Amateur Radio Parity Act

ARRL Letter

The Amateur radio Parity legislation will ensure that every ham in the US, regardless of the community they live in, will have the opportunity to practice their avocation from their own homes without breaking any rules or fear of reprisal.   The legislation is contained in two bills working their way through the legislative process in the House (H.R. 1301) and the Senate (S 1685). Contact your Congressman and Senator and ask them to support the legislation.

When enacted, it will direct the FCC to extend the reasonable accommodation protections to those amateurs who are living in deed-restricted communities. Known as "CC&Rs" (covenants, conditions and restrictions) these are the prohibitions and limitations placed on properties by builders or home-owner associations (HOAs) which prevent licensed Amateurs from erecting even modest antennas.

The Amateur Radio Parity Act would not give Amateurs "carte blanche" to do whatever they wished. It would require HOAs and other private land use regulations to extend reasonable accommodation to Amateurs wishing to erect antennas.

Land use restrictions that prohibit the installation of outdoor antenna systems are the largest threat to Amateur Radio emergency and public service communications. They are escalating quickly and exponentially. An outdoor antenna is critical to the effectiveness of an Amateur Radio station. Typically, all Amateur Radio antennas are prohibited in residential areas by private land use regulations. In other instances, prior approval of the homeowners' association is required for any outdoor antenna installation. However, there are no standards to determine whether or not approval will be granted by the homeowners' association.

Twenty-nine years ago, the FCC found that there was a "strong Federal interest" in supporting effective Amateur Radio commu-nications. FCC also found that zoning ordinances often unrea-sonably restricted Amateur Radio antennas in residential areas. The FCC, in a docket proceeding referred to as "PRB-1", created a three-part test for municipal regulations affecting Amateur Radio communications. State or local land use regulations: (A) cannot preclude Amateur Radio communications; (B) must make "reasonable accommodation" for Amateur Radio communica-tions; and (C) must constitute the "minimum practicable restric-tion" in order to accomplish a legitimate municipal purpose.

The FCC's Wireless Telecommunications Bureau, in an *Order* released November 19, 1999, stated that the Commission "strongly encourage(s)" homeowner's associations to apply the "no prohibition, reasonable accommodation, and least practicable regulation" three-part test to private land use regulation of Amateur Radio antennas:

"…we nevertheless strongly encourage associations of homeowners and private contracting parties to follow the principle of reasonable accommodation and to apply it to any and all instances of amateur service communications where they may be involved." Order, DA 99-2569 at ¶ 6.

You can find information regarding contacting you Represen-tative and Senator along with letter suggestions at the ARRL site here: http://www.arrl.org/amateur-radio-parity-act

Don't wait. Send your letter today!   *BREAK - OVER*

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)
Breakfast Saturday, August 8th
Digital Monday, August 10th

ARES Nets		
MN ARES Phone Net		
6:00PM Sunday	Freq: 3.860 mhz	
ARRL MN Phone Net		
12:00p, 5:30p CST Daily	Freq: 3.860 mhz	
ARRL MN CW Net		
6:30p, 9:50p CST Daily	Freq: 3.568 mhz	
NETS WITH OUR NEIGHBORS		
North Dakota:	Daily 3.937 mhz	6:30pm
South Dakota:	Daily 3.860 mhz	6:00pm
Wisconsin:	Daily 3.985 mhz	5:30pm
Iowa:	Daily 3.970 mhz	12:30/5:30pm

Dog Days Begin

The phrase "Dog Days" conjures up the hottest, most sultry days of summer. The traditional timing of the Dog Days: the 40 days beginning July 3 and ending August 11, coinciding with the heliacal (at sunrise) rising of the Dog Star, Sirius.

The rising of Sirius does not actually affect the weather (some of our hottest and most humid days occur after August 11), but for the ancient Egyptians, Sirius appeared just before the season of the Nile's flooding, so they used the star as a "watchdog" for that event.

Since its rising also coincided with a time of extreme heat, the connection with hot, sultry weather was made for all time:

> Dog Days bright and clear
> indicate a happy year.
> But when accompanied by rain,
> for better times our hopes are vain."

