The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

February 2026 Volume 32 Issue 2

The *Jersey Broadcaster* is distributed to members of the New Jersey Antique Radio Club via email as a PDF file. Back issues of many of our newsletters are available on the club's website: www.njarc.org/broadcaster/

Meeting Notice

Our February meeting will be held at Bowen Hall, Princeton University. Prof. Mike Littman will give a presentation titled "How Innovations Happen: Telegraphy's Technical & Commercial origins in Princeton." There will also be an auction of donated radios after the meeting. Don't forget: 2026 dues are due and will be collected at the meeting. (And don't forget that our Winter Repair Clinic takes place on February 21st at InfoAge.)

Meeting Review

Our January meeting was held at InfoAge and consisted of our annual "Members Only" auction and a "Pep Talk" by Al Klase about how to participate in the club's annual *Broadcast Band DX Contest* and how to improve your chances of success.

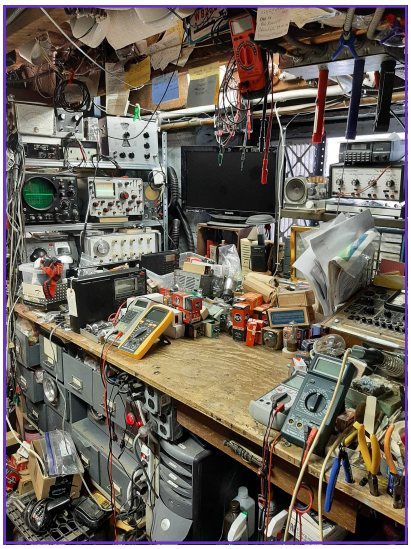
The meeting was livestreamed on our YouTube channel and an on-demand recording is available for viewing if you missed the meeting at www.youtube.com/njarc

Calendar of Events

February 13: NJARC monthly meeting, Princeton U.
February 21: NJARC Repair Clinic, InfoAge
March 13: NJARC monthly meeting, InfoAge
March 15: NJARC Spring Radio Show, Parsippany
April 10: NJARC monthly meeting, Princeton U.
April 24-26: Marconi Day, InfoAge
April 25: NJARC Repair Clinic, InfoAge
May 8-9: Kutztown Radio Show
May 15: NJARC monthly meeting, InfoAge
June 12: NJARC monthly meeting, Princeton U.
July 10: NJARC monthly meeting, Princeton U.
July 25: Summer Hamfest/Swapmeet, Infoage
August 14: NJARC monthly meeting, Princeton U.
August 22: NJARC Repair Clinic, InfoAge
September 11: NJARC monthly meeting, InfoAge
October 9: NJARC monthly meeting, InfoAge
October 24: Fall Repair Clinic, InfoAge
November 13: NJARC monthly meeting, Princeton
November 15: Fall Hamfest/Swapmeet, Parsippany
December 12: NJARC Holiday Party, Jackson

From the President's Workbench

Greetings Fellow Enthusiasts!



The President's Workbench.

A review of our Annual Holiday Party, Saturday, December 13th 2025:

Ooh No! The Big Impending Snow Storm!!

Well that didn't stop the festivities of **our** Holiday Party!!

Over 40 members of our club cheated the weather forecast and ventured to the Westlake Golf & Country Club party hosted by Lynn and Bill Zukowski. On Saturday morning there was talk about closing the Clubhouse down, pending mixed weather reports.

But fortunately that never happened and I did not to need to implement "PLAN B"?!

Our party was a fun event! **Great** food, good libations and lots of Camaraderie!

Once again, our club was gifted with a very generous donation from Joyce Uddo, in memory of her late husband, Peter, who always enjoyed touring our Radio Technology Museum. A check was presented to me by club member Dr. Roberto Forte, Joyce's brother-in-law.

The **Evil Grab-Bag** Game was fun, with some great

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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.

President's Workbench
(Continued)

gifts that "circulated " among the participants Many Times Over!

