



Smithsonian
National Museum of American History
Kenneth E. Behring Center

Guide to the Ralph H. Baer Papers

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by Cory Bernat and Alison Oswald

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Collection Overview

Repository:	Archives Center, National Museum of American History
Creator:	Baer, Ralph H., 1922-2014
Title:	Ralph H. Baer Papers
Dates:	1943-2006
Quantity:	3 cubic feet, 11 boxes and 1 oversize folder, includes videocassettes, compact discs, and audio cassettes
Abstract:	Ralph H. Baer was a German-born ordnance specialist, inventor, and engineer. He was a pioneer of early videogame technology. The papers include autobiographical materials; firearms notes, manuscripts, and photographs; and videogame and television engineering notes, diagrams, schematics, and video documentation.
Language:	Collection text is in English.

Administrative Information

Acquisition Information

The collection was donated by Ralph H. Baer in 2003.

Provenance Information

Working in consultation with Ralph Baer from 2002-2005, David Winter provided important assistance in the discovery, identification, and organization of additional videogame history documentation relating to Ralph H. Baer, held at the Chicago law firm of Leydig, Voit & Mayer.

Separated Materials

The Division of Medicine and Science holds artifacts related to this collection including early video game prototypes and TV Game products.

TV Game Unit #1 (TVG#1); 1966; vacuum tube spot generator with Heathkit IG-62 Generator (See Accession 2006.0102.01)

Heathkit IG-62; used with TVG #1 (See Accession 2006.0102.02)

TV Game Unit #2 (TVG #2), aka the "Pump Unit," 1967; large aluminum chassis with wooden "pump" handle (See Accession 2006.0102.03)

TV Game Unit #7 (TVG#7), aka "Brown Box," 1967/1968; prototype for Magnvox Odyssey (See Accession 2006.0102.04)

Cardboard program cards for use with Brown Box (See Accession 2006.0102.05)

Lightgun, 1967/1968; game accessory for Brown Box (See Accession 2006.0102.06)

TV Game Unit #8, 1968; "de/dt" (velocity responsive) ballgame chassis for use with Brown Box (See Accession 2006.0102.07)

Magnavox Odyssey (Model ITL200) video game unit, 1972; with all accessories in the original carton (See Accession 2006.0102.08)

Milton-Bradley Company SIMON handheld microprocessor-control game, 1978 (See Accession 2006.0102.09)

Ideal Toy Company MANIAC microprocessor-control game, 1979, in original box with game instructions (See Accession 2006.0102.10)

Golf Game accessory, 1968; golf ball mounted on joystick handle for use with Brown Box (See Accession 2006.0102.11)

"Brown Box" programming card, target shooting, 1967 (See Accession 2006.0102.12)

Related Material

Materials at the Archives Center, National Museum of American History

[Ralph H. Baer Innovative Lives Presentation](#), August 15, 2009 (AC1179)

The presentation documents a moderated conversation about Baer's life and work. Baer reenacts, with his partner William Harrison, the first time he played "Odyssey", the first home video game for the consumer market, which he invented, and answers questions from the audience. Materials include original video (born digital), master videos, and reference videos.

Materials at Other Organizations

Brian Sutton-Smith Library and Archives of Play at The Strong

[Ralph H. Baer Papers](#), 1968-2010 inclusive; 1975-1998 bulk

The Ralph H. Baer papers are a compilation of correspondence, game designs, drawings, notes, reference materials, photographs, product descriptions, digital videos, schematics, electronic components, and manuals utilized by Ralph H. Baer throughout his lengthy career in the toy and game industry. The bulk of the materials are from 1975 through 1998.

U.S. Ordnance Museum, Fort Lee, Virginia

Materials consist of data on foreign small arms brought back from Europe in 1946 by Ralph H. Baer.

Available Formats

Select materials in Series 2 digitized in 2012 and Series 4 digitized in 2006.

Processing Information

Series 2 processed by Alison L. Oswald, archivist, 2003; Series 3 processed by Tiffany Draut, 2008; Series 1 and 4 processed by Cory Bernat, March 2006; supervised by John Fleckner, archivist.

Preferred Citation

Ralph H. Baer Papers, 1943-2006, Archives Center, National Museum of American History, Smithsonian Institution.

Restrictions on Access

The collection is open for research use. Gloves must be worn when handling unprotected photographs and negatives.