BREAK - OVER

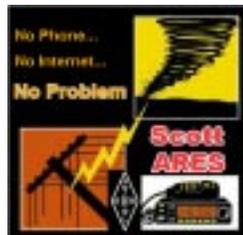## Scott County ARES Contacts

Emergency Coordinator
Bob Reid N0BHC
13600 Princeton Circle
Savage, MN 55378
952-894-5178
N0BHC@arrl.net

Assistant Emergency Coordinator
Tony Lamberttz KC0YHH
Savage, MN
KC0YHH at scottares.org

Assistant Emergency Coordinator
Chad Palm KD0UWZ
Chaska, MN
KD0UWZ at scottares.org

Metro Skywarn Information

Repeaters
Primary
146.700 Neg Offset PL 127.3 http://www.wc0hc.org/
147.210 Pos Offset PL 100.0 http://www.tcrc.org/
147.000 Pos Offset NO PL http://www.k0ltc.org/
Backups
146.670 Neg Offset PL 114.8 http://www.anokaradio.org/
146.760 Neg Offset PL 114.8 http://tcfmc.org/
146.925 Neg Offset PL 107.2 http://www.co.ramsey.mn.us/em/
volunteer.htm
147.120 Pos Offset NO PL http://www.qsl.net/w0mr/
145.170 Neg Offset PL 100.0 http://www.magicrepeater.net/

Resources

NWS Weather Spotter's Field Guide. This is a very nice document for all spotters and available in PDF format or available for purchase from the Government Printing Office. http://www.nws.noaa.gov/om/brochures/SGJune6-11.pdf
http://bookstore.gpo.gov/products/sku/003-017-00568-2?ctid=124

View the Metro Skywarn Training Presentation

Metro Skywarn has made available the training slides from our annual training session to allow Metro Skywarn Spotters to review the presentation. (Videos and images that are copyrighted are not included.)
https://drive.google.com/file/d/0B4iqqB802ovAOVdrc0dvWWFNekU/
view?usp=sharing

Metro Skywarn Spotter Reporting Guide

The Metro Skywarn Spotter Reporting Guide provides a resource for reporting severe weather to Metro Skywarn and the National Weather Service.
https://drive.google.com/file/d/0B4iqqB802ovAb1NaaWl0VmFXSE0/
view?usp=sharing

BREAK - OVER

Amateur Radio License Exam

Want to become a ham? Want to upgrade your license? You can find information and resources to success in ham radio at this page: http://www.scottares.org/License Info.htm
If you want to ask questions or find a local Elmer (Mentor) just drop an email to: newhaminfo@scottares.org

The hams in Scott ARES gather for breakfast the first Saturday of the month at the Perkins Restaurant in Savage. Bring you ham radio questions and talk to local amateur radio operators.

Now that you have done the work to study for your upgrade, here is where to find a convenient exam session near you. There is a VE exam search engine at: http://www.arrl.org/exam_sessions/search

Walk-ins allowed at most sessions however it is always best to check the details at the specific session you are planning to attend.

Below is a list of scheduled sessions close to Scott County. Good Luck!

July 18, 2015 Saturday 9:00 AM
Contact: SEMARC
(651) 769-0358
Zion Lutheran church
8500 Hillside Trail South
Cottage Grove MN 55016-3273
Walk-ins allowed

August 12, 2015 Wednesday 7:00PM
Sponsor: VARC
James C. Rice (612) 384-7709
Location: Perkins Restaurant & Bakery
17387 Kenyon Ave,
Lakeville, MN 55044
Time: 7:00 PM (Walk-ins allowed)

August 15, 2015 Saturday 9:00 AM
Contact: SEMARC
(651) 769-0358
Zion Lutheran church
8500 Hillside Trail South
Cottage Grove MN 55016-3273
Walk-ins allowed

If you don't know where you are going, you might wind up someplace else."

Yogi Berra

Take a Dip in the General Pool

Time to test your knowledge of the information covered by the General Class license exam. Each month we'll take a look at a selection from the question pool.

Strap on your thinking cap and see what you can recall. Here is this month's sample:

1. Which of the following might be an indication that signals heard on the HF bands are being received via scatter propagation?
A. The communication is during a sunspot maximum
B. The communication is during a sudden ionospheric distur bance
C. The signal is heard on a frequency below the Maximum Usable Frequency
D. The signal is heard on a frequency above the Maximum Usable Frequency

2. Which ionospheric layer is the most absorbent of long skip signals during daylight hours on frequencies below 10 MHz?
A. The F2 layer
B. The F1 layer
C. The E layer
D. The D layer

3. What type of device is often used to enable matching the transmitter output to an impedance other than 50 ohms?
A. Balanced modulator
B. SWR Bridge
C. Antenna coupler
D. Q Multiplier
   (Check next month's issue of the ARES Communicator for the answer.)

