

Professional systems programmers use linkage editors, along with editors, assemblers, and compilers, as one of their most important development tools. LINKER is a linking loader/editor for the APPLE II with DISK II. It may be used with virtually any 6502 assembler now on the market to turn your APPLE into a powerful and productive development machine rivaling the much more expensive LSI-11 or S100 bus based systems.

WHAT DOES LINKER DO?

- Dynamically LOADS AND RELOCATES your assembly language programs anywhere in RAM.
- COMBINES A MAIN PROGRAM WITH SUBROUTINES to form a composite, executable program, allowing you to assemble a subroutine once and then use it in as many programs as you
- PRODUCES A MAP of all loaded routines, giving their location and the total length of the resulting module.
- AUTOMATICALLY LOADS each subroutine as it is needed.
- Will SEARCH MORE THAN ONE DISKETTE for subroutines if desired.
- LOADS either UP from an address OR DOWN from an upper boundary
- ROUTINES are either PACKED together OR forced to EVEN PAGE ALIGNMENT at your
- Can be called as a subroutine itself to LOAD PROGRAMS DURING EXECUTION and MANAGE **OVERLAYS**
- Comes with a starter LIBRARY OF SUBROUTINES including

Plus documentation on their calling conventions and an example program showing how to use

EXPERIENCED ASSEMBLY LANGUAGE PROGRAMMERS

LINKER is an invaluable aid to the professional. No more "partitioning" of memory for each routine. No more JMP vectors. No more reassembly of every part of a program to make one

NOVICE MACHINE LANGUAGE PROGRAMMERS

With LINKER's subroutine library you can learn assembly language by writing programs almost as easily as in BASIC.

APPLE is a registered trademark of APPLE Computer Co.

PRICE - \$49.95 ON DISKETTE

\$20.00 FOR MANUAL ONLY



TENEATH APPLE MANOR (BAM) is a solitare role playing simulation game, loosely based upon several popular fantasy games such as Dungeons and Dragons, Tunnels and Trolls, etc. BAM allows you to play the role of an adventurer, exploring an underground maze of corridors, rooms, secret passages and the like, killing dangerous monsters and finding rich and powerful treasures. The dungeon complex consists of many floors or levels, each more dangerous than the last, but as you gain experience from vanquishing Green Slimes, Ghosts, and other fearsome critters, your capabilities will rise to meet each new challenge. Finally, in a dragon horde many levels below Apple manor you may even find the ultimate object of your quest, the fabled golden apple of Apple manor

BAM is similar to the game Adventure but has several important differences. The dungeon construction is two-dimensional and graphically represented. The monsters are different, each having unique capabilities and movement. Unlike Adventure, which can only be played once, with the thrill of exploration and discovery as well as the satisfaction of advancement, you'll want to play BAM again and again. Although BAM is easy to learn to play, the strategies developed by an experienced player are many and complex.

BAM was written for the Apple II in Integer Basic and 6502 machine language. It consists of two main parts: An initialization program which constructs dungeon floor plans; and a run-time program with which the game is played. The program will run on cassette based systems from 16K and up or on diskette based systems from 32K.

Apple II is a registered trademark of the APPLE COMPUTER CO. Dungeons and Dragons is a product of TSR Hobbies Tunnels and Trolls is a product of Flying Buffalo

BAM'S ADVANTAGES:

- EASY TO LEARN AND PLAY (MATH DEGREE NOT REQUIRED) YET NON-TRIVIAL IN ITS STRATE CAREFULLY PLAYTESTED. RELIABLE AND WELL
- CAN BE TAILORED TO THE BEGINNER OR THE
 USES APPLE II COLOR GRAPHICS OR TEXT GRAPHICS AT THE USER'S OPTION.
- ALLOWS PLAYER DEVELOPMENT AND AD-VANCEMENT DURING THE COURSE OF THE GAME.
- BALANCED.
- PROVIDES THRILLS OF EXPLORATION AND RISK
 THROUGH COMPUTER CONTROLLED PARTIAL
 INFORMATION.

