

Silver Comet ARS, INC NEWS PO BOX 1873 Hiram Ga. 30141 501 (C) (3) Not for Profit February 2018 Vol 5 Number 2

## The **Prez Sez**

As I write this I am noticing a quietness on the 955 Repeater.... Ah, we must be having a contest going... This does remind me that at this moment, there are several

contests. The Grid and Winter Field Day to mention two of them. But, I along with all of us are enjoying the restoration of the 955 Repeater. I want to draw everyone's attention to our next General Meeting (February 6th). We will have a special guest speaker giving a presentation on CW - not to be missed. There will be the usual discussions and some very special ones...

John Reynolds - W4TXA, President



### In This Issue

- American Morse Visit
- **SCARS Night Out**
- Maritime Radio Day
- **POW Canteen Radio**
- Why QRP?
- What is EchoLink?
- Duplexers Huh?
- **Grid Squares**
- More on CW
- What's Ahead
- Featured Shack K4BBH
- Check It Out
- Hmmmm
- SCARS Website Updates
- **Bouvet Island Update**
- Contest
- And More Stuff
- 2018 SCARS Calendar

omet ARS Inc. a 501 (c) (3) Not for Profit Organization









### WB4Q0J's Visit to American Morse!

Visiting family over the New Years Holiday in San Luis Obispo, California. I had the pleasure of meeting up with Doug Hauff, W6AME, San Luis Machine Company at American Morse equipment. If you would like to see his website it's <a href="mailto:americanmorse.com">americanmorse.com</a>. I'm planning on showing a short video that I shot while at his business at the February club meeting if time permits after our program on CW. It was a really neat experience to see his machine shop and the quality that he puts into his projects of not only straight keys but paddles and other Morse code equipment. I hope that you'll be able to come and see this and enjoy the short video and hear some of the interesting stories he shared. So visit his website at <a href="mailto:americanmorse.com">americanmorse.com</a> On his opening page he explains his passion for quality.

73 Lee WB4Q0J



## Monday - "SCARS Night Out" Net!

Just a quick reminder of Monday night's net. Please check in if you get a chance and participate in discussions on just about any subject you choose. Check-in begins at 7:00PM. Look forward to hearing from you.

73's David Walk – K4BBH

## Annual Maritime Radio Day!



# Maritime Radio Day



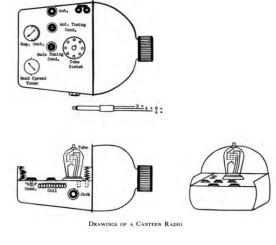
Maritime

Radio Day is held annually and remember the work of the wireless service for seafarers Radio Officers and shortwave listeners are invited to join in

MARITIME RADIO DAY 2017 1200 GMT Friday April 14th to 2200 GMT Saturday April 15th

For more information; <a href="http://maritimeradio.pro/maritimeradioday/">http://maritimeradio.pro/maritimeradioday/</a>

### POW Canteen Radio - WWI Hidden Radio





For more intersting info, go to: <a href="http://www.k0nr.com/wordpress/2015/11/pow-canteen-radio/">http://www.k0nr.com/wordpress/2015/11/pow-canteen-radio/</a>

Contributed by WB4Q0J

## Why QRP?

In amateur **radio**, **QRP** operation refers to transmitting at reduced power while attempting to maximize one's effective range. The term **QRP** derives from the standard Q code used in **radio** communications, where "**QRP**" and "**QRP**?" are used to request, "Reduce power", and ask "Should I reduce power?" respectively. https://en.wikipedia.org/wiki/QRP\_operation

#### Excerpts from the ARRL <a href="http://www.arrl.org/why-qrp">http://www.arrl.org/why-qrp</a>

The **QRP** Q signal was created to mean "Shall I reduce power?" but has since been adopted by the enthusiasts of low-power operation as their banner. **QRP** has come to mean 5 W or less output for CW, or 10 W PEP output or less for SSB. Most amateur organizations and contests embrace these as the official **QRP** limits.