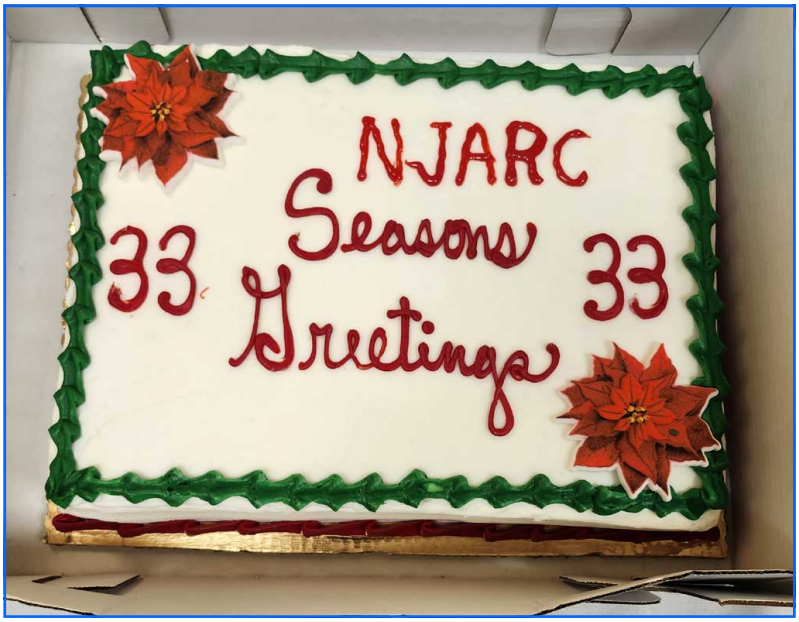
Thanks to a recent rule change, Dave Snellman got the "Pick of the Litter."

By being the first name pulled out of "The Hat" Dave got to pick **last** and went home with a very nice brand new LCR meter!

Happy New Year of Collecting!

– Richard Lee, Pres. NJARC

The Venue: Westlake's Club House



I don't know the secret to happiness, but no one has ever been sad while eating cake!

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President's Workbench
(Continued)

Our Holiday Party Hosts: Lynn and Bill Zukowski

Red Reiff doing his club banner job

(Continued on next page.)

President's Workbench
(Continued)

New member, Ugo Picciani's daughter

Dr. Alex in his usual inventive seasonal attire!

(Continued on next page.)

President's Workbench
(Continued)

The Evil Grab Bag Game Gifts Arrive

Dr. Forte presenting the generous donation check from Joyce Uddo

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Jack DeWitt: An Engineer's Engineer

By James E. O'Neal

Lt. Col. John DeWitt is best known locally as the engineer who led Project Diana, helping to usher in the "space age" in 1946 by bouncing radar signals off the moon and receiving them at what is now known as the Diana Site on Marconi Road at InfoAge. This experiment proved that earth stations would be able to communicate with astronauts in space. DeWitt's team was also one of the first to detect the signals from the Sputnik 1 satellite in 1957. This article originally appeared in the May 23, 2012 issue of Radio World and is reprinted with permission.

John Hibbett DeWitt Jr. was a radio *wunderkind.*

He put Nashville's first radio station on the air when he was 16; was hired by Bell Labs even though he was a college dropout; revolutionized AM transmitter technology; built the country's first commercial FM station; set the stage for satellite communications; put Nashville's first TV station on the air; created the first solid-state broadcast gear; and headed operations for one of the nation's biggest entertainment operations.

Yet Jack DeWitt seems to have escaped notice in many industry circles, even though he left the transmitter building for the last time only about 13 years ago.

Beginnings

DeWitt was born in Tennessee on Feb. 20, 1906, about the time serious experimentation in transmitting speech and music over the air began. He became interested in radio early; he was a radio amateur operator in his early teens and was hired at age 16 to construct a radio station for a Nashville girls' school. The callsign WDAA was issued in 1922 to what became the city's first commercially licensed station.

Jack DeWitt, seated left, is seen in a WSM staff photo from the early 1930s. The microphone is an RCA 4-AA condenser. Photo: Les Leverett

Before completing high school, DeWitt started up two other Nashville stations. After graduation, he briefly explored a career as a shipboard radio operator but decided this was not his calling and enrolled at Vanderbilt University. His career at the school proved equally short-lived, as did DeWitt's next stop at the University of Tennessee in Knoxville.

"I became interested in a broadcasting station [in Knoxville] that was owned by a local telephone company and spent my time at it rather than studying," DeWitt said, as quoted in Craig Havighurst's 2007 book, "Air Castle of the South: WSM and the Making of Music City."

DeWitt's efforts to obtain a college degree ended here; but as the record shows, he didn't really need one.

