



**June 2007**  
**Hello Summer!**

## **President's Corner**

**By Doyle Gantt, W4DJG, LARC President**

Greetings all,

I hope everyone is well and enjoying the weather. The warmer weather has my XYL coming up with rather creative ideas with remodeling inside our home. This has kept me busy for the past few weeks. Keep in mind all these ideas were not “honey do’s” but rather “you will do”. Believe me, there is a big difference. Thankfully, I should be complete with my “you will do” list by the time you read this.

On May 21, Alfred KT4VP, Roger WB4T and I visited two local elementary schools to administer technician exams to several of Crista’s (KD4KPS) students. Below is the result of those children who earned their tech ticket.

### *Chicopee Woods Elementary*

Grade Student Alexander L. Manus KI4VZY  
Grade Student Brecken T. Lawler KI4VZZ  
Grade Student Douglas J. Frazer KI4WAA

### *Sugar Hill Elementary*

Grade Student Oscar I. Mejia KI4WAB  
Grade Student Eduardo M. Figeroa KI4WAC

Congratulations to all the above children and special thanks to Crista for including Amateur Radio into her curriculum. We appreciate her efforts to introduce young folks to our hobby. We look forward to hearing them on the air. I for one am thrilled to have these young folks interested in Amateur Radio.

Congratulations are also in order to Bob Scott, KG4NJC who upgraded to General on 5-11-07.

Last but not least, congratulations to the following for upgrades or new tickets from the VE session on June 3.

Our own Bob Aldrich N9RLA upgraded to General  
Gordon Shirley KI4TVJ upgraded to General  
Abby Black KI4WGF new tech and one of Crista's 4<sup>th</sup> grade students at Sugar Hill Elementary  
Eric Carpenter KI4WGG new tech  
Benjamin Sales KI4WGH

**Our sincere appreciation goes out to Alfred KT4VP and his VE team for conducting our regular testing sessions...**

Well folks, Field Day is getting closer and closer. The field day committee is working hard to make this an enjoyable event for all. I will be sending out more details on the event in the next few days so be watching for the info. Also, satellite photos of the FD location have been posted onto the club web site ([www.lanierlandarc.org](http://www.lanierlandarc.org)) under the Field Day 2007 tab. Take a peek and get a better idea of where the site actually is. As you will be able to see, we have plenty of room. I do hope each one of you can participate. The main purpose for this event is to better prepare ourselves for an emergency by practicing. I welcome your input for what your ideas are concerning this event. Please, if you have input, send me an e-mail at [w4djg@bellsouth.net](mailto:w4djg@bellsouth.net). I am planning on taking a gas grill. Everyone is welcome to use it as needed. Tom N2SBD has invited a Boy Scout troop to visit with us. Let's make this the best FD ever. To accomplish this will require a certified effort on all our part. In closing, please remember we will have our June club meeting on Saturday June 23<sup>rd</sup> between 3 and 4 PM at the Field Day location.

73's to you and yours

Doyle, W4DJG

## **This Months "Ham Profile": Tom Vanvalkenburg, N2SBD**

**Submitted by: Mike Hall, N4HGO**

He loves this hobby, but how did this nice ham get the name Sugar Daddy?

Tom came to Georgia from the upstate New York town of Plattsburgh, about 25 miles from the Canadian border. He worked for GE and later he had his own accounting office, retiring in 1995.

Tom says he came to Georgia to get away from the cold weather. He was familiar with Gainesville from visiting his sister Betty. Tom also knew the south from his World War II days when he was stationed at Fort Benning and Fort Gordon. A veteran of both WWII and the Korean conflict, Tom has received the Asiatic-Pacific medal and the World War II Victory Medal.

Tom has had an interest in amateur radio since high school, but he couldn't pass the 13 word per minute Morse code requirement which was in place back then. Yet Tom taught radio procedures to intelligence officers. In 1992, Tom received his Tech License. He passed his General exam, just before the FCC dropped the code requirement. "I didn't want them to give me anything," says Tom. He appreciates the support of club members in coming to his home to give him the code exam and put up his antennas.