QRP is both a popular technical and operating challenge. Low power transmitters and transceivers are widely popular construction projects—they can be affordable yet challenging to build. With power efficient modes like CW and PSK31, a skilled operator can work the globe! Many operators have qualified for awards like WAS, WAC, and DXCC, with no more than a QRP rig connected to simple wire antennas.

Maybe it's for the challenge of doing something a little different. Maybe it's for the thrill. But I can tell you, there's nothing quite like having a QSO with a Japanese, Russian, or rare DX station while running less power than a kid's nightlight!

Many of the same amateur activities that take place in the rest of Amateur Radio's domain are alive and well within the QRP community. These activities include constructing home-brew equipment, operating QRP stations, experimenting, DX chasing, and contesting.

If you want to hone your operating skills, QRP is for you. With only a few watts of signal to work with, it becomes mandatory to perfect your operating technique if you are going to work through that DX pileup. QRP is the radio equivalent of brain over brawn.

## Why QRP?

From AC6V.... Compliments of Lee, WB4Q0J

"QRPers sometimes sign off with 72 indicating they may be a mite short on power for a full 73! But Kevin Cozens writes "In one of the magazines I was getting for a while from one of the QRP clubs (can't remember if it was from the Michigan QRP club or the G-QRP club) I learned of the use of 72 for the first time. Their use of 72 was based on the idea that "QRP operators do more with less". If you add that to the page you will have both a QRP as well as the QRO operator's view of 72."

Nice reviews on Facebook...go look at website.... <a href="http://www.csi-radios.com/cs108g-hf-radio/">http://www.csi-radios.com/cs108g-hf-radio/</a>

#### **Basic parameters**

Frequency Range: Receive: 0.5 ~ 30MHz

Emissions: All HAM bands

SSB (J3E) CW (A1A) AM (A3E)

Minimum frequency step: 1Hz Antenna Impedance:  $50\Omega$ 

Operating temperature range: -10 °C  $\sim$  + 60 °C Frequency stability:  $\pm$  0.5ppm after 5 minutes

Operating voltage: 12 ~ 14.5V DC

Operating current: 600 mA Max Receiver, 7.5 Amps Transmit 7.5A

Max Machine size: 120 \* 45 \* 180 (mm) [not including knobs, handles, and connectors]



Transmit power: 20W (@ 13.8V) Modes: SSB Upper Sideband SSB Lower Sideband

AM

Spurious rejection: ≥40dBc Carrier suppression: ≥45dBc Selectivity: SSB 2.4kHz (-6dB) CW 500Hz (-6dB)



#### **Receiver parameters**

IF frequency: 10.7MHz Receiving sensitivity: 0.5uV (PRE ON, ≤ 2.0MHz) 0.3uV (PRE ON, > 2.0MHz)

### What is EchoLink?

From Wikipedia, the free encyclopedia <a href="https://en.wikipedia.org/wiki/EchoLink">https://en.wikipedia.org/wiki/EchoLink</a>

**EchoLink** is a computer-based Amateur Radio system distributed free of charge that allows <u>radio amateurs</u> to communicate with other amateur radio operators using <u>Voice over IP</u>(VoIP) technology on the <u>Internet</u> for at least part of the path between them. It was designed by Jonathan Taylor, a radio amateur with <u>call sign</u> K1RFD.

The system allows reliable worldwide connections to be made between radio amateurs, greatly enhancing Amateur Radio's communications capabilities. In essence it is the same as other VoIP applications (such as <a href="Skype">Skype</a>), but with the unique addition of the ability to link to an <a href="amateur radio station">amateur radio station</a>'s <a href="transceiver">transceiver</a>. Thus any low-power handheld amateur radio transceiver which can contact a local EchoLink node (a node is an active EchoLink station with a transceiver attached) can then use the Internet connection of that station to send its transmission via VoIP to any other active EchoLink node, worldwide. No special hardware or software is required to relay a transmission via an EchoLink node.

