



# Mid-Atlantic Antique Radio Club

*Collecting and Preserving Our Electronics Heritage*



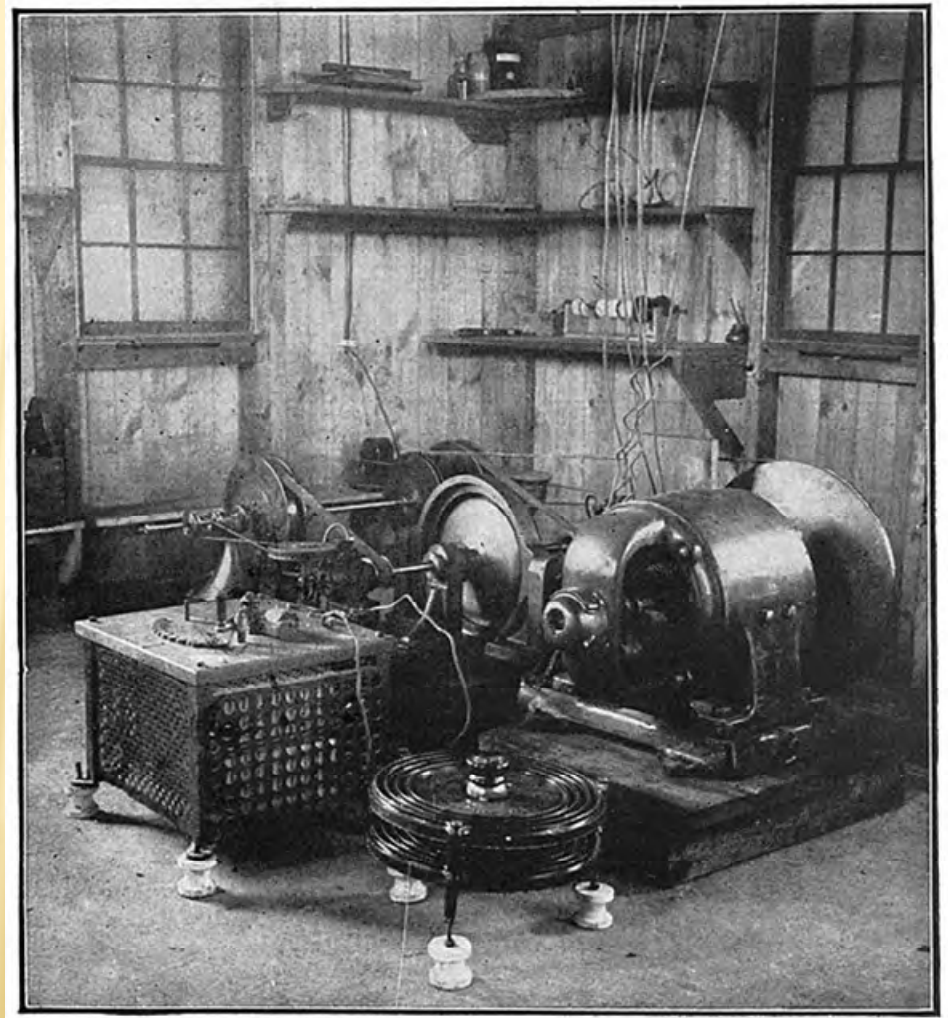
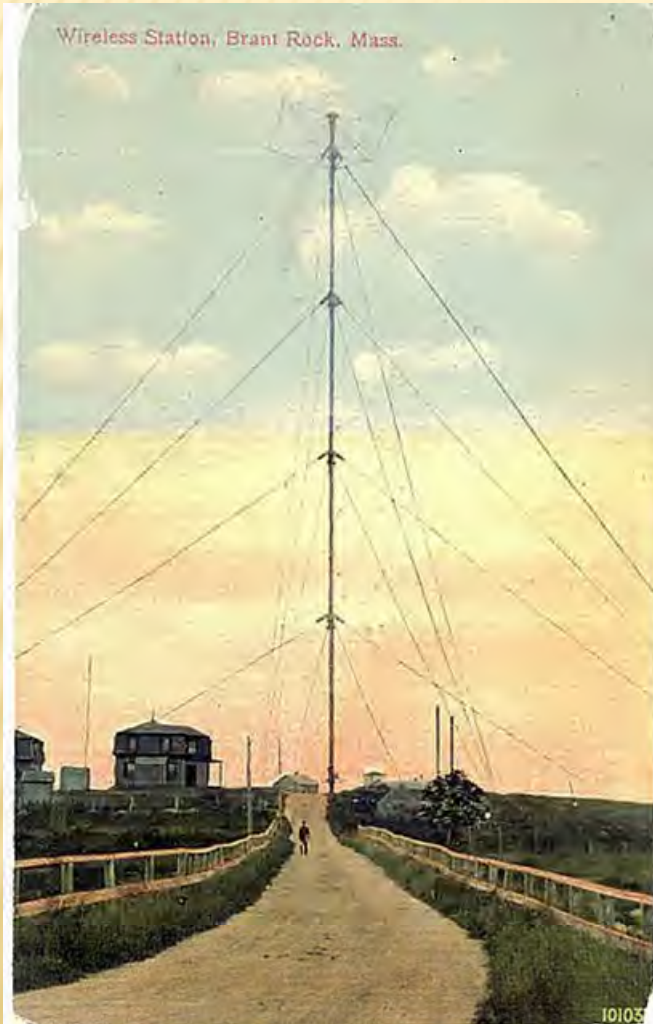
## **CAR RADIO**