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Accruals

Additional materials were donated by Ralph H. Baer in 2006 and 2008 and Larry Mauksch in 2008.

Biographical Note

Ralph H. Baer (1922-2014) was born in Germany and immigrated to the United States with his family in 1938. A graduate of the National Radio Institute (1940), Baer worked as a radio technician in the New York City area servicing all types of home and auto radios. During World War II, Baer served in the United States Army, one year stateside, and two years in Europe. He was assigned to Military Intelligence and became an expert on military small arms. Baer returned to the United States with eighteen tons of foreign small arms for use in exhibits at Aberdeen, Maryland, Springfield, Massachusetts Armory and Ft. Riley, Kansas.

After the war, Baer attended the American Television Institute of Technology in Chicago, graduating with a BS in television engineering. In 1949, Baer joined a small electro medical equipment firm, Wappler, Inc., as their chief engineer. He designed and built surgical cutting machines, epilators, and low frequency pulse generating muscle-toning equipment. In 1951, Baer moved to Loral Electronics of Bronx, New York as a senior engineer designing power line carrier signaling equipment for IBM. During 1952-1956, Baer worked at Transatron, Inc., in New York City as a chief engineer and later as vice president. In 1956, Baer joined Sanders Associates in Nashua, New Hampshire building airborne radar components. He became manager of the Electronic Design Department at Sanders and eventually Division Manager and Chief Engineer for Equipment Design. Baer retired in 1987.

At Sanders in 1966, Baer began an independent project experimenting with ways for consumers to interact with standard home television sets. Development of interactive TV Game (TVG) ideas became a company-supported project continued by Baer and assisted by William H. Harrison and William T. Rusch (download the TV game chronology prepared by Ralph Baer in 2006). By mid-1967, ping pong videogames were played inside Sanders, patent disclosures were applied for, and hardware was designed. Baer and his associates called the devices they were developing "boxes" and numbered the various versions one through seven. In 1971, Magnavox became Sanders Associates' first videogame licensee. Between 1972 and 1975, Magnavox produced and sold over 700,000 units of Odyssey, a set of games played on its television receivers. Atari became a licensee in 1976 after the first of many lawsuits won by Sanders in pursuit of patent infringements.

During his tenure at Sanders and thereafter, Baer has been a prolific inventor. His creations include many electronic toys and games and other consumer electronic products. Among the better known product based on Baer's work are Milton Bradley's Simon, Galoob's Smarty Bear Video, and Kenner's Laser Command. In 2004 President George W. Bush awarded Baer the National Medal of Technology.

Baer married Dena Whinston in 1952 and they had three children, James, Mark, and Nancy.

Scope and Content Note

The Ralph Baer Papers include autobiographical materials and an extended oral history interview. The Papers also include materials about military small arms created by Baer during his World War II service. The largest portion of the collection documents Baer's work on video games.

Series 1, Autobiographical Documents, 2000-2006, provides detailed documentation of Baer's life. An unpublished autobiographical manuscript, *One Inventor's Odyssey: The Life Story of an Engineer and Inventor* (463 pages), is found in hardcopy and, in several versions, as electronic text on a CD. Baer's book, *Videogames: In the Beginning*, 2005 (Rolenta Press, 2005), draws on the manuscript and reproduces many of the documents in Series 4. David Allison, Chair and Curator of the Museum's Division of Information Technology and Communications, was the principal interviewer in an April, 2003 oral history with Baer. Lasting approximately three hours, the interview focuses on Baer's work with television video games but also touches on his life history, his other inventions, the invention process, and the legal complexity surrounding his inventions. There are original and reference audio tapes and an abstract and summary of the interview.

Series 2, WWII Small Arms Documents, 1943-1953, consists primarily of textual information and photographs gathered on European small arms during Baer's military service. The information was used in preparing training courses for military intelligence schools in England and France. One folder of correspondence documents Baer's efforts to publish some of his writings on machine guns and other arms.

Series 3, Hans Otto Mauksch Materials, 1944-1964, consist primarily of textual documents and photographs describing the Military Intelligence group activities during World War II in Europe. Hans Otto Mauksch (1917-) and Ralph Baer were assigned to the Military Intelligence Training team (12th Reinforcement Depot) during World War II in Europe. Baer met Mauksch on the Mata Roa, a British freighter while traveling from New York to Liverpool in 1944.

