The Magazine For Do-It-Yourself Homeowners

Handyman®

January, 1984 245th Edition $1.75

SPECIAL REPORT:

HOME COMPUTERS: TOYS OR TOOLS?

WE ANSWER THE QUESTION

12 BUILDING PRODUCTS THAT LOWER LIVING COSTS

TFH'S HOME MONEY MANAGEMENT GUIDE:

- HOW TO FINANCE YOUR NEXT REMODELING PROJECT
- AVOID HOMEOWNER INSURANCE TANGLES
- BEST BUYS IN AUTO FINANCING
- HOME RESOURCE FILE

CLEVER BUILT-INS MAKE A COZY HOME OFFICE

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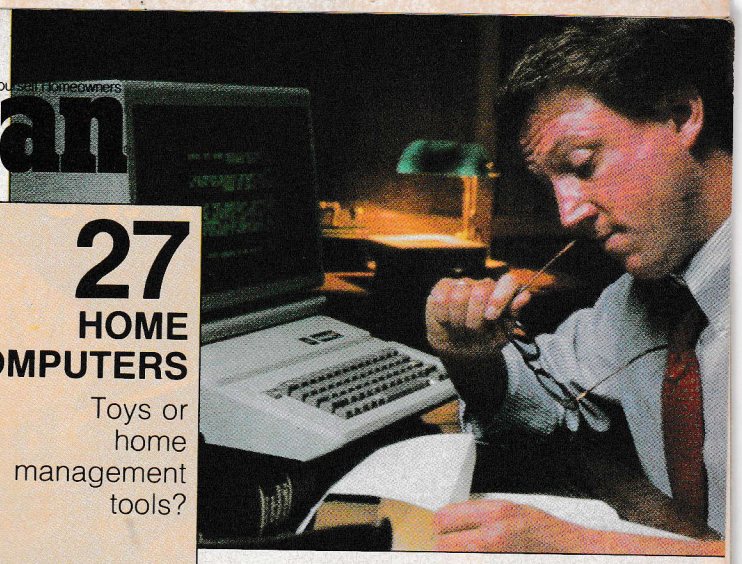
S INSIDE: FURNITURE

S HOME OFFICE

THE FAMILY **Handyman**
The Magazine For Do-It-Yourself Homeowners

JANUARY 1984 Volume 34, No. 1, 245th Edition



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Cover: Expand your home office space, or any other room, with this built-in couch and bookcase. Designed by Scott Mitchell, A.I.A., Menlo Park, CA. Photo by James Peck.

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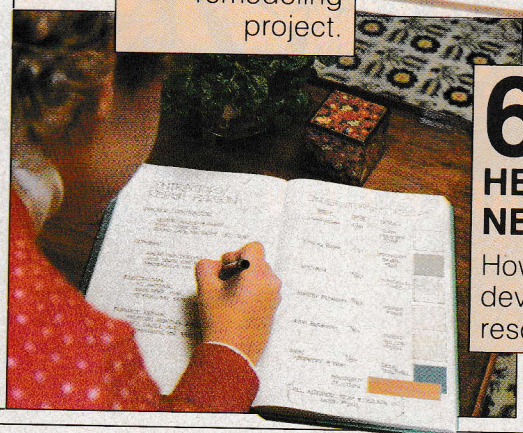

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THE HOME COMPUTER PUZZLE: TOY OR TOOL?

By Mark Schmidlin,
Ray Lorenz and Jim Stanley

The realities of buying, understanding and using a home computer.

We began this article with questions, not answers. Can the typical homeowner put a personal computer to work, we wondered? Are they expensive electronic toys, or a practical investment that can reduce some of the drudgery of daily life? And what about equipment costs, the terminology you have to learn, training? What if you can't even type?

To obtain the answers, we tested a number of computer systems and products. By actual product use we hoped to be able to blow away some of the smoke hiding the facts of computer ownership.

What we have discovered is that the question of whether you can use a home computer has both yes and no answers. For certain specific uses, such as home budgeting, education and word-processing, buying a home computer will be one of the investments you've ever made. But if your intended use doesn't fit into certain categories, the home computer may be used only sporadically.

Another discovery was that you may not have to buy a computer system simply because they are being integrated into other products. Appliance manufacturers are now building computer memory into their products, leading towards the day when they can be operated by remote control or operate themselves.

The following editorial section is divided into three parts: The first section is a primer with a vocabulary of computer terms, a description of the typical first-time setup, and concludes with some recommended computer systems that meet the requirements of reasonable cost and usefulness. Next, there are reviews of a number of computer programs and products and how the typical do-it-yourself homeowner could put them to use. Included here are home accounting, weather forecasting, precision measurement and telecommunications. Finally, sources for more information are listed.

HOME COMPUTER GLOSSARY

For better or worse, computer users are changing the English language. This glossary will help you understand and shop intelligently for a home computer.

BASIC. The most common "language" that home computers use. Fairly easy to learn, it stands for "Beginners All-purpose Symbolic Instruction Code."

Bit. The smallest unit of information (data) the computer uses.

Boot. To ready the computer for use by loading the operating instructions into the computer's temporary memory (RAM).

Byte. Eight bits of information (see above). One byte translates into one typed character (a letter of the alphabet, a one-digit number, etc.).

Cursor. A patch of light on the computer's screen that shows you where you are in the text being displayed.

Database. A large collection of related information (data), such as

Continued on page 28

GLOSSARY *Continued*

a collection of names, organized for easy use.

Disk. A thin plastic disk, housed in a square container, on which computer programs and data are stored. Also referred to as a "floppy," "floppy disk" or "diskette."

Disk drive. Functions like a record player. The disk is inserted into the drive which then records or plays the information from the computer.

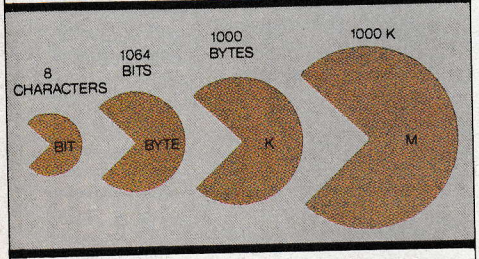
Display. The tv screen.

