



# GRAYSON COUNTY AMATEUR RADIO CLUB NEWS

March - 2019

WWW.GRAYSONCOUNTYARC.ORG

Vol. 25, No. 3

**Next General Meeting Date Scheduled for Tuesday April 16, 2019**  
**Grayson County Courthouse**  
**Sherman Texas @ 7:00PM**

## The President's QSO

It again was a very good and productive meeting this month on March 19<sup>th</sup>. When it came to the agenda, we discussed Waterloo Park as a location for Field Day. That location appears to be a no-go for the June event. Our VP has stated he is going to try another place to see if we can set up there for field day this June and if we are unsuccessful at that time, then we may consider using Doug's hobby house again for summer field day, although that remains to be seen on what happens from now and up to next month's meeting.

An announcement was made by Glen Davis - KG5REK that the GCARC now has its own Talk Group (TG) on the Thank God it's Friday (TGIF) DMR Network for those in our group who have DMR capability. Anyone interested in that mode of operation can find more information on our website at [www.graysoncountycastle.org](http://www.graysoncountycastle.org) or contact Glen Davis directly.

We had a light meeting this month which I was kind of happy about so that Doug - KG5QPI and I would have more time with presentations talking about solar charging and go-kits. There are only a few of us in our club who use solar capability. In my presentation, I demonstrated my solar go-kit and how it works and what you would need to build one. Doug displayed his go-kit with a variety of components. Please observe another article on go-kits by Doug in this newsletter. Many of the observers of my presentation had wonderful questions on solar which I was very happy to answer. A few members called me later to ask more questions on the phone, which I was also very happy to explain. My wish is that you consider investing into solar power someday for your own go-kits and for your amateur radio needs. You really cannot go wrong when added solar capability to your radio installation. My solar configuration has been able to keep my ham radio going whenever power fails during severe weather and during camping trips or when we're out at field day. Although you can use generators and the alternators from your cars, eventually those devices may fail or you may run out of gasoline or propane and you're now in every sense, 'dead in the water'. But with solar, as long as the sun's rays are hitting the panel it will charge your battery and power your radio. Even during cloudy days, the panels will still receive a charge but not as much of a charge as if it were sunny. So, I just wanted to touch on that again.

Now for next month's meeting I don't have a particular agenda set in stone for the meeting next month. I am presently looking at a couple of options to see which one may be best for next month's meeting. It's still too early to tell but regardless on what I choose, I hope you may enjoy another one of the club presentations. So, until then, see you next month.

73 Andrew - KG5SKM  
President of the GCARC  
[president@k5gcc.org](mailto:president@k5gcc.org)

## Officers

President: Andrew Bentley – KG5SKM  
Vice President: Roy Reed – AF5VA  
Secretary: Doug Hotalen – KG5QPI  
Treasurer: James Frank – KW5CW  
Trustee: Rick Simmons – K5ECX  
Event Coordinator: -----  
QSL Manager: Lee Sly – N5SLY

## Meetings

When: 3<sup>rd</sup> Tuesday of each month  
Time: 7:00pm (1900 hours)  
  
Location: Grayson County Courthouse  
100 W. Houston Street  
Sherman, TX 75090  
  
GPS: 33.38.18N, 96.36.59W

## Mailing Address

Grayson County Amateur Radio Club  
P.O. Box 642  
Sherman, Texas 75091

## MEMBERSHIP DUES

Individual: \$20.00/yr  
Family: \$30.00/yr  
Associate (non-Ham) \$15.00/yr

## Newsletter

Published: Monthly via e-mail  
Editor: James Frank – KW5CW  
To submit news or Send E-mail to  
e-mail changes: [KW5CW@arrl.net](mailto:KW5CW@arrl.net)  
Submission  
Deadline:

## WEBSITE & SOCIAL MEDIA

Address: [www.graysoncountyar.org](http://www.graysoncountyar.org)  
Webmaster: James Frank - KW5CW  
Facebook page:  
[www.facebook.com/groups/K5GCC](http://www.facebook.com/groups/K5GCC)

**5 PM on first SATURDAY following each monthly meeting (published by following Monday)**

***Memberships are from January 1-December 31***

## Dues and Donations

Membership dues are payable upon joining and renew on January 1<sup>st</sup> of each year. Donations to support the club are always welcome. Dues and donations may be paid by cash or check at any monthly GCARC meeting and by mail, or by using a credit or debit card online at the GCARC website.

## GCARC, ARES, and SKYWARN Patches

GCARC club patches are available and may be purchased at each club meeting; cost is \$5.00 each. These are round patches with the club logo, and are great for wearing on vests and other non-club clothing, placing on equipment bags, go-kits, etc.

ARES and SKYWARN patches may also be purchased at each club meeting; cost is \$4.00 each. If you choose to wear patches on your club shirt or jacket, we recommend ARES members place the ARES patch first on the right shoulder and any other patch (SKYWARN, RACES, CERT, etc.) should go below it. Since some members have tactical shirts with pen pockets on the left sleeve we do not recommend placing any patches on that side.

## Club Clothing Orders

Several times each year, members have the opportunity to purchase club-related clothing (shirts, caps, jackets, etc.). These items have the GCARC logo and the member's name and callsign embroidered on them. An order form with instructions will be included in the newsletter each time orders are being taken.