Tom plans to come to Field Day, bringing his 6 meter, QRP rig. He's going for his Worked All States award and he's studying for his Extra Class License. Soon, you may hear Tom take a turn as net control for the LARC, Wednesday Night, 8:30 net on the repeater.

Tom knows how to get good customer service from ARRL. He received a QSL card confirming a telephone contact with Membership Manager Katie Breen, W1KRB. Check her out on qrz.com. Tom did! He credits WB4T and W4DJG with giving him the name of sugar Daddy. As Katie says in her QSL, you are lovely, Tom!

## **Field Day Memories**

**Submitted by: Mike Hall, N4HGO**

I wasn't around for the first Field Day for LARC, which was probably in the early 1960's. But I can imagine what it was like. Large, tube type rigs that lit up the summer night sky like lightning bugs on steroids. Some of those radios may have been home-brew projects, built especially for Field Day.

The closest I can come to one of those old clunkers at Field Day was the year I brought my Old Swan to show off to the ham who was going to take it off my hands. The fellas hooked it up and I started making contacts to Western New York and other northern lands where grits don't grow. I almost decided to keep that rig.

Somehow, Field Day seems to bring rain. My theory is that all of that RF energy concentrated all around the country in one weekend punches holes in the clouds allowing rain to fall. Remember, it's just a theory.

For my first Field Day, back in 1996, I don't remember any rain. What I do remember is that the band died on me in the middle of the night. Nobody would talk to me except John Brandon and that wasn't on the radio and it wasn't very intelligible because I was so sleepy. About 5 o'clock in the morning, it was like a rainstorm as the band opened up and I was logging calls all over the place. I still remember those northern ladies wishing me good morning and saying, "Have a good Field Day old man." The only thing that pulled me away from the radio that morning was an egg McMuffin.

Speaking of food, there's always some kind of food at field Day. Whether its John cooking a southern breakfast on his camp stove or Alfred with his cooler of Doctor Peppers, you've got to have food. Perhaps Gary will bring back his peanut butter and jelly sandwiches from last year.

We only cancelled Field Day once in recent history. And wouldn't you know it. That same weekend, there was a big opening on 6 meters. Even on the FM broadcast band, I heard Colorado, Iowa and Wyoming. The moral of the story: don't ever cancel Field Day or you may miss the big one.

Here's hoping for a successful Field Day for you and yours.

Mike Hall, N4HGO

## VE Test Results

**Submitted by: Alfred Westbrook, KT4VP, LARC VP**

The VE team has been busy the last few weeks and the result has been a bunch of new Amateurs as well as some upgrades. Upgrading to General class is Bob Aldrich N9RLA and Gordon Shirley III KI4TVJ.

Krista LeRoy, KD4KPS, saw several of her 4th grade students earn new licenses. They are Alexander Manus KI4VZY, Brecken Lawler KI4VZZ, Douglas Frazer KI4WAA, Oskar Mejia KI4WAB, Abby Black KI4WGF and Eduardo Figueroa KI4WAC.

Other people from the area earning a new license were Eric Carpenter KI4WGG and Benjamin Salas KI4WGH.

Congratulations go out to all the new Amateurs and the upgrades. Good work and stay active in Amateur Radio.

## Soldering

**Submitted by: Alfred Westbrook, KT4VP, LARC VP**

### Soldering Basics Part 1

Most Amateur Radio Operators occasionally need to do some soldering so it's a good idea to have at least a basic knowledge of what it takes to make a good solder connection. Even though it's not hard to learn correct soldering techniques there are a few tips which will improve the chances of making a successful solder joint every time.

Solder is a metal or metallic alloy used to join metal surfaces together. Solder makes an excellent bond between some ferrous metals such as copper, brass, silver, gold, tin and lead. The most common alloy is some combination of tin and lead. The melting temperature of solder depends on the proportions of tin and lead. Some tin-lead alloys have a lower melting point than the parent metals by themselves. The most common alloys used for electronics work are 60/40 and 63/37. The chart below shows the differences in melting points of some common solder alloys.

