

## STARS 2015 OFFICERS



From left to right:

**Ken Pokigo, KC2AYK**

**President**

**Scott Barto, KB2KOL**

**Vice President**

**Jon Hall, KC2QKB**

**Director**

**John Leitten, KA2RFT**

**Treasurer**

**Mettieirene Wagner, KD2DFQ**

**Recording Secretary**

**Judy Levan, N2TEZ**

**Financial Secretary**

**Conrad Barrick, KC2WRY**

**Director**

## CLUB OFFICERS

President	Ken Pokigo, KC2AYK
Vice President	Scott Barto, KB2KOL
Secretary	Mettieirene Wagner, KD2DFQ
Financial Sec'y	Judy Levan, N2TEZ
Treasurer	John Leitten, KA2RFT
Director (1 yr.)	Jon Hall, KC2QKB
Director (2 yr.)	Conrad Barrick, KC2WRV
<hr/>	
Clubhouse Chair	Pat Groom, KC2VWG
Telstar Editor	Tomm Dean, KA2NXY
Webmaster	Don Niles, K2PMC

## WE GOOFED

**Don Niles, K2PMC** brought our attention to an error in the December issue of *Telstar*. On the first page, in the first sentence of the first article, the word "it" should have appeared instead of "is".

**Scott Barto, KB2KOL** also found two errors. On page 5, column 1, the last paragraph should have used the verb "is" when referring to "the secret" (maybe that "is" was the one found on page 1).

At the top of the next column, the word "shorter" should have appeared instead of "shorten".

We take pride in getting things right. If you see something incorrect, let us know.

[wb2elw@verizon.net](mailto:wb2elw@verizon.net)

## BLUE AND UNDERLINED

When you see something in *Telstar* in blue letters and underlined, that means it is an Internet link. Hold the "Control" key and click on the link to open.

*Try it!* ➡ [sample link](#) (control + click)

## JANUARY MEETING

This month's meeting on January 8<sup>th</sup>, will set the pace for **STARS** activities in 2015.

Please come to the meeting with ideas and suggestions for club activities, speakers, contests, field trips, expenditures, and anything else regarding our direction.

The 2015 officers will appreciate your input.

## CLUB NETS

Saturdays	10:00 AM	3.925 MHz +/- QRM
Sundays	9:30 AM	28.380 MHz
Sundays	10:30 AM	147.09 MHz (repeater)

## STARS MEETINGS

**STARS** meetings are *usually* at 7:00 PM on the first Thursday of each month, at the Hamburg Memorial Youth Center, 200 Prospect Avenue (near Hawkins Avenue) in Hamburg.

However, to avoid conflict with a holiday, this month's meeting will be on **January 8<sup>th</sup>**, at 7:00 PM, at the Hamburg Memorial Youth Center.

All are welcome,

The **STARS** board usually meets at 7:00 PM on the fourth Thursday of each month at the Nike Base Radio Clubhouse, just west of the Hamburg Town Arena, 2982 Lakeview Road, Hamburg.

This month, the Board will meet at 7:00 PM on January 22nd, at the Nike Base Radio Clubhouse.

All members are welcome to attend.