Before using the system, it is necessary for a prospective user's call sign to be validated. The EchoLink system requires that each new user provide positive proof of license and identity before his or her call sign is added to the list of validated users. There is no cost for this service, and it ensures that this system is used only by licensed amateur radio operators.

EchoLink FAQs www.echolink.org/faq.htm

Take a Tour www.echolink.org/tour.htm

<u>User's Guide - Introducing EchoLink</u> <u>www.echolink.org/downloads/EchoLinkUsersGuide.pdf</u>

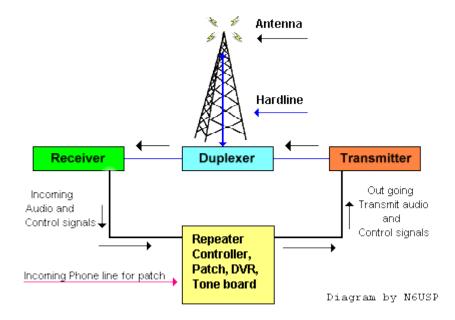
### Repeater Duplexers - What are they?

Editors note: You may hear some of us repeater users mention the word "Duplexer" in reference to the 146.955 repeater, but do you know what we are really talking about? The excerpts from this article may help. To read the entire article go to:

https://www.tessco.com/yts/knowledge center/su/pdfs/understanding your duplexer.pdf

#### Antenna Duplexers By: William F. Lieske, Sr. Founder, EMR Corporation

Duplexer, Defined: The terms duplexer and diplexer have been used interchangeably for many years. The prefix "Di" is defined as "twice, double or twofold." The prefix "Du" means two or dual. "Plex" from the Latin word plexus has, among other meanings, the definitions: "An interwoven arrangement of parts; A network." Thus we can conclude that duplexer and diplexer have the same literal meaning. It is noted that duplexer has been used with regard to wireless (land mobile) systems and diplexer has been used in microwave system application. We will stay with duplexer to refer to the devices covered in this bulletin. Duplexer Applications A duplexer provides the means for simultaneous operation of a mobile relay or repeater station having separate TX and RX frequencies when using a common antenna. The benefits of this include: Saving one antenna and one transmission line, compared with using separate transmit and receive antennas for a repeater, maintaining reciprocal receiving and transmitting signal path characteristics compared with separate, TX and RX antennas, and providing sufficient filtering to prevent both transmitter carrier power and wide band noise from desensitizing the associated receiver.



## Repeater Duplexers - What are they?

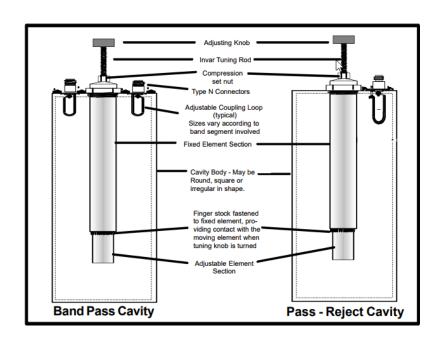
There are two basic types of duplexers, Band Pass and Band Reject.

#### **Band Pass Type:**

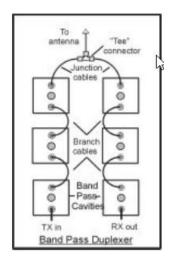
- Generally will have higher branch loss than pass-reject type, 1.5 dB per branch or higher being expected.
- Far superior for dense site use. The multiple cavity strings provide added selectivity for the receiver and a high order of spurious and harmonic rejection for the transmitter.
- Requires larger, higher "Q" cavities and more of them, resulting in higher cost and need for greater site space occupancy.
- Through use of correct branch cable lengths and careful loop coupling adjustments, this duplexer type can be tuned for a broad "nose" response to accommodate multi-frequency transmitters and receivers.
- Impractical for closely spaced TX-RX pairs, compared to pass/notch types. Higher costs than pass notch types due to requiring larger cavities.