K. One kilobyte, or 1,024 bytes of memory. Most home computers are advertised as having so much K, as in "64K." This amount of memory is 65,536 words (or bytes) in size.

Memory. The part of the computer that stores information.

Menu. A video display of different tasks that the computer can perform and from which you choose.

Modem. Equipment that links two computers over a telephone line.



See the article on telecommunications on page 35 for additional information.

Monitor. The tv set, in simplest terms. Monitors designed only for use with computers, however, produce a better picture than that obtainable from a standard tv set.

Program. The instructions to a computer. Refers to both what you type in and the prepared software.

RAM. The computer's temporary memory. It disappears (unless stored on a disk) when the computer is shut off. It stands for "Random Access Memory."

ROM. The computer's permanent internal memory, stored on electronic chips. Additional new information cannot be stored in ROM. It's part of the computer and, thus, is retained even when the computer is turned off. It stands for "Read Only Memory."

Software. Another name for computer programs. For some examples of different software packages, see the following articles on computer-assisted drawing and home financial management.

THE FIRST TIME SETUP

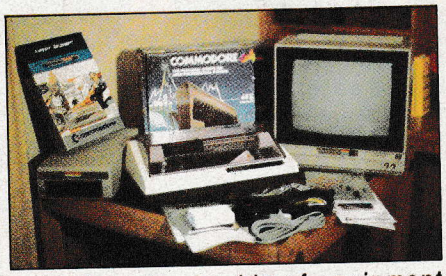
So you've decided to buy a computer. You've done some reading, talked to friends and, of course, watched the tv commercials showing happy people busily writing first novels, poems to their beloved and job-saving reports that impress the boss. Home with your purchase and with the family gathered around, it's time to put it all together. Here's one typical example of what awaits you at setup time and some tips to speed the process.

We took delivery on a Commodore 64 system that included Commodore's single disk drive, color monitor and dot matrix printer. Once unpacked, we found ourselves with four separate power connections to make (three of them grounded plugs); nine separate cable connections; five operating manuals to read; and not enough desk room. The space shortage was aggravated by the system's short connecting cables and power cords.

Because we had a working knowledge of small computers, we were able to have the system up and running in just under two hours. This included making all of the cable connections after reviewing the separate manuals; finding sufficient wall outlets to handle the four power cords; arranging the equipment as permitted by cable length; and putting the first software program to work. Without our prior experience, the assembly time could easily have been twice as long.

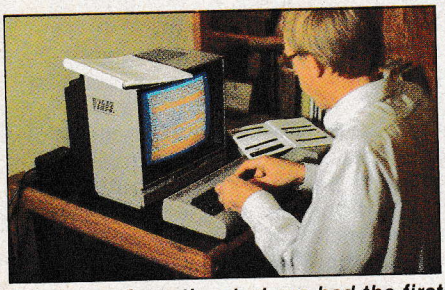
From this fairly typical experience, these tips:

- For power connections, purchase either a UL-approved multi-outlet strip or The Wire Tree from Networx. The Wire Tree provides four outlets combined with a line surge and spike filter that protects your computer from damage to circuitry and lost data caused by power line fluctuations. It comes with a bracket that allows you to mount it out of sight underneath your computer desk.
- Plan ahead for working room. You can build TFH's computer desk (see page 66) or purchase furniture in either assembled or kit form from a large number of sources.
- You don't need to restrict yourself to the supplied cables. Your computer store dealer offers longer, or if clutter is a problem, shorter cables. However, write down and take with you the model names and numbers of the equipment for which you need new cables. Many computer "breakdowns" are eventually traced to nothing more than mismatched cables.
- Read everything first. Both before you buy and before you try to operate. See our recommendations of useful introductory books on page 38.

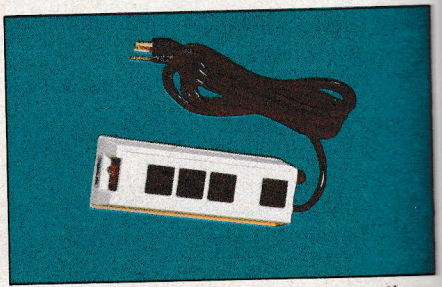


Unpacked, the jumble of equipment covered the entire surface of a 4-ft.-sq. table.

Study of the five instruction manuals is mandatory for all users, experienced or not.



Two hours from the start, we had the first program running. Each program requires time and practice to use.



The Wire Tree simplifies power connections, has both spike and surge filters, and costs about $69.95.

3 RECOMMENDED SYSTEMS

There may not be a more difficult assignment than to make a recommendation for a home computer system. With over 300 manufacturers producing 1,000 different models of home and office computers, there's no such thing as picking "the best."

There are, however, some general guidelines based on what equipment and memory is necessary to effectively use a home computer:

- At least 64K of RAM memory, although you can get by with as little as 48K.
- One disk drive is a necessity, and two drives simplify the copying of data and program execution.
- A printer, either dot matrix or letter quality, turns the home computer into a sophisticated typewriter and allows retention of data in a printed format.
- An RGB monitor greatly adds to the appeal of a home computer.
- The availability of such options as modems, joysticks, expansion cards and other peripherals.
- Plenty of software available.

The most important of these elements is the software. The advice computer professionals give is to, "shop for the software first, and then find a computer that will run it." Advice which we strongly endorse. The software programs you want to use are more important than which computer they are used with.

Our three recommended systems combine affordability (from about $600 to about $2,000), availability of software of many types, and features that we feel set them apart. But there are a number of other good systems that you should investigate, including Commodore's 64K, the Kaypro II, and the TRS (Radio Shack) Model 4, all of which are comparable to both the Apple IIe and the IBM PCjr. Your final choice will depend upon individual criteria.

1 IBM PCjr

Long-rumored and abundantly publicized, IBM's new PCjr has several unique features that allow it to live up to the advance hoopla.

The basic PCjr has 64K of memory and a $700 price, but the $1,269 disk drive model with 128K of memory is our recommendation. There's also a new thermal printer ($175), internal modem ($200) and a host of other options. Patterned after the hugely successful IBM PC, the PCjr can use many, but not all, of the 1,000+ programs available for its big brother. It also has its own software series in both disk and cartridge formats.

