

paleotronic



Sinclair ZX81
Commodore VIC-20
Texas Instruments TI99/4A
Acorn BBC Microcomputer
Modems and CompuServe
SelectaVision VideoDisc
Electronics Kits
Computer and Video Games
...and more!

"In the Christmas
1981
Retro-Spective..."

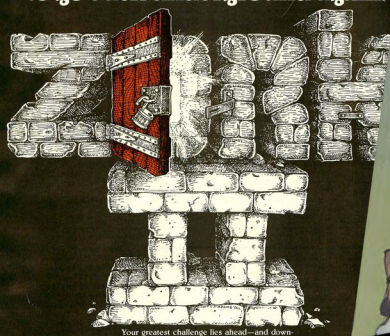


The Atari 2600 continued to cement itself as the leader in arcade conversions with titles such as **Asteroids** and **Missile Command** making Christmas 1981 exciting for Atari 2600 owners.

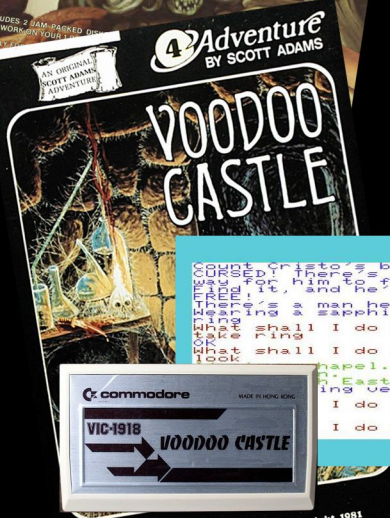
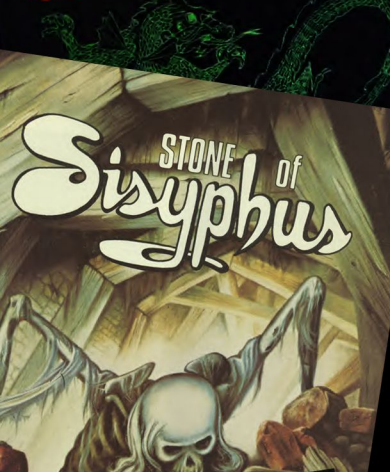


Intellivision, meanwhile, focussed on developing original titles such as **Astrosmash** and **Snafu**, marketing them as "exclusive" titles. Atari would increase its own game production in kind, kicking off the arms race that would lead to the **Great Video Game Crash of 1983**.

Just when you thought it was safe to go back underground again.



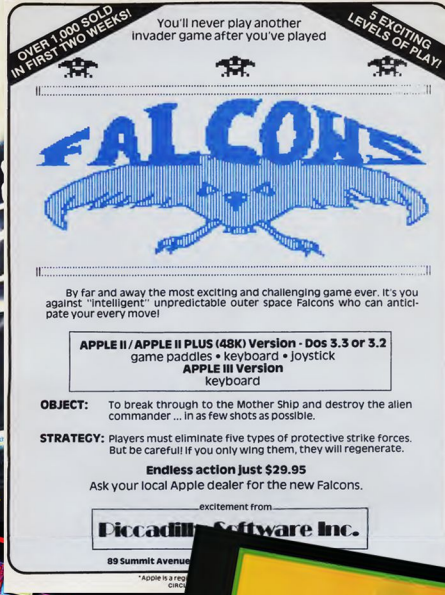
Are you ready to step into the world of **Wizardry**?



© Copyright 1981 Adventure International, A Division of Scott Adams, Inc.

The consequence of this, however, was that the **VIC-20** was quite strange in a number of ways. The screen was more pixels deep than wide, making for an odd looking display. Its text screen had 22 columns and 23 rows, which as you can see in the example above isn't the easiest to read.

It also only had 5K of memory, which for a colour computer was impossibly small. RAM expanders were popular!

