

Texas Instruments introduces the TI-99/4 Home Computer

For personal finance.
For record keeping.
For home management.
For education.
For entertainment.
For every member of your family.
For right now.



TEXAS INSTRUMENTS
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The Official
Computer and
Calculator
Supplier of
the 1980
Olympic
Winter
Games



The remarkable TI-99/4 Home Computer. Compare it. Dollar for dollar. Feature for feature.

**Superior color, music, sound and graphics--
and a powerful extended BASIC--all built in.
Plus a unique, new Solid State Speech[™] Synthesizer
and TI's special Solid State Software[™].**

**There's a computer in your future.
And the future is now.**

We've entered a new and exciting era—the age of the home computer. Maybe you're already quite knowledgeable about computers and are looking for the most programming power and versatility for your money. Maybe you've just read about it, and want to learn more. Either way, you need to look closely at Texas Instruments TI-99/4 Home Computer.

The TI-99/4 was designed to be the first true home computer—skilled computer users and beginners alike will be able to put it to effective use right away.

If you know computers, you'll quickly see the difference in the TI-99/4.

Texas Instruments has taken those features you've been wanting—plus some you may not have heard about yet—and included them in one incredible, affordable computer system. The TI-99/4 gives you an unmatched combination of features and capabilities, including:

- **Powerful TI-BASIC**—Built-in 13-digit, floating point BASIC. Fully compatible with ANSI Minimal BASIC, but with special features and extensions for color, sound and graphics.
- **Up to 72K total memory capacity**—16K RAM (Random Access Memory), 26K ROM (Read Only Memory) plus up to 30K ROM in TI's Solid State Software Command Modules.
- **26K ROM**—Operating system, BASIC, floating point, sound and color graphics software are contained in ROM.
- **16-color graphics capability**—Easy-to-access, high-resolution graphics have special features that let you define your own characters, create animated displays, charts, graphs...and more.
- **Music and sound effects**—Provides outstanding audio capability. Build three-note chords and adjust frequency, duration and volume quickly and simply. You can build notes with short, straightforward commands. Five octaves from 110 Hz (Hertz) to beyond 40,000 Hz.
- **Built-in equation calculator**—Unique convenience feature helps you find quick solutions to everyday math problems, as well as complex scientific calculations. Directly accessible from the keyboard.
- **High quality 13" color monitor**—Specially matched for use with the TI-99/4 computer console. Simple, sure hookup.

If you're new to computers, the TI-99/4 is for you.

You can begin using the TI Home Computer literally minutes after you unpack it. Without any previous computer experience or programming knowledge. You simply snap in one of TI's Solid State Software[™] Command Modules and touch a few keys. Step-by-step instructions are displayed right on the screen. So you or just about anyone in your family can use the TI-99/4.

Two pioneering technological developments in particular set the TI-99/4 apart from the rest.

Solid State Speech[™]—This optional speech synthesizer enables the TI-99/4 to literally speak—to provide verbal prompts and special messages to the user. Actually reproduces the human voice electronically. Hundreds of words are available, and plug-in word modules will add hundreds more. TI's exclusive technology lets you call up the words you want by simply typing them in. Outstanding voice clarity and fidelity. Solid State Speech is a proven technology already on the market in TI's unique Speak & Spell[™] electronic learning aid for children.

Solid State Software[™] Command Modules—Available in a wide range of application areas, these optional ROM modules actually add application program memory to your TI-99/4. They let you use the TI Home Computer immediately, with no programming. Serious programmers will appreciate the time and effort saved by these pre-programmed modules. Plus, they'll let you introduce your family to the computer in the easiest possible way. Solid State Software was pioneered by TI for use with its powerful programmable calculators.

A world of genuine, practical applications exist for the TI Home Computer right now.

In addition to the many personal finance, home management, educational and entertainment uses for the TI-99/4, there are also a variety of home business and professional applications. The TI-99/4 is a powerful problem-solving tool—an ideal solution where larger, more expensive computers would be impractical.



