

# OCEC/RACES SIGNALS

*For the support of County Government during emergencies*



Oswego County Emergency  
Communicators/RACES  
200 North 2nd Street  
Fulton, NY 13069

## Oswego County Repeaters

147.150 mHz PL not req'd  
146.850 mHz PL not req'd  
442.350 mHz 103.5 PL

## Other repeaters of interest

146.670 mHz PL 151.4 Syracuse  
147.345 mHz No PL Phoenix

## Packet FlexDigi User Ports

EOC Fulton 145.090 mHz K2QQY  
Scriba 145.690 mHz KA2AON  
Hannibal 145.770 mHz K1YHR

## NETS

OCEC/RACES The 1st and 3rd Sunday  
of the month at 2000 Hrs. 147.150 mHz

NYS RACES Net Every Sunday Morn-  
ing at 0900 local on 3993.50 kHz

## WEB SITES

OCEC/RACES  
[www.oswegoraces.org](http://www.oswegoraces.org)

Fulton Amateur Radio Club  
[www.fultonhamradioclub.org](http://www.fultonhamradioclub.org)

Go to our web page for more links to  
interesting places.

*A monthly meeting is held in the  
lower level of the County Building  
on Route 481 North, Fulton,  
across from Mimi's restaurant.  
Access is through the west door  
until the meeting starts. Door is  
secured after that. Use the after  
hours button if late. Someone will  
come up and let you in. Meeting  
sign in is at 1850 hours local.*

## Meeting Agenda

**Have a safe holiday  
season.**

**Merry Christmas and  
a Happy New Year.**

**Next meeting will be  
January 21, 2009**

## OFFICERS

John K2QQY Radio Officer  
Keith, WB2NVY ARO Admin  
Jim N2MGU ARO Comms  
Mark KC2JNI ARO Logistics  
Bob WA2AFF ARO Ops & Plan,  
Tom W2TQF ARO ARRL EC  
John N2MKH Unit Ldr Packet  
Steve KC2QXE Unit Ldr IT  
Brien KA2AON Unit Ldr Skywarn

## INSIDE

**Newsletter  
announcement.**

**CRIMP CONNECTORS:  
not your style?**

**2009 Calendar**

**Announcement:**

The monthly newsletter is QSYing to a quarterly version for 2009. You can find agendas and other meeting information on our web site at [www.oswegoraces.org](http://www.oswegoraces.org).

A calendar is included with this issue showing meeting and net dates.

Anyone that is interested in doing a monthly newsletter is welcomed with open arms. Please step forward if you would like to be involved.

The following article is reprinted from SVC ONLINE, a Penton Media, Inc. Publication and contains good information about good crimping procedures for solderless connectors.

“You should solder all connectors, right? No, not necessarily. It is often better to use a mechanical connection only. Think of the cold solder joints you have seen in the past and how you wished that they had been crimped instead. Many crimped or mechanical connections have been operating for years without any problems. Many telephone connections around the world, for example, have never failed, and they are all mechanical connections.

Like any connection, however, mechanical connections must be made correctly. We have all cursed mechanical connections one time or another, not because mechanical connections are not reliable, but because they were made incorrectly. Never use diagonal pliers, lineman’s pliers or a hammer to assemble crimped connectors. It is important that the proper tool always be used to make the connection.

Crimped connectors or lugs are used for stranded and solid wire, coaxial cable, telephone wire, and cable D-Subminiature connectors and IDC flat wire, to name a few. They come in various sizes, shapes, and characteristics (see Figure 1). The connector end may be a ring, spade, flanged spade or splice. All things being equal, the ring end is the most reliable because even if the screw loosens, the connector will not fall off. If you prefer to use a spade-type lug, which is much easier and faster to install, I would use the flanged spade lug because if the screw loosens, the connector will probably not fall off.

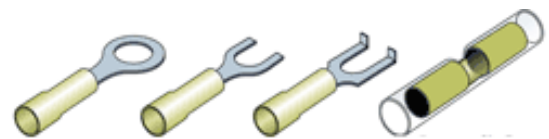


Fig. 1: Examples of solderless insulated lugs. L-R: ring, spade, spade (flanged), splice

Incidentally, insulated connectors are color coded on the wire end of the connector for the various size wire. The color codes are: wire size AWG#22 to AWG#18 is red; AWG#16 to AWG#14 is blue; AWG#12 to AWG#10 is yellow, and AWG#12 to AWG#10 is yellow large bell (white). AWG is the acronym for American Wire Gauge. Non-insulated crimped connectors are used for wire sizes ranging from AWG#8 to AWG#2 and 1/0 to 4/0.

