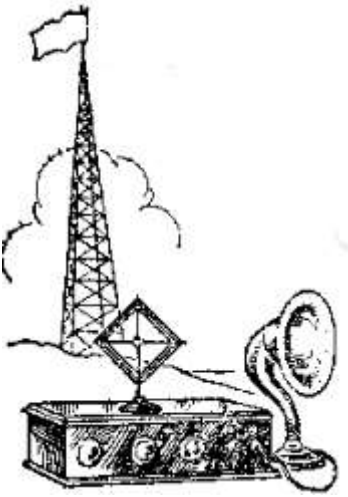
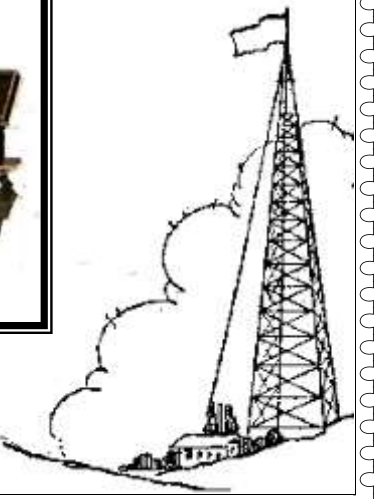


The Carolina Antenna

SPRING 2004
VOLUME #10
ISSUE #1

CAROLINAS CHAPTER OF THE ANTIQUE WIRELESS ASSOCIATION



The Carolina Antenna
The newsletter of the Carolinas Chapter of the Antique Wireless Association

ISSUE # 10 SPRING 2004 VOLUME #1

PRESIDENT'S MESSAGE

By Ron Lawrence, KC4YOY
CC-AWA President

The Spring Meet in the Carolinas is just around the corner. By now all of you should have received your conference brochure in the mail. If you did not, please let me know and I'll get one to you. Last week I mailed almost 650 brochures to club members and past conference attendees. I hope by now everyone has their reservations made and their days off approved by their employers.

We have some great programs again this year along with all the normal good stuff that goes on at the Charlotte Conference.

We will schedule a CC-AWA Board of Directors meeting soon. One of the main topics to be discussed is updating our bylaws. Our original bylaws were written in 1994. In 1999 when we were incorporated our lawyer took those bylaws and reworked them to fit the requirements for incorporation. I feel that after ten years we know a lot more about what it takes to run our club and it's time to give the bylaws another look. I don't anticipate any radical changes, we will submit the proposed changes to the membership for their input.

As always, ALL club meetings including Board of Directors meetings are open to all members. If you're interested I highly encourage you to attend this meeting.

To help me keep up with all the things going on in the club I decided to appoint a club calendar secretary. Stephen Brown has offered to take on this job. It will be his job to keep a running club calendar at least two years ahead and to send reminders to all concerned about upcoming club events, etc.

We had a great time again at the CC-AWA Winter Swap Meet in Columbia SC. As expected with it

being in January, it was a little cool, but not bad at all. I would guess that there were between 25 and 30 vendors and 50-75 shoppers.

I saw a lot of interesting goodies for sale. I picked up a Riders/RCA Chanalyst form Gerald Cromer in anticipation of the program on them planned for the Spring Meet by Dr. Dennis Osbourn.

Richard Owens our VP brought me about 8 boxes full of old issues of QST and CQ magazine going back into the late 50's. A real nice addition to my radio library.

A good friend Mike Yarborough W4JMY is sitting up a new PA system for the Charlotte Conference. Several years ago Gerald Cromer sold the club a 100 watt Bogan PA amp, at the WBT basement clean out we picked up 4 nice large PA horns. Mike has taken all this and a couple of rolls of cable I had, and is putting it all together so it will be ready in time for Charlotte. Hopefully no one will have any problem hearing announcements this year.

I look forward to seeing everyone at the Sheraton in March.

2004 CC-AWA Calendar of Events

- Free admission
- 8 am till Noon. These events start early and end early. If you don't show up until 11 am all you will see is everyone loading the 'goodies' that they bought earlier that morning.

