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COMPUTER ENTHUASISTS
of COLUMBUS, OHIO
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THE EDITOR'S COLUMN

BOOK REVIEW:
Programmer's Reference Guide

ATARI DEMOPAC #9

ATARI DEMOPAC #10

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for ACE of Columbus membership. Dues are on an annual basis and entitle the members to all club benefits (Newsletter, Disk or Tape of the month, group discounts, etc.). Monthly meetings, at St. Francis De Sales High School, 4212 Karl Road, Columbus, Ohio are open to nonmembers. Upcoming meeting dates at 7:30 pm are

DATE	TOPIC
December 10, 1984	Games
January 14, 1985	Education
February 11, 1985	
March 11, 1985	
April day?, 1985	
May 13, 1985	
June 10, 1985	
July 8, 1985	
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THE EDITOR'S COLUMN

Since I have been a member of ACE of Columbus, our meeting place has been at three locations. The first few meetings were held at the ON-LINE computer store. After a couple of meetings there our membership increased and the room at ON-LINE just became too small. Since then out meeting place has been at the Worthington branch of State Savings, except for one meeting at the Worthington Public Library. For some time we've had standing room only for latecomers. This situation has been resolved now that arrangements have been made to hold our meetings at St. Francis De Sales High School. We would like to thank State Savings for the use of their meeting room. We are very appreciative for the future use of De Sales as our new meeting place.

STATE of ATARI

Very little has been heard from the new management at Atari about Atari's future until recently. The situation has just slightly changed. The Jan '85 issue of ANALOG Computing has a report on the "Atari Corporation first press conference" in which the marketing strategy for 1985 was outlined: price reductions on current hardware, no Atari software for more than $50, and plans for new high-quality, inexpensive 16 and 32 bit machines for home use. Details are promised in the Feb issue of ANALOG Computing.

After Atari's press conference, ANALOG's publisher Lee Pappas and editor Jon Bell were granted a short interview with Jack Tramiel, Chairman of the Board and James Copland, VP of marketing. The overall impression left on me was one of confusion and bewilderment after I had read the two pages of questions and answers. At several points in text laughter was reported as a response to both questions and answers. Come on Lee and Jon, this was not an interview; these questions were probably fielded from the audience after the press conference. You can't tell me that the four of you were sitting about a table in an office laughing about the future of Atari. A couple of days after reading the 'interview' I got the Jan issue of ANTIC in the mail.

On the cover I saw a little teaser: **Unlock XL Parallel Bus!**. Opening quickly to page 45, I found an article entitled "The Parallel Bus Revealed: 100,000 bytes per second Part one of a four part series" by Earl Rice, one of Atari's former top technical executives. The parallel bus is on the back of the 600XL and 800XL machines, covered by a plastic plate. The bus is an extension of the 6502 data, address, and control signals. With the appropriate software, external high speed I/O devices such as a 10 Megabyte Winchester drive can communicate with the Atari at the speed of the 6502 microprocessor. This series of articles will show you how the parallel bus works and, more importantly, how you can use it with your own projects. This just excites me, since I received a catalog advertising a surplus 10 meg Shugart Winchester disk drive for $300. A Pennsylvania company has just announced for the Apple II+ and IIe for $695 a Winchester hard disk drive; now we should have one for the Atari 800XL. Before we go overboard about hard disks, there are nonmechanical mass storage devices available, but the cost has yet to come down for these devices.

With the release of the parallel bus specifications, June 1984, I can see better things down the road for Atari. I just hope that history doesn't repeat itself at Atari as it developed at Commodore.

BOOK REVIEW

Programmer's Reference Guide for the ATARI 400/800 Computers
by David Heiserman
Howard W. Sam's & CO., Inc.
4300 West 62nd St.
Indianapolis, Indiana 46268
4949 pages, $21.95.

Sam's is well known as a publisher of electronics books and manuals. Sam's has only recently published books for the Atari, Apple, and TRS-80 computers. There are no small utility programs as found in "Your Atari Computer" by Poole, McNiff, and Cook, the "purple book." It is rather difficult to determine the group of Atari owners the author was writing for since treatment of various topics is inconsistent; some chapters are written for the new Atari owner while other chapters are intended for the new to average Basic programmer or for the assembly language programmer.

