

BY HARRY SAAL

Commodore's PET is a factory-assembled personal computer based on a 6502 microprocessor. The original PET, model 2001-8, is a \$795 system that includes a keyboard, cassette tape unit, built-in TV screen, some graphics, upper and lower case, extended 8K BASIC, and 8K of user memory.

SPOT is devoted to the host of applications—routine and wild—which PET users have found for their machines, as well as to the nitty-gritty of repairs and modifications. In other words, almost anything relating to the PET is fit material for this column. Just send Harry your questions and ideas c/o PCC. He'll give each of them his careful attention.
—LB

HEARD AROUND THE QUAYSIDE

Have you heard there are now two *more* models of the PET? Commodore is producing 16- and 32K PETs which have the old, small keyboard, and built-in cassette. (There is no cassette in the full-size keyboard models.) Called the PET 2001-16 and 2001-32, they cost the same as their sister models, \$995 and \$1195, respectively. They don't appear to be described in any of Commodore's literature, and it is not clear if they are available from dealers nationwide, but I've seen them for sale here in Silicon Valley. Anyone sense that the previously announced models might be later than promised?

I did spend some time trying the new models at a recent show; some of the changes I like, others not so much. The keyboard is nice, although it certainly doesn't have the "feel" of high-quality terminal keyboards. The machine language monitor is in ROM, and even has a hook for extending it with new commands. Just about everything has been moved, so memory map makers, get ready. The screen writing is much

faster (ever watch an Apple scroll?) due to a nice hardware change, which prevents programs that POKE the screen from getting glitches of snow. The phosphor is green instead of white, a change I don't appreciate. The known bugs in BASIC have been fixed . . . Certainly others lurk, but I hope none as catastrophic as the former limitation of 256 elements to an array.

Read the fine print in the description of the Commodore single-disk drive carefully. It turns out *not* to be a single-disk version of the dual-disk system, but rather a cut-down system, with limited function ("a fast cassette drive"). It does not plug into the IEEE connector, but onto the new memory expansion port. That means it is not compatible with the "old" 4- and 8K PETs. Don't hold your breath too long for this product to be shipped. All the effort has gone into making the dual-disk version, and the single-disk model is not very far along in design at this writing.

Words fail me in describing Commodore's *Pet User's Club Newsletter*, Volume I, Issue 1. As happens with most Commodore mailings, few people I've talked to have actually received a copy. But nothing is lost. It is *bad*, with no new information of significance technically. This initial issue concentrates on descriptions of new

PET hardware and cassette software. The printing is poor, literally illegible on page after page. Commodore expects people to pay \$15 a year for this. Apparently, if you don't, you get no future mailings. Someone should show the editors *Contact*, which is Apple's (free) newsletter to all owners. Save your money, or better yet, send it to Commodore Business Machines, Limited, 3370 Pharmacy Avenue, Agincourt, Ontario, Canada M1W2K4, for a decent publication!

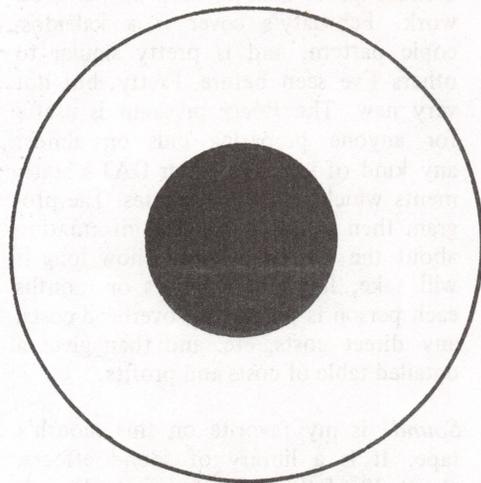
Commodore has relocated to a new, all-solar-powered building, at 3330 Scott, Santa Clara, CA 95050. May the sun shine in!

