

October 2015

Issue 233

# Next Meeting: Saturday: October 3<sup>th</sup> – 1:00 – 4:30 pm Sturbridge Host and Conference Center, Sturbridge, Massachusetts

## Captain's Cabin Tony Brock-Fisher, K1KP The New Season Begins!

Well, it is now the official kickoff of the 2015-2016 Contest season. We're going to try to get everyone really hyped up with a great meeting on October 3<sup>rd</sup> in Sturbridge. There will be the annual Awards Program, recognizing and congratulating the Participation, Improvements, and Achievements of our members for last year. We are hoping to have this year's Awards posted to the website soon, so you can see what you've won. If you have won an award, come to the meeting to collect your goodies. We will be giving out blue embroidered YCCC hats for Participation (work any four majors, earn a hat); YCCC Mugs for Improving your score over the year before, and colored star pins for Achievement of one of six levels of points contributed to the club score last season. Anyone who gets a colored star award also gets the special enameled YCCC Achievement award pin (one per lifetime) to wear with the stars.

Our Awards program sets the stage for the upcoming season. It is the club's chance to say 'Congratulations and Thank You' for your contributions to our successful season, and remind you of the challenges ahead. If you haven't yet earned your YCCC hat, you certainly can do so this season. If you want to collect a handsome coffee mug, just get on the air and make a few more points than you did last year. If you earned a red star pin last year, can you up your game and earn a blue pin this year?

To help you out with whatever you choose as your goals for this season, we will be paying heed to the many requests we have received in past years. While we have been conducting YCCC Contest Universities each year, at locations around the club territory, these have been weeknight-evening meetings. Members have told us they would like to see a regular weekend club meeting devoted to a Contest University, so we are going to do just that. We are honored to have recent CQ Magazine Contesting Hall of Fame Inductee, Doug Grant, K1DG as lead Professor for a full-length Contest University at the October 3<sup>rd</sup> meeting. It is our hope that this will provide tips and techniques that will help everyone 'up their game' for the coming season. Even if you have attended a Contest University lately, please come to this one, as we have some great new and current material to share.

#### Strategy

Usually, I don't have to think very hard to come up with an overall strategy for the club in approaching the Big Four contests (CQWW and ARRL DX). It goes something like 'Get everybody on the air and encourage them to have fun'. But this year, stinging from our defeat in ARRL DX, gives pause for a bit more thought. Our brethren to the south, FRC, have gotten tired of being kicked around for a few years, and have made a concerted effort to give us a fight. Make no mistake, they have smelled (our) blood and will be coming after us again this year. So how do we address this challenge? I think our strategy for the contest should be the same as our strategy for membership – one of inclusion and development. There are those (even myself in past solar cycles) who have preached exclusivity, who argue that members should be required to commit scores, and those who don't, or those whose scores are under par, should be kicked to the curb. As of now, I am standing on this soapbox and claiming that we will do the opposite. We will welcome all who have an interest in contesting, and do our best to help them develop their abilities. I have personally seen this development, and I'm sure other station owners will agree that they have seen operators go from zero to hero in just a few contests, with a small amount of positive encouragement.

(Continued on page 5)

Yankee Clipper Contest Club		
President Tony Brock Fisher, K1KP		
President@YCCC.org		
Vice President Dennis Egan, W1UE		
VicePresident@YCCC.org		
Activities Manager Jim Ussailis, W1EQO		
413-585-8645 W1EQO@Shaysnet.com		
Secretary Brian Szewczyk, NJ1F		
Secretary@YCCC.org		
Treasurer Chet Slabinski, N8RA		
Treasurer@YCCC.org		
Scuttlebutt Editor Steve Rodowicz, N1SR		
(413) 593-6554 <u>N1SR@arrl.net</u>		
Scuttlebutt Publisher Will Liporace, WC2L		
Publisher@YCCC.org		
Webmaster Lyn Glagowski, WB1CCL		
wb1ccl@gmail.com		
Scorekeeper Alec Berman, W2JU		
Scores@YCCC.org		
W1 QSL Bureau Eric Williams, KV1J		
Manager Dennis Egan, W1UE		
W1QSL@YCCC.ORG		
Technical Assistance Dave Jordan, K1NQ		
Manager <u>YCCCTA@YCCC.ORG</u>		
New Members Mark Pride, K1RX		
(603) 778-1222		
Media Manager Tom LeClerc, W1TJL		
W1TJL@arrl.net		