Tin/Lead	Melting Point
40/60	460 degrees F (230 degrees C)
50/50	418 degrees F (214 degrees C)
60/40	374 degrees F (190 degrees C)
63/37	364 degrees F (183 degrees C)
95/5	434 degrees F (224 degrees C)

Solder will pass through a mushy or plastic state when freezing or melting and any movement while solder is in a plastic state will cause a fractured joint. Solder proportioned 63/37 is called "Eutectic" solder and goes directly from a solid state to liquid state in much the same way as water does.

Most electric/electronic soldering jobs can be done with a flux core solder (solder wire with the flux in a "core") when the surfaces to be joined are already clean or can be cleaned of rust, dirt and grease. Flux can also be applied by other means. Flux only cleans oxides off the surfaces to be soldered. It does not remove dirt, soot, oils, silicone, etc. The parts of a solder connection must be clean to adhere properly and provide a reliable connection.

If any part to be soldered has surface contamination, this can prevent the solder from wetting along the surface of the lead, wire or board material. Component leads are usually protected by a surface finish, which must be cleaned before soldering. The surfaces of most metals will become oxidized when exposed to air and other gases or fluids. The presence of oxidation on the surface will prevent solder from adhering and result in a poor solder joint.

Next month we'll look at what tools are needed to successfully make reliable solder connections.

## **Jamboree on the Air (JOTA)**

**Submitted by: Bob Aldrich, N9RLA, LARC Secretary courtesy of the ARRL.**

### **What is JOTA?**

When Scouts want to meet young people from another country, they usually think of attending a World Jamboree. But few people realize that each year more than 400,000 Scouts and Guides "get together" over the airwaves for the annual Jamboree-on-the-Air (JOTA). Modern technology offers Scouts the exciting opportunity to make friends in other countries without leaving home.

JOTA is an annual event in which Boy and Girl Scouts and Guides from all over the world speak to each other by means of Amateur (ham) Radio. Scouting experiences are exchanged and ideas are shared via radio waves. Since 1958 when the first Jamboree-on-the-Air was held, millions of Scouts have met each other through this event. Many contacts made during JOTA have resulted in pen pals and links between Scout troops that have lasted many years.

With no restrictions on age or on the number of participants, and at little or no expense, JOTA allows Scouts to contact each other by ham radio. The radio stations are operated by licensed ham radio operators. Many Scouts and leaders hold licenses and have their own stations, but the majority participate in JOTA through stations operated by local radio clubs and individual radio amateurs. Some operators use television or computer-linked communications.

### **When**

JOTA is held the third weekend in October of each year. JOTA takes place starting Saturday at 0001 hours local time to Sunday, 2359 hours local time, though some activity continues over from Friday to Monday to take advantage of long distance (DX) time differences.

## How Do We Take Part?

First, contact a local Amateur Radio operator or club to ask for assistance. If you need help finding a club in your area check the [ARRL Affiliated Club Search](#) page. The FCC's list of amateurs and clubs in your area (enter your zip code only) can be found [here](#). Radio amateurs are enthusiastic about their hobby and most will be willing to help you participate in JOTA. The radio operator may suggest that the Scouts visit his/her station or that the operator bring equipment to your local campsite. Often, JOTA stations are set up in unusual locations, such as the top of a mountain, or on a boat. To order Girl and Boy Scout brochures, contact the Field & Educational Services Department at ARRL HQ.

## Licensing Regulations

Ham radio operators have obtained a radio transmission license by passing an exam given by national authorities. License conditions vary from country to country. In some, Scouts may speak over the air: in others, special permission can be obtained for Scouts to speak over the radio during JOTA. Please consult the list of [Third Party Traffic Agreements](#).

## Rules

Radio operators run their stations in accordance with their national licensing regulations.

Stations should call "CQ Jamboree," or answer stations doing so. Any authorized frequency may be used. It is recommended that stations use the agreed World Scout Frequencies, listed elsewhere in this document. To avoid congestion, use close-by frequencies.

JOTA is not a contest. The idea is not to contact as many stations as possible during the weekend.

All participating groups are asked to send a report of their activities to their National JOTA Organizer (NJO) and to ARRL HQ after the event. See addresses listed elsewhere in this document. NJOs forward national JOTA reports to the World Scout Bureau for the World JOTA Report.