June General Pool Answers

1. What is the purpose of an electronic keyer?
  B. Automatic generation of strings of dots and dashes for CW operation

2. Which of the following is a use for the IF shift control on a receiver?
  A. To avoid interference from stations very close to the receive frequency

3. What is an advantage of a digital voltmeter as compared to an analog voltmeter?
  C. Better precision for most uses

BREAK - OVER

Test Your NIMS Knowledge

This month we will begin our review of ICS-800: National Response Framework. The purpose of the National Response Framework is to ensure that all response partners across the Nation understand domestic incident response roles, responsibilities, and relationships in order to respond more effectively to any type of incident. The Framework focuses on response and short-term recovery instead of all of the phases of incident management.

.   Check your recall of the course material with this question.

Planning across the full range of homeland security operations is:
A. An inherent responsibility of every level of government.
B. Primarily conducted by Federal agencies with homeland security missions.
C. Required in order to receive assistance under the Stafford Act.
D. Focused primarily on the protection of the Nation's critical infrastructure.

Check next month's ARES Communicator for the solution

June NIMS Knowledge Solution

1. Select the false statement from the following:
Make sure your emergency plans: _____
 A. Leave leadership roles and responsibilities undefined so the plan is more flexible.

BREAK - OVER

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NBEMS Current Versions

The current version of the Fldigi manual is availale at NBEMS Info page at www.scottares.org. Look under the 'Help Sheets' heading.

Now is a good time to check to your digital software to make sure you are running the newest versions. You can find the most recent versions posted at both: www.w1hkj.com/download.html and http://www.scottares.org/NBEMS.htm

Here are the most recent releases as of July 15, 2015.

Software	Version
Fldigi	3.22.11
Flwrap	1.3.4
Flmsg	2.0.10
Flamp	2.2.02

The Monday evening training net is a great place to have your digi questions answered and problems solved! Join the Scott ARES group on 146.535 mHz simplex at 7:00pm on Monday evenings.

Cheap Talk!

A. Nony Moose, Technickel Correspondent

If you have ever wanted to try a headset mounted mic but didn't want to spend the $75 plus to experiment, here is a ~~cheap~~ economical option. A.N. Moose always likes cheap!

I your radio does not glow-in-the-dark, chances are it uses an electret mic. It just so happens these mics are commonly used in computer applications: Skype, gaming, VOIP, etc. This also means they are available at very low cost, under $4.00, by doing a little E-Bay ~~scrounging~~ smart shopping. .

So, let's connect this bad boy to the radio and enjoy some nearly hands-free operation! The computer headsets come terminated in 3.5mm stereo jacks. One labeled 'Mic' usually colored red or pink, and one labeled 'Spkr' usually colored green.

There are three vital functions to voice operation: Microphone, Speaker, and Push-to-talk. All we need to connect to the microphone and speaker plugs are a couple of 3.5mm stereo jacks. The in-line versions make for a nice installation.

Now for the PTT. This operation is handled by a miniature SPST, normally open, pushbutton switch.

Now we have to figure our how to connect the pieces to the radio. Look through the manual (that booklet that came with the radio that you set aside when setting up the station) and find the connection diagram for the MIC connector.

Depending on your radio this may be a round 8-terminal plug or maybe an RJ-45 type connector. You want to identify four connections: Mic, Spkr, PTT, and GND. You may also find these connections available at an Accessory jack on the radio.

Once you find your economical headset all you need is 1.SPST NO pushbutton switch, 2.Mic connector to match your radio, 3.two in-line 3.5mm stereo jacks. You can class up the connections with some color coded heat shrink tubing.

Cheap Talk *- cont'd from page 4*
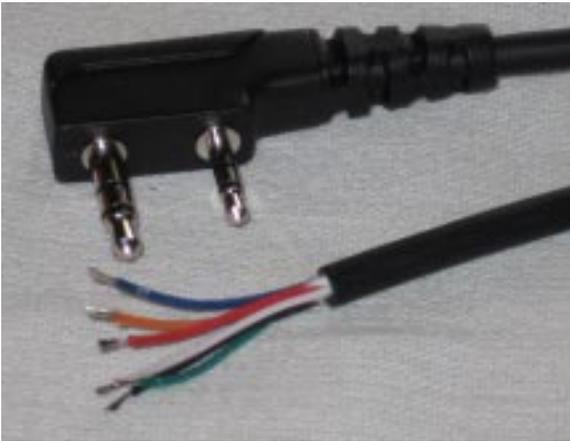
Want to use your headset on your Yeawoodcom or Kenwood HT? You are in luck! You can find a nifty modular pre-wired plug and cable for a couple dollars to take care of the radio connections. Solder on your jacks and switch and away you go.