Dave Rossetti

17 November 2019

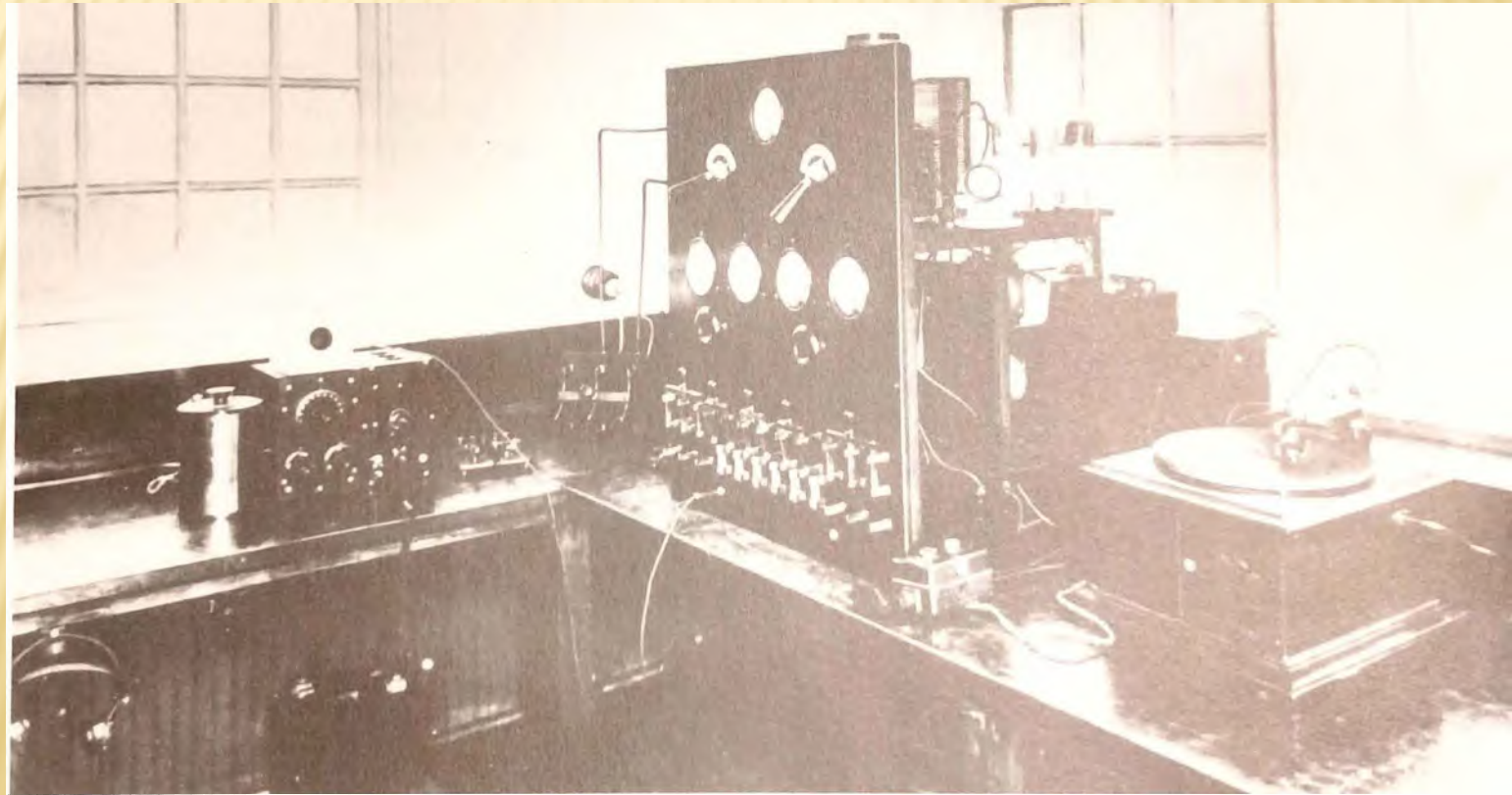
# IN THE BEGINNING - FIRST MODULATED COMMUNICATIONS

- Reginald Fessenden – Christmas Eve, 1906



# FIRST COMMERCIALLY LICENSED RADIO STATIONS IN AMERICA

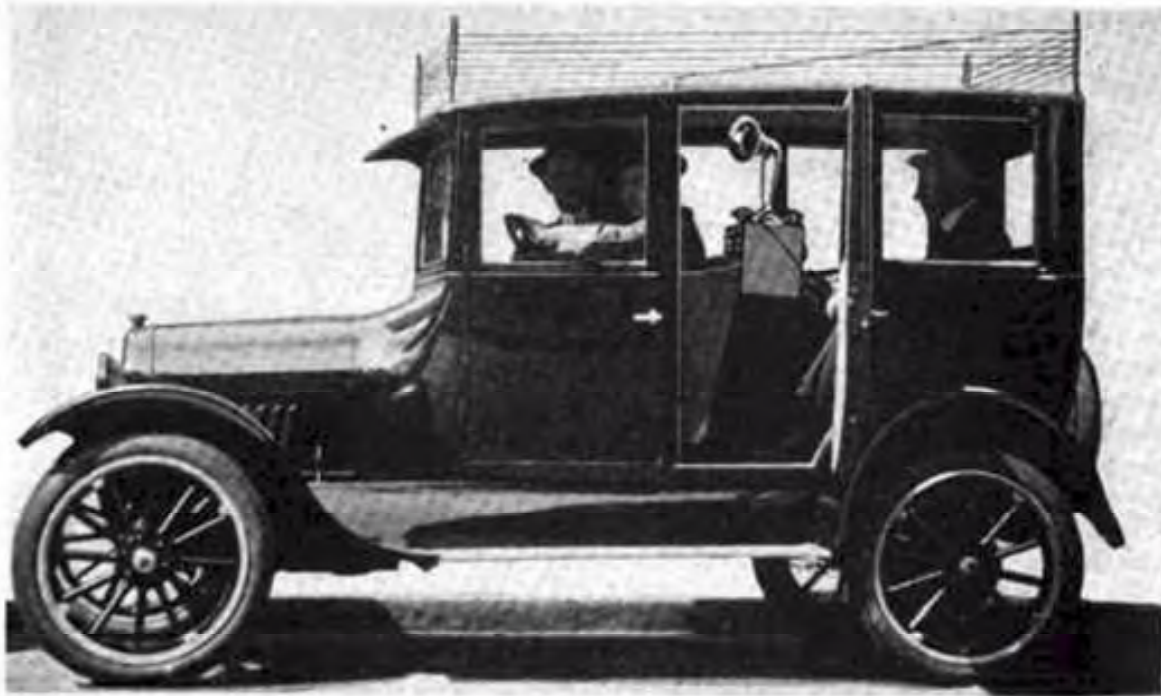
- KDKA, Pittsburg – November 2<sup>nd</sup>, 1920
- Harding-Cox presidential election results as its inaugural show



# FIRST COMMERCIALY AVAILABLE CAR WITH RADIO

## ➤ 1922 Chevrolet

Sedan Equipped for Radio Receiving

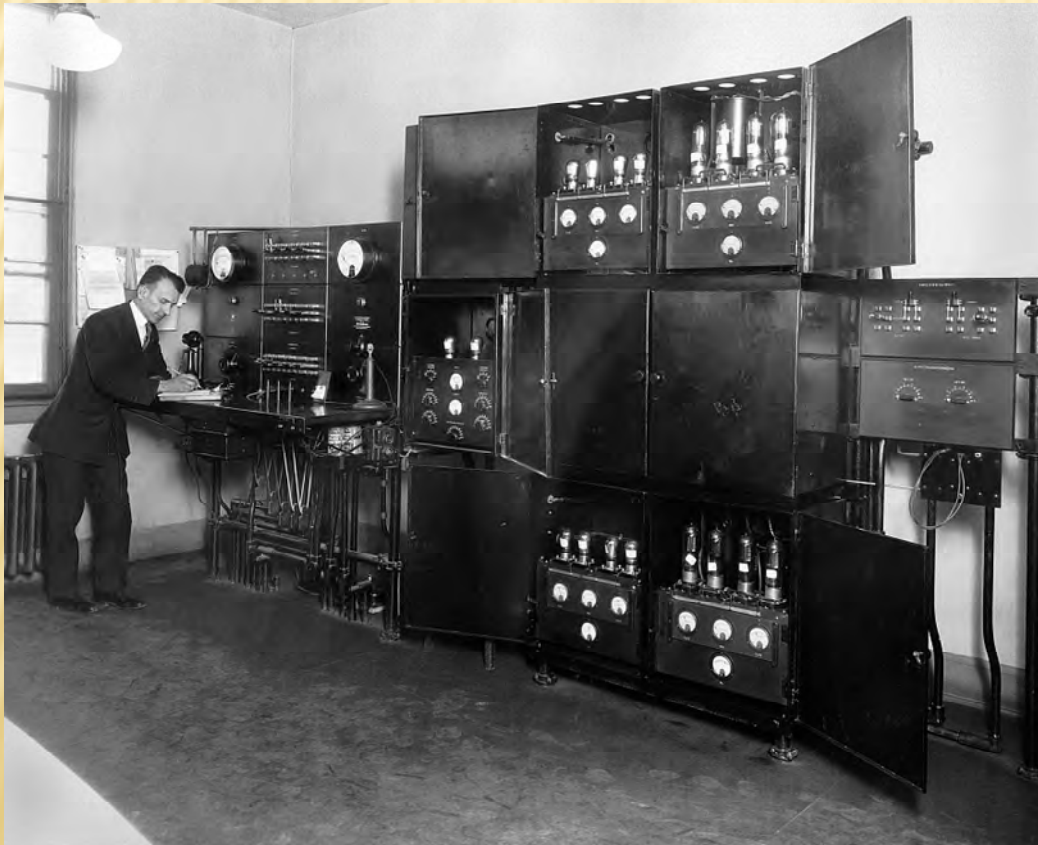


**D**ETROIT, May 8—Satisfactory use of a radio receiving instrument in an automobile without the use of a “ground” has been demonstrated by the Chevrolet Motor Co. With a car equipped with a radio receiver the tourist or picnicker could enjoy concerts and receive news and market reports wherever he happen-

ed to stop, within a reasonable distance of a broadcasting station, the company states. The instrument installed in the Chevrolet may be readily removed to the home, office or other place for use. The company predicts that hereafter many automobiles will be equipped with radio instruments.

