Season 1, Episode 10 - August 2025

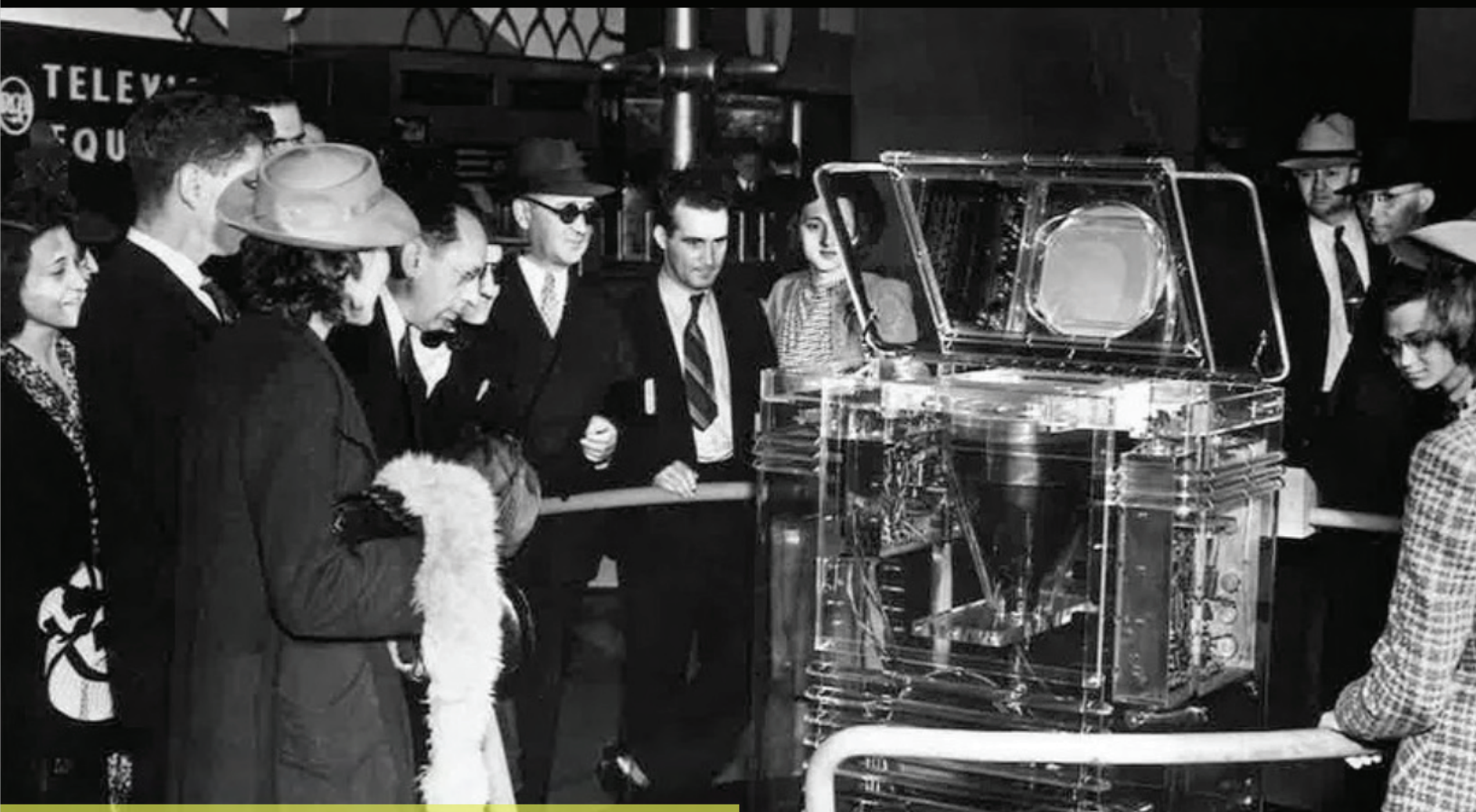
Radio - Television - Broadcast News - Audio - Video Capture

The Technology that Brought the World to Your Home

TEXAS BROADCAST MUSEUM

MONTHLY

MINI-MAGAZINE



TELEVISION AT THE 1939 WORLD'S FAIR

RCA BROADENS THE AUDIENCE FOR THE NEW TECHNOLOGY

SALARIES OF THE STARS

WHAT DID RADIO STARS OF THE GOLDEN ERA EARN? (1930'S-1940'S)

