any communication or series of transmissions, and to allow an amateur station to not transmit its call sign at the end of a communication when the communication or series of transmissions lasts less than three minutes." Read more here.

# The ARRL Letter for May 27, 2010

## *Amateur Radio in Space*: Amateur Community Needed to Assist Japanese Amateur Interplanetary Satellite

An informal network of ham radio experimenters, scientists and CW enthusiasts called FlyVenusCom -- a nonprofit, cross-cultural effort -- has been created to support communication efforts by Japanese scientists with its CubeSat Venus probe, UNITEC-1. This CubeSat was developed by 20 universities of the University Space Engineering Consortium (UNISEC), the Japanese community developing nano-satellites. The Japanese UNITEC-1 team has called for ham radio assistance worldwide in improving and testing two areas of the CubeSat's mission. What makes this mission of particular interest to amateurs is the fact that the UNITEC engineers have added a 5 GHz Amateur Radio beacon to the spacecraft and they are encouraging hams to attempt to receive it. On May 21, Japanese ground stations reported receiving the CW and FSK beacons (call sign JQ1ZUN) at a distance of about 30,000 km. They measured the beacon frequency at 5839.91 MHz. Even though the latest reports say that the signal has been lost, the UNITEC team is trying to re-establish contact with the satellite. Read more here.



An artist's rendition of the UNITEC-1 CubeSat.

# The ARRL Letter for June 3, 2010

## *ARRL in Action*: What Have We Been Up to Lately?

This feature -- including convenient Web links to useful information -- is a concise monthly update of some of the things ARRL is doing on behalf of its members, including bringing the ever-popular ARRL EXPO to the 2010 Dayton Hamvention®, awarding college scholarships, releasing new books, holding Section Manager elections and more. This installment covers the month of May. Read more here.

## *International Perspective*: 2010 IARU Eyeball QSO Contest Results

At the 2010 Dayton Hamvention®, the International Amateur Radio Union (IARU) and the ARRL sponsored a game that involved searching for hams visiting from outside the USA. According to ARRL Membership and Volunteer Programs Manager Dave Patton, NN1N, the idea was to obtain calls and names from as many different DXCC entities (from outside the USA) as possible by making "eyeball QSOs" during the Hamvention.

"No one knew exactly what to expect," Patton said, "as there hadn't been a formal list of attendees from outside the USA in the recent past. But amazingly, there were at least 138 hams from 48 DXCC entities -- not including all the DXpeditioners who signed with their DXpedition calls -- appearing on the eyeball QSO cards that were turned in to IARU officials at the end of the event to the IARU staff." As for the winners, Patton said that "everyone was a winner through the interaction with all the international guests, and the Top 10 will receive gift certificates from the ARRL."

The Top 10 winners -- including a tie for first place --were (with number of international "eyeball QSOs" following their call sign): Margreet Blondeel Timmerman, K2XYL (24); Frank Butler, W4RH (24); Lewis Ankerbrand, W3GHU (19); Steve Gocala, KB8VAO (18); Allen Olender, WA8IWK (14); Stan Arnett, AC8W (14); Judy Attaya-Harris, KB1SRO (12); Coy Day, N5OK (12); Preben Mailand Christensen, OZ1HHH (10); Ed Moyer, AB3AH (9), and Ken Lowry, W8ND (6). For a list of the 138 call signs representing almost 50 DXCC entities, click here.

# The ARRL Rocky Mountain Division update June 2010

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**Division website: www.RockyMountainDivision.org**

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**===== An Awesome Division Convention it was! =====**

"Fun in Amateur Radio" was the theme of the 2010 Rocky Mountain Division convention held a few weekends ago in Casper, Wyoming, and an awesome convention it was! Attended by upwards of 300 hams from all over the Division and other states like South Dakota, Georgia, Virginia, and Connecticut, this year's event was true to its theme.

Hams attending were greeted with 15 mostly-technical forums, vendors/manufacturers such as HRO, Yaesu, Icom, and RF Concepts (home of Alpha amplifiers), a chance to cause a true HF pileup by operating special

event station W1AW/WY7, Ham Radio Olympics (ham radio Jeopardy, transmitter hunting, eyeball county hunting QSO party, ham-related shadowbox ID contest, and the now-infamous toilet seat retrofitted to be a CW key), a solemn Wouff-Hong ceremony, excellent meals, VE exams, a swapfest, QSL card checking, a silent auction for new ham radio transceivers, tons of prizes, and great guest speakers.