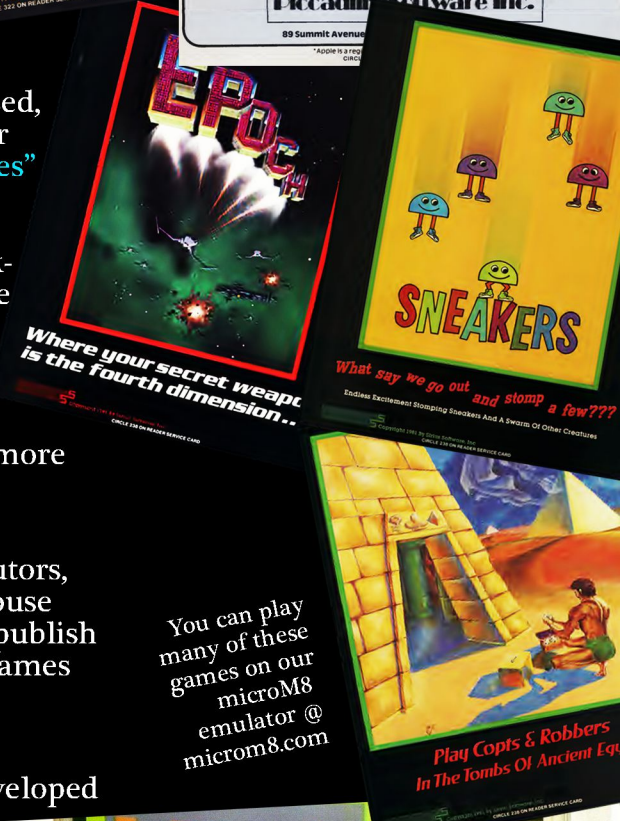


As home computer adoption increased, so did the development of games for them. Many of these "software houses" were mere distributors, purchasing games off of hobbyist programmers (sometimes for a pittance) and marketing them in magazines. Some were hits, some were misses.

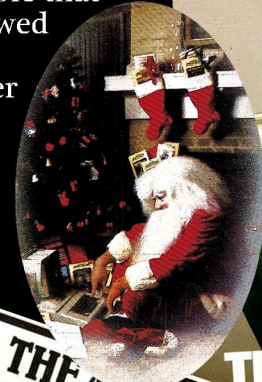
Notice the prices. \$29.95 1981 dollars for one game? That's over \$80 2017 dollars! You probably wouldn't pay more than \$1 for Falcons on your iPhone...

Rather than deal with unsavoury distributors, Scott Adams created his own software house instead. **Adventure International** would publish not only his text adventure games, but games by others as well.

One of the new systems Scott developed games for was the **VIC-20**, **Commodore's** first entry into the home computer market. Using an integrated chip originally designed for a video-game console that never shipped allowed **Commodore** to produce a computer with colour and sound for a low price.



You can play many of these games on our microM8 emulator @ microm8.com



NOW YOU CAN BUY THE BEST HOME COMPUTER IN THE WORLD.

THE AMAZING VIC 20 HOME COMPUTER FOR CHRISTMAS!

FOR ONLY £159.95 (excl.VAT)
Here is one present all the family could use. The VIC 20 is a fully fledged computer that simply plugs into your television receiver.

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- HOME AND BUSINESS PROGRAMS

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Showrooms: 7, St. James's Place, London W1K 7JH

At an incredibly low price of £159.95, it can help the children with their computer studies, handle business and home budgeting or you can relax and play space invaders or one of the many video games soon to be available. Dealer supplies of the VIC 20 are limited. Make sure you're one of the first owners of the VIC 20. Fill in the coupon TODAY or give us a ring on the Woking (04862) 633... or Croydon...

octaves, as well as sound effects. Eight border colours and sixteen screen colours. All in a superbly-designed, compact unit with built-in facilities for expansion. Now you can take a look for yourself. And even take VIC home tonight.

Commodore COMPUTER
For more information on the VIC 20, telephone or write to: Commodore Information Centre, Baker Street, High Wycombe, Bucks, or Tel: Slough 79292.



TI's Home Computer. Unrivalled software.