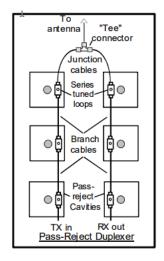
#### **Band Reject (Pass/Notch) Types:**

- Lower insertion loss than band pass types for same TX-RX spacing.
- Since pass band is broad, little help is provided in receiver front end selectivity except for the transmit carrier notch. This can be a real problem when placed at high density sites.
- Can use smaller volume cavities for a given TX-RX spacing, saving space.
- Lower cost to manufacture; savings in materials and labor.



## Repeater Duplexers - What are they?













For more information on duplexers:

https://www.tessco.com/yts/knowledge\_center/su/pdfs/understanding\_your\_duplexer.pdf

### Grid Squares - What are they?

The *Maidenhead Locator System*, is a method of using grid squares to precisely communicate your position from anywhere on earth.

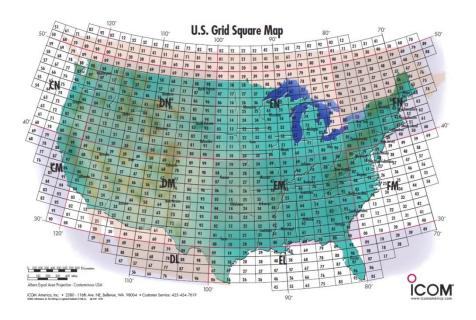
A grid square measures 1° latitude by 2° longitude which is equivalent to approximately  $70 \times 100$  miles. A grid square is indicated by two letters and two numbers, as in **EM73**.

Square
Subsquare
Extended square

BL11bh16

Extended square
Subsquare
Subsquare
Square
Field

Each grid square contains a sub-square which is defined by adding two letters after the grid square, EM73**ox**. Sub-squares measure 2.5 minutes latitude by 5 minutes longitude, roughly corresponding to 3 × 4 miles.



The ARRL International Grid Chase is underway! Join in on our newest yearlong operating event!

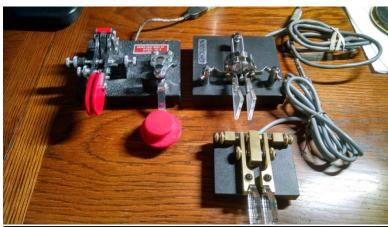
The objective of the ARRL International Grid Chase is simple: Work stations in as many grid squares as possible and upload your log data to ARRL's Logbook of The World (LoTW).

The ARRL International Grid Chase is open to all amateurs, regardless of location or license class. Any operating mode is eligible as well as every band, except 60 meters. You'll find the complete rules at <a href="https://www.arrl.org/aigc2018">www.arrl.org/aigc2018</a>

Grid Square Mapper - <a href="http://wg7j.reinalda.net/gridmapper/gridmapper.php">http://wg7j.reinalda.net/gridmapper/gridmapper.php</a>

### More on CW!





Part of K4CGA's collection of keys. Top: Brown Bros. CTL-B, Bencher BY-1 Bottom: Vibroplex Code Warrior Jr.

### Did You Know?





That VIBROPLEX® - The Oldest Name in Amateur Radio with their first Morse Code keys released for sale in 1905.

http://www.vibroplex.com/index.html

### More on CW!



**Key Collection of K4ELI** 

**Top Row (L>R)** Olsen Electronics Key and Oscillator, Nye Viking Straight Key w/box, Vibroplex #4771 Iambic w/case

**Bottom Row (L>R)** J-38 Straight Key, Western Union Telegraph Co Legless Straight Key, McElroy 300 Stream Key, Schurr-Morsetasten (German) Profi-2 Iambic, Brown Bros. BTL Iambic, Bencher BY-1 Iambic, Vibroplex #7489 Iambic w/cover



