



WATTS NEWS

Welcome to the OARC e-Magazine

www.OgdenArc.org

JUNE 2008

Next Club Meeting

3rd Saturday June 21, 2008

Topic: Field Day Planning/Prep

OARC OFFICERS

President: Kent Gardner WA7AHY
Vice Pres: Kim Owen KO7U
Secretary: Maggi Campbell N7HCP
Treasurer: Jeff Anderson KD7PAW

Director #1: Mike Webster N9NZ
Director #2: Stan Sjol WOKP

"WATTS NEWS" e-Magazine

Editor: Val Campbell K7HCP

OTHER CLUB FUNCTIONS

Webmaster: Val Campbell K7HCP
VE Liaison: Mary Hazard W7UE
Repeater Engr: Mike Fullmer KZ7O
Past President/Advisor:
Mike Fullmer KZ7O

PREVIOUS CLUB MEETING

3rd Saturday May 17, 2008

- Morse Code (HF CW) Made Fun by Bob Carter WR7Q - Murray, UT

Bob's presentation was on some of the do's and don't of learning Morse Code... Topics covered were:

- sending;
- receiving;
- commitment;
- reality;
- "the goal";
- different methods of learning;
- practicing;
- software programs;
- making your own training cd's;
- "q" codes;
- helping the "big boys" do faster code and a brief training drill...

For those that missed this meeting, Bob provided us with extra copies of a CD that contains his Power Point presentation as well as software programs that he recommends to aid hams in learning morse code.

If you would like a copy contact OARC club president Kent Gardner WA7AHY.

OARC door prizes - May meeting:

N9NZ - Mike
K7HCP - Val
K07U - Kim
KB7MG - Mike
N7HCP - Maggi
KE7NQH - Michael
WR7Q - Bob

NEXT CLUB MEETING

When: 3rd Saturday June 21, 2008
Time: 9:00 AM
Location: Riverdale Fire Station (see web site for map)
Talk-in: -146.90 (pl=123)
Topic: Field Day Planning/Prep

DON'T FORGET
FIELD DAY

OARC Field Day Event

Date: 4rd Sat & Sun, June 28 & 29

Time: 12:00 pm Saturday to 12:00 pm Sunday

Location: Field Day Site <<< Stan Sjol WOKP Ranch

Activity: ARRL Field Day - sponsored by Ogden ARC

Note: Dinner provided ... 5:00 pm Saturday evening

However ... Please bring side dish to share (salad, fruit, desert).

Don't forget to bring your own chair and dinner-ware (paper-ware provided).

FROM THE PRESIDENTS SHACK

Kent Gardner WA7AHY

**From the President's Shack
June 2008**

Rather than giving my own thoughts on field day, I thought it would be interesting to let someone else give their impression of what it is like. I went to our club history and found Larry E. White's 1995 description (KC7KDZ). I did some editing from the original article.

My First Field Day

I was very excited about attending my first Field Day. Only recently getting my license and not having attended a Field Day before, I didn't know what to expect. I started thinking about what I wanted to do, or accomplish. First and foremost I wanted to make my first "HF" contact. Next I had made friends with a fellow on 2-meters and wanted to make contact with him over the same weekend. Last and maybe most important, I wanted to get to know and become friends with more of the club (OARC) members.

I decided to participate in all of Field Day, as I understood it. This meant helping with the establishment of the site. This being an unusual year there was still a lot of snow in the area normally used. This meant the use of an alternate site. This site had been discussed at club meeting that week. I knew where the alternate site was located so I was ready.

Being interested in radio, I monitor it on a regular basis and was doing so several hours before it was time to start this new and exciting weekend. By doing this I found that the alternate site was already filled with people and that a new site had been chosen. That was not a problem as I got some good directions over the radio, so off I went. (I also found that 146.520 simplex was going to be used for local communications.)

I found that I was the first to arrive at the new site, so I chose a place that I felt would not interfere with the communications trailer and would give me a high location to make the contact on 2-meters that I wanted. I then began to monitor 146.520 with the possibility of giving some help to others in locating the new site.

It didn't take long and others started to arrive. Before long Field Day started to become a reality. With the layout of camp completed, thoughts turned to dinner. After dinner a campfire was lit and the renewal of friendships was in full swing.

