

Northwest Indiana DX CLUB

Volume 3, Issue 5

May 2015

President's Corner

Finally warm weather has arrived. Of course that means storms will be coming too, so make sure to protect your equipment.

Dayton is not far off, for all that are going, have fun!

We hawill look to meet in June.

73

John, W3ML

Happy DXing!

INSIDE THIS ISSUE

- 1 President Speaks
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Don't Forget

DXCC CARD CHECKING

Doctor Richard Lochner, K9CIV has been appointed an Official ARRL DXCC Card Checker. Contact Rich to schedule an appointment for card checking.

You may email him at k9civ@arrl.net for details on how to mail your cards to him, if you desire to go that route.



Member News

If you have any news to tell, please send it to me so I can send it to the group.

Handy Hint – Dial Lights

By Steve Mollman-KD9HL

Incandescent bulbs are usually used in older equipment (and some newer products) for dial lights. When one of lights burned out on my venerable Drake TR-7, I realized that the other two would probably fail eventually. Two of the bulbs are easy to replace but the third required removing two circuit boards and the associated leads. While not complicated, it had to be done carefully to avoid damage to the assembly. Replacing the bulbs was not something I wanted to continually repeat.

The Drake also had another problem. Like all Drakes, it had blue filters on all of the dials and meters. The blue dials were a Drake trademark. Over the past 30 years, the filters had faded and were no longer effective.

While still readily available, finding the needed #53 lamps required some searching. Looking for a source I stumbled on a vendor that specialized in supplying parts for pinball machine restorers. He had listed drop-in LED replacements for the old bulbs. The price was right; only 60¢ each including shipping. Since these were intended for pinball machines, many colors were available, including the blue that I wanted.

After installing the new bulbs I discovered an unexpected benefit. Drake TR-7 VFO's are notorious for a slight downward drift until they are warmed up. Two of the dial lights are for the VFO's and the incandescent bulbs generated most of the heat. The LED replacements generate virtually no measurable



With the LED's the VFO's are much more stable.

The bulbs are a direct replacement for #43/47 and #53 BA9S bayonet socket bulbs. (#43/47 bulbs are rated at 6.3 volts while the #53's are rated at 13.8 volts. (The 6.3-volt LED bulbs seem to work fine with 13.8 volts). LED life span is estimated to be 50,000 hours vs. 1500 hours for an incandescent. One supplier is <http://www.titanpinball.com/> or a search of e-bay® should locate multiple other sources.

#53 Bulb



#43/47 Bulb



LED Replacement



DXCC Patches Available

The Northern Ohio DX Association offers for a very nominal \$5 each postpaid, DXCC and/or DXCC Honor Roll patches. These patches are suitable for a shirt, jacket or cap. They are approximately 4" x 3". These are high quality patches that will provide recognition for your DX achievements.



Send your order to:

N.O.D.X.A. Patches

Dwaine Modock, K8ME

Thornhurst Drive

North Royalton, Ohio 44133

<http://www.papays.com/patches.html>

Ham Radio Safety

By

Jerry Hess, W9KTP

Let me start by saying I'm not a safety expert. On the other hand, I have accumulated some knowledge of the subject over many years in my profession and my avocations such as ham radio and woodworking. I would really feel guilty if some ham I know gets hurt because I did not think to mention some safety point to him.

Safety is a subject that is not discussed often enough. We generally expect ham radio to be a relatively safe hobby and yet there are often tragic injuries to hams all the time. When I worked at Bethlehem Steel, we attended "Weekly Safety Contacts" which entailed review of JSA's (Job Safety Analyses) and a monthly Department Safety meeting. Often these sessions were boring, but very necessary in a dangerous business like steelmaking. Furthermore, in my woodworking club, safety is discussed at every meeting. Big power tools injure woodworkers all

too often. A good friend now only has seven fingers due to a table saw accident. Another only has part of his right thumb remaining from a band saw accident. How many hams will fall from a tower this year? Or get a lethal shock? **The answer I want to hear is zero!**

GENERAL GUIDELINES

1. **Don't attempt to do any critical work when tired.**
2. **Plan your work. Think about the details.**
3. **Be patient. Work slowly and focus on the job.**
4. **Remove all distractions.**

TOWERS

Let's start with towers. Climbing a radio tower is not a trivial thing. I can't cover the subject thoroughly in a short article, but here are some important points. If you are new to tower climbing, spend some time with some experienced climbers.

