



# WATTS NEWS



**The Best of Amateur Radio**

## OARC e-Magazine

[www.OgdenArc.org](http://www.OgdenArc.org)

**NOVEMBER 2014**

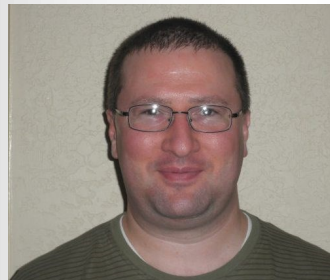
**Next Club Meeting/Activity**

**Meeting: Riverdale Fire Station**



**Gil Leonard NG7IL**

**President**



**Jason Miles KE7IET**

**Vice President**



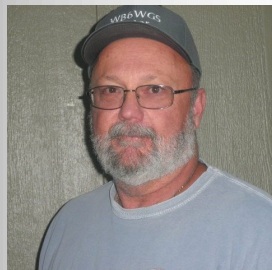
**Larry Griffin AD7GL**

**Secretary**



**John Shupe K7DJO**

**Treasurer**



**Pete Heisig WB6WGS**

**Program Director**



**Mike Taylor KE7NQH**

**Activity Director**



**Val Campbell K7HCP**

**Webmaster/NL Editor**

---

## PREVIOUS CLUB MEETINGS

---

**3rd Saturday 18 October 2014**

**9:00 AM**

**Riverdale Fire Station**

**Meeting :**

**FLdigi software and MT632000 L modem**

**By Gil Leonard NG7IL**

---

### **NEXT CLUB MEETING/ACTIVITY**

**3rd Saturday 15 November 2014**

**9:00 AM**

**Riverdale Fire Station**

**Topic: Antenna Basics**

**by Mike Fullmer KZ7O**

The November meeting of the Ogden Amateur Radio Club will be featuring ... Mike Fullmer KZ7O who will present to the club the Basics of Antennas and how that can be applied to the hobby of Amateur Radio. Don't miss this meeting!

---

## PREVIOUS MEETINGS PICS

---



Gil's  
(NG7IL)  
enthusiasm  
is evident  
as he  
conducts  
his first  
meeting as  
our new  
president.

Jared (KD7BDG)  
presents our club  
with the results  
of his recent  
effort to get us  
compliant with  
the new IRS rules  
regarding non-  
profit ordina-  
tions and clubs.  
Thank you Jared.  
We appreciate  
you a lot.







Gil NG7IL presented FLdigi software installation and operation.





Standing room only!



---

## OARC COMING EVENTS

---



### **-Family Dinner -**

**3rd Saturday 20 December 2014  
6:30 PM  
Golden Corral  
11th & Washington Blvd, Ogden**

---

### **-Tech Licensing Class -**

**One day crash course**

**Saturday 24 January 2015 @ 8:00 AM**

**Special VE test Session follows at 3:00 PM**



## QRM from Gil



**Gil Leonard NG7IL**

Wow, what a great turnout for our first meeting of the year. We filled every chair we could find. What a great mix of members and visitors. I am looking forward to the rest of the year, it will be great one.

Our next meeting will follow a similar format with a minor change at the end. I suggested we try to have a discussion group of sorts after our main speaker. We will try to entertain several areas of interest. I will have my laptop and we can go over some of the questions concerning FLdigi. Other groups can be setup based on common interest. Anyone wishing to volunteer to oversee a group is encouraged to do so.

We will have one item of business we must cover in November. Many thank to Jared Erickson for bringing the club back into compliance and updating the "by laws". These documents are available for viewing on the Club website. We will ratify these documents at our November meeting. Please read over them before the meeting. <http://ogdenarc.org/>

Your input on subjects you would like to explore at upcoming meetings is requested. Feel free to contact any of the board members or myself directly with your ideas. If you have a particular area of radio that you would be willing to share with the club, we would like to hear from you too. Please don't feel you need to be an expert. By definition, we are all amateurs. As a teacher, the teacher often walks away with more than they give. What do you have to share?

Jason will be conducting a one day technician license class on January 24, 2015. I am sure he would appreciate your help and support. There will be a testing session immediately following the class. Walk ins are welcome. Let your friends and neighbors know about the class and test. This would be a good time to think about upgrading your own license. More details to follow.