MIDPENINSULA USERS' GROUP

On the first Wednesday of the month, at 7 p.m. in the cafeteria of Ford-Aerospace Corp., 3939 Fabian Way, Palo Alto, CA, the Midpeninsula PET Users' Group holds forth. The meetings are open to all. There, in the atmosphere of an electronic oriental bazaar, gather neophytes and experts, shoppers and vendors. Lately, there have been about 150-200 people and 40 PETs in attendance.

You can take a look at disk systems, such as the Computhink, Commodore's, or the Nestar Cluster/One, which was simultaneously connected to 15 PETs at

sound generators, speech encoders and transformers, and a variety of printers. Marv Vanderkooi, club president, demonstrated his PET-to-R2D2 radio controlled interface, whereby you control the robot from the PET keyboard, and can later edit and play back the commands from tape. Numerous software packages are tried out, giving people a chance to evaluate before investing money on programs. The club is quite strict about copying commercial software, and members police things well—ever since a few stern lectures a while back. Each month there are new wonders on display, and more programs in the library. Write and tell me what your local club is like.



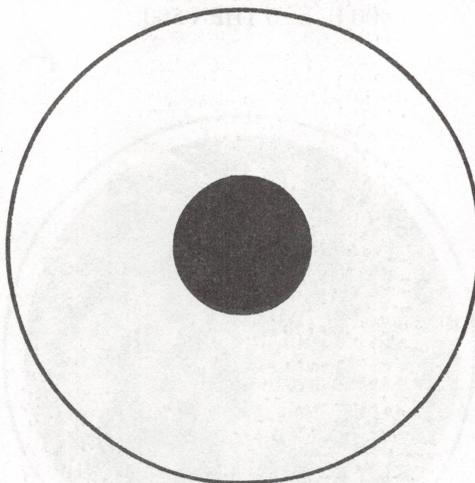
Children/Hospital Games tape, on letterhead, to get a copy. (Write *PET Gazette*, 1929 Northport Dr., Room 6, Madison, WI 53704.) Then take your PET to the hospital and get involved. (Yes, you can copy the programs for your own use, but first let the patients play!)

Cursor Magazine

Cursor Magazine, published by Ron Jeffries, P.O. Box 550, Goleta, CA 93017 continues to be the best buy around. I was pretty skeptical when I first heard about it. How does this guy manage to collect such a nice variety of high-quality programs every month? I still don't really know, but every month seems to bring still better and better programs.

Cursor is distributed on cassette tape, with a one-page information sheet. The first program is always the "cover," a highly entertaining visual (or musical), which stops when you push the space bar, to reveal the table of contents. Tapes usually have programs in addition to the cover, and they range from games to things like text editors, flash card generators, project estimation, etc. Ron has a love of tools and includes useful routines to handle INPUT without blowing up, packing and unpacking spaces from BASIC programs (to save space, and in the reverse direction, make them readable again).

The latest issue at this time is *Cursor* #7, February 1979. I plan to make a review of *Cursor* a regular feature of SPOT as

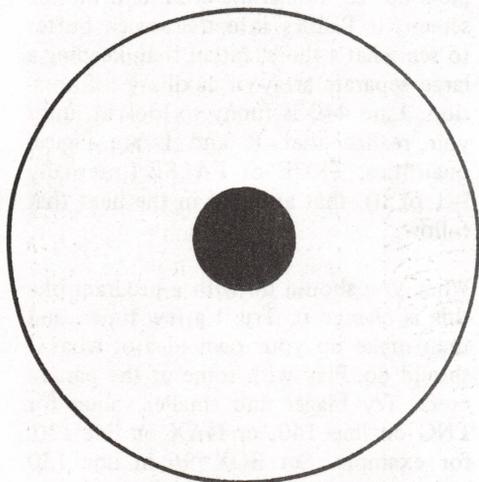


REVIEWS

There are no software reviews this time. I will be happy to do them in the future, but only if we get a copy of a program to try out. *Recreational Computing* gets lots of announcements of software, but it is impossible to judge quality and novelty without those tapes!