For yourself, the TI 99/4A is ready too. TI BASIC is built in. The programming manual is easy to understand, easy to follow every step of the way. You will be amazed

possible is our
You'll find
Early Reading
MS 9903
any of our
software
Some have
superb colour
g them in
to learn to

WHAT THE PROFESSIONAL'S LOOK FOR IN A HOME COMPUTER

Feature	Texas Instruments TI 99/4A
Microprocessor	TMS 9901 16 BIT
Graphics	16 colour, high resolution
Languages	TI BASIC (built-in), extended BASIC, UCSD PASCAL, TI LOGO, Assembler
Memory	16K RAM standard—expandable to 48K RAM
Keyboard	Full size, standard typewriter style
Software	1000 programs to choose from worldwide
Solid State	Yes
Speech Capability	Yes

to discover how much fun programming can be.

And when you're ready to expand your system, we're ready too. Our unique Peripheral Expansion System can house up to seven peripherals without extra cables or clutter. There is even a speech synthesiser that gives your computer a voice.

Sound impressive? Try the TI Home Computer for yourself at your nearest dealer. At around £200 you'll look no further.

**TEXAS
INSTRUMENTS**

The TI 99/4A The Home Computer worthy of the name.

Even if you're new to computers, you'll find the TI 99/4A within minutes of plugging it into any standard TV set. Because the TI 99/4A is a computer for the home. Immediately accessible to the whole family. All for around £299.

Just snap in one of our wide selection of State Software Command Modules, touch a key, and you're ready to go. The 40 modules sharpen your children's maths, teach you to win

or even help you with household financials. And much more besides. In all, over 400 are available.

All enhanced by full music capability and our graphics.

Another development which sets the TI 99/4A apart from the rest, is our optional Solid State Speech Synthesiser. Actually reproducing the voice. With our new Emulator Command Module, its vocabulary is unlimited.

For data input/output you can use an audio cassette recorder. And a full-size manual keyboard makes it easy to use.

The TI 99/4A comes with TI BASIC built in. Ideal for when you want to learn programming—and to get you started there's our 'Beginner's Basic' course, free with each machine—yet powerful enough for even the most experienced programmer.

To help you get the most from the TI 99/4A, you can join the independent users' club. And there's a special magazine ('99'er') available through dealers, or on subscription.

So, if you're looking for a home computer you can't afford to miss the TI 99/4A for versatility, power and value for money.

To find your local dealer check the list on the left, or for more information write to Texas Instruments Ltd., (MS 24), Manton Lane, Bedford MK41 7PA.

- 16K RAM Expandable to 48K
- 26K ROM including 16K BASIC
- Command Modules add up to 36K ROM
- 15-digit floating point
- Other languages: BASIC, LOGO, UCSD PASCAL, TMS 9900 Assembler
- Options: Speech Synthesiser, Thermal Printer, RS-232C Peripheral Adapter, Disk Memory System

• UCSD Pascal is a trademark of the Regents of the University of California

"TI's Home Computer This is the one."

A lot of computers offer a lot. Only one in its price range offers the most. The TI Home Computer.

Better to begin with. Anyone can start right away with our Solid State Software Command Cartridges. Dozens of programs are available in home management, education and entertainment.

Easy to expand. Our Peripheral Expansion System gives you plug-in cards for memory expansion, P-Code capabilities, a disk drive controller and the RS232C Interface. You can also add a modem, speech

synthesiser, disk drive and 80 column dot matrix printer.

Programming flexibility. TI BASIC is built into the Home Computer. But it can also handle TI Extended BASIC, UCSD PASCAL Version IV.0, TI LOGO II, TMS 9900 Assembly Language and TI PILOT.

Programs can be stored in the optional Mini Memory Command Cartridge.

High-Tech specs. 16-bit microprocessor, 16K bytes internal ROM, up to 30K bytes external ROM. 3 simultaneous tones from

110 Hz to 40,000 Hz. High resolution U.S. & I.C. Single line overlay for Control & function keys. 16 colours with 8 modes & sprites.

Sound impressive! Compare a computer with the competition. You need a computer to tell you this is the one.