Although the worldwide JOTA is organized in October, Scouts can meet on the air at other times during the year. Regular Scout nets (a pre-arranged time and frequency when operators meet) are organized nationally or regionally. An updated list of these nets can always be found in the latest *World JOTA Report*, which is published by the World Scout Bureau.

## HB9S

The World Scout Bureau operates its own Amateur Radio station, with the call sign HB9S. There is a permanent radio room in the Bureau's Geneva offices, and the station is regularly on the air during Scout nets and JOTA weekends. Transmitters are on the 10/15/20 meter, 160/80/40 meter and (in the Geneva area) the 440/2 meter bands. Making contact with HB9S requires patience, as many stations call at the same time. Please follow instructions given by the operators and do not interfere with on-going contacts. They speak in as many languages as possible.

## Scout Station Call Signs

Each licensed Amateur Radio station has a unique identifier known as a "call sign." The first letters specify the country. Here are call signs of well-known stations that can often be contacted:

**HB9S** -- World Scout Bureau, Geneva Switzerland

**K2BSA** -- Boy Scouts of America National Office, Dallas TX

**JA1YSS** -- Boy Scouts of Nippon National Office, Tokyo Japan

**PA6JAM** -- Scouting Nederland National Station, Sassenheim Netherlands

**5Z4KSA** -- The Kenya Scouts Assoc. Paxtu Station, Nyeri Kenya

**VK1BP** -- The Scout Assn. of Australia National Station, Canberra Australia

**GB2GP** -- The Scout Assn., Gilwell Park, London UK

**XE1ASM** -- Boy Scouts of Mexico

**DU1BSP** -- Boy Scouts of Philippines

**TF3JAM** -- Scouts of Iceland

## JOTA Program Activities

### Before the event:

- Send a report of your plans to local news reporters. Ask them to visit the station.
- Ask a radio operator to talk about ham radio communications. Visit his/her station to actually see how it works. Learn about radio waves and their propagation.
- Learn to say hello in other languages.
- Learn about other countries and prepare questions to ask over the air.
- Design special QSL cards for the JOTA weekend. Find a way to print cards or prepare different handmade cards.
- Build a [simple antenna](#).
- Build a [simple radio-related project](#).
- Learn about electricity and how to do simple electrical repairs such as how to fix a blown fuse.
- [Learn and practice Morse code](#). Use a computer to teach the code. ARRL has a computer program that helps teach code: GGTE Morse Tutor Gold for IBM or compatible PCs.
- Practice talking into microphones using radio operating procedures and jargon--see examples.
- Find out about your local area in order to answer questions from Scouts in other regions.

## During the Event:

- The global weather situation. Get a large wall map of the world. Ask the Scouts with whom you speak to give the local weather. Mark it on the map for the area where they are located. At the end of the weekend you will have a global weather picture.
- Determine the distance between each radio contact that you made and add them all up. Can you reach 100,000 km (62,000 miles) in one JOTA weekend?
- Learn to say "Scout" in several different languages. Use it whenever possible.
- Invite parents and other friends to visit your JOTA station.
- Organize a weekend hike and take portable radio equipment with you.
- Ask Scouts to keep his/her own personal logbook. Include names, addresses and other information for Scouts contacted.
- Set up an information section with maps, atlases and other sources. When a contact is made, Scouts can find out details about the country or region.
- Plot contacts made on a world map.
- Invite the media to your station. Ask a newspaper to take photos.
- Organize a fox hunt, where Scouts have to locate a small hidden transmitter. This can include the use of a map and compass.

## After the Event:

- Write to the Scouts contacted. Establish individual (pen pal) or troop links. Send your badge and other information about your area.
- Send your reports (and photos!) to the ARRL. Maybe you'll see your picture in our magazine, *QST*!
- Send a report to your NJO. He'll send his national JOTA report to the World Scout Bureau.
- Start planning for next year!

## Examples of Radio Jargon Used by Radio Amateurs

### Ham

An Amateur Radio operator.

### Log

A written (or computerized) record with details of contacts made.

### "CQ Jamboree"

A request for any other JOTA station to answer your call.

