



Ham Radio

in the 21st Century







W4RSC "RADIO SILVER COMET" ARRL SPECIAL SERVICE CLUB

SILVERCOMET SKYWAVE

Silver Comet ARS, INC NEWS PO BOX 1873 Hiram Ga. 30141 501 (C) (3) Not for Profit
Aug. 2020 Vol 7 Number 8

The August Club Meeting Will Be Held On-The-Air & Zoom!



Please join us on the 146.955 (- 77Hz) repeater at 7pm for the August club meeting. A Zoom video meeting will be held simultaneously. Check the SCARS Groups.IO calendar for meeting and link information.

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The Silver Comet ARS Board of Directors have cancelled physical meeting gatherings at the Chamber building until further notice.

W4RSC "Radio Silver Comet"

The Silver Comet ARS Inc. a 501 (c) (3) Not for Profit Organization



The Prez Sez: (from his corner)



As I have stated before, this year, we will have to handle our November Elections a little different. Since we will be mailing out the Ballots via the U.S. Mails, we are going to need to nominate members soon. We have four Offices - President, Vice-President, Secretary and Treasurer. We also have two Board positions to fill. As another President so eloquently stated... Ask not what your Club can do for you... but... I strongly urge the Members of our club, who have the experience, to step forward... and step up to the plate and volunteer to run for these offices. Our club needs good, experienced people. Either volunteer yourself, or if you know somebody that you think would be good, let me know. We also need two more Members to help with this Election process.

John Reynolds, W4TXA – President

Editor's Notes:



Copies of past SKYWAVE newsletters can be found at the club website <http://www.silvercometars.com/newsletter.php>. Please submit your member bios and articles prior to the 25th of the month.

Chuck DuVall, K4CGA – Editor

SCARS Community Food Drive!



COVID-19 has resulted in an unusually high demand for food products from our local Metro food banks. If you can afford to do so, please consider making a monetary or food contribution to the food bank of your choice since we have temporarily suspended our physical gatherings.

Your donations will be greatly appreciated by the recipients and you will feel better. PLEASE HELP ! It all adds up.

146.955 Repeater Maintenance!

The WB4Q0J repeater is undergoing some diagnostic and maintenance to resolve the noisy signal issue. On 7/30 the current repeater was swapped out for a Kenwood commercial repeater for diagnostic purposes. Current ERP is about 115w.

Monday – “SCARS Night Out” Net!



Check-ins begin at 7:30PM. It's fun and informative. On the 1st Monday of each month, a new technical subject will be introduced for discussion. Suggestions for Topics of Discussion are always solicited. You don't have to dress up, it's very informal.

Troy Davis, K4JDA – Net Control

New SDR Transceiver from Apache Labs



Sneak peek at the Andromeda 100W Transceiver.....10th GEN Intel 6 Core i7, 7 inch built in touch screen and an option to add up to two External HD Monitors.

Windows 10 Powerful PC and an Ultra High performance 100W SDR with PureSignal Goodness in a single compact Box! Run FT8 and other Digital Modes out of the box!

Coming Soon! <https://apache-labs.com/>

Log4OM 2 – A Free Logging Software



Log4OM is written in C# and works with Microsoft Windows starting from Windows 7. Requires NET Framework 4.7.2 installed.

Log4OM integrates with JTAlert, PSTRotator, FLDigi, JTDX, WSJT-x, N1MM, JTAlert and QARTest and basically every application that can work over UDP.

Log4OM supports HAMQTH, QRZ.COM, QRZCQ and HAMCALL for web lookup and works with its internal and constantly updated Clublog database and CTY file for zone and call sign exceptions, additionally Log4OM has an internal engine for call sign recognition based on the Clublog historical archives

Current release is 2.8.0.0 (02/07/2020)

Galvanic Corrosion



WARNING! Do not discard or disregard! Please read carefully!

Galvanic corrosion (also called bimetallic corrosion or dissimilar metal corrosion) is an electrochemical process in which one metal corrodes preferentially when it is in electrical contact with another, in the presence of an electrolyte.

Dissimilar metals and alloys have different electrode potentials, and when two or more come into contact in an electrolyte, one metal acts as anode and the other as cathode.

The electro potential difference between the reactions at the two electrodes is the driving force for an accelerated attack on the anode metal, which dissolves into the electrolyte. This leads to the metal at the anode corroding more quickly than it otherwise would and corrosion at the cathode being inhibited. The presence of an electrolyte and an electrical conducting path between the metals is essential for galvanic corrosion to occur. The electrolyte provides a means for ion migration whereby ions move to prevent charge build-up that would otherwise stop the reaction.

