RAMROD XL OMNIVIEW XL

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RAMROD XL: $119.95
OMNIVIEW XL: $59.95
For the 800XL

by Tom Hudson

When the Atari 800XL computer appeared late in 1983, many people were disappointed by its apparent lack of expandability. Gone were the handy expansion slots of the old 800 ... and, with them, everyone thought, went the chance to enhance the basic computer easily.

For serious Atari users, like the ANALOG Computing technical staff, the 800XL was a letdown. I remember looking at the sleek machine, shaking my head and saying, "I'd love to have this on my desk, but without OMNIMON! I just couldn't function" If you've been reading ANALOG Computing for very long, you'll remember that OMNIMON! (reviewed in issue 12) is a resident monitor which can be called with a simple keyboard sequence. This program is indispensable for serious machine- language programmers, as well as other advanced Atari users.

Luckily for 800XL users, Newell Industries has recently introduced Ramrod XL. This compact package contains three improvements for your 800XL: OSNXL, FASTCHIP XL AND OMNIMONXL - and Ramrod XL is capable of being enhanced with an 80-column screen editor.

A new OS.

The first feature present in Ramrod XL is OSNXL, a revised operating system for the 800XL. This OS operates in the same way as the original, but with several improvements which make living with your 800XL much easier.

First, the keyboard response is twice as fast as the standard OS. Many people have written patches that perform this function for the 400/800 operating systems, but it's already built into OSNXL. This is a convenient feature for those who type faster than normal or who use the cursor control keys often.

The cassette interface has been improved, so that the data transfer rate can be increased by the user. The Ramrod XL manual reports baud rate increases to around 1500 baud - 2.5 times the standard speed! The baud rate can be changed via BASIC or machine language, and SYSTEM RESET returns it to the default of 600 baud.

OSNXL should be compatible with most existing software, since the authors kept the entry points at their Revision B locations.

Faster math.

The second feature of Ramrod XL is the FAST CHIP XL, an enhanced floating-point subroutine package. You don't have to be an advanced programmer to use or appreciate this feature.

FASTCHIP XL replaces the built-in math subroutines in the 800XL, resulting in math functions that operate an average of four times faster than the original. Figure 1 shows typical math functions and the processing time for 1000 repetitions in BASIC on the standard OS and OSNXL with FASTCHIP XL.

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FUNCTION   STANDARD   FASTCHIP XL   SPEED INC
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ADDITION      5.19         5.02       1.034
SUBTRACT      5.43         5.38       1.009
MULTIPLY     13.32         7.95       1.675
DIVIDE        9.96         9.51       1.047
EXPONENT    233.67        74.55       3.134
SQ.ROOT      96.92        41.23       2.351
LOG         128.38        49.03       2.618
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Figure 1.

As you can see, the FASTCHIP XL can make life easier-even for the novice user who only uses BASIC. Solid States fans, take note!

The resident monitor.

The last major feature of Ramrod XL is my personal favorite, OMNIMONXL. This is a "must-have" for any assembly language programmer.

With OMNIMONXL in your computer, you can interrupt a program at any time with a simple keyboard sequence. Once in OMNIMONXL, you can easily examine and change memory. You can search for numeric or text data in memory. Hex conversion is available at any time. You can disassemble memory and even assemble 6502 instructions into memory! Testing and debugging of assembly language programs will be much easier with OMNIMONXL resident in your computer.

The Ramrod XL package itself is a simple circuit board which installs quickly in your 800XL. I installed our unit in about ten minutes, most of this time being spent searching for the tools! The only equipment you need for the installation is: a couple of screwdrivers, pliers and a drill.

After the computer is opened, the old operating system chip is removed, and the Ramrod XL board is plugged into the OS chip socket. Then the old OS chip is inserted into one of the three sockets on the Ramrod XL board. Finally, you'll want to install the OS selector switch in the 800XL case. Do this by drilling a small hole in the back of the computer.

Once Ramrod XL is installed, you have the option of using the standard operating system or OSNXL. You simply flip the OS selector switch from one position to another to perform this function. With the old OS selected, your 800XL will perform as it always did before the modification.

With OSNXL selected, you have the new OS functions. FASTCHIP XL and OMNIMONXL, available for your use. Interestingly, OSNXL was designed to set the default blue of the screen to a slightly darker shade. This was done so that you could easily determine which operating system has been selected.

As mentioned earlier, the Ramrod XL board contains three sockets. One holds the original 800XL OS, the second contains the OSNXL chip and the third is available for a third operating system, if you like. The selector switch is a three-position type, allowing you to select any one of the three operating systems.

OmniviewXL.

One interesting possibility available for the third OS socket is OmniviewXL, an 80-column upgrade for the 800XL. This is a single chip which installs in the Ramrod XL board in minutes, requiring no further hardware changes to the 800XL.

OmniviewXL creates an 80 -by- 24 -character display for your 800XL, using the graphics 8 mode. This is a fairly good solution to the 80-column problem, and OmniviewXL uses it nicely. Due to careful color selection, the characters are quite legible on a properlyadjusted color display. Of course, the 80-column output looks best on a monochrome

monitor.

When the computer is powered on with OmniviewXL selected, it will default to the normal 40-column mode. The 80-column display may be selected in one of two ways: pressing OPTION, SELECT and RESET at the same time; or executing a JSR $C001 from assembly language.

According to the manual, OmniviewXL is compatible with any program which uses the normal, nonsplitscreen editor. Programs like Medit, VisiCalc and AtariWriter use custom screens, and won't operate properly.

With programs that can use OmniviewXL, there are a few things to remember. First, the OmniviewXL editor has a maximum logical line length of 80 columns, not 120, as in the standard editor. You can still edit lines longer than 80 columns, by returning to 40-column mode. Second, you cannot set tabs in 80-column mode. Third, split-screen and line drawing are not supported by OmniviewXL.

Because the OmniviewXL screen is set up in graphics 8, there is a way to mix graphics and text on the screen - if your program can draw in graphics 8. The manual describes the technique, which, basically, allows text on the top of the screen and graphics on the bottom.

The manual also describes how to modify various versions of Letter Perfect and Data Perfect to work with OmniviewXL. This can be done easily with OMNIMONXL, or CDY Consulting will do the patches for you, for a $10.00 fee.