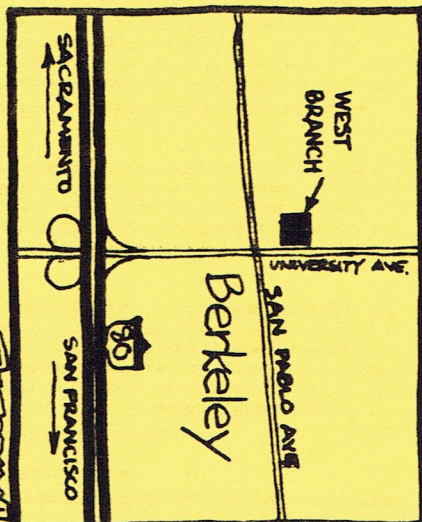


**BRY ARER ZX80/81 USER'S GROUP**



**NEW LOCATION !!!!!!!**



**MEETING STARTS 7:30 PM THURSDAY NOVEMBER 19, 1992**

BAZUG meets for the first time at the West Branch of the Berkeley City Library located near the corner of University Avenue and San Pablo Avenue Thursday, November 18. Take the Berkeley exit off Interstate 80 and head towards the University. The meeting will start at 7:30 pm and end at 9:30 pm. A small rental fee will be more than off-set by the spacious accommodations. Tables, chairs, a kitchen, and electric outlets will be available. (You may wish to bring an extension cord.) Messages can be received during the meeting on the West Branch phone (415 644 6870) and a pay phone is located directly outside the library for out-going calls. Parking is generally not a problem by 7:30 pm use either side of University Avenue. SEE YOU THERE!

**SOFTWARE REVIEWS . . .**

QUEST by Aardvark  
Reviewed by Joel Brody

This adventure program illustrates the best and the worst of software (and other products) available for the Sinclair/Timex. We know the latent ability the machine has for first-class game playing. Its main hindrance being the low resolution graphics capability. Adventure games are my main interest in recreational computing so I was quite excited by Aardvark's ad in Sync. On seeing the game that excitement was enhanced by fine game concept and a good use of the ZX81's graphic capability. However, that excitement turned to frustration by a game that was only 98% complete. Quest puts you on a map of Alesia where you have to wander finding hidden caves, castles, and ruins while searching for treasure and recruits. These resources are necessary to conquer the citadel of

Morlock. The game should take from two to five hours. It plays nicely and is quite interesting . . . when it doesn't crash. In fact, I have never been able to complete a game without this program crashing. This company creates software for other computers and is adapting some of these programs for use on Sinclair/Timex equipment. It is clear that Quest was not properly play-tested before marketing. Another problem was that the program came without an instruction sheet. It was challenging and interesting figuring out the rules, but it is another mark against Aardvark's professionalism. Aardvark has promised to send instructions as well as a corrected game but they have been slow in doing this. The popularity of the Sinclair/Timex is inspiring many new, small businesses to produce software and hardware. From the look of the ads and a few of the products I've seen the quality of the merchandise varies greatly. Since most of the products are only available by mail the upgrading and feeding of our computers is a risky business at this time.