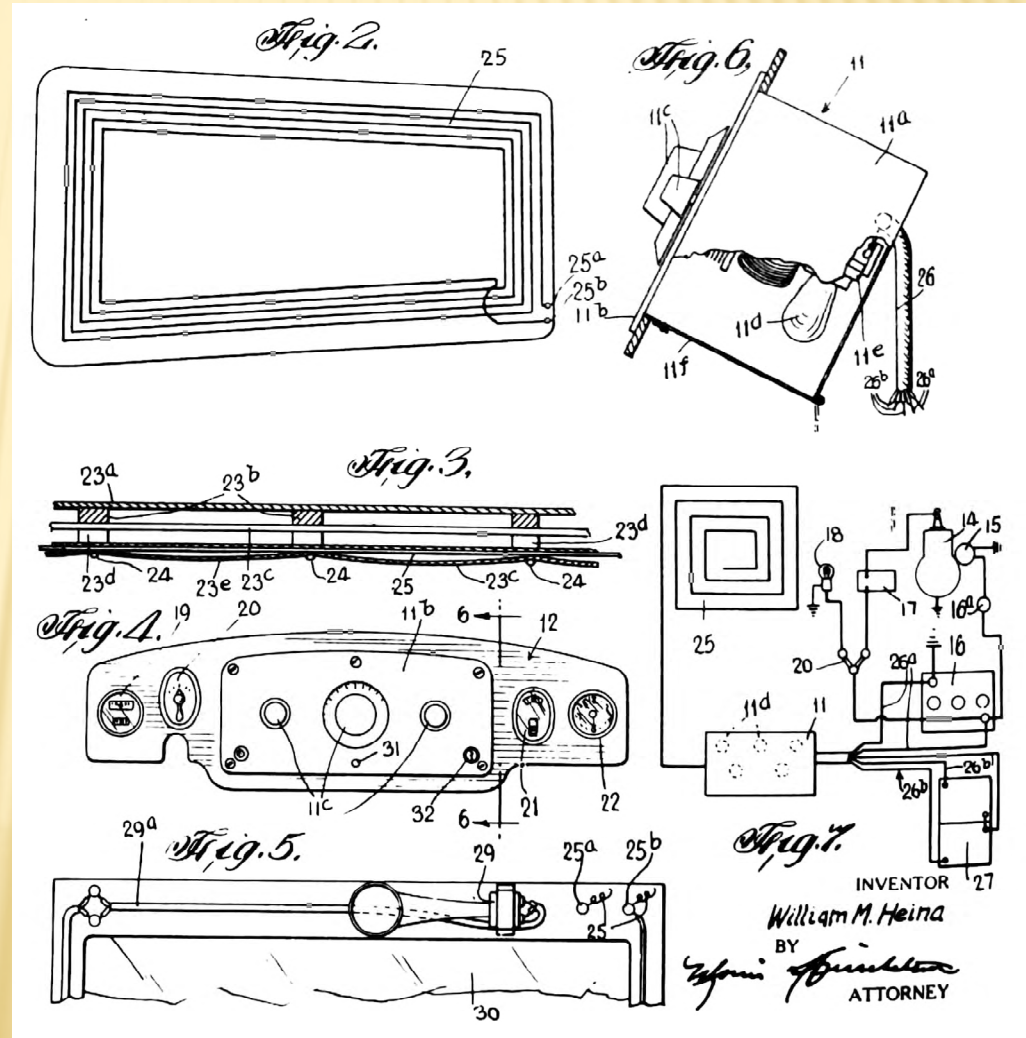
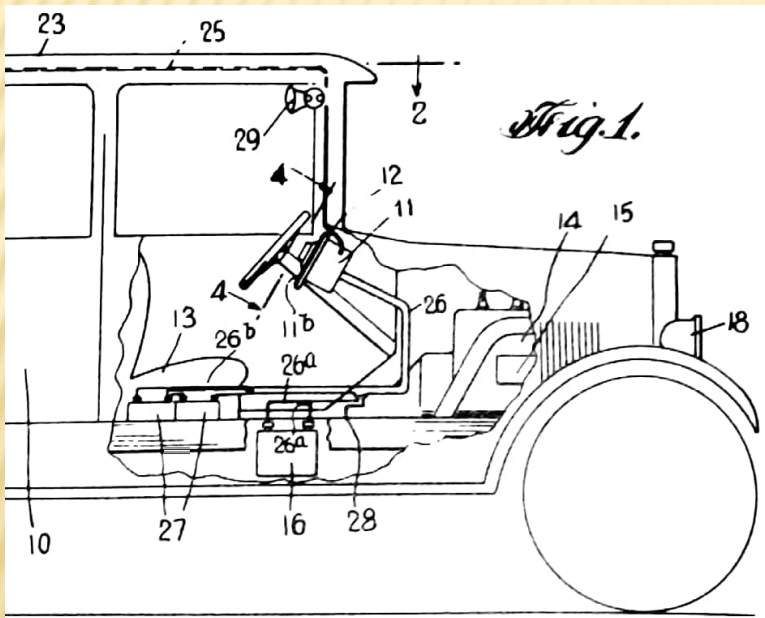
# SUPER-POWER RADIO STATIONS

- 1926 – WJZ, with transmitter in Bound Brook, NJ, and studio in NYC, goes from 1,000 to 50,000 watts



# AUTOMOBILE RADIO PATENT

- 1926 – William Heina files a patent for the Heinaphone.



