

Scuttlebutt

June 2018

Issue 247

YCCC General Meeting: Saturday, June 2nd, 2018 1:00 - 5:00 p.m. Sturbridge Host Hotel & Conference Center

Program includes:

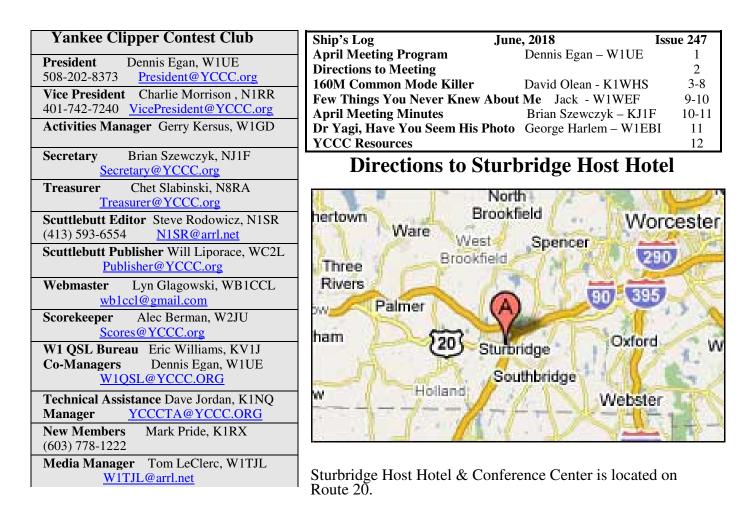
Bob KQ2M- "Refurbishing That Beam"- How to rebuild/refurbish that new (or old) beam

Dennis W1UE- "Using WSPR to Evaluate Antenna Performance"

We will also be attempting to record all 3 presentations so that members that aren't in attendance can still see the presentation. This is the first time in recent years that we've tried to do this, so we'll have to see how it goes.

Dennis W1UE YCCC President

Tony K1KP- "An Introduction to Antenna Modeling"- It's a very basic level introduction to how to model an antenna.



From the North, East and West, take the Massachusetts Turnpike (Interstate 90) to Exit 9, Rte 20 West.From the South, take either Interstate 84 or Rte 131 to Rte 20 West.

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

Area Managers

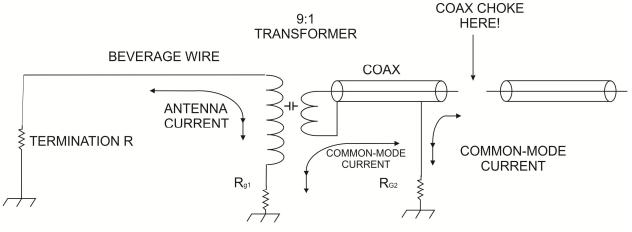
Ai ca Managers					
ME	Mike Russo, K1EU	(207) 883-9524	<u>k1eu@maine.rr.com</u>		
ENH/NEMA	Ken Caruso, WO1N		wo1n@arrl.net		
WNH/SVT	Craig Clark, K1QX		<u>k1qx@arrl.net</u>		
SE MA (508)	Eric Williams, KV1J		<u>kv1j@arrl.net</u>		
Boston (617/781)	Joe Fitzgerald, KM1P	(617) 325-6767	<u>jfitzgerald@alum.wpi.edu</u>		
WMA (413)	Tom Homewood, W1TO	(413) 743-7342	w1to@arrl.net		
CT (860)	Rich Cady, N1IXF		<u>n1ixf@arrl.net</u>		
CT (203)	Mike Loukides, W1JQ	(203) 458-2545	MikeL@oreilly.com		
RI (401)	Nat Henrickson, NG1Z		<u>ng1z@nsradio.org</u>		
NNY	John Bradke, W2GB		W2GB@N2TY.ORG		
NYC/LI (718)	Tom Carrubba, KA2D	(631) 422-9594	<u>ka2d@arrl.net</u>		
NY Capital Region	John Corini, KE1IH		<u>john.corini@gmail.com</u>		
(518/838)					
SNY/NJ/PA (914)	Hank Kiernan, KF2O	(914) 235-4940	<u>hankkier@aol.com</u>		
NVT (802)	Joe Vanat, K1VMT		<u>k1vmt@arrl.net</u>		
QUEBEC	Guy Lemieux, VE2BWL		guy@guylemieux.com		