The PCjr uses a unique 62-key cordless keyboard that communicates with the computer from up to 20 ft. away by means of infrared signals. The keyboard is battery-operated and an optional cord is available for direct connection. The disk drive is double-sided, unusual in home computers, and means that up to 368,640 characters of user memory can be stored, using both sides of the disk.

Also unusual is a 12-month warranty, reducing one concern of many first-time buyers. Another feature the PCjr has inherited is the diagnostic self-test, where the computer runs a check on its systems for correct operation and reports any problems.

The IBM PCjr has just now become available at IBM Product Centers and Sears Business Systems stores.

The IBM PCjr is the company's most affordable system. Based on the popular PC, the version shown features 128K of user memory, a double-density disk drive, two program cartridge slots and an infrared cordless keyboard. Cost is $1,269.

Intended to be the first home computer for many families, ease of use is emphasized in the PCjr's design and software. The IBM features graphic, color and sound abilities, as well as a series of educational programs.

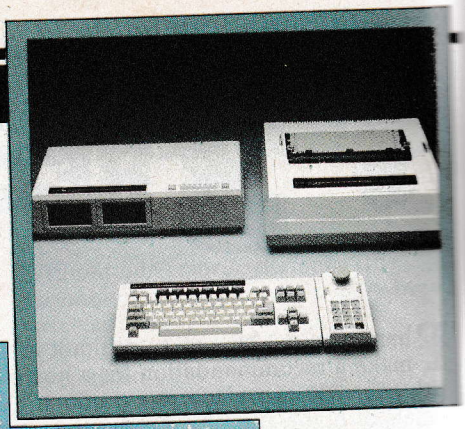
2 Coleco Adam

Adam is the start of something new: Home computers sold as a complete system with everything you need — computer, drive and printer — in one box. The cost is under $600.

The Coleco Adam is no toy. It comes with 80K of RAM memory (expandable to 144K); a keyboard with 75 full-travel keys; a 120 words-per-minute letter-quality printer; built-in software, and a high-speed tape cartridge system. Adam also plays all ColecoVision game cartridges.

The letter-quality printer uses interchangeable daisy wheels in different typefaces and uses both regular and computer paper up to 9½ in. wide. Coleco's Fastransfer tape drive has transmission speeds comparable to a disk drive, but at much lower cost. The tape data packs can store up to 500K (about 250 pages) of text.

The Adam is revolutionizing how home computers are built and sold. It's a total package that anyone can plug in and immediately start using without special technical knowledge.



The Coleco Adam system includes computer, tape drive, numeric keyboard and letter-quality printer in one integrated package for under $600.

The Adam comes with built-in software, 80K of memory, and a full keyboard. The drive utilizes Coleco's Fastransfer circuitry for transmission speeds comparable to that of a disk drive, but at much lower cost.

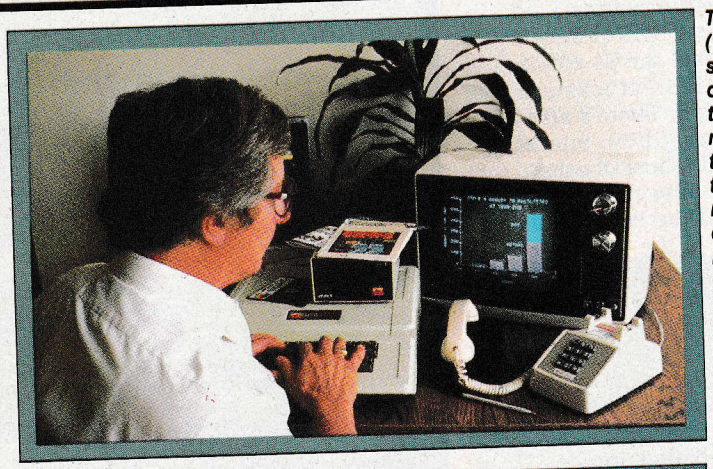
3 Apple IIe

There were Apples long before there were Adams. Apple started the home computer revolution, and the Apple IIe is the latest version.

The Apple IIe computer alone retails for about $1,200 or less, but it's only a starting point. You also have to buy a disk drive, the necessary software, a printer and monitor. Purchasing these necessary add-ons means spending a minimum of $2,000, but you'll own a 64K computer (expandable to 128K) that's versatile enough for either home or business use.

One definite plus to owning an Apple IIe is it's popularity. There's more software programs available for the Apple than any other computer system. And because the Apple IIe is generally sold only through computer stores rather than mass merchandisers, you have someone to turn to for help when problems arise.

The new products from IBM and Coleco have some features the Apple IIe lacks, but the Apple has a proven track record of reliability and a huge base of software from which to choose. That's why the IIe is one of the best choices in home computers.



The Apple II series (the II Plus is shown) started the home computer revolution. Use of a modem as illustrated here, allows the user to communicate with other computers for work, research or entertainment. See "Telecommunications" in this issue, for additional details.

A home computer easily attracts a crowd. The four principal uses are word-processing, home entertainment, financial planning and education.

COMPUTERS YOU TAKE WITH YOU

The TRS Model 100 has a full-sized keyboard, weighs less than 4 lbs. and comes with built-in software. It operates on 4 standard "AA" batteries.

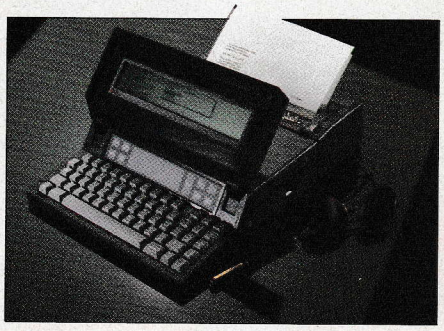
Your first home computer might not spend too much time in the house. Computer manufacturers are putting greater and greater computing ability into ever smaller containers. Because portable computers can go with you to school, the office or on a trip; and usually come with supplied or built-in programs, they may be your best computer investment.

Portables range in size from about 5 lb. and small enough to easily fit into a briefcase, to 30-lb. models the size of a small suitcase.

One of the most popular portables is the Radio Shack TRS Model 100. The display screen shows four lines of text at a time and comes with built-in word processing, scheduling and telecommunications. The basic 8K version costs about $799; the more powerful 24K model, about $1,000.