Among the guest speakers were: Kay Craigie N3KN (ARRL President), Sean Kutzko KX9X (ARRL Contesting Manager), and Andrea Hartlage KG4IUM (past ARRL Youth columnist, Hiram Percy Maxim award recipient, and Goldfarb scholarship recipient).

Roger Kehr N3AOQ of Cottonwood Heights, Utah was presented the 2009 Rocky Mountain Division Ham of the Year award during the Saturday evening banquet. (Read all about Roger's involvement as a ham on the Division website at http://www.rockymountaindivision.org/awards.html.)
Following the presentation, Kay Craigie gave a super banquet address on ham radio and the endless fun it provides. She challenged all of the banquet attendees to commit themselves to trying something new within ham radio, and notice all of the new things they'll learn, the new people they'll meet, and new experiences they'll have as a result.
"Amateur radio indeed has serious roles, but we shouldn't take **ourselves** so seriously that we can't or won't enjoy the fun amateur radio provides as well," Kay remarked.

Many kudos go to the 2010 committee who carried on a great Division tradition by planning and executing a first-class convention. On behalf of ARRL, we greatly appreciate the time, sweat, and treasure put in to making it all happen. And thank you to everyone who traveled to Casper over their Memorial Day weekend to enjoy all of the fun the committee promised you'd have.

**===== Heads Up: 2011 Division Convention =====**

After a superb convention in Casper, it's time to look to next year's big event. The New Mexico section will host the 2011 Rocky Mountain Division Convention, and planning is commencing. More details will be shared as they become available.

**===== Rocky Mountain Division HF Net =====**

Our next monthly Rocky Mountain Division HF net will occur this week to disseminate information and give us a chance to meet you and your ideas in QSO. Here are the details:

DATE: Wednesday, June 9
TIME: 7:30 PM Mountain
FREQ: 7240 kHz +/- due to any QRM

General check-ins will be accepted, news and information will be passed, and everyone participating will be invited to ask their Division leadership questions, raise any concerns, or suggest ideas.
We hope you'll join us.

**===== Rocky Mountain Division Membership Survey -- Results Available =====**

A reminder that results from the recent Division survey are available for your review. Visit the Division website at www.RockyMountainDivision.org where you'll find a link to it on the right side of the homepage. Thank you again to everyone who took the survey and provided their thoughts.

**===== Upcoming hamfests, tailgates & conventions =====**

July 17 PPRAA Ham Radio Megafest (Monument, CO)
August 13 Albuquerque Duke City Hamfest (Albuquerque, NM)

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| August 22 | Denver Radio Club Hamfest (Golden, CO) |
| September 4 | Alamogordo Hamfest (Alamogordo, NM) |
| September 26 | Boulder ARC BARCfest (Longmont, CO) |
| October 9 | SwaptoberFest (Logan, UT) |
| October 30 | Socorro Hamfest (Socorro, NM) |

Links to websites belonging to the above events are found on the Rocky Mountain Division site: www.RockyMountainDivision.org

# The ARRL Letter for June 10, 2010

## *FCC News*: FCC Dismisses California Ham's *Petition* to Amend Section 97.1

In September 2009, Gordon Schlesinger, W6LBV, of San Diego, California, filed a *Petition for Rule Making* with the FCC, seeking to amend Section 97.1 of the Commission's rules to account for changes in technology and amateur practice since the rule was adopted. On June 8, 2010, the FCC dismissed Schlesinger's *Petition*. Schlesinger proposed new text in his *Petition* that he claimed "is equivalent to a total restatement of the Basis and Purpose for the Amateur Radio Service, to account for the numerous and significant changes both in wireless technology and in the practice of the Amateur Radio art over the intervening decades since the present Basis and Purpose was adopted. The current Basis and Purpose, which consists of five goals for the Amateur Radio Service, appears to have been adopted more than 50 years ago. The dramatic change in both telecommunications technology and the practice of Amateur Radio over the past five decades strongly suggests that a review and reconstitution of the Basis and Purpose is in order." Read more here.