IN THIS EDITION

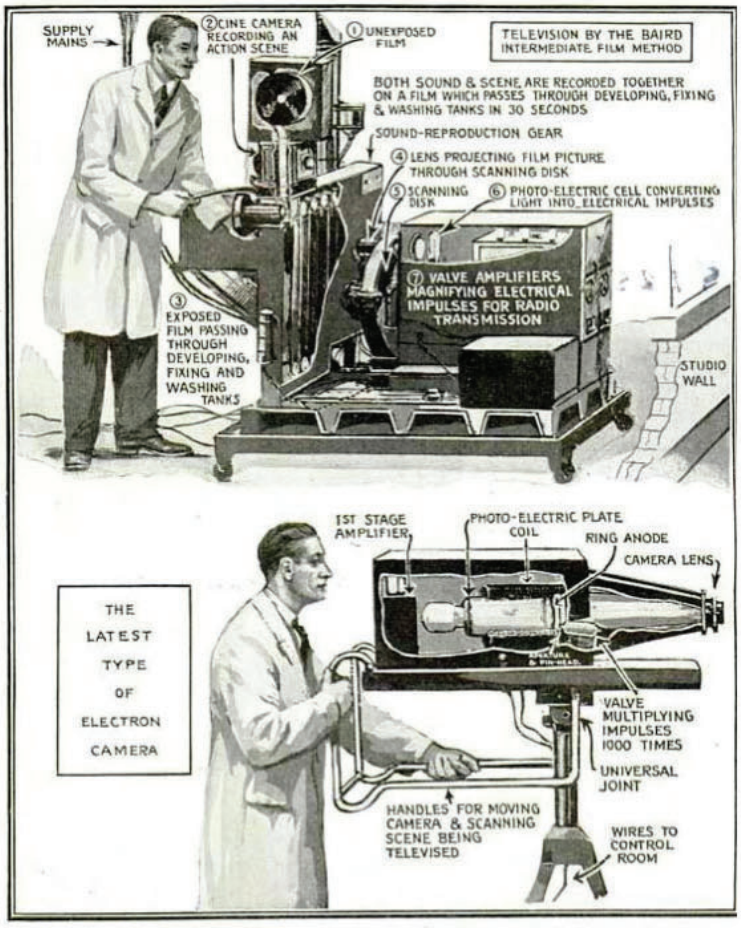
TELEVISION STEALS THE SHOW AT THE 1939 WORLD'S FAIR

US Finally Makes a Splash in Television

The United States was late to the game for Television, but that all abruptly changed in 1939. Regular television broadcasting in the United Kingdom. had been available since 1929 using BBC transmitters on the Baird 30-line mechanical system. Although the pictures were low-resolution, viewership numbered in the thousands. After these broadcasts were shut down in 1935, electronic television on the 405-line EMI-Marconi all-electronic system was chosen by the Selsdon committee to succeed the 30-line system. By November 1936, the BBC was conducting regular, high-resolution television broadcasts on the 405-line standard.

This contrasted with the North American situation. Charles Francis Jenkins' Radiovision broadcasts were popular and thousands of enthusiasts-built television receiver kits, however it was mostly done in the name of

Charles Francis Jenkins illustrates his Radiovision Broadcasting in 1939



Electron Camera "Shoots" Television Images (Popular Machanics Diagram in 1935)

experimentation. The Radiovision pictures were electro-mechanical in nature and used technology very similar to that used by Baird in Britain, but the earliest pictures were only shadowgrams (*an analogue photographic technique whereby an object placed on a sheet of photosensitized paper is exposed to light and developed chemically, thus creating a shadow-image of the object*) and not true television.

Jenkins and a handful of mechanical television companies went into full-scale electro-mechanical television (not shadowgrams, with half-tones) during the late 1920s and early 1930s having built proper Nipkow-disc or mirror-drum cameras. Sales of the deluxe mechanical television receivers were limited to extreme enthusiasts or the wealthy due to their high cost. Regular all-electronic television broadcasting was delayed until well into 1939.

The Patents that Delayed US Television

Many reasons can be given for the relatively slow beginnings of television in the U.S. It was certainly due in large part to the lengthy legal battle between the giant company RCA, and black-and-white electronic television's independent inventor, Philo T. Farnsworth. Farnsworth's Image Dissector camera patents were the contentious issue. RCA wanted to buy them, while Farnsworth wanted to license them. Finally, in 1939, this case was settled, and American

Philo Farnsworth with his early Television device.

television could begin.

RCA had begun to develop reliable television broadcast technology long before their legal case had been settled, and in 1939 had readied their production line to produce 4 different models of consumer TV receivers. Only one thing was needed to sell these sets-content in the form of television programs. The National Broadcasting Corporation (NBC) was RCA's broadcasting wing. It began regular U.S. television broadcasting on April 30, 1939, with a telecast of President Franklin D. Roosevelt opening the New York World's Fair. Programs were transmitted from the NBC mobile camera trucks to the main transmitter, which was connected to an aerial atop the Empire State Building.

