

**Harrell V. Noble Papers**  
**A Finding Aid to the Collection in the Library of Congress**



**Manuscript Division, Library of Congress**  
**Washington, D.C.**  
**2008**

Contact information: <http://hdl.loc.gov/loc.mss/mss.contact>

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Additional search options available at: <https://hdl.loc.gov/loc.mss/eadmss.ms010232>

Prepared by Melinda K. Friend

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## Collection Summary

**Title:** Harrell V. Noble Papers

**Span Dates:** 1923-2003

**Bulk Dates:** (bulk 1932-1972)

**ID No.:** MSS85333

**Creator:** Noble, Harrell V. (Harrell Vaun), 1907-1982

**Extent:** 2,000 items

**Extent:** 9 containers plus 2 oversize

**Extent:** 3.6 linear feet

**Language:** Collection material in English

**Location:** Manuscript Division, Library of Congress, Washington, D.C.

**LC Catalog record:** <https://lccn.loc.gov/mm2006085333>

**Summary:** Engineer. Correspondence, biographical material, awards, speeches and writings, photographs, artifacts, printed matter, and other papers relating primarily to Noble's career in electronic engineering.

## Selected Search Terms

The following terms have been used to index the description of this collection in the LC Catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically.

### People

Brown, William C., 1916- --Correspondence.

Cummins, Stewart--Correspondence.

Dicke, Amos H.--Correspondence.

Joseph, Linda C.--Correspondence.

Kilby, Jack S. (Jack St. Clair), 1923-2005--Correspondence.

Kilgore, G. Ross--Correspondence.

Noble, Harrell V. (Harrell Vaun), 1907-1982.

### Organizations

Crosley Radio Corporation.

Radio Corporation of America.

Westinghouse Electric & Manufacturing Company.

### Subjects

Electrical engineering.

Electronics.

Microelectronics.

Molecular electronics.

Radar.

Radio--Receivers and reception.

Radio--Transmitters and transmission.

Radio.

World War, 1939-1945.

### Places

Wright-Patterson Air Force Base (Ohio)

### Occupations

Engineers.

## Provenance

The papers of Harrell V. Noble, engineer, were given to the Library of Congress by his daughter, Linda C. Joseph, in 2006

## Copyright Status

Copyright in the unpublished writings of Harrell V. Noble in these papers and in other collections of papers in the custody of the Library of Congress has been dedicated to the public.

## Access and Restrictions

The papers of Harrell V. Noble are open to research. Researchers are advised to contact the Manuscript Reading Room prior to visiting. Many collections are stored off-site and advance notice is needed to retrieve these items for research use.

## Preferred Citation

Researchers wishing to cite this collection should include the following information: Container number, Harrell V. Noble Papers, Manuscript Division, Library of Congress, Washington, D.C.

## Biographical Note

<b>Date</b>	<b>Event</b>
1907, Apr. 14	Born, Noblesville, Ind.
1929	B.S., Purdue University, West Lafayette, Ind.
1929-1930	Vacuum tube engineer, Grigsby-Grunow Co., Chicago, Ill.
1930-1933	Research engineer, High Power Tube Laboratory, Westinghouse Electronic and Manufacturing Co., East Pittsburgh, Pa., performing research on medium to microwave vacuum tubes
1933	Inventor and demonstrator, power transmission by radio, World's Fair, Chicago, Ill.
1933-1935	Research engineer, Gulf Research and Development Corp., Pittsburgh, Pa., performing research on tuned circuit filters using the properties of solid state materials
circa 1934	Married Rosalind Wilson
1935-1941	Project engineer, RCA Manufacturing Co., Camden, N.J., developing and designing commercial and government transmitters
1941-1946	Chief engineer, Transmitter Department, Crosley Radio Corp., Cincinnati, Ohio Chief engineer, Government Radio Department, Crosley Division, Aviation Corp., Cincinnati, Ohio, managing the development of several World War II radio receivers, transmitters, radars, beacons, and Identification Friend or Foe (IFF) equipment
1946-1951	Technical director, Research and Plans Branch, Electronic Subdivision, Wright Field (later Wright-Patterson Air Force Base), Dayton, Ohio, directing electronic research efforts of the U.S. Air Force
1951-1965	Assistant chief and technical director, Electron Components Laboratory, Wright-Patterson Air Force Base, managing and directing the research and development programs in electronic components, consisting of transistors, capacitors, resistors, radomes, lasers, and molecular electronics
1965-1972	Director, Electronic Technology Division, Air Force Avionics Laboratory, Wright-Patterson Air Force Base, managing and directing basic research and development in the fields of lasers and molecular electronics
1982, Oct. 6	Died, Xenia, Ohio

## Scope and Content Note

The papers of Harrell Vaun Noble (1907-1982) span the years 1923-2003, with the bulk of the material dating from 1932 to 1972. The papers, organized alphabetically by type of material or topic, primarily cover Noble's career in electronic

engineering involving radios and transmitters especially during World War II and molecular electronics, today called microelectronics, at the Westinghouse Electronics and Manufacturing Company and at Wright-Patterson Air Force Base.

The biographical file contains clippings, résumés, research material, and articles documenting the breadth of Noble's career. The articles written by his children along with the accompanying photographs are especially informative about the various projects, developments, and scientific breakthroughs achieved by Noble. A majority of the photographs pertain to Noble's time at the Westinghouse Electronics and Manufacturing Company. Photographs encompassing his later career are filed separately.

