

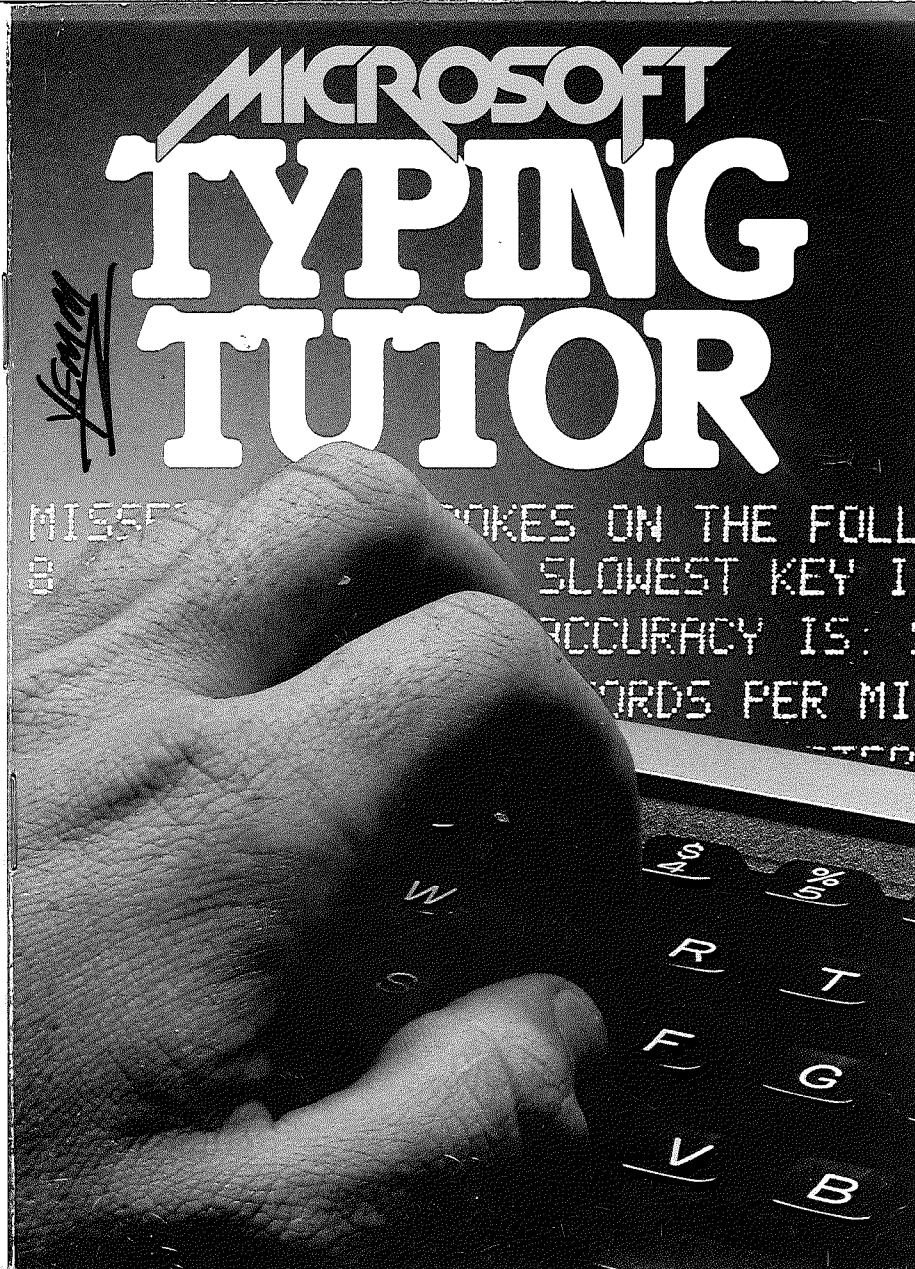
MICROSOFT

CONSUMER PRODUCTS

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TYPING TUTOR

Produced by Microsoft
Written by Dick Ainsworth and Al Baker
Instruction Booklet by Dottie Hall

Microsoft Consumer Products
10800 Northeast Eighth, Suite 819, Bellevue, WA 98004

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Typing Tutor Explained

Typing Tutor is an interactive instructional program for use with your Apple II computer that will teach you to type and help you build typing speed faster and more efficiently than any other teaching method.