PET Cassette Exchange

Len Lindsay continues the fine job that he has done in producing the *PET Gazette*, his free and informative newsletter, by coming up with the *PET Cassette Exchange*. He has put together a tape with 6 entertaining games (Blackjack, Snake, Stars, Tommy Termite, Chase and Hangman) and offers free copies to any hospital that requests it, to help cheer up lonely patients. Have your local hospital's volunteer services director request the



a recent meeting while loaded with hundreds of programs from the free user library. Two different models of keyboard were there, along with light pens

a challenge to Ron to keep up the good work. February's cover is a kaleidoscopic pattern, and is pretty similar to others I've seen before. Pretty, but not very new. The *Pricer* program is useful for anyone preparing bids on almost any kind of job. You enter DATA statements which reflect wage rates. The program then prompts you for information about the job to be done, how long it will take, how many hours or months each person is putting in, overhead costs, any direct costs, etc. and then gives a detailed table of costs and profits.

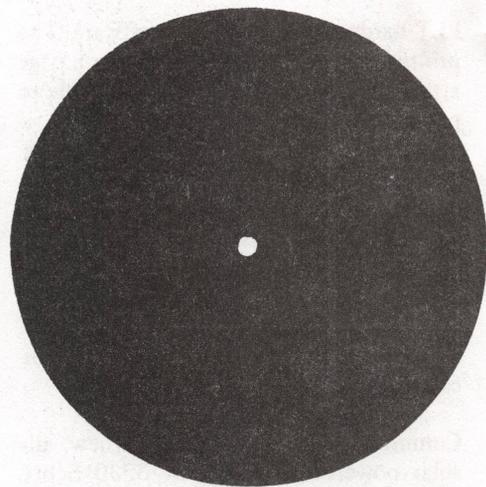
Sound! is my favorite on this month's tape. It is a library of sound effects, about 20 of them, ranging from French police cars to flying saucers, and everything in between. Great job! *Mind* is a version of the board game Mastermind, and much better done than any previous PET version I've seen. Not that new, but it definitely replaces my old copy. *Fball* (Football) is also similar to other games I've seen, but with good graphics, a real time clock, complete with timeout, and a good competitive interaction with the PET, your opponent. Much better than other Footballs I've seen. Last on the tape is *Paper*, a cute "wallpaper" designer. Watch the screen for a good gag at the end.

Is it worth it? *Cursor* now costs \$36 a year, i.e. \$3 a month. I think it is an incredible bargain. I've never had trouble loading a tape, thanks to Ron's very own high-speed duplication machine which he keeps in good shape. I am tempted to go back and tell you about the first six issues, but instead suggest you buy back copies for yourself.

32 BASIC Programs for the PET Computer

This recent book, by Tom Rugg and Phil Feldman, is published by Dilithium Press, which describes it as "an absolute must for the PET owner." Well, it isn't. Some of the programs might be useful, or enjoyable, but unless you see something in it that you really *need*, you won't get much from the book. The programs don't exhibit any hint of expert programming style. My favorite is the beginning of *Vocab*, which reads...

```
300 GOSUB 1000
400 GOSUB 2000
500 GOSUB 3000
600 GOSUB 4000
700 GOSUB 5000
900 IF E=0 THEN 500.
```



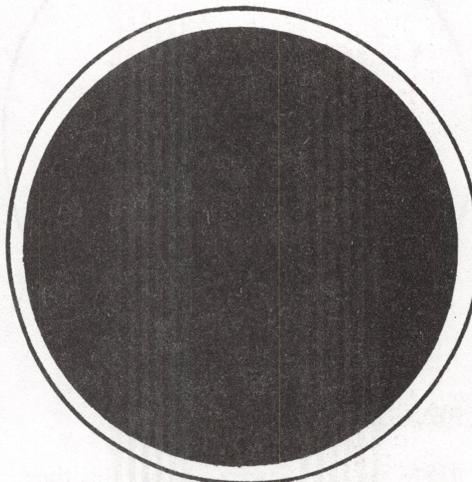
PETABLE, a workbook for PET

This sloppily done discussion of the PET hails from Richard Mansfield, P.O. Box 461, Philipsburg, PA 16866. For \$4.95 you get 40 pages of some of the worst English I've read in years (typed in about the same quality), giving a rambling look at some BASIC for the PET. Save your money... At the end, there is an ad which says "If you have enjoyed *PETABLE*, you will love *Program*, our monthly magazine on cassette." What do I put for an ELSE after the IF?