Chapter 1, entitled "Getting Started", instructs the new user in setting up his computer in various configurations, keyboard operations, screen editing, working with the recorder, and routine disk operations. The routine disk operations section seems to be well written and should be helpful to a person learning how to use DOS 2.0 (Disk Operating System, version 2). For some mysterious reason the author feels compelled to discuss DOS 1.0 which is rarely used.

Chapters 2 and 3 are concerned with several aspects of Atari Basic. Chapter 2 sets forth the notation, rules, and limitations of he numeric and string constants and variables. Dimemsioning string variables and numeric arrays are illustrated with simple programs. Logical or Boolean operations and operators are explained but the corresponding expressions are not mentioned. In chapter 3, the Basic statements, commands, and functions and the corresponding syntax are given along with simple examples.

Chapters 4 and 5, constituting about a third of the book, is the most valuable part of this book. Chapter 4 describes the text and graphics screens. There are lots of tables describing the various graphics modes, the RAM addresses of each row for all modes, the ASCII character set (codes, characters, and keystrokes), the Atari internal character set (codes and ROM addresses), and much more. I had some problems trying to use the Basic XL Move statement to display strings on the Graphics 0 screen. The information listed in chapter 4, unavailable to me elsewhere, helped me to resolve my difficulties with the Move statement. Chapter 5 gives a treatment of player/missle graphics; I will not comment on this treatment of p/m graphics becasuse I have not used the programming techniques. The material in these chapters can be understood by a medium level Basic programmer.

Chapter 6 and 7 cover a variety of subjects mainly for the sake of completeness: I/O for the recorder and disk drive; saving, loading, and running binary files; using the XIO commands; sound and music; the USR function; screen display lists; tokenized Basic. Most discussions are rather brief but informative.

The Atari memory map is discussed in chapter 8 using a list of what the author considers the most import memory locations. It's nice as an overview for the novice like myself, but you really should buy

the COMPUTE book, *Mapping the Atari*, for the complete, authoratative treatment.

For the machine language programmer, chapter 9 gives a rather brief discussion of the 6502 instruction set. Appendix H has pinout diagrams for the 6502, GTIA, and ANTIC microprocessors as well as pinout diagrams for the serial I/I jack, controller jack (joystick and paddle), and monitor jack.

The appendices deal with number system base conversion (dec, hex, bin), Basic reserved words, character and keyboard codes, screen RAM addressing ranges for the Atari screen modes, derived trigonometric functions, error and status codes. It would seem that most anything you would want to look up would be here, but there are couple items missing. In all the lists of derived trigonometric functions available to me, I have not seen an expression which generates the value of pi, the ratio of the circumference of a circle to its diameter:

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RAD:PI=4*ATN(1)
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should be added to these lists.

There is one more table the author could have included in addition to the record number in this book. There is a set of "keyboard internal codes" which are revealed by the PEEK(764) statement. *Mapping the Atari* has a little demo program which generates these codes. The ACE POCKET REFERENCE CARD has a table of these codes and gives the keystroke generating them: normal, shift, control, shift/control. The major use of the 764 register is that it displays the "keyboard internal code" for the last key pressed. The Basic programmer can PEEK(764) in a cycling procedure to look for a keystroke generated by a non-AtASCII keystroke: ctrl 5, ctrl 8, ctrl/shift A, etc. Then control can be transferred to a specified subroutine. This can be used in a program where all AtASCII characters are placed on the screen; the word processor, Scriptor published by COMPUTE magazine uses this technique.

I'm not going to say all programmers need this book, just those who need to look up a lot of memory addresses, which is this book's strong point. Like most technical books, the writing style is like Ohio State's style of football back when Woody Hayes was the OSU coach: "three yards and a cloud of dust". Since the author studied applied mathematics at OSU, I just had to use this simile.

SAM'S has published several other books which complement the *Programmer's Reference Guide*:
ATARI BASIC Tutorial by Robert A. Peck
Advanced ATARI BASIC Tutorial by Robert A. Peck
ATARI for Kids from 8 to 80, by Michael p. Zabinski and Eugene Scheck
BASIC on the ATARI for Kids, by Wyner and Wyner.

Reviewed by Norman Knapp