

The Best of Amateur Radio

Welcome to the OARC e-Magazine

www.OgdenArc.org

FEBRUARY 2013

Next Club Meeting/Activity

3rd Saturday 16 February 2013

Topic: Stan Sjol WOKP - JT65 Digital Mode



Larry Griffin AD7GL President



Vice President





Gil Leonard NG7IL Gary Hudman KB7FMS John Shupe K7DJO Secretary Treasurer



Rich Kennedy KF7VAQ **Program Director**



Dave Woodcock WY7P **Activity Director**



Val Campbell K7HCP Webmaster/NL Editor

PREVIOUS CLUB MEETINGS

3rd Saturday 19 January 2013



Marks open invitation to everyone

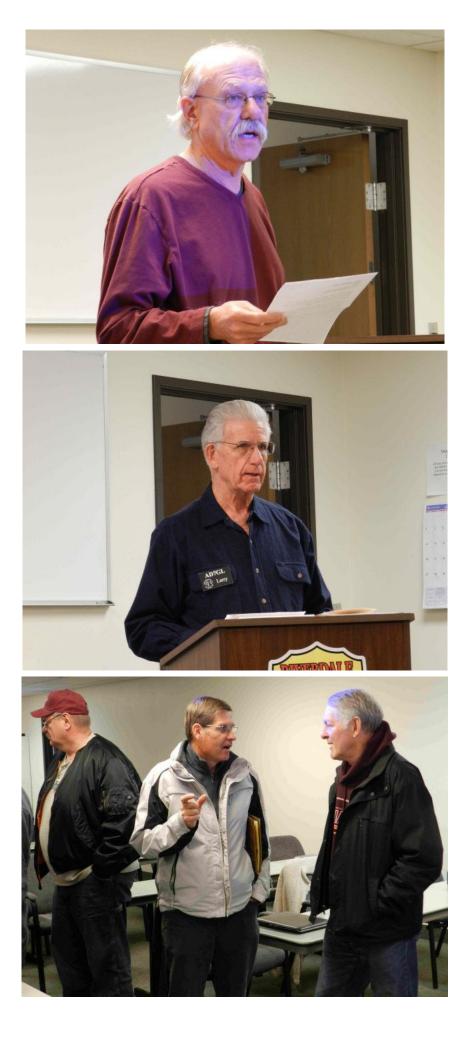
Anyone that would like to see how I do NDB monitoring please give me a call or drop by the shack some evening and get some touchy feely on <u>NDB</u> and <u>SDR</u> receiving world. When one can actually see and hear it at the same time can really make the difference. Mark, Ku7z





activities below 540 kHz

NAVTEX radio teletype - 518, 490, 400 tene
Differential GPS - 300-400 kHz
Weather data stations - 200-450 tene
Non-directional beacons (NDBs)
Long-wave broadcasting - 152 - 686
Lowfers - 137 - 185 kHz, 472 - 510
Time - 60 kHz
Military Transmissions
Natural Radio



NEXT CLUB MEETING

3rd Saturday 16 February 2013

Topic: Stan Sjol WOKP - JT65 Digital Mode

Time: 9:00 AM

Location: Riverdale Fire Station

PLACE YOUR AD HERE

Just Kidding

JOIN OARC

Renew your membership now!

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

Joining is easy. Come to a club meeting or <u>fill out an application form from the club</u> <u>website.</u> Instructions for mailing it are on the form.

DUES: Dues are \$15.00 per person and runs September - August. Additional family members are \$8.00 each.

NOTE: New Hams >>> Membership in OARC is complimentary for remainder of 1st year licensed.

Club Badges

OARC Club badges are still available for all club members and non-members.

The cost is \$8.00 each. You can order the badge with either a "PIN" clip or a "MAGNETIC" clip. Badge includes your Call Sign in large letters and your First Name in a somewhat smaller font in white lettering on a pitch black background. See example below.



Place your order along with \$8.00 in advance for each badge ordered and specify Pin or Magnet style fastener, Call Sign and First Name.