Be a early bird!!

- Be sure to check the CC-AWA web page (www.cc-awa.org) for driving instructions and meet updates.

28th Annual Conference

March 25 - 27
Sheraton Charlotte Airport Hotel
located on I-85, Exit 33
Charlotte NC
Meet Chairman: Ron Lawrence
Meet brochure is available on-line on the club web page

Spring Swap Meet

May 8th
NC Transportation Museum
Salisbury NC

Summer Swap Meet

July 31
McGalliard Falls Park
Valdese NC
Meet Chairman: Richard Owens

Fall Swap Meet

October 23
City Lake Park
Jamestown NC
Meet Chairman: Brad Jones

Future Charoltte Conference Dates

2005
March 24-26, 2005

2006
March 25-27, 2006

CAROLINA ANTENNA SUBMISSION SCHEDULE

Quarterly issues will be mailed during the first week of:

January, April, July, and October.

The deadline for submission of material for each issue is the first day of month preceding the publication month, for the January issue the deadline is the first week of December, April issue, the first week of March, for the July issue, the first week of June and for October, the first week of September.

PLEASE, try Not to wait until the deadline to send stuff in.

Written articles should be sent to Laura Carter; photos & Want Ads go to Barker Edwards; Tidbits & News for the "With the Collectors" column go to Ron Lawrence. You can find contact information for these people on the inside front cover of each issue of the *Carolina Antenna*.

By Barker Edwards

Well, if you looked at the previous article on submission and publishing schedule for the *Carolina Antenna,* you will notice that this issue is real late in getting published. Judy, my wife and the primary publisher has been real sick and unable to work on the newsletter. She recently spent eleven days in the hospital, seven in ICU, with pneumonia. Being diabetic, the medicines that she had to take threw her diabetes out of control. I am glad to say that she is home now and things are *slowly* returning to normal. We will try in the next few months to return to the published submission schedule. So, if you have an article for the next issue please go ahead and mail it to the appropriate person. Thanks in advance.

PARMAK RADIO
By Robert Lozier

A nice radio I don't know much about….

(But it does provide an intro to a bit of radio history.)

Parmak Radio was a mid-west (Kansas City, MO) manufacturer - Parker-McCrory Manufacturing Company. I have been told that they had a pretty good reputation in the mid and late 1930's for making rather high performance 6 & 32 Volt farm radios. I have a fine 1936 example of their 6 Volt storage battery set (no model number given on the labels). It has an unusual combination of a small pin driver loudspeaker for the high frequencies and a moving coil speaker for the bass. The schematic

pasted inside the cabinet appears to be dated 4-5-36 (printing is kind of sloppy in that corner). It has a 1C6 pentagrid converter, two 34's in the IF's, a 30 detector/AVC and then it gets a little strange with push-pull 30's driving the 19 dual triode in push-pull mode.

It uses a synchronous vibrator so a separate rectifier is not required. Filtering is very extensive. The field coil of the dynamic speaker measures only 8.5 Ohms and is in series with all the tube filaments that are all connected in parallel! This schematic does not show the pin driver speaker but it is certainly part of the original design.

I'm sure that I have seen Parmak radios that go back to the mid 1920's at various radio meets over the last 30+ years. However I don't have any literature or schematics for their older products. Riders published schematics only for 1937 through 1939 models.

I was started on this line of thinking because a guy in Italy just obtained a Parmak Radio for restoration. He reports that the set has just one Type 24 followed by four Type 27's and a pair of Type 45's plus a Type 80 rectifier.

I have only two broadcast radios that use just one screen grid tube. One is a 1929 vintage Trav-Ler portable that uses one Type 22 tube. This makes sense for a portable set of the period because the circuit would have had more than twice the voltage gain of two stages of RF using Type 99 tubes while providing a good savings in filament current.