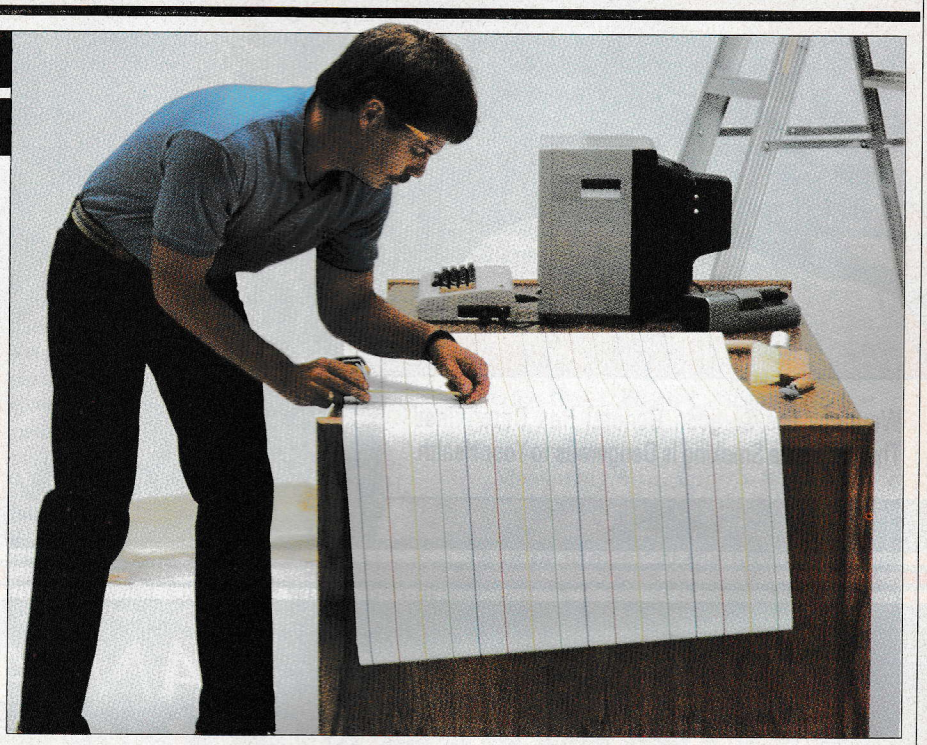
The Kaypro II is representative of the suitcase-size packages. For $1595 you'll have a high-capacity computer system that spends its days at the office, its nights at home for home management chores and entertainment. For the small business owner, it makes an excellent choice.

A much more powerful and expensive (approximately $5,000 with the optional printer) portable is the Gavilan. Using state-of-the-art technology, the Gavilan has the functions and capabilities of a full-size computer shrunk into a package only 12 in. square and less than 3 in. high. Now primarily a computer for business users, it's a demonstration of what the very near future holds for everyday, portable computers.



Exotic and admittedly costly, the Gavilan has 64K of memory (expandable to 228K). Even with the optional printer (shown) it fills only half of a briefcase.

LET OSCAR DO IT



Exact measurements are a requirement of most home projects, especially wallpapering or paneling. Databar's computer program can give you a precise cutting and materials list, saving you time and money.

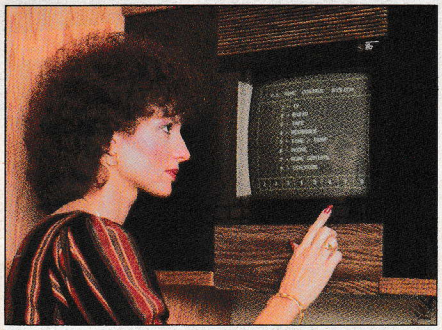
Nearly every do-it-yourself project begins with measurements. You measure to make things fit, to follow installation instructions, to size the materials. For wallpapering, paneling, roofing, siding jobs, to name just a few, those measurements tell you how much to buy, and of what size. And when problems develop, an inaccurate measurement is often where the trouble started. Computers were invented to perform mathematical chores, so an obvious application is handling the measurements part of DIY.

One company that has computer programs that will convert raw measurements into final precise dimensional information, is Databar. Their OSCAR optical scanner and two of *Databar* magazine's published software programs, introduce precison measuring to the DIY scene. The programs are sophisticated enough to handle most sizes and types of landscaping and home workshop projects. For example, if you want to wallpaper a triangular wall with unequal sides, OSCAR can tell you exactly how much wallcovering is needed.

Priced at about $80, which includes a copy of *Databar* magazine, you move OSCAR's wand across the page of bar code, and in about two minutes a program has been loaded into the computer. The bar code contains all of the program information. An accompanying article explains the program usage.

For information on OSCAR and their bar code software series, write Databar Corp., Dept. FH, 10202 Crosstown Cir., Eden Prairie, MN 55344.

GE HOME MANAGEMENT SYSTEM



Think of it as having a smart house. A house that controls and guards itself in your absence or responds to telephoned instructions to start dinner or let the dog out. A house where all of the lights can be controlled from one chair, telephone messages receive answers and various appliances go to work following pre-programmed schedules.

The home computer is making a smart house possible. General Electric, for example, has developed a home management system that uses the tv as the means of controlling a host of computer regulated appliances.

The tv in the kitchen or living room serves as both the household control and as a regular tv set. Once programmed, it can control the thermostat; start dinner; answer the phone and take messages; regulate the lawn sprinklers; call the police or fire departments in case of emergency; control the lights in all rooms; act as an intercom; and still function as an entertainment center with tv, tape and radio play. To choose a new function, you simply touch the screen next to the entry list. The prototype GE system costs several thousand dollars and is a demonstration of what lies in the near future.

An alternative that produces many of the same results uses a $60 home control system from Genesis Computer Corp. The system plugs into a Commodore VIC-20 or 64K and with the addition of separately-purchased modules (about $17 each), you can control up to 256 lights and appliances. Lights will have nine brightness levels, and there are both manual and time control instructions. Not as sophisticated as the GE Home Control System, it is essentially the same concept at a much lower cost.

COMPUTERIZED DRAWINGS

Imagine being able to design a new home, filling it with furniture, and then rotating the design to see how the design's different elements and colors interact.

