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In the last edition of the Forum, I promised to talk about the software that is now available for KIM and other 6502-based hardware. The question of software was probably raised more often than any other point by prospective KIM owners while I was managing KIM for MOS Technology.

The first request was usually for a good version of BASIC. One of the most popular is the version of Tiny BASIC offered for \$5 in paper tape form by Tom Pittman of Itty Bitty Computers, PO Box 23189, San Jose CA 95153. Tom offers versions with their origin at either 400 or 2000(hex), depending on how your memory is organized. Tiny BASIC requires only 2K of memory and Tom provides a good user manual complete with notes on how to modify the I/O routines to meet your requirements. Like the OSI BASIC, no source listing is provided.

Last month I mentioned

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that the best source of KIM software was probably the *KIM/6502 User Group Newsletter*, edited by Eric Rehnke, 425 Meadow Lane, Seven Hills OH 44131. Issue 4 contains a novel game, KIMAZE, a relocation program for hand assemblers, a program to read that ID you forgot from your audio cassette, a chess clock, a cassette duplication program, and best of all, a calculator chip interface (with software) for the MOS 7529-103 IC. The interface

uses the KIM I/O lines, the KIM, and the calculator chip — period. (Not the 29 ICs required in the recent calculator interface published in *Byte*.) If you don't send \$5 to Eric for the first six issues, you just aren't interested in 6502 software.

Also available for KIM is the best chess-playing program available for any microcomputer. Written by Peter Jennings, it's available for \$10 from MicroChess, 1612-43 Thorncliffe Park Dr., Toronto, Canada M5H

1J4. Included are instructions on how to make it play a variety of opening games and modifications to vary its game strategy. An interesting feature is the ability to vary how long the program thinks about its next move — anywhere from 2 to 100 seconds. I had the pleasure of having dinner with Peter and some of his friends from Toronto at the Trenton Computer Festival. He mentioned that he had rewritten the MicroChess program to run on an 8080. The program requires all of the 1K memory on KIM, but requires more than 2K on the 8080!

Another excellent source of software is Bob Tripp of *The Computerist*, PO Box 3, S. Chelmsford MA 01824. Bob "retired" from his post with a well-known computer manufacturer to spend full time writing software and consulting in the micro field. His package runs on an unexpanded KIM-1 and allows you to

play a variety of games including DAFFY (similar to Mastermind), Shooting Stars, and Hi-Lo. Also included are a digital clock and timer, a reaction timer and several other programs. All of his software is written in an intermediate language called PLEASE. Experienced programmers will recognize it as a series of functions with parameters which are passed to a small executive program.

Bob's latest effort, called HELP, is described as a cassette-oriented text editor which can be used to maintain mailing lists (finally, a practical application for your micro) and print selected portions as mailing labels. PLEASE and HELP are available from Bob for \$10 each, complete with excellent documentation.

For TIM owners, a good collection of utility programs is available from The

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SOFTWARE

All programs include: Complete assembler source listing, sample output, hex dump, sorted symbol table, plus complete instructions and thorough documentation.

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tions and trade-offs and the theory of operation. The article would contain photos, diagrams, listings, flowcharts and (in the case of a board) complete construction details which would include the PC board layout and artwork. (That last one might unsettle the poor guy who feels this would be the same as giving his product away ... but there's really no cause for alarm. Sure, there are going to be a few people who will actually make a negative and make their own PC board ... but the number will be incredibly small compared to those who purchase the board.)

Of course, there are those who don't really need the exposure a good article would give their product. Take Bob Mullen (if only someone would!). Mullen Computer Boards recently completed development of an opto-isolator/relay control board for the Altair bus. The endless applications for this board are mind-boggling! But, unfortunately we'll probably never see an article on it because Bob is too tied up with taking cruises on his yacht and counting his money! Like I said, there are some out there who don't need the exposure. (It's important that the word "exposure" be emphasized here because articles written by manufacturers about their products *cannot* come off sounding like advertisements.)

If you really can't find the time to write about your product, or for some other reason you can't (or won't) do it, then drop me a line and let's see about getting it into the hands of one of KB's writers for a hardware or software review. There's a lot to be said for an objective review.

Program Listings

I'm sure a lot of you noticed the program listings in last month's issue which were not typeset. Barbie, Sandy and Marie (our typesetters) undoubtedly got

together and threw a party to celebrate this decision. Aside from relieving those girls of some tedious work, there are other advantages to be derived from using computer-generated listings ... the most important being the reduction of possible errors.

We would prefer that *all* articles which contain programs have the listings generated by the computer rather than being typed or handprinted. If the programs are *lengthy* then we (and the readers, of course) would be most grateful if every attempt was made by the author to generate those listings in camera-ready form. This can usually be accomplished by putting a new ribbon on your printer or TTY before running off the listing.

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6502 Program Exchange, 2920 Moana, Reno, NV 89509. Write for their latest list.

While I was with MOS Technology I was contacted by a programming club at the Colorado School of Mines who had developed some excellent large-scale software and was willing to share both source and object code with the 6502 user community. I have agreed to distribute this software for them so that they can continue to develop more software without the hassles of duplicating listings and tapes and interfacing with users. As of now there are three packages available; a 4K version of FOCAL, a 2-1/2K resident assembler, and a high-level language compiler called XPLO. FOCAL is a registered trademark of Digital Equipment Company for a BASIC-like language and includes floating-point variables,

one-dimensional arrays, user formatting and a complete editor. The assembler uses the MOS Technology op codes but a slightly different scheme for indicating the addressing mode. A loader is also provided. You will have to patch in your own I/O routines since they will depend on the devices you have available. I don't have room here to go into details but an information packet is available for \$2 from ARESCO, 314 Second Ave., Haddon Heights NJ 08035. The complete packages, including source listings (over 100 pages for FOCAL), user manuals, and object code on cassette or paper tapes are available from the same address. FOCAL is \$40, the assembler/loader is \$30 and XPLO is \$40.

As a final note for the hams in the audience, I'm told there is a RTTY auto-start net on 3637.5 kHz which includes some KIM-1 users. I've always thought this would be a great way to distribute software. Now can someone figure out how to copy RTTY with a KIM? The on-board PLL should work fine as an AFSK demodulator!

LEGAL BUSINESS FORUM

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date. Where there is a subsequent delay, the renewed option must inform you that you will be deemed to have rejected any further delay unless the seller receives a consent from you prior to the old definite revised shipping date.

The failure by the seller to provide the required notices and options creates a rebuttable presumption that the seller has failed to comply with the requirements of the Rule and is liable for the civil penalty. A rebuttable presumption is

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The failure to make a prompt refund also subjects the seller to a civil liability of up to \$10,000 per violation.

If you feel that a company you have been dealing with is in violation of the Mail Order Merchandise Rule, you should file a complaint with the FTC. The FTC has complaint forms and will provide you with one following a telephone call or written inquiry.

Not all complaints are investigated by the FTC. The management at the FTC office first evaluates the complaint to determine whether it is in the public interest for the FTC to conduct an investigation. The factors considered in determining whether or not an investigation is in the public interest are primarily the size of the non-complying company and the extent of the consumer injury. The extent of the consumer injury is ordinarily the amount of the purchase. Purchases of microcomputer products will generally be of a sufficient size to be worthy of an investigation. If the investigation turns up evidence which indicates a