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COMMON MODE KILLER for 160 METERS

David Olean K1WHS - 4/2018

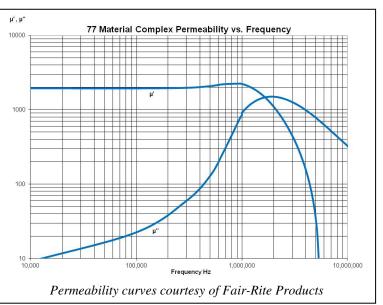
I needed an effective coax choke or current balun for improving my beverage antennas. I was concerned that common mode signals present on the outside of the coax feedlines were mixing into the antenna currents on the beverage wires and causing added noise and unwanted signals from local noise sources. Both my southwest and my west beverages were so noisy that they were rendered useless this past winter. I read ON4UN's Low–Band DXing book, 5th edition, and figured that some added chokes and additional ground rods would help reduce the noise on the beverages. It was worth a try. Note that these beverage improvements were only listed in the 5th edition.



A coaxial 1:1 balun installed in the coaxial cable will help to remove any common mode signals that appear on the outside of the coax. To be effective, the two ground rods shown at the antenna must be separated by about 5 meters at a minimum to be effective. Too close and the ground rods will couple between themselves!. Not shown is a second coaxial choke located where the coax will enter the ham shack building. For each beverage antenna, you will need a minimum of four ground rods! The 9:1 transformer must have a minimum of capacitance between windings to prevent common mode currents from jumping across the transformer.

If you study the "schematic diagram" above, note that the resistance of RG1 (the ground rod at your beverage transformer) has some amount of series resistance and any common mode currents that jump across your transformer winding will appear across that resistance along with your desired antenna current from the beverage wire! Note that you always want an isolated winding transformer at the beverage rather than an auto transformer type with a common ground for both impedances. Common mode energy will blow right through an auto transformer type with almost no attenuation at all!

I looked at some ferrite specifications and thought that some 31 material would be just the ticket to build my chokes. Unfortunately, I could not find 31 mix cylindrical cores in the proper size from the usual toroid suppliers. I did locate some 77 material in a 1.4" donut, at "Kits and Parts" (W8DIZ) for a reasonable price, and a quick look at the specs

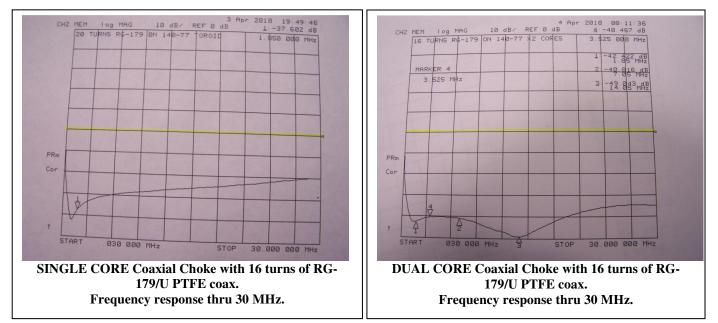


convinced me that this type ferrite would be usable to knock down any common mode energy on 160, 80, and 40 meters. Permeability peaks just above 1 MHz and the lossy characteristics peaked in the low HF part of the spectrum. I figured I would give them a try and ordered a stock of FT140-77 toroids.

I found some nice Bud plastic boxes available from Mouser Electronics, (Bud CU-1874-B), and procured a bunch of CATV F panel jacks off eBay from a Chinese source. That was a big mistake as they arrived with poorly machined mounting nuts that were so sloppy that they fell off when I tried to tighten them in the plastic boxes. I even tried milling away some of the plastic

to reduce the width that the connector had to fit through on the plastic cases. I ended up with a 0.050" wall thickness, but the nuts still would not hold. The threads were just too sloppy and oversized. I ended up getting some American made 3/8-32 NEF2 nuts and all was good again. I need to find a better supplier of F fittings! 3/8-32 is the common thread on panel mount volume controls.