#### T.R. McElroy "World's Champion Radio Telegrapher"

aka: McElroy Manufacturing Corp. -Model 300 Stream Hand Key

Ted McElroy was a champion radio telegrapher of the 1930s up into the early 1950s. His receiving speed was advertised as 55wpm in the mid-thirties but ultimately Ted was clocked at over 70wpm. Ted's company seems to officially have been "McElroy Manufacturing Corporation" (officially formed in 1941) but most of his earlier telegraph key name-plates will have "T. R. McElroy - World's Champion Radio Telegrapher - Boston Mass." as the company name. Sometimes "MAC" also appears on the

name-plates. Around 1955, McElroy sold his business to Telegraph Apparatus Corp. (T.A.C.) The Model 300 Stream Hand Key is from 1940. McElroy had built other stream keys earlier and these models had either black wrinkle finish bases or the bases were made out of black molded plastic. Most of his earlier hand keys did have labels. The Model 300 was McElroy's first chrome plated stream key and these models have no identification tag. Selling price was under three dollars in 1940. The Model 300 is an excellent hand key with a nice feel and great stability due to its shape that puts most of the base weight is at the rear of the key.

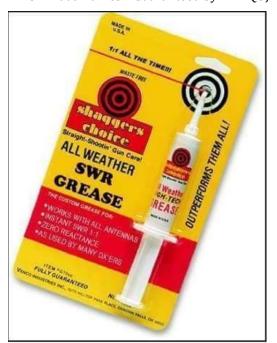
### What's Ahead!

*Thursday, May 17<sup>th</sup> 2018.* **Contest University** will be held on Thursday May 17, 2018, from 7:00am to 5:00pm, at the Crowne Plaza Hotel in Dayton, Ohio. This is the day before the Dayton Hamvention officially opens. Don't miss this rare opportunity to gain knowledge that may take you years of practice, trial and error or lost time to learn otherwise. Get the edge to improve your scores and put your station in the winner's circle today! <a href="https://www.contestuniversity.com/">https://www.contestuniversity.com/</a>

**Tuesday, January 9th 2019. National Static Electricity Day.** If you feel a special, hair-raising electricity in the air today, well that's no wonder — it's National Static Electricity Day. Static electricity is the result of an imbalance between negative and positive charges in an object. These charges build up on the surface until they are discharged. This commonly happens when you shuffle about when the humidity is very low and then touch a conductor, such as a door handle or your pet's wet nose. Static electricity has uses in air purifiers, photocopiers and bonding in the painting of automobiles, as well as sticking party balloons onto walls and ceilings. Generating and distributing more practical electricity is a \$430 billion a year business for over 10,600 electric power establishments nationwide. You can find more facts about America from the U.S. Census Bureau online at <a href="https://www.census.gov">www.census.gov</a>

### Hmmmm!

1:1 SWR at all times - Guaranteed by WB4Q0J





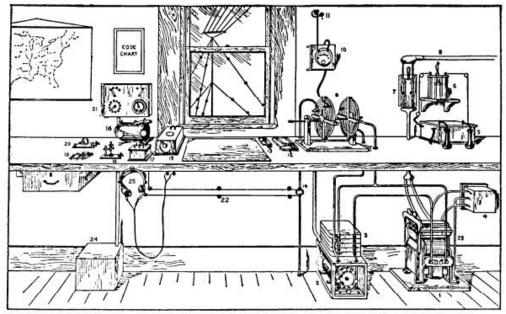
How to fix a broken repeater with it.



### Featured Ham Shack - K4BBH



Dave's remodeled shack and new radio.



Modern Amateur Wireless Station - 1- Thordarson flexible transformer on slate base. 2- Rotary spark gap in box with glass side and end.

3- Murdoch moulded sending condenser units. 4 - Clapp-Eastman kickback preventer. 5 - Electro-Importing Co's 1/2 kw. transformer.

6 - Gernsback electrolytic interrupter. 7- 25 ampere DPST power switch. 8 - Power supply, AC or DC (in conduit). 9 - Oscillation tranmeformer.

10 - Brandes hot wire ammeter. 11 - Electrose lead-in insulator. 12 - 25 ampere DPST switch controlling current to transformer and rotary spark gap motor.

