

# **AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.**



**GENERAL MEETING**

**MEETING #28**

**Tuesday, April 25, 2017**

**7 PM**



**INVOCATION**



# ARCCC, INC. AGENDA OVERVIEW

- Welcome and Introductions (Quickly)
- Applications for New Membership
- Treasury Report and Meeting Minutes
- Swap Table
- Presentation
- Updates from Committee Directors
- New Business

# RECOGNIZE SPECIAL VISITORS





# WELCOME AND INTRODUCTIONS

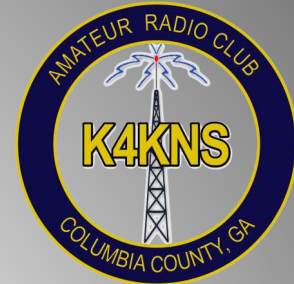
- Please Sign In on the Attendance Log
  - Please PRINT Legibly
- Introductions
  - QUICKLY Go Around the Room and Provide Your Name and Call Sign



# MEMBERSHIP APPLICATIONS

- Are there any additional ARCCC, Inc. Membership Applications which need to be turned in before we vote?
  - Robert Fabich (NU9Q)

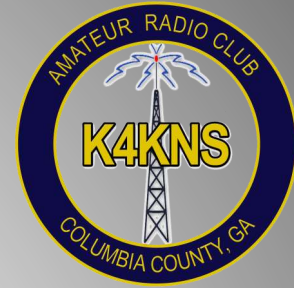




# ARCCC, INC. REPORTS

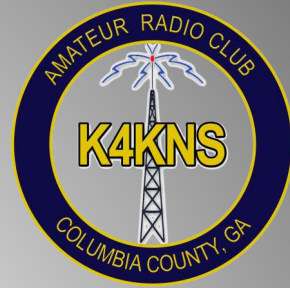
- Treasurer's Report
- Secretary's Report
  - Posted on Website







# Photos of the NWS CAE COOP/SKYWARN OPEN HOUSE





National Weather Service  
Weather Forecast Office





## Proposed Changes

March 2011



THE PALMETTO STATE  
EDISTO BEACH  
SOUTH CAROLINA  
ATLANTIC COAST  
STATE PARK





















WX4CAE





UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION



AMATEUR RADIO LICENSE  
WX4CAE

ATTN: DOUGLAS P ANDERSON  
MIDLANDS REGION SKYWARN TEAM  
2909 AVIATION WAY  
WEST COLUMBIA, SC 29170

FCC Registration Number (FRN): 0018105403

Special Conditions / Endorsements

NONE

Grant Date	Effective Date	Print Date	Expiration Date
06-06-2009	05-02-2016	05-03-2016	08-02-2019
File Number	Operator Privileges		Station Privileges
0007251266			CLUB

THIS LICENSE IS NOT TRANSFERABLE

*[Signature]*  
(Licensee's Signature)

FCC 440 - May 2007

Cut Along This

Call Sign / Number	Grant Date	Expiration Date	File Number	Print Date	Effective Date
WX4CAE	06-06-2009	08-02-2019	0007251266	05-03-2016	05-02-2016
Operator Privileges		Station Privileges	THIS LICENSE IS NOT TRANSFERABLE		
		CLUB	Special Conditions / Endorsements		
ATTN: DOUGLAS P ANDERSON MIDLANDS REGION SKYWARN TEAM 2909 AVIATION WAY WEST COLUMBIA, SC 29170			<i>[Signature]</i> (Licensee's Signature)		
AMATEUR RADIO LICENSE			FCC 440 - May 2007		
FCC Registration Number (FRN): 0018105403					

Cut Along This

Licensee: This is your radio authorization in sizes suitable for your wallet and for framing. Carefully cut the documents along the lines as indicated.

The Commission suggests that the wallet size version be laminated (or another similar document protection process) after signing. The Commission has found, under certain circumstances, laser print is subject to displacement.