I tried a number of different combinations of RG-179 teflon coax wound around the 140-77 core. I ended up with 20 turns of coax around one core. Below-left is the S-21 plot for 20 turns of RG-179 on the core. This plot shows the attenuation vs frequency thru the choke. Test gear is an HP 8753D Network analyzer. Plot covers 30 kHz to 30 MHz.



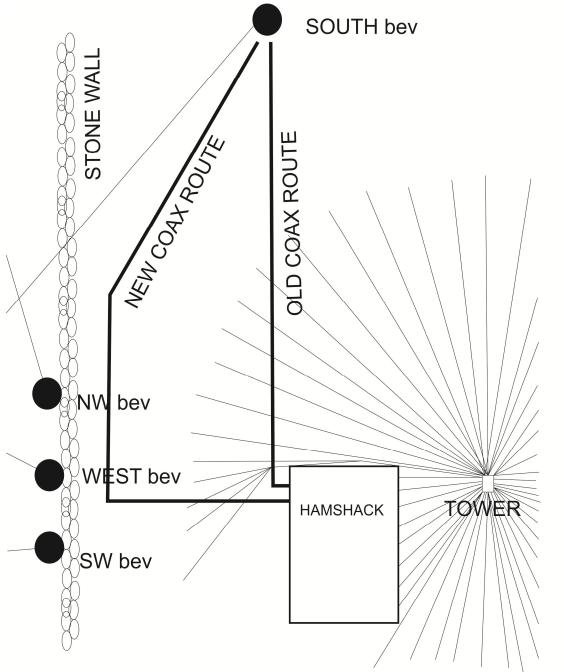
I also tried using 16 turns of RG-179/U wound around two cores and really liked what I saw. Check out the attenuation on the low bands with this dual core choke in place (Above-right S-21 plot).

Note the markers for 160 thru 20 meters. Attenuation is better than 40 dB from 1.8 MHz up to almost 20 MHz. I checked the impedance at 1.85 MHz and found 4.31K ohms reactance. I figured this was good enough to cure the common mode problems I was having. The pure resistive component was 4.7K at 1.85 MHz too. These toroids work well on 160M for sure.

I mounted the toroids in the boxes and secured them down with hot melt glue to hold the heavy toroids in place. A grounding lug was added on one side of the box connected to the outer shield at that point, and I was ready to try them out. I added the chokes about 20 ft away from the beverage transformer ground rod out in the woods, and pounded a new ground rod in the ground there next to the added choke box. Similar chokes were added to the other end of the beverage feed line where it entered the hamshack building. I have enclosed a picture of the completed choke assembly in its' plastic housing with F fittings attached. It makes for a neat method for adding chokes to an existing beverage system. All you do is cut the beverage coax where you want a choke, and install a pair of male RG-6 plugs on each cut end. Then just screw in the new plastic box and add a new ground. Simple!

To make a long story short, I put ferrites on all my beverages except the SOUTH antenna which was having some intermittent power line noise issues. It terminated next to the country road that I live on. There are 7,200 Volt power lines across the road about 40 ft away. I figured I would re locate the wire and increase the distance between the end point and the power lines. The noise was bad on this wire but it was intermittent. I disconnected the far end of my transmission line while testing things. I checked the noise on the disconnected coax during the day and it was quiet. That night, I switched to it by accident and saw all sorts of receive noise. I even heard signals on 160. It was acting like a real antenna! I went outside in the dark with my flashlight and saw the coax cable was unconnected and laying on the ground. OK this is bad! My 500 ft RG-6 coax is THE antenna. The next day, I had S5 to S7 power line noise on the SOUTH antenna. I added a coax choke at the shack end of that coax run but it had no effect. That fact made me think that the common mode energy was getting into the inside of the coax from the far end. I disconnected the antenna wire but had the coax connected to the transformer. The noise was still S5 to S7. I took an FT-817 out to the beverage transformer and listened at the transformer. It was totally quiet. This proved that my 500 ft coax run was picking up the noise. I needed a coax choke out at the far end too, but did not want to pound in a ground rod just yet, so I decided to play around by moving the feed line. It was running across a section of the TX antenna radial field. I laid out another run of 150 ft of RG-6 from the hamshack end, ran it away from the radial field, and checked it for noise. It was quiet. I then moved the 500 ft feed line off the radial field and located it about 30 ft away from the ends of the radials. I then plugged it into the extra 150 ft run of new coax. A second check now showed the noise was way down to S0 on the FT-817. I