See ya all on the 15th,

73 de Gil

NG7IL

## CLUB NEWS

### Congratulations to the following new Hams from the Weber Co VE Test Session 01 Oct 2014

Rudd, Travis	Extra	KG7NVA
Nilson, Susan	Gen	KF7YYP
Owens, Max	Gen	KF7IDP
Rudd, Bruce	Gen	KG7NUZ
Adams, James	Tech	KG7OGY
Bump, Shannon	Tech	KG7OGW
Karn, Bruce	Tech	KG7OGX
Mc Crary, John	Tech	KG7OGV
Moser, Jason	Tech	KG7OGU

**Welcome to the following OARC “New-Comers” that visited our club meeting this past month. We welcome you back soon!**

Steve Perry — KG7BIK  
Jerry Mohr — KG7WJH  
Forrest Terrell — KG7NJF  
Richard Terrell



## CLUB NEWS

### Club Badges

John K7DJO our club treasurer is worried about several of you that have not picked up your new pre-paid OARC club badge. Your badge doesn't look quite like this one because it has your call sign and your name on it but we are quite sure you will enjoy yours just the same. You can claim your badge at any future club function, meeting, activity or event or contact our club badge czar John K7DJO.



---

AK7PH, Patrick  
KB7KP, Dave  
KD7FDH, Luke  
KD7OYH, Paul  
KE7IEV, Ceva  
KE7VVT, John  
KF7HNU, Ralph  
KG7FMY, Ryan  
KG7HYP, Neal  
KG7HYQ Matt  
KG7IGW Jerry  
KG7IHA, Tom  
KG7LIG, Andrea

## CLUB NEWS

OARC is in the process of updating the club ByLaws and Articles of Incorporation. Jared KD7BDG has spend considerable time preparing these documents. Thank you very much Jared. We appreciate all that you have done to make this possible.

Please review the following two documents prior to the November meeting for ratification at that time.

Go to the club website homepage and click on the links provided on the left panel.

**Oarc By-Laws [proposed 18 October 2014](#) <<< review for future ratification <sup>NEW!</sup>**

**Oarc Articles of Inc [proposed 18 October 2014](#) <<< review for future ratification <sup>NEW!</sup>**

73, Val K7HCP


# CLUB GAMES

## GET TO KNOW YOUR FELLOW HAM

This month: Test your knowledge of our current OARC officers and board members.

How to play: Go to the OARC website home page and click the link "OARC Monthly Cross Word Puzzle" from the right side panel. Then print the .PDF file.

GET TO KNOW YOUR FELLOW HAM														
November: OFFICERS & BOARD MEMBERS														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														



(Print before playing puzzle)

by K7HCP

**HINT:**  
Refer to OARC website:  
"Member Roster"

**DOWN**

3 Exclusive CW operator

5 Outside ham shack

7 Club mentor/elmer (call sign reversed)

9 K-9 fox hunts

12 IT Guru

**ACROSS**

5 Newest club officer

6 Moved from CA

7 VE Liaison

8 Two wheel mobile

10 Web master

---

## 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**.

---

## Featured Item

---

**ITEM #156**

**WANTED to BUY:**

**Two 10- foot straight Rhon 25 tower sections - Clearfield area.**

**PRICE: \$ (TBD)**

**CONTACT: Dan N7JCO, 801-710-3129**



# WATTS-NEWS

by K7HCP

## OARC RECENT/PAST HISTORY

At the August Steak Fry in the year 2004, OARC abruptly changed its focus and direction. Gary Liptrot N7ZI was elected president that day and under his direction and leadership the club shifted to be more of a 'Social and Hobby' Amateur Radio Club as opposed to an 'Emergency Preparedness' ARES/Races club.

While maintaining VHF/UHF content the club started once again to consider HF communications in its meeting topics and external activities. It was at that time that Gary asked me to be the club's "Watts News" newsletter editor and the OARC website <http://OgdenARC.org> webmaster. That was 10 years ago this month. This month's news release, November 2014, will be my 121<sup>st</sup> issue. Past issues can be accessed at the club's website 'newsletter archive' page.

A complete pictorial summary of all of the club officers since that time can be viewed by clicking on the **OARC Officers: [Review Club Officers and Volunteers since 2004](#)** link from the right side panel of the club's website homepage. While you're there be sure to visit the link to our current club officers and board support staff at **OARC Officers: [Meet your 2014/2015 Club Officers](#)** NEW! .

**73, Val Campbell K7HCP**

Chart follows ...