A spectacular example of galvanic corrosion occurred in the *Statue of Liberty* when regular maintenance checks in the 1980s revealed that corrosion had taken place between the outer copper skin and the wrought iron support structure. Although the problem had been anticipated when the structure was built by Gustave Eiffel to Frédéric Bartholdi's design in the 1880s, the insulation layer of *shellac* between the two metals had failed over time and resulted in rusting of the iron supports. An extensive renovation was carried out requiring complete disassembly of the statue and replacement of the original insulation with PTFE. The structure was far from unsafe owing to the large number of unaffected connections, but it was regarded as a precautionary measure to preserve a national symbol of the United States.

A "*lasagna cell*" is accidentally produced when salty moist food such as lasagna is stored in a steel baking pan and is covered with aluminum foil. After a few hours the foil develops small holes where it touches the lasagna, and the food surface becomes covered with small spots composed of corroded aluminum. In this example, the salty food (lasagna) is the electrolyte, the aluminum foil is the anode, and the steel pan is the cathode. If the aluminum foil touches the electrolyte only in small areas, the galvanic corrosion is concentrated, and corrosion can occur fairly rapidly.

Galvanic Corrosion *(continued)*

If the aluminum foil was not used with a dissimilar metal container, the reaction was probably a chemical one. It is possible for heavy concentrations of salt, vinegar or some other acidic compounds to cause the foil to disintegrate. The product of either of these reactions is an aluminum salt. It does not harm the food, but any deposit may impart an undesired flavor and color.

There are several ways of reducing and preventing this form of corrosion.

- Electrically insulate the two metals from each other.
- Ensure there is no contact with an electrolyte.
- Using antioxidant paste is beneficial for preventing corrosion between copper and aluminum electrical connections.
- Choose metals that have similar electro-potentials.
- Electroplating or other plating tends to use more noble metals that resist corrosion better.
- Cathodic protection uses one or more sacrificial anodes made of a metal which is more active than the protected metal.

All metals can be classified into a galvanic series representing the electrical potential they develop in a given electrolyte against a standard reference electrode. The relative position of two metals on such a series gives a good indication of which metal is more likely to corrode more quickly. However, other factors such as water aeration and flow rate can influence the rate of the process markedly.

The compatibility of two different metals may be predicted by consideration of their anodic index. This parameter is a measure of the electrochemical voltage that will be developed between the metal and gold.

When design considerations require that dissimilar metals come in contact, the difference in anodic index is often managed by finishes and plating. The finishing and plating selected allow the dissimilar materials to be in contact, while protecting the more base materials from corrosion by the more noble metal.

This is why sterling silver and stainless steel tableware should never be placed together in a dishwasher at the same time, as the steel items will likely experience corrosion by the end of the cycle (soap and water having served as the chemical electrolyte, and heat having accelerated the process).

Credit and references: https://en.wikipedia.org/wiki/Galvanic_corrosion

Ferrite Bead – What Is It and Why Use It



A *ferrite bead* or *ferrite choke* is a passive electric component that suppresses high-frequency noise in electronic circuits.

Ferrite beads prevent electromagnetic interference (EMI) in two directions: *from* a device or *to* a device.

If a device produces radio-frequency energy, such as a transmitter or antenna, this RF energy can be *transmitted* through the cable, which acts as an unintentional radiator. In this case a bead is required to reduce EMI. Conversely, if there are other sources of EMI, such as household appliances, the bead prevents the cable from acting as an antenna and *receiving* interference from these other devices.

On wires intended to be DC conductors, beads can block low level unintended RF frequency energy by acting as a low pass filter.

On unbalanced coax transmission lines (for instance, USB cables and video cables) the cable is designed to contain the signal, and beads can be used to block stray common mode current from using the cable as an antenna while not interfering with the signal carried inside the cable. In this use, the bead is a simple form of a balun.

Ferrite beads are one of the simplest and least expensive types of interference filters to install on preexisting electronic cabling. For a simple ferrite ring, the wire is simply wrapped around the core through the center, typically five or seven times.

Clamp-on cores are also available, which attach without wrapping the wire: this type of ferrite core is usually designed so that the wire passes only once through it. If the fit is not snug enough, the core can be secured with cable ties or, if the center is large enough, the cabling can loop through one or more times. (Note, however, that although each loop increases the impedance to high frequencies, it also shifts the frequency of the highest impedance to a lower frequency.)