Each of your three circuits will probably share the 'ground' connection. Then just connect Mic to the tip and ring of the red 3.5mm stereo jack. Connect the Spkr to the tip and ring of the green 3.5mm stereo jack. The one wire remaining is the PTT which goes to the other side of the pushbutton switch. Wasn't that easy! A tip to lower the learning curve, use stranded wire for your connections. Twenty four gauge stranded wire is a nice trade-off between flexibility and reliability. You can always use an old Cat5 cable for the wire. Hey, the plug may match the 'mic' jack on the mobile Xcvr!

- PARTIAL PARTS LIST -
Stereo In-Line 3.5 Mm Jack
CAT# SJI $1.00 each

SPST N.O. Red Pushbutton
CAT# MPB-1 $0.85 each
(www.allelectronics.com)

Now, check it out on the air and have fun making nearly hands-free contacts – cheap talk! Now all the nattering nabobs of negativity who are grousing about frequency response and impedance matching and a myriad of technical factors, shush up and save your money for the expensive rig. We will be having fun experimenting on a shoestring budget. Less than $10.00!

BREAK - OVER

"It is incumbent on every generation to pay its own debts as it goes. A principle which if acted on would save one-half the wars of the world."
Thomas Jefferson

Cheater Disqualified

ARRL Letter

The CQ World Wide Contest Committee said on June 25 that it plans to review all past CQ WW contest logs, after its investigation revealed a pattern of routine QSO padding on the part of one top-scoring CQ WW participant. This follows in the wake of the disqualifications of some two dozen 2014 CQ WW SSB contest operators in April, and another 30 contestants in the 2014 CQ WW CW event. Among the latter group of DQs was the TO7A entry of Dmitry V. Stashuk, UT5UGR, of Kiev, Ukraine, for unclaimed use of assistance. TO7A had claimed the top Single Operator, High Power score.

"During the public discussion around this disqualification, a section of the log on 160 meters was pointed out as being suspicious," the committee said. "Further checking revealed a run of 47 QSOs that were added to the log when TO7A could not be detected on the air by RBN [Reverse Beacon Network] or SDR recordings. In total, as many as 123 QSOs representing 22 additional multipliers were padded into the log." The CQ WW Contest Committee said the "particular pattern" of the suspicious contacts made it clear that they were added deliberately after the contest to fill in rest or break periods.

The contest committee subsequently decided to dig more deeply into past contest logs submitted by UT5UGR, many of them competitive entries, including one for a record continental score, and it uncovered evidence of log padding going back to 2008, when UT5UGR placed third in the world in the Single Operator, High Power category from V31WA in the CQ WW CW.

As a result, CQ has disqualified UT5UGR's entries in which they detected log padding and removed them from the official score database. In addition, any entry into a CQ-sponsored contest until July 2020 in which UT5UGR is the operator or listed as a participant will be reclassified as a checklog.

"This violation of the trust that underlies radiosport competition cannot be ignored," CQ said. The CQ WW Contest Committee has announced that new log checking processes were being developed to improve the detection of log padding. "We intend to test these methods against all submitted logs from 2011-2014. If other entries are found to have added unverifiable QSOs, we will address them on a case by case basis," CQ said.
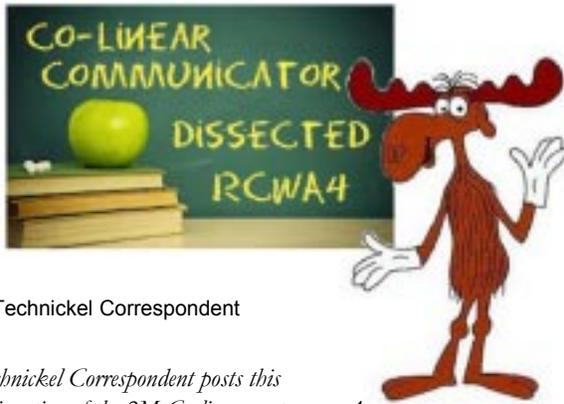
Stashuk did not respond to an ARRL e-mail seeking comment.