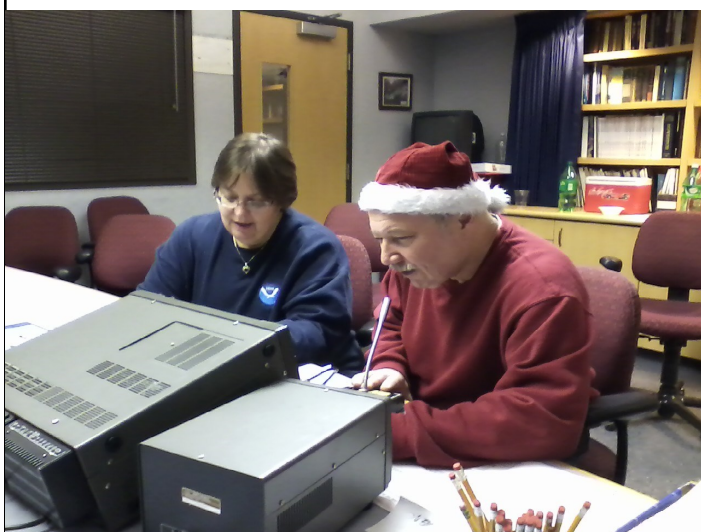


## STARS MEMBERS WORK NWS SPECIAL EVENT

The National Weather Service recently held Skywarn Recognition Day on December 6th. Amateurs in the Skywarn program were invited to operate the NWS amateur radios, in an attempt to maximize contacts.

The Buffalo NWS office made 276 QSOs, contacting 37 states, and 46 other NWS offices. Full details can be found at:

[www.wr.noaa.gov/mtr/hamradio/2014/2014History.php](http://www.wr.noaa.gov/mtr/hamradio/2014/2014History.php)



**STARS** members **Judy Levan, N2TEZ**, and **Robert Koster, KA2WYE**, operate NWS amateur radios for Skywarn Recognition Day.

## PIONEER HIGH SCHOOL ARC SPECIAL EVENT CELEBRATES 25 YEARS

The Pioneer H.S. Amateur Radio Club will operate a special event station on January 17th, from 1400Z to 2000Z. This will honor their 25th anniversary. Pioneer High, in Yorkshire, NY, is currently the **ONLY** school in Western New York with an amateur radio station.

The station, KC2AIF, anticipates operation on the following frequencies: 28.380, 14.260, 14.250, and 7.250 MHz. QSLs available.

Amateurs are encouraged to contact the station.

For further information, contact Joe Claus, KB2JDB, 6313 Kast Pl, Hamburg, NY 14075; [joeclaus@msn.com](mailto:joeclaus@msn.com)

## HAMFESTS

01/31/2015 [Lockport Amateur Radio Hamfest](http://www.lockportara.us/)

**Location:** South Lockport Fire Company  
5666 South Transit Road (Use Ruhlmann Road Entrance)  
Lockport, NY

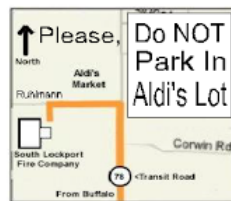
**Sponsor:** Lockport Amateur Radio Association

**Website:** <http://www.lockportara.us/>

(control + click on name for full information)

## 54TH ANNUAL WINTER HAMFEST

The Areas Longest Running Winter Hamfest  
**SATURDAY JANUARY 31ST, 2015**  
**8:00 AM UNTIL NOON**



South Lockport Fire Company  
5666 South Transit Rd. Lockport NY USA  
(Use Ruhlmann Road Entrance)

**General Admission \$ 5**

### Hourly Prizes Drawings

1x At 9:00 am  
1x At 10:00 am  
1x At 11:00 am



Baofeng UV-5R Plus

### BREAK OUT OF THOSE WINTER DULDRUMS

Join us and find that great deal,  
meet up with old friends  
or make some new ones.

For Table Reservations  
or Additional Info. Contact:

Steve Ortnier - KD2GBD  
716-491-3158 (2pm - 9pm)  
[lara.hamfest@gmail.com](mailto:lara.hamfest@gmail.com)

### Grand Prize - Noon Drawing

Baofeng UV-5R Plus & Accessories

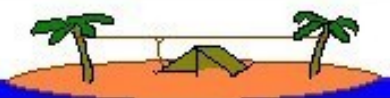


See Our Website - [www.lockportara.us](http://www.lockportara.us)

## UP with antennas



by Don - K2PMC



In previous columns, I have discussed different antenna systems and the transmission lines used to provide power to those antennas.

For a long time, I have advocated the use of multiband antennas employing a balanced transmission line for various reasons which I've previously discussed. By this time you should also know that a balun is an absolute must when employing a balanced transmission line.