The essential feature that makes Typing Tutor different from a typing class or series of regular lessons is the program's ability to monitor your progress constantly as you are learning and use this information in creating your lessons. Typing Tutor's proprietary TRM—Time Response Monitoring—software monitors the keyboard 20 times per second. TRM is so responsive it can detect even the slight pause that occurs when you look at the keys instead of keeping your eyes on the screen.

Your computer is a natural teacher and Typing Tutor takes full advantage of its capabilities. The tools that you need for Typing Tutor, the typewriter style keyboard and CRT screen, are already available on your computer. The timing and memory abilities of your computer are ideal for measuring and recording speed and accuracy levels. Typing Tutor brings it all together.

The Authors

Microsoft Typing Tutor was written by Dick Ainsworth and Al Baker of The Image Producers, Inc., Northbrook, IL. The Image Producers brings unique creative talents in human communications, education and programming to the personal computer market.

A Word About Microsoft

Microsoft produces high-quality software for today's microprocessors.

Microsoft's BASIC Interpreter, in its several versions, has become the standard high-level programming language used in microcomputers. In addition to Radio Shack TRS-80 Level II BASIC and TRS-80 Disk BASIC, Microsoft has supplied BASIC interpreters for the Commodore PET, the Apple II computer, NCR 7200, Compucolor II, OSI, Pertec Altair, and many others.

Microsoft's careful approach to the development of microprocessor software has allowed the production of large amounts of bug-free, well-designed code in a minimum amount of time. Currently available: BASIC interpreters for the 8080, 6800 and 6502 microprocessors, a BASIC compiler for the 8080, a FORTRAN compiler, assembler, loader and runtime library package for the 8080 and Z80 microprocessors, and an ANS-74 COBOL compiler for the 8080 and Z80. A complete line of software for the new 16 bit microprocessors is presently under development.

Microsoft Consumer Products was founded as a division of Microsoft in the summer of 1979 to provide microcomputer users with high quality system and utility software as well as application software.

Microsoft Typing Tutor is just one of many products being planned for the end-user or consumer market. All of these software packages will be marketed by Microsoft Consumer Products.

Microsoft Consumer Products is dedicated to providing only the best, most reliable microcomputer software.

For more information on Microsoft Consumer Products, please write to:

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The Right Hardware

Microsoft Typing Tutor requires an Apple II microcomputer with 16K of memory, Apple BASIC and cassette tape player. While Typing Tutor is supplied on cassette tape, it may be copied onto diskette for use with disk-based systems.

Typing Tutor Cassette

The Typing Tutor cassette that comes in your Typing Tutor package is a high-quality recording from Microsoft.

The program is recorded two times on the side of the cassette tape with Typing Tutor printed on it. A length of leader tape precedes each recording. If you listen to the tape, you will hear a steady pilot tone during these leader sections.

Tape Replacement

Your Microsoft Typing Tutor cassette tape is guaranteed to be a faultless recording. If the tape fails to work properly when first opened, return the cassette to the dealer from whom it was purchased or mail it, along with your receipt and an explanatory letter, to Microsoft Consumer Products. Your tape will be replaced at no charge. If for any reason, your tape becomes damaged at any time during your ownership, we will replace it for a nominal \$5.00 charge. Mail the cassette with your check to:

Microsoft Consumer Products
10800 Northeast Eighth, Suite 507
Bellevue, WA 98004

How To Load Typing Tutor

Follow these instructions to load Typing Tutor:

1. Turn on your Apple II computer and bring up Apple BASIC following the instructions in your Apple II manual.
2. Insert the Typing Tutor cassette into your tape recorder. The side labeled "Typing Tutor" should be facing up.
3. Press the REWIND key on your recorder, and allow the tape to rewind fully.
4. Remove the cable from the earphone jack of your recorder. Press PLAY on the recorder and listen for the steady pilot tone that indicates "leader" space on the tape.
5. Stop the tape as soon as you hear the pilot tone. Then reinsert the cable into the earphone jack.
6. Type the word LOAD on your computer keyboard.
7. Press PLAY on your recorder, then press **RETURN** on the Apple keyboard. A few seconds later, the computer will beep. Then when the program is loaded, it will beep a second time and the prompt character > and the cursor will appear.
8. When you hear the second beep, press STOP on the recorder to stop the tape. Then press REWIND to rewind the tape fully.
9. Type the word RUN, then press **RETURN**. The screen will show:

1. LETTERS
2. NUMBERS
3. SYMBOLS

SELECT KEYS TO LEARN (1-3)

You are now ready to begin your typing lessons.

What To Do About Loading Problems

The most common loading problem is finding the correct settings for the TONE and VOLUME controls on the tape deck. We suggest that you start with a low VOLUME setting and adjust it up one half level each time you attempt a load. The TONE control is less important, but try changing it also.

Since the sensitivity of individual cassette recorders varies significantly, there is no way to determine specific settings. Once a tape loads, it is a good idea to write down the settings on the cassette label for future reference.

If you still cannot load a tape, try cleaning and demagnetizing the head of your tape recorder. Use a high-quality head cleaner and a head demagnetizer (both can be purchased from most electronics outlets) for these tasks. We don't recommend so-called "cleaner tapes" as they are often abrasive and may damage the head of your recorder.

Other suggestions to try before taking the matter up with your computer dealer:

- Try loading the second recording on your Typing Tutor cassette.

- Try loading the tape with a different cassette recorder.
- Dust and other particles can sometimes prevent a load. To remove particles, run the tape through REWIND and FAST FORWARD a few times.
- Remove the earphone jack and play the tape to listen for the leader tones and digital signals of the files. If you don't hear these sounds, try a different recorder. If you still hear nothing, the tape probably has been erased.

The Preliminaries

Before you actually begin to learn to type, there are a few characteristics unique to typing on a computer that you should take into consideration.

RESET Key

When pressed, the **RESET** key on your computer keyboard causes whatever program is currently being run to disappear. On the Apple II keyboard, the **RESET** key is located just above the **RETURN** key, which you will use often while you are learning to type. The proximity of the two keys makes it easy to accidentally hit the **RESET** key when reaching for **RETURN**, especially while you are learning.

To avoid pressing **RESET** by mistake, and having to reload Typing Tutor, we suggest you remove the top of the **RESET** key before you start your lessons. You can do this by lifting the key top gently. It slides off, leaving a short button.

If you do press **RESET** by mistake while Typing Tutor is in your computer, an asterisk (*) will appear in the lower left corner of your TV screen along with a blinking cursor. When this happens, you have to load the program again. (See How To Load Typing Tutor, page 7).

Typewriter Vs. Computer

There are some other differences between your Apple keyboard and a standard typewriter that you should also be aware of if you ever plan to type on a typewriter.

Your Apple computer displays all letters as CAPITALS while a typewriter regularly types in small letters with the **SHIFT** key used to make capital letters. Although you will only use the **SHIFT** key when typing symbols on your Apple II, you will be able to adapt to using the **SHIFT** key for capital letters on a typewriter easily once you know where the letters are. The symbols (= + -) are located in different places on different keyboards. The locations vary from computer keyboard to computer keyboard and from typewriter to typewriter. Every time you use a different type of keyboard, you will need to adjust yourself to the symbol locations.

Among typewriter typists, it is common to type a lower case L (l) as the numeral 1 and to sometimes type the capital letter O as the numeral 0. You cannot do this on a computer keyboard.