Saturday morning brought the arrival of the club's communications trailer. My excitement grew as I had not seen the trailer before. After the location for the trailer was set, the raising of antennas began. This meant the stringing of an antenna between two tall pine trees. Out came a fishing pole equipped with a large weight. This was used to string a rope through the branches to the top where one end of the antenna was fastened. The procedure was repeated for the other end of the antenna. (This was something I had read about, but never seen before.) The first antenna was up. Then came the vertical antenna which was attached to the trailer. During this time others were setting up the generator. With the antennas, coax, grounds and the generator setup it was about noon, time to start making contacts.

As noon approached everyone gathered around the trailer. The radios were at the ready with hands eager to start spinning the dials looking for that first contact. With the arrival of noon the mad scramble began.

I watched and listened, I wanted to learn a little before making my first try. I finally gained the confidence to sit down and participate. My first contact (K7SKW, 2A, W. Washington—on 20-meters) was made and my excitement grew. I went on to make others and before I knew it, it was time to break for dinner.

There was a steak fry and potluck dinner Saturday evening. Everyone had brought a salad or casserole. A few additional people had come up during the afternoon. All participated in making contacts with most staying for dinner. Later that evening Campfire Pies were made. A delicious treat for all.

The radios were kept busy until 1:00 am with Matt (AB7GM) working CW. It was Matt's call that was used during Field Day. Thanks Matt.

Sunday morning came early with the sound of the generator. I knew that communications had once again begun. I got up, fixed a cup of coffee and once again remembered the excitement of my first "HF" contact. I got

back on the air about 11:00 am and soon lost track of time again. Then, I was shaken back into reality when my last contact said "I think it's over". It was 12:00 noon and Field Day contacts had come to an end.

Field Day was not over though. Next came the tearing down and cleanup of our camp site. Those of us that were left, went down the mountain in a caravan, keeping in contact with each other using 2-meter simplex.

Field Day was a great experience for me. The making of my first contact was exciting but there was much more. I made new friends and renewed other friendships. I now know more about some of the equipment the club had, how to use that equipment and where to find it.

I have always felt accepted in the club since I first joined. I have gotten good information and some very valuable help from some of the veteran "HAM's". But now, with my participation in Field Day, sharing a part of myself and with others sharing a part of themselves, I now feel a true part of OARC.

THANKS TO ALL THAT ATTENDED FIELD DAY.

Larry E. White KC7KDZ

June, 1995

President's note: I will be a little late coming to field day on that Saturday because of scout camp, but I hope to see you there anyway. Also, can anyone tell me what a campfire pie is?

TNX

Kent, WA7AHY

CLUB NEWS

The Weber County VE Test Session for June was held at the Weber Co Sheriff's Communications Team & Weber County ARES

ECOMM HAMFEST 2008

on June 07, 2008 at Browning Armory in South Ogden, UT

CONGRATULATIONS:

The following attendees successfully tested there.

- Sorry! But we did not receive response from VE coordinator prior to publication date...
-

AR HOBBY NEWS

What's Happening?

- [Utah Hamfest 2008](#) (Brice Canyon - Ruby Inn)
July 11-13 (even numbered years only)
- No WIMU 2008 (odd numbered year only)
"Wyoming-Idaho-Montana-Utah" Hamfest (Jackson Hole Wyoming)

ARRL CORRESPONDENCE

Kent WA7AHY sent an email question to ARRL and guess what? They did reply. The answer probably isn't a very specific one, but it does bring up some interesting possibilities. I hope he meant 1 Hz and above instead of 1 Hz and below?

Q. Tech Dept.

In the Technician licensing class material/questions it says that frequencies 20 KHz and above are considered radio frequencies and those below are audio. I listen for lightning caused whistlers on a kit receiver (Project Inspire) that covers 5-15 KHz. There are also signals that are broadcast to submarines even at ELF. I have always thought that these signals were RF and weren't considered audio until they came out of the receivers speaker. I have received on my low frequency receiver, imprints of flies buzzing past my antenna, sound of people walking in the gravel and peoples voices talking while my whistler recordings were in progress. My ears could hear these audio events, but the receiver, I think, received them as RF and then processed to audio. Are we just talking about semantics here or is there RF from one Hz on up?

TNX

Kent S. Gardner, WA7AHY

A.

Hi Kent WA7AHY,

Definitions for RF/audio are typically based on perceived practicality. Yes, it is theoretically possible to have electromagnetic radiation traversing galaxies at 1 Hz and below. Imagine an advanced civilization capable of using highly maneuverable spacecraft to stretch out and position an extremely large antenna in space. But, we can't afford such antennas.