NBC Mobile Camera Trucks (1939)

Ten days prior to Roosevelt's speech, David Sarnoff, President of the Radio Corporation of America (RCA) made the dedication speech for the opening of the RCA Pavilion at the New York World's Fair. Staging this event prior to the World's Fair opening ceremonies ensured that RCA would capture its share of the newspaper headlines.

The ceremony was televised and watched by several hundred viewers on TV receivers inside the RCA Pavilion at the fairgrounds, as well as on receivers installed on the 62nd floor of Radio City in Manhattan. Programs of 1939 included operas, cartoons, cooking demonstrations, travelogues, fashion shows and skaters at Rockefeller Center. There were also numerous live telecasts relayed from within the fair itself.

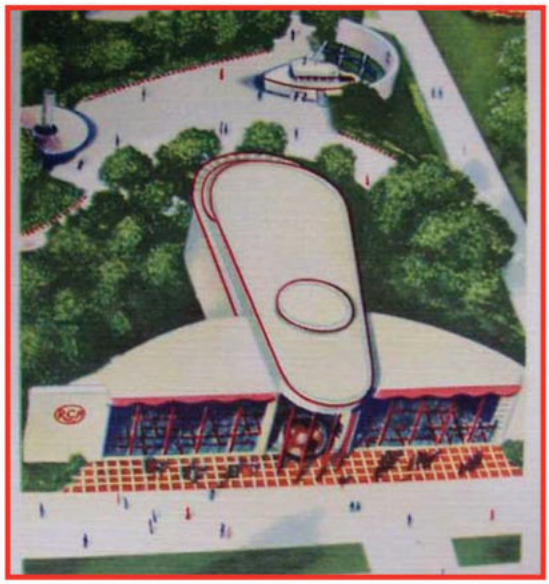
The Radio Living Room of Tomorrow

Exhibits within the RCA Pavilion dramatized the use of television in the home, and documented RCA's experimental breakthroughs. The "Radio Living Room of Tomorrow" was outfitted with contemporary built-ins such as a combination radio/television/record player/record-recording set, a facsimile receiver, and a sound motion picture projector. To illustrate how television could be integrated into existing decor, Vassos designed a "Radio Living Room of Today". This featured period furniture complemented by separate cabinets containing the same electronic components.

Vladamir Zworykin's Iconoscope

The RCA "Television Laboratory" exhibit featured a display of Vladimir Zworykin's experimental television camera tubes (such as Iconoscopes) and picture tubes (these tubes were often called Kinescopes). As visitors travelled further into the RCA Pavilion they could enter a "Hall of Television" which contained thirteen of RCA's finest TRK-12 receivers. These were kept operational as much as possible, to better provide visitors with an opportunity to sample the new medium.

Also in this room was an experimental projection television receiver, which used a very bright five-inch cathode-ray-tube and a large lens to project television pictures onto a special light-reflective screen. The pictures demonstrated with this unit are believed to have been at least three feet high by four feet wide. A large Nipper the Dog statue, that familiar dog listening to "His Master's Voice" on the RCA phonograph logo, looked on from a pedestal on the other side of the room.



1939 TV Pavilion Aerial Shot

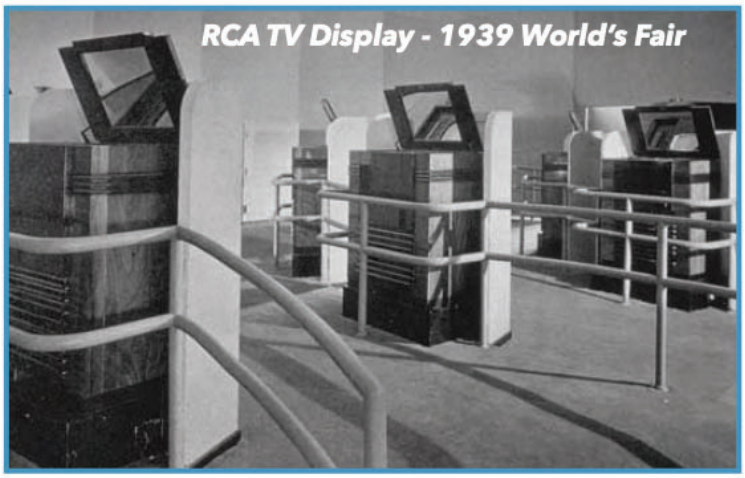
World's Fair Pavilion Built Just for the TV Exhibit

The RCA Pavilion was designed by the renowned U.S. Modernist architectural firm of Skidmore & Owings. When viewed from the air, it was shaped like a radio tube, attracting much attention since aerial views and models of the fair were immensely popular as they showed visitors the scope of the exhibition.