The most important thing is that you use the proper tool to crimp the lug.

Probably the most recognized crimp connectors or lugs are T&B (Thomas and Betts), AMP and Stakon. They all sell tools for crimping as do many other tool manufacturers.

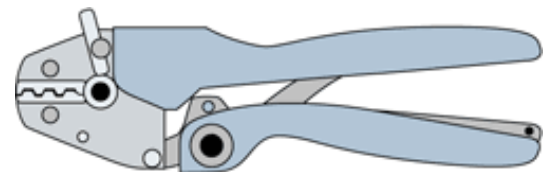


Fig. 2: A ratchet-type crimping tool

Some tools are made for only insulated connectors; others can be used for both insulated and non-insulated ones. Again, always use the proper tool; do not think that a cheap tool will properly crimp a connector.

Crimped insulated lugs work best with non-tinned stranded wire. When using solid wire, it is important to solder the connection after crimping because the crimp does not fill the empty space as well, so even if the crimp is well made, the wire can move and rotate, causing a poor connection. It is also better to solder stranded wire that you have tinned after it has been crimped for the same reason. If you use non-insulated lugs for AWG#22 to AWG#10 solid wire, and they are crimped with an AMP type W tool, the wire does not have to be soldered to the lug.

There are many kinds of crimping tools. Probably the most common tool for wire is the AMP Super Champ or equivalent. This is a simple hand device where you place the connector in the tool and squeeze the handles until they touch each other. If the connector is not in the proper die space, it is possible to close the tool without completely squeezing the connector around the wire. Always be sure that the connector is in the die for the color connector you are using, or if you are using a non-insulated connector, be sure the connector is in the small die marked non-insulated. This tool can also be used to strip the wire and to cut bolts. The Super Champ IV, although it does not cut bolts, strips and crimps more aggressively.

Although the Super Champ is adequate for most jobs, if you plan to crimp many connectors and you do not want any call backs, I recommend you purchase a professional crimper. These tools have a die for each connector size so you can be sure the crimp will be made in the proper die. The tool has ratchet closing, which does not allow you to release the tool until the crimp is completed, producing a more accurate and repetitive crimp. Remember, a minute saved is a dollar earned.

A good crimp always starts with the first step; preparing the wire. When using an insulated lug, strip off the insulation of the barrel and insert it into the barrel up to the insulation. If you have the correct lug for the wire size, the insulation will not slide into the barrel. The free end of the wire should be no less than flush with the far end of the barrel and should not extend more than 1/16 inch (1.6 mm) past the barrel.

It is also important to align the tool with the connector. The crimp should be made on the exact top of the lug, which is where the metal rolls over and touches. Also, crimp on the metal part of the barrel. All too often the crimp is made on the insulation rather than on the metal part. Although the joint may look good, the joint is electrically poor and, as a matter of fact, so is the mechanical strength. Always follow the directions that came with your tool. They will tell you where to place the lug and how many crimps are required (usually one).

If you plan to use the connector in a humid or damp area, you may want to cover it with liquid tape after crimping to keep the moisture from corroding the joint or use crimp and seal connectors. These connectors come with a heat-shrinkable covering that, when heat shrunk, seals the wire to the connector.

Always lead the wires properly. When connecting to a device, do not run the cable haphazardly. Align the cable with the device and neatly dress the wire over the device and to the connector rather than fanning it out and returning it to the connector sloppily.

When connecting the lug to a terminal, be sure to use a washer, preferably a locking washer, between the lug and the screw head so that the lug will not turn while you tighten the bolt and the connection will not loosen due to vibration. The same rules that apply to wire connectors also apply to all connectors-prepare the wire, use the right tool, do not hurry and use care.

When crimping cable connectors, cut the cable properly. Always cut the end of the center conductor, the insulation, the shield and the outer jacket square and to the correct length as specified by the connector manufacturer. If you do it correctly, the insulation will hit the barrel of the connector when the center conductor is inset the correct distance. The outer jacket will butt to the connector at the proper shelf. Be sure to flare the shield so that it will be only on the outside of the flare of the connector, and be sure there are no wire whiskers. Oh yes, put the crimp ring on the cable before putting the cable on the connector. Again, it is best to take the time to do it right the first time.

So what does this all boil down to? Use the proper size lug for the wire or connector size for cable. Prepare the wire or cable according to the crimper tool manufacturer. Use the best crimping tool you can afford. The difference between a \$125.00 tool and a \$25.00 tool is less than two one-hour call backs at a \$60.00/hr labor rate. Remember, have patience and never hurry”.