The other set I have is a Freshman Model Q of 1928 vintage. I acquired this set from Bob VanSleen, of Shelby, NC just before his death. At that time I thought it a little strange that this metal box AC set would have had only one double tuned TRF stage using a Type 22 (I don't think the 24-A had been released yet.). It has a Type 27 in the detector, Type 26 as a first audio and a Type 71-A in the output stage. He reminded me a little bit about what was going on in the American radio business at that time ...

From 1922 to 1925 manufacturers could hardly turn out enough parts and sets to meet the seemingly bottomless consumer demand for radios. But into 1925, the economy went soft and was in recession by 1926. Manufacturers continued to build at a frantic pace but sales were drying up. A large number of companies failed in 1926 & 27 and their

inventories were liquidated. The surviving companies had an abundance of parts to build the AC sets using the Type 26 & 27 tubes.

As you may know, the radio technology was changing in the 1920's as fast as the personal computer business is changing today (who wants a 4 year old computer today?) So the classic three tube regenerative set of 1922 was hopelessly out of date by 1925. The advent of the screen grid tube eliminated the use of triodes in top-of-the-line sets by 1929. So…. Bob speculated that putting one screen grid tube in the radio design made it possible for these manufacturers to make some sort of claim like "New Outstanding 1928 Screen Grid Performance!" while still using up these supplies of cheap excess inventory. I think he was right!

FROM THE GOOD IDEA DEPARTMENT

Hello fellow collectors and enthusiasts: Hearken back to the 2003 CC-AWA conference in Charlotte. It was during our requisite club meeting that we were discussing how to bolster the declining coffers of our club's treasury. My suggestion, and the reason for this reminder, was to invite people to donate items to the auction for the sole benefit of the club. I made a donation myself in the recent past. This donation had no benefit to me whatsoever other than the good feeling of supporting the organization I love and the extreme relief of alleviating myself of something that was taking up precious limited space. I also lacked the resolve to resell the piece on my own as it was a large console radio requiring more time and resources than I felt would redeem this investment. The console radio was given to me in trade and I don't generally collect consoles.

I say that there are many similar situations out there among our compliment. My donation was small. This console only netted $22 for the club. But, as they say, every little bit helps. And perhaps with some encouragement others would consider this gesture and relieve themselves of some of their burdens to the benefit of the club and interested collectors.

Matt Countess
Durham, NC
mnmcounts@msn.com

UX-201A
By Robert Lozier

While cleaning in preparation for the Open House at my place back on December 20th., I picked up a UX-201-A with the standard black Bakelite base. What was odd is that the tip-less envelope is crystal clear. (Most of us know that the original UV-201's had clear glass but they also a tit top envelope and a brass base.)

The nice feature of this tube is that the RCA logo is embossed directly on the plates! What's the story here? Without a getter the tube would have to spend more time on the pump (i.e. more cost). It seems like this must have been a promotional item. Do you have any specific info on this little collectible?

A few years later Raytheon embossed their logo on the plates but I don't think they are particularly difficult to locate.

FROM THE MAILBOX!

NO WONDER WE CAN'T 'EAR NOTHING ---
MUVVER'S GONE AN' PUT THE WASHIN' ON THE ARIEL.!

ARMSTRONG 1943 SENATE TESTIMONY PART 2

Testimony by Major Armstrong before Senate Interstate Commerce Committee

Reviews Early Struggles of FM for Recognition

On December 6, 1943, Major Edwin H. Armstrong appeared before the Senate Interstate Commerce Committee, which under the chairmanship of Senator Burton K. Wheeler, was charged with investigating the need for new legislation to amend the Communications Act of 1934.

Part 2 of 3

Taking part in this hearing, in addition to the Chairman, were Senators White, McFarland, Moore, and Hawkes. After the customary preliminaries, Major Armstrong was asked:

The Chairman: You may resume your statement.

Dr. Armstrong: At this point I want to make this statement, that I have heard the chairman of the Commission has been accused of holding up FM. At this point he certainly did not hold up FM. Another chairman might well have done so, but at this point Mr. Fly gave FM its greatest boost. Later on regulations by the Commission did hold up FM, and they are still doing so.