Weather Service SKYWARN









**DANGER**  
DIESEL  
FUEL

**NO SMOKING**









# UPCOMING EVENTS

- 05-06-2017 – Amateur Radio Club of Augusta Tailgate and Picnic – Old React Building
- 05-19-2017 – Dayton Hamvention
  - Need a Room?
- 05-27-2017 – Aiken Memorial Day Parade Event – Comms by NABRC
- 08-21-2017 - Total Solar Eclipse Special Event Station
- 09-16-2017 – Bsidies Conference

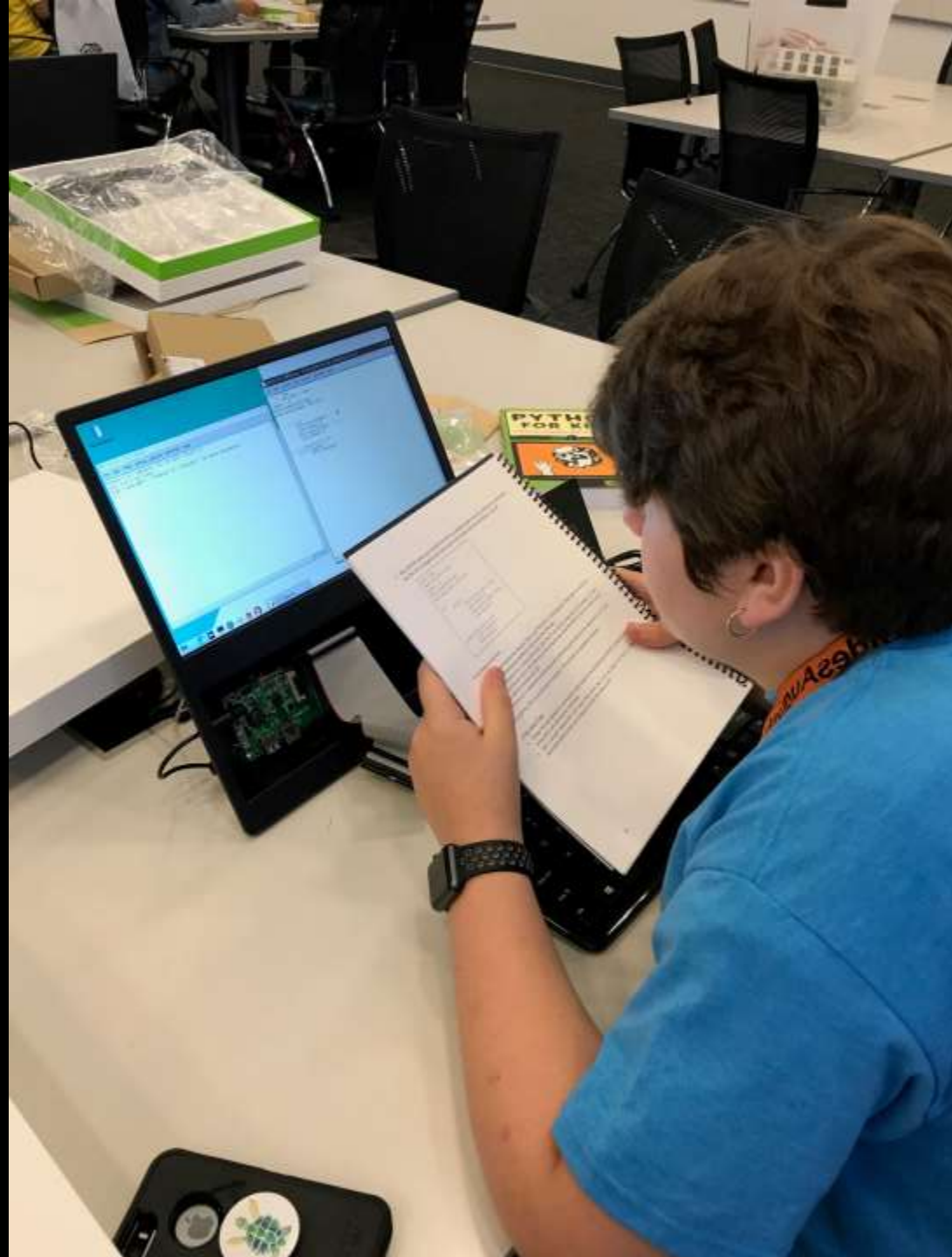




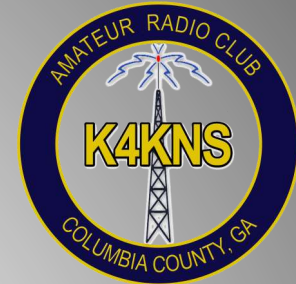
# Bsides Augusta STEM

- 04-22-2017 from 9 AM to 5 PM









# COLUMBIA COUNTY, GA AMATEUR RADIO EMERGENCY SERVICE (ARES) EMERGENCY COORDINATOR (EC)

- Pete LaPierre (K1OYQ)



# PRESENTATION

Automatic Packet Reporting System

Richard Sturgis (KR4XN)

dou · ble en · ten · dre

ambiguity of meaning arising from  
language that lends itself to more than  
one interpretation.