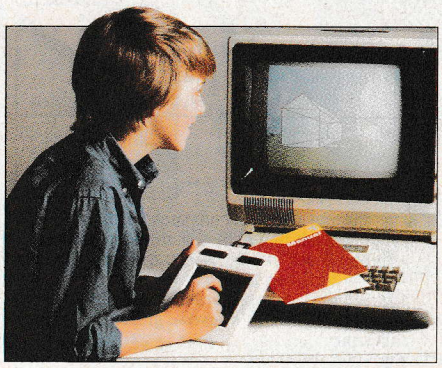
It's all possible today with computerized drawing methods that cost only $40 up to about $125. Here are three computerized drawing tools that you might like to try.

Apple World. At $60, the Apple World program is a low-cost admission ticket into one of the most sophisticated computer fields: Computer aided design (CAD). CAD systems are the costly computer modeling instruments that engineers use to design and test their creations.

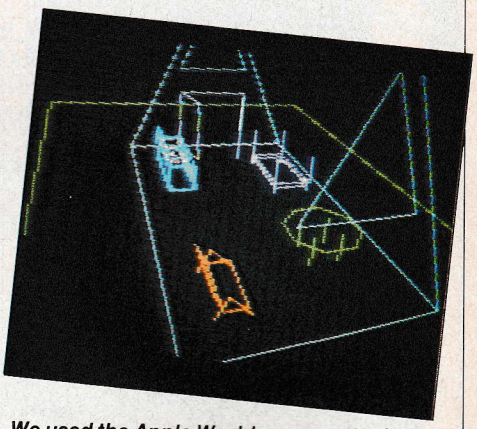
The same is true of Apple World. Designed for the Apple computer, it will create an electronic house (or other design) to your dimensions and design, and fill it with furniture. Then you can rotate it, look down on it, zoom in for a closeup of one portion, or rearrange the furniture.

However, in exchange for all of this versatility, you pay a price in time spent at the computer terminal. To create the 3-D drawings, you have to specify the numerical coordinates on the computer, defining the design's lines on three axes. It takes several hours to produce the finished electronic drawing. The Apple World program is available in computer stores or from United Software of America, 750 Third Ave., Dept. FH, New York, NY 10017.

The Light Pen. What's more natural than drawing something with a pen or pencil? With The Light Pen from FutureHouse, "drawing" by computer is that easy. The Light Pen is a 6-in. long, pencil-sized electronic instrument with a coiled 4-ft. cord that plugs into the computer. You can use the pen to draw freehand on the screen; compose music; or play several games. The Light Pen costs $34.95, plus $3 shipping, from FutureHouse, P.O. Box 3470, Dept. FH, Chapel Hill, NC 27514.



The Koalapad is so simple to use that instructions are hardly necessary. What you draw on the pad surface is what appears on the computer monitor screen.

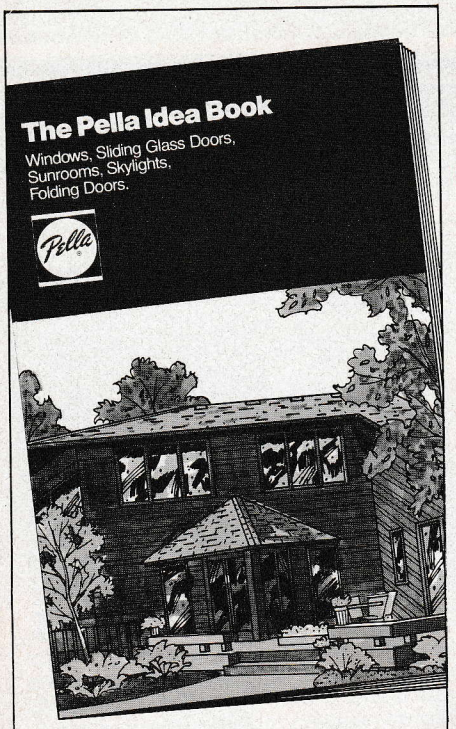


We used the Apple World program to design a 3-dimensional A-frame house, complete with furniture. We then rotated it in order to view the design's different perspectives.

Koalapad Drawing Tablet. There may not be an easier way to draw than with the Koalapad Touch Tablet. The Koalapad is a position-sensing device that converts pressure on the pad into electronic signals that control the computer.

Measuring 6 in. wide x 8 in. deep x 1 in. high, it has a drawing surface area 4¼ in. square. To draw, add color or use any of the product's other functions, you simply move a stylus (or your finger) across the pad's surface. You can draw freehand or allow the Koalapad to draw exact squares, rectangles, diagonal lines, circles, straight lines or zoom in for a closeup look at part of your drawing. When the drawing is finished, you can add color, provided you have a computer and monitor so equipped, by selecting another option.

The Koalapad and the accompanying Micro Illustrator software program costs from under $100 to $150, depending on computer type. Available in many computer stores or from the manufacturer, Koala Technologies Corp., 3100 Patrick Henry Dr., Dept. FH, Santa Clara, CA 95050.



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HOME ACCOUNTING

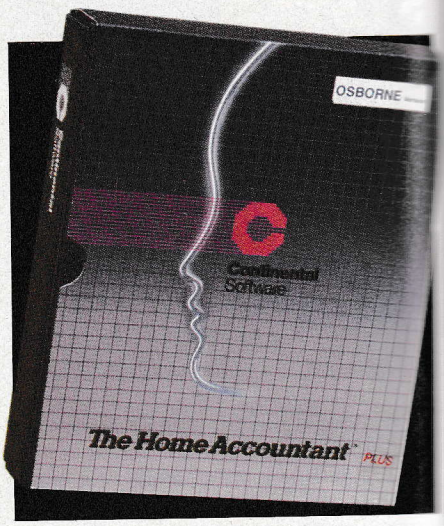
If it seems that the money always runs out before the month does, then you're a prime candidate for a home financial management program. Computers were invented to solve mathematical problems, not kill mythical space creatures, and one of the best applications for a home computer is in sorting out the general chaos of most personal budgets.

Realize that we're not talking about the "checkbook balancers" available. Those types of programs are essentially useless, turning a simple job into a difficult one. What you need is a program modeled after those used by businesses to do accounting work, but customized for use by individuals.