Contact any club officer via email or see them at the next club meeting. See web site <u>www.ogdenarc.org</u> "Club Officers" page.

Club Swapmeet

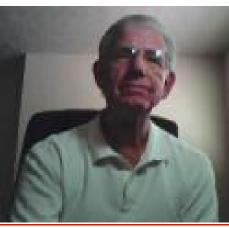
"SALE" or "WANTED" ITEMS NEEDED

OARC's O-bay (On-Line Swap-Meet) items needed for the web site ...

Visit http://www.ogdenarc.org/ then click on Obay-Swap.

QST's and QRM from LARRY'S SHACK







Larry Griffin AD7GL President

QST'S and QRM from Larry's shack

January 30th marked the end of our weekly O.A.R.C. Technician Licensing Class sessions. The classes went very well Thanks to Gil, NG7IL and his well-executed planning. February testing should provide a nice group of new Ham Operators. We also hope to welcome some new club members from this group of students.

Speaking of club members, our club membership could use some help. The paid membership roster is down compared to last year. Your input and ideas on ways to remedy this would be much appreciated. If you know anyone who just needs some encouragement to rejoin our club, please bring them to our next meeting. In the meantime, we greatly value the folks who always support us. They seem to make every meeting and attend every event.

I found a really fun web site in my wanderings around the internet last week. Some of you have probably already visited there, but it was discovery time for me. Did you know you could check HF propagation from eighteen locations around the world in the space of ten minutes? You can check any time 24/7. The beacon stations identify with CW and follow a very specific protocol to help you determine propagation. The transmissions are done in twenty second windows and can be found on the 20, 17, 15, 12, and 10 meter bands. The beacons are sponsored by the International Amateur Radio Union. You might want to try a frequency of 14.100 megahertz for starters. All the information on transmission protocol and the schedule can be found at <u>www.ncdxf.org</u>. The link will be on the right side of the web page.

More fun! Stan, WOKP at our February 16th meeting is going share the secrets of a digital HF mode called JT65hf. Talk about fun --- Stan introduced me to JT65hf on September 13 of last year. Since then, I have logged 147 contacts everywhere with JT65hf. And all on *five watts* from my Yeasu FT-817 (most you know five watts is all the FT-817 will do). My antenna is a G5RV JR located in the attic of my house. The operating program is free on the internet and is very user friendly and easy to set up. Don't miss Stan's presentation.

Thanks for reading this. See you on the 16th.

CLUB NEWS

VE Test Session Weber County: 06 February 2013

Congratulations to the following Hams ...

Kotter, Reed H (K7PRH)	EXTRA
Shannon, Gary L (???)	EXTRA
Wever, Tom J	EXTRA
Lakomski, Peter E (KE7TQV)	GENERAL
Ashmore, Robert E (Jr)	TECH
Child, Ronald D	TECH
Dorius, Douglas, K	TECH
Medes, Mary	TECH
Meredith, Ian J	TECH
Meredith, Steven L	TECH
McFarland, Kevin P	TECH
McFarland, Richard B	TECH
McFarland, Riley F	TECH
Perry, Stephen	TECH
Sandall, James H	TECH

Thanks to the following VE Team members ...

Richard Morrison W7RIK Ken Wilson N7OG Larry Griffin AD7GL Richard Rohde W7DAX Dave Woodcock WY7P Jason Miles KE7IET

MORE CLUB NEWS

ECOMM HAMFEST 2013 REGISTRATION

Weber County ARES Team and OARC are sponsoring a HamFest on the 3rd Saturday 20 April 2013.

EComm 2013 will be held at the Ogden ATC (<u>http://goo.gl/maps/6XyZJ</u>) on April 20. Registration is \$5 and will include 3 raffle tickets.