Basic Programming — The TI Home Computer was designed to be used for extensive personal programming. The built-in BASIC language makes the TI-99/4 a valuable desktop tool—at home or at the office. It also gives you a great way to teach your children about computers. And in a society constantly making greater use of computers, familiarity with them will be a tremendous asset.



Personal Finance/Home Business — The TI Home Computer can help pay for itself over and over by helping you with tax and financial planning. It can help you weigh investment alternatives. The TI-99/4 helps take the guesswork out of problem-solving, whether they're personal or business problems. And it can assist with everything from record-keeping and budgeting, to making decisions about major purchases.



Education — Computer-assisted education is now available right in the home. For instance, your TI Home Computer can help students sharpen their grammar, math, spelling and reading skills. The computer guides the student through activities at his or her own pace. Colorful, entertaining pictures—plus sound effects and rewards—make learning fun and encourage achievement.



Entertainment — One of the many capabilities of a powerful computer system like this is its ability to add a new dimension to entertainment—from chess to football. The TI Home Computer is a challenging, "thinking," ever-ready opponent. And, unlike ordinary home TV games, it can also be a patient instructor in a variety of exciting games. Use Solid State Software or program your own.

Solid State Software™ Command Modules
 not only eliminate unnecessary
 programming, they make it possible for
 almost anyone to put
 the TI Home Computer
 to work immediately.



Command Modules contain one or a series of ROM chips. There are no moving parts. All program information is permanently stored in solid silicon.

No other memory system is so convenient or so simple to use.

Getting a computer up and running used to require a lot of programming knowledge and complex, time-consuming steps.

But TI's system is today's most advanced computer program system—whether you intend to program in BASIC (TI BASIC is accessible with only two keystrokes) or use one of TI's many ready-to-use Solid State Software programs.

Each plug-in Command Module automatically gives your TI Home Computer an entirely new capability. Each module is a complete, self-contained program with its own *extra* memory capacity.

Solid State Software is a proven concept—an innovation developed for TI's line of advanced programmable calculators.

TI's unique use of ROM helps give you more computer value.

Both RAM (Random Access Memory) and ROM (Read Only Memory) are necessary in any home computer. But the more memory you have, the higher the cost of the computer—particularly if it uses large amounts of expensive RAM.

With most other computers you normally must load ready-to-use programs into the computer's RAM system from an external source, like an audio cassette. This means your computer must contain enough RAM to house that external program. If you had to supply enough RAM to contain our "Video Chess" program, it would take more than 30K bytes. And the cost of a RAM memory that large could easily put the computer out of the reach of most people.

That's exactly why Texas Instruments uses solid state ROM integrated circuit chips inside each Command Module to hold pre-programmed instructions. While the TI Home Computer contains plenty of RAM (16K), it's used for your input *not* for pre-programmed instructions.

Solid State Software™ makes using the TI Home Computer just this easy.

If you know how and want to write original programs, there's plenty of memory in the Texas Instruments Home Computer to satisfy you—16K RAM in fact. But if you lack the time or the programming skills,

you don't have to program at all. This dual capability is a big part of what makes the Texas Instruments Home Computer the best computer—for you and the other members of your family.

Here's a quick look at just how easy it is to use the TI Home Computer:

EASY 3 STEP USE

- 1 SELECT 1 OF THE 4 DECISION AREAS.
- 2 SELECT THE SPECIFIC QUESTION YOU WANT ANSWERED.
- 3 TYPE IN THE INFORMATION ASKED FOR, THEN PRESS ENTER.

FINANCIAL DECISION AREAS

PRESS

- | | |
|---|-----------|
| 1 | FOR LOANS |
| 2 | RESIDENCE |
| 3 | CAR |
| 4 | SAVINGS |

1. Let's use "Home Financial Decisions" for this demonstration. You plug in the Command Module, and press the keys as instructed. This "how-to" screen will be one of the first you will see.