Example: “We’re all here-  
because we’re not all there!”

A series of white diagonal lines of varying lengths and thicknesses, located in the bottom right corner of the slide.




APRS

Automatic Packet (Position)  
Reporting System

**Automatic Packet Reporting System (APRS)** is an amateur radio-based system for real time digital communications of information of immediate value in the local area.

Data can include object (GPS) coordinates, weather station telemetry, text messages, announcements, queries, and other telemetry.

Several white lines of varying lengths and angles are drawn in the bottom right corner of the slide, creating a modern, abstract graphic element.

APRS was started by Bob Bruninger,  
WB4APR more than 20years ago.

Bob is a senior research engineer at the  
United States Naval Academy

APRS is a registered trademark of Bob Bruninger

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the center of the slide.



An APRS infrastructure comprises a variety of Terminal Node Controller (TNC) equipment put in place by individual amateur radio operators. This includes sound cards interfacing a radio to a computer, simple TNCs, and "smart" TNCs. The "smart" TNCs are capable of determining what has already happened with the packet and can prevent redundant packet repeating within the network.

## Some available controllers



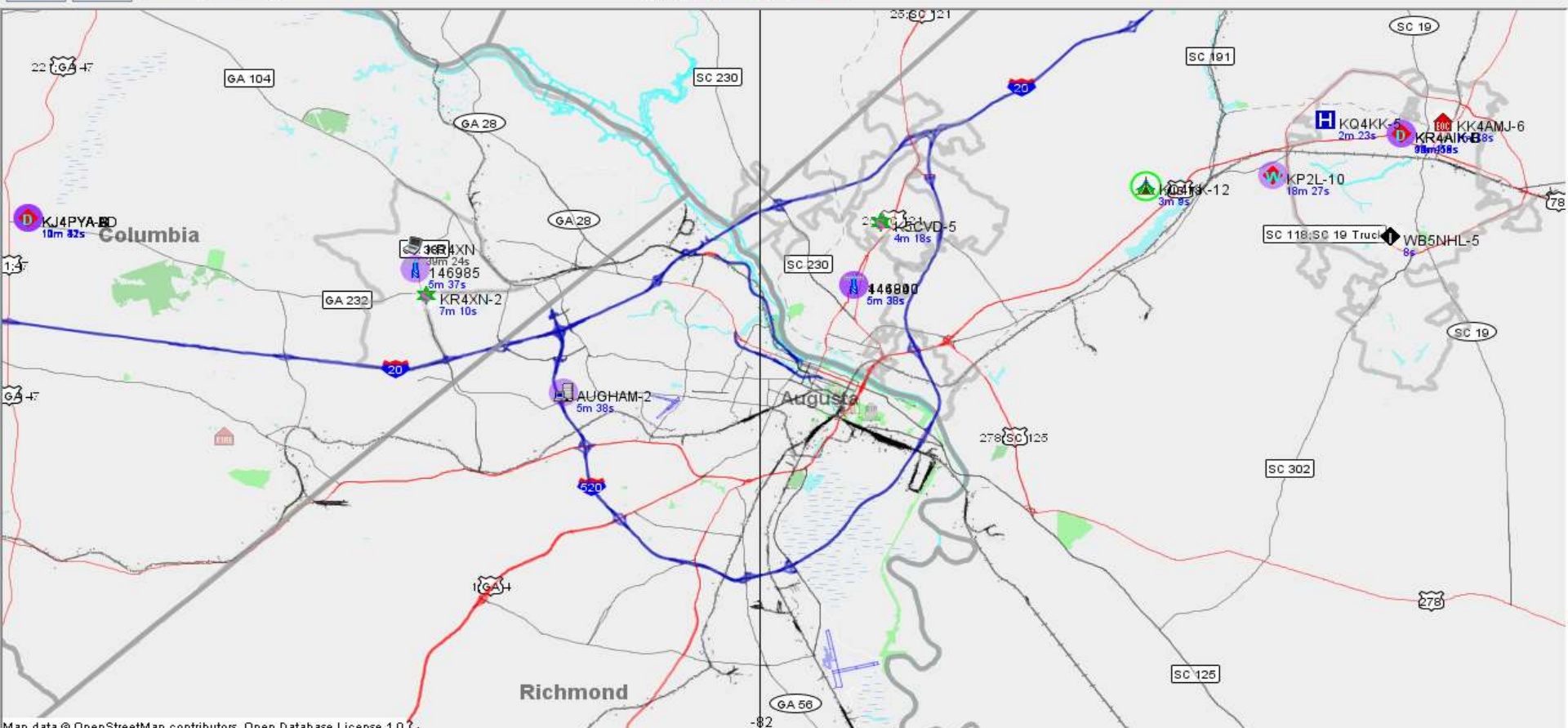




YAAC

Yet Another APRS Client

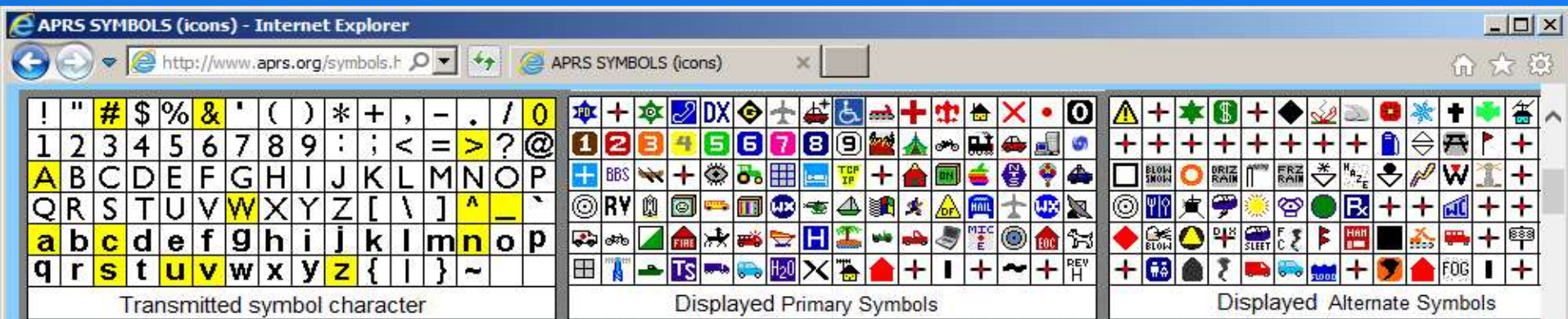
A series of several parallel white diagonal lines of varying lengths, located in the bottom right corner of the slide.



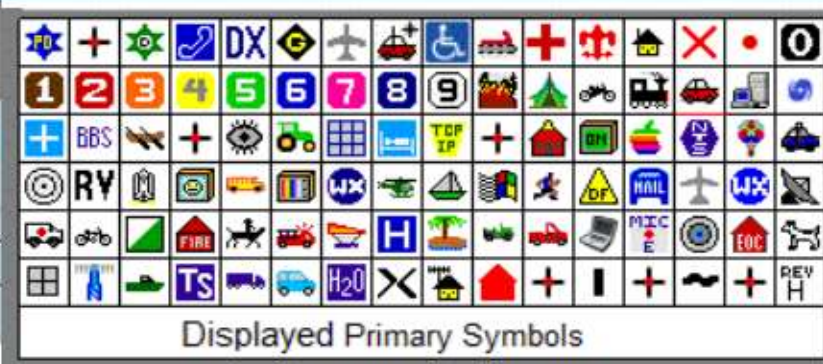
Map data © OpenStreetMap contributors, Open Database License 1.0