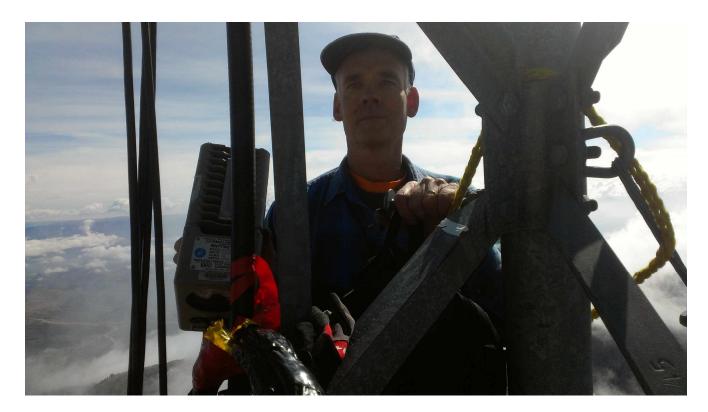
Preregistration (online only) will include 2 additional raffle tickets. Preregistration will still pay at the door. *Last day to preregister is April 13.*

More information can be found on the pre-registration form at the following website...

>>> Pre Register >>> http://tinyurl.com/ecomm2013

MORE CLUB NEWS

Submitted by Scott Willis KD7EKO



Mt Ogden Repeater Site

Mike Fullmer KZ70

This is the 4th picture in a series that Scott Willis KD7EKO and Mike Fullmer KZ7O took from the Mt Ogden repeater site during their recent visit to the site to do necessary repairs.

Scot and Mike are the OARC repeater engineers that keep our club repeaters at Mt Ogden and Little Mountain operational.

MORE CLUB NEWS

Repeater update

Well, this update may be obsolete by the time you are reading it, but it is good as of the first week of February. Our wonderful repeaters have been a real headache the past few months. First of all, lets cover Little Mt.

The Little Mt. Repeaters are powered by solar. There is no commercial power available at the site. So when the batteries do not get enough charge the voltage goes to low and the repeaters turn off. Over the years there has been a few times in the winter when the repeaters have gone down at night. But this year has been really bad. Early in Dec a trip to the hill was made to have a look at the equipment. It was noticed that the voltage seemed to never get above 12.5v. Well, this really is not enough to keep the batteries charged where they need to be. By the time the night is half over the voltage drops too low and down go the repeaters.

It has been concluded that first, the solar controller is not working correctly. it was made by a company that has been defunct for a number of years now. So, this is on the shopping list. Second, the batteries are on their last leg. They were put there in 2005, so they are 7 years old. This is beyond the life expectancy of a typical battery. So, this is also on the shopping list.

All of this equipment is expensive. In the past, the Weber County Emergency Managment dept, which is part of the Weber County Sherriffs Office, has funded the repeaters. Well, money is a little tight, so we have been waiting for some money to free up. We asked for some help from the VHF Society, which they are considering. The latest is that the Sherriffs Office just might be able to get the funds for the controller sooner than they thought. So, if all goes well, we might be able to order a new controller by the end of February. It would be a full PWM controller that will allow us to rewire the solar panels (10 of them) so that even on cloudy days we would still be able to charge the batteries.

Now the batteries. There are currently 4-200 amp hour 12v batteries there. They are very heavy. We are working on getting some new batteries. This will likely happen later this year.

So if all goes as hoped, Little Mt will back to normal in March.

Now, onto Mt Ogden.

The 146.82 repeater has been down for several months. After many hours, many driving trips to the top of Mt Ogden, and two helicopter trips, it has been concluded that something happened at the Mt Ogden site that is causing the 146.82 repeater to hear a signal and lock itself on until it times out. We are convinced that another radio at the site is causing the problem. But finding this radio is like searching for a needle in a very large haystack. It very likely is what we call intermod. This is where another signal, not on the same frequency, comes into the receiver and mixes with the frequencies in the receiver and generates a frequency that just happens to be 146.22, which is the input to the repeater. A very complicated and difficult thing to find. There is a lot of other radio equipment on top of Mt Ogden.