1. **Never climb a tower without a safety harness.**
2. **Never climb a tower alone.**
3. **Use the two point method when climbing.**
4. **Never climb a tower when tired or after drinking alcoholic beverages.**

As further clarification, I mean a safety "Fall Arrest Harness (FAH)", not a safety belt. See Picture 1 and Note 1. Also use a Fall Arrest Lanyard (FAL) when climbing. While climbing either your harness belt or your lanyard should be attached to the tower at all times. This is often referred to as "Two Point" climbing.



Picture 1

I would be shocked if any DXer didn't recognize the call, K3LR, Tim Duffy. It was mentioned in September 2009 QST that Tim fell attached to a 40 foot tower that toppled over. He spent three days in the hospital and sustained 27 stitches in the back of his head. He was only sixteen at the time but he readily admits he was very lucky.

Another note, sometimes it is necessary to work on a partially collapsed crank-up tower. Steve Mollman, KD9HL, cannot remove his rotor with the tower completely down. Steve inserts two pieces of galvanized pipe through the tower when the tower is about 2-3 feet from completely collapsed. I have to do the

same thing to remove the winch. This work has to be done very carefully.

If you happen to use a ladder to work on your tower, make sure **you tie it off at the top first**. It is easier on the feet.

FIRE

No ham expects his equipment to catch fire but it does happen. **Do you have a fire extinguisher in your shack?** Even if you have to spray your rig with the extinguisher, at least it may be repairable. Better than a glob of carbon and melted plastic. Oh, by the way, **have you ever used an extinguisher?** If not, do it. Try it on a simple, safe camp fire. Have the whole family try it. You may be able to get it recharged at a local fire station so you are not out the cost of a new extinguisher. (See Note 2)

While I'm on the subject, **do you have a fire alarm in the shack?** Have you changed the batteries recently? Current recommendation is to change them twice a year, perhaps in the spring and fall when the time changes.

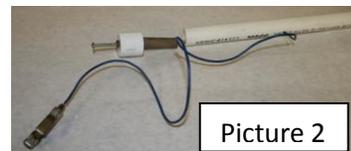
Chuck Hill, KC9OYE, a member of NWIDXC, knows firsthand about fire in a ham shack. In August 2013 the socket above his basement station caught fire and destroyed his equipment. By the time he had extinguished the fire, smoke had filled his home. The probable cause was the use of aluminum rather than copper wire to wire the house. Over time, corrosion created enough resistance to start the fire. He has had to add special aluminum to copper junction connectors in each receptacle in the house.

VOLTAGES

Inside our equipment there are often lethal voltages and repairing it takes considerable caution (See Note 3). One common task is to replace the tubes in an amplifier. Here are some general recommendations.

1. Unplug the equipment

2. Make sure all **voltages are down to zero**. Use a shorting stick like the one in Picture 2 which is partially disassembled to show the 10 watt resistor. Don't just check the high voltage, make sure all other supplies are dead (grid bias, screen supply, etc.). As a final check, use a big screw driver with an insulated handle and short each supply to ground again. Don't



Picture 2

do this before bleeding down the supplies. You can damage your equipment. And by the way, only check voltages with your shiny new multimeter that are in range of the meter.

3. Even with the voltages down, an old adage is to “**keep one hand in your pocket**” while you work as often as you can. You don’t want to have a shock across your body.

Although much of our equipment is designed to operate with 13.4-50 volts, those power supplies have many amperes. If a lead happens to get near ground, it will create a tremendous arc. Yup, just like an arc welder. Pretty nasty!