Initially, to make any of the budget managers work, you'll have to do some work yourself. Records, receipts, on-going expenses, loans, taxes, payroll deductions, charitable contributions — they'll all have to be logged into the computer program. But after that few hours of work are over, you'll reap benefits in hours and money saved at tax time, when you need a loan, or when you're trying to decide whether you can afford that vacation. Probably the greatest benefit will come at tax time when otherwise hidden deductions will appear.

The personal budget or tax program you purchase should:

- Allow easy retrieval, easy inputting of information.
- Maintain a running balance of cash on hand.
- Maintain multiple assets and liability accounts.
- Be able to report your net worth in spreadsheet fashion (an aid in securing personal loans from your bank.)
- Provide you with personal income tax management.
- Maintain your income and expense statements.



Continental Software's "Home Accountant Plus" is the best-selling home finance package available because of its completeness. It can keep track of up to 5 checking accounts and 200 budget categories.

Two software publishers that offer programs that meet these requirements are: "The Home Accountant Plus," from Continental Software, Dept. FH, 11223 S. Hindry Ave., Los Angeles, CA 90045. This program is the most popular available and the cost is about $75. Another choice is "The Complete Personal Accountant," from Programmer's Institute, a division of FutureHouse, P.O. Box 3470, Dept. FH, Chapel Hill, NC 27514. Their versions no. 2 and 5 cost a total of about $100 in disk format.

This personal budget report shows where the money has and will be spent, in spreadsheet fashion. Such spreadsheets, besides being a personal planning benefit, are often useful when securing a personal loan.

ACTUAL FOR
JOE SMITH
OCT 8, 1982

PAGE 4

EXPENSE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
RENT	650	0	0	0	0	0	0	
FOOD	323	361	357	371	290	251	410	356
CLOTHES	154	0	54	0	0	0	0	
UTILITIES	57	56	50	59	62	51	53	54
CREDIT CARD INTEREST	0	0	0	0	0	0	0	
ENTERTAINMENT	143	100	58	13	24	45	125	54
GASOLINE	100	110	90	100	100	100	95	90
MORTGAGE INTEREST	0	0	0	0	0	0	0	
MISCELLANEOUS EXPENSE	28	0	44	0	98	0	0	44
CAR EXPENSES	990	0	0	0	0	0	0	
TOTAL EXPENSE	2445	627	653	543	574	447	683	675
NET INCOME	105	1623	1597	2091	1676	1803	1863	1825

TELECOMMUNICATIONS

The computers of science fiction novels were devices that put the user in contact with almost any type of information imaginable, from daily needs to exotic research. The "someday" of those novels is now here. The computer and a device called a modem connects you via the telephone to over 150 information utilities offering thousands of services. What it means is that you can buy and sell your own stocks; take your child to the library to use the encyclopedias, without ever leaving the house; check all current airline schedules and make reservations; shop from catalogs and read the latest sports, legislative, commodity and international news direct from the UPI news service lines, the same source your newspaper uses for many of its reports. Or any of hundreds of other possibilities. Listed here are some of the more popular consumer and business information utilities:

BRS/After Dark, 1200 Rt. 7, Latham, NY 12110. Consumer-oriented; $50 membership fee, plus hourly charges.

Compuserve, 5000 Arlington Ctr. Blvd., Columbus, OH 43220. Consumer-oriented; $49 membership fee, plus hourly charges.

Delphi, 3 Blackstone St., Cambridge, MA 01803. Consumer-oriented; $50 one-time fee, plus hourly charges.

Dow Jones News/Retrieval, P.O. Box 300, Princeton, NJ 08540. Business-oriented; $50 to $90 one-time fee, plus hourly rates; both based on data base accessed.

Continued on page 38

A home computer, a telephone and the modem, shown here placed under the phone, are all you need. Many computer makers now offer built-in modems because of the popularity of telecommunications.

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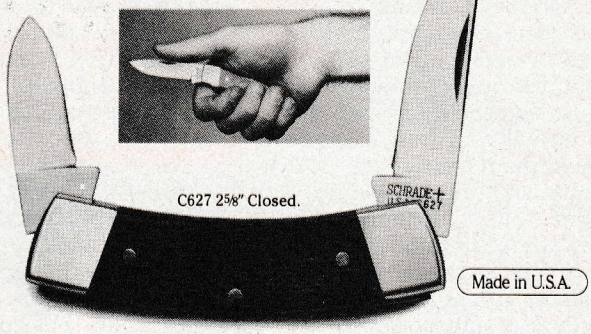

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PUBLIC DOMAIN SOFTWARE

The most important part of a computer system isn't the computer itself, it's the software (also called "programs"). Getting the programs you need for a true working system can involve a major cash outlay. But, unknown to many computer users, a great deal of software is available virtually for free. It has been published without restrictions on reproduction and, thus, is public property, or "public domain."

The best source of public domain software is your computer user group. (there are user groups for virtually all computer brands and systems). They will have programs in the group library and will know where you can get additional programs. The programs you get from your user group will be compatible with your computer.

Major computer magazines, such as *Byte* and *Creative Computing* frequently publish programs in BASIC and other languages for the use of their readers. The only problem is keying them into your computer. It can be a tedious typing job. Optical scanners will soon change all that (see "Let OSCAR Do It" in this issue)

Some companies specialize in collecting public domain software and selling it in formats for the most popular home computers at a relatively low price-per-program. The price usually amounts to a little more than copying time plus the cost of disk or tape. One of the largest of these is Public Domain, Inc., 5025 S. Rangeline Rd., Dept. FH, West Milton, OH 45383. Their free catalog lists hundreds of home computer programs.

Magazines are starting to publish software programs in bar code format. OSCAR "reads" the program into the computer in just minutes.

WEATHER FORECASTING

If you are a gardener, farmer or outdoorsman, then knowing what the weather is about to do is important. The Home Automatic Weather Station (HAWS) manufactured by Vaisala, is a computer system that combines a forecasting/measuring computer program with a self-contained external monitoring device. Used with either a VIC-20 or Commodore 64 home computer, the HAWS provides: (1) A continuous display showing temperature, humidity, dewpoint and atmospheric pressure, updated every 15 seconds; (2) a comfort-factor report; (3) a chill-factor report; (4) a trend program that allows you to collect and store weather data for time periods of up to 36 hours; (5) weather forecasting; (6) cloud altitude and a number of additional options.