*"It shall be our purpose to further the exchange of information and cooperation between members, to promote radio knowledge, fraternalism and individual operating efficiency, and to so conduct club programs and activities as to advance the general interest and welfare of Amateur Radio in the community."*

From the GCARC Constitution

**GRAYSON COUNTY AMATEUR RADIO CLUB  
SECRETARY REPORT**

Meeting Minutes by Douglas Hotalen KG5QPI 3/19/2019

Submitted - March 19, 2019

All fours Officers Present:

KG5SKM	President	Andrew Bentley
AF5VA	Vice President	Roy Reed
KG5QPI	Secretary	Douglas Hotalen
KW5CW	Treasurer	James Frank

President gave agenda for the Meeting as follows:

Treasurers Report

Old Business

Updates on Potential Summer Field Day Locations

Discuss new business

Solar Presentation

**Treasurers Report** - James Frank indicated first of the month \$1,696.53, on meeting day \$1,659.63, \$34 to Lee for ARRL Placks, Jim K5QOI 1<sup>st</sup> Motion, Lee 2<sup>nd</sup> Motion, also received \$5 from K5QOI for Bureau postage. New member Joseph KI5DYY Tech, now have 29 members.

**Old Business** - Jim K5QOI 1<sup>st</sup> Motion to squash his initial request to change meeting day back to Friday. Roy 2<sup>nd</sup> Motion and unanimously passed.

**Field Day Locations** - Goal to have Summer Field Day at a public area to get more interest for our club. Roy looked at Waterloo Park Denison, require \$60 for every 4 hours, this will cost too much to use for the club. Joseph Davis offered his place in Denison about 4 blocks from Main St., however, he will be on vacation during Field Day. Other areas to research are Herman Baker Park and Pecan Grove Park in Sherman.

**Net Control Activity** - Roy indicated more people need to sign up for Net Control. Doug recommended an easier method to signup, James to add a feature to allow people to sign up on the web.

**National Night Out Event** - Roy approached by Sarah Bingham from Kings Trail Church in Whitewright to attend National Night Out in October. The club made a motion to support National Night Out, 1<sup>st</sup> Motion by Jim K5QOI, 2<sup>nd</sup> Roy AF5VA

**Ambassador for Weather and Community Events** - Roy is the community contact through many of our services, 1<sup>st</sup> by Roy AF5VA, 2<sup>nd</sup> by Andrew KG5SKM.

**More Old Business** - Subject was Perrin Field Museum Antenna, Club was to put up antenna, but, too many dynamics in leadership and upgrade facilities. Motion not to put up antenna, 1<sup>st</sup> by Jim K5QOI, 2<sup>nd</sup> by Roy AF5VA

**Web Site Progress** - James making plan to implement 2<sup>nd</sup> version Website hopefully by the April Club Meeting. New web site will be friendly for both computer and cell phone platforms, buttons will be added to clean up intro page, and chat rooms added.

**DMR Activity** - TGIF Network is up, TG903 is our group, having talk group on Fridays at 7:30 PM. Glen indicated we need to use this service or we will lose it.

**House for Sale** - Mike W8CM is selling his home in Van Alstyne, TX which is a Ham Radio Operators Dream. Full details found in a Grayson County ARC website announcement. Asking price down from \$590,000 to \$554,900. Appraised at \$590,000.

**Solar Presentations** - Andrew KG5SKM and Douglas KG5QPI both had solar presentations to offer the club. Andrew concentrated on the different types of solar panels and batteries and showed his mobile unit. Doug talked about budgeting power to keep batteries charged. Doug brought his mobile unit with various sizes of batteries and a solar panel. It is worth noting you need a 100 watt solar panel with a 20 amp charge controller and a battery at least 4 times the amp hours then the demand of the radio over an 8 hour period. Factors include the solar panel size, how much sun per day, storage capacity of the battery and how much during an hour of operation the radio PTT is pushed for transmitting.

73 - Doug Hotalen - KG5QPI  
Secretary of the GCARC  
secretary@k5gcc.org

# GRAYSON COUNTY AMATEUR RADIO CLUB TREASURER REPORT

March 23, 2019

Balance of Last Report - Feb 22, 2019 \$1,693.53

DEPOSITS - Feb 22 thru Feb 28 2019 \$0.00

LESS EXPENSES - Feb 22 thru Feb 28 2019 \$0.00

Ending Balance for 2/28/2019 \$1,693.53

Opening Operating Fund Balance for Mar 1, 2019 \$1,693.53

NO DEPOSITS CREDITED

ACTUAL DEPOSIT TOTAL \$0.00

LESS EXPENSES - Actual Expense Dates Posted

1 - Lee Sly - ARRL FEE 3/4/2019 (\$34.00)

ACTUAL EXPENSE TOTAL (\$34.00)

OPERATING FUND BALANCE AS OF March 4 2019 \$1,659.53

MEMBERS YTD 29

Available Equipment Funds \$0.00

Equipment Fund Balance \$0.00

ENDING BANK BALANCE as of March 23, 2019 \$1,659.53

James Frank - KW5CW - Treasurer

## 2019 OPERATING BUDGET

POST OFFICE BOX-DUE MAR 1 80.00

WEBSITE 125.00

### SPECIAL EVENTS

Perin Field 50.00

EisenHower 50.00

RR Bridge War 50.00

### FOOD FOR SPECIAL EVENTS

Winter Field Day 50.00

### Memorials and Emergency needs

Per Occurrence 150.00

**TOTAL 555.00**

## QSL Managers Message

At the meeting in February the members approved the expense to get our latest awards from ARRL's Log Book Of The World, and here it is...



I also got the club set up to receive QSL cards from the Incoming Bureau by sending them \$5.00 for the service, and we have another QSL card that arrived there. We won't get it until there are enough cards to fill up an envelope with enough cards to use up one stamp. Great presentation at the meeting last night about solar panels. Here are a couple of examples of

Hams using their solar panels...