## + Boy Scouts Revive Four Merit Badges for 100th Anniversary


In keeping with Boy Scouts of America's centennial theme -- *Celebrating the Adventure, Continuing the Journey* -- four retired badges have been brought back for the group's 100th anniversary. The effective date for earning these new merit badges -- Carpentry (1911-1952), Tracking (formerly Stalking, 1911-1952), Pathfinding (1911-1952) and Signaling (formerly Signaler, 1910-1992) -- is April 1, 2010; requirements must be completed no later than December 31, 2010. The contemporary merit badges closely resemble the original designs of their counterparts, but with a gold border, immediately identifying it as a 2010 historic merit badge. These four historical merit badges may be used toward a Scout's rank advancement.

"The Signaling merit badge is a great way to encourage hams who are already involved in Scouting to mentor this limited-time badge in their Troop and perhaps in other ways, such as camps," said ARRL Rocky Mountain Division Director Brian Mileshosky, N5ZGT; Mileshosky is the chairman of the ARRL's *ad hoc* Committee on Scouting. "Hams -- and especially clubs, that have more resources and volunteers -- who are not involved in Scouting at the present time but want to assist a Troop with earning the Signaling merit badge -- should contact their local BSA Council to inquire about Scoutmasters in their area to contact and offer their assistance." The requirements for the Signaling merit badge are the original requirements as written in 1911. Read more here.

## Questions for Extra Class License

1. (E1A07) What is the only amateur band where transmission on specific channels rather than a range of frequencies is permitted?
A. 12 meter band
B. 17 meter band
C. 30 meter band
D. 60 meter band

2. (E1E17) What are the consequences of failing to appear for re-administration of an examination when so directed by the FCC?
A. The licensee's license will be cancelled
B. The person may be fined or imprisoned
C. The licensee is disqualified from any future examination for an amateur operator license grant
D. All of the above

3. (E2C06) During a VHF/UHF contest, in which band segment would you expect to find the highest level of activity?
A. At the top of each band, usually in a segment reserved for contests
B. In the middle of each band, usually on the national calling frequency
C. In the weak signal segment of the band, with most of the activity near the calling frequency
D. In the middle of the band, usually 25 kHz above the national calling frequency

4. (E3C11) From the contiguous 48 states, in which approximate direction should an antenna be pointed to take maximum advantage of auroral propagation?
A. South
B. North
C. East
D. West

5. (E4D14) Which of the following is a way to reduce the likelihood of receiver desensitization?
A. Decrease the RF bandwidth of the receiver
B. Raise the receiver IF frequency
C. Increase the receiver front end gain
D. Switch from fast AGC to slow AGC

6. (E5C18) In polar coordinates, what is the impedance of a series circuit consisting of a resistance of 4 ohms, an inductive reactance of 4 ohms, and a capacitive reactance of 1 ohm?
A. 6.4 ohms at an angle of 53 degrees
B. 5 ohms at an angle of 37 degrees
C. 5 ohms at an angle of 45 degrees
D. 10 ohms at an angle of -51 degrees

7. (E6A18) What are the names of the three terminals of a field-effect transistor?
A. Gate 1, gate 2, drain
B. Emitter, base, collector
C. Emitter, base 1, base 2
D. Gate, drain, source

8. (E6F14) Which of the following is the approximate open-circuit voltage produced by a fully-illuminated silicon photovoltaic cell?
A. 0.1 V
B. 0.5 V
C. 1.5 V
D. 12 V

9. (E7D14) What is one purpose of a "bleeder" resistor in a conventional (unregulated) power supply?
A. To cut down on waste heat generated by the power supply
B. To balance the low-voltage filament windings
C. To improve output voltage regulation
D. To boost the amount of output current

10. (E9H03) What is the effective radiated power of a repeater station with 200 watts transmitter power output, 2-dB feed line loss, 2.8-dB duplexer loss, 1.2-dB circulator loss and 7-dBd antenna gain?
A. 159 watts
B. 252 watts
C. 632 watts
D. 63.2 watts

(For answers to test questions see page 12)

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Answers to questions on page 11: 1-D, 2-A, 3-C, 4-B, 5-A, 6-B, 7-D, 8-B, 9-C, 10-B