**TEXAS
INSTRUMENTS**

© 1982 Texas Instruments
Circle 462 on inquiry

The second iteration of Texas Instrument's failed TI99/4 computer, the **TI99/4A** had a better keyboard, nicer case and improved reliability. There were a number of peripherals available, such as a printer and a disk drive, all of which interconnected on the sides, leading to the computer comically growing out to the right, sometimes quite far.

TI would come out with an expansion box to solve that problem.

The **TI99/4A** was popular for its speech-synthesis capabilities. Many games featured realistic-sounding speech synthesis, and there was even a terminal emulator (which connected to bulletin-board systems and on-line services) that had text-to-speech support.

However, the **TI99/4A**'s sales were lacklustre, and it was discontinued in early 1984.



"Sidechaining" a number of peripherals could lead to all sorts of silliness.

**TEXAS
INSTRUMENTS**

By Delores Haze

You've unrated your machine, mastered BASIC and taken over the family TV set. But what do you do once you've played all the games, and tried your hand at a few elementary graphic designs? You get a modem. Then—with the help of your telephone—you're ready to tap into remote data bases and shop at Saks, research the family tree, play new video games and find out what the weather's like in Tanzania—without leaving your easy chair. The fun of personal computing has just begun.

Reach out and touch someone! The modem made it possible for you to interact with more people than you could “shake a stick at”, which in a society where your circle of acquaintances was generally quite small was an extremely novel development. On-line services such as Compuserve could connect you to scores of people who shared your interests. You could download “free” programs (at a per-minute rate!), browse the latest headlines, look at stock prices and so on – for 1981, this was advanced, indeed! It was almost even worth the long-distance charges...

Luckily, all those assorted fees led hobbyists to set up their own “bulletin board systems” (or BBSes) typically for local callers, who could e-mail and chat with other people in their city, and exchange files truly for free.

Including files that were copyrighted. More on that later.

TWO almost a FREE TRIAL OFFERS

And one that costs you a buck.

One: Send us your first order for an Atari 520XE cartridge for your

Two: Send us your second order for an Atari 520XE cartridge for your

Three: Send \$1.00 to us and we'll send you the current "menu" of services, including the sophisticated big mainframe power of Micro Channel, LAN, and LAN Manager.

Three: Send \$1.00 to us and we will send you a current "menu" of services, including the sophisticated big mainframe power of MicroN. Send \$1.00, name and address to: Computer Information Service Division, 5000 Arlington Centre Boulevard, Columbus, Ohio 43220.

All this is yours to command.

Welcome to CompuServe

Access to news and entertainment data bases, computer games and art, regional newspapers, newsletters, programs, languages, storage (up to 128k free!) and lots more is yours for 8½ cents per minute (between the hours of 6 pm and 5 am weekdays and all day weekends), billed to your charge card. It's up in more than 260 U.S. cities.

MicroQuote has historical and statistical data on almost every stock, bond or option you can buy. Corporate financial information, commodity prices and financial newsletters are also available.

And, when you're ready for big-time computer power, you need a computer.



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mpuServe
Information Service Division
Arlington, VA

Hello, information.
Or, how the IBM Personal Computer can bring you the world.

There's a world of information just waiting for you. But to use it, study it, and profit from it, you first have to get it. Yet the facts can literally be right at your fingertips — with your own telephone, modem and the IBM Personal Computer.

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Plug into the network

...that plugs into your
the codes your IBM Personal
understands and turns them into
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or office. So, in minutes,
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A movie on a record? Released in 1981 after a whopping 16 years in development, the **CED** (capacitance electronic disc) or "**VideoDisc**" system used an electrically charged needle and a conductive record to reconstruct a video signal out of vertical undulations at the bottom of the groove.

At half the cost of a contemporary **VCR**, **CED** was attractive to many lower-income families. The discs came in caddies, and all the mechanics were squreled safely away inside the machine, making it easy for children to use. You didn't have to rewind them, but you did need to flip the disc half-way through most movies.

Unfortunately, by 1986 cheaper **VCRs** killed **CED**.



