

The Jersey Broadcaster is

distributed to members of the New Jersey Antique Radio

Club via email as a PDF file.

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the club's website:

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB



June 2023

Volume 29 Issue 6

Meeting Notice

Our June meeting will be held on Friday, 6/9 at Princeton University. The "Tech Talk" topic will be "Hints & Kinks" where members can bring in an item to show-case or tell a story about a favorite restoration technique.

For our non-local members and anyone who is unable to make the meeting in person, it will also be livestreamed on Youtube at <u>http://www.youtube.com/@njarc</u>.

Meeting Review

At our May meeting Darren Hoffman made a presentation "Metalworking for Vintage Radio Enthusiasts." Darren shared his expertise in this area discussing various techniques for cutting, bending, punching and otherwise forming and modifying the shape of sheet metal for radio chasses and panels.

A recording of the presentation is available on our YouTube channel: <u>http://www.youtube.com/@njarc</u>.

Upcoming Radio Events

Check the calendar on our website for the latest information about upcoming events. Some key dates are:

June 9: NJARC meeting, Princeton University June 10: VCF technology swap meet, Wall NJ June 13: DVHRC meeting, Telford PA June 16: HARPS meeting, Suffern, NY June 23-25: NJARC/ARRL Field Day, InfoAge July 11: DVHRC meeting, Telford PA July 14: NJARC meeting, Princeton July 15: JD Auction, Jackson NJ July 16: Sussex Hamfest July 22: NJARC Summer Swapmeet/Hamfest, InfoAge August 11: NJARC meeting, Princeton University August 18: HARPS meeting, Suffern NY August 19: NJARC Summer Repair Clinic, InfoAge August 26: InfoAge Classic Car Show September 8: NJARC meeting, InfoAge September 14-16: Kutztown Radio Show September 22: HARPS meeting, Suffern NY September 26-30: AWA Conference, Henrietta NY October 7: BARA Hamfest, Westwood NJ October 13: NJARC meeting, Princeton NJ October 20: HARPS meeting, Suffern NY November 10: NJARC meeting, Princeton NJ November 18: NJARC Fall Swapmeet, Parsippany NJ

From the President's Workbench

Greetings Fellow Enthusiasts.

On the evening of May 24th, I had the privilege of presenting our club's first NJARC Scholarship Award (\$1,000) to a very deserving Pre-Engineering Academy Senior at Wall Township High School. Her name is Molly Matri, the class of 2023's Valedictorian! Molly's grade point



average is 4.46 with a class ranking of 1 out of 249! Yes, a very smart young woman who will be attending Cornell University in the fall, studying Chemical and Biomedical Engineering. According to her instructor, Danial Leonard, he could not understand where she also found the time to participate in school sports and music!

(Continued on next page)



Richard Lee and NJARC Scholarship Recipient Molly Matri

The Jersey Broadcaster

June 2023

Page 2

THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$25 per year and meetings are held on the second Friday of each month either at InfoAge or at Princeton University. Neither the editor nor NJARC is liable for any other use of the contents of this publication other than for information.

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President's Workbench (Continued)

This is the backstory: in 2019 I had asked our club's Executive Board to fulfill an idea I had since becoming NJARC President. I wanted to establish a scholarship award in the club's name, for a high school senior who would be pursuing a career in STEM, at University. STEM is the acronym for Science, Technology, Engineering & Mathematics. The 2020 pandemic arrived and put a damper on everything until now.

In the winter of 2022, I revived the search for an appropriate high school, and as luck would have it, I found Wall Township High School was the perfect fit with its Pre-Engineering Academy AP course, and it's less than 5 miles from InfoAge Science & History Museums! The Counseling Dept. of W.H.S created a poster [with old radios] advertising the NJARC award. A prerequisite for the scholarship award was to visit our Radio Technology Museum (RTM) and write an essay with the theme "How old technologies affect new technologies and future technologies" which you will pursue in your studies at university. There were 5 applicants who made the visit to our museum and also visited the other museums within InfoAge.

I requested their instructor, Mr. Leonard to read the essays and choose the most deserving candidate. Obviously, he chose well and I present Molly Matri's winning essay on the following page.

I look forward to next year's awards ceremony in the knowledge that our club is helping to further local High School Seniors in their pursuit of STEM studies at University.



President's Workbench (Continued)

Molly Matri, Class of 2023 GPA: 4.46, Class Rank: 1/249 Carnegie Mellon University, Major: Chemical & Biomedical Engineering

Technology is constantly evolving as we advance as a society. Often, this means that old technologies become obsolete, left behind in favor of new and improved devices. One example of this is the cathode ray tube, invented by Karl Ferdinand Braun in 1897. Today, the cathode ray tube is not used for much, but it was a crucial piece in our evolution of technology.

