



# The Difference Engine: Charles Babbage and the Quest to Build the First Computer

By Doron Swade

Download now

Read Online 

## The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade

In 1821, Charles Babbage was reviewing a set of mathematical tables with a colleague in preparation for a scientific presentation when, after finding a wealth of errors, he exclaimed in frustration, "I wish to God these calculations had been executed by steam!" With this outburst, Babbage began to envision an end to human errors in the numerical tables upon which finance, trade, science, and navigation relied. *The Difference Engine* is the fascinating story of his heroic quest, against all odds, to build the first computing machine more than one hundred years before the modern computer we use today was invented.

Set against the politics and science of the explosive early Victorian era, *The Difference Engine* is a thrilling tale of Babbage's exuberant determination. Like *Longitude*, *The Difference Engine* is a fascinating portrait of the human story behind a pivotal moment in history and one of the most influential inventions of our time.

 [Download The Difference Engine: Charles Babbage and the Que ...pdf](#)

 [Read Online The Difference Engine: Charles Babbage and the Q ...pdf](#)

# The Difference Engine: Charles Babbage and the Quest to Build the First Computer

By Doron Swade

## The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade

In 1821, Charles Babbage was reviewing a set of mathematical tables with a colleague in preparation for a scientific presentation when, after finding a wealth of errors, he exclaimed in frustration, "I wish to God these calculations had been executed by steam!" With this outburst, Babbage began to envision an end to human errors in the numerical tables upon which finance, trade, science, and navigation relied. *The Difference Engine* is the fascinating story of his heroic quest, against all odds, to build the first computing machine more than one hundred years before the modern computer we use today was invented.

Set against the politics and science of the explosive early Victorian era, *The Difference Engine* is a thrilling tale of Babbage's exuberant determination. Like *Longitude*, *The Difference Engine* is a fascinating portrait of the human story behind a pivotal moment in history and one of the most influential inventions of our time.

## The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade Bibliography

- Sales Rank: #596314 in Books
- Brand: Brand: Viking Adult
- Published on: 2001-09
- Released on: 2001-09-10
- Original language: English
- Number of items: 1
- Dimensions: 8.10" h x 1.25" w x 5.42" l,
- Binding: Hardcover
- 352 pages

 [Download The Difference Engine: Charles Babbage and the Que ...pdf](#)

 [Read Online The Difference Engine: Charles Babbage and the Q ...pdf](#)

## Download and Read Free Online *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* By Doron Swade

---

### Editorial Review

#### Amazon.com Review

What a difference a century makes. Doron Swade, technology historian and assistant director of London's Science Museum, investigates the troubles that plagued 19th-century knowledge engineers in *The Difference Engine: Charles Babbage and the Quest to Build the First Computer*.

The author is in a unique position to appreciate the technical difficulties of the time, as he led a team that built a working model of a Difference Engine, using contemporary materials, in time for Babbage's 1991 bicentenary. The meat of the book is comprised of the story of the first computing machine design as gathered from the technical notes and drawings curated by Swade. Though Babbage certainly had problems translating his ideas into brass, the reader also comes to understand his fruitless, drawn-out arguments with his funders. Swade had it comparatively easy, though his depictions of the frustrating search for money and then working out how best to build the enormous machine in the late 1980s are delightful.

It is difficult--maybe impossible--to draw a clear, unbroken line of influence from Babbage to any modern computer researchers, but his importance both as the first pioneer and as a symbol of the joys and sorrows of computing is unquestioned. Swade clearly respects his subject deeply, all the more so for having tried to bring the great old man's ideas to life. *The Difference Engine* is lovingly comprehensive and will thrill readers looking for a more technical examination of Babbage's career. --Rob Lightner