Ship's Log	Octob	er 2015	Issue 233
Captain's Cabin	Tony Brock	Fisher - K1KP	1,6,7
<b>Directions to Meeting</b>			2
Metallurgy for the Ra	dio Amateur	Dave Malley-K1NYK	3
YCCC QSL Card Ord	lering	Tom, Homewood, W17	ГО 5
<b>August Meeting Minu</b>	tes		6
YCCC Resources			10

## **Directions to Sturbridge Host Hotel**

Sturbridge Host Hotel & Conference Center is located on Route 20.

- From the North, East and West, take the Massachusetts Turnpike (Interstate 90) to Exit 9, Route 20 West.

- From the South, take either Interstate 84 or Route 131 to Route 20 West.

Sturbridge Host Hotel & Conference Center is located on the shore of Cedar Lake, just past the first set of traffic lights.



#### Upcoming Meeting: Date: 10/3/2015 Time: 1-4:30 PM Location: Sturbridge Host, Sturbridge, MA

Come and get pumped and prepped for the upcoming Contest Season! We will be handing out Awards earned from the 2014-2015 season. Also, we will be conducting a Contest University, with professors Doug Grant, K1DG, Paul Young, K1XM, and Dennis Egan, W1UE. New Material will be presented so don't miss it!

### -. - - / - . - . / - . - . / - . - .

## Area Managers

ME	Mike Russo, K1EU	(207) 883-9524	kleu@maine.rr.com
ENH/NEMA	Jerry Muller, K0TV		k0tv@arrl.net
WNH/SVT	Craig Clark, K1QX		klqx@arrl.net
SE MA (508)	Eric Williams, KV1J		kvlj@arrl.net
Boston (617/781)	Joe Fitzgerald, KM1P	(617) 325-6767	jfitzgerald@alum.wpi.edu
WMA (413)	Tom Homewood, W1TO	(413) 743-7342	w1to@arrl.net
CT (860)	Rich Cady, N1IXF		nlixf@arrl.net
CT (203)	Mike Loukides, W1JQ	(203) 458-2545	MikeL@oreilly.com
RI (401)	Nat Henrickson, NG1Z		nglz@nsradio.org
NNY	John Bradke, W2GB		W2GB@N2TY.ORG
NYC/LI (718)	Tom Carrubba, KA2D	(631) 422-9594	ka2d@arrl.net
SNY/NJ/PA (914)	Hank Kiernan, KF2O	(914) 235-4940	hankkier@aol.com
NVT (802)	Al Frugoli, KE1FO	(802) 893-8388	kelfo@arrl.net

Articles in the Scuttlebutt (except for those separately copyrighted) may be reprinted, provided proper credit is given. The editorial deadline for the Scuttlebutt is the 10<sup>th</sup> of every odd month.

## Metallurgy for the Radio Amateur

Dave Malley. K1NYK

# This article was originally published in RadCom June 2015. It is reproduced here with permission but remains copyright © RSGB 2015, <u>www.rsgb.org</u>

**INTRODUCTION.** Metallurgy, as the name suggests, is an engineering discipline that deals with the design, processing and use of metals and their alloys. What separates 'metals' from 'alloys' is that metals contain just one metallic element (eg iron) whereas an alloy has two or more elements (eg iron and chromium, nickel and/or carbon). Carbon is non-metallic; however, it's a critically important alloying element for both steel and stainless steel. We know that both metals and alloys have different physical properties like mechanical strength, corrosion resistance, electrical and thermal conductivity, etc. This results from having chemical composition differences as well as the processing (forging, casting or heat treatment) used to make the materials. Interestingly, the strength of many alloys can be considerably improved by subjecting them to heat treatment. That process exposes an alloy to one or more temperatures for a specific time(s). Note that pure metals and some alloys do not have compositions that allow strengthening by heat treatment.



Metals and alloys have an internal structure consisting of grains and various microscopic particles. In some respects, this parallels features found in wood. This characteristic of having a 'microstructure' is common to all metallic materials but often requires high magnification (see Photo 1) to observe the features present. Heat treatment produces changes in an alloy's microstructure to achieve one or more benefits. Metallurgists methodically study a material's microstructure to understand the impact it has on physical and mechanical properties.

