



# W5PC

## THE AMATEUR RADIO CLUB OF PARKER COUNTY NEWSLETTER

ARCPC NEWSLETTER VOLUME 17, NO. 11

NOVEMBER 2007 ISSUE

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## Sputnik and The Dawn of the Space Age

From NASA's Web Site

History changed on October 4, 1957, when the Soviet Union successfully launched Sputnik I. The world's first artificial satellite was about the size of a beach ball (58 cm. or 22.8 inches in diameter), weighed only 83.6 kg. or 183.9 pounds, and took about 98 minutes to orbit the Earth on its elliptical path. That launch ushered in new political, military, technological, and scientific developments. While the Sputnik launch was a single event, it marked the start of the space age and the U.S.-U.S.S.R. space race.

The story begins in 1952, when the International Council of Scientific Unions decided to establish July 1, 1957, to December 31, 1958, as the International Geophysical Year (IGY) because the scientists knew that the cycles of solar activity would be at a high point then. In October 1954, the council adopted a resolution calling for artificial satellites to be launched during the IGY to map the Earth's surface.

In July 1955, the White House announced plans to launch an Earth-orbiting satellite for the IGY and solicited proposals from various Government research agencies to undertake development. In September 1955, the Naval Research Laboratory's Vanguard proposal was chosen to represent the U.S. during the IGY.

The Sputnik launch changed everything. As a technical achievement, Sputnik caught the world's attention and the American public off-guard. Its size was more impressive than Vanguard's intended 3.5-pound payload. In addition, the public feared that the Soviets' ability to launch satellites also translated into the capability to launch ballistic missiles that



that could carry nuclear weapons from Europe to the U.S. Then the Soviets struck again; on November 3, Sputnik II was launched, carrying a much heavier payload, including a dog named Laika.

Immediately after the Sputnik I launch in October, the U.S. Defense Department responded to the political furor by approving funding for another U.S. satellite project. As a simultaneous alternative to Vanguard, Wernher von Braun and his Army Redstone Arsenal team began work on the Explorer project.

On January 31, 1958, the tide changed, when the United States successfully launched Explorer I. This satellite carried a small scientific payload that eventually discovered the magnetic radiation belts around the Earth, named after principal investigator James Van Allen. The Explorer program continued as a successful ongoing series of lightweight, scientifically useful spacecraft. (continued)

## Sputnik and The Dawn of the Space Age

(continued)

The Sputnik launch also led directly to the creation of National Aeronautics and Space Administration (NASA). In July 1958, Congress passed the National Aeronautics and Space Act (commonly called the "Space Act"), which created NASA as of October 1, 1958 from the National Advisory Committee for Aeronautics (NACA) and other government agencies.

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## THE DOCTOR IS IN

**From: ARRL Letter Vol. 26 No. 41 October 12, 2007**

This week, ARRL Letter readers are in luck! The ARRL's very own Doctor, author of the popular QST column "The Doctor Is IN," answers a question from his mailbag:

Question -- Ray Fritts, KA8SYX, of Jacksonville, Florida, asks: If a piece of coaxial cable has a specified loss figure in dB per 100 feet at a given frequency, does that mean that the loss in a different length of the same cable that is a fraction of 100 feet long is the same fraction of loss? For example, I have a type of coax that has a loss of 6 dB per 100 feet at 150 MHz. I have a 15 foot length I want to use as a feed line for my 2 meter mobile SSB transceiver. Does that mean that my feed line would have a loss of about 0.9 dB, not including SWR and connector insertion? I am particularly interested in the loss in received signal.

Is my math correct, or is there a different method to determine the amount of signal lost in a coaxial cable when the length is different from that for which the published loss figures are expressed?

The Doctor Answers -- Your calculations are right on. That's all there is to it. But do keep in mind just a few potential pitfalls:

Published cable loss data is for new cable. If used indoors in a non-hostile environment, it will stay close to new for many years. If the jacket allows moisture or moisture vapor to penetrate, it can degrade from subsequent corrosion. I have been amazed to find that the copper in some old cables that have been used outdoors has turned black from corrosion, and likely is no longer acting like a shield at all.

You are correct that the loss increases with an SWR higher than 1:1. For your receive case, keep in mind that the SWR is determined by the input impedance of the receiver -- not the antenna impedance. Sometimes receivers aligned for minimum noise figure do not have an impedance of 50 Ohms. Check your receiver specs.

Do you have a question or a problem? Send your questions <doctor@arrl.org>; or to "The Doctor," ARRL, 225 Main St, Newington, CT 06111 (no phone calls, please).

## DESIGN A WEARABLE POWER SUPPLY AND WIN \$1 MILLION

**From: QST Magazine November 2007**

Believe it or not. Some soldiers on the ground in Iraq or Afghanistan carry as much as 40 pounds worth of batteries to power various electronic devices — radios, computers, night vision equipment, etc. The Department of Defense wants to lighten this load, ideally to less than 9 pounds.

They've decided to open the "wearable power supply" design challenge to the public at large, not just to defense contractors. That means that you, or you and a group of friends, can compete with the big boys. The DoD is offering a \$1 million prize for first place, \$500,000 for second place and \$250,000 for third place.

They will award prizes to the top three teams or individual in a final competitive demonstration planned for fall 2008. You'll have to demonstrate your wearable power system prototype under "realistic conditions," which I hope doesn't include live fire!

To be in the running for the top prizes, your power supply system must produce 20W average power continuously for 96 hours while weighing less than 4 kilograms. This is a stiff requirement, but DoD officials believe that someone out there has the inventiveness to meet the challenge.

