

\$3.00



December 1983

No. 15

### TABLE OF CONTENTS

Dumping the Screen on a BBI .....	4
BBII Video Calculations .....	6
If Your Serial Port Isn't Feeling Its Oats .....	10
Great Eight Kaypro .....	14
SBASIC Learning Disk .....	34
Adventuring Alone .....	35



### REGULAR FEATURES

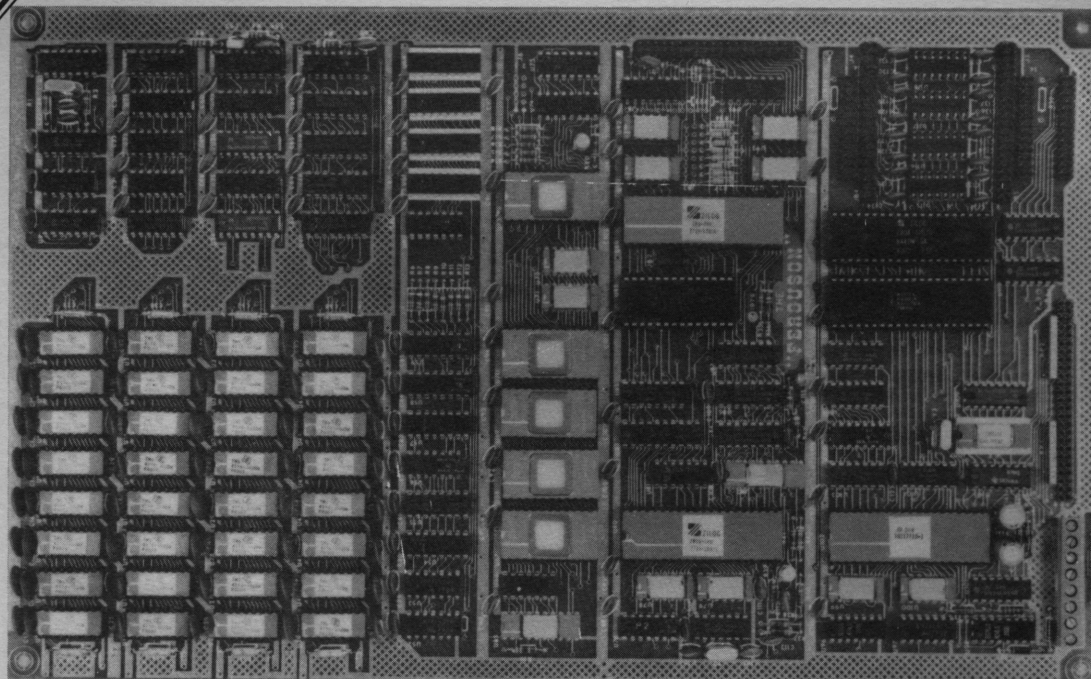
Slicer Column .....	16
C'ing Clearly .....	20
FORTHwords .....	24
Pascal Procedures .....	28
Kaypro Column .....	30
SBASIC Column .....	32
On Your Own .....	40
Technical Tips .....	45

**NEW  
LOWER PRICES**

**"THE ORIGINAL BIG BOARD"**  
OEM - INDUSTRIAL - BUSINESS - SCIENTIFIC  
**SINGLE BOARD COMPUTER KIT!**  
Z-80 CPU! 64K RAM!  
(DO NOT CONFUSE WITH ANY OF OUR FLATTERING IMITATORS!)

**NEW!**

**PARTIALLY ASSEMBLED KITS**  
For All Sockets Installed  
And Soldered Add \$50.  
(Not For Blank PCB)



**WANT MORE INFO?**  
Full Documentation and  
Schematics — \$5.

**THE BIG BOARD PROJECT:** With thousands sold worldwide and over two years of field experience, the Big Board may just be one of the most reliable single board computers available today. This is the same design that was licensed by Xerox Corp. as the basis for their 820 computer.

The Big Board gives you the right mix of most needed computing features all on one board. The Big Board was designed from scratch to run the latest version of CP/M\*. Just imagine all the off-the-shelf software that can be run on the Big Board without any modifications needed.

**\$ 279 00** (64K KIT  
BASIC I/O)  
\*\*

SIZE: 8 1/2 x 13 3/4 IN.  
SAME AS AN 8 IN. DRIVE.  
REQUIRES: +5V @ 3 AMPS  
+ - 12V @ .5 AMPS.