Hans O. Mauksch was the leader of the Military Intelligence group in England and was the first to conceive of the idea of a military intelligence team to train troops on enemy subjects. Sent to Europe in February 1944, Mauksch led an effort to amass enemy weapons for the purposes of establishing a museum in Tidworth, England, to train officers and enlisted men to handle enemy weapons and to learn quickly their characteristics and capabilities. Ultimately, a small arms museum was established in France and then arms were shipped to the United States to establish small arms exhibits, particularly at Ft. Riley, Kansas.

Series 4, TV Game Documents, 1966-1972, consists of records created during Baer's work on interactive television games at Sanders Associates. The records include notes, drawings, engineering schematics, laboratory notebooks, and administrative records created by Ralph Baer, William H. Harrison, and William T. Rusch. Baer retrieved these documents, with the assistance of David Winter, from a Chicago law firm years after they had been assembled for the various legal cases involving his television game inventions. Many of the documents are marked and stamped as trial exhibits. Rusch's notebooks include work on an electric guitar pick-up and other non-television game inventions. They also contain ideas about a wide range of games that might be developed. Because these papers were badly disorganized, the archival staff arranged them in the current order.

The records in Series 4, Subseries 4, consist of copies of records in Subseries 1-3, apparently created before the originals were turned over to legal counsel. These documents are arranged as received from Ralph Baer. They may contain copies of some documents for which originals do not exist.

Arrangement

The collection is arranged into four series.

Series 1: Autobiographical Documents, 1962-2006

Subseries 1, Manuscript, Book and Other Documents, 1962-2006

Subseries 2, Other Media: CDs, VHS videos, periodical, 1991, 2000-2003

Series 2: WWII Small Arms Documents, 1943-1953

Subseries 1, Correspondence, 1950-1953

Subseries 2, Writings and notes, 1943-1948

Subseries 3, Drawings and schematics, undated

Subseries 4, Manuals and encyclopedias, 1943

Subseries 5, Photographs, 1945

Series 3: Hans Otto Mauksch Materials, 1944-1964

Subseries 1, Personal background information, 1944, 1945, 1946, 1964

Subseries 2, Instructional materials, 1944-1946, undated

Subseries 3, Ft. Riley, Kansas, 1946, 1953

Series 4: TV Game Documents, 1966-1972

Subseries 1, Working notes, diagrams and schematics, 1966-1971

Subseries 2, Administrative documents, 1966-1972

Subseries 3, Notebooks, 1966-1968

Subseries 4, TV game development documentation, 1966-1968

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

Books

Firearms

Games
Inventions--20th century
Litigation
Machine guns
Military intelligence
Pistols
Rifles
Television--History
Toys--20th century
Video games
Weapons
World War, 1939-1945

Types of Materials:

Audio cassettes
Audiotapes
CD-ROMs
Correspondence--1950-2000
Diagrams
Drawings--1940-1950
Interviews--2000-2010
Manuals--1940-1950
Notes
Oral history--2000-2010
Photographs--20th century
Photographs--Black-and-white photoprints--Silver gelatin--1940-1950
Sketches
Videotapes

Container Listing

Series 1: Autobiographical Documents, 1962-2006

Subseries 1.1: Manuscript, Book and other documents, 1962-2006

- | | |
|-----------------|--|
| Box 5, Folder 1 | One Inventor's Odyssey: The Life Story of an Engineer and Inventor unpublished manuscript (hardcopy), 2006
(folder a: page 1-211) |
| Box 5, Folder 2 | Unpublished manuscript (hardcopy), 2006
(folder b: page 212-463) |
| Box 5, Folder 3 | Videogames: In the Beginning, 2005
(Rolenta Press, 2005) |
| Box 5, Folder 4 | "Summary of Chassis/Boxes/Models," chart, lists of images, "RHB Firsts"undated |
| Map-folder 1 | TV Game time line, 1962-1974
View Digitized Material
(photocopy) |

