

*The increasing interest in microcomputers for home and fun and games as well as practical work has led to a number of information centers — the clubs and newsletters organized by readers of BYTE to help promote communications among practitioners of this art. For this first issue of BYTE, I've collected together a "dump" (in English character text, not hexadecimal) of my files on the subject to date.*

...CARL

**People's Computer Company**  
PO Box 310  
Menlo Park CA 94025  
Editor: Bob Albrecht

This organization puts out a newspaper style publication of information, fantasy, technical designs, etc. It is a "non profit" operation about recreational and educational uses of computers. Publication is on an irregular schedule with subscriptions to 5 issues at \$5 to all comers, \$3 to those who present some evidence of status as students. The magazine is typeset and assembled with plenty of graphics in what might be called a "neo-Whole Earth Catalog" style. The same organization also runs the PCC bookstore at the same address.

*The Computer Hobbyist*  
Box 295  
Cary NC 27511  
1-919-467-3145 or  
1-919-851-7223 evenings or weekends

*The Computer Hobbyist* people put out an excellent photo offset newsletter prepared with the help of a microcomputer text editing system. A sample of their product — in the form of an article by Hal Chamberlin comparing three micros — is reprinted by permission in this issue of BYTE. Of particular interest for the coming arguments and controversies over cassette interface methods is their

unique method of recording which Hal Chamberlin described to me in phone conversation. The goals of the design are reliability and speed independence, which are achieved by a pulse recording technique. Another design published by TCH is a fairly sophisticated visual graphics system (it might be called a "Cadillac" among such systems) which uses a highly modified TV and can produce very detailed high resolution pictures. TCH also is planning to supply a series of kits with PCs and parts for their designs. TCH also is very close to having available a BASIC package for the 8008 computer.

## PEOPLE'S COMPUTER COMPANY

ROOM X 17'-8"

ROOM X 17'-8"

CONY

SECOND FLOOR

Imagine...

The Home Computer Environment

To receive and send message code...

**VOLUME 3**

**MARCH '75**

**NUMBER 4**

### "IT'S A HOBBY"

Yes, a hobby for fun. Interest in home computing is spreading fast. I feel our club is doing a good job in supporting the individual experimenter get his or her system up and flying. There are a lot of obstacles, bugs, and technical tricky problems which can frustrate and discourage a person alone. By sharing our experience and exchanging tips we advance the state of the art and make low cost home computing possible for more folks. Bring your heart in for a demo! Can it sing or play games? What tricks does it know? Let's have a look at it.

Thanks to Ray and Karen for demonstrating his 008A Microcomputer with audio cassette adapter at the May 14th meeting. Using an 8008 microprocessor, the 008A is available as a kit (\$375) from RGS Electronics 3650 Charles St. Suite K, Santa Clara, Ca. Recently Ray got Jerry's TV Typewriter I working nicely.

Thanks to Gordon for bringing and explaining his text editing system May 28th. The system's beauty is the ease with which one can look into 16 K of storage and find what's there to be re-arranged as you please. The only thing I missed in playing REVERSE on it were the bells congratulating me when I'd won. A computer game without bells is like a steam engine without a whistle!

A special thanks to Wayne for bringing the club a paper tape version of a Fortran IV cross assembler for the 8008 and PL/M on mag tape, and two listings of the resident 8080 and 8008 assemblers. The club now has a responsibility to use this software in a non-profit manner, which means no private or commercial deals. If you have a system large enough to house a copy of the mag tape and can make access available to the rest of the members, contact Gordon French.

Wayne also brought a TV terminal Intel developed two years ago as a demonstration unit. The unit uses a 4004 microprocessor and has both a character and a plot mode (5 x 7 dot square you can move around). Wayne hooked it up to a TV and tuned it in on the edge of channel 6. The current ROM gave us our choice of tic-tac-toe or tennis. We played both.

At the previous gathering Wayne had suggested using a shadow ROM for bootstrapping when you first turn on your computer. This time on request he drew a schematic on the greenboard, but I don't think many of the less technically oriented among us followed his explanation completely. Which brings me to a general observation: The club is quite a mixed group. We are composed of outright novices to top flight professionals and leaders in the industry. Many are somewhere inbetween. Only a few are strong in both hardware and software.



Wayne

It seems to me, we need classes or some more patient and detailed means of conveying information across an ignorance gap, and at the same time not bore the more experienced among us. I think our size is large enough now that after meeting as a whole from say 7 to 9 pm, we then break into three or four small groups for more educationally oriented discussions for an hour. Anyone have comments on this? Perhaps there is enough learning taking place as it is and any attempt to optimize it further will upset the relaxed informality of the gatherings. Comments?