could still hear a little"buzz" on AM mode, so I added a coax choke at the shack end and the AM buzzing noise was gone! The coax choke was now working. I also now knew that the beverage was not picking up the power line noise, so I left it where it was and added a coax choke at the antenna end of the feed line. I saw the noise on my K3 drop by a few dB with the added choke. Now I see no noise coming in during the day or night. The feedline is now completely quiet. Here is a diagram showing how I routed the coax around my radial field.

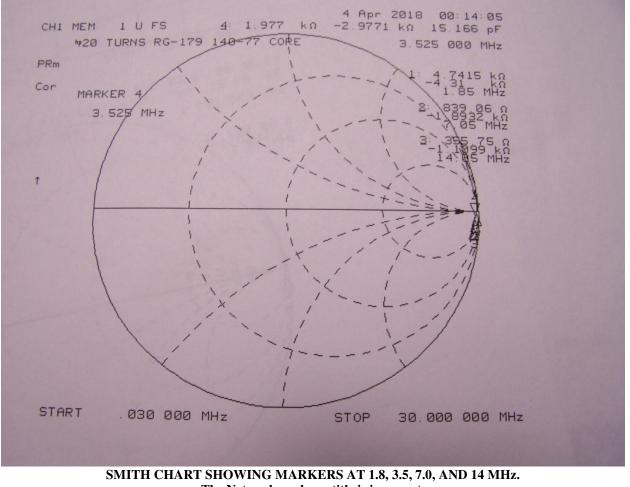


OLD AND NEW COAXIAL CABLE POSITIONS FOR NOISE REDUCTION

It should also be mentioned that the same FT140-77 core may be used as a choke on small interconnecting cables between gear in your shack. Speaker leads, low level audio cables, USB cables etc. all will benefit from attaching chokes to remove common mode problem energy from these wires.



140-77 TOROID PAIR WITH 16 TURNS OF RG-179 AND AN ADDED GROUNDING LUG.

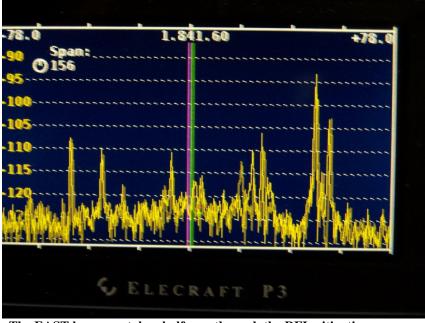


The Network analyzer title is incorrect. It is not 20 turns, but 16 turns on two 140-77 cores. (I WAS NOT PAYING ATTENTION!) Note the reactance and resistance numbers for each marker frequency.



A COMPLETED COAX CHOKE IN PLACE OUT NEAR THE BEVERAGE TRANSFORMER. This was in a different box than I used in the later models.

As a final check, after installing all of the chokes on each end of every beverage feed line, I surveyed the individual beverages for noise during the day. I set the panadaptor to about a 150 kHz spread and took pictures of the screen. What a difference! Check out these BEFORE and AFTER pictures.



The EAST beverage taken half way through the RFI mitigation program and before the feed line was removed from the radial field. Note all the noise peaks. This noise was getting in from the coax on the SOUTH beverage!!



All of the beverages now look like this last picture.

This is the EAST beverage after moving the coax and adding the final coax chokes to the system. The beverages are all almost totally devoid of any interference. Looking at earlier photos, you can see a huge difference.

There are several nice choices for making effective coaxial chokes for HF applications in ham radio. 31 mix or 43 mix ferrites are very useful at HF. I found that the 77 material was also a fine choice on the low end of the HF spectrum. Maybe I should say MF for 160 meters? My use was for receive only and I used pretty small 75 ohm coax, but the same construction can be used with RG-316 teflon coax should a 50 ohm impedance be needed. A power level of a many hundreds of watts is possible with this 50 ohm coax. I used RG-316/U 50 ohm coax for a half wave balun on a six meter antenna at one time, and ran 1000 watts through it on SSB and CW with no problem! Stay away from small polyethylene coax such as RG-174, if you will transmit through this. Heating will cause the tightly wound dielectric to migrate and will ruin the coax in short order. RG-174 has a 1" bending radius spec, so is not recommended.I am not sure of the power handling of two 140-77 cores, but would think that they could stand a few hundred watts as a common mode choke. I did not test that as my application was receive only. Good luck on 160 meters!

