

## 2006 OFFICERS

### **President**

David Schierenbeck, N8PF, 633-5272

### **Vice President**

### **Secretary**

Oscar Kramer, KA3OOK, 642-0621

### **Treasurer**

George Guler, WØOIR, 634-9489

### **Program Director**

Virgil Gibbs, KG4FCD, 634-8121

### **Members at Large**

Ron Bouverat, K14ILK, 633-1297  
George Gray, K14HIS, 634-8721

### **Past President**

Jim Lewis, WB8GIP, 633-6871

### **Station Trustee**

Elmer Priebe, KK8E, 633-1139

## 2006 APPOINTMENTS

### **Emergency & Special Events Team**

Rick Sochon, N1OV, Captain  
Bill Barron, W1WAB  
Don Nathan, K2GPM

### **Entertainment & Sunshine**

Rita Hale, W1UZR

### **News Letter**

Charles Miller, N4GIO, Editor  
Article submission by 20<sup>th</sup> of month

### **Publicity**

Virgil Gibbs, KG4FCD

### **Radio Room Equipment Team**

Bob Greenberg, WA4M, Captain  
Bill Shepherd, W4AUZ, Maintenance  
George Guler, WØOIR

### **Radio Room Operations Team**

Jack Werkowitz, K14NXI, Captain  
Bob Casey, KE4CFJ

### **Training**

Don Chinnery, WU9T

### **VE Team**

Dick Marshall, K1KTK

### **Club Station**

KE4ZIP  
E-Mail ke4zip@verizon.net

### **E-Mail: [ke4zip@yahoogroups.com](mailto:ke4zip@yahoogroups.com)**

David Schierenbeck, N8PF, Manager  
Bill Barron, W1WAB, Moderator

### **Web Site: [www.sccarc.info](http://www.sccarc.info)**

Don Chinnery, WU9T, Manager  
Bill Barron, W1WAB, Moderator

### **Club Meetings**

First Wednesday of the month at 3:00 PM in the Florida Room. The meetings June through August are informal.

# KE4ZIP CONNECTOR

"The World at Our Doorstep"

Volume 1 \_\_\_\_\_ Issue 3 November 2006

## OUR PURPOSE:

To promote the hobby of Amateur Radio Communications, to provide license training and present topics of interest to all amateurs, to provide emergency communications to the Sun City Center community in times of crisis and to offer support to other organizations in Sun City Center that require communications for their projects.

## THIS MONTH'S PROGRAM:

Our own Bill Barron, W1WAB will present a topic of interest to us all. He will be doing a demonstration of CAT, Computer Aided Transceiver functions. The CAT program also affords logging, satellite, PSK31, DX Clusters, mapping among others.

## A WORD FROM OUR PRESIDENT:

At a recent Saturday breakfast I was sitting across the table from Jean Hall, WA8OXL and Jean told me she thought Amateur Radio was one of the most exciting and fascinating hobbies she knew about. She went on to say with all the new technology available, the opportunities to be of service to our communities and to have a lot of fun are endless. Jean made me stop and think about all of the change I see occurring and how I react to them.

Speaking of change, if you have not visited the Radio Room for a while you will find a couple of additions. My XYL donated her computer to the club and Bob Hibbard, N1ZK donated a printer/copier/fax. George Gray, K14HIS will most likely be found trying to get everything up and running.

One of the first programs installed was for the G4FON Koch Method of learning code. We now have instant code practice in the Radio Room. What else should be added is a question I pose to all members. Please send your suggestions to George.

## MARK YOUR CALENDARS:

VE Training, November 11 Time and location to be determined. Those interested in this class contact Dick Marshall. K1KTK@marshall.net

Annual AAUW Walk, November 18-early morning. We will provide communications. Don Nathan K2GPM will coordinate.

SCC& KPARC Brown Bag Picnic at horseshoe shelter including Fox hunt, November 18 11:00 a.m.

Holiday Golf Cart Parade December 2 in the morning. We will provide communications. Don Nathan K2GPM will coordinate.

SCCARC & KPARC Annual Holiday Party December 2 at the King's point Banquet Room.

SCCARC Annual Meeting and Elections December 6 3:00 p.m. in the Florida Room

## **IN CASE YOU MISSED IT:**

Virgil Gibbs sent the following to all members:

You can have 2 emergency contacts attached to your FLORIDA driver's license as of 10/02/06. In other words, if you are in an accident and the authorities run your driver's license 2 emergency contacts will pop up so they don't have to search for relatives. I have tried this and it's very simple to do.

