

Logo Programming for the Apple II

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What is Logo?

“Logo is the name for a philosophy of education and a continually evolving family of programming languages that aid in its realization.”

Harold Abelson, Apple Logo, 1982

Roots

- Artificial Intelligence
- Mathematical Logic
- Developmental Psychology

History

- 1966: Created at a private research firm (BBN)
- 1969: First floor turtle robot used with Logo
- 1970: Logo Laboratory at M.I.T.
- 1971: Turtles graphics added to Logo
- 1980: *Mindstorms* by Seymour Papert
- At least 248 different version of Logo

Thursday, July 21, 2011

See <http://el.media.mit.edu/logo-foundation/logo/index.html> for background.

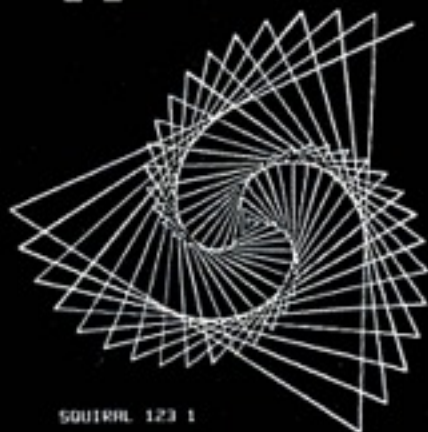
See the Logo Tree Project (<http://www.elica.net/download/papers/LogoTreeProject.pdf>) for a list of different Logo version.

TERRAPIN LOGO

A Language for Learning that Says Explore!

The Logo Language is Here for the Apple II

```
TO SQUIRAL :ANGLE :DISTANCE
  IF :DISTANCE > 200 THEN STOP
  FORWARD :DISTANCE
  RIGHT :ANGLE
  SQUIRAL :ANGLE :DISTANCE + 3
END
```



SQUIRAL 123 1

Terrapin, the Turtle Company, brings you the Terrapin Logo Language for the Apple II with Turtle graphics, now ready for immediate delivery.

The Terrapin Logo language is a sophisticated and powerful language that is easy for anyone to use. Although originally intended for children, the Logo language is one that the most advanced programmers will enjoy using too. It includes many features common to artificial intelligence research languages permitting programs of great power to be written quickly and easily. Writing comparable programs in other languages is usually much more difficult and time consuming.

The Turtle graphics is fun and easy. With simple commands such as FORWARD, RIGHT, and PENUP you can draw in six hi-res colors. In just a few short sessions you can learn to create figures more complex than the one above whether you know how to program or not.

But the Terrapin Logo language is more than just a graphics language. It supports:

- list structure, allowing easy manipulation of words (strings) and lists
- user defined procedures which can be used exactly as if they were part of the language.
- fully integrated screen editor for procedures and text
- floating point and integer arithmetic
- a total of 120 primitives (commands) including 30 graphics commands
- recursion
- assembly-language interface capability

The Terrapin Logo language was developed by the Artificial Intelligence lab at the Massachusetts Institute of Technology. Terrapin is now authorized by MIT to distribute the results of its 12 years of research to you. To provide quality support for the language, Terrapin has assembled a team that includes two of the three authors who developed the Logo language for the Apple II at MIT, as well as Dr. Fournier, the originator of the Logo language.

Every copy of the Terrapin Logo language comes with complete documentation. To run the language, a 48K Apple II with a 16K RAM card or a language card, and one disk drive is required.

Terrapin also offers the robot Turtle, and the following books: *Turtle Geometry*, *Special Technology for Special Children*, *Mindstorms*, *Katie & the Computer*, and *Apple Logo* from Byte Books.

Suggested retail price: \$149.95

To order or for more information, call or write:



Terrapin, Inc.
676 Massachusetts Avenue
Cambridge, MA 02139
(617) 492-5816

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The Terrapin Logo Language for the Apple II

The Terrapin Logo Language
for the Apple II
Language Disk

No. 2296



Thursday, July 21, 2011

Terrapin is still in business selling Logo for OSX and Windows: <http://www.terrapinlogo.com/>

Apple Logo (LCSI)

IT'S TIME KIDS STARTED USING STRONG LANGUAGE.



We encourage it.

Because now the most powerful educational language is available on the Apple Personal Computer.

Presenting Apple Logo.

It's not just a programming language for computers, but a learning language for people.

Enough so that anyone, working with Apple Logo, can easily learn the programming principles once reserved for college courses.

Apple Logo encourages you to break problems into small steps, and then shows you how to make those steps automatic.



It does all this interactively.

For instance, if you accidentally type "foreword," instead of forward, Apple Logo responds with "I don't know how to foreword."

There is no such thing as a mistake with Apple Logo, only logical statements telling you what needs to be done to make the program work. So the student programs the computer. Not the computer the student.

