

Harrell V. Noble Papers

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Prepared by Melinda K. Friend

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 ; 9 containers plus 2 oversize ; 3.6 linear feet

Language: Collection material in English

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

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 Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

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.

Administrative Information

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Copyright in the unpublished writings of Harrell V. Noble in these papers and in other collections of papers in the custody of the Library of Congress has been dedicated to the public.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

| <i>Date</i> | <i>Event</i> |
|---------------|---|
| 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 |

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

| <i>Container</i> | <i>Contents</i> |
|------------------|---|
| 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

| <i>Container</i> | <i>Contents</i> |
|------------------|--|
| 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) |