Subseries 1.2: Other Media: CDs, VHS videos, periodical, 1991, 2000-2003

- | | |
|----------------------|---|
| Box 5, Item OV 854.1 | "The Story of Computer Games"undated
<i>1 videocassette (vhs), Duration: 51:00</i> |
| Box 5, Item RV 854.1 | "The Story of Computer Games"undated
<i>1 videocassette (vhs), Duration: 51:00</i> |
| Box 5, Item OV 854.2 | "Playing the Game"2000 May 24
<i>1 videocassette (vhs), WMUR Channel 9 in New Hampshire. Duration: 02:57.</i> |
| Box 5, Oversize 9 | "Playing the Game"2000 May 24
<i>1 videocassette (vhs), WMUR Channel 9 in New Hampshire. Duration: 02:57</i> |
| Box 5, Folder 6 | <i>One Inventor's Odyssey</i> and additional photographs, undated
<i>4 electronic discs (cd), 4 versions</i> |
| Box 5, Folder 7 | <i>Electronic Gaming Monthly</i> , article on Ralph Baer, undated
page 168 |
| Box 5, Folder 8 | Ralph Baer Oral History, 2003 April 22-23
Oral History Abstract Summary (overview):

Baer describes his flash of insight about an interactive video game and the memo he subsequently wrote outlining the idea. Baer demonstrates |

and describes several prototypes, the last of which was the “Brown Box” (eventually produced by Magnavox as the Odyssey). Baer discusses the process of selling this to manufacturers. He demonstrates and/or describes other inventions and innovations, both successful and unsuccessful (including Telstar, Simon, Maniac, Smartybear, Monday Night Football, a talking tape measure). He discusses the processes that led to their creation and efforts to secure contracts from manufacturers. Baer discusses inventing in general: the distinction between doing inventive work and actually thinking of himself as an inventor (pursuing patents, etc.), his own passion for the process of inventing, and his interest in creating financially feasible inventions. He mentions inventors and mathematicians whom he admires. Baer describes experiences of persecution in Nazi Germany and the role that these difficulties played in his development. He describes his family’s immigration to America, the anti-Semitism he experienced in this country, and his military service. Various portions of the interview touch on Baer’s habit of documentation, the many legal disputes concerning his inventions, and the complex relationship between Baer’s work at Sanders and his inventive activity.

- | | |
|---------------------------|---|
| Box 10, Item OTC
854.1 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item OTC
854.2 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item OTC
854.3 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item OTC
854.4 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item RTC
854.1 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item RTC
854.2 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 10, Item RTC
854.3 | Ralph Baer Oral History, 2003 April 22-23
<i>1 cassette tape</i> |
| Box 6, Folder 43 | Ralph Baer Interview, 1991 December 4
<i>2 videocassettes (vhs), Raw footage. Duration: 41:09.</i> |

Series 2: WWII Small Arms Documents, 1943-1953

Subseries 2.1: Correspondence, 1950-1953

Box 1, Folder 1

Subseries 2.2: Writings and notes, 1943-1948

Box 1, Folder 2	Machine Guns: A Resume of Their History and Characteristics, 1946
Box 1, Folder 3	Basic Weapons, 1886-circa 1920s
Box 1, Folder 4	World War I Heavy Machine Guns, undated
Box 1, Folder 5	Post World War I Light Machine Guns, undated
Box 1, Folder 6	The German Line, 1920-1945
Box 1, Folder 7	Machine Guns, manuscript, undated
Box 1, Folder 8	Multiple Shot Arms, by Mark Dineley, undated
Box 1, Folder 9	Various notes and questions for Mark Dineley, 1945
Box 1, Folder 10	A Brief History on the Development of the Submachine Gun, 1943
Box 1, Folder 11	Aircraft Machine Guns, undated
Box 1, Folder 12	The Machine Gun The Period of Recognition, by Lt. Col. Calvin Goddard, 1943
Box 1, Folder 13	Outline of the Development of the Modern Bolt Operated Service Rifle, 1945
Box 1, Folder 14	Semi-Automatic Rifle notes, undated
Box 1, Folder 15	The Story of the Tommy Gun, 1948
Box 1, Folder 16	German Weapons Information, undated
Box 1, Folder 17	Italian Weapons Information, undated
Box 1, Folder 18	Notes on inventors of various firearms, undated
Box 3, Folder 1	Japanese Weapons Information, undated
Box 3, Folder 2	British War Office technical weapons information, undated
Box 3, Folder 3	German Weapons Information, Specifically Infantry, undated
Box 3, Folder 4	Course Material, undated View Digitized Material

Subseries 2.3: Drawings and schematics, undated

Box 2, Folder 1 Rifle Actions, undated
Map-folder 1 Schematic charts of machine guns, undated