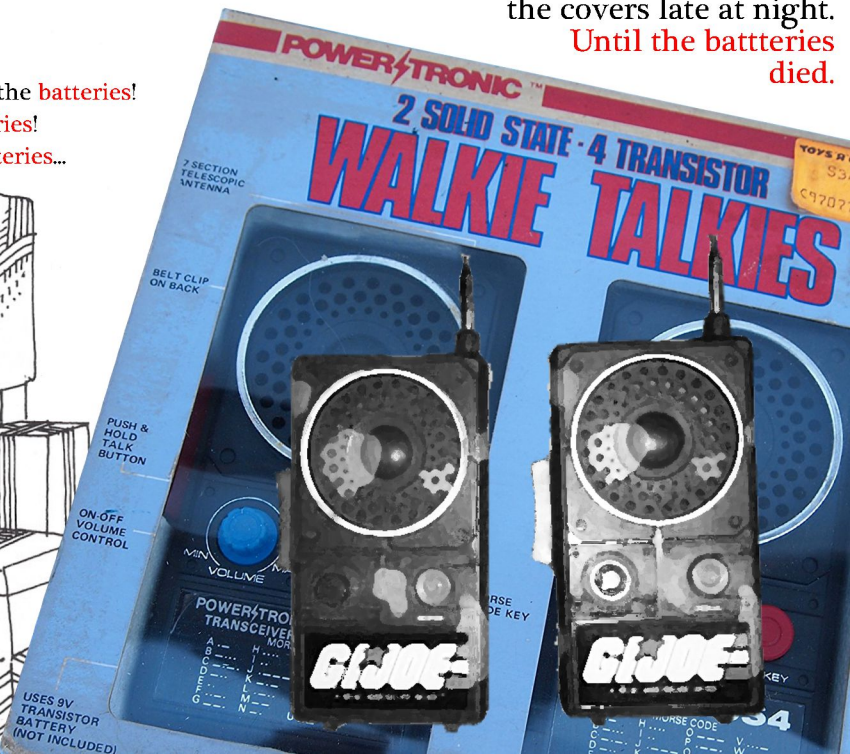
"VCR killed the CED star..."
It was too bad, really. But recording TV shows for free has always been more attractive than having to buy them.

Utilizing "graphics" that consisted of lighting up various segments of squares, laid out in a grid, containing crude representations of each game element (ghost, Pac-Man, etc.), these pint-sized "tabletop" arcade games provided a rudimentary experience at home, without the need of a video-game console or home computer. **But they were really hard on batteries!**

Portable radio transceivers (aka "**Walkie Talkies**") became an affordable Christmas present, and kids everywhere used them to talk to their siblings and friends under the covers late at night. **Until the batteries died.**



Don't forget the **batteries!**
Lots of **batteries!**
So many **batteries...**



LOSE ATOM POWER



—everything you need in a personal computer—

Optional Extras

- **Internal floppy disk with Econet**
- **Disk II PAL DIP command encoder**
- **4 disk in-cabinet 525" memory**
- **Interface to digital, video, VCR, disk controllers, data-mouse, printer, plus many more!** **Free** **Power supply**

FREE MANUAL:


The Atom's highly advanced manual comes with everything you need to know about the Atom and leaves nothing out. In just one year you'll be completely at ease with your Atom. Which brings you to the setting your own program.

produced by Atomcraft, Inc.
Compieters, Trust the
guy who's been from the
current software includes
word processing, mail, packs
over 50 games, database,
Port and business packages.

YOU AND YOUR CHILDREN

Most and more than others are buying Atom. Most and more children will learn to use the Atom. Most and more than others family familiarity with Atom is here.



ACORN COMPUTERS

1000 Market Street
CAMBRIDGE CB2 3RQ

When you order your Atom we will include full details of all software and our free 1000 Market Street, Cambridge CB2 3RQ.

Acorn Computers Limited, 41 Market Hill, Cambridge CB2 3RQ.

London: a branch/points of interest.