Adjusting the Monitor

Since you will be typing from material that is printed on your monitor screen, it is important to be able to see the letters clearly. A black and white monitor connected to the direct video output of your Apple II is the best arrangement. If you use a television as your monitor, vary the controls to get the best image you can. Make sure there is no glare on the face of the monitor from lights, windows, etc.

Also, make sure the computer is at a height that will be comfortable for you as you type. Desk height or slightly lower will probably be most comfortable.

Getting Started

After you load Typing Tutor, the screen will show you a menu:

1. LETTERS
2. NUMBERS
3. SYMBOLS

SELECT KEYS TO LEARN (1-3):

By pressing the appropriate number, you select the letters of the alphabet; the numbers and letters; or the symbols, numbers and letters to learn.

Begin your first session by pressing number one **1** to start with the most basic keys. As you become more advanced or if you are already a competent typist and just want to drill, you may wish to start with **2** or **3**. The computer will respond with THANK YOU. After you make your choice, the computer screen will read:

1. TYPING TUTOR
2. PRACTICE PARAGRAPH

SELECT (1, 2)

TYPING TUTOR is the instructional part of the program designed to teach you new keys. It is a series of lessons that are continuously adjusted by the computer to help you learn keys you don't know. The program automatically inserts new letters as you gain speed and accuracy. PRACTICE PARAGRAPH generates a paragraph drill that lets you type longer passages, then evaluates your skill.

To begin to learn to type, select TYPING TUTOR by pressing **1**.

Three headings will appear at the top of your screen: FAST, LESSON KEYS, and NEW. Under the LESSON KEYS heading will be four letters:

A, S, D and F. Under the NEW heading will be listed the letters, numbers and symbols that you will be learning. In the middle of the screen will be two groups of four letters each, using the letters A, S, D and F.

The heading, FAST, represents those keys that you know well. This list is initially empty because as yet you are not fast on any keys. Letters will be added to this list as you learn them.

The NEW heading indicates the keys you haven't learned yet. At first, it includes all keys except the four that are listed under LESSON KEYS.

The Home Keys

Your first four LESSON KEYS are **A**, **S**, **D** and **F**. Place the fingers of your left hand lightly on these four keys. These keys are called the "home keys" and are where your left hand will normally be while you are typing. The home keys for your right hand are **J**, **K**, **L** and **;**. Place the fingers of your right hand on these keys.

Practice putting your fingers on the home keys and pressing them lightly. Don't rest the palms of your hands on the front edge of the computer. You won't be able to type very fast unless only your fingertips touch the keyboard.

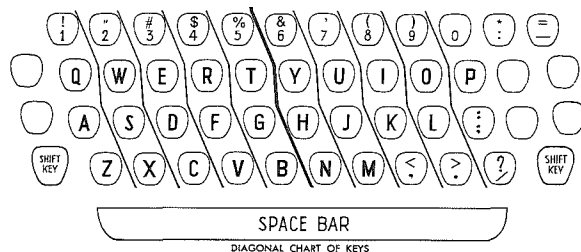


Diagram of fingers on home keys.

Before you start typing, memorize the locations of the **A**, **S**, **D** and **F** keys then **glue your eyes to the screen**. It is essential that you not look at the keys as you type. You must learn to type by touch in the beginning if you want to eventually develop much typing speed.

Look at the two groups of four letters in the middle of the screen. Type the first four letters as they are indicated, **keeping your eyes on the screen**. Press the space bar with either thumb to move one space to the right. Now type the last four letters.

Press the **RETURN** key using the little finger of your right hand, without moving your hands or lifting your fingers off of the home keys. It may feel awkward at first but it is important to master the ability to press **RETURN** without moving your fingers away from the home keys, so that you don't have to look back at your hands everytime you end a line. (If you find yourself hitting the **RESET** key when you are reaching for **RETURN**, see The Preliminaries, page 9.)