Subseries 2.4: Manuals and encyclopedias, 1943

Box 2, Folder 2 Basic Manual on Small Arms, 1943
Box 2, Folder 3 Basic Manual on Small Arms, 1943
Box 2, Folder 4 Ian V. Hogg and John Week, *Military Small Arms of the 20th Century. A
Comprehensive Illustrated Encyclopedia of the World's Small Caliber Firearms*
, undated
(DBI Books, sixth edition)

Subseries 2.5: Photographs, 1945

Box 4, Folder 1 Light machine guns, undated
Box 4, Folder 2 Submachine guns, undated
Box 4, Folder 3 Automatic pistols, undated
Box 4, Folder 4 Rifles, undated

Series 3: Hans Otto Mauksch Materials, 1944-1964

Subseries 3.1: Personal background information, 1944-1964

- Box 11, Folder 1 War Department identification card, photographs, certificate of service, citations, correspondence, undated
- Box 9, Folder 9 *Yank Magazine* (British), 1944 November 5
- Box 9, Folder 10 *The Guidon* newspaper, 1946 June 28

Subseries 3.2: Instructional materials, 1944-1946 , undated

- Box 9, Folder 2 Pistols and revolvers; submachine guns; rifles; machine guns; and semiautomatic rifles, undated
- Box 9, Folder 2 *A Brief Outline of the Development of the Modern Bolt Operated Service Rifle* , undated
- Box 9, Folder 2 *Equipment and Arms of the German Armed Forces, Part I, Enemy Small Arms* , 1945
- Box 9, Folder 3 Drawings and Ballistics of Military Ammunition, 1944
- Box 9, Folder 3 *A Short History of the Development of the Modern Machine Gun* , undated
- Box 9, Folder 3 Military Intelligence School, German Psychology and background of the Weimar Republic, circa 1945
- Box 9, Folder 3 Course in foreign small arms by Hans Otto Mauksch and Ralph H. Baer, undated
- Box 9, Folder 4 *A Summary of Enemy and Allied Bolt Operated Rifles* (partial list), undated
- Box 9, Folder 5 *A Summary of Enemy and Allied Bolt Operated Rifles* (partial list), undated

Subseries 3.3: Fort Riley, Kansas, 1946-1953

- Box 9, Folder 6 Inventory of small arms exhibit, 1946 June 24
- Box 9, Folder 6 *The Guidon* , 1946 June 28
- Box 9, Folder 6 Issue slip from Instrument and Weapons pool, 1953 June 17
- Box 9, Folder 7 Photographs, 1946

Series 4: Television Game Documents, 1966-1972

Subseries 4.1: Working notes, diagrams and schematics, 1966-1971

- | | |
|------------------|---|
| Box 6, Folder 1 | Original Schematic, TV Game, 1966 September 6
View Digitized Material |
| Box 6, Folder 2 | Notes and Diagrams, including DMV Spec-Schematic #1, MOD IG-62 Block Diagram, MOD IG-62 Outputs, 1966 December , undated
View Digitized Material |
| Box 6, Folder 3 | Some Proposed Basic Circuits and TVTYNDB, 1967 January 2
View Digitized Material |
| Box 6, Folder 4 | Discussion with R. Solomon, Future Planning-TV Gaming, 1967 February 11
View Digitized Material |
| Box 6, Folder 5 | List of Possible Games and Untitled Diagram of Joystick, 1967 February 12
View Digitized Material |
| Box 6, Folder 6 | Layout for Gun Electronics in Pocket Radio Shell, 1967 February 19
View Digitized Material |
| Box 6, Folder 7 | Second Experiment: Creating various hues from background and screen symbols, 1967 February
View Digitized Material |
| Box 6, Folder 8 | Notes and Diagrams, including TV Sync Notes, TV Gaming Techniques, To Produce Moveable Dot, and Car Race, 1967 May 2-31
View Digitized Material |
| Box 6, Folder 9 | TVG 1st Game, 2nd Game, 3rd Game, 4th Game, 5th Game and Mo-W.H., 1967 May 16-17, undated
View Digitized Material |
| Box 6, Folder 10 | Notes, Diagrams, Schematics, including "Color Receiver," "Remote Unit," Target Game, 1967 May 15-1967 June 16
View Digitized Material |
| Box 6, Folder 11 | Notes and Diagrams and Switching Functions and untitled documents, 1967 June 1-June 7, undated
View Digitized Material |
| Box 6, Folder 12 | Schematics of TVG Game Unit #3, completed August 2, 1967 (3 versions), 1967 July 7-1967 August 2
<i>3 versions</i>
View Digitized Material |
| Box 9, Folder 1 | Schematic for early May start of TV Game #2"1967 May 15
View Digitized Material |
| Box 9, Folder 2 | TV Game #2 Updated Schematic, 1967 June 14
View Digitized Material |