[To Old Newsletters](#)  
[Back to Latest Edition](#)

"Watts News"

<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>	<a href="#">January</a>
<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>	<a href="#">February</a>
<a href="#">March</a>	<a href="#">March</a>	<a href="#">March</a>	<a href="#">March</a>	<a href="#">March</a>	<a href="#">March</a>	<a href="#">March</a>	<a href="#">March/April</a>	<a href="#">March</a>	<a href="#">March</a>
<a href="#">April</a>	<a href="#">April</a>	<a href="#">April</a>	<a href="#">April</a>	<a href="#">April</a>	<a href="#">April</a>	<a href="#">April/May</a>	<a href="#">March/April</a>	<a href="#">April</a>	<a href="#">April</a>
<a href="#">May</a>	<a href="#">May</a>	<a href="#">May</a>	<a href="#">May</a>	<a href="#">May</a>	<a href="#">May</a>	<a href="#">April/May</a>	<a href="#">May</a>	<a href="#">May</a>	<a href="#">May</a>
<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>	<a href="#">June</a>
<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>	<a href="#">July</a>
<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>	<a href="#">August</a>
<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>	<a href="#">September</a>
<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>	<a href="#">October</a>
	<a href="#">November</a>	<a href="#">November</a>	<a href="#">November</a>	<a href="#">November</a>	<a href="#">November</a>	<a href="#">Oct/Nov</a>	<a href="#">November</a>	<a href="#">November</a>	<a href="#">November</a>
	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>	<a href="#">December</a>

<b>2004</b>
<a href="#">November</a>
<a href="#">December</a>

100%

Past issues of the club newsletter "Watts-News" can be accessed at the clubs website 'newsletter archive' page.

## CLUB REPEATER NEWS

### OARC Repeater Sites



Scott Willis KD7EKO



Mike Fullmer KZ7O

**Scott Willis KD7EKO and Mike Fullmer KZ7O are the OARC repeater engineers that keep our club repeaters at Mt Ogden and Little Mountain operational.**

**More to come  
following the next 3 pages of commercials.**

**Please stay tuned.**



## OARC YAHOO GROUP



### Did you know that OARC has a Yahoo Group?

We occasionally communicate with our OARC members via the Yahoo Group. Receive notices regarding upcoming club meetings and all future e-newsletter release notices and much more.

You can also send notices to other group members yourself.

It's easy to sign up...



Just click on the icon at the top of the club website home page and then follow the Yahoo Group instructions to create yourself a user ID and password.

## Club Badges

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

The cost is \$10.00 each. The badge comes with 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 with the club logo. See example below.



Place your order along with \$10.00 in advance for each badge ordered and specify Call Sign and First Name. Contact webmaster or any club officer via email or see them at the next club meeting. For additional information see club website left side menu and click “Join” to fill out a club application form to order a club badge.

# OARC MEMBERSHIP DRIVE

## SUPPORT YOUR RADIO CLUB

**Don't forget to signup/renew your OARC membership now (\$15) which runs August to August. Consider signing up your spouse as well.**

**Ham + Spouse = \$15 + \$10 = \$25**

**THANK YOU FOR YOUR SUPPORT**

## 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.

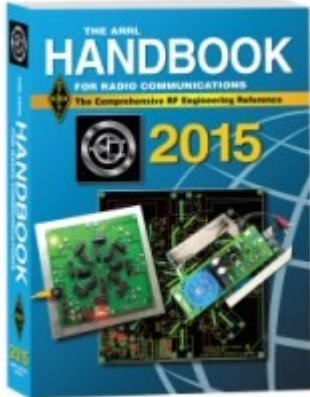
Joining is easy. Come to a club meeting or fill out an application form from the club website (click "Join" from the left side main menu). Instructions for mailing on the form.

**DUES:** Dues are \$15.00 per person and runs August - August. (Ham + spouse = \$25.) More than one ham in the family? Consider the OARC Family plan for \$25.

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

## HOBBY NEWS

### The 2015 Edition of *The ARRL Handbook for Radio Communications* is Now Available!



The 2015 *ARRL Handbook for Radio Communications* is [now shipping](#), and, while supplies last, you can get the hardcover edition for the softcover price. *The ARRL Handbook* provides the theory, practical information, and construction details to expand your knowledge and skill as an Amateur Radio operator and experimenter. This 92nd edition of *The ARRL Handbook* is at the forefront of the growing field of wireless telecommunications. The book covers not only the fundamentals of radio electronics -- analog and digital -- but also offers practical circuit and antenna designs as well as information on computer-aided design, digital operating modes, equipment troubleshooting, and reducing RF interference.

Many projects and construction articles are included to help enhance your station and expand your participation as an active radio experimenter.

Practical applications and solutions make *The ARRL Handbook* a must-have for hobbyists and technical professionals. For years now, the Handbook has been a staple on the work bench and operating desk as well as in university libraries and classrooms.

*The ARRL Handbook* is available in hardcover and softcover from the [ARRL Store](#) or your [ARRL Dealer](#). [Hardcover](#), ARRL Order No. 0218, ISBN: 978-1-62595-020-8, \$59.95 retail, special offer \$49.95. [Softcover](#), ARRL Order No. 1920, ISBN: 978-1-62595-019-2, \$49.95 retail. Call (860) 594-0355 or, toll-free in the US, (888) 277-5289.