33° 24.18'N 082° 10.66'W EM83vj To: Via: SMD



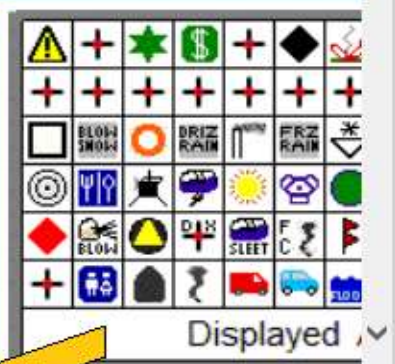


**OVERLAYS:** An optional overlay character could be applied over many of the original Alternates (those highlighted in yellow). Beginning around 2007 we suggested that the 36 overlay characters could also apply to any of the 92 alternates giving us over 3000 unique symbol opportunities. See: [symbols-new.txt](#). These would be displayed on all existing clients as an overlay character on the basic alternate symbol, but clients could begin to draw additional unique images to represent these symbol/overlay combinations. Here is an example of how the original "Runner" symbol was expanded to represent any number of special symbols for humans carrying APRS such as a Hiker, Skier, or with Baby-on-Board (proud parents). Another example is the House symbol expanded to show Power sources such as Battery, geothermal, Hydro, Solar and Wind plus the new Clubhouse symbol. To document these added overlay symbols a new table format was suggested below:



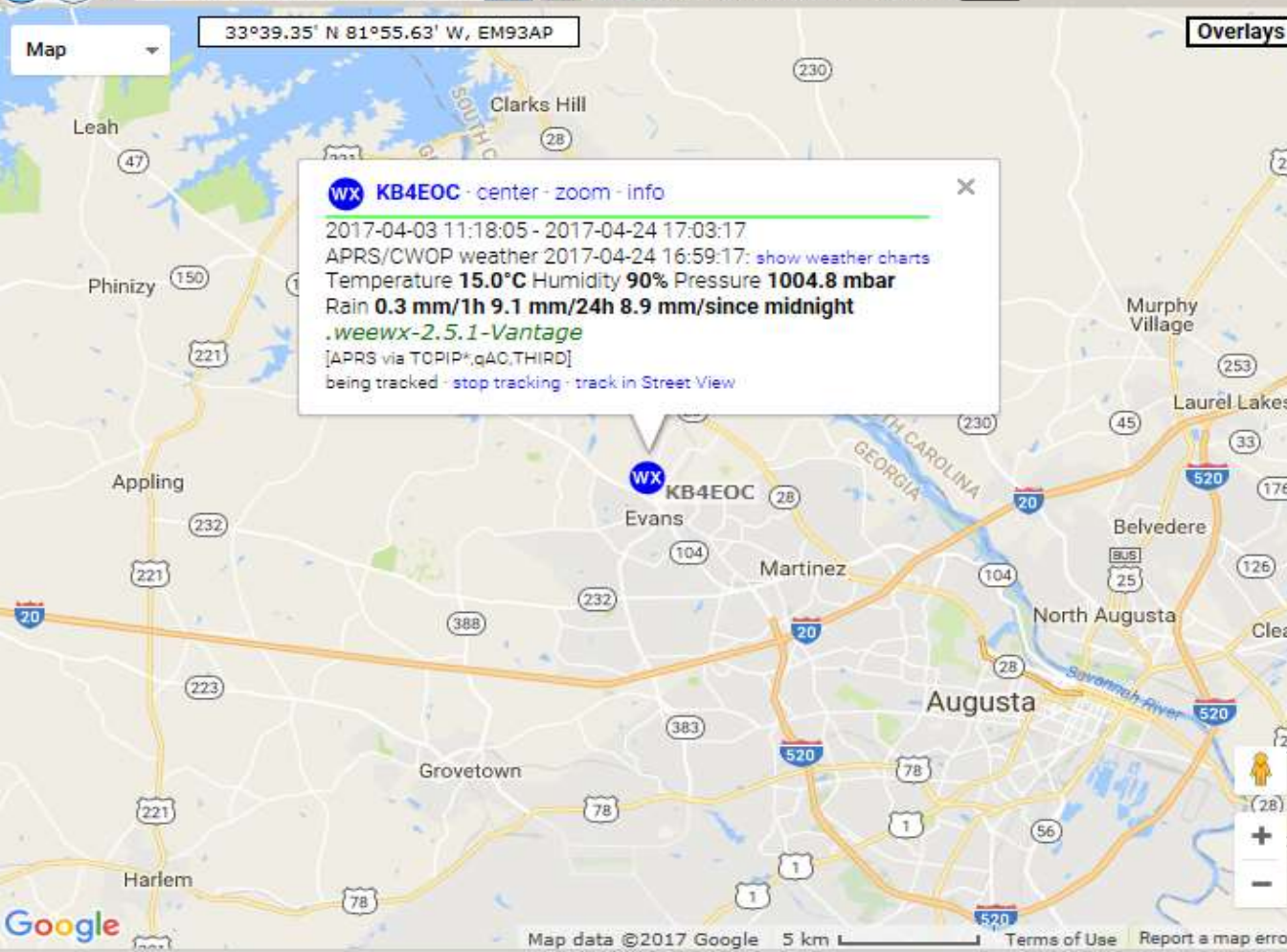
Originally, APRS had 192 symbols.