2. Now you simply press "Enter" and this selection list appears, giving you your choice of financial decision areas. Again, all you have to do is follow the instructions that appear on the screen.

BUY A HOUSE

ENTER
PURCHASE PRICE \$80500.00
DOWN PAYMENT \$20000.00
NUMBER OF YEARS FOR
MORTGAGE REPAYMENT
25
ANNUAL % INTEREST RATE
ON MORTGAGE 10.25

YOUR PAYMENTS WILL BE:
MONTHLY MORTGAGE PAYMENT
\$560.46
MONTHLY PROPERTY TAXES
\$50.00
MONTHLY INSURANCE PAYMENT
\$37.50
TOTAL MONTHLY PAYMENT
\$647.96
PRESS ENTER TO CONTINUE

3. If, for instance, you wanted to evaluate buying a certain home, you would type in the information requested on this screen and one or two others.

4. Then the TI Home Computer quickly makes its calculations, and instantly displays the answers you need to help make a sound, objective decision about buying the house.

Texas Instruments Solid State SoftwareTM Command Modules. The system for the future...now.

Thousands of man-hours have gone into developing these programs. They have been carefully planned, executed and tested by professional programmers, engineers, educators and expert consultants. This in-depth quality assurance is the key to programs that are truly useful, simple to use, accurate, fun and engaging.

Texas Instruments is committed to continuing development of programs to meet a wide variety of needs and interests.



Home Management/Personal Finance Command Modules:

- Personal Record Keeping*
- Home Financial Decisions
- Household Budget Management
- Tax/Investment Record Keeping*
- Investment Analysis*
- Statistics*

Example: *Household Budget Management*. Today, an increase in income is often blunted by higher taxes, but saving through better money management is *pure gain*. What better way to cope with inflation? This program gives you valuable assistance in doing just that. It will help you implement a budget and monitor expenses by category, month and year. It can help you better foresee the effects of new purchases or of income or expense changes. In short, you can create a workable budget then make it work.

Education Command Modules:

- Early Learning Fun
- Physical Fitness
- Early Reading*
- Number Magic
- Beginning Grammar

Example: *Beginning Grammar*

This highly visual and entertaining program helps school children (grade levels 3-5) learn the basic parts of speech and how they're used to build sentences. Activities combine color, sound and pictures. Makes learning enjoyable and rewarding. Children can use the program alone or in groups. The computer guides the student through the activities at his or her own pace. Provides encouragement and rewards—with pictures and sounds—as progress is made.

Entertainment Command Modules:

- Football
- Video Chess
- Video Graphs

Example: *Video Chess*

"Video Chess" was developed with the assistance of International Master David Levy. It allows you to play chess with the computer or with a friend. A special replay feature lets you watch an entire game over again. You can set up special chess problems for study purposes, and even sit back and watch the computer play both sides of the game. "Video Chess" can be a capable, ever-ready opponent or a friendly, patient instructor. The computer has three skill levels, and you can also choose the computer's playing style—normal, aggressive, passive or losing (if you need an ego boost).

(For a complete, up-to-date list of Solid State Software Command Modules see your Texas Instruments dealer.)

*Command Modules available later in 1979. Check with your dealer for the Command Module Programs currently available.

(Where data storage is required or desired—for instance with some of our personal finance programs—the use of a cassette recorder is necessary.)

Texas Instruments developed an extremely powerful built-in BASIC for the TI Home Computer.

If you know anything about BASIC, you'll quickly recognize that TI BASIC is a rich, highly versatile language. It's a full floating-point, 13-digit extended BASIC — fully compatible with American National Standards Institute specifications for Minimal BASIC.

TI BASIC is designed to provide all the accuracy and power required for the most demanding technical applications of the TI Home Computer, yet it is expressly structured to be easy to use for the beginner.

