



Guide to the Logitech Optical Dance Pad Design Papers, 2005-2016 — 120.1024

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Description is written in: English.

Describing Archives: A Content Standard

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

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Summary Information

Repository:	Brian Sutton-Smith Library and Archives of Play at The Strong
Creator:	Grand, Joe
Creator:	Baer, Ralph H.
Title:	Logitech optical dance pad design papers
ID:	120.1024
ID [aspace_uri]:	/repositories/3/resources/355
Date [inclusive]:	2005- 2008, 2016
Date [bulk]:	bulk 2005-2008
Physical Description:	66.1 Megabytes
Language of the Material:	English
Mixed Materials [Logitech dance pad design papers]:	digital collection
Abstract:	This collection consists of design documents related to the Logitech optical dance pad, developed by Joe Grand and Ralph Baer. The materials date from 2005 through 2016, with the bulk dates from 2005 through 2008. The collection includes source code, software files, photographs, sketches, correspondence, and the patent for the device.

Preferred Citation for Publication

Logitech optical dance pad design papers, Brian Sutton-Smith Library and Archives of Play at The Strong.

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Historical Note

The dance pad was first developed in the late 1980s by Bandai for *Family Trainer*, where it was called the "Power Pad". It was developed as a "soft" pad, which was a mat with sensors in it; while a commercial success, it wasn't until the release of *Dance Dance Revolution* in 1998 that dance pads truly took off. Dance pads became popularized first in arcades and later as personal devices in the 2000s, with the Logitech optical dance pad being one such personal device. Development on the device began in 2005 by Joe Grand and Ralph H. Baer as a solid state dance pad relying on proximity sensors to detect the placement of the user's foot on the device. It was released in 2008 after three years of development. Dance pads continue to be popular today, with games such as *Dance Dance Revolution* regularly having large tournaments across the world.

Joe Grand is an engineer, inventor, and hacker who first gained prominence as a member of the hacker group "L0ft" in the late 1990s, which at their height of fame and influence participated in a Congressional hearing on cybersecurity in 1998. Grand received his bachelor's degree in computer engineering from Boston University in 1997 and has since received an honorary doctorate from the University of Advancing Technology in Tempe, Arizona. He appeared on the Discovery Channel show *Prototype This!*, where in 2009, he launched his research and development firm Grand Idea Studio; Grand Idea Studio focuses on product engineering, cybersecurity research, and tech training. Grand continues to teach about cybersecurity and hacking today (as of 2025).

Ralph H. Baer was an engineer, inventor, and video game designer who is today considered the "Father of Video Games." Born in 1922 in Germany, his family immigrated to the United States shortly before the World War II, where he first became involved with electronics as part of the war effort. After the war, he continued working on electronics, developing the first video game console in 1972. He went on to have at least 150 patents, was awarded the National Medal of Technology in 2006, and was inducted into the National Inventor's Hall of Fame in 2010. He passed away in 2014 at 92 years old.

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Collection Scope and Content Note

This digital collection documents the development life of the Logitech optical dance pad, which began production in 2008. Developed by Joe Grand and Ralph H. Baer, the collection highlights design decisions and changes that occurred during the design process. The collection includes photographs of prototypes, design sketches, driver information, source code, patents, correspondence, and design budgets. The materials date from 2005 through 2016, with the bulk dates from 2005 through 2008.

The papers are arranged into four series. The access copies have been migrated into PDF/A format. Additional scope and content information can be found in the Collection Inventory section of the finding aid.

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System of Arrangement

This collection consists of one box divided into four series.

Series I: Documentation 2005-2008

Series II: Firmware source code 2005-2006

Series III: Hardware schematics 2005

Series IV: Photographs 2005-2009, 2016

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Administrative Information

Publication Statement

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Conditions Governing Access

This collection is open for research use by staff of The Strong and by users of its library and archives. Digital collection is available to on-site researchers in a read only format.

Conditions Governing Use

Though the donor has not transferred intellectual property rights (including, but not limited to any copyright, trademark, and associated rights therein) to The Strong, they have given permission for The Strong to make copies in all media for museum, educational, and research purposes.

Immediate Source of Acquisition

The papers were donated to The Strong in April 2020 as a gift of Joe Grand in honor of Ralph Baer under object ID 120.1024. The collection was received from Joe Grand via digital transfer.