Zack Lau W1VT
ARRL Senior Lab Engineer
ARRL - The national association for Amateur Radio
225 Main Street, Newington, CT 06111-1400 USA

NEWS ARTICLES

Newsline

RADIO WAVES: SOLAR CYCLE DELAYED A YEAR

The next 11-year cycle of solar storms will most likely start next March and peak in late 2011 or mid-2012. That's up to a year later than expected according to a forecast issued by NOAA's Space Environment Center in coordination with an international panel of solar experts. The complete story is at www.swpc.noaa.gov/SolarCycle/...ssRelease.html (NOAA, QRZ.COM))

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PUBLIC SERVICE: HAMS ASKED TO ASSIST CALIFORNIA ELECTION

According to the Sacramento Bee newspaper, ham radio was pressed into service to provide a communications system in sparsely populated El Dorado County during last Tuesday's state wide California election.

According to the newspaper, despite the proliferation of cellular telephones, about 40 percent of the El Dorado County's 1,790 square miles don't have cellular service. The terrain is a mix of sparsely populated open range, thickly wooded hills and hard-to-reach canyons. As such, it makes little economic sense for cellular telephone companies to provide service into the area. Unfortunately come election day some polling places in the largely rural county have had problems maintaining lines of communication, leaving poll workers isolated because there are not even wire-line telephones at these sites.

So the county elections office asked local radio amateurs to provide a communications network that would function at polling sites where the cellular telephones and other radio systems might not. At airtime the extent of the involvement in election communications network by radio amateurs is not known. The entire story is on-line at <http://www.sacbee.com/101/story/976114.html> (Sacramento Bee)

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RADIO LAW: CHP POSITION ON THE "HANDS-FREE" WIRELESS TELEPHONE LAWS

Some good news from the California Highway Patrol. This, for hams worried about being stopped for using their push-t-talk radio gear without hands free devices once the states new cellular telephone law takes effect on July 1st.

In a letter to several hams and authenticated by the C-G-C Communicator newsletter, Commander Fran Clader of the patrols Office of Media Relations writes -- and we quote:

"The new cell phone laws involve only wireless telephones. They do not concern radios such as your Amateur Radios, unless they are also wireless telephones.

"Again, the law only applies to wireless telephones.

"Thanks for your inquiry. If you have any further questions, please give us a call."

That said, Commander Clader does have some sound advice for anyone driving a car and operating any sort of accessory. She says -- and again we quote:

" All motorists are strongly encouraged to operate a motor vehicle safely, paying attention to their safe operation of the vehicle, the changing road and weather conditions and the actions or anticipated actions of other drivers."

Words to live by that can keep you alive, no matter where you live. (CGC, ARNewsline)

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ENFORCEMENT: \$17,000 FINE AFFIRMED TO UNLICENSED BOSTON BROADCASTER

Turning to enforcement news. the FCC has issued a monetary forfeiture in the amount of \$17,000 to Charles Clemons. This, for operating an unlicensed radio transmitter on the frequency 106.1 MHz in Boston, Massachusetts and for failing to permit a station inspection.

This past February 29th the Commission's Boston Field Office issued a Notice of Apparent Liability for Forfeiture in the amount of \$17,000 to Clemons after tracing the unlicensed operation to him. To date, Clemons has not filed a response to the N-A-L or paid the proposed forfeiture. Based on the information before it the FCC has now affirmed the \$17,000 fine and ordered that Clemons pay the amount within the time frame specified by law. (FCC)

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ENFORCEMENT: FLORIDA CB'ER FINED FOR OVER POWER OPERATION

A Florida C-B operator has been fined \$10,000 but will only have to pay \$350. Amateur Radio Newsline's

The FCC has issued a monetary forfeiture in the amount of three hundred fifty dollars to Florida C-B operator Richard Ross. This, for willful and repeated violation of section 301 of the Communications involving the operation of an unauthorized C-Bradio transmitter.

According to a Commission news release, On August 16, 2007, agents from the Tampa Office inspected Ross' CB station to confirm that it was in compliance with the rules. They found that Ross' CB radio station included a CB transmitter and two linear amplifiers. The agents measured the power of the amplifiers combined power output and found the devices had the capability to boost the power of the station to several hundred times the authorized power level.