The question then becomes, "What kind of balun do I need?" Is it a 1:1, 4:1 or 9:1 balun? Clearly, if I'm using 450 ohm ladder line, then a 1:1 or 4:1 balun makes no sense. It's obvious that a 9:1 balun will match my 50 ohm coax perfectly. Right? No, that is not right, and here's why.

The impedance and reactance at the center of your antenna changes dramatically from band to band. Also, the voltage and current nodes appearing on the transmission line will vary not only with the frequency, but also the length. How in the world can I determine which balun best suits my needs? As you might expect, there are formulas and calculations to make this determination. These calculations are complex and time consuming. And, way above the head of the average ham who does not have an engineering degree.

My suggestion is to start with a 4:1 balun. Why? For no other reason than it is almost halfway between 1:1 and 9:1. If you are using an external tuner, chances are it will match your antenna using a 4:1 balun. If you are using a tuner in your radio you might not be so lucky. External antenna tuners are much more capable in matching wide variations in impedance and reactance than the tuners in most radios. And, manual tuners employing a variable inductor will always do a

better job than any autotuner. So, if your tuner matches your antenna on all the bands, then you are good to go with one possible exception, which I will discuss later.

Let's say your tuner will not give you a proper match on certain bands. You could start by altering the transmission line length. This could solve your problem but you can end up with a mess of hanging wire. On certain bands your balun may be seeing an impedance that is relatively close to your 50 ohm coax. So, after your 4:1 balun performs its down conversion, your tuner could be seeing 12 ohms of impedance, which it may not be able to handle. My suggestion would be to try a 1:1 balun. The 1:1 balun merely passes whatever impedance it sees right to the tuner. Yes, but how will the 1:1 balun work with higher impedances? Tuners deal with high impedances better than they do with low impedances, so the 1:1 balun may work just fine on those bands. If all else fails, then try the 9:1 balun.

Earlier I mentioned that there could be an exception, even if your system is matched on all bands. It only becomes a consideration if you plan on running substantially more than 100 watts output. Insertion loss occurs anytime you insert an object into a system. Ergo, the balun will create some loss in the system. Ideally it will not be large. Loss means there will be a certain amount of heat generated within the object. If your matching system is operating at the extremes of its capability, the loss will be greater which means more heat. At relatively low levels, this loss is of minimal consequence and your system will work fine. However, if you plan on running substantially more

*(Continued on page 5)*

(Continued from page 4)



than 100 watts output this could cause a problem. As you continue to operate, the heat will build in the balun and could eventually cause the toroid in the balun to fail.

How can you tell if this is happening? A simple check is to keep an eye on the SWR as you are transmitting. If you notice the SWR beginning to creep upward, this is a dead giveaway that your balun is heating, and its characteristics are changing. Either stop transmitting or reduce power to the point where the SWR returns to normal. At this point you do have options. The first is don't operate on this band. Or, operate on this band with reduced power. Use a higher power balun. Finally, try another balun ratio to see if the problem goes away.

73, and see you next month,

*Don*

Don, K2PMC



*(Editor's note: If you have questions or comments regarding anything from "Up with Antennas", feel free to email Don Niles at: [k2pmc@arrl.net](mailto:k2pmc@arrl.net). )*



## THANX FOR SERVICE TO JOHN CZUBA, W2IV

For the past three years, **STARS** has benefitted from the services of Treasurer **John Czuba, W2IV**. This year, John stepped down from that position, as he has taken on commitments outside of western New York.

In addition to his position as **STARS** treasurer, John has served as one of the Volunteer Examiners (VE) for our licensing/upgrading test sessions.

John has served admirably in both positions. It is with pride that we offer our thanx for his service, and we wish him well in his future endeavors.

## NEW COAXIAL CABLE FOR SALE

New coax, never used, with factory silver-plated PL-259 connectors ,from DX Engineering.

75 foot of DXE-400 Max 50 ohms,

Gas injected foam, tape foil covered by copper braid shield,

UV-resistant poly jacket, direct-bury, made in USA!!

Attenuation per 100 foot = 1.8 DB @ 150 mHz.