13 - Marconi wireless key. 14 - Anchor gap in ground wire circuit. 15 - Gernsback rotary variable condenser. 16 - Clapp-Eastman navy type tuner.

17 - Fixed condenser. 18 - Silicon detector. 19 - 10 ampere 3PDT switch for detectors and receivers. 20 - De Forest audion detector.

21 - Battery switchboard for audion. 22 - Leads from anchor gap to receiving set. 23 - Head receiver set.

24 - Battery box containing battery cells for audion lamp and head telephone receivers. 25 - Kickback ground wire.

Hawkins Electrical Guide. No 8 - 1917

### Check It Out!

### Welcome to the Bunker of DOOM

www.bunkerofdoom.com

Where technologies of the past live within the exciting projects of the future!

~~ Timeless Information for Retro-Tech Hobbyists and Hardware Hackers ~~

### Recent SCARS Website Updates:



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

- 2018 elected Officers/Board members updated on the Contact page.
- SCARS Jan 2<sup>nd</sup> meeting Fldigi demonstration video uploaded to <u>SCARS YouTube Channel</u>.
- On the Packet, Weak Signal, and other Digital Modes section of the Digital Modes page;
  - Updated link to current FT8 Digital Operating Guide from ZL2iFB.
  - Link added to the FT8 Digital Mode Club website.
- Link to ARRL International Grid Chase contest added to the <u>Contest Calendar</u> page.

Send SCARS website corrections, comments, or suggestions to K4LDC (Larry) at K4LDC@arrl.net

## Bouvet DX Update!

Posted on DX-World web site

**JANUARY 27** – Thursday night, our weather took a major turn for the worse, as we were overtaken by a low pressure system with winds about 35 knots and confused seas at 5 meters. The ship has been pitching quite a lot, but is riding well. This **short video** courtesy of Jeff, NM1Y best tells the story of our day yesterday, and why we have remained below decks.

We had to QRT our maritime mobile operation and secure the radios, because of the ship's rolling. We did not want to risk damage to the radios. We have yet to ascertain the status of our ship-mounted antennas for possible damage. The Hustler vertical is mounted on the bow, and took many salt water baths yesterday (as you can see in Jeff's video). Today's forecast looks a little better. We hope to be back at full speed, and have 3G9A/MM QRV again, after checking and repairing the antennas. [Hal, W8HC]

### Breakfast @......







The "Official" Breakfast Joint of

### The Silver Comet Amateur Radio Society

## **Come Join Us!**

Thursday mornings Around 9am +/-Until ??????

Located on Hwy 278 in Hiram between the Goodwill and Racetrack across from the Home Depot.

Say Hi! To Kyle, the manager and show your Greystone Connections Card for a discount.

## **Contest & Special Events**

#### 2018 ARRL Contest Dates - Ver 1.0 - 30 June 2017

January 2018 1 Straight Key Night 6 Kids Day 6-7 RTTY Roundup 20-22 January VHF	February 2018 12-16 School Club Roundup 17-18 International DX – CW
March 2018 3-4 International DX- Phone	April 2018 15 Rookie Roundup – Phone
June 2018 9-11 June VHF 16 Kids Day 23-24 Field Day	July 2018 14-15 IARU HF World Championship
August 2018 4-5 222 MHz and Up Distance Contest 18-19 10 GHz & Up – Round 1 19 Rookie Roundup – RTTY	September 2018           8-10         September VHF           15-16         10 GHz & Up - Round 2           29-30         EME - 2.3 GHz & Up
October 2018 15-19 School Club Roundup 27-28 EME - 50 to 1296 MHz	November 2018 3-5 Nov. Sweepstakes – CW 17-19 Nov. Sweepstakes – Phone 24-25 EME - 50 to 1296 MHz 11/30-12/2 160 Meter
December 2018 11/30-12/2 160 Meter 8-9 10 Meter 16 Rookie Roundup-CW	Check your emails for additional contest and special event activities

#### Additional Contest Calendars

### SCARS V.E. ACTIVITIES

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:

### 2018 Schedule

Jan 11 Feb 1	Feb 1	Mar 1	Apr 5	May 3	Jun 7
Jul 12	Aug 2	Sep 6	Oct 4	Nov 1	Dec 6

All classes of licenses will be available.