WSM Takes to the Air

When the 19-year-old returned to Nashville, he learned that the National Life and Accident Insurance Co. was interested in launching a radio station. He was hired to help and spent summer and fall working to construct what was to become WSM ("We Shield Millions," a reference to the insurance company's slogan). The station took to the air on the evening of Oct. 5, 1925, with DeWitt running the controls.

He remained at WSM for a time and did engineering work for other stations, until an opportunity to become more deeply involved in radio engineering arrived in 1928 with a visit to WSM by a Bell Labs engineer.

DeWitt made a favorable impression, and soon the Nashville radio prodigy was on his way to New York

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Jack DeWitt: An Engineer's Engineer

(Continued)

City and a research job at the prestigious laboratory.

However, it was not to last. In the fall of 1930 DeWitt took leave from that job to testify at Federal Radio Commission hearings aimed at determining WSM's worthiness for one of the new 50 kW assignments opening up. WSM was awarded the coveted slot and DeWitt was offered the job of shepherding the power increase as the station's chief engineer.

Understandably, this caused him considerable angst. "It was one of the tough decisions of my life," he said, as recorded in Havighurst's book.

"Here was the great Bell Telephone Laboratories, where I really got a good education in electronics with all sorts of facilities and everything. And here was WSM, a radio station in my hometown. Should I go back to my hometown where I would be a big frog on a little pond, or would I stay in New York and try to make my career?"

Return to Nashville

The pond won out, and soon DeWitt was back in his old surroundings, where the 50 kW project was in progress.

One element was not quite a done deal: the antenna. RCA, supplier of the 50 kW transmitter, advocated conventional flat-top horizontal antenna technology. DeWitt had been involved at Bell Labs in testing a "new" half-wave vertical radiator, and he appreciated the superiority of that design.

"Bell Laboratories was in the business of designing radio transmitters and studio equipment [and] now, they wanted a good antenna to recommend to purchasers of their equipment," DeWitt recalled in a 1982 interview.

THREE FM GRANTS APPROVED BY FCC

AUTHORIZATION of commercial FM facilities to Maj. Edwin H. Armstrong, inventor and pioneer in the development of frequency modulation, highlighted the FCC's action of March 5 in granting three additional FM construction permits and bringing the total number thus far to 42. Besides Maj. Armstrong's grant in Alpine, N. J., construction permits were issued for Chicago and Rochester, N. Y.

Maj. Armstrong was authorized to utilize the site of his present experimental high-frequency station, W2XMN, at Alpine, as the location for the new Class D station to operate on 43.1 mc., serving 19,610 square miles embracing a population of 12,300,000 in portions of New Jersey, New York, Connecticut and Pennsylvania.

Chicago Station

The Chicago grant was to the Moody Bible Institute of that city to operate on the same non-commercial basis as it now conducts standard broadcast station WMBI, 47.5 mc., will be employed to serve 16,809 square miles with a population of 4,656,000. The third grant was to the Stromberg - Carlson Telephone Mfg. Co., Rochester, to use 43.1 mc., to cover 3,200 square miles and a population of 885,000. Proposed transmitter location is 89 East Ave., in Rochester, present location of the company's experimental FM station, W8XVS.

Only applications received by the FCC for FM during the past week were from WJR, The Goodwill Station, Detroit, requesting to change their original application for 46.5 to 46.3 mc., and the request of WGPH, adjunct of WCAU, Philadelphia, to modify its construction permit in regards to equipment.

AMERICAN GUILD of Musical Artists has moved to New York headquarters to 2 W. 45th St. New telephone number is Murray Hill 2-5644.

COMMERCIAL FM became a reality in Nashville March 1 when W47NV, FM adjunct of WSM, Nashville, took the air on a full commercial basis over the new station's custom-built 50 kw. FM transmitter, constructed by the WSM engineering staff, is Jack DeWitt, WSM chief engineer, and Warner McNeil, Tennessee bureau chief of Associated Press. At right, H. H. Campbell, president of Standard Candy Co., Nashville, slaps the moniker on the first spot announcement ever broadcast by the new FM station, while Tom Stewart, program director of W47NV, grins contentedly. Mr. Campbell also qualifies as the No. 1 sponsor to sign on WSM, thus attaining a two-time "first" in Nashville radio sponsorship.

New FM Station of WSM, in Nashville, Starts Operation With 70 Hours Weekly

BECOMING the first FM station to start operating on a regular schedule under full-commercial authorization by the FCC, W47NV, Nashville, FM adjunct of WSM, on March 1 started a weekly schedule totaling 70 hours of FM broadcasting. The station, operating with 20 kw. power on 44.7 mc., broadcasts from 1 to 11 p.m. weekdays and 11 a.m. to 9 p.m. Sundays.