I have contacted Kent, K7CAR, many times over the years and every time he is in different place. He lives in the camper and travels all over the western states during the year. As far as I know he never camps in a RV park. He is always off the grid, so his solar panels are his only means of recharging his batteries.

Here is a ham that is using his solar panels for Field Day. Charging his battery during the day insures that he'll be able to have enough power to operate all during the night.



If I was a younger man I would be doing these things also. But now I'm just happy to "chase" these folks from the comfort of my home shack. There are a number of very fun and challenging activities going on right now in Amateur Radio. It's not always easy to make contacts when the "Activators" are running on battery power and are QRP. Here are some links to their web sites...

Parks On The Air...<https://parksontheair.com/>

World Wide Flora and Fauna...<http://wwff.co/>

Canadian Parks On The Air...<https://cnpota.ca/>

The best thing about this hobby in my opinion is that there are just so many different things you can do. It is not one size fits all. You are only limited by your imagination.

Have fun doing what you enjoy in the hobby.

73 de Lee N5SLY



## **ARES Members Attend Texas Instruments Safety Fair at TI-Sherman Site**

Wade Graves, KF5AUD, and Jim McGlynn, K5QOI, recently attended the Texas Instruments Safety Fair at the Sherman location. This event brought in many vendors to showcase Safety and Health items for the workplace as well as more general safety and preparedness information.

The Amateur Radio Emergency Service used this event to recruit hams to ARES as well as provide information to those who might wish to become radio amateurs. Employees who stopped by the booth also received information on storm spotting, storm ready preparedness levels, and the CoCoRaHS rain measuring program. These programs were well received by the 40-50 individuals who stopped by the booth during the two-day event. We also received two ARES applications during this event and welcome our new members!



L to R -- Wade Graves, KF5AUD and Jim McGlynn, K5QOI at the ARES booth during the Sherman Texas Instruments Safety Fair.

