

# QRZ NEWS

A MONTHLY PUBLICATION OF  
SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB, INC  
PO BOX 1033 - LANCASTER, PA 17608-1033

(Founded June 1960)

AN AFFILIATED SPECIAL SERVICE CLUB OF THE ARRL, INC.

*"Public Service through Communication"*

Website: [www. K3IR.org](http://www.K3IR.org)

Email address: [k3ir@arrl.net](mailto:k3ir@arrl.net)

Repeaters: 145.230 - 449.975 - Packet 145.030 - ATV 923.250, FN10se

**September 2009**

## September SPARC Meeting

The SPARC business meeting will be Wednesday, 16 September 2009 at the Rapho Township Municipal Building, 971 N. Colebrook Rd, in Rapho Twp. Meeting time is 7:00PM. Members and others interested in Amateur Radio are invited to attend.

## President's Message

Jamboree On the Air (JOTA) is scheduled for the third weekend in October every year. JOTA is an effort by ARRL and The Boy and Girl Scouts of America to allow young people to operate on the HAM bands under the watchful eye of experienced Amateur operators. This year the dates are October 17 and 18, 2009. The Southern PA Amateur Radio Club is opening our site to troops who wish to participate in this event. This is our opportunity to demonstrate our hobby to young boys and girls. We need interested HAMs who are willing to give a few hours back to the community. I would like to see us offer a chance for these kids to see many different modes of amateur operations. Please consider bringing your equipment and expertise to the Brenemen Road site either Saturday or Sunday. We are looking for digital modes and ATV in addition to voice operations. President's reminder, CW is a digital mode!

Many SPARC members have invested a lot of time and money into our property and this is our chance to make use of it in a positive way. Please consider aiding in whatever way you can.

Harry, WA3FFK

## Table of Contents

Meeting Announcement	Page 1
President's Message	Page 1
Meeting highlights	Page 1
Coming Events	Page 2
Editor's Notes	Page 3
RACES Meeting Minutes	Page 3
SPARC Officers, Nets, Etc.	Page 5
W9RCA End of an Era Operation	Page 6
Red Lion Beacon Update	Page 6
Kelvin Degrees Explained	Page 7
Compact Fluorescent Lamps	Page 9

## HIGHLIGHTS OF THE AUGUST 2009 MEETING OF THE SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB (SPARC)

Held Wednesday August 19, 2009 at the  
Rapho Township Municipal Building

Dave Sarraf, N3NDJ  
Mike Zelinski, WB3CVC  
Dave Payne, N3LOM  
George Gadbois, W3FEY

Ross Kauffman, W3ZKU  
Jim Silvius, KW3E  
Ted Freedman, K3KSA  
Dave Payne, N3LOM  
Rick Watson, N3SWJ  
Jerry Wilson, KB3GNB

The meeting was called to order by Harry Bauder, WA3FFK, at 19:05 hours, with a round robin introduction by name and call.

Dave Sarraf read the minutes of the July membership meeting. One minor correction was noted by Rick Watson. A significant discussion ensued regarding the total for the Treasurer's Report section. Ted stated that the line items were correct, and that the error was due to a bad balance carried forward. He uses a separate sheet to make these summaries and makes the entries by hand. The books are kept in Quicken and are correct. On a motion by Ross Kauffman and a second by Dave Payne the minutes were approved as corrected.

The August 5 BOD meeting minutes were read.

Ted Freedman presented the Treasurer's Report (copy attached). Amounts shown are as of August 3, 2009. All outstanding bills have been paid. On a motion by Dave Payne and a second by Ross Kauffman the report was approved as presented pending review by the audit committee.

### New Members

No applications were presented. Mike Zelinski paid dues for 2009. He had been on the roster since 2008 but had no time to attend.

### Notes from Harry

The Keystone Bike Tour is on September 12. Email Harry to sign up.

The Ephrata Bike tour had all slots filled. We hams received much positive recognition for our work supporting this event.

Dutch Wonderland is calling to ask for help. They need people on August 24<sup>th</sup> and August 31. Grant Beauchamp and Gerry Wagner (and spouse) are working. SPARC gets \$6 per member hour worked. Wear khakis; they furnish shirts and training to operate a ride. Shifts are 3-4 hours long. If you can't work, consider making a donation instead.