As amateurs, we routinely rely on a rather wide variety of alloys and metals. This article provides information that may not commonly be known. The intent is to help understand the considerations that lead to choosing a particular material (metal or alloy) for a specific use.

**METALS AND ALLOYS.** Let's start with silver and gold. Many higher quality RF connectors are available with either a nickel, gold or silver plating. Is the more expensive gold plating better? Well, it depends. From

a corrosion standpoint gold could be better, but silver has 35% higher electrical conductivity (see Table 1). Silver also has significantly better thermal conductivity. So, the best choice would be the silver plated RF connectors. Even the oxides that form on silver are electrically conductive! However, for items like plug-in sockets and connectors on circuit boards, gold plated connectors generally are preferred because of gold's corrosion resistance. Gold PCB connections are less likely to fail over time.

Copper is another common metal that's used in virtually all electronic components. It certainly is much less expensive than the precious metals. But what's very important for electrical and electronic circuits is that copper has nearly the same conductivity as silver!

Aluminium has a low density and Table 1 shows that it also has reasonable electrical conductivity. These traits make it popular for building Yagi antennas. Pure (unalloyed) aluminium wouldn't work well since it's quite soft and has low mechanical strength. However, aluminium can be combined with other elements including silicon, magnesium and copper to form alloys such as 6061 or 6062. Heat treating these 6000-series alloys increases their strength to a level where they can be used as structural materials for antenna elements, booms and clamps, etc.

TABLE 1:   Electrical conductivity of selected metals and alloys				
Material	Conductivity (S/m)	% of silver's conductivity		
Silver	$6.30 \times 10^{7}$	100		
Copper	$5.96 \times 10^{7}$	95		
Annealed copper	$5.80 \times 10^{7}$	92		
Gold	$4.10 \times 10^{7}$	65		
Aluminum	$3.50 \times 10^{7}$	56		
Iron	$1.00 \times 10^{7}$	16		
Carbon steel	$1.43 \times 10^{7}$	7		
Titanium	$2.38 \times 10^{6}$	3		
Stainless steel	$1.45 \times 10^{6}$	1		

Stainless steels are iron-carbon alloys that contain substantial chromium and nickel. Chromium gives stainless alloys the bulk of their corrosion resistance when there's enough present. Stainless alloys containing 18% chromium will form a surface film of chromium oxide that self-heals defects (think surface scratches). However, there can be some issues with stainless steels and we'll discuss them in the next section.

Brass and to a lesser extent bronze also have a place in our hobby. Brass is an alloy produced using copper and zinc while copper and tin form bronze. Bronze is harder and better suited for outdoor use and is a mainstay in the boating industry where it's primarily used for fittings, propellers, etc. Our hobby's principal use for these alloys is predominantly in small nut and bolt hardware. There's also a corrosion preventative benefit.

Titanium has good strength, a high strength to weight ratio and excellent corrosion resistance. It also is quite expensive. An alloy called Ti 6-4 containing 6% aluminium and 4% vanadium is the most common titanium alloy and is widely used by the aerospace, medical and chemical industries. It has even been used for golf clubs! However, titanium finds few amateur radio applications due to its cost and difficulties in forming, welding and other manufacturing operations.

Composite materials, perhaps the best known of which is Copperweld<sup>®</sup>, combine some benefits of one material with those of another. Copperweld uses the excellent conductivity and corrosion resistance of copper that's been metallurgically bonded to the surface of a strong steel wire. It can be used for antennas and has better survivability than ordinary copper wire. RF energy flows on the near-surface of a conductor so having copper over the steel is ideal. However, Copperweld has the disadvantage of being very stiff, which makes it more difficult to work with than copper wire.

**CORROSION.** We all know that metals corrode and have had first-hand experience with it. While corrosion mechanisms can be quite complex we will discuss the basic principles and some ways to minimize corrosion of outdoor equipment. One of the most common types of corrosion is something called galvanic corrosion. This occurs when two metals or alloys are in electrical contact in an electrically conductive environment (typically fresh or salt water). Salt water is considerably more corrosive but fresh water generally contains enough minerals to allow the current flow required for corrosion to occur.