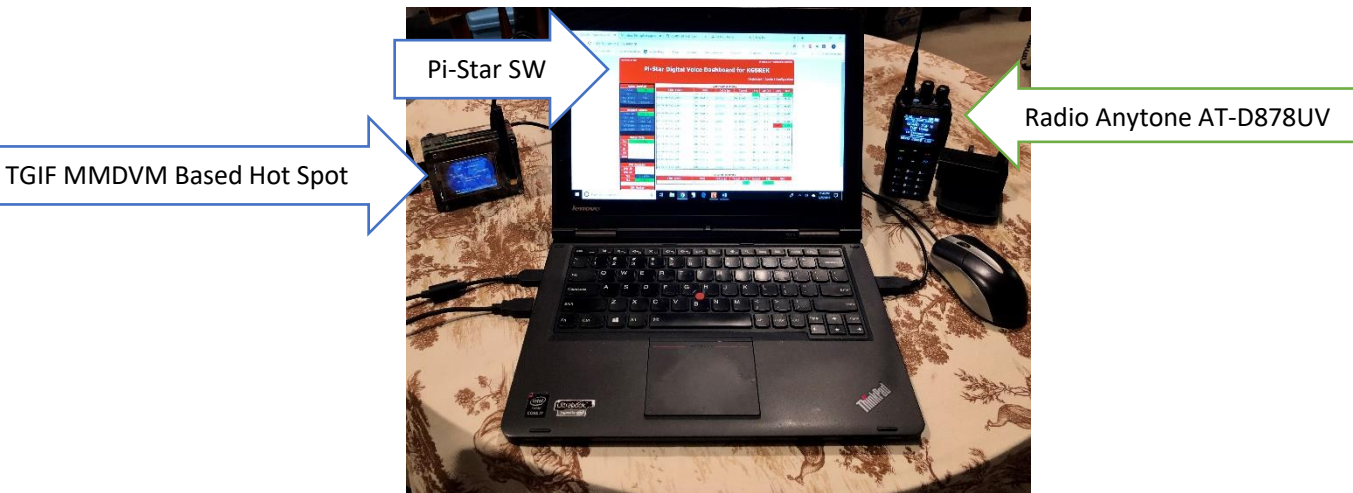


## 2019 GCARC Membership List – March 2019

	NAME		CALL SIGN		Email Address
*1	Paul Caputo		K1PKZ		lifetime member
2	Tammy Jaresh		KD5NIB		<a href="mailto:tjaresh46@hotmail.com">tjaresh46@hotmail.com</a>
3	Jonnie Jaresh		KD5NIC		<a href="mailto:tjaresh46@hotmail.com">tjaresh46@hotmail.com</a>
*4	Sharon Hotalen				<a href="mailto:dhotalen@peoplepc.com">dhotalen@peoplepc.com</a>
5	Douglas Hotalen		KG5QPI		<a href="mailto:dhotalen@peoplepc.com">dhotalen@peoplepc.com</a>
6	Jim McGlynn		K5QOI		<a href="mailto:sailingtexoma@yahoo.com">sailingtexoma@yahoo.com</a>
7	Marvin Schiavone		KG5GMA		<a href="mailto:marvin818@msn.com">marvin818@msn.com</a>
8	Leland Sly		N5SLY		<a href="mailto:n5sly@arrl.net">n5sly@arrl.net</a>
9	James Frank		KW5CW		<a href="mailto:kw5cw@arrl.net">kw5cw@arrl.net</a>
10	Thomas Kraemar		K5TPK		<a href="mailto:k5tpk@arrl.net">k5tpk@arrl.net</a>
11	Joseph Davis		KG5REK		<a href="mailto:kg5rek@gmail.com">kg5rek@gmail.com</a>
12	Jesse Heiman		AC5OY		<a href="mailto:ac5oy@cableone.net">ac5oy@cableone.net</a>
13	David Anderson		KD5KPR		<a href="mailto:denisondave@sbcglobal.net">denisondave@sbcglobal.net</a>
14	Mark Pilkilton		KF5UZW		<a href="mailto:mpilkilton@gmail.com">mpilkilton@gmail.com</a>
15	Rick Simmons		K5ECX		<a href="mailto:k5ecx@arrl.net">k5ecx@arrl.net</a>
16	Linda Mihay		W5ULY		<a href="mailto:bikrgran@gmail.com">bikrgran@gmail.com</a>
17	James Mathis		K5IV		<a href="mailto:jlmathis@verizon.net">jlmathis@verizon.net</a>
18	Wade Graves		KF5AUD		<a href="mailto:wade.graves@gmail.com">wade.graves@gmail.com</a>
19	Lynda Tuma		KF5JUO		<a href="mailto:lyndatuma@gmail.com">lyndatuma@gmail.com</a>
20	Nancy Pierce		W5ZMH		<a href="mailto:rumbles5@verison.net">rumbles5@verison.net</a>
21	Andrew Bentley		KG5SKM		<a href="mailto:kg5skm@cableone.net">kg5skm@cableone.net</a>
22	Rickey Jessen		KG5FDT		<a href="mailto:ricky.jesson3@gmail.com">ricky.jesson3@gmail.com</a>
23	Michael Hepner		KG5WHU		<a href="mailto:KG5WHU@gmail.com">KG5WHU@gmail.com</a>
24	Aaron Bucy		KG5BNC		<a href="mailto:aaronbucy@yahoo.com">aaronbucy@yahoo.com</a>
25	Brad McMillon		KE5UMJ		<a href="mailto:ke5umj@arrl.net">ke5umj@arrl.net</a>
26	Matt Gaskill		KF5KOY		<a href="mailto:kf5koy@arrl.net">kf5koy@arrl.net</a>
27	Roy Reed		AF5VA		<a href="mailto:deadbugr@hotmail.com">deadbugr@hotmail.com</a>
28	Trevor Reed		KG5BFI		<a href="mailto:kg5bfi@gmail.com">kg5bfi@gmail.com</a>
29	Joseph Benson		KI5DDY		<a href="mailto:jbenson1986@yahoo.com">jbenson1986@yahoo.com</a>

# GCARC DMR TALK GROUP ANNOUNCEMENT

By Glen Davis – KG5REK



## **My DMR Gear**

Greetings fellow GCARC Members and Club Friends: I am happy to announce that the GCARC now has its own Talk Group (TG) on the Thank God it's Friday (TGIF) DMR Network.

**The GCARC Talk Group has been activated** on the TGIF Network with the following Name and Number.

**Talk Group Name:** GCARC TG

**Talk Group Number:** 903

History - I (KG5REK – Glen) informed the Club membership at the February GCARC monthly meeting about a new DMR Network known as TGIF. The network is young. At the time of this writing the TGIF network only has 105 TGs. I agreed, with club approval to pursue with a TGIF admin a GCARC talk group on the TGIF Network. A motion was made and seconded with unanimous approval. There is no cost for the TG. As an aside the North Central Texas Connection (NCTC) has also set up a TG on the TGIF Network. The TGIF Network is not yet on any of our local repeaters however, we can work on that later as well as connecting other modes to our TG (see note taken from TGIF FB page below).

*"External bridges are allowed on individual talk groups just not the TGIF Talk Group - 31665.*

*Cross-Mode Operations via Pi-Star is allowed as well.*

*Zello: "TGIF DMR YSF 31665"*

*Password: TGIF#31665"*

The main TG on the TGIF Network is 31665 usually pretty busy during the day and evenings. **The TGIF Net is on, you guessed it Friday evenings at 7:30 PM.** The following are some helpful TGIF links that you can bookmark.

TGIF Network is on Facebook: <https://www.facebook.com/groups/tgif31665/>

TGIF Forum - <https://tgifnetwork.createaforum.com/index.php>

TGIF Last Heard, Active Talkers, Talk Groups (list), Self-Care, Server Status

- <http://tgif.network/lastheard/active.html>

## Some Helpful Hints to get on the TGIF Network

If you are already on DMR using a hot spot with a MMDVM board inside you are likely familiar with how to change your **Pi-Star Software to the TGIF Network** and then program your radio with the appropriate TGIF TGs and channels.

For configuring the TGIF Network in Pi-Star I offer the following instructions:

Those GCARC Members and Friends that use a MMDVM hot spot to access DMR can while connected to the internet select the TGIF network by going to the Configuration page of their Pi-Star software, see below:

1. Logon to your Pi-Star Dashboard
2. Click on "Configuration" this will open your Pi-Star Configuration page

Hostname: pi-star Pi-Star:3.4.17 / Dashboard: 20190115

### Pi-Star Digital Voice Dashboard for KG5REK

Dashboard | Admin | Configuration

Modes	Enabled
D-Star	<input type="checkbox"/>
DMR	<input checked="" type="checkbox"/>

Gateway Activity								
Time (CST)	Mode	Callsign	Target	Src	Dur(s)	Loss	BER	

Pi-Star:3.4.17 / Dashboard: 20190115

### Pi-Star Digital Voice - Configuration

Dashboard | Admin | Expert | Power | Update | Backup/Restore | Factory Reset

Gateway Hardware Information				
Hostname	Kernel	Platform	CPU Load	CPU Temp
pi-star	4.9.35-v7+	Pi 3 Model B (1GB) - Sony, UK	0.15 / 0.21 / 0.14	41.9°C / 107.4°F

#### Control Software

3. Scroll down to "DMR Configuration" section
4. Drop the "DMR Master" box down and look for TGIF Network towards the top.
5. Select TGIF Network and click Apply Changes. After it reloads the config, it should connect to the TGIF Network.

