Dear fellow VIPER,

The world of computers is growing -- sometimes almost too
fast -- everyday. With your Cosmac VIP, you hold a precious
spot in the pioneer front line of the most exciting and
rewarding hobby ever to grab hold in modern times. Everyone
has a computer (very nearly a true statement), and everyone
owning one of these fascinating marvels has a different
interest in their inner secrets. If you suspect me of being
a "computer-fanatic," you are right! And I sincerely hope
that the following pages will pass on at least some of the
excitement that I feel while manipulating, molding, directing
all those seemingly insignificant little memory bits into a
program. A program that does something; whether it's a game
or a "utility" routine that helps write still other programs.
I cannot tell you how much I enjoy programming, and how much
I want to share the experience of programming with you. But
I will try, and I am thankful to you and to the fine people
at ARESCO for giving me the opportunity to present my computer
"discoveries" in these pages.

If you are new to computers and perhaps having some trouble
getting started, my suggestion is to relax and learn as much
as you are able -- a little at a time. Study the manuals
that came with your VIP. They are of the best written in the
market, and contain all you need for a valuable introduction
to the binary world. Study other programs such as those in
this book, play games, make the modifications suggested, and
you will be well on your way in a hobby that I predict, once
you begin, you will never put away.

To the goal of teaching computer programming in a fun and
interesting way, I have made every effort to clearly mark
each instruction in the following programs, what they are,
what they do and why I did things the way I did. The program
descriptions accompanying the listings add explanations where
routines crucial to your understanding of the program are
picked apart piece by piece unveiling their hidden purpose
to the whole. Modifications are included to allow you to
customize your game to suit your own tastes as it would be
presumptuous of me to assume that my choices were the best in
all cases. (And I invite my fellow authors here publicly,
to do the same.) It is your computer -- you should be able
to say how you want it to perform!

For those of you who have been programming for some time and
have written your own programs already, the games presented
here offer the unique capability of modular design, allowing
experiments in higher level programming concepts without