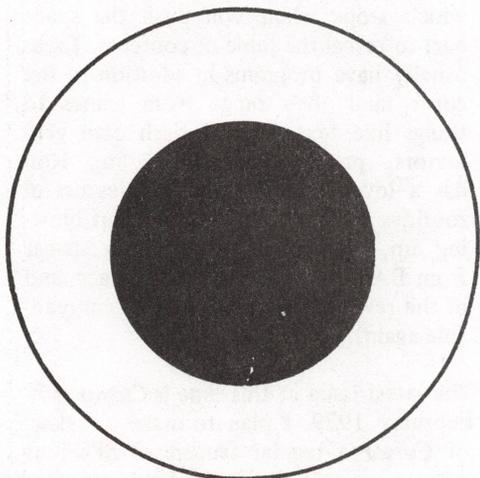
CASCADES

The next page contains a program I wrote that is fun to watch. I think it makes good use of the PET graphics, and illustrates a number of techniques you should pick up. As things move around on the screen, it PEEKs into the screen buffer to see what's there, rather than keeping a large separate array of auxiliary information. Line 440 is funny to look at, until you realize that R and L are logical quantities, TRUE or FALSE (internally -1 or 0), that are used in the lines that follow.

What you should do with a program like this is *change it*. Try it a few times, and then make up your own idea of what it should do. Play with some of the parameters. Try bigger and smaller values for LNG on line 140, or MAX on line 130, for example. Set BOX=96 in line 130 and watch what happens. Make the boxes go vertically instead of horizontally. And especially, change the rules for what happens when the front of a drip gets stuck, from 600 on. Make it break, go up, and so on. Have fun!



This program and all the others are essentially devoid of comments, except for the title and copyright notice. Fear not. Who'd rip this stuff off? It is a shame the programs are not worthier, for the overall format of the book is quite laudable. Each program is written up with a section on program purpose, instructions, a sample run, suggestions for change, an overview of line numbers and what they do, and the variables used and their meaning, along with a set of suggested projects. This is fine, but none of the programs contain instructions for their use *in* the programs. What did you do the last time you encountered a program like that?