DMR Configuration	
Setting	Value
DMR Master:	TGIF_Network
DMR Color Code:	1
DMR EmbeddedLCOnly:	<input type="checkbox"/>
DMR DumpTADData:	<input checked="" type="checkbox"/>

Apply Changes

6. If your DMR Master dropdown does not have TGIF in the dropdown list scroll up to the top of your Pi-Star configuration page and click update. (You must be connected to the internet) Once your software has updated scroll back down and reselect the DMR drop down and the TGI Network should be there, select it and apply changes.

Pi-Star:3.4.17 / Dashboard: 20190115

## Pi-Star Digital Voice - Configuration

[Dashboard](#) | [Admin](#) | [Expert](#) | [Power](#) | [Update](#) | [Backup/Restore](#) | [Factory Reset](#)

Gateway Hardware Information				
Hostname	Kernel	Platform	CPU Load	CPU Temp
pi-star	4.9.35-v7+	Pi 3 Model B (1GB) - Sony, UK	0.15 / 0.21 / 0.14	41.9°C / 107.4°F

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Control Software

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**Note:** Just follow these same steps above to change back to your old or any other network.

**For Open Spot Configuration** - <https://tgifnetwork.createaforum.com/hotspot-configuration/openspot-configuration-for-tgif/>

### Non Radio Specific Programming -

1. Find the list of TGIF TGs from link given above.
2. Using your programming software enter the TGs you want into "Talk Groups" and or "Digital contacts".
3. Create channels using the frequency set in your hot spot for each TGIF TG entered.
4. For convenience you can put TGIF TGs in one or more zones and label them TGIF-1 - 2...
5. Save and upload your edited code plug to your radio

Lastly there is an editable TGIF Wiki that I have populated with a short blurb about our talk group as follows:

*"The Grayson County Amateur Radio Club located in Grayson County, Sherman, TX has created this Talk Group in order to foster the continued use of the DMR and other digital modes as well as to provide a radio meeting place for Club Members and guests to discuss any topic related to Amateur Radio or other personal topics as appropriate and authorized."*

I will be happy to field any questions.

73

KG5REK - Glen



### Simplex Mono Basic

Price: \$285.00

The Simplex Mono Basic is our least expensive single lever key, combining the base of the Simplex Basic with the mechanism of the Simplex Mono. Despite its lower price it is a very capable CW instrument that can hold its own against many far more expensive keys on the market. (RF Solutions)

## **CW Corner**

**By James – KW5CW**

Spring is here. Now is the time to start thinking ahead to yet another GCARC Special event. With winter field day behind us, the Perrin Field Special Event is less than two months away so the topic of the Perrin Field Special Event will be part of next month's agenda. The event is scheduled to start on May 11th and run through Sunday May 19th. This year, I plan to do quite a bit more operating than in the past. Usually at our special events, I do very little operating but this year will be different. After the live event at Perrin Field, I plan to continue to operate in the event from home. Immediately afterwards I will continue to prepare for my own next personal event which I will discuss next.

After the Perrin Field Event is over, I will be taking a drive to Manhattan Kansas to meet up with Kurt Zoglmann - AD0WE, one of the authors of a few past articles in our newsletter. I met him on the operating mode of FT8 in a contact that lasted under 1.5 minutes. Now we are good friends. He is rapidly becoming a force to reckon with when it comes to CW. Kurt and I plan to operate the CQ WorldWide WPX CW contest together using his club's call - W0QQQ the following weekend after the Perrin event from an operating position at his club station located at Kansas State University in Manhattan Kansas. The event begins on May 25th and runs for 48 hours. Information about the event can be found at <https://cqwpw.com>. I would encourage any of my past CW students to try and find me on the band. If I can be heard from this distance of 400+ line of sight miles, I could be found on my standby CW frequency of 7.045 MHz. +/- 10 kc in the afternoons and evenings and



throughout the night. During the day, I can be found of 20 and 15 meters, 14.045 +/- 10 kc and 21.045 +/- 10 kc respectively. If you happen to hear me, give me a call. The exchange for the contest is a signal report plus a serial number, which is the number of the present contact. An example - 599nr050, which means a signal report of 599 and QSO of #50. That's the only information required for the contest exchange. My personal set goal for my first CW contest this year will be a minimum of 500 contacts. One warning though... The average speed for operators is somewhere between 25-35 WPM. But since there is very little data being sent back and forth, most likely many of my students and others could eventually pick up the exchange if they keep listening to the transmissions.