That was expanded in 2007 to thousands by allowing every alternate symbol to have 36 alphanumeric overlays.









**wx KB4EOC** · center · zoom · info

2017-04-03 11:18:05 - 2017-04-24 17:03:17  
 APRS/CWOP weather 2017-04-24 16:59:17: [show weather charts](#)  
 Temperature **15.0°C** Humidity **90%** Pressure **1004.8 mbar**  
 Rain **0.3 mm/1h 9.1 mm/24h 8.9 mm/since midnight**  
**.weewx-2.5.1-Vantage**  
 [APRS via TOPIP,qAO,THIRD]  
 being tracked · [stop tracking](#) · [track in Street View](#)

**Overlays**

**aprs.fi · Login**

[Google Chrome - Download](#)  
[Chrome Today](#)  
 Chrome is a fast, secure and free browser for all your devices. [Go to google.com](#)

Track callsign:  [Search ?](#)

Address, city or Locator:  [Search ?](#)

Show last:  
 [Show all](#)

Track tail length:

**KB4EOC wx**

Updated: 2017-04-24 17:03:17 (59s)  
 Position: 33°32.84' N 82°7.93' W

**2015** **2016** **2017** [Calendar](#) [Previous](#) [Next](#)

Wx: 15.5°C 89% 1004 mbar 0.4 m/s NE

**Other views:**

- [Station info](#)
- [Raw packets](#)
- [Status packets - Beacon packets](#)
- [APRS/CWOP weather - Telemetry](#)
- [Messages - Bulletin board](#)
- [Prefix browsing](#)
- [Google Earth KML ?](#)



Google Maps APRS

Secure | <https://aprs.fi/#/mt=roadmap&z=14&call=a%2FKR4XN-8&timerange=10800&tail=3600>

Map

32°21.47' N 82°08.20' W, DM25WM

Overlays

aprs.fi - Login

Click to Install

Track callsign: Clear

Search

Address, city or Locator: Clear

Search

Show last: 3 hours Show all

Track tail length: 1 hour

KR4XN-8

Updated: 2017-04-11 14:06:30 (4d5h)

Position: 33°31.47' N 82°08.72' W

2015 2016 2017

Other SSIDs: KR4XN-8 KR4XN-2

KR4XN-2

W: 25.1°C 53% 1024 mbar 0.3 m/s S

Other views:

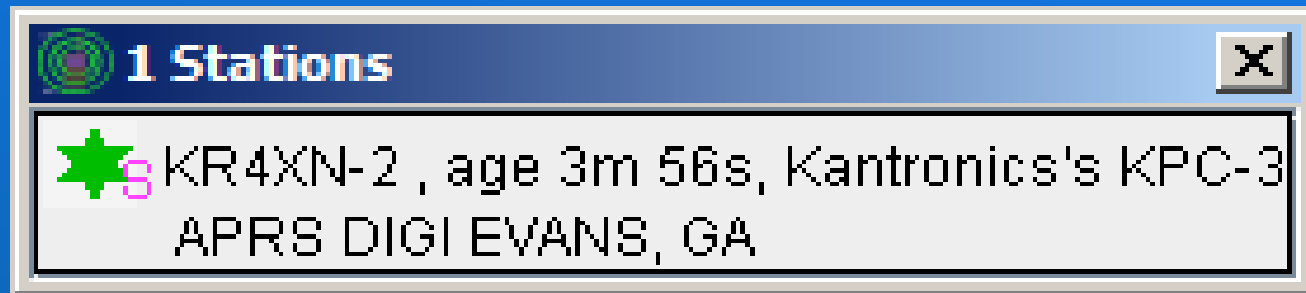
- Station info
- Raw packets
- Status packets - Beacon packets
- APRS/CWOP weather - Telemetry
- Messages - Bulletin board
- Prefix browsing
- Google Earth KML
- Data export tool
- Preferences - My account