The remote sensor is patterned after other Vaisala meteorological testing products. The sensor may be mounted outdoors (with some restrictions concerning exposure to sun and rain), or used indoors to monitor the relative comfort levels of different portions of the house. A 15-ft. cable connects the sensor to the computer, with longer cables available, subject to some restrictions.

A well-written instruction manual is also a part of the package, which sells for $199.95 plus $5 for shipping. The manual not only explains computer operation and data displays in clear language, but also what the information means in terms of personal comfort, and weather trends.

If you're interested in adding the HAWS to your home or farm, our recommendations would be to purchase a VIC-20 home computer, which currently retails for about $60, and use it as a "dedicated" computer with the sole purpose of handling the HAWS data reports. For more information, contact Vaisala, Inc., 2 Office Park, Dept. FH, Woburn, MA 01801.

INSURING YOUR COMPUTER

If you use your home computer for business as well, and you've invested $1,000 or more in hardware and software, it's time to have your system insured. Home computer insurance policies are growing as fast as the computer industry, and some firms offer $15,000 of coverage as part of homeowners insurance policies.

For example, the Kemper Group offers a nondeductible, all-risk homeowners policy that covers both hardware and software up to $15,000. The company also does not depreciate the equipment when paying claims. The cost? About $1.50 per $100 of coverage, with a minimum annual premium of about $35.

State Farm offers a standard homeowners policy that includes a free $3,000 home computer endorsement, though it isn't all-risk. The company also has deductibles from $100 to $250 per claim. The depreciation factor depends on the type of policy you arrange.

More and more insurance firms are specializing in computer coverage. Safeware, an insurance company based in Columbus, Ohio, has seen computer coverage "grow steadily for the past two years." Says a spokesman for the company, "Home computers are no longer just for video games. Homeowners are making serious use of $2,000-plus units for home management and business. Homeowners coverage is becoming very important." Safeware's policy includes all-risk, full-replacement value for all software and hardware in a range of annual premiums, from $35 for up to $2,000 of coverage to $105 for $11,000 to $14,000 of worth.

The company offers these precautions when buying insurance: Purchase a power line filter; make sure a policy covers software; and aim for full-replacement value of any loss.

Continued on page 38

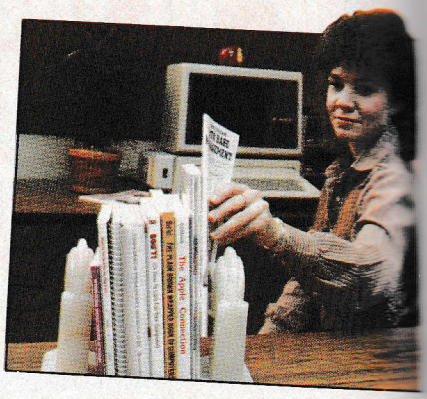
TELECOMMUNICATIONS

Huttonline, One Battery Pl., New York, NY 10004. For E.F. Hutton clients. A one-time $25 fee and $17 per month allows unlimited access to stock market information, research and transactions.

Source Telecomputing Corp., 1616 Anderson Rd., McLean, VA 22102. The grandfather of consumer information utilities, it charges a $100 one-time fee, plus hourly charges.

WORDS

If a home computer is in your future, then so are at least 14 books and three magazine subscriptions, according to computer market researchers. Home computers have spawned thousands of new books and hundreds of magazines that explain what the machines can do and how to



get them to do it. The magazines are especially useful in that they publish tough product reviews, looking for flaws in equipment or software. The books range from overviews of home computers to brand-specific titles that help you use a particular model. Here are some recommendations for books that, while in no way comprehensive, will serve as a starting point for you.

Don't (Or How to Care For Your Computer), by Rodney Zaks, $11.95. Dedicated to ". . . the allegedly mythical trouble-free computer," it's a primer on home computer care and maintenance. From Sybex, Inc., 2344 6th St., Dept. FH, Berkeley, CA 94710.

What Do You Do After You Plug It In?, by William Barden, Jr. A concise and complete tutorial on small computers for the average user. Explains terminology and leads you into more complex applications. From Howard W. Sams & Co., 4300 W. 62nd St., Dept. FH, Indianapolis, IN 46268.

Computer Handy Guides, published by Alfred Publishing Co., $2.95 each. A series of concisely-written instruction books covering all of the popular home computers and computer usage. These books offer a maximum of information and value in a minimum of space. From Alfred Publishing Co., P.O. Box 5964, 1535 Morrison St., Dept. FH, Sherman Oaks, CA 91413.

The Plain Brown Wrapper Book of Computers, by Anna Mae Walsh Burke, Ph.D. $9.95. Here's one book that can lead you from complete ignorance of computers to BASIC programming, all of it written in a nontechnical, clear and humorous style. From Harbor Publishing, Inc., 1668 Lombard St., Dept. FH, San Francisco, CA 94123.

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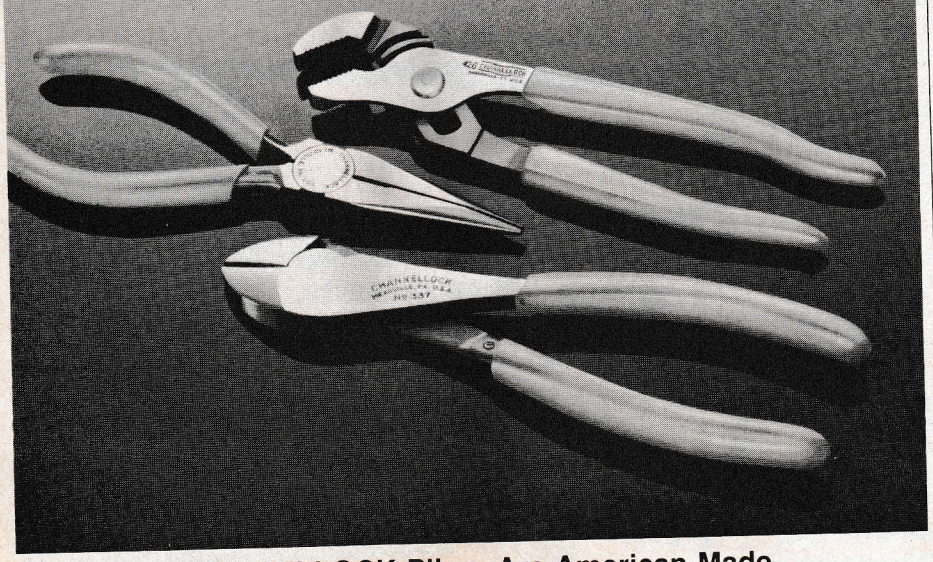

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WORDS

The Apple Connection, by James W. Coffron, $12.95. Everything you ever needed to know about Apple computers, all in one book. Includes complete instructions for installing a home security system and managing home appliances with the Apple. From Sybex, Inc., 2344 6th St., Dept. FH, Berkeley, CA 94710.