In addition to a full complement of 33 statements, 19 system functions and 14 commands, TI BASIC features extremely easy-to-use color graphics capability (with 16 colors) and simple-to-access sound and music that includes five octaves. Here's a closer look at these capabilities:

Sound — The TI BASIC sound subprogram (CALL SOUND) allows the playing of tones over a five octave range. And up to three notes (for computer music) and one noise tone (for sound effects) may be used simultaneously. You can also control the duration and the volume of the sound. Duration ranges from 1 to 4275 milliseconds. Volume selections are scaled from 0 to 30.

Color/Graphics — The TI BASIC graphics subprogram (CALL VCHAR and CALL HCHAR) enables you to use your TI Home Computer to create colorful designs — graphs, charts, pictures, gameboards and so on — right on the screen. Combined with the CALL COLOR subprogram, this easy-to-use BASIC capability makes creating graphics almost as simple as typing in data. You can specify the colors of the

characters on the display and of the background, and all 16 colors can be used on the screen at one time. You can also define up to 128 graphics characters. Each character consists of eight rows of eight dots each.

Many other small computer systems offer an advanced BASIC like ours, but you ordinarily have to pay extra for it and it must normally be loaded into the machine each time you need it. TI BASIC is built right into the TI Home Computer — at no additional cost to you. And it's instantly available at the touch of a few keys.

For a deeper insight into the power of TI BASIC and the TI Home Computer take a look at copies of the manuals shown below.

Additional special features of TI Home Computer BASIC

- Dynamic string variables up to 255 characters.
- Three dimensional arrays of numbers and strings.
- In-line editing with program re-numbering capability.
- Powerful program debug features; breakpoints and trace.
- Variable names up to 15 characters.
- English language error messages.
- Full standard 64 character set provided as default.
- Data I/O to either one or two audio cassettes.

Thorough, step-by-step documentation

Texas Instruments has prepared a simple, easy-to-understand "Beginners Guide to BASIC" book to get you started into programming step-by-step. The "User's Reference Guide" contains advanced details on using TI BASIC. Both come with the TI-99/4 or, if you like, you may purchase these in advance to help you in your computer choice. McGraw-Hill has prepared a special book called "Programming in BASIC on the TI Home Computer." This optional book will give you even more understanding of the BASIC power of your TI-99/4.



Only Texas Instruments technology could bring you a home computer with all this and more.

When you buy a Texas Instruments Home Computer you can be assured you have invested in one that offers you the advantages of the very latest in technology. And, because Texas Instruments is a leading force behind the continuing development of these technologies, you'll be among the first to benefit from future advances in accessories and expansion capabilities.

Texas Instruments is committed to making your TI Home Computer an enjoyable, useful, long-term investment—a total system that will grow in utility and value for years to come. And you can rest assured that Texas Instruments will be there in the years ahead to stand behind your system with prompt, efficient service, in addition to a growing selection of programs and accessories.

The TI Home Computer Main Console

This compact, low-profile unit contains the brain of the TI Home Computer—a powerful 9900 Family microprocessor.

Capabilities built in include 16 colors—to make displays easier to read, charts and graphs easier to interpret, games more exciting; graphics—for creating charts, graphs, pictures and drawings; sound—three tones and five octaves for generating synthesized music and special sound effects; operating system and TI BASIC permanently installed in 26,000 bytes of ROM; 16,000 bytes of built-in RAM.

A series of connectors (I/O ports) are built into the sides, front and rear of the console. These ports permit the addition of a wide variety of optional computer peripherals or accessories. And these can be added in an integrated, modular form, without the usual clutter of wires—because TI peripherals plug directly into the side of an adjoining accessory.

Texas Instruments Solid State Software Command Modules are plugged into the special port provided on the front of the console. A dual cassette connector is located on the rear of the console. One or two audio cassette recorders can be connected to the TI Home Computer, enabling you to store information or programs for later use.



Color Video Monitor



Main Console Unit



Solid State Software Command Modules

Color, sound, graphics, Solid State Software™ and Solid State Speech™.