INVENTOR

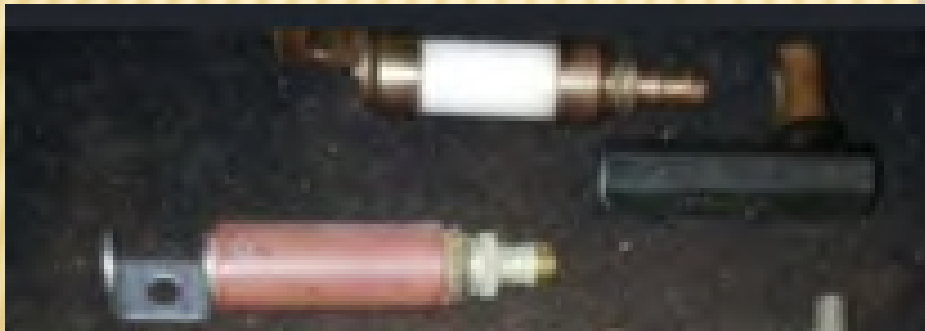
William M. Heina

BY

John P. ...  
ATTORNEY

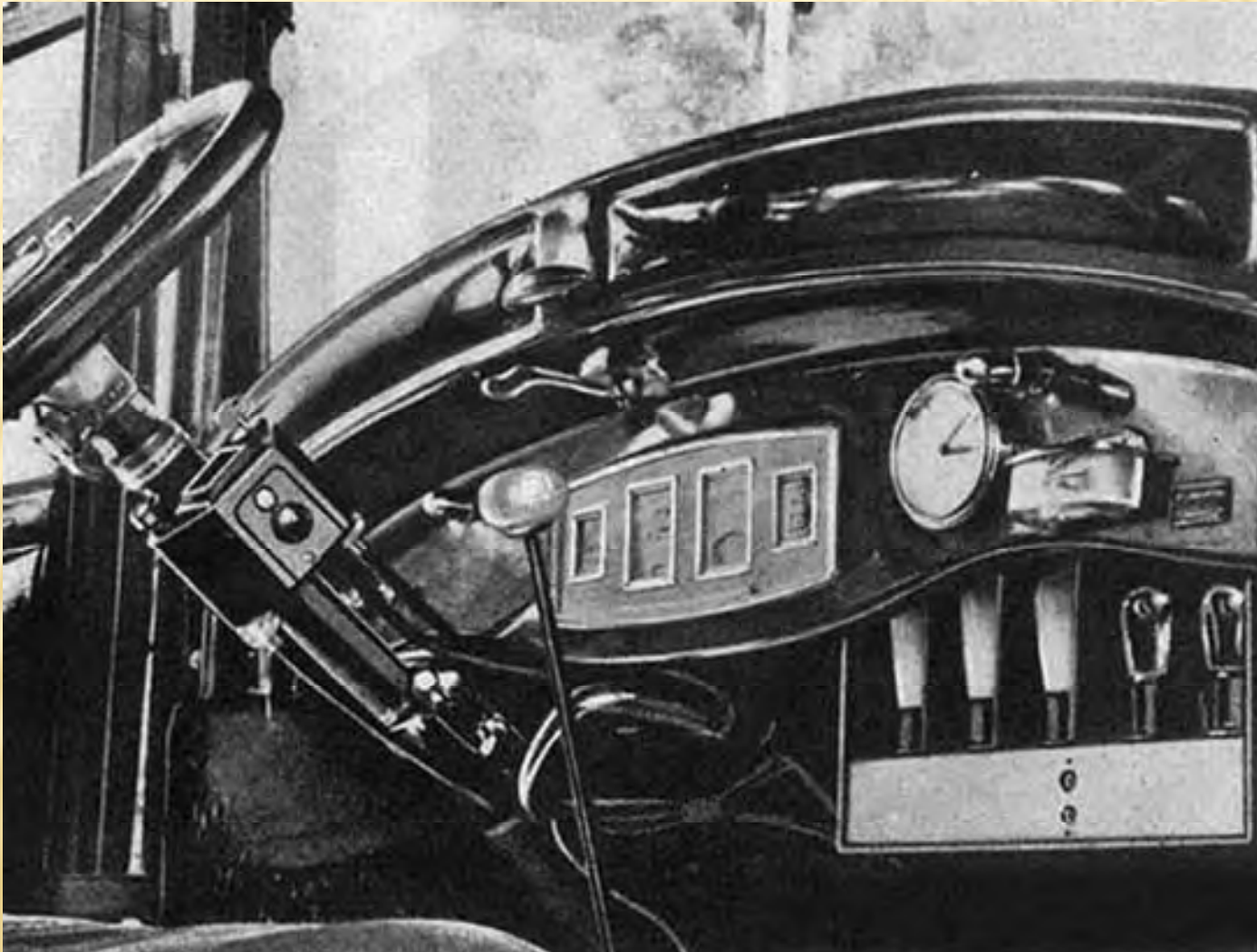
# SPARK PLUG SUPPRESSORS

- 1927 – Mr. A. A. Leonard of the Automobile Radio Corporation develops the Spark Plug Suppressor.



# AUTOMOBILE RADIO CORPORATION INTRODUCES THE TRANSITONE

- 1929 – The Transitone based on Heina's patent





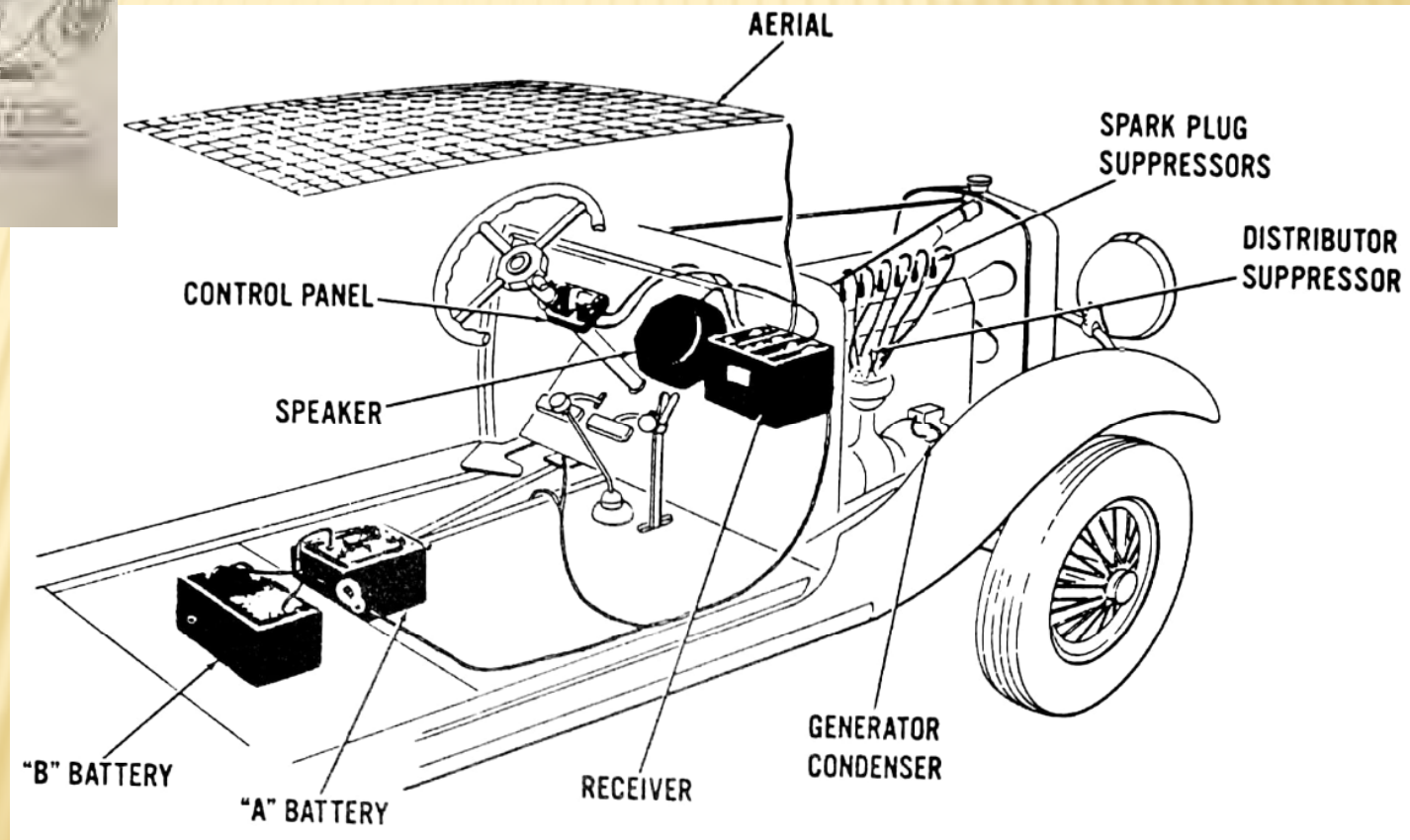
# GALVIN ENTERS THE CAR RADIO MARKET

- 1930 – ‘Motorola’ (concatenation of ‘Motor’ and ‘Victrola’) becomes the first mass-produced car radio

*Motorola*  
MODEL  
5T71



# INSTALLING A MOTOROLA RADIO





# MOTOROLA, WAVERING, AND LEAR



# DYNAMIC CAR RADIO GROWTH

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- Ten new companies making car radios by the end of 1930
- 1931 – Automatic Volume Control, new 6.3 filament volt tubes, and the Magnavox developed dynamic speaker were incorporated into car radio offerings

# NEW B+ SOURCES - DYNAMOTOR

- 1932 – Dynamotors come on the scene.