Basically, the more 'dissimilar' two metallic materials are (the further apart they are on the Galvanic Series in Table 2) the more corrosion will occur. Those toward the bottom of the list are 'noble' or passive and form the cathode in the electrical corrosion circuit. Those closer to the top are anodic and will be corroded because they lose electrons to the cathode side of the circuit. This table assumes that salt water is the electrolyte but a generally similar ranking would exist in fresh water. Copper and nickel are found next to each other so galvanic corrosion between them should be minimal. However, a combination of copper and zinc results in the zinc corroding. A magnesium and brass combination will result in preferential corrosion of the magnesium (more anodic) material. A practical example of the latter is placing aluminium or magnesium plates on brass propellers. This same principle applies to using aluminium or magnesium to galvanically protect stainless steel.

One corrosion prevention approach that's used with mixed success involves plating a noble metal, rather than an alloy, onto a part. Various metals including nickel, chromium, cadmium, gold and silver can be used for the plating. We discussed the last two, so what about the others? Nickel is moderately effective and is found in some inexpensive coaxial cable terminations such as PL-259 and N- connectors. Silver plating is very effective while nickel plated connectors are less expensive. I prefer silver plated PL-259 connectors for outdoor use and may use the nickel plated ones indoors. However, if your attachment method involves soldering the coax braid to the outside of the PL-259, it's advisable to use silver plated connectors for both indoor and outdoor applications.

Galling is another concern that is common with certain fastener materials. Technically, galling is not a corrosion mechanism but rather a localised seizing between two fasteners that tightly contact each other. Aluminium alloys and stainless steels are susceptible to galling since both materials form a passive oxide film. Tightening the threads on stainless fasteners breaks that oxide film and the intimate contact present excludes the oxygen necessary to reform the protective oxide. This causes microscopic high points to seize and not come apart. Encountering this problem at the top of a tower is no-one's idea of a good time! The best prevention is to coat fastener threads with an anti-gallant compound to provide a barrier between the two fasteners. These compounds are available from industrial supply companies and other sources. Some can be messy to use and you always should select one that's appropriate for your material combination. One example is Loctite Heavy Duty Anti-Seize, which also provides resistance to galvanic corrosion and oxidation of aluminium and stainless. Another solution is to place a phosphor-bronze washer between the aluminium and stainless components.

(NOT SO) SECRET TIPS. There are many stainless steel alloys and they can have a variety of corrosion and strength differences. Not all are suitable for use in a corrosive environment. The more commonplace stainless alloys have either an austenitic (non-magnetic) microstructure or one that is magnetic. The alloys in the 300 series (eg Types 304 and Type 316) are austenitic and offer some of the best corrosion protection with Type 304 being the most common and least expensive. While 400 series alloys (Type 410) typically are stronger, they do not possess adequate corrosion resistance for most outdoor applications in our hobby. So here's the first secret – use a magnet to be sure that a component really is 'stainless'.

The Galvanic Series tells us that aluminium will be the material that corrodes when in contact with Type 304 stainless. But aluminium Yagis are assembled using stainless steel bolts and nuts. What's going on here? This brings up the second secret – the surface area of the anode (the Yagi) is comparatively large while the stainless bolts have a much smaller surface area. It turns out that a large anode-to-cathode area ratio reduces corrosion of the anode material. This is because the current (electrons released by the anode) is spread over a wider area when the anode is larger than the cathode. In other words, the corrosion rate is proportional to current density. Many antenna suppliers suggest using Penetrox A® to ensure a good electrical connection between copper and aluminium.

Some precautions may be needed if 300 series stainless alloys are to be used to homebrew an assembly that requires welding. The microstructures of those alloys have tiny discrete particles ('carbides') containing chromium and carbon that generally benefit mechanical properties. However, if a stainless weld is exposed to temperatures above about 425°C (as it will during cooling), these carbides can re-form as continuous layers along grain boundaries. That means the areas right next to the carbides may have too little chromium to maintain good corrosion resistance. Continuous carbides also can make the stainless brittle. This is probably a non-issue for statically loaded components. But parts exposed to high, alternating stresses may well see a reduced fatigue strength and suffer premature failure. There are several not-so-secret ways to prevent this. The least