- Box 6, Folder 13 "Cludge" Notes and Schematic John Mason's Original Idea, and Random Pulse Gens, Notes, 1967 June, 1967 June 8
[View Digitized Material](#)
- Box 6, Folder 14 Notes and Diagrams, including "Target Shooting," "Test of Resistance Vrs Light"1967 July 7-24
[View Digitized Material](#)
- Box 6, Folder 15 Notes and Diagrams, including "Chroma Channel" Block Diagram, "One Transistor," "Rifle Electronics"1967 August 2-September 7
[View Digitized Material](#)
- Box 9, Folder 3 To add color to TV Game #3, Schematic, 1967 September 12
[View Digitized Material](#)
- Box 6, Folder 16 Undated Schematics, undated
[View Digitized Material](#)
- Box 6, Folder 17 Notes and Diagrams, including "TVG Available Functions," "Utilizing Integrated Ckts," "Modulator Economizing," "Target Shooting," "Dot Disappearance"1967 October 10-31, undated
[View Digitized Material](#)
- Box 6, Folder 18 Notes and Diagrams, including "Rifle Electronics," "Low Free Circulator Movement of Dot," "Method of Voltage Control of Delay Multivibrators," "Black Dot for Golf Putting"1967 November 1-29 and undated
[View Digitized Material](#)
- Box 9, Folder 4 Game Unit #4 Rusch's Slicer Circuits as ball and paddle generators, 1967 November
2 drawings (visual works)
[View Digitized Material](#)
- Map-folder 1 Untitled Notes, 1967 November
[View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#)
- Box 9, Folder 5 Block Diagram; Updated Block Diagram; and Untitled Block Diagram, 1967 December 12, 1967 June 14, undated
[View Digitized Material](#)
- Box 6, Folder 19 Notes and Diagrams, including "Pool or Billiards Game," "Hockey," "Wall Bounce"1967 December 1-20, undated
[View Digitized Material](#)
- Map-folder 1 Rusch describes various games, 1967 December 4
[View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#)
4 fold-out sheets
- Box 9, Folder 6 Two Untitled Schematics, 1967 December 22
2 drawings (visual works)
[View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#)
- Box 6, Folder 20 Untitled Notes and Diagrams, 1967 December 26-1968 January 12
[View Digitized Material](#)

- Box 6, Folder 21 Notes and Schematics (and copies), including "Low Freq Multivibrator," "Spot Gen," "Gun Electronics"1968 January 17-26 and undated
[View Digitized Material](#)
- Box 9, Folder 7 TV Game Unit #4 Ball & Paddle Slicer Circuits adapted for cable, 1968 January 26
[View Digitized Material](#)
- Box 6, Folder 22 Untitled Diagrams, 1968 January-1968 February 20
[View Digitized Material](#)
- Box 6, Folder 23 Notes and Diagrams, including "Spot size change" and "DMV Voltage Controlled"1968 August 11-October 8 , undated
[View Digitized Material](#)
- Box 6, Folder 24 TVG diagrams, 1968 October 24
[View Digitized Material](#)
- Box 6, Folder 25 "TVG List of Games" Notes, 1968 October 26
[View Digitized Material](#)
6 pages
- Box 9, Folder 8 Schematic for TV Game Unit #6, 1968 November 17 , undated
6 drawings (visual works)
[View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#)
- Box 6, Folder 26 Notes and Diagrams, including "Game Sequence"1969 January 2-May 29 , undated
[View Digitized Material](#)
- Box 6, Folder 27 Schematics, including "Spot Gen," "Summing Amp Modulator & FR Osc.," "Primary Flip Flop," "Secondary Flip Flop," "Joystick Amps," "Chroma Gen.," "Rifle Electronics"1969 August 21 , undated
[View Digitized Material](#)
- Map-folder 1 Untitled Block Diagram; TVG Schematic, 1969 January 20, undated
[View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#) [View Digitized Material](#)
- Box 6, Folder 28 Notes and Schematics,including "Game Truth Table," "Chroma Gen for Magnavox"1971 June 10-1971 August 24, undated
[View Digitized Material](#)
- Map-folder 1 Unidentified block diagram, undated
[View Digitized Material](#)

