

MACHINE LANGUAGE MANAGER, a review...

We carried an ad for The Bit Fiddlers in the last issue, which offered a new cartridge to be used in the Arcade. I ordered one, and quickly received a package containing the cartridge, a manual, and an overlay card. I asked Al Rathmell to review the product, and his report follows:

"The Machine Language Manager from the Bit Fiddlers is an EPROM plug-in software package for Z-80 machine language program development on the Bally Arcade.

"The user's manual is excellent. There are nine chapters that in a concise and easy-to-understand way, cover the concepts of machine language programming, use of the manager and its utility routines, and some good sample programs.

"The manual also includes a complete source listing of the Machine Language Manager, as well as the Z-80 instruction set in alphabetical order. The users manual is great, and one of the best features of the Machine Language Manager!

"Using the Manager is easy. After reading the users manual once, all that is required is an occasional glance at the quick reference command list on p. 8-1.

"The first obvious difference from using Bally Basic is the small character font. The small font allows up to 15 lines, and 39 characters per line. At first it looks a little strange, especially N and Q, but it is certainly readable and allows about twice as much information to be displayed than Basic. Punching in machine code is simple if you don't make mistakes. Fixing mistakes is a little tedious since the address is shown only every eight bytes. The insert and delete are somewhat difficult to use because you must keep track of the address of the last program opcode.

"The reset function is like the HALT command in Basic. Pushing RESET returns control to the manager without changing memory. Memory is only cleared during power-up.

"The Machine Language Manager is a useful tool for those into machine language programming. Some future additions that would make it better include a search function that would scan a memory range for a specified byte or string of bytes, and an assembly function that would generate opcodes from mnemonic source codes."

The above was written by one who uses machine code programming frequently, not a new-comer. I noted that the text contains some educational material, and some leading-by-the-hand, which is just what I need. As with most computer operations, one needs to "do it yourself" to better understand the operation, and I will be doing so in the future. You will be hearing more about the Machine Language Manager as we utilize this opportunity to study the computer in more detail.

A review of the manual that comes with the cartridge reveals a few interesting details. The first 37 pages contains a mixed bag of general descriptive material, some insights into the Basic language as written by the Bally software team, specific data about the Manager, and instructions as to its operation. There are a few sample programs.

A shift key is included, so that a couple of keys do double duty. These primarily are associated with the use of the tape port (300 baud, requiring the cassette interface), so that the equivalent of Basic commands :PRINT, *PRINT, :INPUT, and :LIST can be generated.

Following the above, the Bit Fiddlers have included the disassembled Manager program (28 pages), and the Z-80 OpCode in 15 pages.