Please send your Atom/
Background/Info/
Signatures
to:

Acorn Computers Ltd.
Telephone

Telephone Number

Responsible: 0482 75111 21 41 00

Request	TELEPHONE	Post
Atom	0482 75111	0482 75111
Background	0482 75111	0482 75111
Signatures	0482 75111	0482 75111
Atom	0482 75111	0482 75111
Background	0482 75111	0482 75111
Signatures	0482 75111	0482 75111

Acornsoft to Market Hill,
for full details and prices.

THE FIRST NOEL
by Ann Padley

This should be a very useful program to have standing by at this time of year. It will almost certainly drive your in-laws out of the house and will probably annoy your carol singers greatly, as it goes much faster than they do. By halving all the values in data statements 400-401 and 202 you can make it go very fast indeed. By selecting random 2-figure numbers for data statements 200, 201 and 202 you can make strange noises. Best of all, by adding a 'GOTO 500' statement at the end you can have continuous background music all through Christmas Day.

```

10 POKE 768,173: POKE 769,48: POKE
   770,192: POKE 771,136: POKE
   772,208: POKE 773,5: POKE 77
   4,206: POKE 775,81: POKE 776
   ,3:
20 POKE 777,240: POKE 778,9: POKE
   779,202: POKE 780,208: POKE
   781,245: POKE 782,174: POKE
   783,80,3: POKE 784,3: POKE 785
   ,76:
30 POKE 786,0: POKE 787,3: POKE
   788,96:
50 DIM T(72)
60 DIM D(72)
100 FOR L = 1 TO 72: READ T(L): NEXT
   L
200 DATA 101,112,128,112,101,95
   ,83,75,67,64,67,75,83,75,67,
   64,67,75,83,75,67,64,83,95,1
   01
201 DATA 101,112,128,112,101,95
   ,83,75,67,64,67,75,83,75,67,
   64,67,75,83,75,67,64,83,95,1
   01
202 DATA 101,112,128,112,101,95
   ,83,64,67,75,75,83,64,67,75,
   83,75,67,64,83,95,101
300 FOR K = 1 TO 72: READ D(K): NEXT
   K
400 DATA 50,50,150,50,50,50,200
   ,50,50,100,100,200,50,50
   ,100,100,100,100,100,100,100
   ,100,100,200
401 DATA 50,50,150,50,50,50,200
   ,50,50,100,100,100,200,50,50
   ,100,100,100,100,100,100,100
   ,100,100,200
402 DATA 50,50,150,50,50,50,200
   ,50,50,200,100,250,100,100,1
   00,100,100,100,100,100,200
500 FOR L = 1 TO 72
600 POKE 848,T(L): POKE 849,D(L)
   : CALL 768
700 NEXT L

```

*A gift of the future...
from BYTE Books*



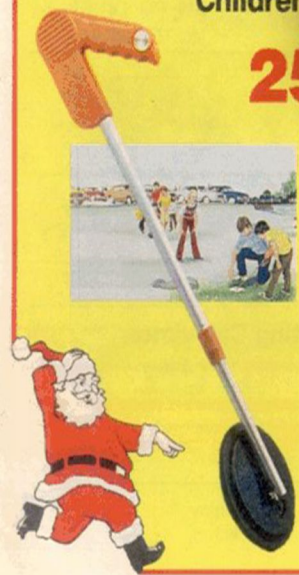
For more information, call (800) 538-9696. In California, call (800) 662-9238. Or write: Apple Computer Inc., 20525 Mariani Avenue, Cupertino, CA 95014
Apple® Logo is a product of Logo Computer Systems, Inc., 222 Brunswick Boulevard, Point-Claire, Quebec, Canada H9R1A6.



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Children's

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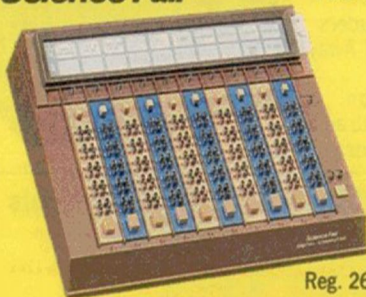


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100 Computer Projects
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Young computer buffs can build a digital "computer" and learn about programming, binary math, geography, health, more. Solderless coil-spring assembly. 68-page lab-type manual. Batteries extra.