### QSL card

A card which gives the details of the contact, such as location, time and date of contact, etc.

### 73

Ham lingo for "sincere best regards." (Used on both phone and CW, toward the end of the contact.)

### CW

(continuous wave): Morse code telegraphy.

### SSB or Phone

Voice mode of sending messages.

### Packet

Electronic mode of sending radio messages using ham radios and personal computers.



## RTTY

(radio teletype): Radio signals sent from one "teleprinter" to another. What the sending operator types on his or her keyboard will be printed on the screen of the receiving station.

## Shack

The room where an Amateur Radio operator has set up his or her radio equipment.

## World Scout Frequencies

Band	SSB (phone)	CW (Morse code)
80 meters	3.740 / 3.940 MHz	3.590 MHz
40 meters	7.270 MHz	7.030 MHz
20 meters	14.290 MHz	14.070 MHz
17 meters	18.140 MHz	18.080 MHz
15 meters	21.360 MHz	21.140 MHz
12 meters	24.960 MHz	24.910 MHz
10 meters	28.390 MHz	28.190 MHz

## JOTA Resources

### Participation Certificates\*

Postcard-size certificates are free and are available to anyone participating in any way. They may be ordered beforehand for presentation during the JOTA, or they may be awarded at Scouting or amateur radio club meetings later. **Send requests to Jamboree-on-the-Air Certificate Cards & Patches, S221, 1325 West Walnut Hill Lane, P.O. Box 152079, Irving, TX 75015-2079.** All orders must be received by December 31 of the year for which certificates are ordered.

### Pocket Patches\*

Temporary insignia to wear on the right pocket of the Scout uniform or on jackets/vests are available again for \$4.00 each, postpaid. Insignia are available in limited quantity only and will not be reordered when supplies are exhausted.

- **ORDER EARLY.** Allow four weeks for delivery on all orders.
- **Send requests to:** Jamboree-on-the-Air Certificate Cards & Patches, S221, 1325 West Walnut Hill Lane, P.O. Box 152079, Irving, TX 75015-2079
- **Pay by check or money order.** We cannot accept cash or credit cards for payment. Make check payable to BSA-JOTA.
- **NOT**

## **Additional JOTA Resources**

Accounts of the Jamboree-On-The-Air event are contained in the "World JOTAReport." To order your personal copy, contact your National Scout HQ.

[Check here for a list of Amateur Radio Clubs in your area.](#)

**Look for exact dates in future newsletters and postings in our Yahoo group and the LARC website. In the meantime, write a reminder on your calendars for the October 2007 JOTA!**

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## **AZIMUTH and MAPS**

**Submitted by: Ed Cravey, KF4HPY**

While reviewing a Power Point Presentation for radio amateurs to upgrade for a General Class ticket, I found Azimuth maps to be a complete mystery to the class. So I decided to dwell on the subject for a bit. What is Azimuth? Webster describes it as "the arc of the horizon between the meridian of the observation point and a star sighting." Hey Dude, that's heavy, man! Gotta be something simpler! Azimuth, as taught by the Army so many years ago, means "The Way" or a bearing. With a compass you align the orienting arrow and the magnetic needle after locking on to a distant point with the "Direction of Travel Arrow" which aligns with a number on the azimuth ring. This number on the azimuth ring is your bearing in degrees of travel to the distant point.

You have just taken a bearing or shot an azimuth; you have determined "The Way".

Azimuthal equidistant maps are circular projections of the earth with your location as the center of the map. The outer perimeter of the map is marked in degrees, with 0 being North, 180 South, 270 West, and 90 East of your location in the center. Out on the edge of the azimuth ring the continents become distorted, which upsets some people. That is how it looks from space. These maps are considered accurate if you live within a 150-mile (208km) radius of the center. The ARRL Azimuthal Equidistant Projection Map has Kansas as the center of the United States. OK for most, but I would enjoy Atlanta as the center of my personal map. The ARRL map is good enough for all but the purist fussybudget. Now get out a string, straight edge, chalk line, whatever and learn to use this map.