BREAK - OVER

"To compel a man to subsidize with his taxes the propagation of ideas which he disbelieves and abhors is sinful and tyrannical."
Thomas Jefferson

A. Nony Moose, Technickel Correspondent

Ed Note: Our Technickel Correspondent posts this description of his dissection of the 2M Co-linear antenna. A review of previous submissions may be helpful in following the discussion.

Greetings fellow antenna enthusiasts! The 2M Co-linear antenna has finally been beaten into submission and forced to give up it's secrets. Hopefully!

As a service to those too eager to get started to read further, here are the Quick Start Instructions:

1. Get your spool of 20 ga. stranded wire and a tape measure. (By the way yellow is a particularly good color for an antenna.)
2. Strip about 1" from the end and form a loop about ¼" dia. and solder or solder on a ring terminal. This gives you a hangar to suspend the finished antenna.
3. Measure 35 ½" from the loop and mark the wire with your sharpie. (See why yellow is a good color for an antenna?)
4. Measure another 35 ½" from your mark and make another mark.
5. You are getting good at this, measure a third 35 ½" segment and cut the wire! (Hope you didn't have the sharpie ready!) Strip ½" of insulation from the wire.
6. Next you need a 2" piece of ½" diameter wood dowel. Drill a hole, large enough to pass the wire, through the dowel about ¼" from one end. (No it doesn't make a difference which end.)
7. Slide the wire through the hole in the dowel up to the first 35 ½" mark, from the end-loop. Wind the wire tightly around the dowel until you reach the second 35 ½" mark on the wire.
8. Drill a second hole through the dowel so that the second 35 ½" mark is positioned just as the wire
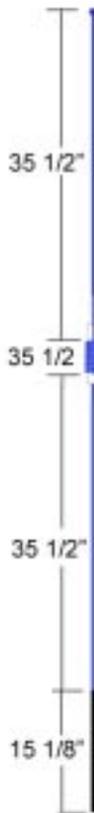
These are the starting dimensions for the antenna.

Coil wound on a ½" diam. wood dowel. Note the position of the sharpie length markings on the coiled wire.

cont'd col. 2

emerges from the dowel.

9. Cut a 16 1/8" piece of 300 ohm twinlead.
10. Strip the two conductors for ½" on one end and solder them together.
11. Strip ½" from the conductors from the other end. Cut one of the conductors at the insulation. You should have a 15 1/8" piece of twinlead with a stripped ½" stub on one end and the other end shorted.
12. Measuring the twinlead from the shorted end, mark a spot at 1" and carefully strip the insulation from both wires on one side of the flat twinlead.
13. Solder the ½" stripped end of the stranded wire to the ½"

The feedpoint connection of the coax. A tie-wrap serves as a strain relief. The feedpoint is about 6-7% of the length of the stub from the shorted end.

stripped single wire on the twinlead.

14. Attach your coax to the twinlead at the spots you stripped 1" from the shorted end. Use a couple of tie wraps to secure the coax to the twinlead. Your creation should look like the diagram.
15. Hang your antenna inside a length of ¾" dia. PVC pipe and have a great QSO!

Now, for those of you who want to fine-tune the antenna, read on.

Knowing the velocity factor of the various conductors used in the antenna are key to making it perform. You definitely need to know the accurate velocity factor of the twinlead to avoid screaming a lot of unique language at your SWR meter.

The twinlead used here (JSC Wire & Cable #1018) has a VF of 80%. The stranded wire used (Consolidated Elect. Wire & Cable, 20ga, str.) has a velocity factor of 91%. These VF values are starting points that should get you in the ballpark.

Now, a word about the ¼ wave matching transformer. The 'sweet spot' for the feedpoint (coax attachment point) is usually 6 – 7% from the shorted end of the twinlead. You will see that trying to fine tune this in real life is real tough. Use 1" from the shorted end as a good starting point.

Now check out the previous installment and build a ½ wave antenna using the twinlead matching transformer described above. You should have a nice antenna with a reasonable bandwidth for 2M.

Use this length for the three elements; Upper, Coil, and Lower. Now solder it together and check the resonant frequency. Tweak as desired. Remember when searching for perfection,

Co-linear *- cont'd from page 6*

you will only find the sweet spot AFTER you have trimmed too much!