The first sight to be seen inside the entrance of the building was a TRK-12 with a special transparent cabinet. People were amazed by the quality of the television pictures on this unit. The great majority of visitors had never seen television before, and the set's transparent cabinet removed any doubts in viewer's minds that magic or trickery was involved in obtaining the pictures.

Actual Transparent case RCA-TR12 exhibited at the 1939 World's Fair - Now on permanent display in the MZTV Museum in Toronto, Canada.

In 1949 Visitors crowded together to watch NBC broadcasts or internal closed circuit demonstrations. Frequently, volunteers were escorted outside to the cameras and encouraged to wave at the folks inside. Television was such a novelty at the time that "I was televised" cards were handed out as a souvenir of the experience.



RCA offered four types of television receivers for sale to in 1939, the TRK-12, the TRK-9, the TRK-5, and the TT-5. The TT-5 was an "everyman" vision-only table model introduced last. Their prices, ranging from U.S. $199.50 to $600 (***$4,663 to $13,903 in 2025 dollars***) , were considered high. Advertising was initially aimed at the wealthy depicting viewers dressed in evening suits and gowns to watch TV.

RCA-TR12 Print Advertisement

All RCA TV sets at this time were designed by John Vassos, with handcrafted, highly polished wood cabinets taking their cue from the newly popular "streamline" style. They received channels 1 to 5 (the frequency for channel 1 had not yet been taken over for military use). The RCA sets were offered for sale in Macy's, Bloomingdale's and Wanamaker's department stores in the New York Metropolitan area. Although shoppers were curious, television sales right up until the beginning of World War II were disappointing. Most of the unsold 1939-41 televisions were put into storage and sold after the war.

Manufacturers other than RCA exhibited their television receivers at the 1939 World's Fair. In 1938, Allen B. DuMont Laboratories, established by the inventor and entrepreneur of the same name, had already offered the first electronic TV sets for sale to the public (prior to the Fair) with their 180 model.

Westinghouse Electric and General Electric offered competing production lines of consumer televisions in their own pavilions. These companies also built studios with live cameras for interviews.

Even Ford Motor Company got into the act, with television receivers in their executive lounge. Conspicuously missing was Farnsworth Television. Although Philo T. Farnsworth was the first to demonstrate electronic television technology in 1927, his company was not yet manufacturing commercial television receivers.

RCA's pioneering television efforts continued at the World's Fair the following year (1940). Exhibition space for the new medium was nearly doubled and the display featured "Television Suites", again designed by Vassos, showcasing the new models in 10 different American home settings. Vassos also contributed to the "America at Home" exhibition. His "Musicorner" featured indirect lighting, soundproofing, 16mm sound film projector, radio, phonograph, and television receiver all housed in bleached Mahogany modular furniture. Most of the New York World's Fair facilities were demolished in 1940–41 due to a lack of new tenants for the exhibition buildings.

Early 1939 Sets Shown at (or near) the 1939 New York World's Fair

1939 Dumont

DuMont introduced this set in 1938, months before RCA first sold sets. This is the early 1939 version of the DuMont 180. It has a 8 x 10 inch picture, and sold for $395

1939 General Electric Model HM-225

This set has a 9 inch direct view picture tube. GE introduced 5 models in 1939. The others were the HM-171 (5"), HM-185 (5" console), HM-226 (12 inch direct view console) and HM-275 (12 inch mirror in lid console).

1939 Westinghouse Model WRT-702

The WRT-702 was introduced in 1939, together with the WRT-701, WRT-702, and WRT-703. This set is a direct view 9 inch receiver, with an AM/SW radio receiver.

EXACTLY WHAT DID 1930'S-1940'S RADIO STARS EARN?

In the 1930s and 1940s, radio comedy and variety shows were incredibly popular, with many performers achieving high salaries. Jack Benny, Bob Hope, and Edgar Bergen (with his ventriloquist dummy, Charlie McCarthy) were among the highest-paid stars of the era, according to Radio Connection Broadcasting School. Other notable and well-compensated personalities earned substantial incomes in radio during the 1930s and 1940s:

- **Abbott and Costello:** The comedy duo's physical humor and classic routines, like "Who's on First?", were a hit on the radio airwaves. In 1938, when they debuted on "The Kate Smith Hour," Abbott and Costello were paid $350 a week ($8,000 a week in 2025 dollars). As their popularity grew, their salary increased to $1,250 a week. In the 1940s, the duo started their own regular radio program, "The Abbott and Costello Show," which aired from 1942 to 1949. In 1942, they were the top box office stars in the country, and their earnings for the fiscal year were **$789,026** ($15.6M in 2025 dollars).