The station incorporates several unique operating factors. Its antenna, completely insulated from WSM signals, utilizes the 878-foot transmitter tower of WSM, and technical operation of both WSM and W47NV centers in the WSM transmitter house. [BROADCASTING, Dec. 15]. The FM transmitter, designed by WSM Chief Engineer Jack DeWitt, is said to utilize a new method of generating Armstrong wide-swing FM signals and was custom-built under direction of Mr. DeWitt by members of the WSM engineering staff.

The four-element FM turnstile array on the WSM tower, concentrated by coaxial cable to the transmitter house, is located just below the flagpole topping the tower. The coaxial line from the transmitter terminates at the base of the tower in a matching section which feeds the open wire line on the tower, an arrangement claimed to operate not only as an effective filter separating the AM signals of WSM and the FM signals of W47NV but also as a lightning ground for the entire structure. The FM signal is generated in a single relay rack unit in the control room of the transmitter house, coupled successively to a three-stage 1,000-watt amplifier and a 20,000-watt amplifier. The main rectifier and other power supply equipment are located in the basement of the transmitter house.

Although a complete separate staff has not been set up, Program Director Tom Stewart and Announcers Bill Terry Jr. and Herbert Oglesby are handling programs of the station. Coverage of the station is being tested, but preliminary reports from listeners indicate that coverage comes up to calculations, it was stated. First regular listener reporting lived in Beaver Dam, Ky., about 90 airline miles from the transmitter.

Finch Gets Licenses

WITH issuance of a facsimile experimental license to Finch Telecommunications Inc., Passaic, N. J., for use at its Bendix Airport laboratory, Bendix, N. J., W. G. H. Finch, president, announced that his company has been licensed by Maj. Edwin H. Armstrong to manufacture FM mobile communications and miscellaneous equipment. The new facsimile test station will be known as WTXAH and will use frequencies between 30 and 40 mc., adjacent to the FM channels, with power of 1,000 watts.

WTAG's FM Station

WXTG, FM station of WTAG, Worcester, Mass., began operating March 2 with a series of musical and news programs independent of WTAG, which is owned and operated by the *Worcester Telegram & Gazette*. The FM outlet operates from 6:30 a.m. until midnight, claimed to be the longest FM schedule in the country.

Page 46 • March 10, 1941 BROADCASTING • Broadcast Advertising

W47NV became the nation's first commercial FM operation, airing its first commercial message on March 1, 1941. The event was highlighted in Broadcasting magazine.

DeWitt didn't have a tough job in selling the vertical, which added only about 10% to the $200,000 budgeted for the power increase. Blaw-Knox was awarded the contract for another "diamond" tower. It is still used by WSM.

After the plant went into service, DeWitt started experiments aimed at improving transmitter performance, earning him his first patent, a feedback system for reducing hum and noise.

"It reduced the distortion from maybe 5–8% percent in the transmitter, to about 1%, and it was broadband," said DeWitt. "I got a patent on it and sold it to RCA for $10,000, which allowed me to build a house."

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Jack DeWitt: An Engineer's Engineer

(Continued)

Making History

A lifelong love of good music, coupled with curiosity and expertise in RF, undoubtedly were driving factors in DeWitt's lobbying the insurance giant to apply for an experimental FM license. He designed and constructed a 20 kW transmitter for the purpose, along with a turnstile antenna that was mounted atop the AM radiator, apparently the first time that an AM tower served a dual purpose.

WSM was a pioneer FM broadcaster in another respect. In 1941 it was granted the country's first commercial FM license, W47NV. The station's ERP was 65 kW; it provided service as far away as Alabama and Kentucky. (The low-band station survived through the war years, moving to present day high-band operations in the late 1940s. Unfortunately, like many pioneer FM stations, it produced little revenue and went dark in the 1950s.)

With America's entry into WWII in 1941, DeWitt's electronics expertise was sought by the military's radar program. He became director of the Army's Evans Signal Laboratories in New Jersey and did much pioneering work in radar. But it was a postwar experiment that put him and the lab in the limelight.

DeWitt had a strong interest in space and astronomy, and after the war's end, found time to recreate an experiment he'd tried unsuccessfully in 1939: bouncing radio signals from the moon.

