

ATWATER KENT MUSEUM

TUNING IN TO YESTERDAY

Vintage Sets from the
Golden Age of Broadcasting



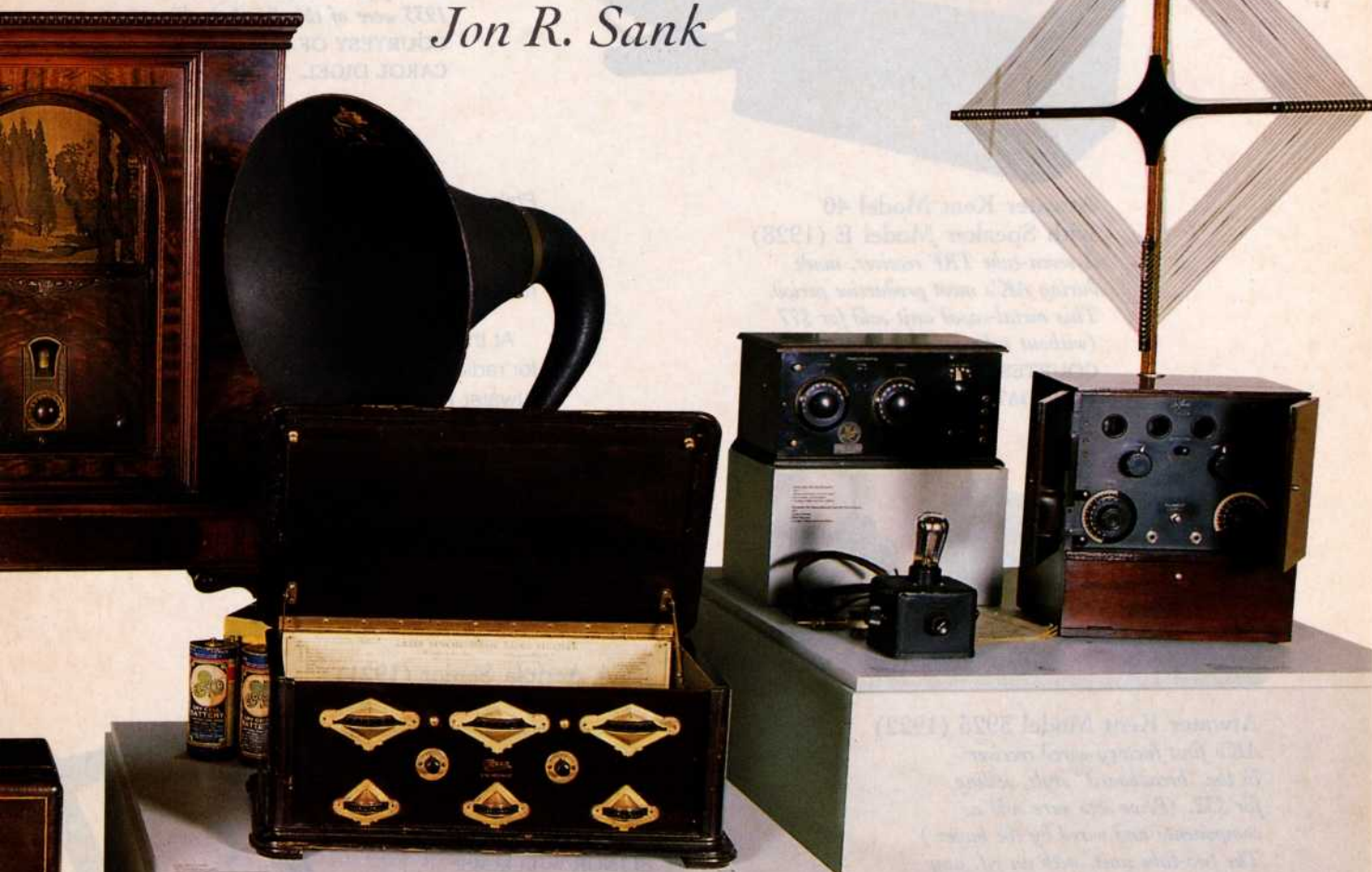


"Sit back, relax . . . turn on your imagination, and pull your easy chair closer to the Atwater Kent's tapestry-covered speaker." These words were heard nightly in 38 states as Gary Hodgson introduced his show *Radio Classics* on clear-channel WCAU-AM in Philadelphia. (The program ended when the station changed hands in 1990.) Hodgson's loyal fans, scattered throughout the eastern and central states, demonstrated that people of all ages are discovering or rediscovering the magic of early radio. I especially enjoyed his rebroadcasts of radio drama, and I learned that the "picture" was much better on radio than on television because it was in my mind. Of course, audiophiles know

that listening to radio or recordings permits you to do useful tasks at the same time, thus preventing you from becoming a tube turnip.

