

## STARS INSTALLS OFFICERS FOR 2014



PHOTO BY LINDA JABLONSKI, KC2YMM

During the December meeting/holiday party, **STARS** officers for 2014 were elected and installed. From left to right:

> Mettieirene Wagner, KD2DFQ Judy Levan, N2TEZ Jon Hall, KC2QKB John Czuba, W2IV Ken Pokigo, KC2AYK Chris Mastri, N2RLY John Leitten, KA2RFT Conrad Barrick, KC2WRY

Recording Secretary Financial Secretary Board of Directors Treasurer President Branch Relations Vice President Board of Directors (continuing term)

# CLUB OFFICERS

President	Ken Pokigo, KC2AYK
Vice President	John Leitten, KA2RFT
Secretary	Mettieirene Wagner, KD2DFQ
Financial Sec'y	Judy Levan, N2TEZ
Treasurer	John Czuba, W2IV
Director (1 yr.)	Conrad Barrick, KC2WRY
Director (2 yr.)	Jon Hall, KC2QKB
Clubhouse Chair	Pat Groom, KC2VWG
Telstar Editor	Tomm Dean, KA2NXY
Webmaster	(vacant — can you help??)

# 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)

# MEETING SPEAKERS

Start your preparation! The January meeting will feature YOU!

A primary component of the meeting will be

a review of the goals and objectives of the **South Towns Amateur Radio Society** for the 2014 calendar year.

All members are encouraged to bring their ideas for **STARS** to the meeting for discussion. Here's your chance to have a say in the future direction of the club. All suggestions will be welcome.

# WE GOOFED

It has been brought to our attention that the name of the building in which we hold our meetings is officially named, "Hamburg **Memorial** Youth Center".

Thanx to Scott Barto, KB2KOL, for this information. If you see something that is not correct, let us know at:

### wb2elw@verizon.net

#### ☆ $\frac{1}{\sqrt{2}}$ STARS MEETINGS ☆ ☆ ☆ ☆ ☆ ☆ $\bigstar$ STARS meetings are usually at 7:00 PM on the $\frac{1}{2}$ ☆ ☆ first Thursday of each month, at the Hamburg ☆ ☆ $\stackrel{\frown}{\sim}$ Memorial Youth Center, 200 Prospect Avenue $\frac{1}{2}$ ☆ (near Hawkins Avenue) in Hamburg. ☆ ☆ $\bigstar$ The January meeting will be **January 2<sup>nd</sup>**, at 7:00 ☆ ☆ ☆ ☆ PM, at the Hamburg Memorial Youth Center. ☆ ☆ ☆ All are welcome. ☆ $\stackrel{\frown}{\phantom{a}}$ $\checkmark$ The STARS board usually meets at 7:00 PM on ☆☆☆☆ $\frac{1}{2}$ $\star$ the fourth Thursday of each month at the Nike $\bigstar$ Base Radio Clubhouse, just west of the Hamburg $\bigstar$ ☆ ☆ Town Arena, 2982 Lakeview Road, Hamburg. ☆ $\bigstar$ The January board meeting will take place on ☆ $\frac{1}{2}$ ☆ ☆ January 23rd, at the Nike Base Radio Clubhouse. ☆ ☆ $\bigstar$ All members are welcome. ☆ $\frac{1}{2}$ ☆ \*\*\*\*

# 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)
4th Saturdays	9:00 AM	Tim Hortons Cafe 342 Buffalo St, Hamburg



To understand the concept of matching we need to introduce a term called impedance. Impedance is defined as, "the ohmic value of an antenna feed point, matching section or transmission line." I'm not going to spend a lot of time with technical definitions, but you should remember that impedance is comprised of a resistive component and a reactive component. These are both expressed in terms of ohms but they are not the same. Therefore they cannot simply be added to or subtracted from each other.

You've probably heard (or read) that in order for an antenna to work properly, it must be properly matched to the feedline, so that the **S**tanding **W**ave **R**atio (SWR) is low. This is true in some cases, but not in all. We will see why in a future column.

For now, let's concentrate on impedance. The nominal impedance of a half wave dipole is about 70 ohms. Feeding this antenna with 52 ohm coax means the best possible SWR you could realize is 1.3 to 1. The power loss in the High Frequency (HF) spectrum at this SWR is negligible so you can say your antenna is matched.

You will see impedance expressed as either Z = R + jXor Z = R - jX where R is the Resistive component expressed in ohms and X is the Reactive component expressed in ohms. What does the little 'j' mean? That is called the j factor and all it means is that even though R and X are expressed in terms of ohms, you cannot add or subtract them from each other. Ergo, to have a perfectly matched system where Z=52 ohms, then R must equal 52 and X must be 0.