On March 31, 2008, the Tampa Office issued a Notice of Apparent Liability for Forfeiture to Mr. Ross in the amount of ten thousand dollars. Ross submitted a response to the NAL requesting cancellation of the proposed forfeiture. He asserted financial hardship and supplied the FCC with documentation to back up his claim. After examining the financial documentation submitted by Ross, it decided to reduce the forfeiture to \$350.

Ross was given the usual 30 days to pay or to file a further appeal. (FCC)

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FEATURE ARTICLE

Three Ways to Receive and Record HAARP-LWA Moon Echoes

By Kent Gardner – WA7AHY

An email from the American Radio Relay League (ARRL) was sent out on Thursday 17 Jan 08. They were looking for people to monitor and report signals from an auroral-moonbounce experiment on 19 and 20 Jan 08 Universal Time. The High Frequency Active Auroral Research Program (HAARP) and the Long Wavelength Array (LWA) in New Mexico co-sponsored the experiment.

The HAARP antenna array consists of 180 antennas (crossed dipole antennas arranged as a rectangular, planar array) on a total land area of about 35 acres. The array, along with its integrated transmitters, has a total radiated power capability of about 3,600 kilowatts. For further information on the facility, see <http://www.haarp.alaska.edu>.

The scenario went like this:

Date (UTC)	From UTC	To Hr: Min	Transmitted Frequency (MHz)
19 January 2008	05:00	06:00	6.7925
	06:00	07:00	7.4075
20 January 2008	06:30	07:30	6.7925
	07:30	08:30	7.4075

The transmitter would be on for two seconds and then off for three seconds to listen for the echoes coming back from the moon. The signal was carrier only (no modulation).

A number of Ogden (Utah) Amateur Radio Club members tuned in and heard both the primary signal and the echoes. Three were able to record both these signals. The following information shows how three different approaches were used to successfully record these signals.

Equipment and software used and connections:

Kent Gardner, WA7AHY of South Ogden, Utah.

Antenna: G5RV dipole broadside North-South

Receiver: Realistic (Radio Shack) DX-160 general coverage

Dual tape deck: Realistic SCT-72

60 Minute audio cassettes (30 minutes each side) taken from tape deck

after recording and placed in Texas Instrument Program Recorder

(standard portable cassette recorder) and played into microphone input of

Compaq Evo N600c laptop computer

Recorded into Spectrogram software (distributed as freeware) from NASA Project Inspire used for analyzing recordings of "Lightning Caused Whistlers" and other natural radio signals. Longram was used in these recordings.

Jeff Anderson, KD7PAW of Brigham, City, Utah.
Antenna: G5RV dipole broadside WSW-ESE
Software Defined Receiver: SDR IQ built from a kit
SDR IQ out via USB connection to
MPC TransPort T2400 laptop computer
Recorded directly into laptop using Spectravue software

Jim Southwick, N7JS of Ogden, Utah.
Antenna: 75 meter dipole broadside NW-SE
Receiver: Kenwood TS-2000
Recorded by Handy Recorder H2 (by Zoom) digital recorder placed in front of receiver speaker

Pictures of Equipment:

Kent, WA7AHY
Top dual tape deck
Black AM/FM receiver/amp
Bottom DX-160 receiver

Jeff, KD7PAW
SDR IQ receiver on the right above mouse.
Laptop with waterfall display

Jim, N7JS

H2 digital recorder down and to the left (standing upright) of the black speaker above the meter. The Kenwood TS-2000 is immediately behind the recorder.

Jim says, "The antenna was a half-wave dipole actually cut for 75 meters. It ended up being the lowest in noise yet able to detect the signals. My vertical detected the signal from Alaska, but could not resolve the moon echo (at least not to my human ears). I missed the other frequency it was sent on and was only able to grab this one. Just for fun, after it was over – I ran outside and took a picture of the moon through the heavy clouds with my digital camera.It was neat to know just a few moments earlier, I was actually receiving a signal bounced off it. Amazing! I would rate this event as a very exciting one in my 32 years of being a ham radio operator."

Jim's moon echo audio can be heard by going to www.N7JS.com.

WA7AHY's screen capture of Spectrogram (Longram) display.

Light blue columns show primary transmitter signals received directly (2 seconds). Lower yellow shading shows echoes from the moon (3 seconds). This was a 30 second audio segment. Log segment below shows time and frequency.

Segment of written log submitted to HAARP-LWA in Alaska.