Dave Sarraf needs to contact the state regarding our corporate registration. The updated officers still do not show up on the State web site, and Ted has received no confirmation of the change.

The business portion of the meeting was adjourned at 7:55 PM.

Respectfully submitted,  
Dave Sarraf, N3NDJ  
SPARC Secretary

After the meeting, SPARC purchased a used porta potty for permanent use at the club site. This is the more economical solution to the site usage problem. Summer rental costs ~\$72/month. Servicing the porta potty on the slightly used basis we have will be much less costly.

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## **Coming Events**

Saturday, September 12, is the Keystone Trails hike in southern Lancaster and York Counties. The Red Rose club is

coordinating communications for the event.  
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September 12 - 13 ARRL September VHF  
QSO Party

Begins 1800 UTC Saturday and ends 0300  
UTC Monday (September 12 - 14, 2009).  
\*\*\*

### **Saturday, September 26, 2009 Mid Atlantic States VHF Conference**

Mt. Carmel Club, Plymouth Meeting, PA  
See

<http://www.w3ccx.com/latest.htm#Anchor-49575> for details.

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October 17-18 is the JOTA weekend. The  
SPARC club site will host scouts for an  
overnight stay.

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Tuesday, October 27<sup>th</sup> next regular RACES  
meeting.

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## **Editor's Notes**

The Summer Es season for 6m is over. The  
almost daily openings to the Bahamas have  
ceased. There is still enough ionization for  
the better equipped stations to work some  
DX.

September and October are the best months  
for tropospheric propagation on the VHF  
and UHF bands. Look especially for DX  
when there is a stable high pressure area  
present with warm days and cool nights.  
The UHF bands may be better than VHF  
under certain conditions. Always check all  
the bands when the weather looks good.

See the article at the end of the newsletter on  
CFLs by Jack Smith, K8ZOA. Given that  
Congress has mandated an end to tungsten  
lamps, we need to understand more about  
CFLs. I bought my first CFL about a year  
ago and have been replacing tungsten lamps  
as they burn out. I can see a difference in  
my electric bill.

I have not kept any records, but the  
manufacturers life expectancy claims are not  
validated by my experience. I'll put  
together some more details next month.

Ross, W3ZKU, reported that WGAL has  
been authorized by the FCC to increase  
power on their digital transmitter to 14kw  
because of the loss of coverage. All VHF  
TV broadcasters are reported lost coverage.  
It seems the FCC coverage estimates for  
digital broadcasting were overly optimistic.

73,  
George, W3FEY

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## **ARES/RACES**



## **Lancaster County Races Meeting**

Minutes for 08/20/2009

Meeting was opened at 7:00 pm by  
Chris (K1CWB). Everyone was asked to  
introduce themselves. Chris passed out  
official welcome letters to members. He  
asked that everyone take the letter  
sometime after September 1 to the  
Lancaster County Fireman's Association  
on East Oregon Road to receive their  
ID cards for RACES. The reason for  
holding off until after the first of the next  
month was to allow him time to have the  
folks at the LCFA office change some of  
the fields on the cards. Chris also

passed copies of the official roster to everyone.

Minutes for the last meeting were sent to most after the last meeting so they were not read. Information on the Field Support Van – was displayed on field day at the LRTS site. Approximately \$1000.00 was provided by the County to provide new antennas. These consisted of: 2) dual band mobiles; 3) 2 meter 1/2 waves; 1) 220 Mhz antenna; 1) 150 Mhz (police band) vhf; 1) 40-50 Mhz (Red Cross) vhf; 1) 27 Mhz (CB band) vhf; 1) 102" whip (hf band) and 1) 70cm antenna. All antennas require mounting to the van. A work party is being planned to do this soon. Also, the van was serviced to update the registration. It was necessary to have an inspection and new tires and brakes installed. The organization has been invited to display the van in Harrisburg at a PEMA Conference being planned for September 26<sup>th</sup>, from 8 AM to 5 PM. It remains to be seen if it can be ready by this date. Chris is planning on pulling it up and invited any interested parties to ride along on that date.

There was discussion on the LCSTP/MACC tower/Radios. The Task Force, RACES, and others are interested in this and will continue discussion with the Technical Committee.

Karen (K3LPA) is officially keeping up the roster. Anyone with information to change can contact her.