## ARRL Board May Seek Member Input on 15 Meter Novice/Tech Digital Privileges

10/21/2014

A proposal aired at the July ARRL Board of Directors meeting endorsing additional HF digital privileges for Technicians and referred to the ARRL Executive Committee (EC) for study came in for considerable discussion when the EC met on October 4 in Memphis. The original motion by ARRL Southeastern Division Director Doug Rehman, K4AC, had called for a *Petition for Rule Making* to the FCC seeking digital privileges for Techs on narrow segments of 80, 40, and 15 meters. Rehman's motion had noted that Technicians already enjoy digital privileges on 10 meters, a band with highly variable propagation that will diminish as the sunspot cycle declines.

After discussing the proposal's pros and cons, the EC put the ball back into the Board's court in a modified form: The EC recommended that the Board consider soliciting input from the membership on adding Novice/Technician data privileges within their existing 15 meter subband. In his original proposal, Rehman had pointed out that text messaging, a medium preferred by today's youth, bears "great similarity with amateur digital communications."

"This is not a proposal that the Board *adopt* data privileges for Techs and Novices on 15 meters as an objective, and it is most definitely not an ARRL proposal to the FCC," stressed ARRL CEO David Sumner, K1ZZ, a non-voting member of the EC. "That would come later, if at all, after the Board has had an opportunity to weigh membership input."

In other matters, ARRL General Counsel Chris Imlay, W3KD, told the EC to expect an FCC *Notice of Proposed Rule Making* "sometime in the next few months" that will propose the elimination of the existing symbol rate limit on HF data communication. The *NPRM*, in response to an ARRL [Petition for Rule Making](#) filed last November, is expected to leave open for comment the specific bandwidth limitation that should replace it, and it may address additional topics.

Imlay also briefed the committee on recent discussions with US House Telecommunications Subcommittee staff regarding "[The Amateur Radio Parity Act of 2014](#)." The bill, H.R. 4969, had attracted 47 co-sponsors by the time Congress recessed. Another 10 representatives have committed to signing on when Congress returns next month after the elections.

Imlay noted there has been no action on the League's 2012 *Petition for Rule Making* to create an MF Amateur Service allocation at 472-479 kHz, nor on ET Docket 12-338, regarding implementation of the Final Acts of World Radiocommunication Conference 2007. There also was nothing new to report regarding other allocation issues, including an Amateur Service allocation at 135.7-137.8 kHz and upgrading 1900-2000 kHz to primary.

Imlay observed there had been a recent uptick in enforcement activity by the FCC. The EC also discussed the status of the 1984 agreement between the FCC and the ARRL that established the Amateur Auxiliary to the FCC Field Operations Bureau — as a part of the Official Observer program — and the desirability of revitalizing this relationship with the FCC's Enforcement Bureau. Imlay further reported that a review of power line interference case files is underway to identify serious cases still in need of attention.



## **WRMI—Shortwave’s Newest Broadcaster Takes to the Air at**

**7:00 pm Eastern on Oct. 31**

(Hollywood, FL) Oct. 21, 2014 – Global 24 Radio LLC announced today that its inaugural broadcast will go live at 7:00 p.m., Friday, Oct. 31 (0000 UTC November 1), with a line-up of new and well-known programs and around-the-clock English language programming. The broadcast can be heard 24 hours a day, 7 days a week on 9395 kHz on WRMI broadcasting from Okeechobee, Florida. “We’re very excited about launching Global 24 and the important contributions it will make to shortwave radio listening – as both a medium worth preserving and a vital part of the modern media mix for so many listeners around the world,” said Phil Workman, general manager of Global 24. “Our broadcast will appeal to dedicated shortwave listeners (SWL) all over the world looking for breaking news, opinion and music.” Global 24 aims to revitalize the shortwave medium by bringing general interest news and entertainment into sharper focus for listeners looking for high quality programming on a daily basis. Regular listeners will be informed, entertained and engaged in an ever more complex world. According to Jeff White, general manager of WRMI, “Global 24 represents another step in the long overdue commercialization of shortwave radio. We are excited to be working with them on their ambitious program to engage and entertain a global audience.” Additional press releases in coming days will announce our broadcast schedule, our Listeners’ Club, contests, sponsors, our web store, staff and much more. Follow us on Twitter at @Global24Radio or on Facebook at <https://www.facebook.com/global24radio>. Visit our website: <http://www.global24radio.com> to join our email newsletter for the most current updates.

## GUEST ARTICLE by KB6NU

### Are knobs and buttons toast?

In a recent column on EETimes ([http://www.eetimes.com/author.asp?doc\\_id=1324283](http://www.eetimes.com/author.asp?doc_id=1324283)), an old colleague of mine, Martin Rowe, says, "Knobs and buttons are slowly on their way out. Get used to it." He's referring to the controls on oscilloscopes, but if he were a ham, he might just as well be talking about amateur radio transceivers, too.