So, what is being considered is the possibility of moving the 146.90 repeater to Mt Ogden. This requires approval of various agencies, which is being worked on as I write this. If this is approved, it could be tried the next time a helicopter ride is available. This is all very "up in the air" right now, so things could change rapidly as we learn more. Also helicopter rides do not come easily. The last ride was a result of a dead Man being found on Mt Ogden a few weeks ago. It was nice of the guy to die just so we could do one last try with the repeater, but it is not exactly how we want to arrange for these rides. Of course, if you want to hike to top and die, let us know, so we can get ready. I think that is way to much info, but now you can say you are informed.

Mike, KZ70

HOBBY NEWS

Announcing the 2013 Utah VHF Society Swapmeet

Same great event, different location!

The 2013 Utah VHF Society Swapmeet will be held on Saturday, February 23, 2013 at the Davis County Fair Park Legacy Events Center, building #2 in Farmington. Doors will open for the general public at 8 AM with setup for sellers to start at 7 AM.

This is <u>NOT</u> the same location as previous years' swapmeets!

Why the change in location?

For years we have been holding the swapmeet at Utah State Fairpark but when the Utah VHF Society went to book the venue for 2013 it was discovered that the combined costs for renting the building, tables, and other miscellaneous things had **more than doubled** and to have used that same venue would have been, let's say, not the best use of Utah VHF Society funds!

So, in 2013 we'll try the Davis County Fair Park and see how it goes. While Farmington is a bit more of a drive for those coming from the south, but it adds only about 10 minutes or so of extra driving time for most people.

How do I get there?

The Legacy Events Center is just west of the Davis County Sheriff's office (where the Davis County Amateur Radio Club holds its meetings) and the location of the Events Center is 151 South, 1100 West.

While we'll be soon be adding additional pictures and maps of the area, you can find directions to the Legacy Events Center here:

• Directions to the Legacy Events Center at the UVHFS blog.

http://www.utahvhfs.org/

MORE HOBBY NEWS

BSA to Offer Amateur Radio Operator Rating Strip

01/18/2013

The Boy Scouts of America (**BSA**) has approved an Amateur Radio Operator rating strip for Scouts and Scouters to wear on their uniforms. According to BSA Communication Services Director Jim Wilson, K5ND, the strip recognizes the Scout or Scouterøs availability as an Amateur Radio operator for communication services for events and activities, as well as emergencies. All registered youth members and adult leaders who also hold a valid FCC-issued Amateur Radio license of any class are eligible to wear the rating strip.

õLast year, the BSA Awards and Insignia Committee <u>introduced the Morse Code Interpreter</u> <u>Strip</u> upon the recommendation of the BSA¢s National Radio Scouting Committee,ö Wilson told the ARRL. õWe are always looking for ways to promote Amateur Radio, both within Scouting and to the world. The National Radio Scouting Committee thought this new Amateur Radio rating strip was a wonderful way to do exactly that, as it readily identifies to everyone that the wearer is a licensed radio amateur, prepared to be useful and to help others.ö

Wilson, who heads up the National Radio Scouting Committee, said that the Amateur Radio Operator rating strip is similar to the Amateur Radio Operator badge offered as a proficiency badge by Scouts Australia, as well as the badge recently introduced by Scouting Netherlands. It follows in the footsteps of the Scout Radioman personal interest badge for Senior Scouts and Explorer Scouts that was offered by the Boy Scouts of America in the 1940s. The strip is worn on the right sleeve (see illustration below).



Our Ogden Radio Club President, Larry, AD7GL found a notice on ARRL.org about a new strip that can be worn on the Scout uniform if you are a licensed ham operator. It was dated 18 Jan 13. I checked at the Scout office a couple of days ago and the Scout shop does not have any in stock or can even identify it on the computer as being a valid item. We will just have to wait to see how long it takes to get them in stock.

In the text of what Larry forwarded to me it also mentioned a "Morse Code Interpreter" strip similar to those who speak another Language (Swiss, German, Japanese etc.) The Scout shop did in fact have them in stock since last year. I was able to buy a couple for my two uniforms. I now have to see where the proper location is to get them sewn on.