When you hang the antenna inside the PVC pipe, strange things happen! The antenna you fine tuned for a great match at 147 mHz suddenly has a SWR of 2.6 to 3.4 and a resonant frequency of about 143 mHz! The dirty little secret is that hanging the antenna in PVC pipe LOWERS the resonant frequency by about 4 mHz!

So, determine your desired frequency for your antenna and add

The loop at the top attached to the mason line with a Trilene knot. (Non-fishermen, Google it!)

4 mHz. Fine tune your antenna hanging in free space for that frequency.

When you suspend the antenna in the PVC you will probably have to do some pruning. As you trim the ½ wave sections, don't forget that you have to make the same changes in each of the three sections: upper, coil, and lower.

Once you get the antenna resonant at the desired frequency, the SWR curve may seem to have flattened out a bit and the resonant SWR increased a bit. Adjust the ¼ wave transformer to tweak this characteristic. Remember, this is a ¼ wave section vs. a ½ wave in the upper sections. If you shortened the upper sections by say, ¼" then only take of 1/8" from the twinlead conductor opposite the ½" stub you soldered to the wire elements.

When you have the PVC enclosed antenna functioning as you like, you need to pay some attention to devising a method to attach it to your coax feedline.

Once you figure out the total length of the antenna you could cut the pipe 4" longer, insert a Tee fitting and then a longer 'tail pipe' below to attach to a mast, etc. Do not place any clamps or metal elements next to the twinlead transformer at the lower end of the antenna.

You can bring your coax out the side of the Tee and devise a

SO239 coax connector used for connecting the feedline. Mount the SO239 in a pvc pipe cap.

connections scheme. One option could involve inserting a 90 degree Ell pointing toward the ground. You could plug the Ell with a cap which has been drilled to hold a SO 239 single hole chassis connector (*Google search or E-bay*). You then connect your PL259 to the downward-facing connector and all is well with the world!

The final dimensions for the antenna that produced the SWR curves in the chart are: Upper, coil, and lower elements = 35", Twinlead = 14 7/8" (plus ½" tail on upper end) .

Some finale notes.

- Everyone's personal construction practices will vary so precise dimensions for one builder may need some tweaking for another.
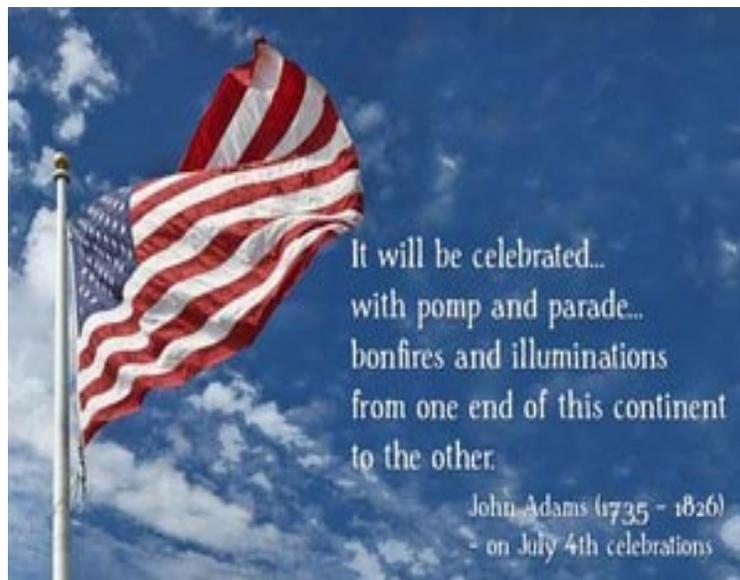
- It really does pay to measure the velocity factor of the twinlead you are going to use. Samples have ranged from 65 – 85%. Getting it wrong will turn the atmosphere blue and raise your blood pressure!

- When you hang the antenna inside the pipe DO NOT use any wire or metal parts! I suggest getting a short piece of ¼" wooden dowel and inserting it through two holes (¼"+) drilled through the pipe close enough to the end so they will be covered by a ¾" pvc pipe cap. Use some nylon 'mason line' to loop around the dowel and attach to the loop on the end of the antenna.

- When attaching the feedline remember to devise some type of strain relief. The antenna will not support a long length of coax.

Have fun building and using your new antenna! The Technickel Correspondent occasionally stops by to check the mailbox at Moose@scottares.org Leave a note if you want to give him what for! *BREAK - OVER*

It will be celebrated...
with pomp and parade...
bonfires and illuminations
from one end of this continent
to the other.