There's something else we must discuss about Reactance. It can be either Inductive or Capacitive. What does that mean and how do we know which is which? It's really quite simple. If your antenna is too long for the desired frequency the Reactance is considered to be Inductive. If the antenna is too short the Reactance is considered to be Capacitive. In the expression Z = R + jX the '+' means X is Inductive Reactance (antenna too long). In the expression Z = R - jX the '-' means X is Capacitive Reactance (antenna too short). The antenna analyzers on the market today provide an excellent insight into these components.

Impedance matching is very important for antennas using coaxial feedline. Antennas of this type are usually single band antennas. There are ways that you can use a coaxial fed antenna on more than one band, and multiband beams are a good example. Remember, where the coax feeds the antenna, it must always be as close to the impedance of the antenna as possible or the antenna will not perform efficiently, if at all.

How does the TH6DX tri-bander at the club house work on 3 bands with only 1 feed line? The commercial antenna designers use advanced techniques to achieve this goal. They employ capacitive loading, RF traps, resonant coupling and variable element spacing to achieve an acceptable match on the target frequencies. That's one of the reasons they charge you so much for their product. Before the advent of the PC, the design of a multiband beam was a daunting task, requiring extensive knowledge of formulas and the use of various charts and graphs. However, with the software available today and the speed of the PCs, the average ham can do a pretty good job of designing a multiband beam.

See you next month when we will begin to look at different antennas and what makes them work the way they do.

# COST OF FREEDOM TRIBUTE & WALL

The Lancaster Amateur Radio Club (LARC) cordially invites you to attend a special presentation from members of the Oakfield-Alabama Legion Post #626 at 7pm on Tuesday, Jan. 7, 2014 at the Office of Emergency Management, 321 Columbia Ave., Depew, NY.

The O-A Post is sponsoring the *Cost of Freedom Tribute* coming to the Pembroke Town Park (Genesee Co.) from Wednesday, June 11 through Sunday, June 15, 2014. Please see attached COFT information.

LARC is offering refreshments and a big welcome to any & all.

73s

Pam Ware, AB3PW

<u>http://www.co.genesee.ny.us/geneseecounty/ departments/veterans/uploads/ Initial\_Announcement\_Flyer\_Pembroke\_NY.pdf</u>

# EXTRA CREDIT

So, you think you know all about amateur radio. Well, here's an actual question that appears on the Extra examinations. It was recently covered in the Extra class underway at the Nike Base Radio Clubhouse.

### E7C11 (D)

Which of the following is the common name for a filter network which is equivalent to two L networks connected back-toback with the inductors in series and the capacitors in shunt at the input and output?

> A. Pi-L B. Cascode C. Omega D. Pi

(Answer on page 6.)

# MEMBER UPGRADES

Congratulations go to two **STARS** members who recently upgraded their licenses.

**Richard Gerster**, **K2RWG**, is now a General. He recently completed the General course in Elma, led by **Ed Patton**, **N2ING**.

Jon Hall, KC2QKB, is now an Extra. He was enrolled in the Extra class underway at the Nike Base, but couldn't wait for the last class. Jon felt he was ready, and tested successfully at the North Tonawanda Fire Headquarters. Jon is still attending the class, even though he he's already licensed at the Extra level.

Congratulations go to **Ed Patton**, **N2ING**, for conducting the General and Extra classes this past year.

# RENEWALS WILL SOON BE OVERDUE

Every year, we place items in the newsletter reminding members that their renewal applications and dues are expected by January 1st. This is usually done in a polite and courteous manner, with placement of the notices appearing on different pages of the newsletter, including the cover page.

In addition, a copy of the renewal application accompanies the newsletter.

Yet, despite these reminders, SOME members still have not yet submitted their renewals. By the time you receive this newsletter, there will be less than 48 hours to renew in time.

Sure, there is usually a grace period. But when it ends, a non-renewed member will not be included on the annual roster. This means issues of *TELSTAR* will be discontinued. Also, the skies will turn black, the rains will come, earthquakes will build, the sun will begin to shut down, wild animals will go berserk, mon-



# 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

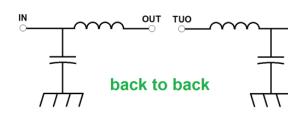
### (more info)

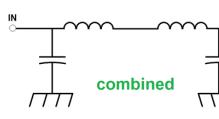
# EXTRA CREDIT ANSWER

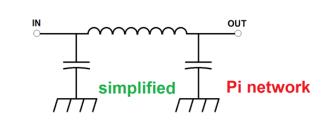
The correct answer is "D", a Pi network

The "trick" is knowing that two inductors in series should be considered simplified to a single inductor.