•Jack Benny - A popular comedian whose show, "The Jack Benny Program," consistently topped the ratings. In 1940, he signed a deal paying him **$18,500 weekly** (about $425k a week or $16.6M annually for a 39 week schedule in 2025 dollars), making him the direct employer of everyone on his program.

•Amos 'n' Andy: A comedy duo who started their radio careers earning $250 a week in 1925. By 1930, they were making a combined salary of $100,000 annually, which they split with their announcer. In 1948, CBS lured them away from NBC with an astounding offer of **$2.5 million ($58 million in 2025 dollars!)**.

•**Bob Hope:** A popular comedian, actor, and singer, Bob Hope's radio show was a major draw for listeners. His comedic style, often involving topical humor and self-deprecating jokes, resonated with audiences. "The Pepsodent Show Starring Bob Hope" began, and Hope signed a ten-year contract with the show's sponsor, Lever Brothers. During this time, he hired eight writers and paid them out of his salary of **$2,500 a week** ($58k a week in 2025 dollars**)**.

•**Bing Crosby:** A singer and actor who became a radio superstar. His smooth baritone voice and relaxed style were incredibly popular. He also starred in radio dramas and variety shows. In 1946, Crosby signed a contract with Philco for his new show, "Philco Radio Time", for $30,000 a week. Additionally, he received $40,000 a week from 400 independent radio stations for broadcast rights. **That is $1.16M combined in per week in 2025 dollars, or $45 million per year for a 39-week** schedule)

•**Burns & Allen:** Husband and wife team George Burns and Gracie Allen were paid about **$9,000 a week** (about $178k per week in 2025 dollars) in the early 1940s. It is stated that at this time, the sponsor often paid much of a big performer's salary.

• **Fibber McGee and Molly:** Another popular comedy duo whose show garnered high ratings throughout the era. They were among those who "fought the War on the Home Front" successfully with their radio show during World War II. Fibber McGee and Molly (Jim and Marian Jordan) were making **around $4,000 per week** during the 1940s.

- **Edgar Bergan and Charlie McCarthy:** The ventriloquist act featuring Edgar Bergen and his dummy Charlie McCarthy was a massive hit. Their banter and comedic routines, often featuring social commentary, were a unique and popular part of the radio landscape. In **1937,** Bergen went from earning $270 a week to $14,000 a week (about $324k in 2025 dollars) in just 18 months. In **1941:** Bergen received $282,000 for his radio work from Standard Brands, Inc. **That 1941 pay equates to $6.2M per year today.**

•**Fred Allen:** A comedian and satirist known for his witty playlets and characters, whose show appealed to a wide audience. In 1932, he debuted on CBS with a **$1,000-a-week salary**, from which he paid his cast. That's almost $24k a week in today's dollars, or $936k a year for a 39-week schedule – in the height of the depression.

•**Jimmy Durante:** A comedian and singer known for his raspy voice, piano playing, and catchphrases. His energetic performances made him a popular radio personality. In 1934, he earned $4,000 per week for a 24-week engagement on a commercial radio program. His weekly salary equates to $96k a week in 2025, or $2.3M a year for 24 weeks of work.

It is important to remember that these high salaries were primarily earned by performers with established reputations and shows with strong ratings. Lesser-known performers, newscasters, and guest stars did not command comparable incomes. The income of radio stars varied considerably depending on their popularity and their show's ratings, as well as the negotiations with networks and sponsors, who often paid a significant portion of a performer's salary.

THE DESIGN OF EARLY RADIO MICROPHONES

The first radio microphones, developed in the early 20th century, were quite different from the sleek microphones we know today. They were often large, bulky, and sometimes even resembled household items. Early microphones used in radio broadcasting included variations of carbon microphones, condenser microphones (The Texas Broadcast Museum is a 1929 RCA 4-A-1A condenser mic on display. It has three tubes inside it, which explains why it is so large) and ribbon microphones, both of which had unique appearances.

Western Electric Double-Button Carbon Microphone

The first microphones used for radio broadcasting were primarily carbon microphones, initially developed and refined in the late 19th century. These microphones, like the Western Electric Double-Button Carbon microphones, often featured a metal housing with a diaphragm that vibrated and compressed carbon granules within a chamber. Some models had a distinctive "cage" or protective covering around the microphone element. These early carbon microphones differed somewhat in their design and appearance depending on the inventor and the intended application. Below are three examples of early carbon microphones:

- Drum-like device with a carbon button: One notable design was Emile Berliner's, which was described as a drum-like device with a carbon button at its core. This device housed two electrical contacts separated by a thin layer of carbon.