Technical Committee – Kurt (N3TUQ): Two new touch screen, Pentium 4 computers have been donated by Chris for the Field Support Van.

Net – Vern (N3VK): All emergency related nets will be held on the 145.310 repeater. Only when necessary will other repeaters be linked. This will avoid tying up other repeaters most of the time since the 145.310 repeater covers 90% of the entire county. There appears to be a problem with the link on the 145.390 repeater when there is local activity (near the repeater site) on the 147.315 repeater.

The idea of a full-scale training drill will be delayed until next year to allow adequate time for other accomplishments to happen to allow this to be successful. Rick (N3SWJ) commented on how frustrating it has been to participate in the TMI drills and Peach Bottom drills previously. He is working on establishing our own drill. Some possible suggestions received are a mock train accident and losing a central telephone control center. Training is being planned for the use of both digital and voice modes of communications. Plans are being worked on to develop some digital training exercises. Eventually the organization would like to be prepared to handle unannounced drills. This will take time to develop to this point. Paul (KD8WY) commended us on these ideas and encouraged us to start working on these concepts now. He shared that the task force is also working on this. Vern (N3VK) asked what form of digital communications were being considered. Rick replied that the committee will have to plan for this in the future. Anyone with ideas or suggestions may email Rick with these. Chris reports that he has had a favorable response from Phil on these matters.

Chris thanked Troy (N3TJJ) for the donation of some radio equipment. He also thanked Don (KB3LHT) who donated CB equipment for use. Vern (N3VK) asked Chris if he would verify that the records of him having already taken the tests and passed for the IS100, IS700, EC001 and EC002 are currently on file with the county. He said he would be verifying this for any who have already taken the courses so they will not need to repeat them.

Mark (KB3NCJ) was given some time to report on the KTA SuperHike event that is scheduled for September 12. He reported that the Middle Creek Search and Rescue group have been invited to participate with the Red Rose Repeater Club and others volunteering with the hike. This is the first time this event is taking place and some are concerned that the club hosting the event may have difficulties with inexperienced people participating and needing aid along the way. Mark is still asking for volunteers and hopes to be over-staffed for the event. You may contact him if you would like to add your name to the volunteer list for this event.

The next regular RACES meeting will be on October 27. This may be the final meeting for this year.

Minutes respectfully submitted by Mark Vreeland (KB3NCJ).

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As part of the SPARC commitment to emergency communications, the SPARC repeater system is maintained as available for linking with other area repeaters.

Lancaster County RACES VHF Net is held on the first Tuesday of the month at 2030 hours local time. Presently being held on the 145.310 MHz repeater.

The Lancaster County primary ARES/RACES repeater is on 145.310 MHz with minus offset and 118.8 PL.

Combined York County Amateur and ARES/RACES NET convenes at 8:30 PM (2030) Mondays on 146.97.

Pennsylvania RACES HF Nets are held at 3993.5 kHz LSB on all Sundays except holidays.

The statewide net is on the first Sunday of the month at 0800 hours local time.

The Central Area (including Lancaster County) net is at 08:30 local time.

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## SPARC Nets

SPARC holds nets on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> Tuesday (every Tuesday except the first) at 2030 local time on 145.230 MHz minus offset and a PL of 118.8.

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## Club Officers

President Harry Bauder – [WA3FFK](#)  
Vice-President: Rick Watson - [N3SWJ](#)  
Secretary - Dave Sarraf. - [N3NDJ](#)  
Treasurer - Ted Freedman - [K3KSA](#)  
Repeater Trustee - Dave Payne - [N3LOM](#)  
Past President - Mike Warner – [N3XPD](#)  
Board of Directors - Jim Silvius – [KW3E](#)

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## Nearby Nets of Local Interest

**Delaware Co. Mobile Sixers** Net Schedule  
Sunday 2000 50.550 MHz USB

**Cumberland Co.**  
Monday 2130 144.160 MHz USB

**Packrats** 1296.100 MHz USB net Mondays at 2130 local time Bob, W2SJ, Pennsauken, NJ, FM291w, is net control. Bob has a good signal into Lancaster County. He looks west ~ 2135-40.

**Combined York County Amateur** and ARES/RACES NET convenes at 8:30 PM (2030) Monday on 146.97.

Technical/Elmer NET -- following Monday  
Combined York NET

For discussion or questions in reference to Amateur radio, the club, equipment, operating procedures, etc, have them ready to ask. If you just want to talk about something particular to Amateur radio, we can do that too. The net will start at 9 PM on the York 146.97 repeater. If the regular net runs longer than this, it will start when the normal Monday night net ends.