John Adams (1735 - 1826)
- on July 4th celebrations

XP Regrets?

Many Windows XP users found it difficult to abandon the friendly operating system. The U.S Navy is mourning the death of XP as well. In fact they are paying big bucks to continue life support for the aging operating system.

The US Navy has agreed to pay Microsoft at least $9m to help secure computers running Windows XP after it failed to replace the aged OS before support ended.

The deal will see Microsoft provide critical hotfixes and software patches for Windows XP, Office 2003, Exchange 2003 and Server 2003 for a maximum of three years.

The navy runs a number of "legacy applications" that require Windows XP, which it is in the process of replacing.

Microsoft discontinued support for Microsoft XP, Microsoft Office 2003, and Microsoft Exchange 2003 in April 2014 and will end support for Microsoft Server 2003 in July 2015.

The navy expects the deal will run until July 2016, but there are provisions for further work to be undertaken until June 2017 if necessary - in which case it would cost just under $31m. The new deal extends an earlier arrangement with Microsoft to support these systems.

Steven A. Davis, a space and naval warfare systems command spokesman, described why the joint Microsoft premier support services and Microsoft custom support services deal is necessary.

"Nearly all the networks and workstations afloat and ashore will benefit from the Microsoft Premier Support services and Microsoft Custom Support services for Windows XP, Office 2003, Exchange 2003 and Server 2003."

He added the deal would specifically help "maintain enterprise-wide Microsoft capabilities to ensure Navy warfighters have connectivity to their respective networks and to the data necessary to support and accomplish their mission".

In addition to providing patches, the deal also provides Microsoft support and training for tackling problems related to these Microsoft products.

The Navy isn't the only defense division struggling to upgrade, though. As *Ars Technica* points out, the Army announced in April that it would require a similar contract with Microsoft to support about 8,000 devices using XP.

As of late June, NetMarketShare.com was still listing XP as the second most adopted Windows version after Windows 7. Windows 8.1 is finally in striking distance to overtake XP, but really the whole situation is just pitiful at this point.

BREAK - OVER

Electro Launch

The age of steam is over – at least, as far as US aircraft carriers are concerned. At Newport News, Virginia, the *USS Gerald R Ford* (CVN 78) successfully test fired a revolutionary Electromagnetic Aircraft Launch System (EMALS), which replaces the steam catapults that have been standard carrier equipment since the 1950s. The test made a literal splash because it involved an unmanned dead-weight sled rather than an aircraft, which landed about a hundred yards off the bow of the still under construction vessel.

The first of her class, the *Ford* will be the first US navy ship to carry the electromagnetic launcher. Though it will be used on all future carriers, it will not be retrofitted to existing vessels. Under development for over 25 years and manufactured by General Atomics, EMALS is the first new carrier catapult technology in 60 years to advance to practical application. Instead of using a piston forced along by a head of steam, it uses computer-controlled, solid-state electrics to propel an armature down a track.

The EMALS is designed to replace the steam-powered launch system that has been the standard on strike carriers since the 1950s. According to the Navy, EMALS is capable of being used by a wide variety of aircraft, is near-silent, and enjoys smoother acceleration and a more consistent launch speed. It also has higher launch energy, is more reliable, mechanically simpler, and is easier to maintain.

EMALS has already been tested in the first phase of ACT testing that ended in 2011 and included 134 manned launches of aircraft, including the F/A-18E Super Hornet, T-45C Goshawk, C-2A Greyhound, E-2D Advanced Hawkeye and F-35C Lightning II. The second phase saw launches of the EA-18G Growler and F/A-18C Hornet. In all, 452 manned launches were conducted.

A video showing the EMALS inaction can be found here: https://www.youtube.com/watch?v=rOijb3JPCe4