MATERIALS		
Plastic Box	5.3 x 2.9 x 1.9" black	Bud CU-1874B
		Mouser PN: 563-CU1874B
RG-179/U	75 ohm Teflon coaxial cable	41" needed for single 20 T core
		48" for16T dual core version.
Toroid core	Ferrite cylindrical core 1.400" OD	AMIDON FT-140-77
	0.900" ID, 0.50" height	Fair-Rite PN: 5977002701
		Available from "KITS AND PARTS" W8DIZ.
RF connector	CATV "F" female panel mount RF connector (2 req'd)	

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Aluminum Tower for Sale

Three 10-foot sections, 10-inch face, including tapered top section and rotator mounting plate. Weight about 10 lbs each. Excellent condition, stored inside. Perfect for expeditions and Field Day. \$300. W3EP@ARRL.NET.

"A Few Things You Never Knew About Me"

Jack Schuster W1WEF

George, W1EBI, gave me this idea at lunch the other day. I remarked that I had just seen the obituary for a SK friend who I had worked with for 32 years, and it was there that I learned more about him than I ever knew. Most contesters are not rag chewers between contests, and we sure don't learn much about each other from 59905! I thought it might be interesting to share some of our other interests in the Butt, not necessarily related to Ham radio, just to learn a little more about each other.

I'll be happy to be the editor, so anyone who would like to share, send your story to me and I'll pass it along to Steve, N1SR for the Butt. I'll start it off in this issue, and we'll see how much Steve can fit in each future Butt.

Jack –W1WEF:

I used to be an avid skier in my younger days. I started skiing in my early working years with friends from work, skiing just about every weekend. I spent the first few years at Mt Snow, then at Stratton, and then Killington where I met my wife riding up a chair lift with her. It turned out we were both members of ski clubs with ski lodges across the road from one another, and the two clubs shared a beautiful heated indoor pool with saunas. Some of us would take a sauna, go out and roll in the snow, and then jump in the pool. After we were married, we bought a little farmhouse in Pittsfield Vt, and brought our two kids up on skis from the time they were 4 years old.

One of my dreams was to build a house. When Pittsfield decided to vote out all their zoning regulations, we subdivided our lot and I got to build my chalet. I did just about everything single-handedly except for the masonry and a little help framing the roof. I started in May, worked on it every weekend and it was finished that December. I also built an addition on our Ct house that doubled the size, and finished the interior of two houses on the Cape. I always enjoyed at least attempting to do whatever I could myself, be it building, car repairs, radio repairs etc...

My interest in radio evolved from building a crystal set (with a catwhisker...not a 1N34!), and many one tube and five tube AM radios. My Dad had a radio and TV service business, and I couldn't wait until I was 13 when I started going into his store after school where I repaired radios and TV sets. Dad was not a ham, but another Boy Scout and I studied for our novice licenses together, and I became WN1WEF in 1952. I started with a homebrew 6AG7 crystal oscillator, a 3749 crystal and an S40B that landed me my first DX QSO with VE1II after two weeks of calling CQ! I went on to build VFO rigs with 807's and 6146's, and single band 813 amps for 80, 40 and 20, but I operated mainly on 80 in the National Traffic System which was a great place to develop CW skills. During my college summers I worked for Vic, N4XR (SK and YCCC Hall of Fame) as a troubleshooter in a factory that built TV tuners for all of the American TV manufacturers. To keep the job interesting I made it a contest to see how many tuners I could repair in a shift...which really irked the full timers!

I took a hiatus from ham radio from about 1960 to 1977 after I graduated with a BSEE from U Mass and started working and bringing up a family. Since becoming active again I've loved this great hobby more than ever.