Lists for \$97.45 - yours for \$75.00

For info, call **Paul, WA2DII**, at 716 262-6156.

## DID YOU FORGET??

Applications for renewal of membership in **STARS** were due on January 1, 2015. A renewal form is on page 9.



## AREA EXAM SITES

01/14/2015 [Niagara Falls](#)

Sponsor: Niagara Radio Club, Inc.  
 Location: Venture Forthe, Inc.  
 3900 Packard Road  
 Time: 6:30 PM (Walk-ins allowed)

01/17/2015 [Hamburg](#)

Sponsor: **STARS**  
 Location: Hamburg Youth Center  
 200 Prospect Avenue  
 Time: 9:00 AM (Walk-ins allowed)



01/17/2015 [Rochester NY](#)

Sponsor: Rochester ARA  
 Location: RIT Gleason Engineering Bldg Rm 3139  
 1 Lomb Memorial Drive  
 Time: 10:00 AM (Walk-ins allowed)



01/25/2015 [Geneseo](#)

Sponsor: Genesee Valley ARA  
 Location: Livingston County Government Center  
 2 Court Street Rm 205  
 Time: 5:30 PM (Walk-ins allowed)

01/27/2015 [Lancaster](#)

Sponsor: Lancaster ARC  
 Location: Lancaster ARC- Club House Building  
 525 Pavement Road  
 Time: 7:00 PM (Walk-ins allowed)

02/07/2015 [North Tonawanda](#)

Sponsor: ARA of the Tonawandas  
 Location: North Tonawanda Fire Headquarters  
 495 Zimmerman Street - Basement  
 Time: 10:00 AM (Walk-ins allowed)

(control-click on City for more info)



- Free; no charge for examination

## TESTING NEEDS

- Legal photo ID (a driver's license is excellent!)
- Current license and/or CSCE documents, if any, and a non-returnable photocopy of each
- Federal Registration Number (FRN); if none, then Social Security Number (SSN)
- \$15 in cash, check or money order
- Two #2 pencils with erasers, and a pen
- Calculators are permitted as long as any programming has been cleared.

[\(more info\)](#)

## VEs HONORED

**STARS**, as a representative of the **ARRL** and the **FCC**, offers the opportunity to take amateur radio license/upgrade exams.

Those examination sessions are run by qualified examiners, known as Volunteer Examiners (VEs).

For 2014, these VEs contributed to the efforts:

Tony Balas, KB2OUT	2
Conrad Barrick, KC2WRY	4
Scott Barto, KB2KOL	1
Shane Brady, WB2WPM	3
Jay Clark, KF2JY	1
John Czuba, W2IV	1
Tomm Dean, KA2NXY	6
Gregory Hoerner, AC2MO	2
Edward Jablonski, KC2YMN	2
Linda Jablonski, KC2YMM	2
Earl Kipler, Sr., W2ECK	2
John Leitten, KA2RFT	5
Edward Patton, N2ING	1
Jim Starr, N2TFA	5
Mark Wolf, W2MAW	2

Each of the above VEs will be presented with a certificate at the January 8<sup>th</sup> meeting.