The Chairman: In what way?

Dr. Armstrong: The invention Mr. Chairman, is 10 years old. There are still no channels assigned for relaying programs of FM about the country. It is one of the great developments which is surely coming, and that will be the relaying of FM broadcasting around the country without the use of connecting wires.

The Chairman: How did the Commission hold it up?

Dr. Armstrong: The Commission has never allocated a band of frequencies for that purpose, although the bands which could be utilized for relaying might be anywhere in a region as far up as 300 megacycles or more. They have had it under consideration, and perhaps if it had not been for the war there would have been something done about it, but nothing yet has been done.

Senator Hawkes: Dr. Armstrong, do you mean by that to say that they could have made these available to FM without interfering with the established channels at all?

Dr. Armstrong: Yes, Senator Hawkes. There are vast spaces up in the upper frequencies where, prior to the war, no stations whatsoever were operating.

Senator Hawkes: What have they given as a reason for not extending that privilege, or that license, to you for FM?

Dr. Armstrong: Informally that the existing allocations system

provides for the allocation of these frequencies to television and Government, and that there is no space available.

Now, that reason was given a good many years ago, when allocations were based on the theory that everything about radio was known for all time; that there was a certain limited amount of spectrum, and that it had to be allocated among the different services. But I think the engineering department of the Commission has gained wisdom since that time.

Senator Hawkes: Has gained what?

Dr. Armstrong: I think the engineering department of the Commission since that time has acquired much wisdom.

Senator Hawkes: It is to be hoped so.

Dr. Armstrong: And I believe that we will in the future have much more sympathetic treatment of that particular request for relay channels.

Senator Hawkes: But their position was at that time, when this hoped-for wisdom you are speaking about had not been acquired, was that they could not make those assignments without interfering with other assignments already made; is that correct?

Dr. Armstrong: Yes. That is, assignments which had been made over large areas of the spectrum, where you could take a receiver and listen from morning until night and never hear a station. There was plenty of room to put relays in. There was another reason why the relay broadcasting should have been put into use. It would have been years before any demand would have arisen for these channels for the purpose to which they were allocated, and by that time we would have learned how, through using these channels, to have moved the relay stations on up into the higher part of the spectrum, out of the way of the demands of some new service.

As this art develops you see more and more the impossibility of making progress under the rigid allocations of the past, for they were made on the theory that there is a limited quantity or number of channels. That is the lesson I am trying to get across, by relating the experience of FM, of getting it underway; and while at the present time FM has escaped that danger, the danger of being blocked off, I want to assure the committee that I as an inventor am not anxious to run the risks again that I ran in undertaking to put this thing into use.

The Chairman: As Senator White has just suggested to me, at that time no one knew much about these ultra high frequencies, I take it.

Dr. Armstrong: Yes, that is true, Mr. Chairman. A few of us knew, but it was not possible by the use of the English language to convert people to your point of view.

I haven't that power of speech. The only way that it could ever be done was to build a station, set it up, and wipe out by the demonstration of the things that people knew that were not so. (Laughter.)

Senator Moore: If that could be applied to other activities of the Government, it would be very desirable.

Dr. Armstrong: I do not know of any other way of making progress in the radio art. I have been in the field of inventing since 1912.

Senator Hawkes: Your experience in proving what you knew yourself is very similar to the experience of anyone who has made a brand-new discovery in the mythical field; isn't that correct?

Dr. Armstrong: Yes; that is true. But in the ordinary type of human endeavor you are usually able to go ahead without being blocked in any way. Now, here was the case where if the engineering department of the Commission made a mistake, you never would get the opportunity to prove that you were right. That is the lesson of the development of FM. The history of all inventions is that most engineers are wrong. So that if you prevent him from developing what his idea is, he will never have the opportunity of making any converts. It is a tough problem.

The Chairman: The inventor has to prove that the other fellows were wrong.