And as you learn, Apple Logo learns with you. So whether you're a student of 5 or 55, you'll always be challenged — but not overwhelmed.

Apple Logo runs on the Apple II with 64K. And it comes from Apple, the leading personal computer company in education — with the largest library of courseware at all levels.

Apple Logo. It can make getting to know a computer the most positive of learning experiences.

Your kids will swear by it.

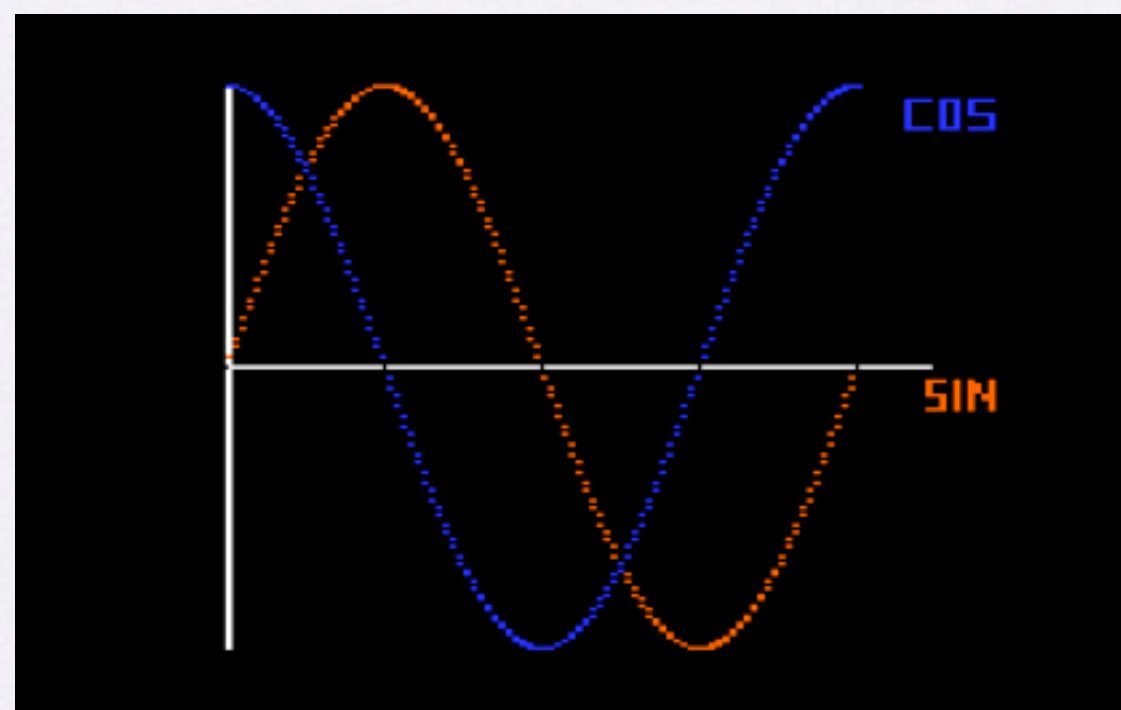
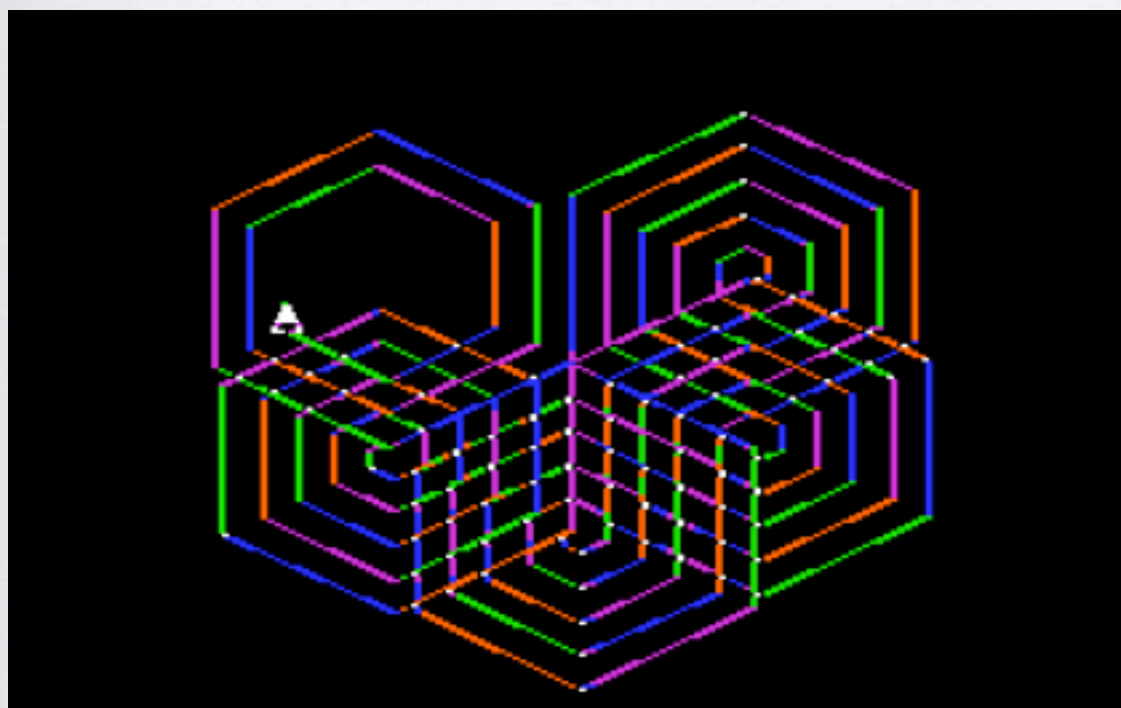
The personal computer.