Take a straight edge or string pinned to your location, and pass it over the city or area you want to contact by radio, to out beyond the azimuth ring and note the reading. This is the azimuth or bearing

you will aim for on your antenna rotator dial. Your antenna and rotator are set for “true North”, right? For example, the azimuth from Atlanta GA to Fremantle and Perth Australia is about 270 degrees. This is the azimuth, bearing or “way” to rotate the antenna to contact Australia. 90 degrees would allow contact with Zambia in central Africa.

The ARRL azimuth maps would look great on your wall and be useful too. Azimuth maps with your location as center are available. On the Internet there are vendors and software available. Even some freeware is out there. At hamfests there were a few vendors dealing in custom azimuth maps. There are a few questions in the General pool about the azimuthal maps, but you should have little trouble answering them. So forget those Mercator maps as radio aiming devices. Azimuth maps also require no batteries, no interfaces, computers or other high tech equipment and are fine looking in color. Azimuth means “the way”; so enjoy a different concept of the Great Circle Bearing usage.

## **Battery Trivia**

**Submitted by: Ed Cravey, KF4HPY**

- (1) What are “A”, “B”, and “C” batteries?
- (2) How are these batteries used?
- (3) Give some representative voltages.

### Answers

- (1) A series of batteries used in tube type radios of the ‘20s through the ‘40s where AC electric power was not available. Such batteries were used in Regenerative, Tuned Radio Frequency, and Super heterodyne receivers. Also such batteries were used in low power transmitters. Sold separately or combined as “A/B” packs these batteries were available in stores and catalogs everywhere. One, well known, supplier was National Carbon Co., trade name “Eveready.” The other was the Burgess Battery Co. These were dry cell batteries.
- (2) “A” batteries supplied current to the filaments. “B” batteries supplied the plate current. “C” batteries provide bias voltage.
- (3) Representative voltages of the various batteries were 1.5 V for ‘A” batteries; 22.5, 45, 67.5 and 90 V for the “B” batteries. “C” batteries were 4.5V. These batteries were large and bulky; the radios were large also. A radio example would be a Zenith “Transoceanic” portable AM/SW set.

# Georgia ARRL Events

## 2 Jun 2007\* Georgia State Convention (Atlanta Hamfest)

Atlanta Radio Club

<http://www.atlantahamfest.com>

**Talk-In:** 146.820 (-) (PL 146.2)

**Contact:** Johh Talipsky, N3ACK  
385 Madison Chase Drive  
Lawrenceville, GA 30045  
Phone: 678-618-2190  
Fax: 678-985-2906  
Email: [johnn3ack@comcast.net](mailto:johnn3ack@comcast.net)

Marietta, GA  
Jim Miller Park  
[2245 Callaway Road](#)  
**Div:** Southeastern  
**Sect:** Georgia

## 11 Aug 2007+ Ellijay Ham Fest

Ellijay Amateur Radio Society

<http://www.qsl.net/w4hhh/>

**Talk-In:** 145.170 (-600) PL 100 Hz

**Contact:** Sam Underhill, K4SWU  
446 SUTTON RD  
ELLIJAY GA 30540  
Phone: 706-276-4877  
Email: [k4swu@ellijay.com](mailto:k4swu@ellijay.com)

Ellijay, GA  
Ellijay Lions Club  
1729 S. Main St (Old Hwy 5 South) , Ellijay, GA  
**Div:** Southeastern  
**Sect:** Georgia

## 15 Sep 2007+ Paulding Amateur Radio Club

<http://www.pauldingarc.com>

**Talk-In:** 146.895+ (PL 77)

**Contact:** AL Martin, KF4RPQ  
409 Sleepy Hollow Road  
Powder Springs, GA 30127-6751  
Phone: 770-920-1309 (Home) or 404-281-6859 (Cell)

Email: [KF4RPQ@yahoo.com](mailto:KF4RPQ@yahoo.com)

Dallas, GA  
Paulding Meadows Park  
Highway 61  
**Div:** Southeastern  
**Sect:** Georgia

**Send newsletter submissions to Bob Aldrich, N9RLA,  
LARC Secretary and Newsletter Editor**

**See You At Field Day**  
**2007!**