He made this entry in his personal notebook in May of 1940:

It ha[d] occurred to me that it might be possible to reflect ultra-short waves from the moon. If this could be done it would open up wide possibilities for the study of the upper atmosphere. So far as I know no one has ever sent waves off the earth and measured their return through the entire atmosphere of the earth.

In addition, this may open up a new method of world communication.

The moon is visible several hours out of every 24-hour period in the year. There are many times when communication by this method might be extremely valuable such as during magnetic storms and daytime radio 'blackouts.' This may provide a means in the future of bringing television programs over long distances, such as across the oceans."

In early 1946, his second moon bounce attempt succeeded, opening the door to the age of satellite communications. (While Arthur C. Clarke predicted satellite communications in a 1945 magazine article, it was DeWitt who actually relayed the first radio signal from a satellite, in this case, the moon.)

Peacetime Career

After the war, broadcasting was burgeoning, with equipment once again available for upgrading stations and constructing new ones. And while a partnership in a Washington engineering firm — Ring and Clark — looked especially promising, another offer soon surfaced.

The National Life folks had decided to separate WSM operations — along with those of the Grand Ole Opry, and the organization's artist bureau — from the insurance business. It sought someone to

Jack DeWitt moved the WSM operation into the new world of television on Dec. 30, 1950. This picture shows what opening night was like at WSM(TV). DeWitt appears between the transmitter and its operating console. Photo: Allen Nelson

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Jack DeWitt: An Engineer's Engineer
(Continued)

head up these newly formed enterprises as president. DeWitt's name was at the top of the list. Though tempted by the Washington job, he realized that he belonged back in Nashville.

Television was starting to come into its own, and just as with FM, DeWitt wanted to be first on the air in Nashville.

WSM managed to secure a CP before the FCC's 1948 "freeze" on new applications; soon DeWitt was laying the groundwork for a new television station.

Television cameras were especially pricey in 1950, the year WSM(TV) took to the air. Few people had seen one. Yet DeWitt was bold enough to roll his own. According to Ray Tichenor, who was hired during WSM (TV)'s first year, DeWitt bought two RCA cameras and immediately cloned them.

"Of course, he had to buy the IO [image orthicon] tubes and yokes from RCA, but everything else was done in-house," Tichenor recalled. "The copies worked as well as the originals. Mr. DeWitt was a genius at building things."

The 'home-brew' WSM television transmitter. Photo: David Wilson/Doug Smith

Television transmitters have always been big-ticket items as well. As DeWitt was an RF man *par excellence*, he likely would have fabricated his own if time hadn't been a factor, but DeWitt settled for a commercial rig. Once the dust settled, though, Nashville's RF grandmaster constructed a backup 5 kW television transmitter, as well as a 20 kW linear amplifier for boosting ERP up to the 100 kW authorized by the FCC in 1952.

This "exciter/afterburner" combo remained in service for a quarter century or so. To the credit of DeWitt and his engineering staff, the workmanship was exacting. The one-of-a-kind rig offered scant evidence of being homebrewed, blending in perfectly with the commercial transmitter.

(Continued in next issue.)

Jack DeWitt at InfoAge

Project Diana

https://www.infoage.org/history-ia/army-research/project-diana-january-10-1946/

https://youtu.be/SqobJ_gajvQ?si=lt2uwXI6yp1RRfh4 (Col. DeWitt appears briefly in this video, at the receiving station now the Diana Site at InfoAge.)

Sputnik

https://www.infoage.org/history-ia/historical-resources/camp-evans-and-sputnik/

https://www.infoage.org/history-ia/historical-resources/an-early-sputnik-diary/

New Jersey Antique Radio Club's

Spring Swap Meet and Ham Fest

Antique Radios, Vintage Hi-Fi, & More!!

Parsippany PAL Building
33 Baldwin Road
Parsippany, NJ 07054
Just off Route 46,
Adjacent to Smith Field

Sunday, March 15th, 2026

Refreshments Available

(40) 8 Foot Tables

$30.00 for members

$35.00 for non-members

Reserve Additional tables $25.00

At the door $30.00

Open to the Public

8am to 12 noon

Vendor setup at 7:15am

$8.00 Entrance Fee

Club Donation

For Directions

Visit our website:www.njarc.org
or use your favorite phone app
33 Baldwin Road
Parsippany NJ 07054

Vendors Make Your Reservations Now!
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