## OUT IN OUT 2 - L networks







# EXAM SITES

#### North Tonawanda 01/04/2014

Sponsor: ARA of the Tonawandas North Tonawanda Fire Headquarters Location: 495 Zimmerman Street - Training Rm. 9:30 AM (Registration preferred) Time:

## 01/15/2014

### Niagara Falls

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

#### 01/18/2014 Erie PA

#### Sponsor: Wattsburg Wireless Association Greene Twnshp Mun Bldg Rm 114 Location: 9333 Tate Road (use district justice entrance) Time: 9:00 AM (Walk-ins allowed)

## 01/18/2014

## Hamburg

Sponsor:

Time:

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## STARS

Location:

Hamburg Youth Center 200 Prospect Avenue 9:00 AM (Walk-ins allowed)

## 01/18/2014

## Rochester

Sponsor: Location: Time:

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

adio socie

## 01/26/2014

Sponsor: Location: Time:

## Geneseo

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

(control-click on City for more info)

# CONTEST CALENDAR



Start and Finish	Contest Title	Sponsor's Website
Jan 1, 0000Z - Jan 1, 2400Z	ARRL Straight Key Night	www.arrl.org/straight-key-night
Jan 1, 0000Z - Jan 1, 0100Z	New Year's Snowball Contest	ev5agb.com/index.htm
Jan 1, 0200Z - Jan 1, 0330Z	QRP Fox Hunt	www.qrpfoxhunt.org/winter_rules.htm
Jan 1, 0800Z - Jan 1, 1100Z	SARTG New Year RTTY Contest	www.sartg.com/contest/nyrules.htm
Jan 1, 0900Z - Jan 1, 1200Z	AGCW Happy New Year Contest QRP Fox Hunt	www.agcw.org/index.php/en/contests-and-cw-activities/ www.qrpfoxhunt.org/winter_rules.htm
Jan 3, 0200Z - Jan 3, 0330Z	NCCC Sprint Ladder	www.ncccsprint.com/rules.html
Jan 3, 0230Z - Jan 3, 0300Z Jan 4, 0000Z - Jan 4, 2400Z	070 PSKFest	www.podxs070.com
Jan 4, 1200Z - Jan 5, 1200Z	WW Peace Messenger Cities Contes	
Jan 4, 1500Z - Jan 4, 1800Z	QRP Pet Rock Sprint	www.grparci.org/contests
Jan 4, 1800Z - Jan 5, 2400Z	ARRL RTTY Roundup	www.arrl.org/rtty-roundup
Jan 4, 2000Z - Jan 5, 0700Z	EUCW 160m Contest	www.eucw.org/eu160.html
Jan 5, 1800Z - Jan 5, 2400Z	Kids Day	www.arrl.org/kids-day
Jan 6, 1600Z - see website	OK1WC Memorial Contest	www.memorial-ok1wc.cz
Jan 7, 0200Z - Jan 7, 0400Z	ARS Spartan Sprint	www.arsgrp.blogspot.com
Jan 8, 0200Z - Jan 8, 0330Z	QRP Fox Hunt	www.grpfoxhunt.org/winter_rules.htm
Jan 8, 1300Z - see website	CWops Monthly Min CWT Test	www.cwops.org/onair.html
Jan 10, 0200Z - Jan 10, 0330Z	QRP Fox Hunt	www.qrpfoxhunt.org/winter_rules.htm
Jan 10, 0230Z - Jan 10, 0300Z		www.ncccsprint.com/rules.html
Jan 11, 0000Z - Jan 12, 2359Z		www.yisystem.org
Jan 11, 1200Z - Jan 12, 2359Z		
Jan 11, 1200Z - Jan 12, 2359Z	Straight Key Weekend Sprintathon	www.skccgroup.com
Jan 11, 1800Z - Jan 12, 0600Z		www.ncjweb.com/naqprules.php www.nrau.net/nrau-baltic-contest/rules.html
Jan 12, 0630Z - Jan 12, 0830Z Jan 12, 0900Z - Jan 12, 1100Z		www.nrau.net/nrau-baltic-contest/rules.html
Jan 12, 09002 - Jan 12, 11002 Jan 12, 09002 - Jan 12, 10592		www.darc.de/referate/dx/contest/10m/en/rules/
Jan 15, 0200Z - Jan 15, 0330Z		www.grpfoxhunt.org/winter_rules.htm
Jan 15, 2300Z - see website	Linc Cundall Memorial CW Contest	www.antiquewireless.org
Jan 16, 0130Z - Jan 16, 0330Z	NAQCC Monthly QRP Sprint	nagcc.info
Jan 16, 0200Z - Jan 16, 0256Z		www.k6vva.com/lgp
Jan 17, 0200Z - Jan 17, 0330Z	QRP Fox Hunt	www.grpfoxhunt.org/winter_rules.htm
Jan 17, 0230Z - Jan 17, 0300Z	NCCC Sprint Ladder	www.ncccsprint.com/rules.html
		www.lzopen.com/lz-open-contest/rules/rulesF.htm
Jan 18, 0600Z - Jan 18, 1400Z	Int'l United Teenager Contest	www.uarl.com.ua/tlum/index.htm
Jan 18, 1200Z - Jan 19, 1200Z	Hungarian DX Contest	www.ha-dx.com/HADX/html/rules_en.html
Jan 18, 1600Z - Jan 18, 1800Z		www.feldhellclub.org
	North American QSO Party, SSB	www.ncjweb.com/nagprules.php
Jan 18, 1900Z - Jan 20, 0400Z Jan 20, 0200Z - Jan 20, 0400Z		www.arrl.org/january-vhf
Jan 22, 02002 - Jan 22, 0330Z		www.fpqrp.org www.qrpfoxhunt.org/winter_rules.htm
	QRP Winter Fireside SSB Sprint	www.qrparci.org/contests
Jan 24, 0200Z - Jan 24, 0330Z		www.qrpfoxhunt.org/winter rules.htm
Jan 24, 0230Z - Jan 24, 0300Z		www.ncccsprint.com/rules.html
Jan 24, 2200Z - Jan 26, 2159Z		www.cq160.com/rules.htm
Jan 25, 0600Z - Jan 26, 1800Z		concours.ref-union.org/reglements/actuels/reg_cdfhf_dx.pdf
Jan 25, 1200Z - Jan 26, 1200Z		www.bartg.org.uk/sprintcontest.asp
Jan 25, 1300Z - Jan 26, 1300Z	UBA DX Contest, SSB	www.uba.be/en/hf/contest-rules/uba-dx-contest-rules
Jan 25, 1700Z - Jan 26, 1700Z		www.spar-hams.org
Jan 25, 1900Z - Jan 25, 2300Z	•	www.worked-all-britain.co.uk/contest
Jan 26, 1400Z - Jan 27, 0800Z		www.classicexchange.org
Jan 29, 0200Z - Jan 29, 0330Z		www.qrpfoxhunt.org/winter_rules.htm
Jan 31, 0200Z - Jan 31, 0330Z		www.qrpfoxhunt.org/winter_rules.htm
Jan 31, 0230Z - Jan 31, 0300Z	NUCU Sprint Lauder	www.ncccsprint.com/rules.html