Thanks to John Draper for setting up a group library account for the club at Call Computer. Those who have accounts, have your number changed to a K-277 number. If we have enough join, the club won't be charged the \$5.00 monthly base rate. (We also pay 63 cents per thousand characters on file per month.) The intention is to have useful programs stored in the K-200 library file.

Thanks to Dan for testing the 2102's the group purchased from Solid State Music. Thanks to Lenny and Frank for setting up the auditorium for our use. Much thanks and appreciation to everyone for your time, energy, and spirit in making the club what it is.

The MITS MOBILE came to Rickey's Hyatt House in Palo Alto June 5th & 6th. The room was packed (150+) with amateurs and experimenters eager to find out about this new electronic toy. The evidence is overwhelming that people want computers, probably for self-entertainment and educational usage. Why did the Big Companies miss this market? They were busy selling overpriced machines to each other (and the government and military). They don't want to sell directly to the public. I'm all in favor of the splash MITS is having with the Altair because it will do three things: (1) force the awakening of other companies to the demand for low-cost computers for use in the home, which will mean competition, resulting in lower prices just as happened with the hand held calculator. (2) cause local computer clubs and hobby groups to form to fill the technical knowledge vacuum. (3) help demystify computers. Computers are not magic. And it is important for the general public to begin to understand the limits of these machines and that humans are responsible for the programming.

### Amateur Computer Society of New Jersey Is Up and Running

The ACSNJ was first assembled on Friday, June 13, 1975.

The feasibility study was performed by Sal Libes who has become its Operating Manager. The system will run monthly on the second or third Friday of the month.

Input is in the form of 40 + enthusiastic hobbyists. Over 50% of the amateurs are hardware and/or software oriented. There are 10 home computers running in the group, 5 of which are Altairs.

Output will be a local newsletter. The first issue will contain information compiled from a questionnaire given out at the meeting.

Information was processed randomly. There were some minor bugs which had to be worked out; however, those assembled were pleased with the results.

A parts supplier was on hand and welcomed as a local source.

The second running of the ACSNJ was scheduled for Friday, July 18, at the Union County Technical Institute, 1776 Raritan Road, Scotch Plains, New Jersey.

It's good news.

The Amateur Computer Society of New Jersey Is Assembled and Running.

George Fischer  
72 So. Railroad Ave.  
Staten Island NY 10305

The Amateur Computer Society  
Stephen B. Gray  
260 Noroton Ave.  
Darien CT 06820

Mr. Gray puts out a newsletter. No further information is available about The Amateur Computer Society.

### Homebrew Computer Club Newsletter

Fred Moore, Editor  
558 Santa Cruz Ave.  
Menlo Park CA 94025

The Homebrew Computer Club is an organization located in Northern California around Menlo Park. The club was founded by Fred Moore with a hand from Gordon French. A newsletter is published photo offset on a monthly schedule — although no price is quoted, a donation of 50-75¢ per issue would be a fair recompense for costs listed in the club treasury report in issue No. 4. The newsletter has included some excellent design notes by Terry Lee, covering SART chips, power supplies, heat sinking, etc.

Issue No. 4 reports the start of a San Francisco-Berkeley chapter, and refers to another California club:

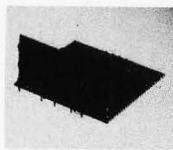
Sonoma County  
Minicomputer Club  
Mark Robinson, President  
1-707-544-2865 (work)  
1-707-525-1659 (home)



## JAMES ELECTRONICS

P. O. BOX 822 BELMONT, CALIFORNIA 94002  
(415) 592-8097

### DIGITAL VOLTMETER

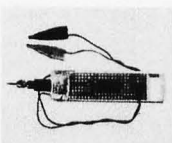


This is a 3 1/2 digit, 0-2 volt Digital Voltmeter, with a .5% full scale accuracy. It is based around the Siliconix LD110, LD111 DVM chip set. The voltmeter uses MAN7 readouts (.3" high) to provide a highly readable display. The unit requires the following supply voltages: 12, -12, 5. The unit comes complete with all components to build the unit pictured at the left, that is a complete DVM less power supply.

**\$39.95 Per Kit**

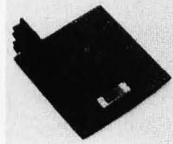
### LOGIC PROBE

The Logic Probe is a unit which is for the most part indispensable in trouble shooting logic families: TTL, DTL, RTL, CMOS. It derives the power it needs to operate directly off of the circuit under test, drawing a scant 10 mA max. It uses a MAN3 readout to indicate any of the following states by these symbols: (H) - 1 (LOW) - 0 (PULSE) - P. The Probe can detect high frequency pulses to 45 MHz. It can't be used at MOS levels or circuit damage will result.