If anyone is serious and thinks that they want to give a little bit of contest operation a try, I will present them a challenge. If any member from the Grayson County Amateur Radio Club does work me and sends a simple email with the contact information of the contact with my mobile station and I can confirm the contact, I will issue a beautiful stand-alone certificate along with a special QSL to that person for the contact. Since I'm getting pretty cheap these days regarding QSL fees and other mailing fees, you will have to attend a GCARC club meeting to pick up the certificate. But if you send an SASE, I'll mail out the special QSL card. Is that enough motivation to get on CW to make a contact or to come to attend a GCARC club meeting? There will be positive confirmation of each QSO. All contacts that I make in this contest will be personally taped. The reason for the taped contacts in the first place is to confirm that certain contacts are made. There is a possible requirement by the contest committee that they have audio proof of certain contacts, or the contacts just may not count. What is the reason for this? It is a fact that in every contest, there are operators that never turn in their results, and the committee has to verify that the so-stated worked station may have ever existed. If that station that you claimed that you worked does not appear on any other turned in log or there may be a serious difference in operating times with that station in question, then the contest committee would require an audio recording of the contact. For example, if you worked a rare DX station and only a handful of people actually turn in logs with that rare dx station in the log, then it may be required by the committee that you prove that you worked that possible rare station at a particular time.

Also, on the way up to Manhattan Kansas and back home again after the contest event, I plan to run mobile CW using a new edition to my equipment list, a used IC-7100 purchased with a great price from the Houston Hamfest that ran this weekend. I plan to use this radio in my new mobile go-kit in the future that will be on display soon at another club meeting. I will demonstrate at the future club meeting - a pretty neat, live-on-the-air operation of how the remote - mobile go-kit works. I'm putting together some special mobile QSL cards that will be available to all hams that I work to and from Manhattan Kansas and with the new mobile go-kit. Again, an SASE or a visit to one of our club meetings will be the requirement to get a card. Imagine having a laptop as a controller PC in front of club members during a

club presentation, with the actual radio station setup and running in the car two floors below from a parking space in front of the courthouse. That will be the demonstration.

So what else can a retired old ham think of within this great hobby? Stay tuned and you may just find out.

## HAM RADIO HUMOR

*Why do folks get their license? Herman Munster tells us why he got his...*

<https://youtu.be/F-8RltOZE30>

**NOTICE...NOTICE...NOTICE...NOTICE...NOTICE...NOTICE...NOTICE...NOTICE**

## HAM FRIENDLY QTH FOR SALE

**As mentioned at the GCARC Club meeting...**

**Price Reduced!! Offered at \$554,900. Appraised at \$590,000.**

**Have you ever wanted to live on 15 acres of land already stocked with three antenna towers with antennas? Have you ever just wanted to move away from your HOA and live somewhere you could put up ANYTHING you want?**

**Mike, W8CM has his place for sale, and if you could answer 'YES' to either of the two questions, then you may want to check out this listing of Mike's home.**

<http://www.announcemymove.com/announcement.php?id=19685805&code=MPQMauL06>

# Ham Radios with Solar Power Sources

By Doug Hotalen KG5QPI

When we think of a mobile setup we can think of many scenarios. Is our mobile setup in a car using a car battery or an independent mobile unit with an external battery? Will we use the mobile unit in a backpack walking through the woods or a station with a table and all the ham equipment? It depends on the situation. We support ARES and Bike Rallies that require two situations.

It's nice to have a charged battery around in case the house power is not available. Emergency power is the use of batteries and generators at a house. I know in Denison we had a power out for days in some areas.

I like many sources of DC power either using a solar panel to keep batteries charged or using an AC charger connected to house power to charge batteries. I also have a 5500-watt generator to keep the refrigerator, freezer and an AC window unit powered to keep cool and save food from perishing.

Solar energy is limited to keep ham equipment operating. We must charge the batteries from the solar panel. It is balancing act. The solar panel must produce enough current to keep the radio operating and the battery charged at dusk and hope the battery doesn't totally discharge by dawn. The battery capacity must be large with many more amp hours of current than the radio demand. As an example, if I use 24 amp hours of energy in 8 hours and my battery has a charge of 74 amp hours, then, I will always have a functional battery.

The best scenario is to have a 100 watt solar panel with a 20 amp charge controller and a 74 amp hour battery to supply energy to a 50 watt radio. The critical factor is how many times will I transmit which will consume more power.

In my ham setup, I am using a 9-amp hour battery for minimal communications. The solar panel is connected to an external 9-amp hour battery so I charge a backup battery. I also have a car jump start unit which has a 17amp hour battery. Finally, I keep a charged marine battery with 74-amp hours so I can communicate for another day. All of these batteries can be directly connected to the radio. See the attached pictures of my setup.

Regards,

Doug Hotalen KG5QPI



Figure 1 - 25W Radio VHF, 20W UHF with 12A Charge Controller and 9 Amp Hr battery.

# Calculations for Solar Radio Support

Doug Hotalen KG5QPI

If I'm going to operate for 4 hours per day then I need 3.6 Ah of capacity.

Expressed as a formula, it looks like this:

$$((Pr * Ir) + (Pt * It)) * Ho$$

Pr = Percentage of an hour in receive mode, expressed as a decimal from 0 to 1

## Radio Requirements

16	Description	5W Baofong	5W Baofong	25W/20W TYT 8600	25W/20W TYT 8600	50W Yaesu 7900	50W Yaesu 7900
Pr	Percent of Hr to Receive	0.8	0.8	0.8	0.8	0.8	0.8
Ir	Receive Current	0.38	0.38	0.5	0.5	0.5	0.5
Pt	Percent of Hr to Transmit	0.2	0.2	0.2	0.2	0.2	0.2
It	Transmit Current	1.4	1.4	4	4	9	9
Ho	Hrs of Operation	4	8	4	8	4	8
Amp Hrs	Amp Hrs Used	2.3	4.7	4.8	9.6	8.8	17.6

This is the battery consumption per the radio selected.