Go to <http://www.hsmv.state.fl.us>. Then go to CONTACT INFORMATION in the middle of the page, put in your driver's license number and the it will ask for the name and address and phone number of 2 people you want to have contacted, click SAVE and you're done.

## **TEAM REPORTS:**

### **THE SCCARC WEB SITE:**

This Web Site was initiated during the 2004 hurricane season with the intent that it be a communication tool and others living outside Sun City Center to obtain information regarding the conditions existing in Sun city Center as a result of a hurricane entering the area. Provisions were made for the users of the web site to generate queries to the radio club for specific information regarding their families and/or their homes, club activities and after the hurricane season, the web site was expanded to include news of happenings related to the club and its membership. Additional features include pages about the club, club happenings, members QSL cards, vanity plates and recently several valuable links have been added providing emergency communication materials.

We urge you to visit using the UR <http://www.sccarc.info>. When you do you will arrive outside the radio room at the North end of Old Town Hall. Upon entering you will see station #1 and across the top there's a menu where you can learn more about KE4ZIP, EMERGENCY NEWS, HAPPENINGS, LINKS AND MEMBERS.

We invite you to log on and explore. Afterward you might decide you have something of yours you would like posted. Submissions should be made to the webmaster using the following address - [sccarc@verizon.net](mailto:sccarc@verizon.net). Photos are encouraged. We desire all photos that are submitted to be JPEG and approximately 40-60K in size.

The SCCARC Web Site webmaster is: Don Chinnery , WU9T

## **FAMOUS "HAMS:"**

"If I have seen further, it is by standing on the shoulders of giants" Sir Isaac Newton

This is a new feature I have added to the newsletter. I will select one at random to feature each month.

The list was compiled by Gerry Jurrens, N2GJ and Steven Glazer, W2SG. The list is free and, like ham radio itself they derive no pecuniary interest from their site.

Reginald Aubrey Fessenden, 1XS (SK) Scientist, prolific inventor, wireless pioneer, licensed in 1928 for a 2 meter station in Newton Maine; made first radio broadcast of human voice and music

on Christmas Eve 1906 from Brant Rock on Massachusetts coast.

## **FEATURED ARTICLE:**

### **The Father of Radio Broadcasting**

From Wikipedia The Free Encyclopedia

**Reginald Aubrey Fessenden** was a Canadian-born inventor best known for his work in early radio. Three of his most notable achievements include the first audio transmission by radio in 1900, the first two-way transatlantic radio transmission in 1906, and the first radio broadcast of entertainment and music.

#### **His radio work**

In the late 1890's reports began to appear about the success of Gulielmo Marconi was having in developing a practical radio transmitting and receiving system. Fessenden began limited radio experimentation, and soon came to the conclusion that he could develop a far more efficient system than the spark-gap transmitter and coherer-receiver combination championed by Oliver Lodge and Marconi.

In 1900 Fessenden left the University of Pittsburgh to work for the United States Weather Bureau. He had in mind the proving the practicability of using a network of coastal radio stations to transmit weather information and eliminate the use of existing telegraph lines. The contract between the two gave the Weather Bureau access to any of the devices Fessenden invented but he would retain ownership of them. Fessenden made important advances in receiver design as he worked to develop audio reception of signals. His first success came from a barretter detector and was followed by the electrolytic detector that was made from a fine wire dipped in nitric acid, and for a while this device would set the standard for sensitivity in radio reception. Fessenden also evolved the heterodyne principle combining two signals to produce a third audible tone. Heterodyne reception was not completely practical for ten years after it was invented because it needed a way to produce a stable local signal. The development of the oscillating vacuum tube provided such stable local signal.

His early work in radio was accomplished at Cobb Island, Maryland in the Potomac River downstream from Washington DC. He began experimenting with a high-frequency spark transmitter, successfully transmitting speech over a distance of approximately a mile. This seems to have been the first audio radio transmission. The sound quality was distorted and wasn't commercially practical but the test did show that when further refined it would be possible to transmit audio using radio signals.

As the scope of the experimentation widened, stations were built along the Atlantic Coast in North Carolina and Virginia. His work for the Weather Bureau ended in August of 1902.

Two wealthy Pittsburgh businessmen, Hay Walker Jr. and Thomas H. Given, financed the formation of the national Signaling Company, NESCO to carry on Fessenden's work. Including the development of a high-power rotary-spark transmitter for long distance radiotelegraph and a lower-powered continuous wave alternator-transmitter to be used for telegraphic and audio transmissions. Marshfield's Brant Rock Massachusetts became the center of operations for the new company.