Information:

Stations currently moving - FAQ - Blog - Discussion group - Linking to aprs.fi - AIS sites - Service status - Database statistics - Advertising on aprs.fi - Technical details - API - Change log - Planned changes - Credits and thanks - Terms Of Service - iPhone/iPad APRS

Map data ©2017 Google 2 km





GP  
S

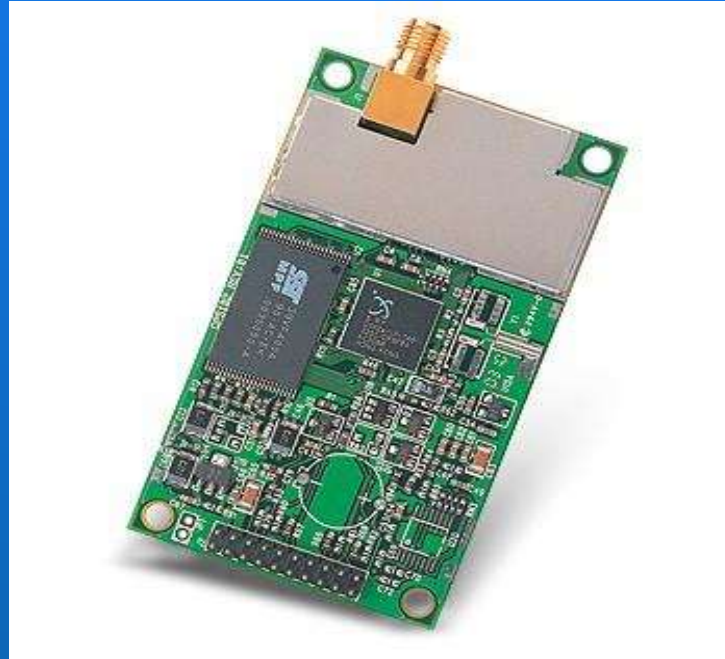
Controll  
r

Radio

Antenna

Comput  
r





GlobalSat GPS Board





GPS system consists of around 27 active satellites  
of which 24 are normally in operation.  
Normally reception of 3-4 gives good location.



MICRO TRAK RTG (Ready to go)

byonics.com

argentdata.com

I'm lost, but I know exactly where I am!

A series of white lines of varying lengths and thicknesses, all slanted at approximately 45 degrees, extending from the right edge of the slide towards the center.



Thank you Richard!



# OLD BUSINESS

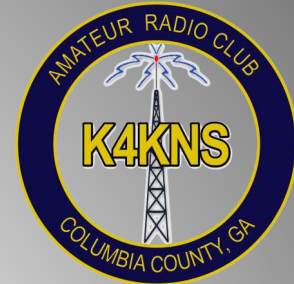
- Any Old Business?
  - Rusty Welsh (KG4HIR)
    - CHIRP Programming Workshop
  - Dan Marshall (N1ADM)
    - Purchase of QSL Cards
      - Jim, Louis, Devon, Eric, Dan
  - Previous Motions to follow up on not otherwise covered by a committee?



# COMMITTEE UPDATES

- Directors should provide QUICK UPDATES on their committees





# COMMITTEE UPDATES

- Asset/Inventory Committee
  - Earl Welsh (KG4HIQ) and Walter Brumbeloe (W4EFS) are Co-Directors



# COMMITTEE UPDATES

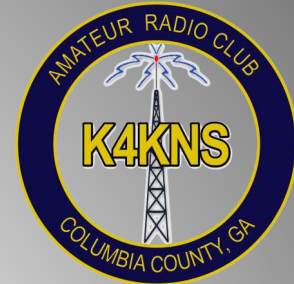
- Asset/Inventory Committee
- Constitution and Bylaws Committee
  - Jim Cunningham (KV4YA) and Steve Clayborn (KJ4FSX) are Co-Directors



# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
  - Doyle Windham (WE4GW) and Richard Sturgis (KR4XN) are Co-Directors





# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
  - Dan Marshall (N1ADM) and Eric Cagle (KK4ZHT) are Co-Directors



# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
  - Earl Welsh (KG4HIQ) and Drew Brejda (KA5VLY) are Co-Directors