For more information, call (800) 538-9696. In California, call (800) 662-9238. Or write: Apple Computer Inc., 20525 Mariani Avenue, Cupertino, CA 95014.
Apple® Logo is a product of Logo Computer Systems, Inc., 222 Brunswick Boulevard, Point-Claire, Quebec, Canada H9R1A6.



Apple Logo // (LCSI)



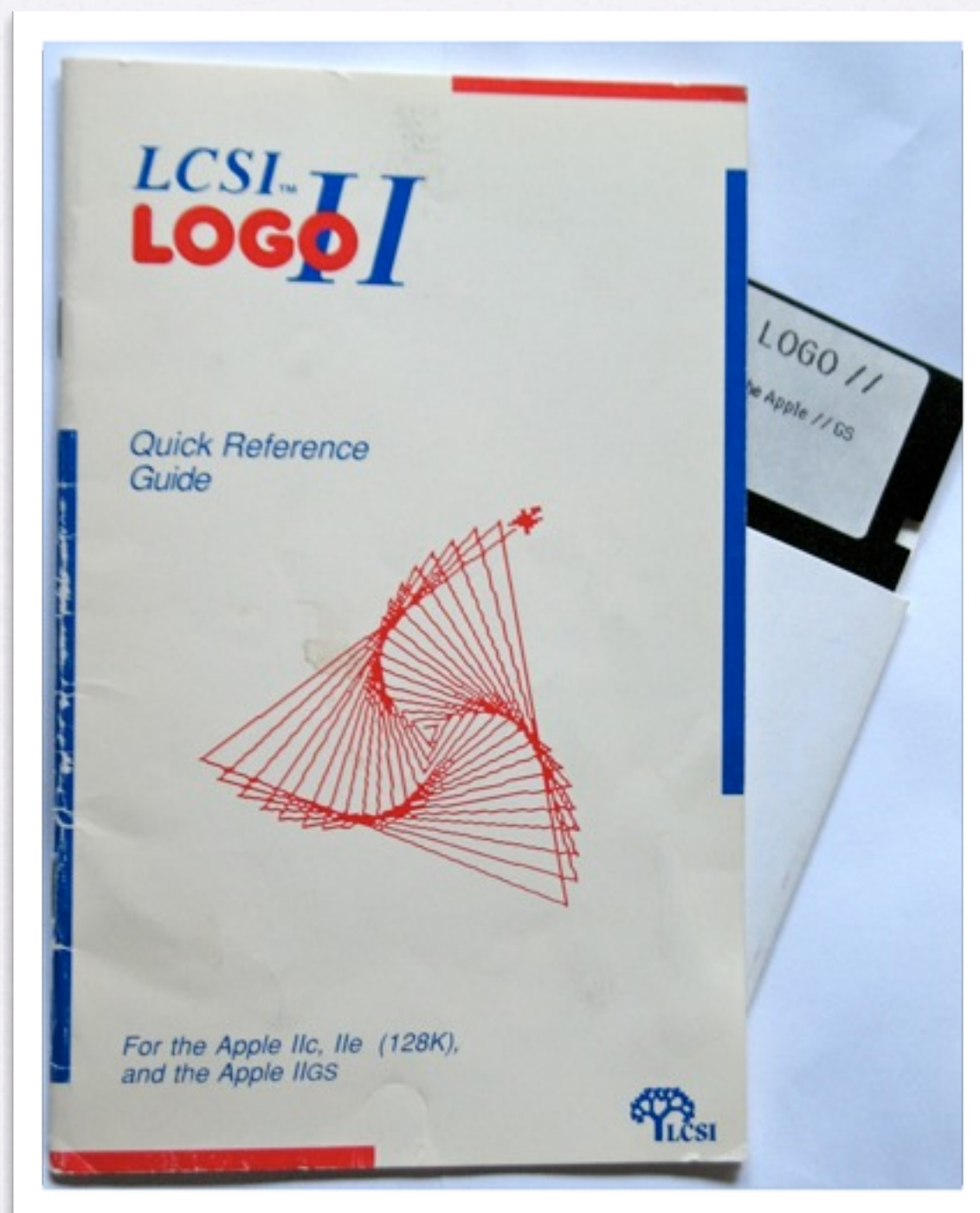
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Licensed from LCSI