Barry - NF10

I was licensed as WB1EDI on June 13 1977, and made my first QSO on that day with my brand new FT-101E. I worked Bill W2BXP in NY on 80 CW. His Card is one of a few framed on my shack wall. I was inactive from Sept 77 until 1984 due to US Navy activity (I was an Avionics Tech) I was not very active until 1993 when I upgraded to ADV (finally passed 13 WPM) and caught the DXing bug. My wife Mary also got her Tech plus then. She caught the DX bug also. In 1994, I passed the Extra.

I collect Telegraph instruments (Mostly straight keys) I am better sending with a straight key than I am with paddles.

I earned 9BWAS, 9BWAC, 9BDXCC and 1500 DXCC Challenge with 100W using a tribander and wires.

I used to Paddle a white water canoe, when my knees went I started Kayaking then small boat sailing.

I enjoy very spicy food.

Barry Whittemore (NF1O)

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Brian - K1LI

I'm a big fan of Scandinavian crime fiction.

Tom - W1TJL

So a couple of things that you don't know about me? Well one, I play the guitar and sing in church. I learned to play the guitar way back in high school but put it down for 20 or so years. Then my wife otherwise known as a xyl made me join the church choir, and then told them I could play the guitar in front of me when I hadn't picked it up for 20 years! Needless to say that was interesting.

Another thing that not many people know is that I spent two full summers in the Arctic Circle managing installation of DEW line replacement radar systems. They were unattended replacements for the big DEW line sites that had been in place during the Cold War. They could go 2 years unattended and had the most amazing radar systems with no turning dish, just a bunch of very accurately tuned dipole arrays which could be turned electronically with no moving parts, no greasing of bearings, and nothing to go wrong mechanically. I saw muskox, caribou, polar bear and many other types of wildlife. I even had a couple of polar bears attack the helicopter that we were riding in between sites. Despite the soda commercials they are not cuddly or friendly!

I've been licensed since 1974 just before Christmas and got on the air finally in 1975. Maybe met you 3 years ago LOL

Oh by the way in case you didn't remember, you, me, K1EBY and a couple others were the founding members of the Connecticut DX Association. 73 Tom W1TJL

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April 14, 2018 Meeting Minutes

President Dennis W1UE called the April14, 2018 general meeting of the Yankee Clipper Contest Club at the Sturbridge Host Hotel to order at 12:15 pm.

President Dennis W1UE called for a roll call of the all present.

President Dennis W1UE then announced the agenda for the meeting.

President Dennis called for the Secretary's Report which was given by Brian NJ1F. A motion to accept the report was made by Paul K1XM and Seconded by George W1EBI. The motion carried.

President Dennis W1UE then asked for the Treasurers Report which was given by Chet N8RA. A motion to accept the report was made by Charlie N1RR and Seconded by Paul K1XM. The motion carried.

President Dennis W1UE then asked Alec W2JU to give an update on the ARRL DX contest club competition. Alec reported that the FRC was ahead by a pretty large margin.

President Dennis W1UE asked if there was any old business. There was none.

President Dennis W1UE then asked if anyone had new business.

President Dennis then asked for input on the funding of the Yankee Clipper Contest Clubs college scholarship which has been done in the past few years by a raffle of an Elecraft K3-100 kit. Does the membership want to continue to do a raffle to fund it?

Craig K1QX made a motion that the club continues to fund the scholarship by conducting a raffle. It was seconded by Paul K1XM. Dennis opened the floor for discussion during which several members suggested alternatives to the K3 for a prize. Ed K1EP volunteered to research alternative radios for the prize and report back to the membership at the next meeting.

Tom N1MM made a motion to amend the motion authorizing the raffle and that K1EP would select a prize for the raffle and report back to the membership at the next meeting. The amendment was seconded by Paul K1XM. Dennis opened the floor for discussion. During which a couple members suggested taking a year off of the raffle and funding the scholarship from the treasury. The majority of those present were for continuing to have the raffle to fund the scholarship.

Paul K1XM made a motion to amend the motion authorizing the raffle and authorizing Ed K1EP to select a suitable prize and "get on with it". Tom W1TO seconded. Dennis opened the floor for discussion. There was none.

President Dennis W1UE then asked for a vote and the motion carried.

President Dennis then announced that he is looking for volunteers who are experienced DXpeditioners for help in writing an YCCC DXpedition Cookbook.