Many thanks to Cynthia Wisheart of Penton for permission to use this article and also for her suggestion to check out a sister publication, “Urgent Communications” at <http://urgentcomm.com/> where you will find other interesting articles concerning communications. There is a very good article about linear and switching power supplies.

January	February	March	April	May	June
<p>OCEC/RACES</p> <p>Sunday 4<sup>th</sup> NET 2000 Monday 5<sup>th</sup> Packet 1930 Sunday 18<sup>th</sup> NET 2000 Monday 19<sup>th</sup> Packet 1930 <b>Wednesday 21<sup>st</sup> Mfg. 1900</b></p> <p>Event schedule: Mtg. Packet drill</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 1<sup>st</sup> NET 2000 Monday 2<sup>nd</sup> Packet 1930 Sunday 15<sup>th</sup> NET 2000 Monday 16<sup>th</sup> Packet 1930 <b>Wednesday 18<sup>th</sup> Mfg. 1900</b></p> <p>Event schedule: Mtg. Table Top Exercise</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 1<sup>st</sup> NET 2000 Monday 2<sup>nd</sup> Packet 1930 Sunday 15<sup>th</sup> NET 2000 Monday 16<sup>th</sup> Packet 1930 <b>Wednesday 18<sup>th</sup> Mfg. 1900</b></p> <p>Event schedule: Mtg. - Skywarn 8<sup>th</sup> D.S.T</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 5<sup>th</sup> NET 2000 Monday 6<sup>th</sup> Packet 1930 <b>Wednesday 15<sup>th</sup> Mfg. 1900</b> Sunday 19<sup>th</sup> NET 2000 Monday 20<sup>th</sup> Packet 1930</p> <p>Event Schedule: Mtg. Member Recognition</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 2<sup>nd</sup> NET 2000 Monday 3<sup>rd</sup> Packet 1930 Sunday 17<sup>th</sup> NET 2000 Monday 18<sup>th</sup> Packet 1930 <b>Wednesday 20<sup>th</sup> Mfg. 1900</b></p> <p>Event Schedule: Mtg. Radiological Training</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 7<sup>th</sup> NET 2000 Monday 8<sup>th</sup> Packet 1930 Sunday 14<sup>th</sup> NET 2000 Monday 15<sup>th</sup> Packet 1930 <b>Wednesday 17<sup>th</sup> Mfg. 1900</b></p> <p>Event Schedule:</p> <p>FULTON AMATEUR RADIO CLUB</p>
July	August	September	October	November	December
<p>OCEC/RACES</p> <p><b>Sunday 5<sup>th</sup> NO NET</b> Monday 6<sup>th</sup> Packet 1930 <b>Wednesday 15<sup>th</sup> Mfg. 1900</b> Sunday 19<sup>th</sup> NET 2000 Monday 20<sup>th</sup> Packet 1930</p> <p>19<sup>th</sup> REPP Practice drill</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 2<sup>nd</sup> NET 2000 Monday 3<sup>rd</sup> Packet 1930 Sunday 16<sup>th</sup> NET 2000 Monday 17<sup>th</sup> Packet 1930 <b>Wednesday 19<sup>th</sup> Mfg. 1900</b></p> <p>19<sup>th</sup> REPP Practice drill</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p><b>Sunday 6<sup>th</sup> NO NET</b> Monday 7<sup>th</sup> Packet 1930 <b>Wednesday 16<sup>th</sup> Mfg. 1900</b> Sunday 20<sup>th</sup> NET 2000 Monday 21<sup>st</sup> Packet 1930</p> <p>22<sup>nd</sup> REPP Drill</p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 4<sup>th</sup> NET 2000 Monday 5<sup>th</sup> Packet 1930 Sunday 18<sup>th</sup> NET 2000 Monday 19<sup>th</sup> Packet 1930 <b>Wednesday 21<sup>st</sup> Mfg. 1900</b></p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 1<sup>st</sup> NET 2000 Monday 2<sup>nd</sup> Packet 1930 Sunday 15<sup>th</sup> NET 2000 Monday 16<sup>th</sup> Packet 1930 <b>Wednesday 18<sup>th</sup> Mfg. 1900</b></p> <p>FULTON AMATEUR RADIO CLUB</p>	<p>OCEC/RACES</p> <p>Sunday 6<sup>th</sup> NET 2000 Monday 7<sup>th</sup> Packet 1930 <b>Wednesday 16<sup>th</sup> NO MITG</b> <b>Sunday 20<sup>th</sup> NO NET</b> <b>Monday 21<sup>st</sup> NO PACKET</b></p> <p>FULTON AMATEUR RADIO CLUB</p>

Fulton Amateur Radio Club 2009 MEETING SCHEDULE OCEC/RACES