Texas Instruments revolutionary Solid State Speech adds the remarkable dimension of the human voice.

This optional speech synthesizer allows your TI Home Computer to literally speak to you. It uses Texas Instruments Solid State Speech technology to actually reproduce the human voice electronically. The TI speech synthesizer gives your home computer a large built-in vocabulary — over 200 words — plus the potential for a wide range of plug-in vocabulary additions including foreign languages.

Speech capability opens up greatly expanded uses for your home computer, particularly as a learning system. It can be programmed to provide verbal instructions or messages to the user. Also certain of TI's Solid State Software Command Modules will be designed to call up words from the speech unit automatically — to enhance user interaction in educational and entertainment uses.

13" Color Video Display Monitor

This special video monitor enables you to enjoy to the fullest the brilliant 16-color capabilities of your TI Home Computer. The display format is 24 lines of 32 characters in a 8 x 8 dot matrix, with 256 programmable characters. Resolution is excellent across the entire face of the screen (192 x 256 dot density).

TI Remote Controls

These optional remote controls are used to position or move objects on the screen. Each unit includes eight-position remote control and a convenient side-mounted action button.

These planned additional accessories will extend the usefulness of your TI Home Computer.

(Available later in 1979. Check with your dealer for availability.)

A printer — For those who wish to have a printed copy of programs or records. This 32-character printer will employ TI's advanced thermal printing technology, a whisper-quiet ribbonless printing system already proven in thousands of TI calculators and computer terminals.

A disk memory — Provides fast, mass storage of information, records and computer programs. The disk is designed to be used instead of or in addition to a cassette recorder/player. Data can be instantly accessed without having to search a tape from end to end to find the information needed. Magnetic disk programs load in a matter of seconds instead of several minutes in the case of audio tape programs.