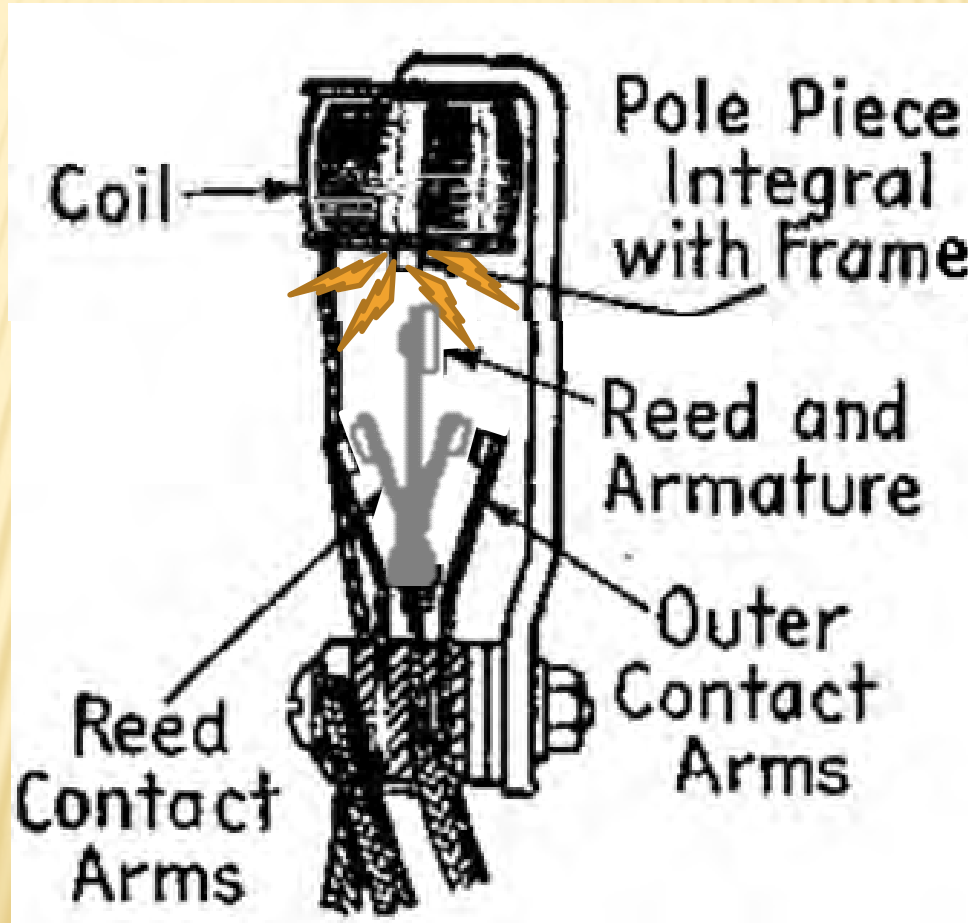


# NEW B+ SOURCES - VIBRATORS

- 1932 – Vibrators come into use.

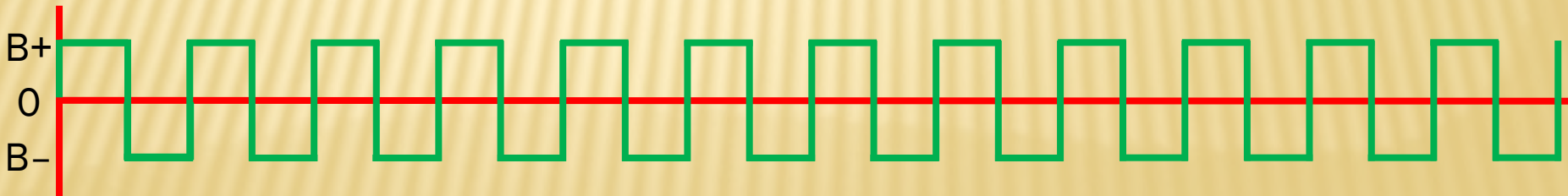
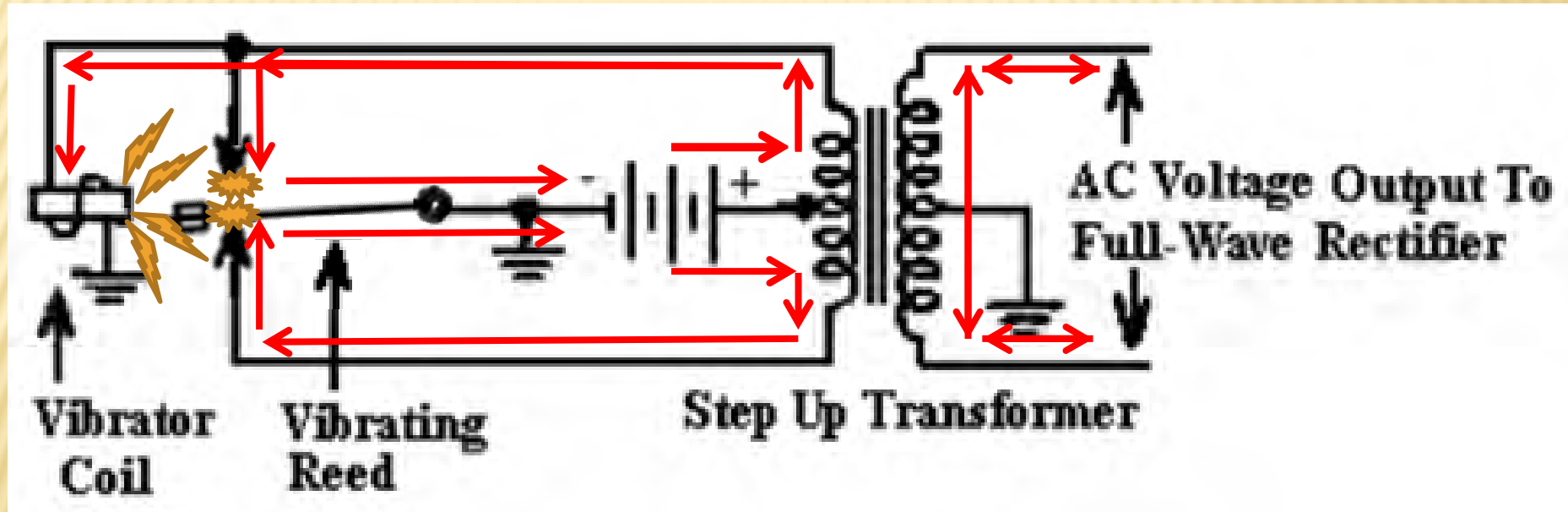