Dr. Armstrong: Invention is going ahead in the face of established rules of scientific knowledge, and in showing that it either does not apply or is being wrongly applied. As Josh Billings has said: "It isn't ignorance that causes the trouble in this world; it is the things that folks know that ain't so." (Laughter.)

Senator Hawkes: You will remember that at the end of the Civil War somebody suggested we ought to close the United States patent Office because there was nothing new to be discovered.

Dr. Armstrong: Yes, Senator, I remember that very well. I have a few copies of another chart here which will illustrate the situation as it is at the present time, in the same frequency range as the chart I have already given you. I only have two or three copies of this chart.

Senator White: Will you state again what this is.

Dr. Armstrong: That is the existing allocation between 40 megacycles and 129 megacycles, as it stands today.

The Chairman: And it is your thought that that is not sufficient.

Dr. Armstrong: FM has developed so much more rapidly than the majority of people believed it could develop, that additional space will be required.

40.0 - 42.0 mcs	Government
84.0 - 90.0 mcs	Television

42.0 - 50.0 mcs	FM Broadcasting
90.0 - 96.0 mcs	Government
50.0 - 56.0 mcs	Television
96.0 - 102.0 mcs	Television
56.0 - 60.0 mcs	Amateur
102.0 - 108.0 mcs	Television
60.0 - 66.0 mcs	Television
108.0 - 112.0 mcs	Government
66.0 - 72.0 mcs	Television
112.0 - 116.0 mcs	Amateur
72.0 - 78.0 mcs	Government
116.0 - 119.0 mcs	Experimental
78.0 - 84.0 mcs	Television
119.0 - 129.0 mcs	Government

"Frequency allocations between 40 and 129 megacycles, May 1940 to date"

Dr. Armstrong: I have here a chart which indicates what additional space is now being asked for by the Association of FM Broadcasters. It is just the same as the charts which I have given you with the exception that the No. 1 television band is shown as allocated to FM broadcasting.

40.0 - 42.0 mcs	Government
90.0 - 96.0 mcs	Government
42.0 - 56.0 mcs	FM Broadcasting
96.0 - 102.0 mcs	Television
56.0 - 60.0 mcs	Amateur
102.0 - 108.0 mcs	Television
60.0 - 66.0 mcs	Television
108.0 - 112.0 mcs	Government
66.0 - 72.0 mcs	Television
112.0 - 116.0 mcs	Amateur
72.0 - 78.0 mcs	Government
116.0 - 119.0 mcs	Experimental
78.0 - 84.0 mcs	Television
119.0 - 129.0 mcs	Government
84.0 - 90.0 mcs	Television

"Frequency allocations between 40 and 129 megacycles (with modification proposed by F.M.B.I.)"

Senator Hawkes: You may have stated it before I came into the room, but how many FM broadcasting stations are there in the United States now?

Dr. Armstrong: Around 50, Senator. I do not know the exact number but it is of that order.

======end quote ======

Part three of Dr. Armstrong testimony will appear in the next issue of the *Carolina Antenna.*

1947 - Armstrong visits his boyhood bedroom in Yonkers, where, in 1912, he made his first great discovery, regeneration.

A Story of Intrigue

By Fred Crews

Recently I wrote this article which was subsequently printed in the December 2003 newsletter of the Museum of Radio and Technology. Additional information has been found which is included here.

A friend recently sent me a book entitled "LEHRBUCH DER DRAHTLOSEN TELEGRAPHIE" written completely in German. The author is Von J. Zenneck. The only English in the book is the publishing year of 1916 and under illustrations, the figure numbers. My friend requested that I find a good museum for the book. Oddly enough, the book was translated from the German by A. E. Seelig, E. E. The English title is "Wireless Telegraphy", published by McGraw-Hill in 1915.(I can only assume that it was translated from the German manuscript since the translation date is one year before the German publication.)