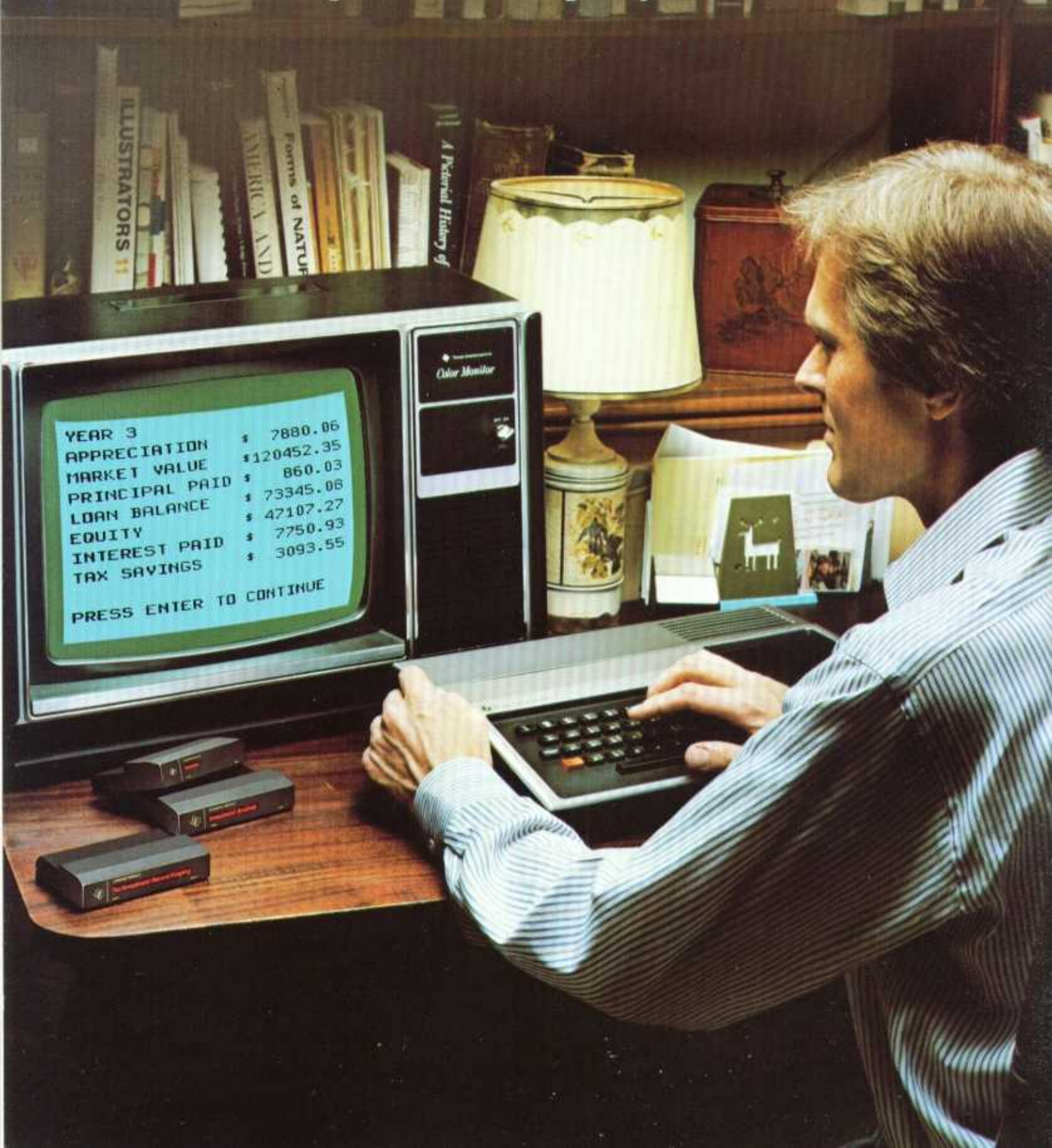
An RS-232 peripheral adaptor — A standard all-purpose communications link. Permits you to interface a wide range of computer accessories to your TI Home Computer. These accessories, available from a number of manufacturers, range from remote keyboards to impact printers, printing terminals, digitizers, plotters, modems, CRT's and more.



Solid State Speech Synthesizer

Remote Controls

**A home computer is a long term investment.
Before you choose one for your family,
look carefully at the company behind it.**



YEAR 3
APPRECIATION \$ 7880.06
MARKET VALUE \$120452.35
PRINCIPAL PAID \$ 860.03
LOAN BALANCE \$ 73345.08
EQUITY \$ 47107.27
INTEREST PAID \$ 7750.93
TAX SAVINGS \$ 3093.55
PRESS ENTER TO CONTINUE

Think about it: A powerful, yet easy-to-use home computer requires the latest in advanced technology, and in advanced technology, *know-how* is the name of the game. So it makes sense to look carefully at the company behind such a product.

Know-how goes far beyond just designing an advanced system. The system also has to be *manufactured in volume* to achieve an affordable price. It has to have reliability *designed in*—like an aerospace system—and it has to be stringently quality controlled throughout. And, finally, this know-how has to include knowing how to maintain a *strong, viable company* year in and year out, in order to stand behind the product with service and expanded capabilities in the years to come.

No other company in the world can match TI's track record in the technology areas involved in the home computer, and in bringing the advantages of these technologies within the practical reach of consumers.

The TI computer family.

Texas Instruments has been deeply involved in computers almost since the modern electronic computer was born. Throughout the years, TI has provided the building block components that have paced computer technology. TI built its own first computer in 1953 to aid in geophysical exploration. Today, TI is one of the top manufacturers of mini and microcomputer systems and computer terminals. At the other extreme, TI's Advanced Scientific Computer is among the most powerful in the world.



DS 990 business systems.



765 portable bubble memory data terminal.

You may know TI best as the company that makes affordable, quality calculators and watches.

But Texas Instruments record of pioneering innovation goes far beyond calculators and watches—back to the earliest days of solid-state electronics.

