

THE TENTH ANNIVERSARY OF THE ALTAIR 8800

Popular accounts of the invention of the personal computer are fraught with error, ego, and eccentricity. To tell the story behind the story, *COMPUTERS & ELECTRONICS* asked Forrest Mims to review the history of the microcomputer. Mims is one of the founders of MITS (Micro Instrumentation and Telemetry Systems), the company that produced the Altair, the first successful personal computer. In the articles in this issue, Mims chronicles the development of the micro and talks with H. Edward Roberts, the "father" of the Altair.



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SETTING THE RECORD STRAIGHT

BY FORREST M. MIMS III

Few major inventions have uncontested ancestries. Consider, for example, the controversies over who invented the telephone, the incandescent lamp and, more recently, the digital computer. Now, the invention of the personal computer is being written about in magazine articles and books, and some of these accounts contain glaring errors and omissions. That should

trouble those of us who use personal computers, for we are the first generation to have at our fingertips the means to extend intellectual and creative abilities once available only to a few.

Two facts about the history of personal computing are indisputable. One is that the introduction of the Altair 8800 through the pages of *Popular Electronics* exactly ten years ago sparked the personal computer revolution. The other is that both individuals and small companies were building small computers long before the Altair arrived in 1975.

As a high school student in 1959, I, among others, began building simple analog machines that performed basic arithmetic. By 1961 these early machines culminated in an analog computer that translated 20 words of Russian

into English. The key circuit of this machine, which I still have, was a memory consisting of 20 miniature trimmer resistors that were automatically scanned by a mechanical sequencer made from a modified electric music box mechanism.

Ed Roberts also began building both analog and digital computing devices in 1959. Even before Ed Roberts, Stan Cagle, Bob Zaller and I formed MITS in 1969, Ed and I used to discuss the homebrew analog computers we had built a decade earlier. In the summer of 1970, we discussed designing and selling, through an article in *Popular Electronics*, a kit analog computer that would use operational amplifiers. Had not Ed become interested in designing the 816 digital calculator featured on the cover of the November 1971 issue of *Popular*