#### From Publishers Weekly

Englishman Charles Babbage (1791-1871), an eccentric, ingenious mathematician, decided that existing tables of computations included far too many errors: the day's textbooks came with errata sheets appended by more errata sheets. The inventive Babbage entered completely new territory in his struggle to design an automatic computing machine that could achieve an "absolute integrity of results," and in the 1820s he completed plans for the "Difference Engine." Swade (coauthor of *The Dream Machine*), an assistant director at the London Science Museum, offers an engaging biography of Babbage and his milieu (buttressed by 16 pages of b&w photos and illustrations). Babbage convinced the government to invest in his invention, but the technology of the day made it prohibitively expensive to complete the machine to his satisfaction. He went on to design the "Analytical Engine," a quicker, more advanced, more broadly applicable machine that could be programmed with punch cards to do computations and store data. Unfortunately, Babbage never got to build this second machine, either. His life was full of personal tragedy, political confrontations, the personal vendettas of colleagues and the frustration of being unable to build what he designed. In the 1980s, Swade gathered a team of experts and tried to make sense of Babbage's drawings and notes in a modern quest to construct what Babbage could not. Swade's able account of this gifted scientist, his cohorts and their curious endeavors enhances and broadens the growing body of literature on computer history. (Sept. 10)Forecast: The "technological frontier" parallels between Babbage's age and our own are becoming increasingly clear, and Swade's immersion in and love for Babbage's project comes through here (beyond some British reserve). Of all the books this season whose flap copy compares them to *Longitude*, this title has one of the best shots at a similar breakout.

Copyright 2001 Cahners Business Information, Inc.

From Library Journal

One of the first devices to be considered an automatic digital computer was conceived by the eccentric British mathematician Charles Babbage in 1822. In Babbage's time, teams of mathematicians working around the clock with primitive calculations generated complex logarithmic and trigonometric tables manually. Noting the large number of errors in these tables, Babbage proposed building an enormous mechanical calculator that he called a "Difference Engine" to calculate them automatically. Engineer and historian of technology Swade (coauthor, *The Dream Machine*) tells the story of Babbage's determined efforts to construct the first computing machine, which was, unfortunately, only partially completed despite financial backing from the British government. Nonetheless, Babbage's story, set against the politics and science of the early Victorian age, is fascinating. More than 150 years after its conception, one of Babbage's Difference Engines was constructed from original drawings by a team headed up by Swade at London's Science Museum. Recommended for an informed audience. Joe Accardi, William Rainey Harper Coll., Palatiane, IL  
Copyright 2001 Reed Business Information, Inc.

## **Users Review**

### **From reader reviews:**

#### **Michael Banks:**

The feeling that you get from *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* may be the more deep you searching the information that hide into the words the more you get considering reading it. It doesn't mean that this book is hard to understand but *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* giving you excitement feeling of reading. The article writer conveys their point in selected way that can be understood through anyone who read it because the author of this e-book is well-known enough. This particular book also makes your vocabulary increase well. Making it easy to understand then can go to you, both in printed or e-book style are available. We advise you for having this kind of *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* instantly.

#### **Carla Spiegel:**

Are you kind of stressful person, only have 10 or 15 minute in your day to upgrading your mind talent or thinking skill perhaps analytical thinking? Then you are receiving problem with the book as compared to can satisfy your short space of time to read it because this all time you only find e-book that need more time to be learn. *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* can be your answer mainly because it can be read by an individual who have those short spare time problems.

#### **Raymond Floyd:**

In this time globalization it is important to someone to acquire information. The information will make professionals understand the condition of the world. The health of the world makes the information easier to share. You can find a lot of sources to get information example: internet, paper, book, and soon. You can observe that now, a lot of publisher that will print many kinds of book. Typically the book that recommended to you is *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* this publication consist a lot of the information from the condition of this world now. This book was represented so why is the world has grown up. The language styles that writer require to explain it is easy to understand. The

particular writer made some study when he makes this book. That is why this book suitable all of you.

**Joel Peterson:**

As we know that book is essential thing to add our expertise for everything. By a guide we can know everything you want. A book is a list of written, printed, illustrated or perhaps blank sheet. Every year was exactly added. This book *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* was filled in relation to science. Spend your extra time to add your knowledge about your science competence. Some people has several feel when they reading a book. If you know how big benefit from a book, you can experience enjoy to read a publication. In the modern era like right now, many ways to get book that you simply wanted.

**Download and Read Online *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* By Doron Swade #UL6NZCT89V1**

## **Read The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade for online ebook**

The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade books to read online.

### **Online The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade ebook PDF download**

**The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade Doc**

**The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade Mobipocket**

**The Difference Engine: Charles Babbage and the Quest to Build the First Computer By Doron Swade EPub**