**TABLE 2: Galvanic** Series for metals in seawater, from MIL-STD-889 (edited). Most anodic (corrodes) Magnesium Zinc Cadmium Aluminium Al 6061-T6 Al 5052-H16 Carbon steel Cast iron Copper Nickel Chromium Stainless steel 430 Stainless steel 410 Brass Bronze 220 Copper Stainless steel 304, 304L Stainless steel 321 Stainless steel 201 Stainless steel 316, 316L Titanium 6Al, 4V Silver Gold Graphite Most cathodic/least anodic (protected)

expensive is to use a stainless alloy with a very small amount of carbon (Type 304L or 316L). There is little or no difference in price of the 'L' (low carbon) versions thanks to improved metallurgical processing methods. Another approach would be to use Type 321 or Type 347 stainless since their compositions form a carbide that doesn't involve chromium. However, that raises material costs since they use more expensive alloying elements.

Platings can be used on steels to add some measure of corrosion resistance. Cadmium plating is effective; however, this metal is now listed as a human carcinogen and not generally used any more. Zinc plating can be found on common hardware store fasteners. Here's another secret – zinc plating offers little protection outdoors because it's very high on the Table 2 chart and can be damaged since it is very thin. Moreover, a scratch completely through zinc plating results in even faster corrosion of the substrate due the surface area ratio just discussed. Lastly, hot dip galvanizing is very effective. It involves immersing parts in molten zinc. This is not a plating process but creates a metallurgically bonded iron-zinc alloy on the surface of the steel part. That layer has very good corrosion resistance and is more abrasion-resistant that the steel itself. Another not-so-secret tip: galvanized fasteners run a relatively close second to the corrosion resistance of the more expensive stainless alloys. Note that 'cold galvanising' is a term meaning 'to apply a zinc-rich paint to a steel part' and does not have the durability or the wear resistance achieved by hot dip galvanising. The paint has non-metallic binders that reduce contact between the zinc particles and limit the cathodic protection that was expected.

**CONCLUSION.** A wide variety of metals and alloys find very practical use in amateur radio. Their mechanical and physical properties depend greatly on their chemical composition and any heat treatment that's applied. Properties and cost determine which material is appropriate for a specific application. The choice of the right materials, coatings and lubricants will lessen the repairs needed on our equipment and increase the survivability of antennas, towers and equipment. I hope that you will find this information to have many practical uses in our hobby.

## YCCC QSL CARDS

Our new QSL card source, UX5UO, has processed two orders. I believe that all the stations who have received their cards are satisfied. After these orders I believe the club should order either the standard matte finish or the heavy matte finish. The standard matte finish is like earlier versions of the club cards in finish. The heavy matte finish is thicker and the finish of the card is nearly glossy, but easy to write on with a pen. Current prices are \$45 per thousand matte and \$49 per thousand heavy matte. A discount is available for orders of 3,000.

#### YCCC QSL Card Order Processs:

- 1. The operator fills out the QSL Form and sends it to W1TO by email. If everything is OK, the form is sent to UX5UO as the order. Any issues are resolved before sending.
- 2. UX5UO sends a proof to the station. If the proof is good, email acceptance to UX5UO and copy to W1TO. Resolve any issues via email with UX5UO, W1TO is available to assist.
- 3. Send payment to UX5UO representative:

Mr. Dwayne Lipscomb (KD4POJ) 4201 13<sup>th</sup> Street NE Minot, ND 58703, USA E-mail: <u>kd4poj@srt.com</u>.

For payments: post a check to "UX5UO QSLs c/o Dwayne E. Lipscomb" or Paypal to above e-mail.

Cards are shipped direct to the station and should arrive in 3 to 4 weeks.

By the time you read this the order form and new sample QSL should be on the website.

73, Tom W1TO

<sup>-. - - / - . - . / - . - . / - . - .</sup> 

## August 22, 2015 Meeting Minutes

The August 22<sup>nd</sup> General Meeting, of the Yankee Clipper Contest club to order at 1:08 by Dennis W1UE.

An abbreviated business meeting was held without Secretary's or Treasurer's reports to maximize time for our guest Announcements:

Dennis W1UE then announced that the winner of the YCCC scholarship was the YCCC's own Matt W1MAT who was at the meeting and thanked the YCCC for the scholarship.

Tom W1TO announced that he was putting together a club purchase of QSL's cards. Anyone interested should see him during the break.

Gerry W1VE announced that the YCCC members had arranged for the remote stations for the special event stations being used at Boxboro.