# VIBRATOR INTERNALS

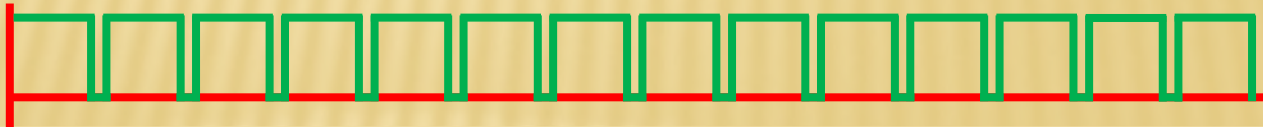
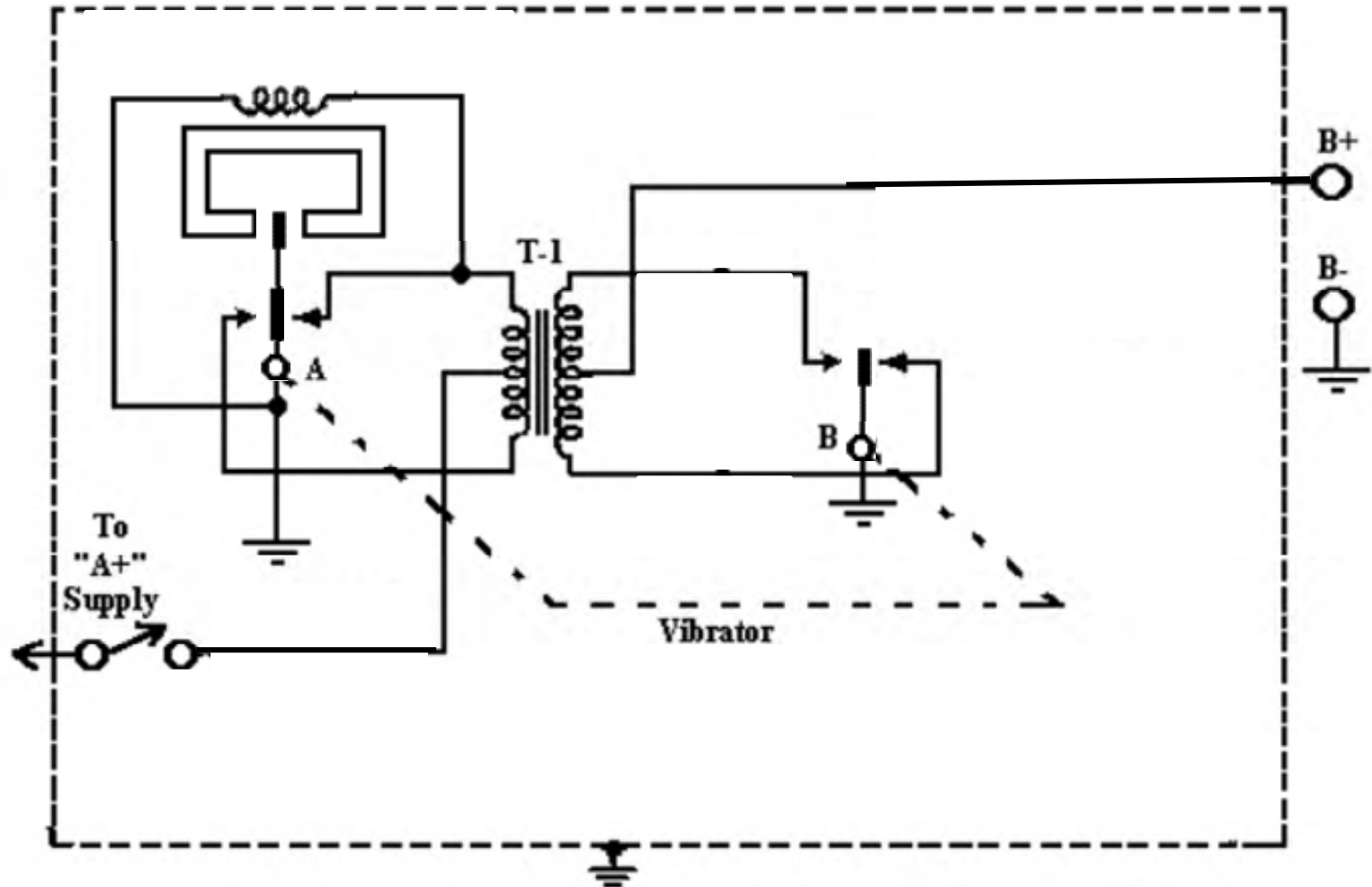




# HOW DOES A VIBRATOR WORK?



# SYNCHRONOUS VIBRATOR - MECHANICAL RECTIFICATION

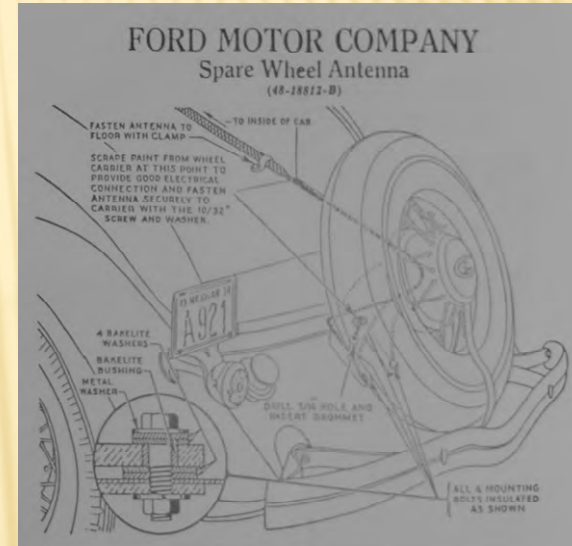
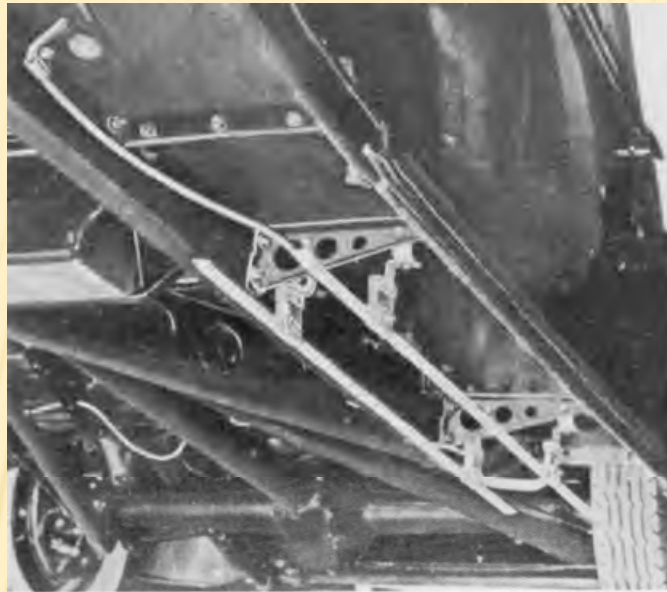


# MORE ADVANCEMENTS

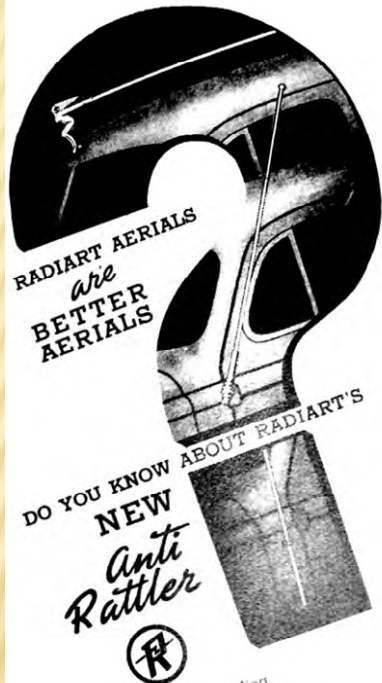
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- 1933 – New tubes introduced
- Car manufacturers were increasingly offering radios integrated into the dashboard
- 1935 – Motorola introduces a “Supressorless” radio
- The all-steel, ‘turret top’ car construction becomes popular

# EARLY CAR RADIO ANTENNAS



# WHIP ANTENNAS



FIRST, it was Radiart Styling everyone could SEE that. Then service men learned that Radiart Aerials are quiet, electrically — because built by a manufacturer who has ALWAYS done precision work. Owners found that Radiart aerials don't rust, tarnish or corrode because Radiart demands, and pays for the highest grade of nickel AND chrome plating on Admiralty Brass. Now comes the latest Radiart betterment — an ANTI RATTLER (Patent Applied for) which, at last, quiets that maddening noise of long telescopic aerials. Learn about the Anti-Rattler. Learn the whole Radiart Story of quality and profit.