**FULLY SOCKETED!**

**FEATURES: (Remember, all this on one board!)**

**64K RAM**

Uses Industry standard 4116 RAM's. All 64K is available to the user, our VIDEO and EPROM sections do not make holes in system RAM. Also, very special care was taken in the RAM array PC layout to eliminate potential noise and glitches.

**Z-80 CPU**

Running at 2.5 MHZ. Handles all 4116 RAM refresh and supports Mode 2 INTERRUPTS. Fully buffered and runs 8080 software.

**SERIAL I/O (OPTIONAL)**

Full 2 channels using the Z80 SIO and the SMC 8116 Baud Rate Generator. FULL RS232! For synchronous or asynchronous communication. In synchronous mode, the clocks can be transmitted or received by a modem. Both channels can be set up for either data-communication or data-terminals. Supports mode 2 Int. Price for all parts and connectors: \$39.95

**BASIC I/O**

Consists of separate parallel port (Z80 PIO) for use with an ASCII encoded keyboard for input. Output would be on the 80 x 24 Video Display.

**BLANK PC BOARD — \$99.95**

The blank Big Board PC Board comes complete with full documentation (including schematics), the character ROM, the PFM 3.3 MONITOR ROM, and a diskette with the source of our BIOS, BOOT, and PFM 3.3 MONITOR.

**24 x 80 CHARACTER VIDEO**

With a crisp, flicker-free display that looks extremely sharp even on small monitors. Hardware scroll and full cursor control. Composite video or split video and sync. Character set is supplied on a 2716 style ROM, making customized fonts easy. Sync pulses can be any desired length or polarity. Video may be inverted or true. 5 x 7 Matrix - Upper & Lower Case.

**FLOPPY DISC CONTROLLER**

Uses WD1771 controller chip with a TTL Data Separator for enhanced reliability. IBM 3740 compatible. Supports up to four 8 inch disc drives. Directly compatible with standard Shugart drives such as the SA800 or SA801. Drives can be configured for remote AC off-on. Runs CP/M\* 2.2.

**TWO PORT PARALLEL I/O (OPTIONAL)**

Uses Z-80 PIO. Full 16 bits, fully buffered, bi-directional. Uses selectable hand shake polarity. Set of all parts and connectors for parallel I/O: \$19.95

**REAL TIME CLOCK (OPTIONAL)**

Uses Z-80 CTC. Can be configured as a Counter on Real Time Clock. Set of all parts: \$9.95

**CP/M\* 2.2 FOR BIG BOARD**

The popular CP/M\* D.O.S. to run on Big Board is available for \$139.00.

**BIG BOARD SOFTWARE SPECIAL — \$149**

Through special arrangement with CDL we offer a powerful package of TDL Z-80 software that has a suggested retail of almost \$600. Includes: Extended Disk Business Basic, ZEDIT text editor, MACRO II Macro Assembler, LINKER, DEBUG I and DEBUG II. Supplied on 8 in. diskette with extensive manual.

**PFM 3.3 2K SYSTEM MONITOR**

The real power of the Big Board lies in its PFM 3.3 on board monitor. PFM commands include: Dump Memory, Boot CP/M\*, Copy, Examine, Fill Memory, Test Memory, Go To, Read and Write I/O Ports, Disc Read (Drive, Track, Sector), and Search PFM occupies one of the four 2716 EPROM locations provided. Z-80 is a Trademark of Zilog.

**Digital Research Computers**

(OF TEXAS)

P.O. BOX 401565 • GARLAND, TEXAS 75040 • (214) 271-3538

**TERMS:** Shipments will be made approximately 3 to 6 weeks after we receive your order. VISA, MC, cash accepted. We will accept COD's (for the Big Board only) with a \$75 deposit. Balance UPS COD. Add \$4.00 shipping.

USA AND CANADA ONLY

\*TRADEMARK OF DIGITAL RESEARCH. NOT ASSOCIATED WITH DIGITAL RESEARCH OF CALIFORNIA, THE ORIGINATORS OF CPM SOFTWARE  
\*\*1 TO 4 PIECE DOMESTIC USA PRICE.

ALL SALES ARE MADE SUBJECT TO THE TERMS OF OUR 90 DAY LIMITED WARRANTY. A FREE COPY IS AVAILABLE ON REQUEST.