John W1FV announced that the controller for the 9 circle array project was on display in the room where the remote stations were setup.

New/Old Business? None.

John W1FV gave an update on the 9 circle array club project. All components for building the array are available at DX Engineering. John described the ordering procedure for YCCC project items. He also gave detailed instructions and tips on assembling the Preamps, Splitters and controller as well as where to get some cost effective enclosures.

Paul K1XM presented a scores update. The YCCC won the large club competition for CQWW DX 2014. This was thanks to members getting on and turning in a score no matter how big or small. The YCCC fell short of winning the ARRL DX club competition by 1,184,601 points. Paul reminded everyone that contesting is a lot of fun and to get on even for a few hours during the contest and most importantly submit a log making sure to fill out the club as YCCC.

Dave K1ZZ made a presentation on operating at CU4DX in the CQ WPX CW contest.

After a 15 minute break, Paul K1XM announced that YCCC member Doug Grant K1DG had been inducted into the CQ Contest Hall of Fame at this year's Dayton Contest Dinner. There was a standing ovation for Doug.

New Members: NA1CC and K8CN introduced themselves to the club. K1XM made a motion to welcome them aboard. Seconded by Alan N2KW and the motion carried.

Randy K5ZD recapped last year's CQWW contests results and provided some updates. Randy reported that 8200 logs were submitted for CQWW SSB and 7600 for CQWW CW. Clearly CW is alive and doing well. There were over 102,000 unique callsigns on the air during the two weekends. The CQWW contests provide a very easy way to work DXCC in a single weekend. Randy closed by saying that Contesting is a lot of fun.

Randy K5ZD introduced Thomas OZ1AA as a special guest speaker. Thomas has been on a multiyear journey to ride his bike around the world. He shared pictures and stories about his travels. Thomas plans on completing his latest part of the journey at Cape Spear, Newfoundland sometime in September.

Dennis W1UE then introduced Jim W1EQO who gave a very in-depth presentation on troubleshooting Astron power supplies.

Dennis W1UE gave the final meeting presentation which was on using a VNA. Dennis showed several filters and stubs whose performance was measured. In some cases the performance less than desirable, using the VNA measurements, adjustments were made to greatly enhance performance.

Paul K1XM made a motion to adjourn the meeting, which was seconded by Tom W1TO.

Meeting adjourned at 5:07

Submitted

Brian Szewczyk NJ1F

YCCC Secretary

#### (Captain's Cabin: Continued from Page 1)

In the last year or two, YCCC has added dozens of new members. We have seen many folks come to a meeting and stand to explain their interest in the club. Some of these have been experienced contesters, moving or returning to 1-land due to career changes. But most of them are on the beginning of the contest learning curve. Having tired of DXng, or just having a competitive nature, they have sought out the club. It is now up to us to bring them on board, show them we appreciate their commitment to membership, and help them contribute to the club scores. It's time to help a newbie win a hat, mug, or pin at next year's Awards handout!

So this year's strategy is to find a new member of the club, and help them get on the air. If you run a multi-op, put out the word on the reflector and let new members know you will welcome them. I know they will learn a lot from you – and I bet you will learn something as well!

If you always run single-op, you can still help out. Offer to help a new member set up their station. Do they need help with antennas, computers, ergonomics, planning? You can still help them out. Offer to visit their station and give them a few

pointers. Perhaps set up a friendly competition between you and them, a contest-within-the-contest, to see who can reach their personal goals first.

#### Daydreams

Sometimes I have these weird visions. I'm a bit short on material this month, so I'm going to share a few of my crazy ideas. Most of you will get a good laugh out of these. One or two of you might see more than a crazy idea – if so, drop me an email.

#### Junk Mail

The other day I walked in from the mailbox. I keep what we call an 'Important Basket' – everything important like bills, checks, Contest Certificates go in this basket for weekly attention and processing. And right next to the 'Important Basket' is the paper recycling bin, handy for rapid disposal of anything that does not meet the 'Important' criteria. As I was processing that days mail, I noticed several brightly colored flyers passing by the Important Basket on their way to the paper recycling bin. I realized that those advertisements had just about 400 nanoseconds to grab my attention and convince me that they were actually important, and I should pause and give them a second thought.