We already see this happening in amateur radio. FlexRadio, and a couple of other companies, already make transceivers with no front panel controls. You must have a computer to use them.

Might we even start to see this with handheld and portable equipment? For example, how much cheaper could they make a Baofeng if to use it, you had to also have an Android or iPhone app to act as the human interface?

To be honest, I haven't really thought about this much myself. I'm enough of a dinosaur to still prefer buttons and knobs, but having to use on-screen controls certainly doesn't turn me off. Rowe claims, however, that "as the old-timers retire (or in our case as older hams become SKs), younger engineers (or young hams) will expect every user interface to function like a phone or tablet. Don't believe me? Just wait."

I got several interesting replies to this idea on my blog. Bill, AD8BC says, "What would be fun would be an open-source mobile radio. I picture an RF deck with a Raspberry Pi and touch screen for control, the Pi would simply tell the RF deck where to tune and handle the interface and scanning functions, it would ship with a stock app, but you could make your own. Built in support for SDR stuff, packet, APRS, remote operation...."

Most commenters, however, even the younger guys, still seem to prefer analog controls. Lucien, DH7LM, says, "I'm a newly licensed ham and I like both - experimenting with advanced computer stuff like SDRs and the great feeling a real radio provides!" Grant, KJ6ZZD, says, "Knobs perform some tasks better than a screen can. Knobs provide some tactile feedback that a screen just can't."

So, what do you think? Are knobs and buttons toast, or do you think there's still some life left in analog controls?

---

You'll find KB6NU working on updates to his "No Nonsense" study guides or blogging about amateur radio at [www.kb6nu.com](http://www.kb6nu.com).

## **A Different Way to Get Phased**

It was a typical Sunday at Church. Teachers were teaching, children and adults were learning, all in a peaceful and comfortable atmosphere.

Then it happened. A loud explosion was heard. The lights in the chapel dimmed and went out. Strangely, the lights in the hallways and other parts of the building stayed on. The chapel lights were of the incandescent type.

No one in the chapel seemed to be concerned, probably because we had all experienced power outages and knew that the electricity would soon magically come back on. There was enough natural light to continue the meeting. After a few minutes, I got up and went into the foyer. The first thing I noticed was that the fluorescent fixtures in the halls were still on, but were somewhat dimmed and there was a noticeable low-level flickering. After making a complete circuit of the hallways, I came upon one of the female members who also had become concerned.

In talking about the problem at hand we identified where two circuit breaker panels were and we both wondered where the main breaker/cutoff switch was. We thought it might be downstairs in the furnace room, but the chain link door there was closed by a padlock.

I went outside and walked around the building. In front, a neighbor was out in his front yard. I called down to him and he too was wondering about the explosion.

Upon reentering the building, the Bishop and a few others were in discussion. I opened the door to the cultural hall and immediately smelled hot or burned wiring, probably coming from the ceiling fluorescent fixtures. The Bishop thought it best to play it safe and asked me to call 911 and to get the fire department.

When I called, I told the dispatcher that there was no fire at present, but we could still use some help in determining if any problems existed. She told me that the fire department treated all calls like this to be real fires and asked that we vacate the building. We did not pull the fire alarm, but went class to class and asked everyone to leave the building. Everyone congregated at the bowery which was immediately North of the church. Luckily it was a comfortable warm summer day.

A few minutes later two fire engines appeared. We took the firemen to the cultural hall where the suspicious smells were coming from. Several firemen broke out some ladders and began checking the fluorescent fixtures. Another checked the power transformer outside. It was then that he noticed a dead squirrel at the base of the power pole.

From there on, things began making more sense.

Our Church leader, the Stake President, arrived on scene. He happened to be an electrician. He immediately checked the breaker panels exactly as the firemen had done by skillfully running his fingers down the row of breaker switches to try to identify any that had tripped. None had.

The power company was called. It wasn't long before the fire department's bolt cutter came out, the lock to the downstairs furnace room was cut and the main cutoff switch was located.

When the power company truck arrived, the main power switch was then turned to OFF. A lineman used a long insulated pole and pulled out a blown line fuse near the pole transformers and replaced/inserted a new fuse. The main power switch inside was moved to the ON position and everything was restored to normal operating condition. There was no more smelly wiring and the florescent fixtures came on in full brightness without any flickering.

During the evacuation, the scheduled Sunday School meeting was missed, but the main Sacrament meeting in the chapel was held with only a slight delay in the starting time. So, with the expertise of the fire department and our church leader/electrician the day turned out to be a successful one, except for the squirrel, of course.