THE RADIART CORP.  
SHAW AVENUE, CLEVELAND, OHIO  
Makers of RADIART VIBRATORS



It's RADIART  
for AERIALS in '38

## Introducing the **CHIEFTAIN**

MODEL F. M. — \$2.45



## WARD'S NEWEST TOP AERIAL

*Made of Stainless Steel and  
Brass — Chromium Plated  
— Telescopic*

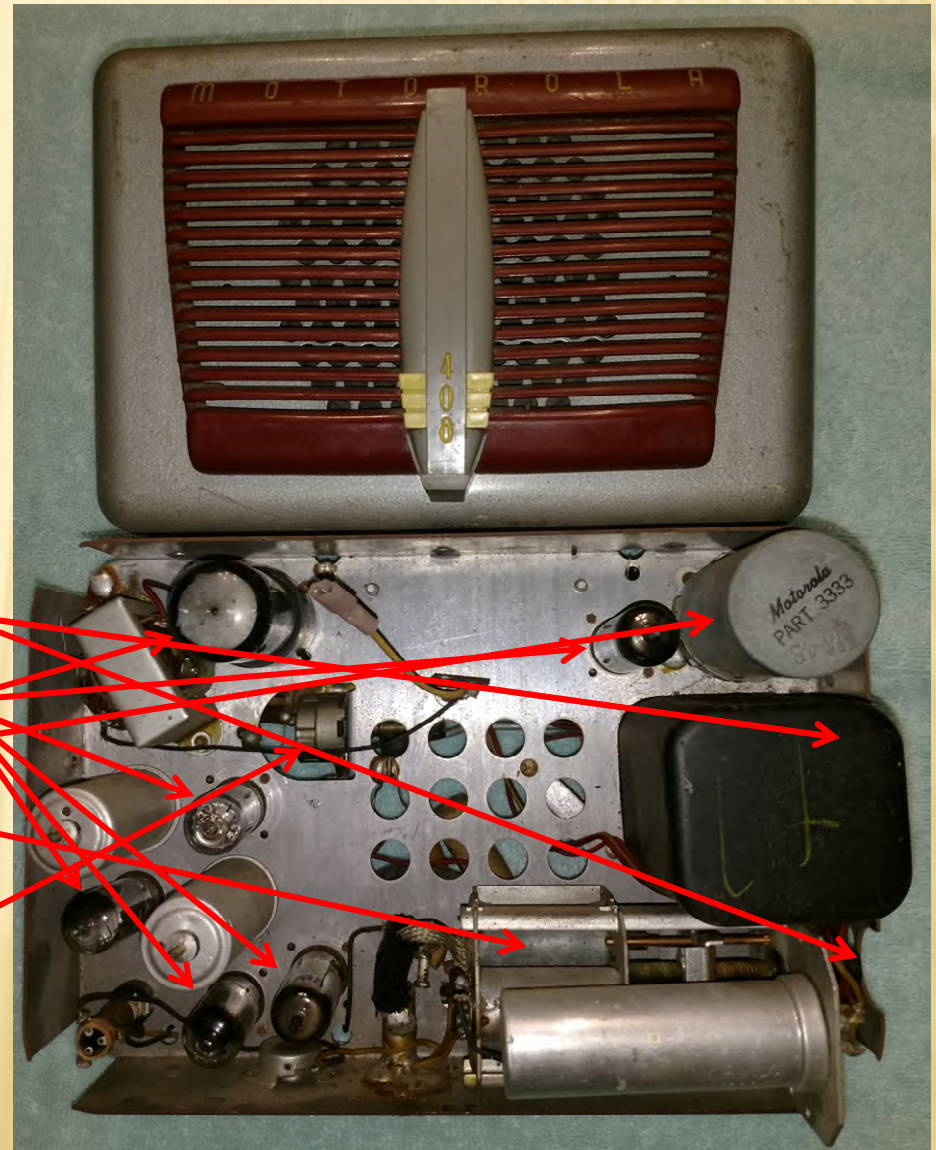
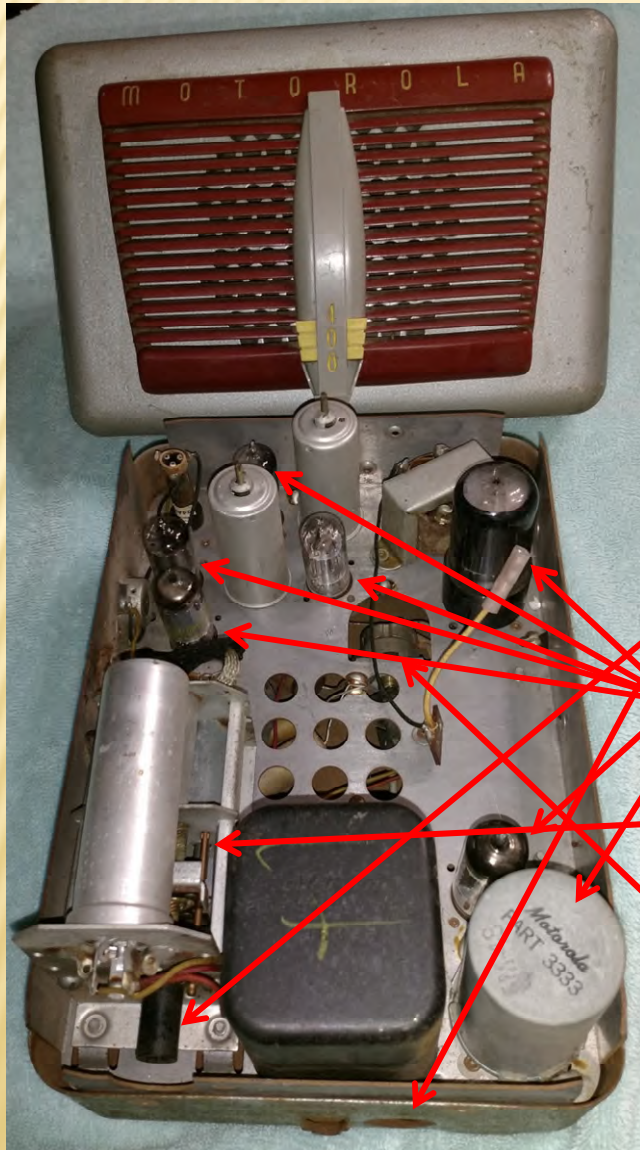
WARD PRODUCTS CORPORATION  
MANUFACTURES THE WORLD'S  
FINEST LINE OF AERIALS  
TOP -- POLE -- UNDERCAR  
SEND FOR CATALOG TODAY