The recent test launched a dead-weight sled from the aircraft carrier Gerald R. Ford (CVN 78)
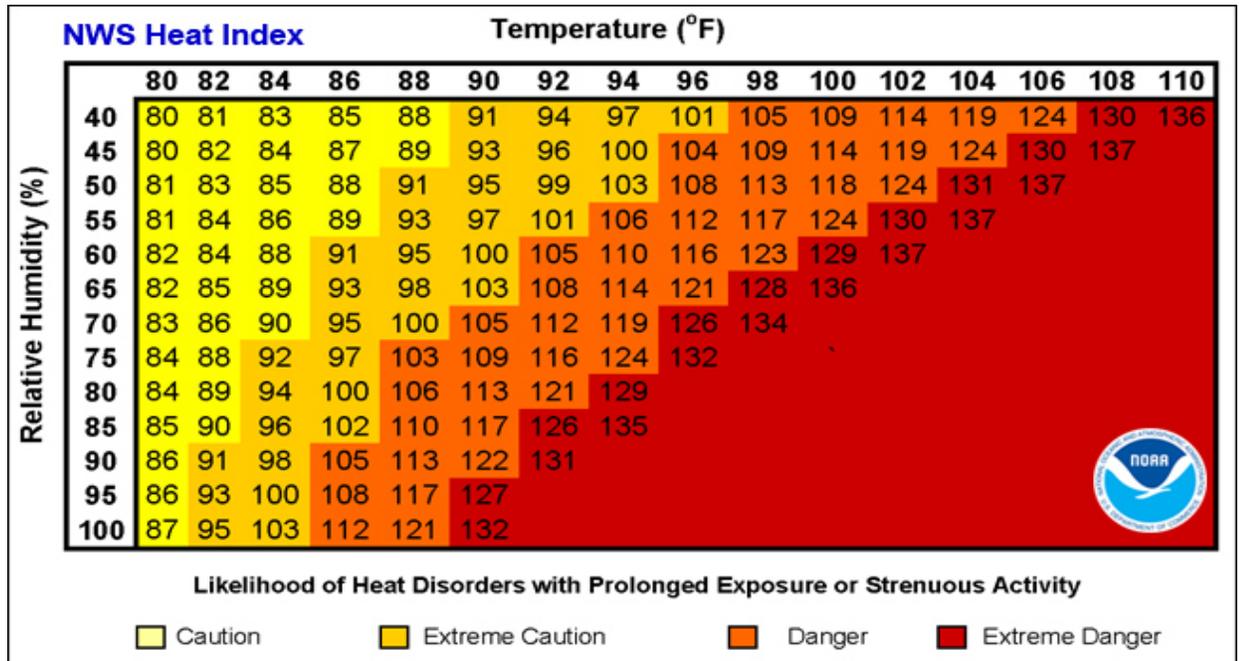
BREAK - OVER

Heat: WHEW!

ARRL Letter

Twenty years ago this summer, a heat wave struck Chicago, leading to the deaths of nearly 750 people during a single week. The Chicago heat wave of 1995 tragically demonstrated that heat and humidity can be a deadly combination. These factors put a lot of stress on the human body and can lead to serious health conditions such as heat exhaustion, heat stroke, or even death. The more extreme the temperature, the shorter the amount of exposure time needed to fall ill.

Heat waves have the potential to cover a large area, exposing a high number of people to a hazardous combination of heat and humidity. In fact, heat is typically the leading cause of weather related fatalities each year. High temperatures and humidity are common in numerous locations across the country. However, when temperatures spike and humidity is on the rise in areas of the U.S. that are not accustomed to these conditions, people don't necessarily understand that they need to take action to stay safe.

The Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature.

cont'd col. 2

NWS Heat Index — Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

☐ Caution ☐ Extreme Caution ☐ Danger ☐ Extreme Danger

High humidity levels combined with hot conditions can be extremely dangerous. Limit your outdoor activities during these periods. You can find info at the National WX Service site here: http://www.nws.noaa.gov/om/heat/heat_index.shtml

BREAK - OVER

2015 Hamfests

Compiled by Doug, N0NAS

Maek your calendars! Here is a list of some of the scheduled Hamfests in the area. Time to refine your shopping list and get ready to comb the flea market tables.

Aug 2, 2015
CVARC Summerfest, Cedar Rapids, IA
www.cvarc.rf.org/2014Summerfest.pdf

Sept 19, 2015
SMARTFEST 2015, Henderson, MN (SW of Belle Plaine)
www.arrl.org/hamfests/smartfest-2015

ARES Breakfast
SaturdayAugust 8th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule July 2015

The first Monday or the month the net is held on the WB0RMK repeater, Carver. You will find WB0RMK here: 147.165/765 PL 107.2

July
Jul 13	KD0UWZ Chad
Jul 20	WA0DGW John
Jul 27	KB0FH Bob

August
Aug 3	KC0YHH Tony
Aug 10	KB0FH Bob
Aug 17	WA0DGW John
Aug 24	KD0UWZ Chad
Aug 31	KC0YHH Tony

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