WIRING

Since most of us did not wire our houses, there are some checks you should make. First, purchase an outlet checker to verify it is wired properly (see Picture 3). Next, I would recommend that you make sure **you and your family know how to determine which breaker controls what area of the house**, particularly the ham shack.



Picture 3

As a caution, many outlets in a typical house may only be wired with #14 wire which limits the total load on the circuit to 15 amperes. Plug in your rig, add a rotor and a few other items and then add an electrical heater to warm the shack, and you are over your limit. At this point, you really need some #12 wire to get 20 amperes for this load. Jump up to adding a 1500 watt amplifier and you probably will want #10 wire to get more current. Better yet, run a separate 220 VAC 20 ampere circuit just for the amplifier if it can be wired for 220.

Sockets for homes generally come two flavors; 15 and 20 ampere ratings. Always match the socket to the breaker rating. See Picture 4. The 20 amp socket has the short horizontal bar on the neutral connection.

Picture 4



I have a pet peeve about how electricians wire sockets. My house was wired using a strip and push technique (Picture 5, left socket). Over the years, I have had four failures because of this technique and spent a lot of time troubleshooting them. Anytime I wire a socket, I wrap the wire tightly around the side screws. That yields a lot more surface contact area and it’s not as likely to corrode or snap off (right socket). Yes, it takes longer to do. Some newer sockets have a square washer that captures the wire when the screw is tightened (middle socket). That’s OK if you get the screw tight, but I still prefer my method. I’m not suggesting that you start pulling out every socket in the house but if a socket becomes intermittent or fails, don’t ignore it.

A word about extension cords (and power strips). Take a look at the current



Picture 5

ratings on the tags. Most likely it's rated at 10 amperes. Maybe 15. Too much load on a 50 foot extension cord could start a fire. For that matter, any cord to your equipment or extension cord **gets too hot to touch, replace it** with a better one. Yes, it can get warm, but not hot. If you are using an extension cord for longer than a few days, maybe you need to add a permanent outlet.

ANTENNAS

Just as a friendly suggestion, I always **ground all my antennas and unplug all my equipment** when not in use. We got hit with lightning once and it did a lot of damage.

Another note from an article in QST, if you happen to use an antenna in the attic, watch your SWR carefully. Your antenna may be on fire. The ham in question had one of the traps in his attic antenna begin to melt. Luckily he caught it before he set fire to the roof. Remember, there could be high voltages at the ends of the antenna that could cause a fire.

CREDITS

Many thanks to Levi Mayes, WB9CAO and Steve Mollman, KD9HL for many suggestions for this article. I could not have done it without their help.

NOTES

1. I'm wearing my safety harness and holding an old climbing belt that was given to me 30 years ago. Climbing belts are dangerous and illegal in some parts of the country. Inspect all your equipment before using them.
2. It is recommended that you use a "dry" type extinguisher for electrical fires. I did find an "Automobile Dry Extinguisher" at Home Depot for \$17.88 (had to order online). Many claim to handle electrical fires but the propellant is wet.
3. "Amplifier Care and Maintenance", H. Ward Silver, N0AX, QST September 2003, page 33. Great article about maintaining an amplifier. However, I have a problem with his "Chicken Stick" since it creates a dead short. It would create a tremendous arc if there is any significant voltage still in the power supply. An older reference which I could not find has a resistor in series with the probe. I use a 12K, 10 watt wire wound resistor. Anything from 5k and higher will work.
4. Yes, when you see **bold** text, I'm shouting at you!

Jerry also sent in this link to a good article.

Did a Google and came up with an excellent paper on repairing residential aluminum wiring.

<http://www.cpsc.gov//PageFiles/118856/516.pdf>

Roy Crosier sent in this link to a good article.

http://www.qrpbuilder.com/downloads/portable_sla_power.pdf



United Radio QSL Management Bureau

Tim Beaumont - MOURX

Ok, here I am again lifting my head above the parapet! Over the last year I have seen quite a lot of comments about how much the LoTW upload has affected direct QSLing. As a QSL manager I am in an unbiased

position to do a little research. Obviously like for like is very difficult due to rarity of the DXCC, total Qs, unique calls in log and many other variables.