Of interest in the research material is correspondence written to Noble's daughter, Linda C. Joseph, by associates and acquaintances such as Jack S. Kilby and William C. Brown in praise of his pioneering achievements in microelectronics. Other correspondents include Stewart Cummins, Amos H. Dicke, and G. Ross Kilgore. Noble's accomplishments are also documented in his awards, certificates, patents, and in the printed matter.

Noble's years at the Radio Corporation of America and the Crosley Radio Corporation, later Aviation Corporation, are represented by notebooks containing photographs of equipment and field tests along with technical manuals. The material covers the development of commercial and government transmitters as well as several World War II radio receivers, transmitters, and radars including the Signal Corps SCR-284 and SCR-694 communication sets. Published articles and printed matter from the 1930s and 1940s kept for reference supplement this material.

The speeches and writings contain the majority of the information on molecular electronics and consist of Noble's published articles, papers, and presentations. Of interest is the unpublished book of essays entitled "Molecular Electronics" for which chapters were contributed by various persons in the field, most notably Jack S. Kilby. The molecular electronics material is supplemented by photographs, artifacts such as an early functional component from General Electric and early integrated circuits, and Noble's annotated business cards on which he recorded meetings and discussions.

## **Arrangement of the Papers**

This collection is arranged alphabetically by type of material.

# Container List

Container	Contents
BOX 1	Annotated business cards, 1964-1972, undated
BOX 1	Artifacts, circa 1954-circa 1972 <i>See Oversize</i>
BOX 1	Awards and certificates, 1954-1979 <i>See also Oversize</i> (10 folders)
BOX 1	Biographical file
BOX 1	Articles by Noble's children with photographs, circa 1930-circa 1932, 1962, undated (2 folders)
BOX 1	Civil service records, 1930, 1945-1949, 1957, 1965-1968
BOX 1	Clippings, 1932, 1941-1942, 1952, 1959-1964, 1983
BOX 1	General, 1929-circa 1933, 1956-1972, 1978, 1989, undated
BOX 2	Research material, 1988-1993, 2003
BOX 2	Transcript of reminiscences, 1981
BOX 2	General correspondence, 1933-1940, 1947-1948, 1958-1977-1982, undated (2 folders)
BOX 2	Gwinn, Cecil W., circa 1966-1972
BOX 2	Keonjian, Edward, <i>Microelectronics: Theory, Design, and Fabrication</i> , inscribed volume, 1963
BOX 2	Miscellany
BOX 2	“Gallium Arsenide Microwave Device Technology,” undated
BOX 2	Illustrations, undated
BOX 2	RCA Victor Rifle Club, 1937-1939
BOX 2	Slides, 1960, circa 1973
BOX 3	Wright-Patterson Air Force Base, Dayton, Ohio, 1946-1947, 1968-1971
BOX 3	Patents, 1936-1937
BOX 3	Photographs, 1929, circa 1941-circa 1946, 1952-1972, undated (5 folders)
BOX 3	Printed matter, 1948, 1955-1973 (3 folders)
BOX 3	Radios and transmitters
BOX 3	Class B amplifier, 1931-1932, undated
BOX 4	Classes
BOX 4	Transmitter design, 1941
BOX 4	Unidentified, circa 1941
BOX 4	Crosley Radio Corp.
BOX 4	Notebook, 1944-1945 (3 folders)
BOX 4	Printed matter, 1942-1944, undated (2 folders)
BOX 5	Notes, 1942, undated
BOX 5	Printed matter
BOX 5	Articles and manuals, 1923, 1932-1946 (4 folders)

## Container List

Container	Contents
BOX 5	Charts and graphs, 1929-1945 <i>See also Oversize</i> (2 folders)
BOX 6	Radio Corp. of America
BOX 6	Notebook, 1939-1940 (3 folders)
BOX 6	Printed matter, 1937-1943, undated
BOX 6	Specifications for export transmitters, 1935-1940
BOX 6	Speeches and writings
BOX 6	General, 1940, 1959
BOX 6	Speeches
BOX 6	General, 1958-1959, 1965
BOX 6	“Molecular Electronics - A Key to Reliability,” 1961
BOX 7	Writings
BOX 7	General, 1932-1935, 1944, 1957-1962, 1968-circa 1970 (2 folders)
BOX 7	“Molecular Electronics”
BOX 7	Chapters, circa 1960-circa 1963
BOX 7	Barditch, I. F., and Andrew W. McCourt (2 folders)
BOX 7	Henkels, H. W. (2 folders)
BOX 8	Kilby, Jack S. (2 folders) <i>See also Oversize</i>
BOX 8	Lehmann, William (2 folders)
BOX 8	Lesk, Israel Arnold
BOX 8	Myers, Peter B.
BOX 8	Noble, Harrell V.
BOX 9	Schreibner, Edwin J. and Berry O. Pyron (3 folders)
BOX 9	Correspondence, 1960-1963
BOX 9	Notes and status report, 1960-1963
BOX 9	“Microelectronic Progress,” 1964-1965, undated (2 folders)
BOX 9	Transparencies, undated
BOX OV 1	Oversize
BOX OV 1	Artifacts, circa 1954-circa 1972 (Container 1)
BOX OV 2	Awards and certificates, 1961-1965, 1972 (Container 1)
BOX OV 2	Radios and transmitters
BOX OV 2	Printed matter
BOX OV 2	Charts and graphs
BOX OV 2	Graphs, 1934 (Container 5)
BOX OV 2	Speeches and writings
BOX OV 2	Writings
BOX OV 2	“Molecular Electronics”
BOX OV 2	Chapters
BOX OV 2	Kilby, Jack S.
BOX OV 2	Later drafts, Fig. 4, circa 1960-circa 1963 (Container 8)