FUN KITS! Christmas Specials!

Discover a whole new world of electronic fun and excitement! Here are just three of the 49 useful and low-cost electronic kits you'll find in PPG Electronic's latest kit catalog.

LOGIC PROBE \$15.95 (Model No. 805)

Find out what's happening in your digital logic circuitry! This new digital logic probe kit takes only a few minutes to build, yet gives readings of professional quality. Long, slim body makes the probe ideal for crowded circuits. Works with TTL and CMOS circuitry. Powered by circuit under test. A bargain at the price! Time to build: ½ hour.

DIGITAL CLOCK \$39.95 (Model No. 876)

Here's a clock you'll be proud to build. 6 large ½" numbers show hours, minutes and seconds. Great for office, den or shop. Features separate switches and a hold switch for perfect synchronization.

\$39.95 (Model No. 866)

3 LED readouts rotate, stop one at a time. If you're a winner! A beautiful kit! A time to build: 2 hours.

LED
guaranteed and are replaced FREE, if whatever reason.

\$89.95
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TO ORDER: Call (213) 988-3525 or write directly to PPG, Mastercharge, VISA, Bank accepted. Add \$1.50 shipping charge to order shipped with order. For catalog only send \$1.00.

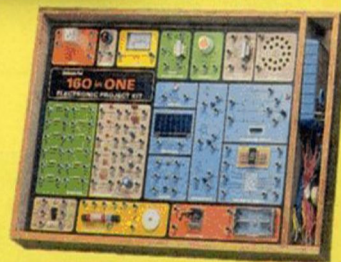
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over most projects. Build system, electronic storage coil-spring assembly. Ear-

160 Project Lab Kit

29⁹⁵
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Code Key

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168-Page Lab-Type Manual

Experiment with solar telemetry, computer/logic circuits, testers, radio, communications, and more. Solderless coil-spring assembly. Batteries extra.

Millions of 80s kids would learn simple electronics theory with these sorts of kits. Using varying lengths of wire, you would chain various components together in order to create a radio, a morse-code generator, a clock, or any number of things. Personally, I think more learning was done discovering what didn't work than what did! But the same could be said for poking around with BASIC...

MORE POWER TO YOUR POCKET!



THE FX702P. A pocket computer that communicates in BASIC language.

AVAILABLE AT SPECIALIST CASIO CALCULATOR OUTLETS.

CASIO WHAT WILL THEY THINK OF NEXT?
CASIO ELECTRONICS CO. LTD., SHARUEN HOUSE, 28 SCRUTTON STREET, LONDON EC2A 4TY.

Hand held alphanumeric programmable-BASIC language—holds up to ten different programs simultaneously—subroutines nested up to ten levels—program looping up to eight levels—simplified program editing and debugging—variable programming capacity: between 1680 steps with 26 memories and 80 steps with 226 memories—55 single key routines including log, trig and hyperbolic—built-in routines include standard deviation (both types), regression analysis and correlation coefficient—all programs and memory data retained even when switched off. Comprehensive library with over 70 program examples. Optional F42 adaptor for program storage on cassette and F710 printer.

R.R.P. £134.95

Speaking of which, Casio would release its own pocket computer; like the Tandy version it only had a one-line screen.



A vintage computer monitor with a beige frame. The screen is black and displays the text "a HUGE Thank You to all of our Kickstarter backers!" in bright green, pixelated, all-caps font. The text is arranged in five lines: "a HUGE", "Thank You", "to all of our", "Kickstarter", and "backers!".

a HUGE
Thank You
to all of our
Kickstarter
backers!

Thanks to you,

paleo³tronic
is coming...