- Loose-contact carbon microphone: David Edward Hughes also developed an early carbon microphone using a carbon rod suspended loosely between two metal electrodes. Sound vibrations on the rod varied the electrical resistance of the carbon contact points, thereby varying the current.
- Carbon button transmitter: Thomas Edison refined the carbon granule microphone into the carbon-button transmitter, which featured a cavity filled with carbonized anthracite coal granules confined between two electrodes, one of which was attached to a thin iron diaphragm.

Ribbon Microphones

Developed in the 1920s, ribbon microphones utilized a thin, lightweight ribbon (often aluminum) suspended in a magnetic field. These microphones, like those made by RCA had a more streamlined appearance, but were still larger than modern microphones.

Round-Sykes Microphone

Other Early Designs

Some early microphones, like the Round-Sykes microphone, were quite large, resembling a circular electromagnet. The BBC's "Meat-safe" microphone was another early example, characterized by its metal cage.

1920s BBC Meat-Safe Microphone

While other microphone technologies like liquid transmitters existed earlier, carbon microphones became widely accepted due to their high output, affordability, and reliability, making them the standard for early radio broadcasts before being eventually replaced by more advanced designs like condenser and ribbon microphones later on in the 1920s.

Some of the factors that influenced the early 1920s radio microphone designs included:

- **Sensitivity and Sound Quality:**

Early microphones were still in the early stages of development, and achieving high sensitivity and good sound quality was a challenge. Microphone designers experimented with various materials and configurations to improve performance.

Some of the many Radio Microphones on Display at the Texas Broadcast Museum - The oldest is an1929 RCA 4-A-1A condenser mic, and was used at KTRH in Houston, Texas.

- **Public Perception:**

Many performers were initially intimidated by the sight of microphones, so some microphones were hidden behind covers or drapes.

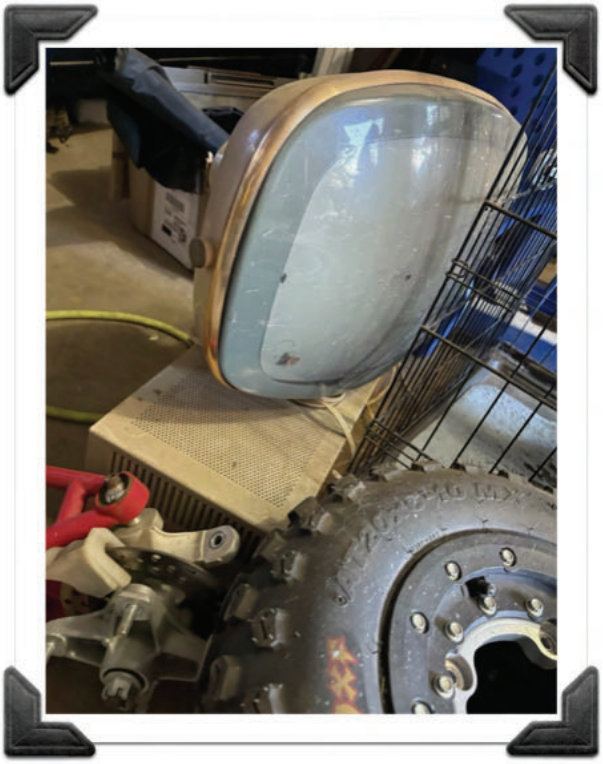
- **Technological Limitations:**

The availability of materials like powerful magnets and stable vacuum tubes also influenced the design and size of early microphones.

WHAT'S IT WORTH?

Our new quick read series where we will examine the most recent asking price for items and give our opinion on if it is worth the asking price or not. If it sold, we will provide the selling price.

Television Classifieds:
1958 Philco Predicta - Listed as "1958 Philco Predicta Television Restored Works w/ Clock Princess Model - Clean!"



Listing Source: ebay

Price: $5,050

The Description: Unsure if it works. Will ship.

Status: Unsold; active offering on eBay as of 8/9/2025.

Our Verdict - As you will see to the right, there was only one photo provided, and the unit looks far from "clean" and is either a Princess or Siesta. The title also says the unit has been restored and works, yet the direction says the seller has no idea if it works. In the last 60 days, restored Princess models have proven to sell on eBay for up to $3,550, while unrestored, but restorable models sell for up to $1,250. With the limitations of this unit and one photo to determine condition, we'd suggest you pass on this one, or tread lightly and offer $350-$600 for this unit.