# CONTEST CALENDAR



Start and Finish	Contest Title	Sponsor's Website
Jan 1, 0000Z - Jan 1, 2359Z	ARRL Straight Key Night	<a href="http://www.arrl.org/straight-key-night">www.arrl.org/straight-key-night</a>
Jan 1, 0000Z - Jan 1, 0100Z	New Year's Snowball Contest	<a href="http://ev5agb.com/index.htm">ev5agb.com/index.htm</a>
Jan 1, 0800Z - Jan 1, 1100Z	SARTG New Year RTTY Contest	<a href="http://www.sartg.com">www.sartg.com</a>
Jan 1, 0900Z - Jan 1, 1200Z	AGCW Happy New Year Contest	<a href="http://www.agcw.de">www.agcw.de</a>
Jan 2, 0200Z - Jan 2, 0330Z	QRP Fox Hunt	<a href="http://www.qrpfoxhunt.org/winter_rules.htm">www.qrpfoxhunt.org/winter_rules.htm</a>
Jan 2, 0230Z - Jan 2, 0300Z	NS Weekly Sprint	<a href="http://www.ncccsprint.com">www.ncccsprint.com</a>
Jan 3, 0000Z - Jan 3, 2400Z	070 PSKFest	<a href="http://www.podxs070.com">www.podxs070.com</a>
Jan 3, 1200Z - Jan 4, 1200Z	WW Peace Messenger Cities	<a href="http://www.s59dcd.si">www.s59dcd.si</a>
Jan 3, 1500Z - Jan 3, 1800Z	QRP ARCI New Year's Sprint	<a href="http://www.qrparci.org/contests">www.qrparci.org/contests</a>
Jan 3, 1800Z - Jan 4, 2359Z	ARRL RTTY Roundup	<a href="http://www.arrl.org/rtty-roundup">www.arrl.org/rtty-roundup</a>
Jan 3, 2000Z - See website	EUCW 160 Meter Contest	<a href="http://www.uft.net">www.uft.net</a>
Jan 4, 1800Z - Jan 4, 2359Z	Kid's Day	<a href="http://www.arrl.org/kids-day">www.arrl.org/kids-day</a>
Jan 5, 1630Z - Jan 5, 1730Z	OK1WC Memorial Contest	<a href="http://www.memorial-ok1wc.cz">www.memorial-ok1wc.cz</a>
Jan 6, 0200Z - Jan 6, 0400Z	ARS Spartan Sprint	<a href="http://www.arsgrp.blogspot.com">www.arsgrp.blogspot.com</a>
Jan 9, 0230Z - Jan 9, 0300Z	NS Weekly Sprint	<a href="http://www.ncccsprint.com">www.ncccsprint.com</a>
Jan 10, 1200Z - Jan 11, 1159Z	UBA PSK63 Prefix Contest	<a href="http://www.uba.be/en/hf/contest-rules">www.uba.be/en/hf/contest-rules</a>
Jan 10, 1200Z - Jan 11, 2359Z	Straight Key Weekend Sprintathon	<a href="http://www.skccgroup.com">www.skccgroup.com</a>
Jan 10, 1800Z - Jan 11, 0559Z	North American QSO Party	<a href="http://ncjweb.com">ncjweb.com</a>
Jan 11, 0630Z - Jan 11, 0830Z	NRAU-Baltic Contest, CW	<a href="http://www.nrau.net/nrau-baltic-contest/rules.html">www.nrau.net/nrau-baltic-contest/rules.html</a>
Jan 11, 0900Z - Jan 11, 1100Z	NRAU-Baltic Contest, SSB	<a href="http://www.nrau.net/nrau-baltic-contest/rules.html">www.nrau.net/nrau-baltic-contest/rules.html</a>
Jan 11, 0900Z - Jan 11, 1059Z	DARC 10 Meter Contest	<a href="http://www.darc.de/referate/dx/conteste/10m/en">www.darc.de/referate/dx/conteste/10m/en</a>
Jan 12, 1630Z - Jan 12, 1730Z	OK1WC Memorial Contest	<a href="http://www.memorial-ok1wc.cz">www.memorial-ok1wc.cz</a>
Jan 14, 2300Z - See website	Linc Cundall Memorial CW Contest	<a href="http://www.antiquewireless.org/awa-on-the-air.html">www.antiquewireless.org/awa-on-the-air.html</a>