Thanks Larry for forwarding the info to me. I hope some of you other scouters can take advantage of these specialialty items. The code patch spells out M O R S E in dots and dashes. You apparently need to show that you can do a five minute code test to be able to wear the patch. I just showed them my General License where I had passed the 13 WPM test years ago.

TNX Kent, WA7AHY

FEATURE ARTICLE

How Do You Choose an Antenna Analyzer?

By Dan Romanchik, KB6NU

A reader recently e-mailed me:

"In the past you told me you started with the Autek RF-1, and later moved to the Palstar ZM-30. I am finally getting around to thinking about purchasing an antenna analyzer, but I am stumped by the choices. In order of increasing purchase price this is what I've turned up:

- * Autek RF-1 \$139.95
- * Autek RF-5 \$229.95
- * Rig Expert AA-54 \$340.00
- * Palstar ZM-30 \$399.99
- * W4RT Electronics MiniVNA \$399.99
- * Rig Expert AA-230PRO \$690.00
- * Timewave Technology TZ-900S \$899.99

"How does one decide? Where does one go to find out the differences? Other than asking a fellow ham, how does one find out which one is the best antenna analyzer without paying an arm and a leg (unless the feature(s) so purchased are deemed worth the cost)?

"Thanks! 73"

When I replied, I noted that he had actually missed several other good choices:

- * Autek VA1 \$199.
- * MFJ 259B \$240.
- * YouKits FG-01 \$250.
- * Comet CAA500 \$450.

The Autek VA1 is actually the antenna analyzer that I first purchased. The MFJ 259B is arguably the most popular antenna analyzer on the market. MFJ has several other models with different feature sets. The YouKits FG-01 is a very cute, little analyzer with a small graphical display. It is made in China and sold in the U.S. by TenTec.

So, how do you choose just one from this list? Well, I think the first thing that you have to ask yourself is how you're going to use the analyzer. If all you're going to do is to check the SWR of your HF dipoles, then buy the Autek RF-1. It's the least expensive unit, is reasonably accurate, and is small and lightweight, making it easy to use outside where your antennas are located.

If you want to do some more serious frequency analysis, then you should be looking at the W4RT miniVNA or, if you have more cash, the Timewave TZ-900s. These instruments can help you do a lot more in-depth analysis of your antenna system. The software for the miniVNA, for example, will easily plot the SWR of a multi-band vertical antenna from 3 - 33 MHz.

Some antenna analyzers do more than just SWR. For example, what sold me first on the Autek VA1 and then on the Palstar was that they also measured reactance. So, you can use the antenna analyzer as an LC meter as well. Palstar also says that you can use the ZM-3 as a low-level signal source. While I have used my Palstar to measure inductance and capacitance, I have yet to use it as a signal source.

Next, you need to consider what bands you'll be using it on. Many antenna analyzers only cover the HF bands. That's a bummer if you like operating 6m, or like to experiment with VHF/UHF antennas. A friend of mine bought the Palstar antenna analyzer after talking to the company at Dayton. At the time, they said that they were planning to come out with a model that covered 6m, as well as the HF bands.

Unfortunately, they never did come out with a 6m version, and he was sorely disappointed. He ended up buying a miniVNA instead. The miniVNA can be used up to 170 MHz right out of the box, and up to 1.5 GHz with an optional extender.

Asking your fellow hams about the antenna analyzers they have is actually a good way to figure out what's best for you. If you ask nicely, they might even let you borrow their analyzers or come over and show you how it works on your antennas.

Reading the reviews on eHam is also a good way to gather information before making a purchase like this. You certainly have to take the reviews there with a grain of salt, but if several reviewers mention a particularly good or particularly bad feature of a product, then it's certainly something worth taking a hard look at.

If you're new to the hobby, starting out small and working your way up might be a good strategy. You could buy one of the less expensive models and get used to how they work, then sell it and make the leap to a more sophisticated unit. The way things are going, you should be able to sell your first antenna analyzer for at least 80% of what you paid for it.