Processed by

Keegan Matthews, August 2025

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Related Materials

Related Materials

Ralph H. Baer papers, 1968-2010 [identifier 2013.baer]

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.

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Controlled Access Headings

- Dance
- Video game designers
- Games -- software
- Source code (Computer science)
- Electronics -- Patents -- United States
- Electronic games industry

- Logitech, Inc.

Collection Inventory

Series I: Documentation, 2005-2008 <u>ID [aspace_uri]:</u> /repositories/3/archival_objects/57441	digital collection	folder I
Series Scope and Content Note		
This series consists of documents related to the patents and the development notes created by Joe Grand and Ralph H. Baer. The documents consist of patents awarded to Joe Grand and Ralph Baer for the project, design notes, ground rules, correspondence, data collected, and unimplemented concepts. The series has been arranged in the order in which it arrived to the museum.		
The documents are dated from 2005 through 2008.		
Title/Description	Instances	
01_Future concepts (unused) [1 pdf], 2008 October <u>ID [aspace_uri]:</u> /repositories/3/archival_objects/57475	digital collection	folder 1
02_Development [4 pdfs], 2005-2008 <u>ID [aspace_uri]:</u> /repositories/3/archival_objects/57476	digital collection	folder 1
03_Patent [2 pdfs], 2005, 2008 <u>ID [aspace_uri]:</u> /repositories/3/archival_objects/57477	digital collection	folder 1
^ Return to Table of Contents		folder 3
Series II: Firmware source code, 2005-2006 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57442	digital collection	folder 2
Series Scope and Content Note		
This series contains the source code of prototype 1.0 and prototype 1.1. These documents include the source code for the microchips, device, and drivers. These are essential for controlling the device's behavior and how the software operates. The code in both prototypes are relatively similar, though they are not exactly the same (mirroring the changes occurring through the development cycle).		

The series dates from 2005 through 2006.

Title/Description	Instances
01_Prototype 1.0 [12 files], 2005-2006, undated <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57486	digital collection folder 2 folder 1
02_Prototype 1.1 [13 files], 2006, undated <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57487	digital collection folder 2 folder 2

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Series III: Hardware schematics, 2005 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57443	digital collection folder 3
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Series Scope and Content Note

This series contains documents related to the device hardware development. It consists of schematics for both prototypes, sketches of the microprocessor, control board, and circuit board, Gerber files, and budgets with price estimates. The schematics explore how the device was expected to work and possible weaknesses that needed attention. Of note is the circuit board sketches, that showcase the evolution that occurred.

The series dates from 2005.

Title/Description	Instances
01_Bill-of-Materials [2 pdfs], 2005 August 28 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57484	digital collection folder 3 folder 1
02_Prototype 1.0 [8 files], 2005 May-August, undated <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57485	digital collection folder 3 folder 2
03_Prototype 1.1 [29 files], 2005, undated <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57493	digital collection folder 3 folder 3

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Series IV: Photographs, 2005-2007, 2016 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57444	digital collection folder 4
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Series Scope and Content Note

This series consists of device images throughout its development cycle. It includes photographs of Joe Grand and Ralph Baer, prototypes, components, finished device, sketches of the radious of the device's sensors, and concept art. Of note is the contrast between the

original design of the device compared to the finished product, serving as a visual representation of design decisions made over the three year development process.

The bulk of the documents in the series date from 2005 through 2007, though it also includes photographs from 2016.

Title/Description	Instances		
01_Sketches [4 jpgs], 2005, 2009 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57478	digital collection	folder 4	folder 1
02_Prototype 1.0 [12 jpgs], 2005 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57479	digital collection	folder 4	folder 2
03_Logitech initial prototype (prototype 1.1) [13 jpgs], undated, circa 2006 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57480	digital collection	folder 4	folder 3
04_Logitech final prototype [4 jpgs], 2007 February <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57481	digital collection	folder 4	folder 4
05_Logitech pre-production prototype [12 jpgs], 2007, 2016 <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57482	digital collection	folder 4	folder 5
06_Joe and Ralph Baer [1 jpg], 2006 June <u>ID [aspace uri]:</u> /repositories/3/archival_objects/57483	digital collection	folder 4	folder 6

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