<b>Worse Case Battery Amp Hrs</b>		3.9	7.8	8.0	16.0	14.7	29.3
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## Battery Efficiency

$$((Pr * Ir) + (Pt * It)) * Ho/.6$$

No battery is perfect, each voltage cycle the battery get used up, also cold weather is a factor.

A battery should only be discharged to 12Volts or about 60% from full charge.

## Solar Panel Specs

Psp	Power, Watts	20	40	80	100	120	150
Isp	Current, Panel	1.23	2.47	4.94	6.17	7.41	9.26
Vsp	Voltage, Panel	16.2	16.2	16.2	16.2	16.2	16.2
C Hrs	Charge Hours	8	8	8	8	8	8
Amp Hrs	Amp Hrs Provided	9.9	19.8	39.5	49.4	59.3	74.1

This shows the condition for the solar panel to operate, do I get 8 hrs of sun light, what size solar panel do I need?

Selecting the right sized solar panel will dictate if the battery gets fully charged.

Note, the Baofong unit only requires 10.5 V input at 0.5amps to charge the 7.4V/1800mAh battery.

Extended Baofeng battery is 7.4V/3800mAh.

Baofeng DC-DC Converter 12-24V Input, 7.5V 3A Output.

Baofeng-Use a Jump Start Unit that has DC Port, battery inside is a 17 Amp Hr size. So 3 Amps per Hour, 6 hr battery.



The Swap Meet section and the Helping Hams section below haven't changed in almost 2 years. If you are the owner of this information and still want it published, then I can continue to do so only if you contact me and tell me what you would like to do with the listing. Otherwise they may not be listed next month.

## Swap Meet

(Disclaimer: This section is provided for hams to list items they wish to buy, sell or trade. The GCARC will not be responsible for the accuracy or completeness of any descriptions, and will not guarantee any items function as described, and will not participate in any transactions. The individual buyer and seller are responsible for all discussions, negotiations and resolving of differences.)

To submit items to be listed, send the information in an email, to the GCARC Newsletter editor at [KW5CW@arrl.net](mailto:KW5CW@arrl.net). Photographs are encouraged. There is no charge for listings, and you do not need to be a member of the GCARC to participate.

### **FOR SALE AS IS: Assorted Electronics/Test Equipment**

The following items were donated to the GCARC and are in need of a new home. No set price per piece. Make an offer.

Heathkit Signal Generator

Square Wave Generator – Model 71

Broel & Kjoer Voltmeter

Sierra Electronic Corporation Carrier Frequency Voltmeter Model 104A

Polytechnic Research Heterodyne Frequency Meter – Type 104

**Note: these items are not tested and provided “as-is’ with No Refunds.**

Contact Lee Sly – N5SLY

Email: [lee.n5sly@gmail.com](mailto:lee.n5sly@gmail.com)

**NOTE:** Anyone that has anything new for sale or have an interest in buying, please send your info to [KW5CW@arrl.net](mailto:KW5CW@arrl.net) and it will be installed in the above list until the units is either bought or sold, or if you decide to remove it from the list.

## Helping Hams

The idea behind Helping Hams is simple – all hams need a little help sometimes, but they might not know who can help them. Our club has many talented members, with some better at certain jobs than others. What we hope to do here is match up hams needing help with other hams who have the skills to help them. Working together, we can all help our fellow hams and encourage them to continue pursuing their interests in this wonderful hobby.

The currently-requested needs are listed below. If you have a need, or know of a ham with a need, or if you or someone you know can help, contact our newsletter editor by sending an e-mail to [kw5cw@arrl.net](mailto:kw5cw@arrl.net). Be sure to include the following:

Who needs the help and how do we contact them.

- 1) What needs to be done.
- 2) When can someone come out to do the work.
- 3) Where is the location of the work that needs to be done.

**You don't have to be a member of the GCARC to ask for help or make an offer to help.** We're all in this together – that's what the hobby is all about!

### Current Requests

Bennie K5DIZ	Antenna install	Sherman
Sheila Sammons KF5TDP	Needs help with antenna repairs – damaged from falling tree limbs.	Sherman
Mike Bernier – KF5NPM	Needs help with replacing damaged HF Antennas and grounding.	Denison

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## LOCAL RADIO NETS

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### Daily

#### **Texas Slow Net (CW only)**

Daily 7:45pm CT on 3.570 MHz

This is a training net for operators interested in building proficiency in CW and learning about handling procedures for CW traffic nets.

### Weekly

#### **South Texas Section ARES Net (HF)**

Mondays 7:30pm CT on 3.873 MHz LSB

This is an information net open to South Texas (STX) Section ARES members. Other Amateur stations are welcome to listen in.

#### **Durant ARA Weekly Net (UPDATED)**

Sundays 7:30 pm CT on the 147.390+ (118.8 PL) repeater.

#### **Fannin County ARC Weekly Net**

Tuesdays 8:00 pm CT on the 145.470- (100.0PL) repeater. (Replaces 147.200 repeater). 444.525 links into 145.470 full time.

#### **McKinney 6 meter AM Net**

Wednesdays 10:00pm CT on 50.400 MHz

#### **McKinney ARC Info Net**

Sundays 8:00pm CT on the 146.740- (110.9 PL) repeater.

### Semi-Monthly

#### **Grayson County ARC Information Net**

1<sup>st</sup> & 3<sup>rd</sup> Sunday at 8:00pm CT on the 147.000+ (100.0 PL) repeater.

This is an informal information net and buy/sell/swap net.

#### **Grayson County ARES Net**

2<sup>nd</sup> & 4<sup>th</sup> Sunday at 8:00pm CT on the 147.000+ (100.0 PL) repeater.

This is a directed information net used for training.