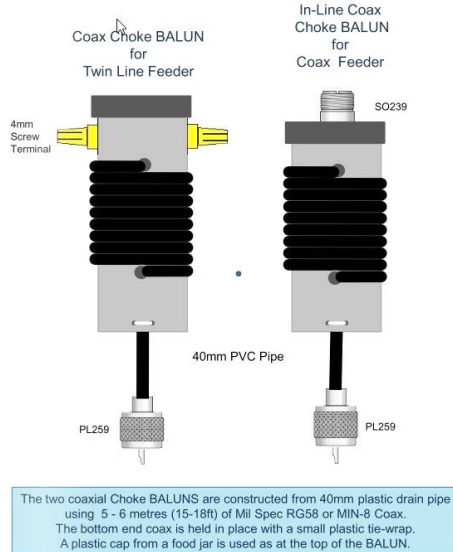
Small ferrite beads can be slipped over component leads to suppress parasitic oscillation.

Credit and references: https://en.wikipedia.org/wiki/Ferrite_bead

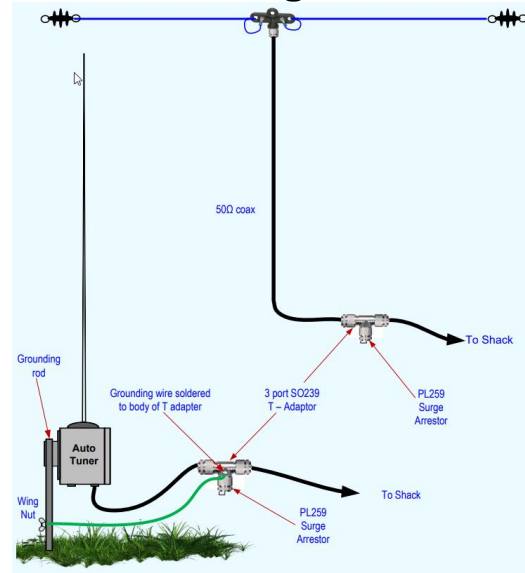
Tips And Hints From Across The Pond

How to make your own:

1:1 Balun



PL259 Surge Arrestor



The Royal Signals Amateur Radio Society

For more information on these *make your own* projects and many more, check out the RSARS technical library: <https://rsars.org.uk/rsars-members-e-library/the-corps-official-website/>

WINMOR – No More!

The Winlink Team will drop support for *WINMOR* on the Winlink system. Other modes such as ARDOP, VARA HF and Pactor 3 or 4 offer the same advantages with superior performance.

In an upcoming release of Winlink Express, WINMOR will be removed in favor of better, speedier, more robust and modern HF digital modes. WINMOR had a good, long and productive run.

ARDOP and VARA have been used by several club members with good results. Try it. If you have any questions, contact WB3ILX or WB4QOJ for assistance.

For more information on Winlink Express/WINMOR: <https://winlink.org/>

Interesting Links to visit!

HF by Vertical-Array, the SV5 for 10-15-20-40-80

vertical-array.com

How to use an Abacus

<https://www.youtube.com/watch?reload=9&v=SYRyKYm0JwM>

AMSAT UK – Activities for August

<https://amsat-uk.org/2020/07/27/iss-mai-75-sstv-activity-planned-for-aug-4-5/>

Audio *Equalizer* for you HF RADIO

<https://www.facebook.com/groups/iq4dj/permalink/10158114236108141/>

VARA FM vs Packet

https://winlink.org/content/new_study_compares_winlink_digital_modes_performance

ARC custom forms update: Daily Shelter Report

http://www.w1hkj.com/files/flmsg/ARC_custom_forms/

AM Radio DX Resource on YouTube

<https://t.co/hjXr6terg6>

Linux Mint 19.3 Mate Desktop update

<https://linuxmint.com>

Basic antennas for everyone

<http://www.silvercometars.com/edu.php>

ARRL Clubs - SILVER COMET AMATEUR RADIO SOCIETY, INC.

<http://www.arrl.org/Groups/view/silver-comet-amateur-radio-society-inc>

Silver Comet ARS YouTube Channel

https://www.youtube.com/channel/UCaL7UG0gkRJxV7lnTj_P3IQ/videos

Silver Comet ARS Website

<http://www.silvercometars.com/index.php>

Silver Comet ARS – ARRL Clubs

<http://www.arrl.org/Groups/view/silver-comet-amateur-radio-society-inc/type:club>

Silvercometars@groups.io|HOME

<https://groups.io/g/silvercometars>

Breakfast @.....