In 1954, TI produced the first commercially available silicon transistor, which became the heart of early space-age electronics.

Then, most significant of all, TI invented the remarkable integrated circuit. This milestone innovation became the building block for virtually all computers and electronic systems to follow. Texas Instruments is the world's leading producer of integrated circuits.

Behind the calculator revolution and most of today's advanced consumer electronic products is the "computer-on-a-chip"—still another TI first. This is a super integrated circuit combining a complete computer on a single silicon chip about the size of a baby's fingernail.

The sooner you buy, the sooner your family can start benefiting from the TI Home Computer.

TI has applied its best insights into today's technology and the direction of future technology to design a system which will grow in value and usefulness over the years. And *you* will grow with your home computer as you become familiar with it. You'll find that *discovery* of new potential—both personal and business—is one of the most exciting aspects of owning one. The quicker you and your family begin the adventure of exploring the emerging new era of the home computer the sooner you'll all start benefiting from this revolution.



TI Programmable 58 and 59 calculators and PC-100C thermal printer/plotter.



Revolutionary plug-in Solid State Software™ module—developed by Texas Instruments for the TI Programmable 59 calculator.

Specifications for Texas Instruments TI-99/4 Home Computer

Console

CPU: 9900 Family, 16-bit microprocessor, plus 256-byte scratchpad RAM.

Memory: Total combined memory capacity: 72K bytes. Internal ROM memory supplied: 26K bytes. External ROM memory: (Solid State SoftwareTM Command Modules) Up to 30K bytes each. RAM memory supplied: 16K bytes.

Keyboard: Staggered Qwerty, full travel style layout. Overlay for second functions.

Sound: 5 octaves, 3 simultaneous tones plus noise generator. From 110 Hz to beyond 40,000 Hz.

Colors: 16

Video resolution: 192 x 256

Power: 110V, 60 Hz, 20W, Wall mounted console transformer, UL listed 8' power cord.

I/O: Composite video and audio output for monitor. Interface for up to 2 audio cassettes. 44-pin peripheral connector – up to 3 peripherals attached to memory. System memory and address signals available at peripheral connector. Mini-earphone jack. Hand controller interface.

Built-in Software: 14K byte BASIC interpreter. Internal Graphics Language interpreter, not user accessible. Equation calculator. Internal 4.4K byte monitor (not user accessible).

Size: 25.9 x 38.1 x 7.1 cm (10.2 x 15.0 x 2.5 in.)

Weight: Less than 2.3 kg. (5 lbs)

Display

13" color monitor, 24 lines of 32 characters.

Optional accessories

Solid State SpeechTM Synthesizer: Approx. 250 English words built in. Accessible from TI BASIC. Accommodates add-on word modules to broaden vocabulary. Size 7.6 x 13.4 x 7.1 cm (3.0 x 5.3 x 2.8 in.)

Wired remote controllers: Eight-position stick with side-mounted action button.

Solid State SoftwareTM Command Modules: Variety of financial, educational and entertainment programs in rugged, reliable plug-in modules. Approx. 10.8 x 6.9 x 1.9 cm (4.25 x 2.75 x .75 in.) Modules contain up to 30K bytes of extra ROM.

Three Month Limited Warranty: On TI console, monitor and Command Module hardware.

Important Notice To Consumers

The warranty mentioned above covers only the hardware portion of the Command Module. See "User's Reference Guide" for complete warranty text. TI cannot and does not warrant that the TI Home Computer programs and book materials will be free from error or will meet

the specific requirements of the user. The user assumes complete responsibility for any decisions made or actions taken based on information obtained using these programs and book materials, which are made available solely on an "AS-IS" basis (see owner's manual).

Due to the difficulty of photographing video screens, some of the screens represented are simulated.

Texas Instruments reserves the right to make changes in materials and specifications without notice.

Texas Instruments technology – bringing affordable electronics to your fingertips.

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