If you would like to volunteer to discuss a topic, for 5 to 10 minutes, please send your name and topic to the NET Manager, Richard Reese at "kr3ee@frontiernet.net". Rich will schedule you.

Sandy Goodman, N3ECF

## QRZ News Publication

QRZ News is published monthly on the second Wednesday of each month, one week before the monthly meeting. Deadline for article submission is the second Tuesday of each month.

We operate on an exchange basis with other non-commercial publications. Articles printed in QRZ News may be reprinted in a not for profit publication provided proper credit is given. Reprinted articles require permission from the original source.

QRZ News is archived at [http://www.k3ir.org/QRZ\\_News.html](http://www.k3ir.org/QRZ_News.html). Documents are in PDF format.

Thanks to Jim Silvius, KW3E and Dave Sarraf, N3NDJ for providing many missing issues for the archive. Jim Silvius is the SPARC historian.

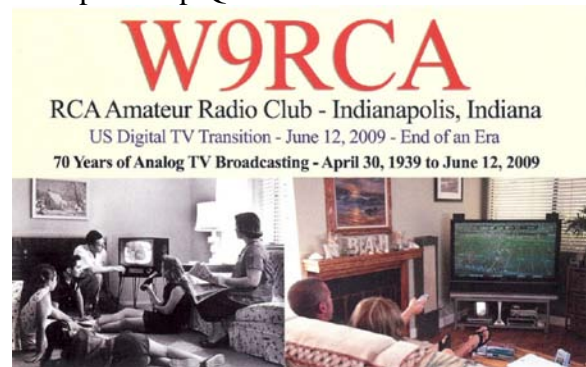
## W9RCA "END OF AN ERA" Special Event Operation

The RCA Amateur Radio Club of Indianapolis sponsored a special commemorative operation for the 70<sup>th</sup> anniversary of scheduled TV broadcasting at the New York Worlds' Fair and the conversion to digital TV. The "End of an Era" operation was Friday evening, June 12<sup>th</sup> from 6 PM to 11 PM and made just over 250 QSOs.

We operated on 75 Meters, 40 meters and 20 meters, had a good time and it was a good excuse to use the [W9RCA](#) club call. We talked with a number of former RCA employees and hams that had been or were involved in broadcasting. Many hams related stories about their families first TV set and the 1950 programs.

Report by Jim Rinehart, K9RU

See special op QSL below.



NBC began regular scheduled TV broadcasting with coverage of the 1939 New York Worlds Fair. On June 12, 2009 the United States switched from analog to digital TV broadcasting marking the end of the analog TV broadcasting era.



Marion County, EM69  
[WWW.W9RCA.ORG](http://WWW.W9RCA.ORG)



Confirming QSO's with <i>F/H</i>				
D - M - Y	UTC	MHz	RST	Mode
<i>George - Here to do QSO for the W9RCA SE operation. It was a special of the moment operation.</i>				
Confirmed by <i>Jim K9RU</i>				

## Red Lion Beacons Updated

The beacons located at the Red Lion tower have been updated with a new frequency for the 1296 MHz beacon and a change from frequency shift keying to CW keying.

*Calibrated with the GPS this afternoon, looks like you have a great frequency; 1296.255100  
CCX beacon is at: 1296.244400  
Phil K3TUF*

The 1296 MHz message is in the process of being updated to show the actual location in FM19qv. This will probably take a few weeks. Telemetry will be increased.

For more details on the beacons, see the June 2008 issue of QRZ News.

[http://www.k3ir.org/QRZ\\_News/QRZ\\_News\\_June\\_2008.pdf](http://www.k3ir.org/QRZ_News/QRZ_News_June_2008.pdf).

George, W3FEY

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## What is the Meaning of Degrees Kelvin?