The Seller is overpriced and..... DELUSIONAL

LEFT PHOTO - Good condition unrestored Predict Siesta

RIGHT PHOTO: Excellent Condition and fully restored Predicta Siesta on the right

WHAT'S IT WORTH?

Radio Classifieds:
1951 Crosley Model 11-130U AM Vacuum Tube Radio

Listing Source: RETRO RADIO FARM

Price: $699

The Description: (truncated) Tabletop tube AM radio manufactured by Crosley in 1951 in excellent working and physical condition. Very rare color marketed to jewelry stores by Crosley.
CABINET CONDITION: Beautiful clear acrylic that was internally painted ruby cranberry red at the factory in excellent condition with no cracks, no chips, no major scratches! Small dings along front, top, side, and bottom edges. The front gold fancy tuning applique is in excellent condition with no cracks, chips, and securely attached. Original factory grill fabric is in very good condition with no rips no separating edges.

KNOBS: The original matching volume on/off and tuning knobs are in excellent condition, gold colored metal, solid, and securely attached. The tuning dial pointer works fine no slipping no sticky spots.

INTERNAL ELECTRONICS: All paper and wax capacitors have been replaced with modern equivalents so this radio has another 50+ years or more of playing time! The tubes are working fine. Both Intermediate Frequency Transformers (IFTs) have been rebuilt to ensure static-free performance. All out-of-spec resistors have been replaced with modern correct value and voltage equivalents. All wiring has been thoroughly checked for possible bridging and weak solder connection.

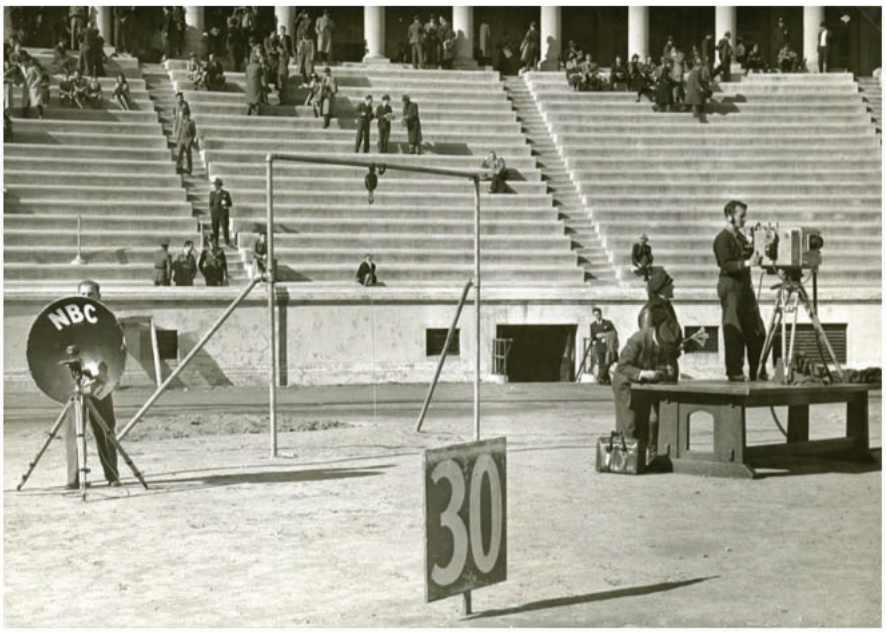
BACKING BOARD: The original backing board is still present and in excellent condition.

Status: Unsold; active offering on Etsy for $729 and on Retro radio Farm for $699 as of 8/9/2025.

Our Verdict - These radios sell from $50 in unrestored condition and in a color other than the prized ruby red up to $600 for one that is this color and fully restored in working condition. This one as been lovingly cared for and for the right buyer, the price is fair and there is no upgrade they will find.

The Seller is premium priced, but for condition, is offering a..... FAIR DEAL

DID NOT KNOW THAT

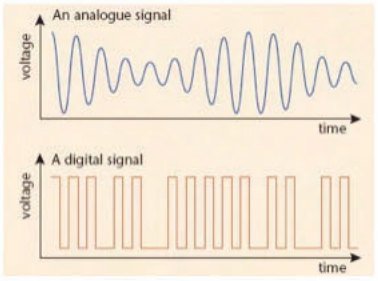


Early Sound for Live Sports on Radio

NBC radio and CBS radio used large parabola microphones to capture sounds at a distance. The Telemobile A1 used one to capture the sounds of a football game.