**\$9.95 Per Kit**

### DIGITAL COUNTER

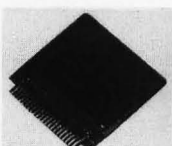


This is a 4 digit counter unit which will count up to 9999 and then provide an overflow pulse. It is based around the Mostek MK5007 digital counter chip. The unit performs the following functions: Count Input, RESET, Latch, Overflow. The counter operates up to 250 kHz. The counter is an ideal unit to be used as a frequency counter, where the only extra components needed would be a timebase, divider chain and gate. The unit requires 5V, and -12V. The unit comes complete as shown on the left less power supply.

**\$29.95 Per Kit**

### ONE KILOBYTE RANDOM ACCESS MEMORY

This memory card is for the most part a universal unit that can be used in almost any microcomputer from a HOMEBREW to an ALTAIR 8800. It uses an array of 2102 1k x 1 static random access memories to produce a 1024 x 8 memory compatible with most standard microcomputer systems. We provide everything from the super low noise vector logic card, to fine quality low profile sockets, to the eight 2102's. We even include timing diagrams and tantalum bypass capacitor.



**\$69.95 Per Kit**

### 5 VOLT 1 AMP T<sup>2</sup>L SUPPLY



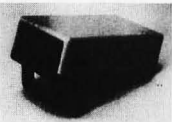
5 VOLT 1 AMP  
T<sup>2</sup>L SUPPLY

This is a standard TTL power supply using the well known LM309K regulator IC to provide a solid 1 AMP of current at 5 volts. We try to make things easy for you by providing everything you need in one package, including the hardware for only:

**\$9.95 Per Kit**

### PLASTIC INSTRUMENT CASE

These cases are fine quality units made by a German manufacturing firm which fit the dimensions of our DVM and COUNTER kit with room enough left for power supply or batteries. Excellent for many other projects as well. Dimensions 2" x 3-1/8" x 5-7/8".



**\$5.95 Per Case**

Satisfaction Guaranteed. \$5.00 Min. Order. U.S. Funds.  
Add \$1.25 for Postage — Write for FREE 1975S Catalog  
California Residents — Add 6% Sales Tax

# JAMES

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### Micro-8 User Group Newsletter

Hal Singer, Editor  
Cabrillo Computer Center  
Cabrillo High School  
Lompoc CA 93436  
1-805-733-3501

The "Mark-8" is one of the first widely marketed home computer kits — an 8008-oriented design of Jonathan Titus (TYCHON, Inc., PO Box 242, Blacksburg VA 24060). It first appeared

on a large scale in an article in the July 1974 issue of the magazine *Radio Electronics* — and the result of a large response to this product is Hal Singer's formation of the Micro-8 User Group with an initial orientation to the 8008 as implemented via the Mark-8. The newsletter is a self-published offset publication available at \$6 for six issues. Much of the information is original as submitted, although Hal summarizes a lot of the stuff with his text editor and printer at the Cabrillo Computer Center. For those interested in the history of one branch of the home computer hobby, the back issues of Micro-8 User Group Newsletter record much activity of the early pioneers of the hobby.

### Club in The Dallas-Fort Worth Texas Area

Bill Fuller (2377 Dalworth 157, Grand Prairie, Texas — 1-214-264-0111/1-214-264-9017) organized an informal get together June 29 in a park near Hurst and Bedford, Texas. At that meeting, 12 people appeared — including three Altair owners, the owner of a Martin Research Mark 2 and one home brew purist. Contact Bill for the latest info on activities on the Lone Star state to date.

The Digital Groups  
PO Box 6528  
Denver CO 80206

This club provides a newsletter of technical and organizational interest which is reproduced photo offset at \$6 per year (12 issues). Also offered are kits, boards, and assembled products for miscellaneous peripherals designed by members in the Denver area.

### Staccato Notes

Derek McColl reports in phone conversation that he attended the first meeting of an as yet unnamed Los Angeles area computer club. You can reach Derek at 1715 Havemeyer, Redondo Beach CA 90278 to find out about that club.

Was your club or newsletter omitted? No claim is made that this listing is complete. Organizers of clubs are invited to send details of their plans for publication in BYTE.

New England Computer Kibitzers? (NECK) I'll act as an initial focal point for a Boston area computer club. Write BYTE Editorial Offices, Box 378, Belmont MA 02178, or call me at 1-617-729-6914 evenings/weekends.

...CARL