Hodgson promoted and participated in a splendid exhibit of early radio receivers at the Atwater Kent Museum in Philadelphia. The exhibit honored the 50th anniversary of the museum's founding by radio magnate A. Atwater Kent, as well as 48 years of service by his son A. Atwater Kent, Jr., as its founding president and later president emeritus. This is Philadelphia's history museum, and radios usually account for only a small portion of the items on display, but they were the stars of *Tune In*—

Jon R. Sank



Photographs: Dave King

ATWATER KENT MUSEUM

Philco Neutrodyne Model 512
with Speaker Model 214 (1928)
*A seven-tube, a.c.-powered TRF receiver.
It was made in Philco's first year of
radio production and cost \$125.*
COURTESY OF RALPH AND
ELINOR WILLIAMS.



Philco Model 81 (1933)
*A four-tube superheterodyne receiver.
Designed for low cost because of the
Depression, it sold for about \$25.
Seventy percent of the radios sold in
1933 were of this "cathedral" style.*
COURTESY OF BILL AND
CAROL DIGEL.



Atwater Kent Model 40
with Speaker Model E (1928)
*A seven-tube TRF receiver, made
during AK's most productive period.
This metal-cased unit sold for \$77
(without tubes).*
COURTESY OF ATWATER KENT
FOUNDATION.

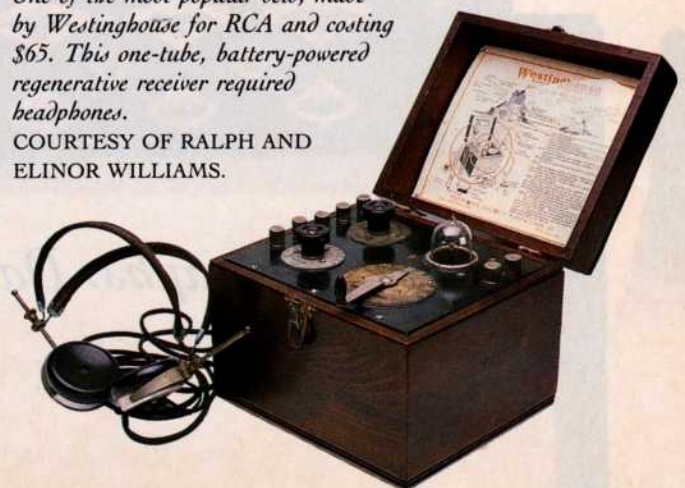
*Philadelphia Radio, 1920-1950. Although the
exhibit included some memorabilia from local
broadcasting stations, most of the items were
radio receivers from the '20s, '30s, and '40s.*

At that time, Philadelphia was a world center
for radio manufacturing. From 1927 to 1928, the
Atwater Kent Co. sold one million sets, becoming
the world's largest maker of radios. Philco,
also based in Philadelphia, made only batteries
for radios until 1928, when it first made its own
sets, selling 96,000. Just across the Delaware
River in Camden, New Jersey, RCA took over



Atwater Kent Model 3925 (1922)
*AK's first factory-wired receiver
in the "breadboard" style, selling
for \$32. (Prior sets were sold as
components and wired by the buyer.)
The two-tube unit, with an r.f. amp
and a detector/audio amp, required
a battery as well as headphones.
The buyer added a vario-coupler
to make it a regenerative circuit,
thus saving AK from infringing on
the Armstrong-RCA patent.*
COURTESY OF RALPH AND
ELINOR WILLIAMS.

RCA Aeriola Senior (1921)
*One of the most popular sets, made
by Westinghouse for RCA and costing
\$65. This one-tube, battery-powered
regenerative receiver required
headphones.*
COURTESY OF RALPH AND
ELINOR WILLIAMS.





Grebe Synchronphase (1925)
A five-tube TRF set, costing \$155.
It was battery-powered but worked
with a speaker. The name reflected
a popular interest in new technology.
COURTESY OF BILL AND
JANE DENK.