Released 1984

ProDOS based

LCSI Logo //

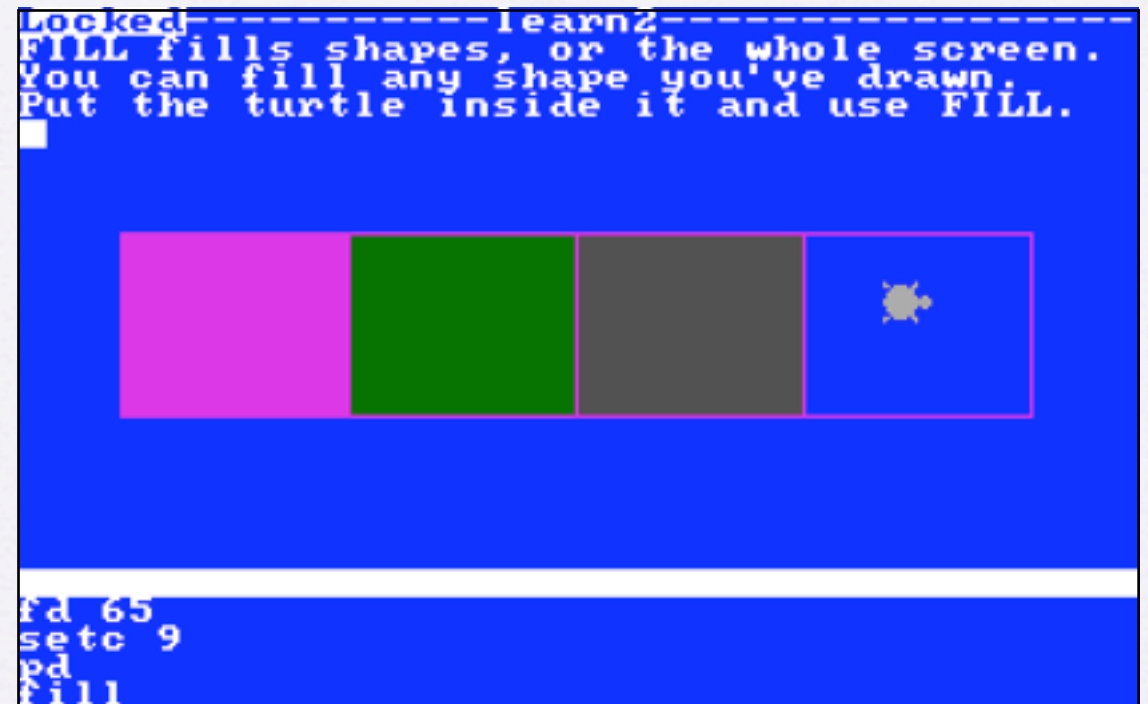


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See http://groups.google.com/group/k12.ed.tech/browse_thread/thread/fd5a2e8191c37971/e29a8e316ef470d5 for offerings from LCSI for the Apple II, including:

- LogoEnsemble for the Apple IIGS
- LogoWriter Secondary
- LogoWriter Intermediate
- LogoWriter Primary
- LogoExpress
- LogoWriter Home Edition
- The Phantom Fish Tank
- LCSI LOGO II
- LogoWriter for Special Needs
- LogoWriter Tools
- LogoWriter Graph Tools
- LogoWriter Language Arts Tools

LCSI Logo Writer GS



Other Versions

- **Byteworks 3D Logo**
- Byteworks HyperLogo
- Krell Logo
- LCSl Logo Ensemble
- LCSl LogoWriter
- Lego TC Logo
- MECC EZ Logo
- Telly Turtle
- Terrapin Logo Plus
- Other books, add-on packages, curriculum, books ...

Tutorial Topics

- Turtle Graphics
- Immediate and Deferred Execution
- Workspace
- Numbers, Words, and Lists
- Procedures and Parameters
- Loops
- Recursion
- Saving & Loading Programs

What's next?

- Get Logo with a matching manual.
- *Computer Science Logo Style*, by Brian Harvey
- *Turtle Geometry*, by H. Abelson and A. diSessa
- *Mindstorms*, by Seymour Papert