Pic #1



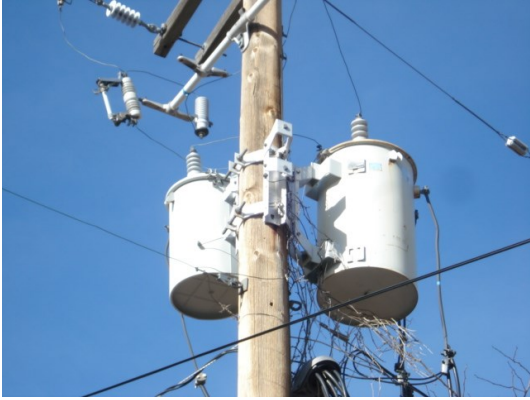
Fifth and Sixth Ward building's three transformers. The wires go down the pole and are fed underground into the building's main switch in the furnace room. The danger remains for more squirrel problems.

Pic #2 & Pic #3



Adams Ward building. The three wire feed goes into the conduit, goes underground to the side of the building and goes into the power transformers inside a protective housing. There is little or no danger that a squirrel problem would occur since the transformer leads are protected by the enclosure.

Pic #4



Stake Center building. Notice the empty mounting hardware closest to the front. Apparently there was a third transformer there at one time. It apparently was replaced by a larger transformer that has two transformers in one container. There appears to still be a danger that a squirrel could cause a problem like the Fifth and Sixth Ward building experience. I wonder what would happen if two legs were shorted out?

Pic #5 & Pic #6



Nancy Building. The pole has no transformers like the Adams building. The power lines go down the pole and go underground to a ground mounted transformer cabinet. There is little danger that a squirrel would cause a problem here.

*Now we come to the Why of all this exercise. Note that the black text was what I thought the wiring configurations should be. After some lively discussions at Field Day on the subject and great input from club member Mike Fullmer, KZ7O **the red text** corrects my novice notions.*

I was told by Rocky Mountain Power that the Fifth and Sixth Ward building wiring was in a three-phase “Delta” configuration. All of our electricity in the United States and probably world-wide uses three phase power. It is the nature of the power generators, whether they be hydro, nuclear or coal-fired generators. The three transformer configuration is somewhat typical. The electricity usage in large buildings, such as church and business-type applications need the three transformers to handle the loads.

Most single homes have a one transformer (still three-phase) **no it is not. It is a single phase transformer. There may be three phases on the pole but the transformer is only connected across two of the three phases. In most local neighborhoods however, there is only two of the three phases present on the pole. In this case, the power company only connected two of the phases to run to your neighborhood.**

**Some other neighborhood would have two different phases run to it. This way they only have to run two power wires to your neighborhood. The power company can run 3 different sets of lines to local neighborhoods. They can choose A and B, B and C or C and A.**

**They calculate how much each neighborhood will draw as far as power goes so that they can keep a reasonable balance of loads on the 3 phase power feeding all three neighborhoods. For a typical industrial location or larger building, such as some church houses, they will bring in three phases to the building pole. At your local transformer, it reduces this typical 4160v to 120v 2 phase or 120v 3 phase. Your house has 120v 2 phase power coming into it, which was derived from two of the three phase wires which generally feeds several homes.**

The delta connection has the problem of a leg “floating” when one side is blown by a squirrel. The voltage could be 105 volts or 75 volts or whatever. This is what caused the fluorescent fixtures to start getting hot when the voltage wasn't high enough to keep the ballast transformers in the light fixtures within their normal operating boundaries.

Not totally true. This only occurs if one fuse on the **primary** side of the distribution transformer blows. If it is a fuse on the secondary side then that particular phase goes totally dead. It does not matter if the transformer is a delta to delta or a delta to wye transformer. As long as it is a 3 phase transformer this will happen.

Newer installations generally use a three-phase “Wye” configuration. **No.** All pole to pole distribution power is delta. The wye is generated in the transformer where it then feeds the building. Wye power is not distributed around town. There is a good reason for this. Wye power requires a 4<sup>th</sup> wire. Delta power only requires 3 wires. Most newer installations have a delta to wye transformer, which provides the wye power to the building.

It is my understanding that if a squirrel shorted out one leg the voltage would be cut off and the building would be without power, but that would get rid of the danger that the fluorescent fixtures and wiring would not overheat or start a fire.

As mentioned above, if it is a fuse on the primary (input) side of the transformer, it does not matter what kind of transformer it is (delta to delta or delta to wye), this same thing happens and one leg will go low, but not to zero. For the power company, they only fuse the primary side of your local transformer. They leave it to the building to fuse the secondary side, inside your building.