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BYTE December 1981

Atari Coin Connection December 1981

CLOAD Magazine December 1981

Compute! December 1981

Creative Computing December 1981

Electronic Games Winter 1981

Hardcore December 1981

Kilobaud December 1981

Personal Computing December 1981

Radio Electronics December 1981

Your Computer December 1981

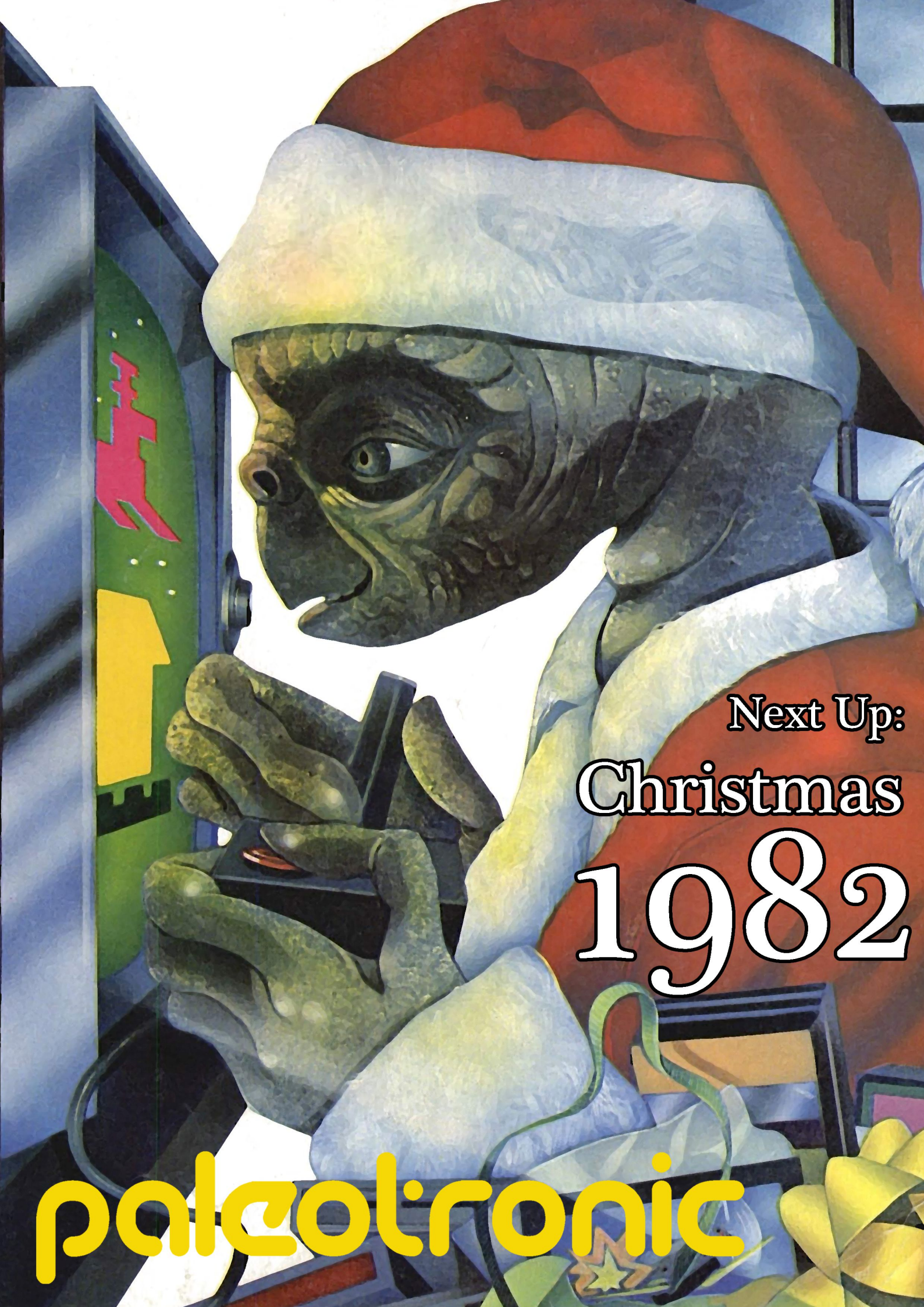
Thank You!

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Next Up:
Christmas
1982

paleotronic