Subseries 4.2: Administrative documents, 1966-1972

- Box 6, Folder 29 Disclosure Document, 1966 September 1
[View Digitized Material](#)

- Box 6, Folder 30 Low Cost TV Data Entry Devices-Funding For, Memorandum and Operation of Color TV Set (4 copies), 1966 December 20, 1967 January 4
[View Digitized Material](#)
- Box 6, Folder 31 Patent Disclosure Sheet and Description of TV Gaming Device Draft, 1968 January
- Box 6, Folder 32 Patent Disclosure Sheet and Detailed Description form, 1968 February 2
[View Digitized Material](#)
- Box 6, Folder 33 Miscellaneous Ideas for T.V.G., Company Memorandum, 1967 May 10
2 drawings (visual works)
[View Digitized Material](#)
- Box 6, Folder 34 Summary of Major Games, 1967 June
[View Digitized Material](#)
- Box 6, Folder 35 Price List, Cost Estimate, and Power Requirements, 1967 October, 1968 January 17, undated
[View Digitized Material](#)
- Box 6, Folder 36 TVG Cost Summary, TVG-DigBox Estimate, and Price/Parts for Hockey ADD ON for TVG, 1969 March , 1969 May 26, undated
[View Digitized Material](#)
- Box 6, Folder 37 Proposal for Anticipated IR&D Programs and cost estimate FY 68, 1967 June
[View Digitized Material](#)
- Box 6, Folder 38 Independent Research and Development Plan and Special Sales Order, 1967 November 7, 1967 October 4, 1967 September 15
[View Digitized Material](#)
- Box 6, Folder 39 Independent R&D Program Monthly Status Reports, 1967 November, 1968 January
[View Digitized Material](#)
- Box 6, Folder 40 Sanders Electrical Parts Lists, 1967 July-1971 March
- Box 6, Folder 41 Parts order forms, 1967 May-1968 February
- Box 6, Folder 41 Purchase Orders, 1968 October 10-1972 December 12
- Box 6, Folder 41 "Stroblite" price list, undated
- Box 6, Folder 42 TV Game Data in Chronological Order, folder with lawsuit identification stickers, undated

Subseries 4.3: Notebooks, 1966-1968

- Box 7, Folder 1 Sanders Associates Engineering Notebook, authored by William Rusch, 1966 October-1967 October
[View Digitized Material](#)

- Box 7, Folder 2 Sanders Associates Engineering Notebook, authored by William Rusch, 1967 October-November
[View Digitized Material](#)
- Box 7, Folder 3 Sanders Associates Engineering Notebook, authored by William Rusch, 1967 November-1968 March
[View Digitized Material](#)
- Box 7, Folder 4 "Engineers' Notebook," authored by William Harrison, 1966 September 11-1967 October 5
[View Digitized Material](#)

Subseries 4.4: Television game development documentation, 1966-1968

- Box 8, Folder 1 Volume I, Tab 1, TVG Concept Stage, 1966 September 1 to 1967 February 6
- Box 8, Folder 2 Volume I, Tab 2, Technology Investigation Stage, 1967 February 11 to May 16
- Box 8, Folder 3 Volume I, Box #1 Phase, 1967 May 23 to June 17
- Box 8, Folder 4 Volume I, Box #2 Phase, 1967 June 15 to July 21
- Box 8, Folder 5 Volume I, Box #3 Phase, 1967 July 28 to 1967 September 29
- Box 8, Folder 6 Volume I, Box #4 Phase, 1967 September 29 to 1967 November 20
- Box 8, Folder 7 TV Game Development, Volume II, Box #5 (folder a), 1967 November 20 to 1968 September
- Box 8, Folder 8 Volume II, Box #5 (folder b), 1967 November 20 to 1968 September
- Box 8, Folder 9 Volume II, Box #6, 1968 September 6 to 1968 December 9
- Box 8, Folder 10 Volume II, Brown Box #7, 1968 December 10 to 1969 August 21
- Box 8, Folder 11 Volume II, TVG Development, Support to Magnavox, 1971
- Box 8, Folder 12 TV Game Development, Vol. IV, Licensing Program Files, 1969-1970