Jan 16, 0130Z - Jan 16, 0330Z	NAQCC Special 160M Sprint	<a href="http://naqcc.info/sprint201501_160.html">http://naqcc.info/sprint201501_160.html</a>
Jan 16, 0230Z - Jan 16, 0300Z	NS Weekly Sprint	<a href="http://www.ncccsprint.com">www.ncccsprint.com</a>
Jan 17, 0000Z - Jan 18, 2359Z	YLISB QSO Party	<a href="http://www.ylssystem.org">www.ylssystem.org</a>
Jan 17, 0000Z - Jan 17, 0400Z	LZ Open Contest	<a href="http://www.lzopen.com">www.lzopen.com</a>
Jan 17, 0600Z - Jan 17, 1400Z	International United Teenager Contest	<a href="http://uarl.com.ua">uarl.com.ua</a>
Jan 17, 1200Z - Jan 18, 1200Z	HA DX Contest	<a href="http://www.ha-dx.com">www.ha-dx.com</a>
Jan 17, 1800Z - Jan 18, 0559Z	North American QSO Party	<a href="http://ncjweb.com">ncjweb.com</a>
Jan 17, 2000Z - See website	Feld-Hell Low-Down Sprint	<a href="http://www.feldhellclub.org">www.feldhellclub.org</a>
Jan 18, 1400Z - Jan 19, 0800Z	Classic Exchange	<a href="http://www.classicexchange.org">www.classicexchange.org</a>
Jan 19, 0200Z - Jan 19, 0400Z	Run For the Bacon	<a href="http://www.fpggrp.org">www.fpggrp.org</a>
Jan 19, 1630Z - Jan 19, 1730Z	OK1WC Memorial Contest	<a href="http://www.memorial-ok1wc.cz">www.memorial-ok1wc.cz</a>
Jan 21, 0200Z - Jan 21, 0256Z	Locust QSO Party	<a href="http://www.k6vva.com/lqp">www.k6vva.com/lqp</a>
Jan 22, 0130Z - Jan 22, 0330Z	NAQCC Monthly QRP Sprint	<a href="http://naqcc.info">naqcc.info</a>
Jan 23, 0230Z - Jan 23, 0300Z	NS Weekly Sprint	<a href="http://www.ncccsprint.com">www.ncccsprint.com</a>
Jan 23, 2200Z - Jan 25, 2200Z	CQ WW 160 Meter Contest	<a href="http://www.cq160.com">www.cq160.com</a>
Jan 24, 0600Z - Jan 25, 1800Z	REF French Contest	<a href="http://concours.ref-union.org/contest">concours.ref-union.org/contest</a>
Jan 24, 1200Z - Jan 25, 1200Z	BARTG RTTY Sprint	<a href="http://www.bartg.org.uk">www.bartg.org.uk</a>
Jan 24, 1700Z - Jan 25, 1700Z	Winter Field Day	<a href="http://www.spar-hams.org">www.spar-hams.org</a>
Jan 24, 1900Z - Jan 26, 2359Z	ARRL January VHF Contest	<a href="http://www.arrl.org/january-vhf">http://www.arrl.org/january-vhf</a>
Jan 24, 1900Z - Jan 24, 2300Z	WAB Top Band Phone Contest	<a href="http://http://wab.intermip.net/Contest%20Dates.php">http://wab.intermip.net/Contest%20Dates.php</a>
Jan 26, 1630Z - Jan 26, 1730Z	OK1WC Memorial Contest	<a href="http://www.memorial-ok1wc.cz">www.memorial-ok1wc.cz</a>
Jan 30, 0230Z - Jan 30, 0300Z	NS Weekly Sprint	<a href="http://www.ncccsprint.com">www.ncccsprint.com</a>
Jan 31, 0000Z - Jan 31, 2359Z	Feld-Hell WAAAEQ Sprint	<a href="http://www.feldhellclub.org">www.feldhellclub.org</a>
Jan 31, 1300Z - Feb 1, 1300Z	UBA Contest	<a href="http://www.uba.be/en/hf/contest-rules">www.uba.be/en/hf/contest-rules</a>