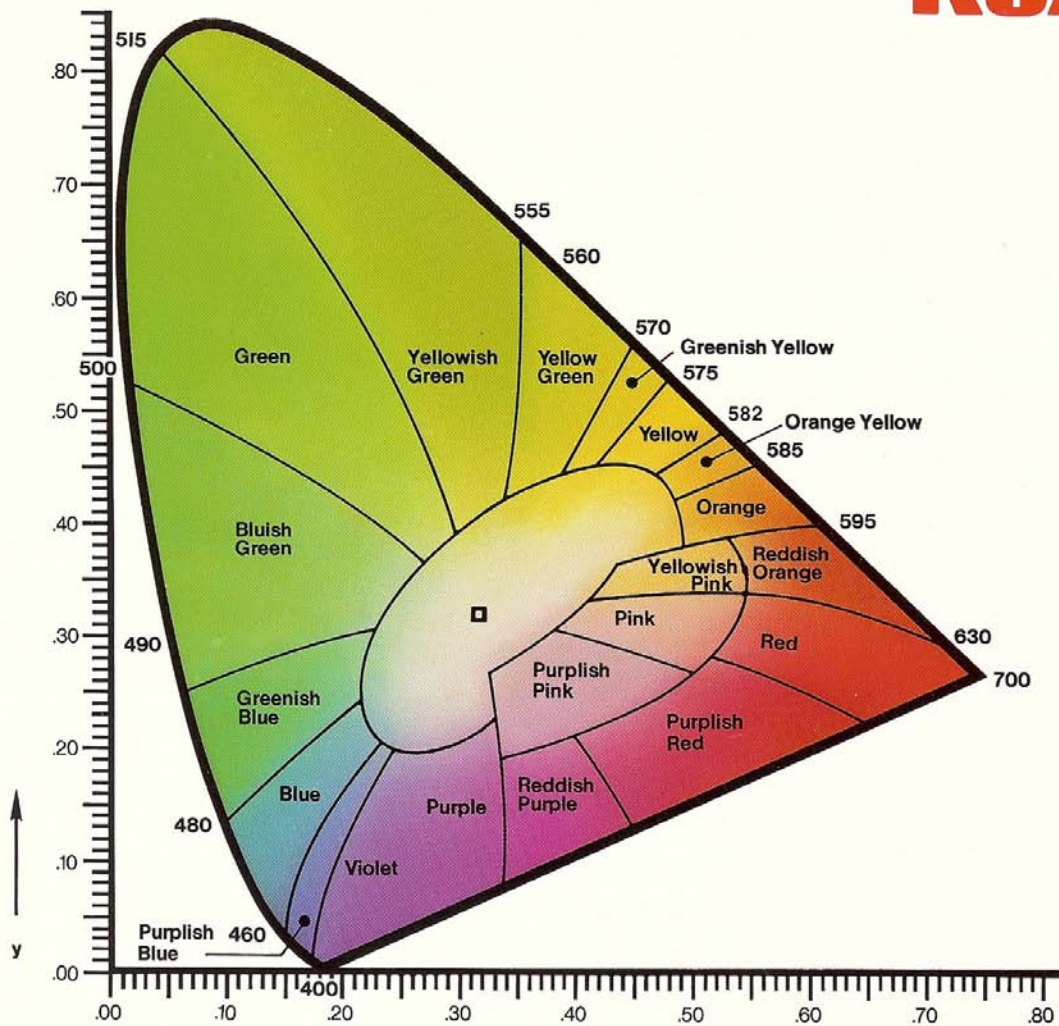
The Kelvin temperature scale is the temperature in Centigrade degrees above absolute zero. Absolute zero is the theoretical temperature where all molecular motion stops. Why is it theoretical? Well, any measurement of temperature is a measurement of molecular motion. If there isn't any molecular motion, there isn't anything to measure. This doesn't mean that the value of absolute temperature can't be predicted. Absolute zero is defined as  $0^{\circ}$  Kelvin,  $-273.15^{\circ}$  Celsius, or  $-459.67^{\circ}$  Fahrenheit. Incidentally, the Rankine temperature scale is the equivalent of Kelvin in Fahrenheit degrees.

So why do we care about absolute temperature? When molecules move, noise is generated. This creates a background noise level that limits the weakest radio signals we can copy. For terrestrial communications, the ambient temperature produces noise at  $\sim 300^{\circ}\text{K}$ . If we aim an antenna at the Sun, the noise level comes up a lot. See the August QRZ news for an article on measuring Sun noise as a means of determining the performance of UHF equipment. When you aim your antenna at the Moon, the background noise goes down a lot. Space isn't uniformly quiet because of the multitude of stellar noise sources. If you aim at the center of the Milky Way galaxy, the noise will be louder than if you aim at deep space. There are galactic maps to show noise levels.