In the past, the cathode ray tube was used largely in TVs, computer monitors, and radar systems. They can project an image onto a screen using a beam of electrons. This ability enables cathode ray tubes to have a variety of uses. JJ Thomson even used one to discover the existence of electrons in 1897. One additional way in which cathode ray tubes have been used is in oscilloscopes. An oscilloscope measures changes in voltage over time, and they use the cathode ray tube to detect these changes. Oscilloscopes are especially useful in monitoring electrical circuits as they can quickly detect potentially dangerous surges in voltage. More importantly, oscilloscopes have medical purposes. By connecting electrodes to an oscilloscope and then connecting these electrodes to a person's skin, changes in heart rate can be monitored. Heart rate monitors are crucial in medicine, and this technology was made possible by the cathode ray tube.

Cathode ray tubes are no longer used in TVs and computers, replaced in favor of liquid crystal displays (LCD) and plasma displays. Even in oscilloscopes, the cathode ray tube has been replaced by LCDs. Although hardly used today, cathode ray tubes served an essential role in our technological past. Yet, as technology advances, even what was once a useful device will eventually be replaced with an improvement.

I am particularly fascinated by the use of cathode ray tubes in oscilloscopes for medical purposes. Medical technologies are crucial to the health of society and are necessary to save lives. They are constantly evolving, and I want to be at the forefront of their evolution. The use of cathode ray tubes in oscilloscopes is just one small part of this evolution, and there are so many more devices to create and improve. My goal is to become a biomedical engineer which would allow me to work toward improving and creating new medical technology that will advance society. To achieve this goal, I plan on studying biomedical and chemical engineering at Carnegie Mellon University next fall. Thank you for considering me for this scholarship.

From My Collection By Marsha Simkin

Happy Father's Day!

Here's a radio themed Father's Day card. No date is indicated on the card but it is probably from the late 1940s or early 1950s.

The card was published by the Art Guild of Williamsburg and made in the USA.



Collecting Juvenile Communications Fiction

(Continued)

Wayne Whipple and S F Aaron are credited with the Radio Boys Cronies and the Radio Boys Loyalty both written in 1922 and published by M A Donohue of New York and Chicago. These two books were also issued under their sub or alternate titles Bill Brown's Radio and Bill Brown Listens In during the same year 1922 by Hurst & Co of New York. The books were issued with generic and distinctive dust jackets and common covers in different colors. An additional title, Bill Brown, Radio Wizard was mentioned at the conclusion of Bill Brown Listens In but apparently was never published. The Whipple/Aaron titles featured an interesting statement. It was from Thomas Edison.

GREETINGS	FOREWORD
"Listaning In" With Edison No kipher authority in the world of invention followed be chosen to in introduce these Schwarz world be chosen to introduce the schwarz world be chosen to introduce the world's greatest inven- tions and the before the world's greatest inven- tions and the before the world's greatest inven- tions and the before the world's greatest inven- tions and the schwarz in the same real of science world discovery. This is the appreciation of science the science of the science of the science world discovery. This is the appreciation on science the science of the science of the science investor of the science telescophic communication.	In this second volume of the Bill Brown Rad stories we have introduced a typical young Italia student at the school of Technology, who brin "Bill" and "Gna" into closer touch with the H and stirring example of his famous countryman Marconi. May the story of the young Marcon ad his later remarkable achievements awaken i young radio enthusiast the sentiment expresses by our great American inventor: J have great admiration and high vegand for Marcon the pioncer inventor of Warcless Telegraphic Communication
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The Whipple / Aaron Radio Boys Series

The Radio Boys Cronies or Bill Brown's Radio1922The Radio Boys Loyalty or Bill Brown Listens In1922







(continued on following page)

June 2023

Page 5

Collecting Juvenile Communications Fiction (Continued)



The Boy Electrician series by Edwin Houston was published by J B Lippincott of Philadelphia and London from 1907 to 1912. This series of two books depicts some of the earliest references to "wireless telegraphy" in juvenile fiction. The books were issued with individual dust jackets that pertained to each story. Each book has a pictorial cloth cover that is the same as the dust jacket. Edwin Houston was an American electrical engineer, academic, businessman, inventor and the author of many books on various scientific topics.