**Join us on the 146.955 repeater and on "ZOOM" on Thursdays @ 8:30am.
In person gatherings are cancelled until further notice due to Covid-19 safety concerns! For "ZOOM" information, check the SCARS Groups.IO calendar.**

Have you joined us for casual conversation, informal Q&A, problem solving and occasional humiliation?

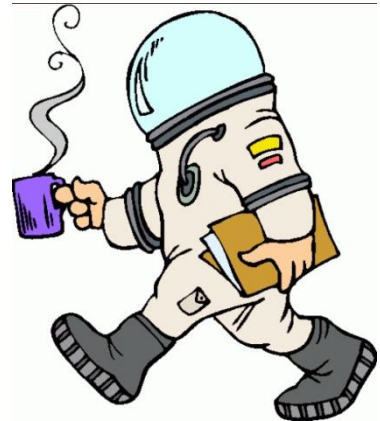
We normally meet at the  McDonalds in Hiram (in front of WalMart).

It has a variety of food, is reasonably quick, has decent prices, and is convenient to the majority of the club members.

Members of other clubs, visitors, spouses and friends are welcomed.

Come Join Us!

**Thursday Mornings
We Gather Around 8:30 +/-
Until the last one leaves!
Even on the Repeater or ZOOM!**



Honor and Respect Our First Responders



Wear A Mask



Recent SCARS Website Updates:



<http://www.silvercometars.com/index.php>

- NO UPDATES TO REPORT

Larry (K4LDC) has retired as Webmaster. Troy (K4JDA) is taking over SCARS webmaster duties. Thank you Larry for all your hard work.

Send SCARS website corrections, comments, or suggestions to Troy (K4JDA) at troy.davis@hotmail.com

Upcoming Special Events

The SCARS 5th Annual AM Broadcast Band DX Contest starts 0001-UTC on 01 October 2020 and ends 2359-UTC on 31 October 2020.

This contest is a local “just for fun” club contest that lasts for a whole month. That gives everyone a chance to participate. Don’t be left out. Prizes such as a paper certificate, used batteries, worn out tubes and a nice trophy custom made, one of a kind trophy (on loan) are awarded.

See rules on our website: www.silvercometars.com. Additional information will be available at our September meeting and will be posted to Silvercometars@groups.io next month.

Please look for K4ELI’s weekly email notices regarding contest and special events on the SCARS Group.io reflector or visit the ARRL website at:

http://www.arrl.org/special_events/search/page:2/Date.start:2016-09-14/Date.end:2016-12-31/model:Event

Contest & Special Events

2020 ARRL Contest Dates

January 2020 1 Straight Key Night 4 Kids Day 4-5 RTTY Roundup 18-20 January VHF	February 2020 10-14 School Club Roundup 15-16 International DX – CW
March 2020 7-8 International DX- Phone	April 2020 19 Rookie Roundup – Phone
June 2020 13-15 June VHF 20 Kids Day 27-28 Field Day	July 2020 11-12 IARU HF World Championship
August 2020 1-2 222 MHz and Up Distance Contest 15-16 10 GHz & Up – Round 1 16 Rookie Roundup – RTTY	September 2020 12-14 September VHF 19-20 10 GHz & Up - Round 2 12-13 EME - 2.3 GHz & Up
October 2020 19-23 School Club Roundup 10-11 EME - 50 to 1296 MHz -	November 2020 7-9 Nov. Sweepstakes – CW 21-23 Nov. Sweepstakes – Phone 28-29 EME - 50 to 1296 MHz
December 2020 4-6 160 Meter 12-13 10 Meter 20 Rookie Roundup-CW	

Additional Contest Calendars

<http://www.contestcalendar.com//index.html>

http://www.cq-amateur-radio.com/cq_contests/cq_annual_contest_calendar/cq_annual_contest_calendar.html

<http://ncjwecom/>

SCARS V.E. ACTIVITIES

SCARS/BHBC Test Session (aka East)

K4ELI and the VE Team will be testing at 7pm at Burnt Hickory Baptist Church, 5145 Due West Road, Powder Springs, on the following dates:

2020 Schedule

VE Testing at BHBC is back on schedule for the August-December test sessions. The Governor's directives in effect at that time will be adhered to.

Aug 6 Sep 3 Oct 1 Nov 5 Dec 3

Please check the ARRL website for changes or corrections.

For more information, contact Steve Walls, K4ELI: swalls46@att.net

All classes of license exams will be available.