(Control + click to activate a link)

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

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

- 12/29/2013 Ham Radio University / NLI Section Convention
- 01/01/2014 European Handball Championship for Men January 12th – 26th, 2014
- 01/01/2014 SKCC 8th Anniversary
- 01/02/2014 Sam Rayburn Birthday Net
- 01/03/2014 475th Anniversary of Hernando De Soto's Winter Encampment
- 01/11/2014 State of Florida Constitution Convention Commemorative Special Event
- 01/17/2014 Virginia Lee-Jackson Day
- 01/18/2014 Activation the Thomas Edison House - Louisville KY
- 01/25/2014 20th Santa Cruz Valley Car Nuts Collector Car Show
- 01/25/2014 Kansas Day
- Special Olympics of Madison County Polar Plunge 01/25/2014





# USEFUL INTERNET LINKS

(control + click to use link) ARRL MAIN SITE:

ARRL ATLANTIC DIV .:

### CONTESTS:

HAMFESTS:

STARS REFLECTOR:

TELSTAR EDITOR:

- http://www.arrl.org/home
- http://www.atldiv.org
  - http://www.arrl.org/contest-calendar
  - http://www.hornucopia.com/contestcal/perpetualcal.php
  - http://www.arrl.org/hamfests-and-conventions-calendar
  - http://groups.yahoo.com/group/STARS-WB2ELW/

wb2elw@verizon.net

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2014 STARS MEMBERS	SHIP RENEWAL
NAMEADDRESS	
PHONE	
Are you a member of ARRL? Y	ES NO
Do you want to receive your <i>Telstar</i> by email? Y If no, please include \$6 additional to cover the o FOR FAMILY MEMBERSHIPS: Additional Names and	cost of printing and postage
CALL NAME	CLASS
CALL NAME	CLASS
CALL NAME	CLASS
DUES: <b>STARS</b> Annual dues payable by Jan	uary 1
SINGLE	\$24
FAMILY	\$27
STUDENT (through Grade 1	.2) \$8
RETURN COMPLETED FORM AND DUES TO:	Judy Levan N2TEZ 120 University Blvd. Depew, NY 14043