



**Texas Instruments**  
**TI-99/4 Home Computer Products**

# Specifications



## Display

13" Color monitor  
 16 Colors  
 5' Video/sound cable

## 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 Software™ Command Modules) Up to 30K bytes each. RAM memory supplied: 16K bytes.

**Keyboard:** 40-key staggered Qwerty, full travel. Overlay for second functions.

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

**Power:** 110 V, 60 Hz, 20 W. 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 system. System memory and address signals available at peripheral connector. Remote control 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)

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

## Console Technology (Detail Description)

**CPU Chip (NMOS):** TMS9900 16-bit microprocessor. Minicomputer instruction set including hardware multiply and divide. Architecture with 16 general registers. Can address up to 64K bytes of memory. 4 interrupt lines.

**Video Display Processor Chip (NMOS):** Controls display memory and generates composite video signal. 24 lines of 32 characters with 8x8 dot resolution.

Provides sixteen colors: white, gray, magenta, light yellow, yellow, light red, medium red, dark red, cyan, light blue, blue, light green, medium green, dark green, black, transparent. Provides 32 sets of 8 characters each with different foreground/background colors. Addresses up to 16K bytes of RAM for CPU or display.

**Sound Controller Chip (I<sup>2</sup>L):** 3 voices with 5 octave musical resolution. 15 bit programmable noise source. 100 mW audio drive with 30 db control in 2 db steps.

**Solid State Software™ Command Modules.** Up to 30K bytes PMOS ROM. Up to 8K bytes NMOS ROM. Simple plug-in module.

## Peripherals

**Remote Controls:** 2 controllers. Cable: twin cable with single connector, 4' long. 8 direction control—up, down, left, right and diagonals. Fire button. Controls designed for use with either hand.

**Solid State Speech™ Synthesizer.** Uses Speak & Spell™ technology. Approx. 300 words in unit. Plug-in vocabulary expansion. Hundreds of words can be added. Interfaces via I/O port.

**RS-232 Interface:** Provides interface to RS-232 type computer peripherals, such as printers, plotters, digitizers, D/A converters, terminals, and data tablets. Dual port, two standard DB-25 connectors

**Recorder Interface:** 1 or 2 standard audio cassette units (not included) interface through a cassette interface. Cable: twin cable with single connector, 2' long. Each record recorded twice for 600 baud effective recording rate. Checksum added to end of each double recorded record. Operator interaction fully prompted. Provides mass non-volatile program/data memory storage. A number of standard cassette recorders can be used with the TI-99/4. For best operation, however, they should have such features as: tone control, microphone jack, remote jack, earphone or external speaker jack, digital tape counter. Check with your dealer and/or the "User's Reference Guide" for details.

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