SCARS/Paulding CoC Test Session (aka West)

W4TXA and the VE Team will be testing at 6:30pm at the Paulding County Chamber of Commerce, 455 Jimmy Campbell Pkwy (Hwy 278), Dallas, on the following dates:

2020 Schedule

Due to Covid-19 concerns and restrictions, contact John W4TXA w4txa.john@gmail.com for July test session information.

Aug 11 Sep 08 Oct 13 Nov 10 Dec 08

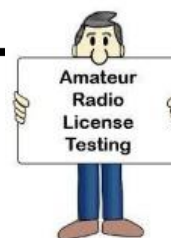
Please check the ARRL website for changes or corrections.

For more information, contact John Reynolds, W4TXA: w4txa.john@gmail.com

All classes of license exams will be available.

BRING:

- Original and copy of existing license.
- Copy of FRN # if you have a GMRS license or some other license.
- \$15 cash----exact change
- Photo ID



See the following web sites for more details:

SCARS http://www.silvercometars.com/about.php#TEST_SESSION

ARRL <http://www.arrl.org/licensing-education-training>



Silver Comet Amateur Radio Society

2020 Calendar

** Don't forget our club breakfast every Thursday morning around 8:30am **

	January	February	March	April	May	June
Meeting 1st Tuesday Date/Time:	01-07-2020 7pm	02-04-2020 7pm	03-03-2020 7pm	04-07-2020 7pm	05-05-2020 7:30pm	06-02-2020 7:30pm
Meeting Location	Paulding Chamber of Commerce Bldg.	Paulding Chamber of Commerce Bldg.	Paulding Chamber of Commerce Bldg.	"On The Air" 146.955- 77Hz Roll Call	"On The Air" 146.955- 77Hz Roll Call	"On The Air" 146.955- 77Hz & "Zoom"
Meeting Activity	Ham Radio Estate Planning (Steve K4ELI)	Ham Tower Engineering (Corey - KN4ULL)	6m Operation & Antennas (Mike - K4PI)	Weather (Postponed)	Spark Gap Transmitter (Postponed)	Field Day Prep Field Day Team
Additional Activities	TBA	TBA	TBA	GA QSOP	Family Night Dinner	Field Day
Hamfest & Conventions	Lawrenceville TechFest	Dalton, GA Orlando, FL (HamCation)	Birmingham, AL Ellijay, GA	Mobile, AL Calhoun, GA	Dayton, OH	Atlanta, GA

This calendar is "Subject to change". Submit change request to K4ELI Steve

V2020.07

Silver Comet Amateur Radio Society

2020 Calendar

** Don't forget our club breakfast every Thursday morning around 8:30am **

	July	August	September	October	November	December
Meeting 1st Tuesday Date/Time:	07-07-2020 7:30pm	08-04-2020 7pm	09-01-2020 7pm	10-06-2020 7pm	11-03-2020 7pm	12-01-2020 7pm
Meeting Location	"On The Air" 146.955- 77Hz & "Zoom"	"On The Air" 146.955- 77Hz & "Zoom"	To Be Determined	To Be Determined	Paulding Chamber of Commerce Bldg.	Paulding Chamber of Commerce Bldg.
Meeting Activity	VE Recognition Night	TBA	TBA	TBA	PWR Supplies Dummy Loads Testing	TBA
Additional Activities	TBD	TBD	Club Fall Picnic (TBD)	AM DX Contest	Club Elections SCARS OTA Reunion	Christmas Dinner
Hamfest & Conventions	Cullman, AL	Huntsville, AL	SEDEC DX	La Grange, GA Chattanooga, TN Rome, GA	Lawrenceville GA Montgomery, AL.	

This calendar is "Subject to change". Submit change request to K4ELI Steve

V2020.08



W4RSC

Paulding County, GA - EM73 - ITU Zone: 8

Silver Comet Amateur Radio Society, Inc.
 PO Box 1873
 Hiram, GA 30141

www.silvercometars.com



STATION	Confirming QSO				Pse QSL <input type="checkbox"/> Tnx QSL <input type="checkbox"/>		
	DAY	MONTH	YEAR	UTC	MHz	RST	MODE

SILVER COMET AMATEUR
RADIO SOCIETY, INC.

CONTACT US:
 Groups.io Request:
 SilvercometARS
www.silvercometars.com
 146.955 (-) (77hz)

Contact: Club President
 John Reynolds, W4TXA

Email:
w4txa.john@gmail.com

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