# COMMITTEE UPDATES

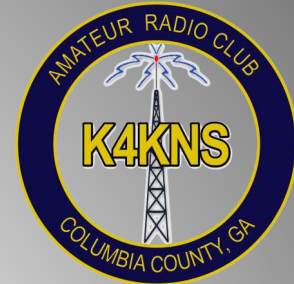
- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
  - Eric Cagle (KK4ZHT) and Dan Marshall (N1ADM) are Co-Directors



# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
  - Devon Harris (KM4PHT) and Dan Marshall (N1ADM) are Co-Directors





# COMMITTEE UPDATES

- Net Committee - Devon Harris (KM4PHT)
  - Net Controllers WANTED!!!
  - ARCCC, Inc. Net
    - Monday's at 7:30 PM Local Time on 146.985, TSqI 71.9
  - ARCCC, Inc. 6 Meter Rag Chew
    - Thursday's at 9:00 AM Local Time on 53.03 (-1 MHz), No Tone
  - AmRRON Net
    - Monday's at 21:00 on 146.985, 71.9 TSqI



# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
- Outreach Committee
  - Jim Cunningham (KV4YA) and Dan Marshall (N1ADM) are Co-Directors



# COMMITTEE UPDATES

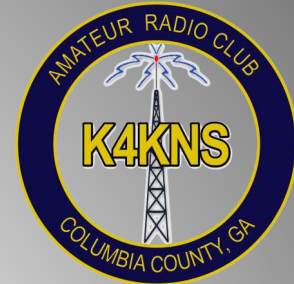
- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
- Outreach Committee
- Repeater Committee
  - Howard Weeks (K5JCP) and Earl Welsh (KG4HIQ) are Co-Directors



# COMMITTEE UPDATES

- Repeater Committee
  - Crystals ordered on 04-03-2017 from Transko Electronics, Inc.





# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
- Outreach Committee
- Repeater Committee
- K4KNS Trustee
  - Richard Sturgis (KR4XN) is the K4KNS Repeater Trustee



# COMMITTEE UPDATES

- Asset/Inventory Committee
- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
- Outreach Committee
- Repeater Committee
- K4KNS Trustee
- VE Team Committee
  - Shannon Covington (KK4MED) is the VEL and Cindy Cunningham (KM4DBA) is the VEL Assistant



# COMMITTEE UPDATES

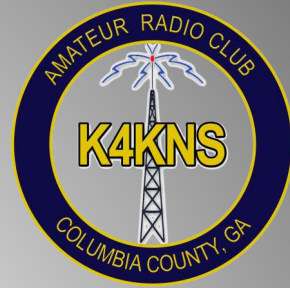
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- Constitution and Bylaws Committee
- Chaplain and Visitation Committee
- Field Day Committee
- Fundraising Committee
- Mentoring Committee
- Net Control Committee
- Outreach Committee
- Repeater Committee
- K4KNS Trustee
- VE Team Committee
- Website Committee
  - Rusty Welsh (KG4HIR) and Eric Cagle (KK4ZHT) are Co-Directors

# NEW BUSINESS





# ARCCC, Inc. Facebook Page



 **Amateur Radio Club of  
Columbia County, Inc.**  
Non-Profit Organization

[Add a Button](#) [Liked](#) [Message](#) [...](#)

[Timeline](#) [About](#) [Photos](#) [Events](#) [More](#)

Non-Profit Organization · Evans, Georgia

[Status](#) [Photo / Video](#) [Offer, Event +](#)

 Write something...



# MEETING AGENDA ITEMS

- Anyone wishing to place an item on the ARCCC, Inc. Meeting Agenda should provide their request via email to the ARCCC, Inc. President at least 7 days prior to the upcoming meeting.



# PHOTOS OF THE HOBBY

- TAKE PHOTOS!!!
- Share the photos with the ARCCC, Inc. Board so they can be placed on the website and other outreach materials.
- Take photos in order so they tell a story in chronological order
- Be certain Camera Date and Time are Correct



# ANY OTHER BUSINESS?

- New Business?





# REVIEW

- Review Motions and Assignments



# MEETING RAFFLE

- All ARCCC, Inc. Members get a free ticket
- Additional Tickets may be purchased for \$1 each
- Nonmembers may purchase Tickets for \$1 each



**THANK YOU!!!**