In today's society, activities like golf, stamp collecting, and yes, ham radio, are in the same boat. More than ever, today's youth (i.e. the golfers, stamp collectors, and ham radio operators of tomorrow) are constantly exposed to brief messages through this new life on the internet, Facebook, Twitter, etc. They may see something that brings a rewarding activity to mind for 400 nanoseconds, but they have learned that if it does not provide instant gratification, it's a distraction, ready to be discarded for the next bit of neurological stimulation. What, on the web, does ham radio do to keep itself from hitting the recycling bin?

Yes, we have some web presence. Google 'ham radio' and you will see it. The top three listings are probably Wikipedia, the League, and HRO. But what do any of these sights really do to provide *instant gratification*? I would argue, nothing.

Yes, this is a secret attempt to review my goal of growing ham radio. I made a foray into this regime last February, when we hosted Brooke Allen, N2BA. You can lead a club to water, but...

Here's the crazy idea: What If, there was a website, where anyone could go and click a link to be immediately connected to a video chat with a friendly, elemerish ham sitting in his shack? Can we provide the instant gratification that is sought by ADHD-afflicted web-cruisers? I envision this ham immediately answering all sorts of questions. The elmer (be it a he or a she) could tune a radio to an open band and let the newbie hear what's going on. They could start a QSO, and let the newbie get on the air immediately! When the connection was over, the visitor would have a much better idea what ham radio was really all about. The FCC says that the internet is nothing more than a long mic cord, so the usual third-party rules would suffice and apply. The elmer is there to be the control operator.

What would it take to make this happen? Not much! Just a well-designed website, with video chat capability, plus a large number of volunteer hams willing to install a video camera in their shack and set aside some time to be available to the website. The website would act as multiplexer, connecting interested visitors to available hams. The critical points would be that it work, and always be available, in real-time. I know if such a thing existed, I would be willing to sign up as a volunteer. Would you? Why isn't the League, or Gordon West, or even HRO, already doing this?

When I had been a ham for a few decades, perhaps when I had children, I realized I had a responsibility to foster at least one real ham radio operator, to replace myself when I went SK. I was lucky – one of my sons became interested in ham radio. And while he was interested, he brought two of his friends with him. So I've bagged my quota. But times have changed, and for ham radio to survive, the quota has to go up. By orders of magnitude. How many hams have you brought into the hobby?

#### The Chair

You may have noticed that when I publish a pre-contest pep talk on the reflector, I often close with the phrase: 'Sit down, Strap in, and Kick Butt'. You might have wondered what I mean by 'Strap In'? Well, I have this fantasy, of an operating chair that resembles the ball-turret gunner in the Millenium Falcon. The chair rotates in three axes. It is complete with a wide angle heads-up display that is running N1MM 3D+++ and has waterfall displays for all 6 bands. As I move my joystick right or left, the chair swivels right and left, and the waterfall displays slide across the screen as if fixed in space, QSYing up or down the band as I swivel. The waterfall display is also annotated with the callsigns from the RBN. The chair creates the virtual reality for me, that I used to see in my mind during the contest. As each station walks through the passband, a photo or avatar of the DX operator appears in a window on the display. Or maybe it's live video. I can watch from behind the DX operator as he types my callsign. I can correct him if he types it wrong(is that unfair assistance)? A simple eyeblink locks me on the DX frequency and sends my call. My hands softly grip dual joysticks, which control the movements of the chair, and a trigger on the right hand logs each station I work. Early in the morning, the chair is tilted down and forward as I aggressively run EU. Later in the day it is fairly level, giving me good spinal alignment for the slowing of the runs and perhaps the rebirth of 20 in the early afternoon. Later at night, as I work the low bands, the chair is fully reclined, to reduce the stress on my neck. Heck, if I need a quick shot of blood to the brain, I can even operate inverted! Sound like fun? You bet!

-. - - / - . - . / - . - . / - . - .

# YCCC CLUB RESOURCE INFORMATION

**DUES AND MEMBERSHIP STUFF** Dues for the year are payable as of January 1<sup>st</sup>. The YCCC has adopted a multi-tiered membership format as follows: Please note that payment of dues IS NOT a prerequisite for contributing scores to the Club aggregate, but IS for the various YCCC Awards Programs

**Full Member** - \$15/yr (Eligible for YCCC member benefits and electronic "Ebutt" delivery of Club newsletter)

Full Member - \$30/yr (Eligible for YCCC member benefits and paper delivery of Club newsletter)

**Family Member** - \$0 (Grants full membership to all amateurs residing at one domicile on payment of one member's "Full Member" annual dues and entitlement to one Club Newsletter sent to one domicile or email address. All members of said family are eligible for YCCC member benefits.)