As I am NOT in a position where I am balancing huge budgets for rare DXpeditions I have the opportunity to look at this in a way many others cannot and here are some statistics from a couple of recent DXpeditions.

EP6T was uploaded to LoTW during the DXpedition and daily to the end. E30FB has NOT been uploaded to LoTW yet and the team have asked me not to until after 3 months.

So a good chance to look at this in more detail. Please note that E30FB worked 3,583 MORE unique call signs than EP6T so would be expected to receive more QSL requests.

E30FB	06/03	–	17/03/2015	EP6T	16/01	–	27/01/2015
Total	QSOs		64,560	Total	QSOs		68,044
Uniques	20,326	- 31.5%		Uniques	16,743	- 24.6%	

Log uploaded to LoTW

E30FB **NOT YET** EP6T **Daily from the 20th January** at the time of the expedition

Direct	QSL	requests	received.
E30FB 3,969	EP6T 3,747		

The Cliff

E30FB	EP6T
OQRS 4 weeks	OQRS 4 weeks,
Direct letters 6 weeks	Direct letters 6 weeks

Bureau Requests

E30FB 2,237	EP6T 2,400 (Aprox)
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We have all read the arguments on here for and against, and when to upload to LoTW.

Last year at the RSGB Convention I recall one lecturer say that:

“Once you have uploaded the DXpedition log to LoTW you may well watch the direct requests fall off the cliff” or words to that effect.

Every DXpedition I have been QSL manager for, QSL cards arrive steadily for some time and then, as you see with the above stats that after 4 weeks the OQRS will suddenly drop off followed by direct two weeks later, known as “The Cliff” once this point is reached for me it is the most economical time to post out all the QSL cards. However this has nothing to do with LoTW uploads.

Although not a scientific experiment the above shows me that uploads to LoTW make very little difference to Direct QSL requests. As we have said all along!

I have noticed an increasing willingness for people to PAY for LoTW uploads, which for those DXpeditions where funding is critical I think this will become a more common practice.

I have also noticed a lot of people pay for the direct QSL saying that "NO QSL required please LoTW only" but I also noticed this with EP6T where the Qs were ALREADY uploaded to LoTW so I would not take much notice of that.

<http://www.m0urx.com/3-M0URX/598-lotw-does-it->

"World's Best Hobby"

Here's a YouTube link to a half hour video that is a good intro to the hobby. It was done in the late 70's, I believe, so the gear is pretty dated, and there is a lot of talk about phone patches, which aren't used that much any longer, but it's still got a lot of good info. Unfortunately, the quality isn't all that good, but you get the idea. By the way, this video was put together by Dave Bell, W6AQ, who wrote a nice book about ham radio called "World's Best Hobby". It's an easy read with lots of fun anecdotal information about Dave's history in ham radio, and television and film production. Anyway, here's the link to the video:

https://www.youtube.com/watch?v=tEl8SJe_zY8#t=244

Announced DX Operations

<http://www.ng3k.com/Misc/adxo.html>

NORTHWEST INDIANA DX CLUB

W9NWI 
 Indiana

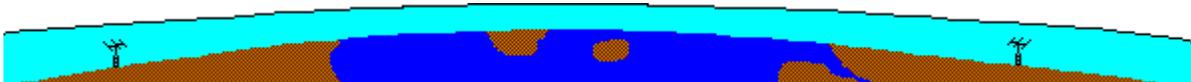
 Northwest Indiana DX Club
c/o Steve Mollman KD9HL
698E - 900N
Westville, IN 46391 USA

Radio	Confirming QSO				PSE QSL <input type="checkbox"/> TNX QSL <input type="checkbox"/>		
	DAY	MONTH	YEAR	UTC	RST	MHz	MODE

www.cheapqsis.com

I want to thank those that have been sending in articles for the newsletter. All items are appreciated.

Don't forget to send in any information you would like to share with the Club members.



Until Next Time,

73

John

W3ML