**BRZUG**  
654 40TH ST.  
RICHMOND, CA.  
94805

Jim March  
3216 Partridge Ave.  
Oakland, CA. 94605



**Computer Continuum**  
301 16th Ave  
San Francisco, CA 94118 (415) 752 6294

- COMPUTER CONTINUUM** 301-16th Ave, San Francisco, CA. 94118 (415) 752 6294, or 526 6798
- PRODUCT LIST** Oct 3, 1982
- EXPANSION BOARD-"BARE BOARD":..... \$40  
With connector to Sinclair's port and 12 page manual including schematic, parts sources, instructions, options theory, plan for I/O port, plan for static RAM. specify if you wish to mount the ZX81 PCB vertically as a card on the Exp. Board.
  - Expansion Board-"KIT":..... \$65  
With Board, manual, 9 chips, sockets, 6 connectors, parts needed, plans. Voltage regulator not included.
  - UHP Modulator:..... \$15  
Replaces VHP on ZX81 to provide a clean video display without interference. With instructions.
  - Ribbon Cable Hardware, insulation displacement type. These gold plated connectors offer a dependable and versatile method of interconnecting various peripherals. Fits standard 50 conductor flat cable. Create your own buss structure. To avoid row inversion problems buy both: Female at Sinclair configuration (cut w/key)..... \$7  
Male connector to fit peripherals..... \$7
  - Connector to Sinclair port with right angle bend on pins and keyway insert.....\$7
  - Program. Enter or list machine code in hex or decimal and display address and character code. With editing. Fits on one K machines. Listing and instructions. By Steve Ng.....\$3
  - Applications booklet. Projects using the 8255 port chip. Schematics, text, and programs for digital volt meter, digital scope, counter, & controller. 32 pages. Written by Scott Vanderlip. Available late october.....\$7
  - Repairs for ZX81/TS 1000.....\$20 + parts.
- PLEASE INCLUDE \$3 MINIMUM for SHIPPING & HANDLING.  
Calif. residents please include %6 for sales tax.  
Deliveries are prompt. Prices and availability are subject to change without advanced notice.
- To order send check or money order to COMPUTER CONTINUUM. COD ORDERS accepted. Join the Continuum. Marketing proposals and information exchanges are encouraged. We have sold hundreds of boards and to our knowledge all of our customers have been satisfied.

Sinclair has made a quiet entry into the video game arena. Space Raiders is the ZX version of Space Invaders (designed by Piton). It looks and moves like the beginning levels of the Atari Game version, minus sound and color. There seems to be plenty of room left in RAM for future improvements. Loading time for this machine code program is a scant 1 minute 30 seconds. Bomber, the flip side of this program, has proved to be my favorite of the two. It also has a short loading time leaving room for future improvements. The object is to totally destroy a city as many times as you can with your bombs and rockets as you get closer and closer to the ground. This procedure repeats until you finally crash or catch yourself in your own missile fire. Both games are available on one cassette for \$8.95 plus shipping. Both offer more than what could be programmed in 1K or 2K and should be entertaining for most children. I would not recommend these as diversions for adults interested in heavy duty ZX software.

*Seen any new software or hardware lately? You are invited to review any and all products for the Times/Sinclair 1000, ZX81. Please share so all may prosper. Thank you!*

\*\*\*\*\*  
 ( ) SOFTWARE, ( ) HARDWARE REVIEW

Item \_\_\_\_\_  
 Description of purpose \_\_\_\_\_  
 Manufacturer \_\_\_\_\_  
 Cost \_\_\_\_\_  
 Available Through \_\_\_\_\_  
 Personal Evaluation \_\_\_\_\_

Recommendation for Purchase (Y) (N)

**BRUCE'S** NOV 1982  
 BRUCE'S ZX80/81 USERS GROUP  
 We are a non-profit organization serving Sinclair ZX and Times 1000 users.  
**PRESIDENT - JIM MARCH**  
**TREASURER - BRUCE BUCHANAN**  
**EDITOR AND SECRETARY - RICK LINK**

Please send all articles, questions, advertisements to the editor:  
 \$54 40TH ST. #8005  
 RICHMOND, CA. 94805  
 ALL TRAVELERS, ETC., ARE PROTECTED!

**NEW PRODUCT ANNOUNCEMENT**

Computer Continuum has announced that its ANALOG INTERFACE for the Times/Sinclair computers and other 8 bit machines is about to be introduced. They should be available after Dec. 15, 1982. Features include:

- \*\*8 channels of analog to digital conversion
- \*\*8 channels of digital to analog conversion
- \*\*8 bits of resolution
- \*\*a fast 2.5 microsecond conversion time
- \*\*memory mapped or I/O mapped, switch selectable
- call channel by memory or I/O address
- \*\*receives power through computer's 9 volt unregulated line

\*\*the portion of the memory or I/O map the which the converter responds is switch selectable  
 \*\*accommodations are included for easy interfacing to most microcomputers

Assembled and tested unit: \$230  
 Kit:..... \$180  
 Write software for the Analog Interface and GET ROYALTIES