The March 2012 QST contains an in-depth review of four analyzers (available online to ARRL members), including the Comet CAA-500, MFJ-266, RigExpert AA-54, and the Youkits FG-01. Each analyzer reviewed had various plusses and minuses. Even if the unit you are considering was not reviewed, the article provides a guide to the kinds of questions you should be asking as you go through the selection process.

When he's not analyzing antennas, Dan, KB6NU blogs about amateur radio at KB6NU.Com, writes and publishes the "No-Nonsense" series of amateur radio license study guides, and just has fun with amateur radio. You can reach him by e-mail at cwgeek@kb6nu.com, @kb6nu on Twitter, or on 40m CW many evenings.

ANNOUNCEMENTS

Next Club Meeting: 3rd Saturday of each Month

- The Ogden Amateur Radio Club meetings are usually held on the $\mathbf{3}^{\mathrm{rd}}$ Saturday of each month.

Time: 9:00 AM

Location: Riverdale Fire Station

Meeting/Activity: See notice above

• 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 Wednesday 05 June 2013

• 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: New for 2013

Weber County Sheriff Office Training Room 712 W 12th Street Ogden Utah

Contact: VE Liaison:

Rick Morrison W7RIK

morrisonri@msn.com (801-791-9364)

Jason Miles KE7IET (IT)

Mary Hazard W7UE (advisor) <u>w7ue@arrl.net</u> (801-430-0306)

Cost: \$ 14.00

Two forms of $\mathbf{ID},$ 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

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

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

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.

OTHER AREA REPEATERS

FREQ	CLUB	TONE	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-	GSARC	123.0	Brigham City
145.430-	GSARC	123.0	Brigham City
147.220+	GSARC	123.0	Brigham City
448.300-	GSARC	123.0	Brigham City
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	100.0	Lewis Peak
	County		

AREA CLUB MEETINGS & WEB SITES			
CLUB	WEB SITE	DATE/TIME	LOCATION
OgdenARC	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 10:00 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
CSERG	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
GSarc	Ubetarc.org	Check Website	Check Website
Utah DX Association	ud×a.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)
WDArc	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 @ 9:45 AM	Orden Old Timens IIF not	7 102 Mb- HE LOD
Sunday @ 8:45 AM	Ogden Old Timers HF net GS ARC	7.193 Mhz HF LSB
Sunday @ 7:30 PM		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	GS ARC	145.290-, 145.430-, 448.300- (all 123.0)
Wednesday @ 8:30 PM	CSERG	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 @ 8:00 PM	Weber State ARC	146.820 - 123.0 (coming soon)
Thursday @ 8:00PM	State RACES VHF/IRLP	145.490 - 123.0, 146.680 - 123.0
		3 rd Thursday - even months only
Thursday @ 8:30 PM	Davis ARES	147.420 = simplex
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

OARC OFFICERS

President: Larry Griffin AD7GL

Vice Pres: Gil Leonard NG7IL

Secretary: Gary Hudman WB7FMS

Treasurer: John Shupe K7DJO

Program Director: Rich Kennedy KF7VAQ

Activity Director: Dave Woodcock WY7P

"WATTS NEWS" e-Magazine

NL Editor: Val Campbell K7HCP

OTHER CLUB APPOINTMENTS

Webmaster: Val Campbell K7HCP
Historian/Librarian: Kent Gardner WA7AHY
Advisor: Kim Owen KO7U
Advisor: Kent Gardner WA7AHY
Advisor: Stan Sjol WOKP
Photographer: John Shupe K7DJO
QSL Manager: John Shupe K7DJO
Equipment Manager: Val Campbell K7HCP
Repeater Engineer: Mike Fullmer KZ7O
VE Liaison: Richard Morrison W7RIK Jason Miles KE7IET (IT) Mary Hazard W7UE (advisor)

Club Call Sign Trustee: Larry Griffin AD7GL



<u>www.OgdenArc.org</u>