The Boy Electrician Series

The Boy Electrician	1907
The Boy Electricians as Detectives	1912



The Ocean Wireless Boys series was authored by Captain Wilbur Lawton one of the pen names for John Henry Goldfrap. The series was published between 1913 and 1917 by Hurst & Company of New York. The books were issued with a common dust jacket that showed a wireless officer and a shipboard wireless room. The volumes had light gray covers and pictures related to the book they were on. The books were re-issued in paperback in Westbrook's "Circling the Globe" series. Under various pseudonyms, Goldfrap also wrote <u>The Boy Aviators</u>, <u>The Dreadnought Boys</u>, <u>The Boy Scouts</u>, <u>The Motor Cycle Chums</u>, <u>The Motor Rangers</u>, <u>The Bungalow Boys</u> and <u>The Border Boys</u> series.

Collecting Juvenile Communications Fiction

(Continued)

The Ocean Wireless Boys Series

The Ocean Wireless Boys on the Atlantic1914The Ocean Wireless Boys and the Lost Liner1914The Ocean Wireless Boys of the Iceberg Patrol1915

The Ocean Wireless Boys and the Naval Code1915The Ocean Wireless Boys on the Pacific1916The Ocean Wireless Boys on War Swept Seas1917



Lewis Theiss authored two series on radio, The Wireless Patrol series (1917 - 1919) and The Young Wireless Operator series (1920 - 1924). Both series had a story related paper picture applied to a cloth cover. Each of The Young Wireless Operator books was issued with an individual dust jacket. It is unknown whether the Wireless Patrol series were issued with dust jackets.

Both series were published by W A Wilde and Co, Boston and Chicago.







Collecting Juvenile Communications Fiction

(Continued)

The Wireless Patrol Series

The Wireless Patrol at Camp Brady	1917
The Secret Wireless; Or, The Spy Hunt of the Camp Brady Patrol	1918
The Hidden Aerial : the Spy Line on the Mountain	1919

The Silence of the Sea is Broken

"Storm, fog and accidents at sea, all lose much of their danger when aboard each vessel is an up-to-date wireless outfit and a staunch, loyal boy to operate it"

From an ad for The Young Wireless Operator Afloat by Lewis Theiss



The Young Wireless Operator Series

The Young Wireless Operator - Afloat or How Roy Mercer Won his Spurs in the Merchant Marine	1920
The Young Wireless Operator as a Fire Patrol or Story of a Young Radio Amateur who Made Good	1921
as a Fire Patrol	
The Young Wireless Operator with the Oyster Fleet or How Alex Cunningham Made his Way to the Top of	1922
the Oyster Business	
The Young Wireless Operator with the U S Secret Service or Winning His Way in the Secret Service	1923
The Young Wireless Operator with the U S Coast Guard	1924

(Continued in next issue)

Can You Hear Me in the Back?

By Bill Zukowski (Continued from last issue)

Ribbon Microphones

History: In the early 1920s, Drs. Walter H. Schottky and Erwin Gerlach co-invented the first ribbon microphone. The ribbon microphone, also known as the velocity microphone, was the last of the four basic microphone types developed, following the dynamic, condenser and carbon microphones.

RIBBON MICROPHONES operate on the same electromagnetic principle as dynamic microphones, but instead of the dynamic's cumbersome voice coil and diaphragm, the ribbon microphone employs an extremely thin strip of corrugated aluminum suspended in a strong magnetic field. Due to its extremely low mass, the ribbon responds to the subtlest variations in sound pressure and moves through space much more freely than the plates of a condenser or the voice coil of a dynamic. Thus ribbons exhibit a natural, even tone that is detailed and musical without the distortion of dynamics or the unnatural brightness of condensers. But low mass also means low electrical output and extremely low impedance: Ribbon microphones require the use of a transformer just before the output to step the voltage up to a useable level, and to raise the impedance from a fraction of an ohm to something more usable.



The Jersey Broadcaster

June 2023

Page9 9

Can You Hear Me in the Back?

Ribbon Microphones

<u>Advantages</u>: Extremely low mass allows provides excellent frequency response. Excellent off-axis response (figure 8 pattern). Adds "warmth" to the tone by accenting lows when close-mic'd (sometimes a disadvantage).

<u>Disadvantages</u>: Extremely sensitive to wind – can actually damage ribbon. Accenting lows sometimes produces "boomy" bass (proximity effect).

Examples of Ribbon Microphones



RCA Model 44-BX, 1950s price \$129, now \$2500+, Discontinued ca. 1955



RCA Model 77-DX, replaced 44-BX in 1955, price \$225, now \$1200+ Discontinued ca. 1967 June 2023

Page10

Can You Hear Me in the Back? (Continued)

Ribbon Microphones



Reslosound (UK) Model RB microphone



The Beatles at the Cavern, 1962, using a Reslo microphone