 COMES COMPLETE WITH ILLUSTRATED RULE
 MANUAL, GIVING BACKGROUND AND STRATEGY HINTS. MANUAL, GI

PRICE - \$15.00 ON CASSETTE

\$20.00 ON DISKETTE

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Astrology is the science of correlating human behavior to the movement of the stars and planets. The mathematical calculations required by an astrologer are well suited to the computer and other programs exist which will perform these calculations. ASTROAPPLE goes beyond these mathematics and provides APPLE II owners with a mini astrologer in their own machine! The following are the features that make ASTROAPPLE unique:

* NATAL HOROSCOPES (BIRTH CHARTS) *

ASTROAPPLE produces a natal horoscope for each subject who has entered his or her birth data. Included in the interpretation are paragraphs describing your:

- * personality (Sun sign)
- ★ emotional behavior (Moon sign)
 ★ the way others see you (Ascendent)
- ★ what sign you are most attracted to
 ★ what sign you may marry
- and much more!

Following the interpretation, a chart may be displayed showing the positions of the planets at the time of your birth, accurate to one half of one degree! This information may be copied directly into the familiar circular horoscope format for a permanent record of your astrological birthday. A blank horoscope and complete instructions on how to create this chart are included in the ASTROAPPLE manual.

* COMPATABILITY *

How compatable are you with your family and friends? ASTROAPPLE compares each pair of subjects that have entered their birth data and produces astrological ratings for physical, emotional, and intellectual compatability. The results may surprise you!

★ THIRTY DAY FORECASTS ★

ASTROAPPLE produces a 30 day forecast for any month (or months) you choose. You are told which days may be good for business, or which days the stars say you should watch your temper and/or your pocket book!

ASTROAPPLE was developed by a former teacher of astrology with over 10 years of programming experience. It consists of two separate 12K programs written in APPLESOFT BASIC and 6502 machine language and requires a 32K or larger system. Both casset midskette versions are available. ASTROAPPLE comes complete with an instruction manual which helps explain the terminology and techniques of the astrologer. Never before has this complete an astrological package been available to the microcomputer owner!

APPLE II is a registered trademark of the APPLE COMPUTER CO

PRICE — \$15.00 ON CASSETTE

\$20.00 ON DISKETTE

TEACH YOUR APPLE TO - WRITE POETRY - COMPOSE MUSIC - CREATE ART - INVENT STORIES

BABBLE

WHAT IS BABBLE?

In some ways BABBLE is a programming language like BASIC or PASCAL but, unlike these general purpose languages, BABBLE is highly specialized. "Programming" in BABBLE is much simpler than in BASIC, as you define the rules the computer will follow to create random or fixed patterns using language, music, or graphics. A BABBLE program can be as simple as a random sentence "babbler" or as complex as a meaningful prose generator. The only limitation is your imagination. Some of the things BABBLE can do are:

- Complete a partially written story, "filling in the blanks" with words, either chosen at random from lists you specify, or obtained from the keyboard at execution time. The stories generated this way are often hilarious!
- Construct random poetry and jingles from "building block" words and phrases, laid out in grammatical rules
- · Generate random stories from small sections or sentence patterns.
- Create fixed or random graphic displays, block letters, and animation more concisely and easily than in BASIC
- Mix text, graphics, sound (and anything else you can think of through calls to your own assembly language subroutines).

WITH BABBLE YOU GET . .

A GENERAL PURPOSE FULL SCREEN $\operatorname{\textbf{EDITOR}}$ SUPPORTING BOTH TAPE AND DOS TEXT FILES

A **COMPILER** WHICH TRANSLATES YOUR BABBLE CODE INTO HIGH-SPEED INTER-PRETIVE CODE

AN EXECUTOR WHICH INTERPRETS AND EXECUTES YOUR BABBLE PROGRAMS EXAMPLE BABBLE PROGRAMS, CREATING STORIES, JINGLES, AND **GRAPHICS**

A COMPLETE MANUAL ON THE USE OF BABBLE WITH PROGRAMMING TIPS

BABBLE is written entirely in 6502 machine language and requires a minimum of 16K on a tape based APPLE II or 32K on diskette based systems and the Integer Basic Rom APPLE II is a registered trademark of the APPLE COMPUTER CO.

PRICE — \$15.00 ON CASSETTE

\$20.00 ON DISKETTE

ASK YOUR DEALER FOR OTHER PRODUCTS FROM:

The

Software Factory

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