**Student Member** - \$10 (Grants full membership to students at a reduced level. Eligible for YCCC awards programs and paper or electronic delivery of the Club Newsletter.)

**Subscription** - \$\*\* (A "supportive friend of YCCC" - not a member but a possible candidate for future membership. Only receives club newsletter in paper or electronic form. \$10 for electronic "Ebutt" delivery domestically or overseas or \$25 for domestic paper delivery.)

**Club members** who move out of club territory and so are not eligible to contribute to club aggregate scores can continue to participate in the Club's e-mail reflector and receive the electronic "Ebutt" delivery of newsletter at no cost.

You can tell if you owe dues by checking your 'Butt mailing label or the Club roster in the Members Only section of the website.

**NOTE**: If your dues are paid to a March 31 date, then you now need to synchronize to the calendar year. Please see the "Dues" area on the Members Only section of the website for the pro-rated dues amount for a partial year.

Mail your dues to the club treasurer, Chet Slabinski, N8RA, 462 W. Hill Rd, New Hartford, CT 06057.

**SCUTTLEBUTT ARTICLES** should be sent to the Scuttlebutt editor, Steve Rodowicz N1SR, by E-mail at **n1sr@arrl.net** The deadline for each issue is the 10th of the preceding month.

Scuttlebutt Advertising: Nominal Business Card sized ad, \$50 per year (6 appearances)

**CONTEST SCORES** should be sent to the club scorekeeper, Alec Berman, W2JU, preferably by E-mail at **scores@yccc.org**. Please include details such as numbers of QSOs, QSO points (if appropriate), and multipliers (all types); entry category; and power.

#### **CLUB GOODIES**

**BADGES** YCCC badges are available from Tony, K1KP. Send \$3, name and call desired on the badge, and your mailing address to Tony.

APPAREL Contact Richie, W1STT. Email: richd1313@aol.com

#### YCCC LOGO ITEMS http://www.cafepress.com/n1ik

*QSL CARDS* are ordered through Tom, W1TO. To order, complete the QSL form from the YCCC website, send it to W1TO who will verify all information is included and send to UX5UO after resolving any issues. You will receive a proof copy directly from UX5UO. Approve the proof after resolving any issues with UX5UO. Email acceptance to UX5UO with copy to W1TO. Current price is \$45/thousand (matte) and \$49/thousand heavy matte. Payment to UX5UO representative, KD4POJ at Mr David Lipscomb, KD4POJ, 4201 13<sup>th</sup> Street NE, Minot, ND, 58703. eMail: kd4poj@srt.com

**MEMBERSHIP ROSTER** is posed on the YCCC website. Updates are published in 'Movers and Shakers' when members move or change callsigns.

**COMPUTER STUFF** *INTERNET REFLECTOR* There is an Internet mailing list for YCCC members. To subscribe, send mail to yccc-REQUEST@yccc.org. Insert only the word "subscribe" in the subject of the mail message. (Do not send messages to the reflector that have file attachments, HTML formatting, use boldface or other fancy fonts, etc.)

WWW HOME PAGE Come visit us at http://www.yccc.org Our Webmaster is Lyn Glagowski, WB1CCL.

**QSL BUREAU – The** *W1 QSL BUREAU* is sponsored by the YCCC. For more information at: www.w1qsl.org Address: W1 QSL Bureau, PO Box 73, Marlborough, MA 01752-0073. Email address: w1qsl@w1qsl.org

#### ARRL COMMITTEE REPS are:

CAC:	New England Dennis Egan, W1UE	Hudson George Wilner, K2ONP	Atlantic Charles D Fulp Jr, K3WW
DXAC:	New England Bob Beaudet, W1YRC	Hudson John Sawina, NA2R	Atlantic Chris Shalvoy, K2CS
VUAC:	New England Ed Parish, K1EP	Hudson Frederick Lass, K2TR	Atlantic Joe Taylor, K1JT
ARRL	LIAISON: Sean Kutzko, KX9X		