UTC Date	UTC Time	Freq. MHz	Notes	Tape Counter
19Jan08	0500	6.7925	Begin tape Side A	000
			Began tuning to find HAARP xmtr	
			1 st reception of xmtr	016
			1 st echoes heard (see spectrogram HAARP1.wav)	040
			No echo heard	048
			Faint echoes-brief 2 or 3	055
			More echoes (see spectrogram HAARPTWO.wav)	074

KD7PAW's screen capture of Spectravue display.

Vertical waterfall shows main transmitter with vertical bar segments. Echoes are faint vertical bar segments slightly to the left. Diffuse vertical segment at 3/4s right is probably interference from a nearby computer monitor. The frequency of 6.7925 MHz is shown in the box below waterfall display. The box below that shows the width of the screen.

All of the configurations were setup in a short amount of time. They all accomplished the same goal of receiving echoes from the moon with old and new technologies. All of us stayed up late to make the recordings, but were excited to participate and were gratified by the results. It was certainly worth the effort.

TNX

Kent S. Gardner, WA7AHY, Jeff Anderson, KD7PAW, and Jim Southwick, N7JS

ANNOUNCEMENTS

Next Club Meeting:

3rd Saturday June 21, 2008

- The Ogden Amateur Radio Club meetings are usually held on the 3rd Saturday of each month.
- **Time: 9:00 AM**
- **Location: Riverdale Fire Station**

Topic: Field Day Planning/Prep

- **Talk-in: -146.90 (pl 123.0)**

Check OARC web site for details

www.ogdenarc.org

- Please invite a friend to join you. You do not have to be a member of the club to participate in our club meetings or activities. We invite all to join us.
- If anyone is interested in doing a presentation on something or just have something unique to show at the meetings.
 - Please get a hold of any of the officers and let us know.

Next Weber Co VE Test Session:

1st Wed Oct 01, 2008

- Exam sessions are held in Ogden every few months, *usually* the first Wednesday in February, June, and October.

Time: 05:00 PM *Walk-ins allowed*

Location:

WEBER CENTER
2380 Washington Blvd,
Room # 112
OGDEN, UT 84401

Contact: VE Liaison:

Mary Hazard w7ue@arrl.net (801-430-0306)

Cost: \$14.00

Two forms of **ID**, one of which must be a **picture ID**.

For "Upgrades" bring current **license** and a **copy** of current license, and any **CSCE's**

Most **calculators** allowed. Calculator memories must be cleared before use.

Club Web Site

Be sure to visit our club web site.

- www.OgdenARC.org

Club membership is open to anyone interested in Amateur Radio. You do not need an amateur license to join us. Dues are used to operate the club, field day activities, and repeater equipment maintenance.

You do not need to join the club to participate with us.

Club Call Sign

Listen to the club repeaters for this very familiar CW ID. You do know Morse Code don't you?

- **W7SU**

ARRL Field Day is held on the last full weekend of June every year.

Location may vary each year so watch this notice for details as time draws near.

See you there.

OARC REPEATERS			
FREQ	CLUB	STONE	LOCATION
146.820-	OARC	123.0	Mt Ogden
448.600-	OARC	123.0	Mt Ogden
146.900-	OARC "Talk-in"	123.0	Little Mtn (w/auto patch)
448.575-	OARC	100.0	Little Mtn (w/auto patch)

OTHER AREA REPEATERS			
FREQ	CLUB	STONE	LOCATION
146.620-	UARC	none	Farnsworth Pk
147.120+	UARC	100.0	Farnsworth Pk
449.100-	UARC	146.2	Farnsworth Pk
449.500-	UARC	100.0	Farnsworth Pk
ATV	UARC	Ch-58	Farnsworth Pk
147.040+	DCARC	123.0	Antelope Isl
447.200-	DCARC	127.3	Antelope Isl
449.925-	DCARC	100.0	No Salt Lake
145.290-	UBET	123.0	Brigham City
145.430-	UBET	123.0	Thiokol
448.300-	UBET	123.0	Thiokol
146.640-	BARC	none	Logan
146.720-	BARC	103.5	Mt Logan
147.260+	BARC	103.5	Promontory Pt
449.625-	BARC	103.5	Mt Logan
145.250-	WSU	123.0	* coming soon
449.250-	WSU	123.0	* coming soon
145.490-	K7HEN	123.0	Promontory Pt
146.920-	N7TOP	123.0	Promontory Pt
449.775-	N7TOP	123.0	Promontory Pt
448.825-	IRLP/Echo	123.0	Clearfield City
449.950-	IRLP	123.0	Clearfield City
449.425-	IRLP	100.0	Nelson Peak
147.360+	Summit County	100.0	Lewis Peak

