

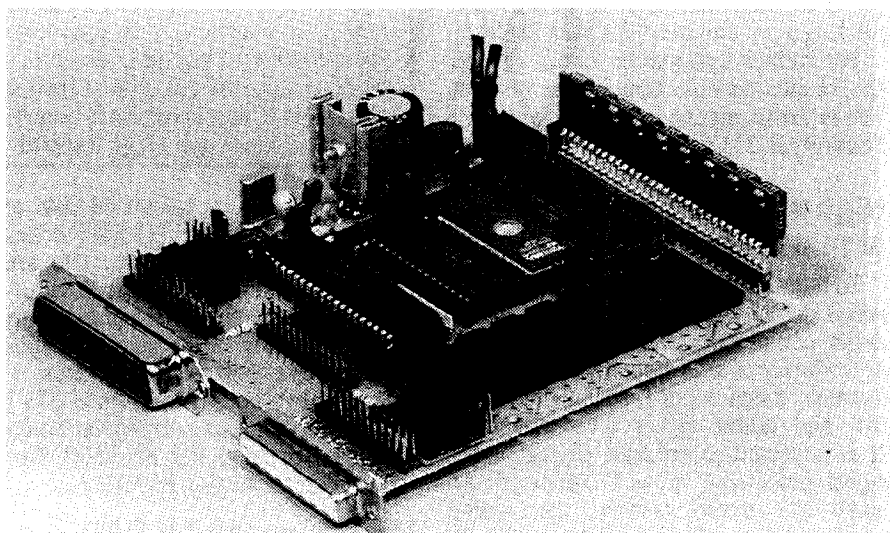
Kit for Printer Buffer, Z80 Development Board

Innovative Melbourne-based kit supplier Don McKenzie has not only upgraded his very popular Printer Buffer kit to provide a buffer capacity of up to 4MB, but also designed it to double as a low-cost development system for Z80 based microcomputers. This should make the kit of interest to an even wider group of potential users.

Mr McKenzie tells us that to date he has sold no fewer than 4000 short-form kits for his 'PBUFF' Printer Buffer design, since it was introduced in 1986. That's certainly very impressive, in anyone's terms. Based on a dedicated Z80 micro, it initially had a buffer of either 64KB or 256KB, and was designed to 'free up' personal computers when using Centronics-type parallel printers. Since then, it has been upgraded first to a maximum capacity of 1MB, and more recently to 4MB.

With the latest revision, however, Mr McKenzie has taken the opportunity to make the design even more flexible, so that the board can now also be used as a low cost development system for those designing or building equipment around dedicated Z80 chips. The one new short-form kit therefore also replaces the earlier 'ZLOAD' development system kit.

In addition to an 8/16KB EPROM and 8KB static RAM, the board can accept either eight separate DRAM chips (4164, 41256 or 4C1024), or a SIMM or SIPP memory module (256KB, 1MB or 4MB). The 8255-based I/O logic can also be con-



figured in many ways, to customise the board for a variety of applications. The board includes a bridge rectifier and 5V regulator, and can be powered from a 9V supply of either AC or DC.

Why a development board for Z80 based projects? Simply because the Z80 micro is a powerful and time proven processor which is readily available at low cost — around \$6 in single quantities. Although it needs to be teamed with other chips such as a separate ROM, RAM and I/O interface for dedicated applications, this still makes it very competitive with 'newer' micros designed more specifically for dedicated use, in terms of both cost and availability.

As a development system, the board is intended to hook up to an IBM-compatible PC using MS-DOS, via the parallel printer port. Together with the etched board, Mr McKenzie supplies a set of development software including the fast public domain Z8T cross-assembler, Z8T BASIC, and source code, plus full circuits.

The board can be operated at 3.58MHz using a Z80A processor, 6MHz with a Z80B or 10.94MHz with a Z80H.

An optional 16KB EPROM is available containing both the software for using the board as a printer buffer, and that for using

it as a Z80 development system. Full source code is provided, for all the software and firmware.

The new PBUFF/ZLOAD short-form kit for the Printer Buffer/Z80 Development System is priced at only \$49, and includes PCB, EPROM and software. The firmware in EPROM is also available separately for \$20, while the PCB and data alone cost \$35. In each case handling and postage adds \$3.00.

Other kits currently available from Don McKenzie include 'PPEX', an I/O expansion board which connects to the printer port of a standard PC, to provide it with up to 64 bits of programmable parallel I/O (\$35 for PCB and software, plus postage); 'PPEXREL', a relay driver board which drives up to eight low-cost relays from the PPEX board; and 'MAXCLOCK', a PC-driven serial interfacing duo-decimal clock display based on the Maxim MAX7219 serial display driver.

Also available are low cost SRAM, DRAM and EPROM memory chips, and also SIPP and SIMM memory modules.

Further information (including a promo/data 3.5" floppy disk, for \$2) is available from Don McKenzie, 29 Ellesmere Crescent, Tullamarine 3043; phone (03) 338 6286. (J.R.) ♦