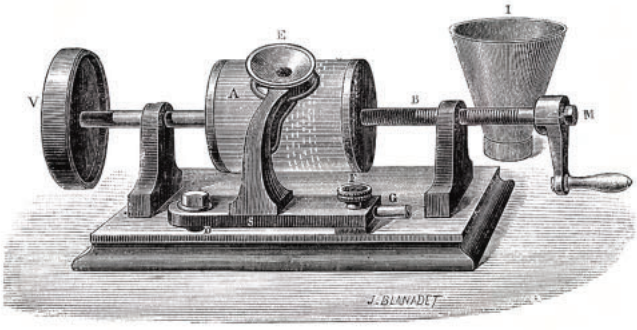
MORSE CODE ANYONE?

FUN FACT



While the transition from analog to digital broadcasting has largely been completed in many parts of the world, some countries still utilize analog radio signals. Specifically, certain countries in Africa. Asia. and Latin America.

The first phonograph, invented by Thomas Edison, was a machine capable of recording and playing back sound. It utilized a cylinder wrapped with tinfoil, where sound vibrations were etched by a stylus, and could later be reproduced by reversing the process. Edison demonstrated this "talking machine" in 1877, astonishing the world with the ability to capture and replay human speech.



DID NOT KNOW THAT

FUN FACT

TURN THE CHANNEL!

The first television remote control was the "Lazy Bones" from Zenith Radio Corporation in 1950. It was a wired remote that allowed users to turn the TV on and off, and change channels. The Lazy Bones, while innovative, had the drawback of a cable that was prone to tripping hazards and cluttered the living space, and it was short-lived as wireless options replaced it.

The Big Three Radio Networks of the 1940s

While there were plenty of local radio networks, the airwaves in the 1940s were dominated by NBC and CBS, with Mutual Radio also carving out a significant, although lesser market share. ABC radio was late to enter the market and established themselves in 1943, but did not win a radio ratings period until the 1970s. NBC held a long-standing lead in national radio rankings for much of the Golden Age of Radio, assisted by their radio manufacturing unit at RCA.

MUSEUM OF THE MONTH

SPARK Museum of Electrical Invention is a science and history museum located in beautiful Bellingham, WA. And provides exciting and educational experiences for audiences of all ages and backgrounds through innovative programs and a world-class collection of artifacts representing the historic development of electricity, radio, and early technology. SPARK embraces the wonder and mystery of electricity.

Following a continuous thread of invention and discovery, the SPARK Museum's collection contains a wealth of unique and rare artifacts dating from the earliest days of scientific electrical experiments in the 1600s through the 1940s and the Golden Age of Radio. Artifacts from the laboratories of the early pioneers of electricity, from magnets and Leyden jars to light bulbs, telegraphs and telephones, all are well-represented at our history museum in Bellingham.

In 2012, ,the museum broadened its focus from radio history to include, as he describes it, the "wonder and mystery of electricity." The Museum changed its name to SPARK Museum of Electrical Invention, added the giant MegaZapper Tesla coil to the collection, and a phenomenon was born.

By the end of 2017 visitation reached 20,000 people, six in 10 of whom are from outside Whatcom County.

Visit the SPARK Museum at:
1312 Bay Street, Bellingham, WA 98225.
Phone: 360.738.3886

TEXAS RADIO HALL OF FAME ADDS TEXAS BROADCAST MUSEUM FOUNDER IN 2025

We are proud to announce that the Texas Broadcast Museum's Founder, Chuck Conrad is one of 25 honorees to be selected to enter the Texas Radio Hall of Fame in November. The TRHOF Induction ceremony will be at the Museum on November 1, 2025. Tickets are available at www.TRHOF.net

Chuck Conrad

Chuck Conrad - already with a Mic in 6th grade

Chuck in early DJ work in High School

Chuck hits the big time at KZQX

HELP US PRESERVE BROADCAST HISTORY

TEXAS BROADCAST MUSEUM

If you have that pile of old stuff that's just been sitting in the barn or basement, it might be something we've been looking to add to our collection for others to enjoy. Old TV cameras, tape systems, audio equipment or early radios and TV sets? Old hardware manuals? Give us a call **(903) 985-8115,** or shoot us an email at **info@txmbc.org**

For us, older is better - radio, camera equipment or something else. Best of all, we have a new 8,500 square foot storage and staging facility tho house new donations.

Of course, there is always money. The Museum owns its building and real estate, but insurance, utilities and maintenance are huge expenses. Besides the modest admission fee and seasonal facility rental for special events, the Museum relies on donations from our supporters. Can you help?

To donate financially, please use the QR code below.


TEXAS
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