Dr. Jonathan Zenneck ((1871-1959), was a brilliant German with PhDs in several physics and electronic type fields. He was a college professor and also served as director of the famous Munich Museum. A computer search by either his name or his name and book title turns up all sorts of references, many written in German with accompanying translations. His work was highly technical and theoretical and seemed to be the last word on many wireless telegraphy subjects. He was accepted and respected by technical and engineering people in the U. S. and other countries.

After I began looking into all this, and with the help of our Museum's webmaster, Richard Post, and a ham radio friend and electronics engineer, Gary Anderson, a real story surfaced.

American Telefunken Co., in 1910, was selling new German built quenched wireless telegraph sets. These units outdid and irritated the British who had an inferior unit on the market. By 1913, Germany had in the U.S., long-wave CW stations in Tuckerton, NJ and in Sayville, NY. In 1915 two German ex-professors (one of them Jonathan Zenneck, now a captain in the German army) were sent to the U.S. to man the Sayville site and exploit the German unit. Keep in mind that World War I was in progress, but the U.S. had not entered it at this time.

Zenneck, in charge of the station, and his friend entered the U.S. by being dropped offshore by a German submarine and not at a port! This was necessary because the British blockade of US ports would not have otherwise permitted them passage. They promptly attended a dinner session for the members of the fledgling Institute of Radio Engineers. Later Zenneck became the first fellow of the IRE. It became evident to the equivalent of the U.S. Secret Service Bureau that transmissions to Germany from these two stations might not be entirely neutral. They seemed to be broadcasting from about 11 PM at

night until 1:30 AM the next morning. The Bureau asked a nearby ham whose name was Charles Apgar to help them. Apgar developed a remarkably sensitive receiver and because of his interest developed a recorder which took the output of a telephone receiver and cut phonograph type disks of radio transmissions. So he set up and during the transmissions made records which were promptly delivered to the local Secret Service Office the next morning to be analyzed.

This lasted for only 3 days at which time the Secret Service closed the stations, confiscating all their equipment, because under Zenneck's direction they were transmitting positions of Allied and neutral ships sailing the East Coast of the U.S. to German submarines nearby as well as other transmissions to Germany.

Both Zenneck and his coworker were detained and initially sent to Ellis Island. Remember they had not really performed covert acts because the U. S. at that time had still not declared war on Germany. Eventually, they spent most of their incarceration in Fort Oglethorpe, GA, and at the end of the war were freed to return to Germany.

Back to the book for a moment. The English translation of this book sells for $175 at internet listed book stores. I can't afford that, but through the help of some of the staff of the National Radio Astronomy Observatory I was able to borrow a copy from the Smithsonian Museum for 2 weeks. Wow! In comparing the two books, I find the translation to be precise and as far as I can tell Seelig did a super job. Chapters, paragraphs, and illustrations are arranged the same in each book. In keeping with my promise, I will soon donate the book to the Antique Wireless Association Museum in Rochester, New York.

This is one of those stories that make radio history so fascinating. In July 1915, the tale of Agpar's assistance was released to the press, and his efforts were described as "the most valuable service ever rendered by a radio operator to his country".

References

VON J. ZENNECK, "LEHRBUCH DER DRAHTLOSEN TELEGRAPHIE" I can't ascertain the publisher, but the date is 1916

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Lloyd Espenschied , "Early German Wireless", Letter from Old Timers Bulletin, Antique Wireless Association (AWA), Winter 1967

Clinton DeSoto, "200 Meters and Down", Story of Ham Radio from beginning to 1936 pages 44,45, American Radio Relay League (ARRL)

Search for J. Zenneck, numerous Internet Web Sites

FIND THE PARTS AND/OR TUBES YOU NEED TO FIX THAT RADIO AT THE 28TH ANNUAL CONFERENCE OF THE CC-AWA CHARLOTTE NORTH CAROLINA MARCH 25-27, 2004!

Registration for the conference is free to all members. Have you paid your 2004 dues yet? Membership information may be found on the inside front cover or on the CC-AWA web page.