If you think you have what it takes to enter the competition, you can obtain registration information online at [www.dod.mil/ddre/prize/](http://www.dod.mil/ddre/prize/). Registration opens October 8 and closes November 30. Good luck!

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## RILEY HOLLINSWORTH K4ZDH

**From: ARRL Bulletin ARLB024**

Riley Hollingsworth, K4ZDH, Special Counsel for the FCC's Enforcement Bureau, has decided not to retire. He had announced last week that he would leave the FCC in January 2008.

Riley states, "After spending the entire weekend thinking about the decision [to retire], it became more and more clear to me that it just isn't the right decision for me right now. There are several issues on the table that I want to continue to work through with the amateur community."

The Enforcement Bureau is the primary organizational unit within the Federal Communications Commission that is responsible for enforcement of provisions of the Communications Act, the Commission's rules, Commission orders and terms and conditions of station authorizations, as well as enforcement of Amateur Radio rules (Part 97).



## SECRETARY'S NOTES

Minutes of the October 2007 Meeting

The Amateur Radio Club of Parker County met on Tuesday, October 9, 2007 at the Weatherford Community Center. President Jim Spaulding WØUO called the meeting to order at 7:13 PM. There were fifteen members and one visitor present. Lanny Priddy K5LP gave the invocation.

**ANNOUNCEMENTS:** Jim Spaulding WØUO announced that the club had missed the Alzheimer's Walk this month. He requested that all members become more active in club projects and activities. This will help stay aware of upcoming events. Bob Gill K5BG announced the Pairs, TX Ham Fest will held the weekend of 13-14 October.

**MINUTES:** The minutes were approved as read by Jerry Thompson W7JT by voice vote. The motion was by Bob Gill K5BG and was seconded by Will Teague W5CX.

**COMMITTEES:** Al Warren WR5AW gave the generator committee report. The club members present recommended a 5.5KW unit be purchased.

**NEW BUSINESS:** None

Bob Gill K5BG gave a belated notice of the passing of life member Pat Hartnett W5TJD.

Following approval of a motion by Mark Rutenschroer W5MJR and seconded by Smokey Vulgamore KD5VHS, by voice vote, the meeting was adjourned at 7:27 PM.

Respectfully submitted,  
Jerry Thompson W7JT Secretary/Treasurer

Thanks to Judy Wolf KB5JEY for the great food (Chili) provided. We ate it all, didn't we?

Jim Spaulding WØUO gave an excellent presentation on historical and modern receiver design.

## ARCPC ANNOUNCEMENTS

### NOVEMBER PROGRAM

The November program will be a presentation on simple, inexpensive HF antennas by: Jim Spaulding WØUO

### FIELD DAY RESULTS:

In Class 2A there were 468 stations reporting

Our joint effort, W5PC, was 33rd overall, 3rd in the West Gulf Division, and 1st in the North Texas Section.

But most interesting, we were 1st over all, by a large margin, in the number of participants with 115.

73 de Jim Spaulding

WØUO

### PARKER/PALO PINTO INFORMATION NET

Mondays at 7:00 pm on 147.040 (tone 110.9) Alt: 146.900 or 443.800

### ARCPC VE TESTING

VE testing for all license classes and upgrades will be conducted on the third Thursday of each month, except November and December, at 7:00 pm at the Emmanuel Baptist Church, 1706 S. Main St. Weatherford. Enter side door of main building.

### LICENSE CLASSES

Contact Jim Spaulding WØUO for details.

Again, a reminder: Dues for 2007-2008 are due. Single member renewals are Ten Dollars and Family renewals are Fifteen Dollars. To those who have paid "Thank You"

**Jake Sez!** *"Learn to laugh at yourself ....  
you'll have a lifelong source of  
amusement"*



## ARCPC HOSPITALITY

November 13, 2007 Meeting



Chicken vegetable soup with crackers.

Pecan Milk Chocolate Brownies

Coffee and Soft Drinks

*Judy*  
**KB5JEY**

**= NOTICE =**

**The next club meeting will be held at 7:00 pm, Tuesday November 13, 2007  
at the Weatherford Community Center, 701 Narrow Street, Weatherford, TX  
Talk-in 147.04 and Tone 110.9**

**AMATEUR RADIO CLUB OF PARKER COUNTY MEMBERSHIP APPLICATION**

NAME: \_\_\_\_\_ CALL SIGN: \_\_\_\_\_  
LICENSE CLASS: (E)(A)(G)(T)(N) ARRL MEMBER: (YES) (NO) STATUS: (NEW) (RENEWAL)  
(CIRCLE APPLICABLE ANSWERS ON ABOVE LINE)  
ADDRESS: \_\_\_\_\_ EMAIL ADDRESS \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP (plus 4): \_\_\_\_\_  
PHONE: HOME: \_\_\_\_\_ WORK: \_\_\_\_\_

INITIATION FEE: One time initiation fee per family - \$5.00

ANNUAL DUES: \$10.00. HAM FAMILY MEMBERSHIP: \$15.00 (+ 1 same household or full time college student) (Add an additional \$5.00 if you wish to receive a hard copy of the newsletter).

HAM FAMILY MEMBER NAME: \_\_\_\_\_ CALL SIGN: \_\_\_\_\_

Cut out and mail this application to the ARCPC Secretary/Treasurer along with you check or money order for the amount due. Or, bring it to the next regular club meeting.

**ANNUAL MEMBERSHIP RENEWALS ARE DUE IN JUNE**

**W5PC**

**FIRST CLASS  
MAIL**

**AMATEUR RADIO CLUB OF PARKER COUNTY, INC.  
P.O. BOX 1795  
WEATHERFORD, TX 76086**



**[www.qsl.net/w5pc](http://www.qsl.net/w5pc)**