Commodore 64 Programmer's Reference Guide, $19.95 from Howard W. Sams & Co.. A 416-page reference text that provides detailed programming information for both beginners and experienced users of the Commodore 64 home computer. From Howard W. Sams & Co., 4300 6th St., Dept. FH, Indianapolis, IN 46168. **TFH**

BUYER'S GUIDE

Computer systems

Apple Computer, Inc., Dept. FH, 20525 Mariani Ave., Cupertino, CA 95014.
Coleco Industries, Inc., Dept. FH, 945 Asylum Ave., Hartford, CT 06105.
Commodore Computer Systems, Dept. FH, 487 Devon Pk. Dr., Wayne, PA 19087.
Gavilan Computer Corp., Dept. FH, 240 Hacienda Ave., Campbell, CA 95008.
IBM, Entry Systems Div., Dept. FH, P.O. Box 2989, Delray Beach, FL 33444.
Kaypro, Dept. FH, 533 Stevens Ave., Solana Beach, CA 92075.
Radio Shack, Dept. FH, 1800 One Tandy Center, Ft. Worth, TX 76102.

Software and Applications

Continental Software Co., Dept. FH, 11223 S. Hindry Ave., Los Angeles, CA 90045.
Creative Software, Dept. FH, 230 East Caribbean Dr., Sunnyvale, CA 94086.
Databar Corp., Dept. FH, 10202 Crosstown Cir., Eden Prairie, MN 55344.
Genesis Computer Corp., Dept. FH, 1444 Linden St., Bethlehem, PA 18018.
Koala Technologies Corp., Dept. FH, 3100 Patrick Henry Dr., Santa Clara, CA 95050.
Programmer's Institute, Div. of FutureHouse, Dept. FH, P.O. Box 3470, Dept. C, Chapel Hill, NC 27514.
Public Domain, Inc., Dept. FH, 5025 S. Rangeline Rd., W. Milton, OH 45383.
Software Solutions, Dept. FH, 8293 State St., Box 989, Montpelier, VT 05602.
Timeworks, Dept. FH, P.O. Box 321, Deerfield, IL 60015.
United Software of America, Dept. FH, 750 Third Ave., New York, NY 10017.
Vaisala, Consumer Products, Dept. FH, 2 Tower Office Park, Woburn, MA 01801.

Information utilities (databases)

BRS/After Dark, Dept. FH, 1200 Rt. 7, Latham, NY 12110.
CompuServe, P.O. Box 20212, 5000 Arlington Ctr. Blvd., Columbus, OH 43220.
Delphi, General Videotex Corp., Dept. FH, 3 Blackstone St., Cambridge, MA 02139.
Dow Jones News Retrieval, Dow Jones & Co., Inc., Dept. FH, P.O. Box 300, Princeton, NJ 08540.
Huttonline, Dept. FH, One Battery Pl., New York, NY 10004.
Knowledge-Index, Dept. FH, 3460 Hillview Ave., Palo Alto, CA 94304.
The Source, Dept. FH, 1616 Anderson Rd., McLean, VA 22102.

Miscellaneous

Network, Dept. FH, 203 Harrison Pl., Brooklyn, NY 11237

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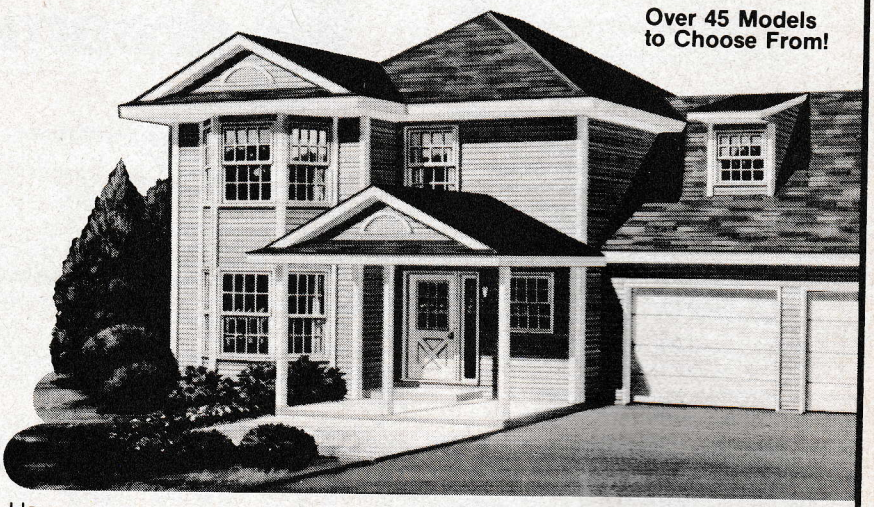

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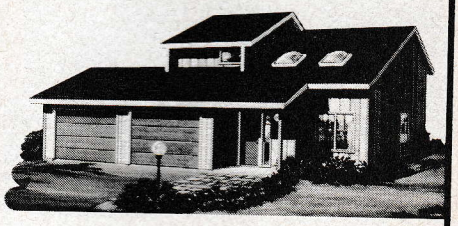

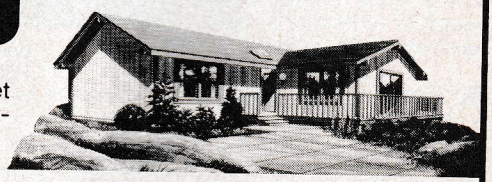

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