The company set out to try to establish a transatlantic Radiotelegraph service. In January, 1906, using his rotary-spark transmitters Fessenden made the first successful two-way transatlantic transmission exchanging Morse Code messages between a station at Brant Rock and one built at Machrihanish Scotland. Marconi had only made a one-way transmission.

The transmitters could not cover the distance during daylight hours or in the summer so work was held up until later in the year. On December 6, 1907 a careless contractor hired to shift some of the supporting cables caused the Machrihanish radio tower to collapse ending the transatlantic

work before it could ever get into commercial service.

The rotary-spark transmitter was to be used until a superior approach could be perfected. Fessenden felt that a continuous-wave transmitter, one that created a pure sine -wave signal on a single frequency would be more efficient because it could be used for quality audio transmissions. His design was to take a basic electrical alternator, which operated at speeds that made alternating current of at most a few hundred cycles per second and speed it up greatly in order to create electrical currents of tens of thousands of cycles per second. The high speed alternator would produce a steady radio signal when connected to an aerial. Then, by putting a telephone microphone in the transmission line, the strength of the signal could be varied in order to add sounds to the transmission. Amplitude modulation would be used to impress audio on the radio signal. It would take many years of development before even a prototype alternator-transmitter would be ready and a few more beyond that for high-power versions to become available.

Fessenden contracted with General Electric to help design and produce a series of high-frequency alternator-transmitters. In 1903, Charles P. Steinmetz of GE delivered a 10,000 cycle version which proved to be of limited use and couldn't be directly used as a radio transmitter. Fessenden's request for a faster, more powerful unit was assigned to E.F. W. Alexanderson and in August of 1906 he delivered an improved model operating at a transmitting frequency of approximately 50,000 cycles per second but with much less power than Fessenden's rotary-spark transmitters.

The alternator-transmitter reached the goal of transmitting quality audio signals but there was no way to amplify the signals so they were somewhat weak. Fessenden made an extensive demonstration of the new Alternator-transmitter at Brant Rock on December 21, 1906 showing its utility for point to point wireless Telephony including interconnecting his stations to the wire telephone network.

Later two additional demonstrations took place, which appear to be the first audio radio broadcasts of entertainment and music ever made to a general audience. In 1904 the U.S. Navy had broadcast daily time signals and weather reports but these used spark transmitters transmitting in Morse Code. On the evening of December 24, 1906, Christmas Eve, Fessenden used the alternator-transmitter to send out a short program from Brant Rock, which included his playing a song, Oh Holy Night on the violin and reading a passage from the Bible. On December 31, New Year's Eve a second short program was broadcast. The main audience for both transmissions was an unknown number of shipboard radio operators along the Atlantic coast. Although now seen as a landmark, the two broadcasts were barely noticed at the time and were soon forgotten. The only first-hand account seems to be a letter Fessenden wrote on January 29, 1932 to his former associate, Samuel M. Kinter. Fessenden does not appear to have made any additional broadcasts intended for a general audience, and was actually promoting the alternator as the ideal for point to point wireless telephone service. Still, looking back, it was an important look into the future of radio. Although designed for transmissions over a few kilometers, on a couple of occasions, the test Brant Rock audio transmissions were apparently overheard by NESCO employee James C. Armor across the Atlantic at the Machrihanish site.

Fessenden purchased a small estate called Wistowe in Bermuda. He died there in 1932 and was interred in the cemetery of St Mark's Church on the Island.

An editorial in the new York Herald Tribune said:

It sometimes happens, even in science, that one man can be right against the world. Professor Fessenden was that man. He fought bitterly and alone to prove his theories. It was he who insisted, against the stormy protests of every recognized authority, that what we now call radio was worked by continuous waves sent through the ether by the transmitting station as light waves are sent out by a flame. Marconi and others insisted that what was happening was a whiplash effect. The progress of radio was retarded a decade by this error. The whiplash theory passed gradually from the minds of men and was replaced by the continuous wave one with all too little credit to the man who had been right.

Fessenden's private residence at 45 Waban Hill Road in the Chestnut Hill district of Newton Massachusetts is on the National Register of Historic places.

## **PUBLICATION:**

This newsletter will be published and e-mailed to members and friends the last Wednesday of each month.

Any article for publication should be emailed to: [panamacharlie@verizon.net](mailto:panamacharlie@verizon.net) at least ten days before publication.