They sell commercial 3 phase power monitors that monitor all 3 phases and detect if one goes low or below a specific voltage. These devices typically close a relay which can then be used to drive some kind of switch, such as a 3 phase contactor, or a 3 phase circuit breaker, to protect downstream equipment such as your church building. The power company does not protect for this, the end user must do this.

Figure 3. Three-Phase 120/240V Delta

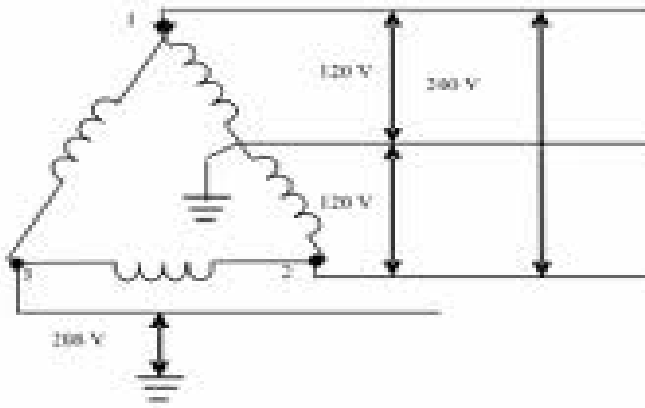
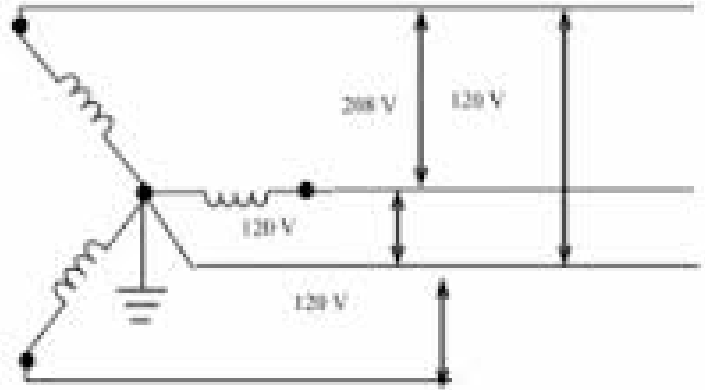


Figure 1. Three-Phase 120/208Y



The above two diagrams are included to show the difference between the Delta and Wye wiring. You can imagine a D and a Y. There are many ways to configure either type. It just depends on the application.

I am not an expert in the electrical engineering of these methods, but do know that whatever the type of connection at the Fifth and Sixth Ward building it caused some disturbing symptoms that we should try and remember in case other squirrels come snooping. The wiring of the ground connections are of particular interest. Navy ships have three phase electrical generators, but there is no ground to attach to so they have to be configured other ways.

Conclusions/suggestions:

- ♦ The buildings being supplied by pole mounted transformers are at risk of a squirrel problem happening again.
- ♦ The buildings that have ground mounted transformers inside protective steel cabinets are not at risk.

TNX

Kent, WA7AHY



## ANNOUNCEMENTS

### Next Club Meeting:

**3<sup>rd</sup> Saturday of each Month**

The Ogden Amateur Radio Club meetings are usually held on the **3<sup>rd</sup> Saturday** of each month.

### Meeting/Activity:

**See notices above**

Talk-in: **-146.82 (pl 123.0)**

Check OARC web site for details

[www.ogdenarc.org](http://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 Feb, Jun & Oct**

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

**Time: 06:00 PM** *Walk-ins allowed*

**Location: Permanent location**

Weber County Sheriff Office  
Training Room  
712 W 12<sup>th</sup> Street Ogden Utah

### Contact: VE Liaison:

**Rick Morrison W7RIK** (Liaison)

[morrisonri@msn.com](mailto:morrisonri@msn.com) (801-791-9364)

**Jason Miles KE7IET** (IT)

**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](http://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.

## 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.

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

<b>OTHER AREA REPEATERS</b>			
FREQ	CLUB	TON E	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
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
147.100+	Morgan	123.0	Morgan Co
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 Co	100.0	Lewis Peak

