MODIFY THE ELF-II TO RUN CHIP-8 AND VIP GAMES

by Bobby R. Lewis

(Editor's note: We have received requests from literally dozens of VIPER readers requesting information on how they can use their ELF-IIs to run VIP games in CHIP-8. Since the VIPER is dedicated to users of the VIP rather than to users of the ELF-II, we haven't exactly been what one would call responsive to the inquiries. One reader wrote: "Most of the more elaborate games, etc. seem to have been written in CHIP-8, and at my present level of skill, I'm not up to decoding and re-writing RCA's VIP monitor and CHIP-8 to run on my Super Elf. The manual that came with my machine is confined to very elementary stuff - besides that, it's terrible. They don't know a thing about communication. Help us, VIPER people! We need a "liberator"! " This particular reader reflects the same aura of "desperation" we've seen in several dozen similar letters, and we've been scratching our heads about how such an article would fit into the "exclusively VIP" format we've adopted.

A careful look at Bobby Lewis's article convinced us that the information will be useful to many of our subscribers, even if the idea is to use an ELF II rather than a VIP to start with. However, once the modifications have been made, the user will have an "effective" VIP - and will be among the exclusive membership of the VIPER subscribers! That, to us, was enough of an excuse to justify inclusion of the article in this issue. So here it is - enjoy!)

If you own an ELF-II, you can take advantage of CHIP-8 and RCA VIP games. Although the following information assumes that you have an ELF-II with Giant Board Monitor and at least 4K of RAM, you can possibly use it on other systems if you are familiar with the VIP operations and hardware.

First, let's take a look at some of the VIP features. A basic system contains a 512 byte (2 page) operating system in ROM, addressed at 8000 through 81FF. The operating system normally searches for and uses the highest page of RAM for the operating system display page. The VIP manual, contains a hexadecimal listing for the 512 byte CHIP-8 interpreter that must be entered into addresses 0000 through 01FF with the hex keypad. The VIP has no 7-segment displays for data; instead, it uses the video screen in conjunction with the operating system to display addresses and data and to allow modification of the data. The keyboard on the VIP is what I like to call