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 (415) 524-3730

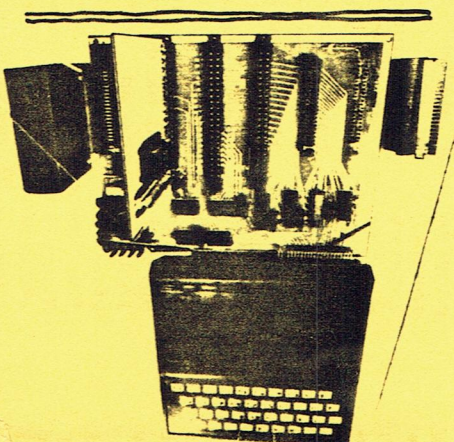
*Computer Typesetting was accomplished with the aid of Tom Kilpatrick on one of his computers at ROBOTEK. Anyone interested in helping the newsletter get out on time VOLUNTEER! We need articles, programs, reviews, helpful hints, whatever you have!*

*Thanks EDITOR*

**Here is what the Computer Continuum Expansion Board gives you:**

- (A) **Buffered buss including all the lines from the ZX80/81 expansion port.**  
 These Buffers are like digital amplifiers which allow up to 10 peripherals to simultaneously interface the computer (as opposed to 3 otherwise). You can construct and develop peripherals while the computer is on with little fear of damaging or crashing the system. All lines except Reset and Busrequest are buffered. The Data buss is bi-directionally buffered. An optional jumper is provided to connect the Busrequest line to the buffer "enables" to allow Direct Memory Access. Works with I/O mapped ports. The buffers are arranged so that any line can easily be unbuffered.
- (B) **Connector slots to interface to existing or user built peripherals.**  
 Works with ZX 16K RAM and other 16K RAMS, ZX printer, micro Developments boards, fits onto Memotek's 64K RAM and other products. 4 slots for experimenter cards; 44 pins at 0.156 inch spacing; available from Radio Shack or Vector. Room for wire wrap. 2 slots at 0.1 inch spacing, for jumper headers and ribbon cable to attach to marketed peripherals. 1 set of fingers to accommodate the 16K RAM pak.
- (C) **An extra 8K of addresses for you to use for more memory or memory mapped peripherals.**  
 Memory mapping a peripheral allows much easier programming with the PEEK and POKE commands (I/O mapping requires a machine language subroutine POKEd in and called with a USR command). The ROM in the ZX80/81 repeats itself at addresses 8K to 16K. The Expansion Board prevents this by sending a signal to the ROM Chip Select (ZX80 users are given full instructions to add a wire at ROM CS).
- (D) **Optional voltage regulator.** Jumper wires allow you to choose which regulator powers what unit.
- (E) **Full documentation.** Plan for memory mapped programmable I/O port, RAM plan and sample program is included. *Here is your chance to learn about computer/digital electronics!*
- (F) **Finest quality board:** double sided, plated through holes, legend, solder mask, tin plated, gold over nickel plated fingers. Board securely fastens to ZX81.
- (G) **Mounting Option.** The ZX81 has an alternate mounting to the Expansion Board. The ZX81 can be removed from its case and mounted vertically as a card. If you add a real keyboard the Expanded ZX becomes a more meaningful system. To take this option you only need to ask for the appropriate connector when ordering the Expansion Board (no extra charge).
- (H) **Other computers.** We have used the Expansion Board as a development system on other Z80 CPU type computers. *So can you!*

**Computer Continuum**



*See current prices on back page !!!  
 OTHER CC PRODUCTS ALSO AVAILABLE . . .*

Some of the universities that are using the Computer Continuum Expansion Board are:  
 Texas Tech, University of Oregon, Stevens Institute of Technology, Georgetown University, Henderson State University, San Francisco State University, Purdue, University of California, etc.

The following companies have used the Expansion Board as a development system: FAIRCHILD Weston, Northrop Corp, Harman-Motive, Argonne National Laboratories, Questor Corp, Microcomputer Systems Corp, Lang Systems Inc, Le Baron Foundry Co, Dumas Ltd, Drysdale Securities Corp, Rex Humbar Foundation, Gulf Oil Communications, Alderman Studies, Veterans Administration Center Medical Research Office, Institute of Gas Technology, Henderson DeSilvey and Assoc Inc, Murdoch Engineering Inc. and many others.

*See article on A/D, D/A board. Manufacturer promises delivery soon! Watch this Newsletter for details!*