(Control + click to activate a link)



For more information on contests: <http://www.arrl.org/contest-calendar>

# SPECIAL EVENT STATIONS

Full information at: <http://www.arrl.org/special-event-stations>

Dec 6-Jan 6,	0000Z-0500Z,	XM3G	200th Anniversary of the Treaty of Ghent
Dec 25-Jan 5,	0000Z-2359Z,	Various	FOCUS Magazine 25th Anniversary & 100th Issue
Dec 28-Jan 4,	0001Z-2359Z,	W2HRU	Ham Radio University/NLI Section Convention
Jan 1-Jan 31,	0000Z-2359Z,	VG3SJAM	200th birthday of Sir John A Macdonald
Jan 1-Dec 31,	0001Z-2359Z,	K6BB	40th Anniversary Year
Jan 1-Jan 31,	0000Z-0000Z,	W9JUQ	Celebrating Amateur Radio in Shelby County Indiana
Jan 2-Jan 31,	0000Z-2359Z,	K3Y	9th Anniversary Celebration
Jan 3-Jan 5,	1400Z-0200Z,	N0J	Lake of the Ozarks Eagle Days
Jan 6,	1400Z-2200Z,	K5FRC	Sam Rayburn Birthday
Jan 7-Jan 11,	0000Z-1200Z,	W7D	Camino del Diablo
Jan 10-Jan 24,	1400Z-2100Z,	W9S	100 Years of Radio in Shelby County Indiana
Jan 10,	1700Z-2359Z,	NI6IW	Battle of Midway Exhibit Inauguration Special Event
Jan 10,	1600Z-2000Z,	W0CS	Eagle Watch On the Mississippi River
Jan 10,	1700Z-2300Z,	WA6HP	Radio Day at Upland Memorial Park
Jan 10,	1400Z-2000Z,	W4FFC	State of Florida Constitution Convention Commemorative Special Event
Jan 16,	1400Z-2359Z,	K4FRT	Frog Leg Festival
Jan 16-Jan 18,	0000Z-2359Z,	K5D	Silent Key Memorial Weekend
Jan 17,	1400Z-2000Z,	KC2AIF	Pioneer HS ARC 25th Anniversary
Jan 24,	1600Z-2100Z,	KS0KS	Kansas Day
Jan 24,	0700Z-1500Z,	WA4TRS	Madison County Special Olympics Polar Plunge
Jan 24-Jan 25,	1700Z-1700Z,	N8W	Winter Field Day
Jan 31,	1600Z-2100Z,	WE7GV	21st Tubac Collector Car Show Special Event
Jan 31,	1300Z-1800Z,	WX4MPD/ WX4EMA	Macon Police and Bibb County EMA



## USEFUL INTERNET LINKS

(control + click to use link)

**ARRL MAIN SITE:**

<http://www.arrl.org/home>

**ARRL ATLANTIC DIV.:**

<http://www.atldiv.org>

**CONTESTS:**

<http://www.arrl.org/contest-calendar>

<http://www.hornucopia.com/contestcal/perpetualcal.php>

**HAMFESTS:**

<http://www.arrl.org/hamfests-and-conventions-calendar>

**STARS REFLECTOR:**

<http://groups.yahoo.com/group/STARS-WB2ELW/>

**STARS WEBSITE:**

<http://www.wb2elw.net>

**TELSTAR EDITOR:**

[wb2elw@verizon.net](mailto:wb2elw@verizon.net)





## 2015 STARS MEMBERSHIP RENEWAL

CALL SIGN \_\_\_\_\_ LICENSE CLASS \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_

E-mail address \_\_\_\_\_

Are you a member of ARRL? YES NO

Do you want to receive your *Telstar* by email? YES NO

If no, please include \$15 additional to cover the cost of printing and postage

FOR FAMILY MEMBERSHIPS: Additional Names and Calls

CALL \_\_\_\_\_ NAME \_\_\_\_\_ CLASS \_\_\_\_\_

CALL \_\_\_\_\_ NAME \_\_\_\_\_ CLASS \_\_\_\_\_

CALL \_\_\_\_\_ NAME \_\_\_\_\_ CLASS \_\_\_\_\_

DUES: **STARS** Annual dues payable by January 1

SINGLE \$24

FAMILY \$27

STUDENT (through Grade 12) \$8

RETURN COMPLETED FORM AND DUES TO: JUDY LEVAN N2TEZ

120 UNIVERSITY AVE

DEPEW NY 14043-2974