CASCADES

```
100 REM CASCADES
110 REM COPYRIGHT 1979, HARRY J. SAAL
120 REM PERMISSION GRANTED FOR NON-COMMERCIAL USE
130 WALL=160: BALL=81: BOX=102: MAX=100
140 LNG= 6: DIM DRP(LNG)
150 SC=32768:PRINT"[CLEAR]"
160 REM MAKE THE WALLS
170 FOR I=0 TO 24
180 POKE SC+I*40,WALL
190 POKE SC+I*40+39,WALL
200 NEXT I
210 FOR I=0 TO 39
220 POKE SC+24*40+I,WALL:NEXT I
230 REM MAKE THE BARRIERS
240 FOR I=1 TO MAX
250 P=SC+INT(1000*RND(1))
260 FOR J=0 TO 3
270 IF PEEK(P+J)=32 THEN POKE P+J,BOX
280 NEXT J,I
290 FOR I=1 TO 38:POKE SC+I,32:NEXT I:REM MAKE A HOLE
300 REM DROP A NEW DRIP
310 S=SC+20: D=40 :CLNG = LNG
320 FOR I=1 TO CLNG:DRP(I)=0:NEXT I
330 DRP(CLNG)=S
340 IF PEEK(S)<>32 THEN 660
350 REM DRAW HEAD AND TRY TO MOVE
360 POKE S,BALL
370 REM TRY DOWN FIRST
380 IF PEEK(S+40)=32 THEN D=40: GOTO 510
390 NS=S+D: REM NEW POSITION
400 IF PEEK(NS)=32 THEN 510
410 REM IF WE ARE GOING SIDEWAYS, GIVE UP
420 IF D<>40 THEN 600
430 REM CANT MOVE, CHECK LEFT AND RIGHT
440 R=32=PEEK(S+1): L=32=PEEK(S-1)
450 REM IF CAN GO BOTH WAYS, RANDOMLY CHOOSE
460 IF R AND L THEN D=1+2*(RND(1)<.5):GOTO 510
470 IF R THEN D=1:GOTO 510
480 IF L THEN D=-1:GOTO 510
490 GOTO 600: REM STUCK, SPLIT OFF THE HEAD AND TRY AGAIN
500 REM HERE WE MOVE BY D
510 TL=DRP(1): REM FIRST GET THE TAIL
520 IF TL<>0 THEN POKE TL,32: REM BLANK TAIL
530 REM ADVANCE ALL PARTS
540 FOR I=2 TO CLNG
550 DRP(I-1)=DRP(I)
560 NEXT I
570 DRP(CLNG)=S
580 S=S+D: DRP(CLNG)=S
590 GOTO 360
600 REM WE ARE STUCK, TRY THE NEXT ONE IN
610 IF CLNG<=2 THEN 310
620 CLNG=CLNG-1
630 S=DRP(CLNG)
640 IF S=0 THEN 660: REM DONE IF OFF SCREEN
650 D=40: GOTO 360: REM TRY TO GO DOWN
660 REM WE ARE FINISHED, START ALL OVER
670 RUN
```

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CHINA TRADESMAN: TAIPAN
Taipan TRS-80, Level II, 16K
Cybernautics
Box 40132
San Francisco, CA 94140
\$9.98

Tired of space wars? Hammurabi getting a bit old? Looking for a new thrill on your micro? Well, have we got a game for you!! Taipan—a simulation of a seagoing trader set in China in the middle 1800s.

The game is so intriguing that I played it for over six hours when I first received a copy. You start the simulation in the home port of Hong Kong. You are in debt; you have nothing in the bank. (Sounds real enough.) You do own a ship that is capable of carrying 50 units of cargo. There is a warehouse in which you can store excess goods.

There is a sometimes friendly money-lender who is prone to giving Buddhistic lectures on debt paying. You can borrow money from him to help get you going. Using the money, you are given the opportunity to buy cargo for the ship.

The trade goods are: general cargo, arms, silk and opium. At the beginning, because of your financial state, you must trade mostly in the first two items. As you acquire money, you can move up to the more costly goods. But, watch out!! As your cargo gets more expensive, you attract more pirates. Li Yuen, the chief pirate, can be found in Hong Kong upon occasion. He may ask for a donation to the temple. Refuse him at your own peril!

Once your ship is loaded, you set sail to one of several ports. There are storms, unspecified pirates and Li Yuen's pirates upon those treacherous waters. When you arrive in port, the prices for the goods you are carrying may be priced so low that you are forced to sail again. Meanwhile, your debts back in Hong Kong are accruing interest at an alarming rate.

I won't give away any more of the game. There are many surprises in the program that are best discovered by playing it. I mean, is it possible that Li Yuen could actually show up on the open sea and chase away a band of pirates that are attacking you?

Several adults have been at my home when my children were playing the game. They would often ask what it was that seemed to have the children so engrossed. The kids would usually be in the middle of a hot debate over the merits of buying silk or general cargo, for example. I know that there are two answers to that question: 1) It's a game, or 2) it's a simulation of a historical scenario that teaches them about tradeoffs. I always use the second response because I know that 1) I'm talking to an adult, and 2) I know what their next response is. They always ask how can that be possible!

At that point, I say sit down and try it. Four hours later... but you know the rest.

Reviewed by Ramon M. Zamora.