If you look at the packaging of compact fluorescent lamps, you should find a color temperature in degrees Kelvin. Not all packaging includes this very important information. These labels are indicating the color of the light from the CFL compared to a black body heated to the stated Kelvin temperature.

Let's talk about color in terms of radiation rather than the more familiar absorptive colors of printing inks and paint. See the color chart below which shows a color diagram that describes the color of mixtures of light of different wavelengths. If you choose any two colors on the chart and draw a line between them, that line will include the color of all possible mixtures of the two colors. For color television, the primary phosphor colors are red, green, and blue. The colors that can be displayed on the screen are enclosed in the triangle described by the three primaries.

CIE chart next page:



**C.I.E. Color Designation Chart** (This chart represents the printer's best efforts to reproduce, in color, the EIA "Kelly Chart of Color Designation for Lights")

This chart is a representation of all possible visual colors. The monochromatic colors, the colors of the rainbow, are shown on the curved line starting at 400nm where the diagram touches the X axis and ending at 700nm at the right lower corner of the diagram. The area enclosed illustrates mixtures of colors with the mixture of all colors more or less equally showing up as white in the central area of the diagram. What should be evident, is that white is really a range of colors.

I couldn't find a chart with a black body line overlaid on this color chart after a short search of the Internet. The black body color is a mixture of wavelengths that includes increasing amounts of shortwave length energy as the temperature increases. A black body barely heated enough to be visible will be a dull red in the right hand corner of the diagram. As the temperature increases, the color will follow a curve that passes more or less through the black square in the center of the diagram and continues curving off toward a bluish white. You see this in the halogen headlights on newer cars.

A regular tungsten household light bulb, will have a color temperature of about 2700°K. CFLs are available with color temperatures of 2700°K to 5600°K for different purposes. For uses where you look at the bulbs such as around a mirror, I recommend the 2700°K lamps. I find the bright white lamps extremely difficult to tolerate.

I don't know of any local store that sells the lower color temperature bulbs. Yale Electric claims the best selection in town and they do have a wide choice of styles, but they don't know about color temperature. Here are a couple of on line dealers that carry a selection of color temperatures, <http://www.1000bulbs.com/> and [http://www.bulbs.com/default.aspx?cm\\_mmc=msn--Brand--Brand--bulbs.com&affid=5](http://www.bulbs.com/default.aspx?cm_mmc=msn--Brand--Brand--bulbs.com&affid=5).

George, W3FEY

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## Compact Fluorescent Lamp

By Jack Smith, K8ZOA

A long time friend, K8AQC, asked about the AC current and power characteristics of the compact fluorescent lamps (CFL) he uses.

### Revision History

Originally written June 2008

revised 27 Sept 2008

### Introduction and Economics

I've made measurements of the AC current and power and also looked at the broadband and line spectrum noise coupled back into the AC line by a Sylvania 100 watt (equivalent) 23 watt actual screw-in CFL, model CF23EL/BL/1.

This lamp appears typical of those sold as of mid 2008. I purchased this one at a Sears Hardware store for about \$7.00. The packaging says the expected life is 8000 hours with an output of 1600 lumens. The packaging also says a typical 100 watt incandescent lamp has an output of 1680 lumens. The electricity and replacement lamp savings are stated as \$61. (The price on CFLs continues to drop and with a bit of shopping around, you can find 60 watt equivalent lamps for \$2 to \$3 and 100 watt equivalent lamps for \$5.)

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Ed Note: This is the introduction to an extensive article on

compact fluorescent lamps by Jack Smith, K8ZOA. Excerpting this article does not seem adequate for the topic covered. You can view the full article at [http://www.cliftonlaboratories.com/compact\\_fl.htm](http://www.cliftonlaboratories.com/compact_fl.htm). Congress has mandated a conversion to eliminate tungsten lamps so this is an important topic for everyone.

Jack discusses the HF interference potential of the CFLs but has not observed significant problems at his station. The power company pole transformers will not efficiently pass rf so for most homes the hash generated by the switching ballast will not go far. Where BPL is installed, there must be a bypass mechanism to get rf around the transformers. Does anyone have any information on such installations and how much hash is passed back onto the power lines?