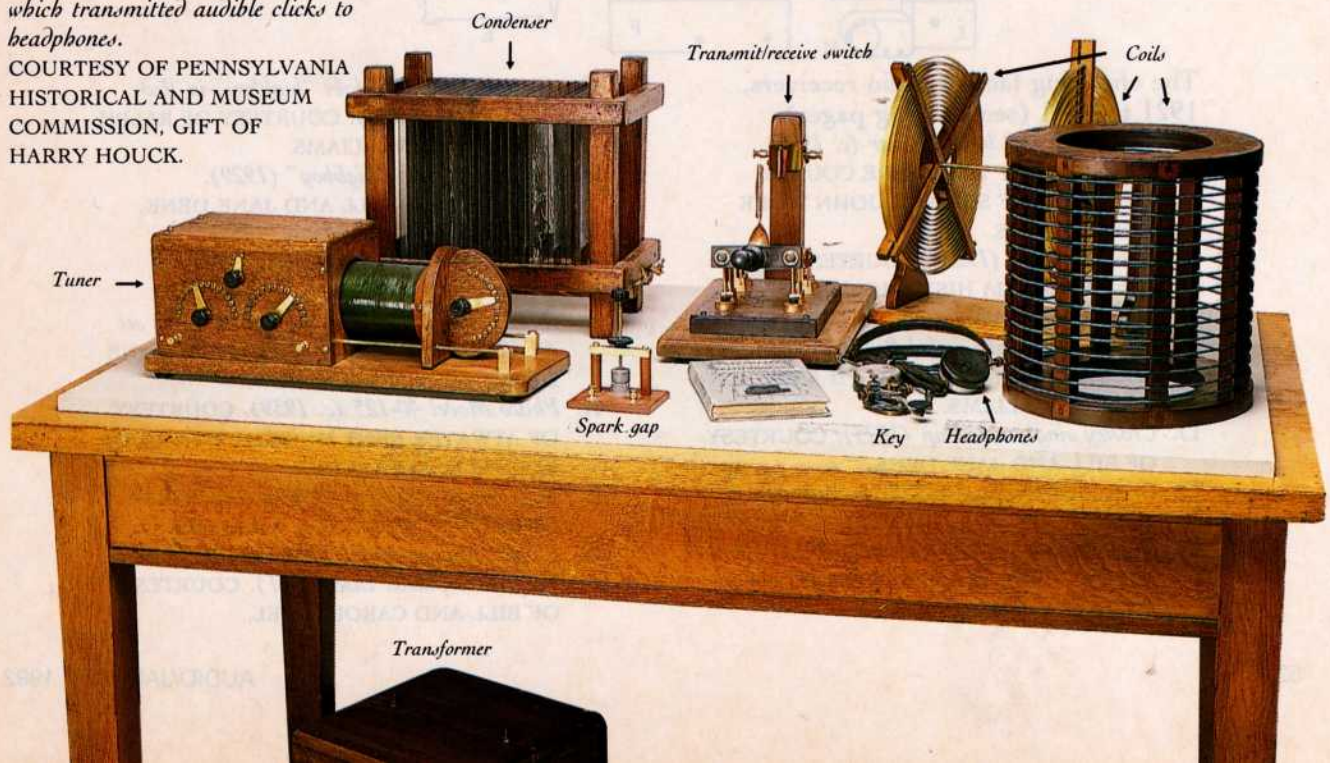
Spark-gap transmitter and receiver (1909)

*Made by 13-year-old Harry Houck,
this apparatus sent and received
Morse code (CW) signals only.
When connected to a battery, the
telegraph key and the high-voltage
transformer caused a spark to jump
the gap when the key was released.
The r.f. component of this energy
was tuned by the coils and condenser
and then radiated by an antenna.
A distant antenna was connected to
the tuner and a crystal detector,
which transmitted audible clicks to
headphones.*

COURTESY OF PENNSYLVANIA
HISTORICAL AND MUSEUM
COMMISSION, GIFT OF
HARRY HOUCK.

the Victor Talking Machine Co. plant in 1929
and began manufacturing radios itself, whereas
before they had been built for RCA by Westing-
house and General Electric.

RCA held inventor Edwin H. Armstrong's pat-
ents for the superheterodyne and regenerative
receivers in the 1920s (the company also had a
monopoly on vacuum tubes until 1927). So
Atwater Kent, Philco, and other competitors ini-
tially had to make tuned radio frequency (TRF)
receivers. (The TRF circuit lacked selectivity but
could offer higher audio fidelity than the super-





RCA Radiola 60 with Model 103 Speaker (1928), shown with Atwater Kent Doublet Antenna Kit Type D (c. 1927)

The first superheterodyne receiver powered by a.c., costing \$147.