President Dennis W1UE announced the club's annual election of officers and opened the floor for nominations.

Charlie N1RR nominated Dennis W1UE for President seconded by Paul K1XM

Dennis W1UE nominated Charlie N1RR for Vice President seconded by Charlotte KQ1F

Ed N2HX nominated Brian NJ1F for Secretary seconded by Paul K1XM

Charlie N1RR nominated Chet N8RA for Treasurer seconded by Paul K1XM

Brian NJ1F nominated Gerry W1GD for Activities Manager seconded by Paul K1XM, There were no further nominations.

YCCC Scuttlebutt

Paul K1XM made a motion to close the nominations which was seconded by Tony K1KP. The motion carried

President Dennis W1UE then asked for a vote by show of hands of those members present for the slate of nominated officers. The slate of nominated officers was unanimously elected.

President Dennis W1UE asked if there was any further new business.

Craig K1QX made a motion proposing that the Yankee Clipper Contest Club petition the ARRL contest director and the Contest Advisory Committee to change the wording of rule 8.7.

8.7. For multioperator stations, the score may count for only one club and at least 50% of the operators must be members of the club receiving the score and meet all other criteria.

He proposed dropping the 50% of the operators' requirement. This would allow a DXpedtion or multioperator score to be divided amongst the operators clubs without having a majority of club members as operators. Seconded by Rich K1CC

President Dennis W1UE opened the floor for discussion. After several minutes of discussion including how CQ handles DXpeditions the motion carried.

Charlie N1RR asked for a moment of silence for Mark K1RX and his family on the tragic loss of his son.

President Dennis W1UE then called for a 15 minute break

President Dennis W1UE called the meeting back to order at 1:28

President Dennis W1UE then asked if there was anyone present that wanted to join the club. Tom KA1IS and Steven N1TYH came forward and told the group about themselves. Paul K1XM made a motion to welcome them to the club which was seconded by Ed N2HX. The motion carried

President Dennis W1UE the introduced Tom N1MM who gave the group a presentation titled "The 200 Dollar Panadaptor" which showed how using a low cost SDR can enhance you contest score. (NOTE: A pdf with the slides of this presentation is http://n1mm.hamdocs.com/tiki-list_file_gallery.php?galleryId=5) posted at:

President Dennis W1UE then introduced Chet N8RA who gave a presentation titled "The Secret Life of Contacts"

A motion to adjourn the meeting was made by Paul K1XM and Seconded by Charlie N1RR. The Motion Carried.

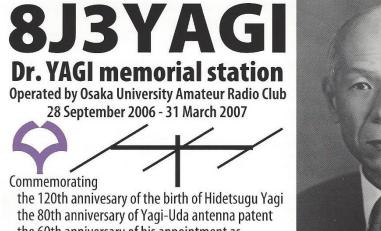
The meeting adjourned at 3:18 pm

Submitted

Brian Szewczyk NJ1F YCCC Secretary

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We all know his name. Have you ever seen his photo?



the 60th anniversary of his appointment as the President of Osaka Imperial University

the President of Japan Amateur Radio League the 30th anniversary of his death

Hidetsugu Yagi 八木秀次

28 January 1886 - 19 January 1976

Card courtesy of JH3PRR at the Dayton Hamvention

Thanks to George W1EBI for submitting.

YCCC CLUB RESOURCE INFORMATION

DUES AND MEMBERSHIP STUFF Dues for the year are payable as of January 1st. 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. Mail your dues to the club treasurer, Chet Slabinski, N8RA, 200 Mount Parnassus Rd, East Haddam, CT 06423.

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 13th 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, go to <u>https://groups.io/g/yccc/join</u> and enter your email address.

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: <u>w1qsl@w1qsl.org</u>

ARRL COMMITTEE REPS are:

CAC: New England Dennis Egan, W1UE	Hudson George Tranos, N2GA	Atlantic Charles D Fulp Jr, K3WW
DXAC: New England Bob Beaudet, W1YRC	Hudson OPEN	Atlantic Chris Shalvoy, K2CS
ARRL LIAISON: Bart J. Jahnke, W9JJ	Hudson Frederick Lass, K2TR	Atlantic Joe Taylor, K1JT