#### **RACES Command Net Check (HF)**

2<sup>nd</sup> & 4<sup>th</sup> Sunday at 2:00pm CT on 7.255 MHz LSB

This is a RACES Command Net check for statewide RACES Command Net members ONLY. All other Amateur stations are welcome to listen, but DO NOT check in!

#### **Ladies Net (RUNNING AGAIN AS of February 21, 2019)**

\*\*Every 1<sup>st</sup> and 3<sup>rd</sup> Thursday of each month at 8:00 pm CT on the 147.00+ repeater

### Monthly

#### **North Texas Section ARES Net (HF)**

2<sup>nd</sup> Wednesday at 8:30pm CT on 3.860 MHz LSB

This is an information net open to all ARES members in the ARRL North Texas (NTX) Section.

#### **McKinney ARES Net**

2<sup>nd</sup> Sunday at 9:00pm CT on the 146.740- (110.9 PL) repeater.

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## AREA REPEATERS (UPDATED 11-30-2018)

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**Sherman TX** – 444.750+ MHz (100.0 PL) W5RVT

147.280+ MHz (107.2 PL) W5COP

147.000+ MHz (100.0 PL) W5RVT

**Allen TX** 145.350 – MHz (100.0 PL) N5GI

**Bonham TX** 145.470 – MHz (100.0 PL) K5FRC

443.750 – MHz (100.0 PL) K5FRC

~~147.200+ MHz (100.0 PL) K5FRC~~

**Denison TX** 145.330 – MHz (100.0 PL) W5DWH

**Durant OK** 147.390+ MHz (118.8 PL) K5KIE

147.255+ MHz (114.8 PL) K5CGE

**Gainesville TX** – 147.340+ MHz (100.0 PL) WB5FHI

**McKinney TX** - 146.740- MHz (110.9 PL) W5MRC

**Melissa TX** - 443.200+ MHz (100.0 PL) W5MRA

**Paris TX** 146.760- MHz (203.5 PL) WB5RDD

**Rosston TX** - 145.490- MHz (85.4 PL) WD5U

**Van Alstyne TX** - 443.800+ MHz (103.5 PL) W5VAL

**Whitesboro TX** - 442.875+ MHz (100.0 PL) WC5GC

**NOTE: Most Nets except the ARES nets are held on 444.750+ (100.0 PL) until further notice. 147.280+ (108.2 PL) will be backup.**

**The ARES net is back on 147.000 repeater.**

## 2019 Grayson County Amateur Radio Club Dues Form

**Instructions: Print this form, fill it out, and bring it with your dues payment to a club meeting. If you cannot make the meeting, please mail this form and payment to:**

**Grayson County Amateur Radio Club**

**P.O. Box 642  
Sherman, TX 75091**

Today's Date: \_\_\_\_\_

Yourself:

\_\_\_\_\_  
First Name                      Last Name                      Call Sign

\_\_\_\_\_  
Street Address                      City                      State + ZIP

\_\_\_\_\_  
Phone Number                      E-mail Address                      ARRL Y/N

Additional Family Members:

\_\_\_\_\_  
First Name                      Last Name                      Call Sign                      Class Held

\_\_\_\_\_  
First Name                      Last Name                      Call Sign                      Class Held

\_\_\_\_\_  
First Name                      Last Name                      Call Sign                      Class Held

**Renewals received after January 31 are considered LATE.**

Dues:

Individual Membership \$20.00/year

Family Membership \$30.00 year (2 or more hams/same family)

Associate (non-ham) Membership \$15.00/year

Cash or Checks accepted. No cash in the mail. Payable to GCARC.

**(NOTE: Sign-up Online. Go to [www.graysoncountyar.org](http://www.graysoncountyar.org))**

**Pay via Paypal or Stripe**



## K5GCC Grayson County Amateur Radio Club Apparel Order Form



### Tactical Shirt \$45

Mic loops on shoulders and front placket, dual pen pockets  
**2x-4x** sizes + \$5



Polo Shirt\* sm to xl \$30  
Camp Shirt\* sm to xl \$36  
W Left pocket  
Caps \$17  
Jacket\* sm to xl \$45



<p>First Name _____ ( as you want on clothing)</p> <p>Last _____</p> <p>Call _____</p> <p>Payment _____</p> <p><small>Make checks Payable to GCARC</small></p>	<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">Men/ Ldy Qty</th> <th style="text-align: right;">Ext</th> </tr> <tr> <td>Polo Shirt* sm M L XL</td> <td style="text-align: right;">\$30</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Camp Shirt* sm M L XL</td> <td style="text-align: right;">\$36</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Caps</td> <td style="text-align: right;">\$17</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Jacket* sm M L XL</td> <td style="text-align: right;">\$45</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Tactical Shirt sm M L XL</td> <td style="text-align: right;">\$45</td> <td style="text-align: right;">_____</td> </tr> <tr> <td colspan="3"><b>*Shirts/jackets- (2x to 4x +\$5)</b></td> </tr> <tr> <td>_____ Shipping \$2.00 per item</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td style="text-align: right;"><b>Total</b></td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> </table>		Men/ Ldy Qty	Ext	Polo Shirt* sm M L XL	\$30	_____	Camp Shirt* sm M L XL	\$36	_____	Caps	\$17	_____	Jacket* sm M L XL	\$45	_____	Tactical Shirt sm M L XL	\$45	_____	<b>*Shirts/jackets- (2x to 4x +\$5)</b>			_____ Shipping \$2.00 per item	_____	_____	<b>Total</b>	_____	_____
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Rev 02-12-18



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