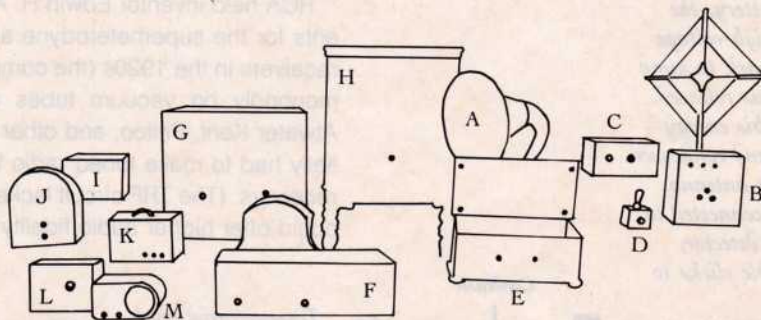
This nine-tube set used the newly developed RCA heater-cathode tube (Type 27), which reduced audio hum.

RADIO AND SPEAKER COURTESY OF RALPH AND ELINOR WILLIAMS.
ANTENNA KIT COURTESY OF ATWATER KENT MUSEUM.

het.) To compete with the more advanced superhet circuit, the TRF sets had various high-tech-sounding names, such as Neutrodyne, Synchronphase, and Radiodyne.

After the museum exhibit closed but prior to its dismantling, *Audio* was granted the privilege of photographing the display. The pictures here show the most popular radios of the Golden Age of Broadcasting, each representing an important milestone in the history of its manufacturer. (The notable exception is the one-of-a-kind spark-gap transmitter/receiver.)

I am indebted to the Atwater Kent Museum and to Curator of Exhibits John Mayer for providing detailed information on the exhibit, as well as to the owners and donors of the radios for permitting us to photograph their precious antiques. **A**



The changing face of radio receivers, 1921 to 1941 (see opening pages)

- A. *Magnavox R-2 horn speaker* (c. 1921). COURTESY OF DELAWARE COUNTY INSTITUTE OF SCIENCE, JOHN WORK COLLECTIONS.
- B. *DeForest D-10* (1922). COURTESY OF PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION.
- C. *Transcontinental/Gimbel Brothers Type ZR-4* (1924). COURTESY OF RALPH AND ELINOR WILLIAMS.
- D. *Crosley single-tube Pup* (1925). COURTESY OF BILL AND JANE DENK.
- E. *Grebe Synchronphase* (1925; see separate photo).
- F. *RCA Radiola 17 with matching Model 100A speaker* (1927). COURTESY OF RALPH AND ELINOR WILLIAMS.

- G. *Atwater Kent Model 44 "highboy" in Red Lion cabinet* (1928). COURTESY OF RALPH AND ELINOR WILLIAMS.
- H. *Philco Model 95 "highboy"* (1929). COURTESY OF BILL AND JANE DENK.
- I. *Atwater Kent Model 275* (c. 1933). COURTESY OF RALPH AND ELINOR WILLIAMS.
- J. *RCA Victor Model 4-T "cathedral"-style set* (c. 1933). COURTESY OF BILL AND JANE DENK.
- K. *Philco Model 40-125* (c. 1939). COURTESY OF ATWATER KENT MUSEUM, ESTATE OF ROBERT C. ALEXANDER.
- L. *RCA Model 75X18* (c. 1940). COURTESY OF RALPH AND ELINOR WILLIAMS.
- M. *F.A.D. Andrea Model 1000 with Art Deco design and plastic case* (1941). COURTESY OF BILL AND CAROL DIGEL.

Atwater Kent Model 10
with Model L Speaker (1923)
*AK's most popular "breadboard"-style
radio, a five-tube, battery-powered,
factory-wired set. About 15,000
sold at \$37.50 each. The Model 30
(background) was similar but had
ganged condensers and was housed
in a cabinet.*

MODEL 10 COURTESY OF
ATWATER KENT MUSEUM,
GIFT OF PAUL CLAPFFER
IN MEMORY OF FRANK LUDTKA.
MODEL L COURTESY OF
ATWATER KENT FOUNDATION.
MODEL 30 COURTESY OF
RALPH AND ELINOR WILLIAMS.



Stromberg-Carlson
Model 420R (1939)
*A typical console radio, featuring
AM and short-wave bands.*
COURTESY OF
ATWATER KENT MUSEUM,
GIFT OF JOSEPH DERRY.