**WARD PRODUCTS CORP**

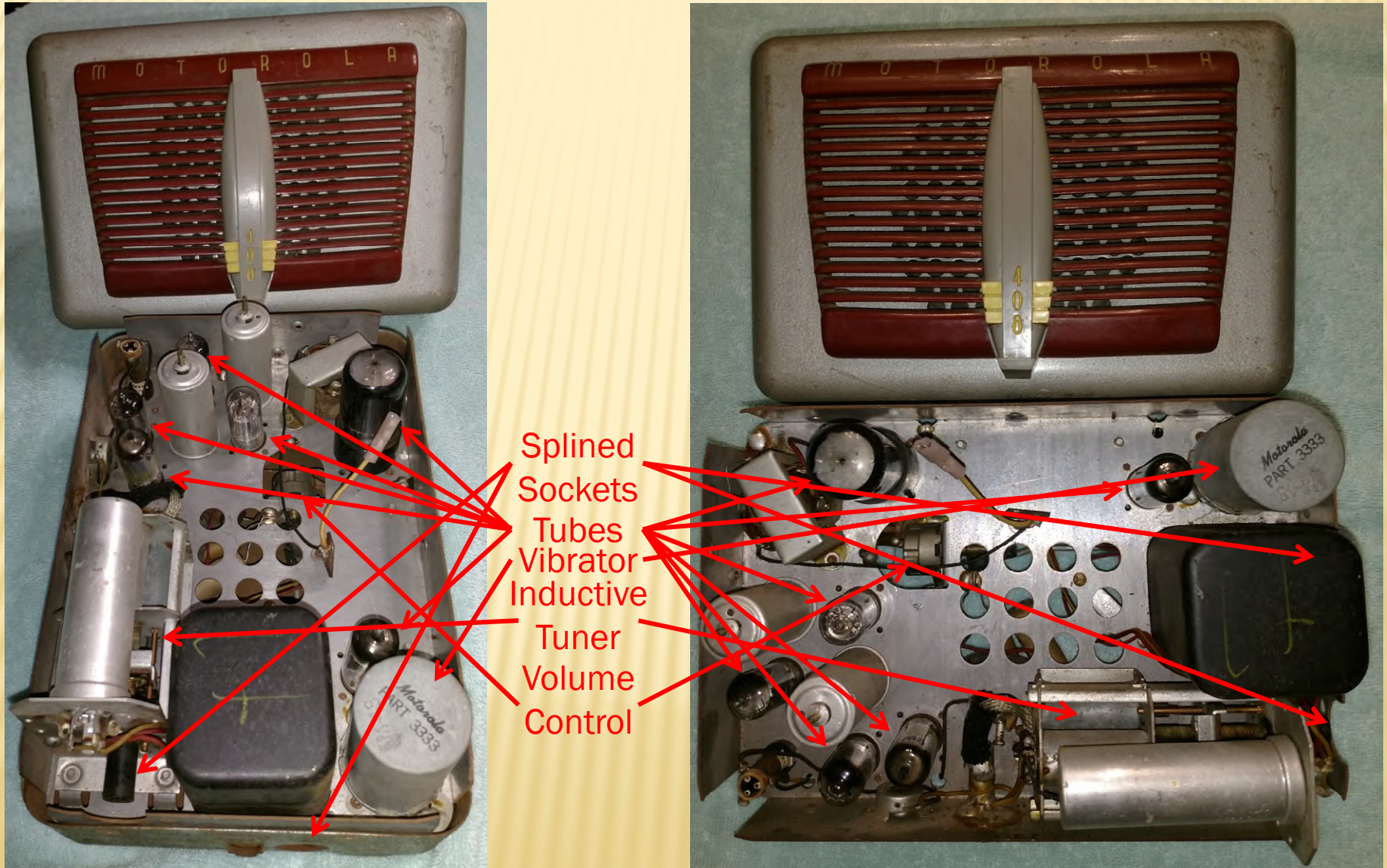
WARD BUILDING

CLEVELAND, OHIO

# POST WWII CAR RADIO



Splined  
Sockets  
Tubes  
Vibrator  
Inductive  
Tuner  
Volume  
Control



# POST WWII CAR RADIO



**New All-Transistor Car Radio**  
( Model 914HR )

**NO TUBES**

Actual Size

PHILCO  
Enlarged

**NO TUBES**

courtesy Rick Hirsch

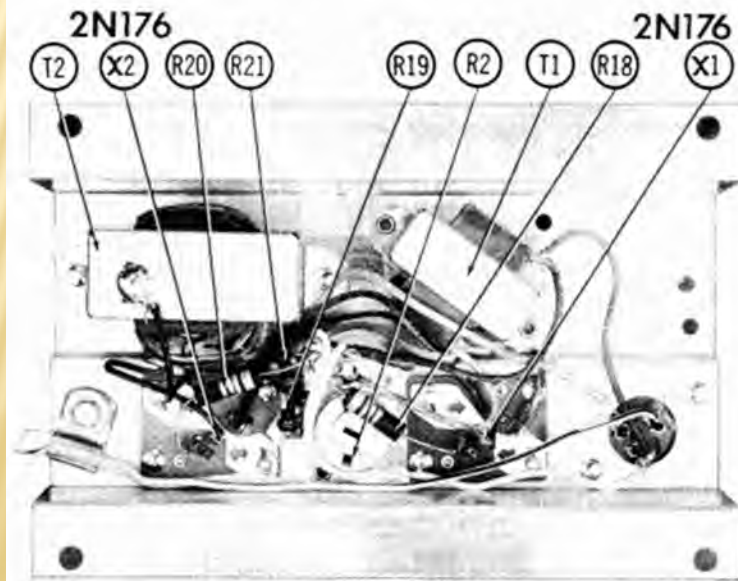


# LOW VOLTAGE TUBES FOR CAR RADIO

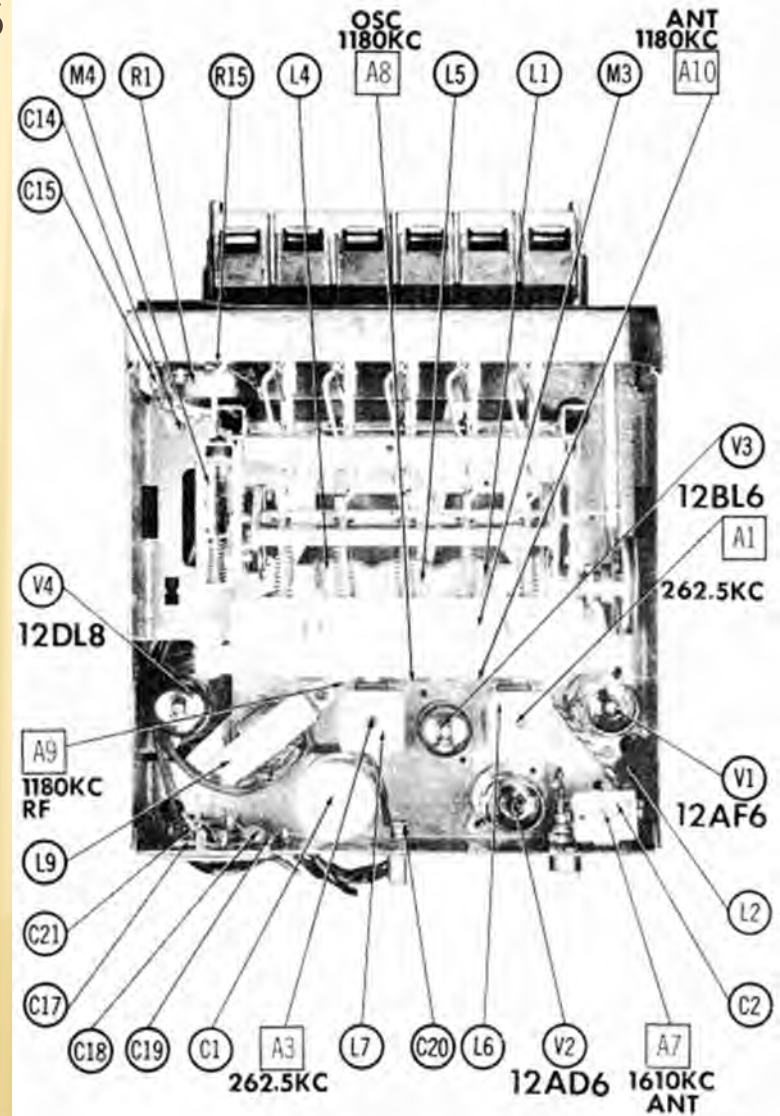
## ➤ 1958 - Hybrid Car Radios



POWER CHASSIS



CHASSIS—TOP VIEW





# REFERENCES

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