AREA CLUB MEETINGS & WEB SITES

CLUB	WEB SITE	DATE/TIME	LOCATION
Ogden ARC	ogdenarc.org	3 rd Saturday 09:00 am	Check OARC web site ...
WC ARES	ogdenarc.org/join.html#ares	2 nd Thursday 06:30 pm	Weber Co. Library Ogden Utah
WC Sheriff Comm-O		1 st Saturday 09:00 am	Weber Co. Sheriff Complex West 12 th Street Ogden Utah
Barc	barconline.org	2 nd Saturday 10:00 am	Cache Co. Sheriffs Complex 200 North 1400 West Logan Ut
CSEERG	dcarc.net/ares.htm/	Last Wednesday 8:30pm	Clearfield City Hall Clearfield Utah
Dcarc	dcarc.net	2 nd Saturday 10:00 am	Davis Co. Sheriff Complex Farmington Utah
NU Ares	home.comcast.net/~noutares/	3 rd Wednesday 7:00 pm	Cache Co. Sheriff Office Logan Utah
Uarc	xmission.com/~uarc/	1 st Thursday 7:30 pm	UofU EMC Bldg Room 101 Salt Lake City Utah
Ubet	27meg.com/~k7ub/	4th Thursday 6:30 pm	BE-Thiokol: 24 East 100 South Brigham City Utah
Utah DX Association	udxa.org	3 rd Wednesday check web page for details	check web page for details Salt Lake City area
UvhfS	ussc.com/~uvhfs/	Each Tuesday 8:00 pm (refer to web site)	Weekly 2 meter net (no eye ball meetings)
WD Arc	westdesertarc.org/	1 st Tuesday 7:00 pm	Tooele County Courthouse Tooele Utah
WsuArc	arcweber.edu	3 rd Thursday 5:30 pm	WSU Blding #4 Room ? Ogden Utah

LOCAL AREA NETS		
DATE	CLUB	FREQ
Daily @ 12:30 PM mt	Utah Beehive net HF	7.272 Mhz HF LSB
Daily @ 07:30 PM mt	Utah Code net HF	3.570 Mhz HF CW
Daily @ 02:00 UTC	Utah Farm net HF	3.937 Mhz HF LSB
Sunday @ 8:45 AM	Ogden Old Timers HF net	7.193 Mhz HF LSB
Sunday @ 7:30 PM	UBET ARC	145.430 - 123.0 (training net)
Sunday @ 8:30 PM	SATERN Net	145.900 - 123.0
Sunday @ 9:00 PM	Morgan Co Net	147.060 = simplex
Sunday @ 9:00 PM	UARC Info net	146.620- no PL tone required
Monday @ 9:00 PM	2-meter SSB net	144.250 Mhz 2-meter USB
Tuesday @ 8:00 PM	Weber ARES	448.600 - 123.0
Tuesday @ 8:00 PM	VHF Society Swap	147.120 + 100.0
Tuesday @ 9:00 PM	Bridgerland ARC	147.260 + 103.5
Wednesday @ 8:00 PM	UBET ARC	145.290-, 145.430-, 448.300- (all 123.0)
Wednesday @ 8:30 PM	CSEARG	145.770 simplex
Wednesday @ 9:00 PM	No Utah 10m HF net	28.313 Mhz HF USB
Wednesday @ 9:00 PM	6-meter SSB net	50.125 Mhz 6-meter USB
Thursday @ 6:30 PM	Davis Co Elmers Net	147.040 + 123.0 New Hams
Thursday @ 7:00 PM	Davis ARES	147.420 = simplex
Thursday @ 8:00 PM	Weber State ARC	146.820 - 123.0 (coming soon)
Thursday @ 8:00PM	RACES State VHF	145.490 - 123.0, 146.680 - 123.0 3 rd Thursday - even months only
Thursday @ 9:00PM	Wasatch Back Net	147.360 + 100.0
Saturday @ 8:00AM mst	RACES State HF	3.920 Mhz HF LSB 3 rd Saturday – odd months only
Saturday @ 11:00AM mst	QCWA net HF	7.272 Mhz HF LSB

73 es cul de W7SU

www.OgdenArc.org