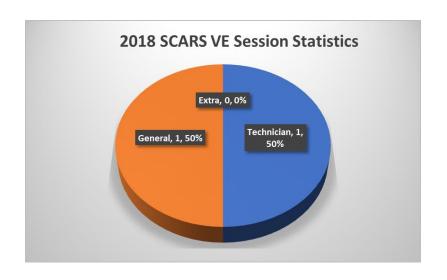
#### **BRING:**

- 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 ARRL or SCARS web sites for more details.

## SCARS V.E. ACTIVITIES (YTD as of 11 January 2018)

Call	Date	Name	City	State	Class
KN4ILS	10-Jan-2018	Kevin Zgonc	Powder Springs	GA	Gen
KN4IXX	11-Jan-2018	Gerald B. Jones, Jr.	Dallas	GA	Tech



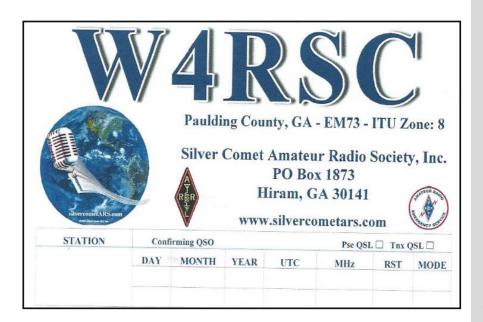
## Silver Comet Amateur Radio Society

## 2018 Calendar

** Don't forget "BABJ" [Breakast At BoJangles] every Thursday morning at 9am. **						
	January	February	March	April	May	June
Meeting 1st Tuesday Date/Time:	01-02-2018 7pm	02-06-2018 7pm	03-06-2018 7pm	04-03-2018 7pm	05-01-2018 7pm	06-05-2018 7pm
Meeting Location	Paulding Chamber of Commerce Bldg					
Meeting Activity	Digital (WB3ILX)	CW Training	Digital (WB3ILX)	Severe WX Presentation (K4DMF)	Digital (WB3ILX)	Logging Techniques (K4ELI)
Additional Activities	TBD	TBD	Fox Hunt Date TBA	GA QSOP.	Family Night Dinner Date TB	Field Day 23 <sup>rd</sup> & 24th
Hamfest Schedule	Lawrenceville TechFest	Dalton, GA	Birmingham, AL Elijay, GA	Mobile, AL Calhoun, GA	Dayton, OH	Atlanta, GA

	July	August	September	October	November	December
Meeting 1st Tuesday Date/Time:	07-03-2018 7pm	08-07-2018 7pm	09-04-2018 7pm	10-02-2018 7pm	11-06-2018 7pm	12-04-2018 7pm
Meeting Location	Paulding Chamber of Commerce Bldg	Paulding Chamber of Commerce Bldg	Paulding Chamber of Commerce Bldg			
Meeting Activity	Digital (WB3ILX)	QSL Cards (K4ELI)	Cheap Antennas (K4CGA)	Clusters & Nodes (WB4QOJ)	Station Grounding (W4TXA)	TBD
Additional Activities	TBD	TBD	Club Fall Picnic	AM DX Contest	TBD	Christmas Dinner
Hamfest & Conventions	Cullman, AL	Huntsville, AL	SEDEC DX	La Grange, GA Chattanooga, TN Rome, GA	Lawrenceville GA Montgomery, AL.	

V2018.01



SILVER COMET AMATEUR RADIO SOCIETY, INC.

#### **CONTACT US:**

Yahoo Group Request:
SilvercometARS
www.silvercometars.com
146.955 (-) (77hz)

Contact: *Club President*John Reynolds, W4TXA

Email: John-W4TXA@comcast.net

SILVERCOMET ARS, INC. PO BOX 1873 HIRAM, GEORGIA 30141