## AREA CLUB MEETINGS & WEB SITES

CLUB	WEB SITE	DATE/TIME	LOCATION
OgdenARC	<a href="http://ogdenarc.org">ogdenarc.org</a>	3 <sup>rd</sup> Saturday 09:00 am	Check OARC web site ...
WC ARES	<a href="http://ogdenarc.org/join.html#ares">ogdenarc.org/ join.html#ares</a>	2 <sup>nd</sup> Thursday 06:30 pm	Weber Co. Library Ogden Utah
WC Sheriff Comm-O		1 <sup>st</sup> Saturday 10:00 am	Weber Co. Sheriff Complex West 12 <sup>th</sup> Street Ogden Utah
Barc	<a href="http://barconline.org">barconline.org</a>	2 <sup>nd</sup> Saturday 10:00 am	Cache Co. Sheriffs Complex 200 North 1400 West Logan Ut
CSERG	<a href="http://dcarc.net/ares.htm/">dcarc.net /ares.htm/</a>	Last Wednesday 8:30pm	Clearfield City Hall Clearfield Utah
DCarc	<a href="http://dcarc.net">dcarc.net</a>	2 <sup>nd</sup> Saturday 10:00 am	Davis Co. Sheriff Complex Farmington Utah
NU Ares	<a href="http://home.comcast.net/~noutares/">home.comcast.net/ ~noutares/</a>	3 <sup>rd</sup> Wednesday 7:00 pm	Cache Co. Sheriff Office Logan Utah
Uarc	<a href="http://xmission.com/~uarc/">xmission.com /~uarc/</a>	1 <sup>st</sup> Thursday 7:30 pm	UofU EMC Bldg Room 101 Salt Lake City Utah
GSarc	<a href="http://Ubetarc.org">Ubetarc.org</a>	Check Website	Check Website
Utah DX Association	<a href="http://udxa.org">udxa.org</a>	3 <sup>rd</sup> Wednesday check web page for details	check web page for details Salt Lake City area
UvhfS	<a href="http://ussc.com/~uvhfs/">ussc.com /~uvhfs/</a>	Each Tuesday 8:00 pm (refer to web site)	Weekly 2 meter net (no eye ball meetings)
WDArc	<a href="http://westdesertarc.org/">westdesertarc.org/</a>	1 <sup>st</sup> Tuesday 7:00 pm	Tooele County Courthouse Tooele Utah
WsuArc	<a href="https://groups.google.com/forum/#!forum/wsuarc">https://groups.google.com/forum/#! forum/wsuarc</a>	3 <sup>rd</sup> 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 <b>HF LSB</b>
Daily @ 07:30 PM mt	Utah Code net HF	3.570 Mhz <b>HF CW</b>
Daily @ 02:00 UTC	Utah Farm net HF	3.937 Mhz <b>HF LSB</b>
Sunday @ 8:45 AM	Ogden Old Timers HF net	7.193 Mhz <b>HF LSB</b>
Sunday @ 7:30 PM	GS ARC	145.430 - 123.0 (training net)
Sunday @ 8:30 PM	SATERN Net	145.900 - 123.0
Sunday @ 9:00 PM	Morgan Co Net	147.100 +123.0
Sunday @ 9:00 PM	UARC Info net	146.620- no PL tone required
Monday @ 9:00 PM	2-meter SSB net	144.250 Mhz <b>2-meter USB</b>
<b>Tuesday @ 8:00 PM</b>	<b>Weber ARES</b>	<b>448.600 - 123.0</b>
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	CSEGR	145.770 simplex
Wednesday @ 9:00 PM	No. Utah 10m HF net	28.313 Mhz <b>HF USB</b>
Wednesday @ 9:00 PM	6-meter SSB net	50.125 Mhz <b>6-meter USB</b>
Thursday @ 6:30 PM	Davis Co Elmers Net	147.040 + 123.0 <b>New Hams</b>
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 <sup>rd</sup> 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 <b>HF LSB</b> 3 <sup>rd</sup> Saturday – odd months only
Saturday @ 11:00AM mst	QCWA net HF	7.272 Mhz <b>HF LSB</b>

## OARC OFFICERS

President: Gil Leonard NG7IL

Vice Pres: Jason Miles KE7IET

Secretary: Larry Griffin AD7GL

Treasurer: John Shupe K7DJO

Program Director:  
Pete Heisig WB6WGS

Activity Director:  
Mike Taylor KE7NQH

## "WATTS NEWS" e-Magazine

NL Editor: Val Campbell K7HCP

## "OARC" web site

Webmaster: Val Campbell K7HCP

## OTHER CLUB APPOINTMENTS

VE Liaison: Richard Morrison W7RIK  
Jason Miles KE7IET (IT)

Repeater Engineers: Mike Fullmer KZ7O  
Scott Willis KD7EKO

Photographer: John Shupe K7DJO

QSL Manager: John Shupe K7DJO

Historian/Librarian: Kent Gardner  
WA7AHY

Equipment Manager: Val Campbell K7HCP

Club Call Sign Trustee: Larry Griffin AD7GL

Advisors: Stan Sjol W0KP  
Mike Fullmer KZ7O  
Kent Gardner WA7AHY  
Kim Owen KO7U  
Larry Griffin AD7GL

---

**73 es cul de W7SU**

[www.OgdenArc.org](http://www.OgdenArc.org)