Progress Reports

After you have typed all of the keys of the lesson and pressed **RETURN**, the computer will give you a progress report like:

ERRORS: 1 WORDS PER MINUTE: 20

that indicates the number of errors you made in the lesson (in this case, one) and how fast you typed in words per minute (in our example, twenty words per minute).

While you are learning new keys, don't worry about your speed. Concentrate on typing the keys accurately and without looking. Later, once you can type all of the keys without looking, you will be able to build speed fairly rapidly.

If you don't see the progress report on your screen, you haven't finished typing the lesson. Press the space bar a few times to move the cursor that's below the letters all the way to the right.

When the program prints out the progress report of your errors and speed, it's also checking to see if you are typing any of the lesson letters fast enough to indicate that you know where they are. When your reaction time on any letter is equivalent to 20 words per minute, that letter is added to the FAST list and a new key is selected for your next lesson. The TRM software enables the computer to monitor your speed on **each key individually** by checking your typing 20 times per second.

After your progress report, a new lesson will automatically be generated including keys from the previous lesson that you haven't yet mastered plus new keys to replace any that are now on the FAST list.

Continue typing your next lesson. After the first four letters, press the space bar with either thumb. After you type the second four letters, press the **RETURN** key without moving your hands from the home position. Continue each successive lesson in the same way.

Advancing To New Keys

Your first lessons will include only the home keys, which you type with the appropriate fingers according to the diagram on page 12. As you learn where the home keys are, new keys will be introduced automatically.

Each time a new non-home key is added, it will be introduced in conjunction with the home key that is typed with the same finger. For example, when the key **E** is first introduced, it will be in a drill with the home key **D**.

DEDE DEDE

You should type **E** with the same finger you use to type **D**—the middle finger of your left hand.

Non-home keys should be typed by **reaching the appropriate typing finger only**. Do not move your other fingers off of the home keys. By keeping most of your fingers on the home keys at any one time, you will develop a reference for locating all of the keys by touch.

To help you remember the appropriate finger for each key, a diagram is included on page 12. Keep this diagram next to your computer and refer to it if you cannot remember where the next key is. Do not look down at your fingers.

Your Options

After you have completed ten lessons, the computer will offer you four options:

1. ALLOW SLOWER RESPONSE
2. SAME RESPONSE
3. REQUIRE FASTER RESPONSE
4. PRACTICE PARAGRAPH

SELECT (1-4)

If you select **1**, **2** or **3**, you will return to TYPING TUTOR, the instruction part of the program. Which of these numbers you select affects the typing speed the computer will require on any key before it will move that key to the FAST list and add a new key.

Press **1**, if you want to cover all the keys more quickly. By allowing a 20 percent slower response time, the computer lets letters enter the FAST category more easily and introduces more NEW characters into the lesson to replace them. If you press **1** after your first ten lessons,

the computer will start requiring a speed of 16 words per minute rather than 20 in order to move a key to the FAST category. To continue slowing the required rate of response, type [1] after every ten lessons. The program will quickly expand to include all the letters of the alphabet. The keys you are slower on will always find their way back into your lesson.

Press [2], if you want to continue to the next lesson at the same rate of progression. For your first lessons, you should select either this option or the paragraph drill. [2] is the response you will use most often. It signals that all is fine and that you wish to continue your lessons.

Press [3], to build speed faster by requiring a twenty percent faster response time before a letter is shifted from the lesson category to the FAST category. If you press [3] after your first ten lessons, the computer will begin to require a speed of 24 words per minute on a letter before it is considered FAST. The effect is to help you gain speed by giving you additional practice on each key. To continue raising the required rate of response, type [3] after every ten lessons.

If you wish to practice the keys you have just been learning rather than return to the lessons, press [4], for a PRACTICE PARAGRAPH.

Practice Paragraph

You can select the PRACTICE PARAGRAPH either by pressing [4] at the end of a group of lessons or by pressing [2] after you choose LETTERS, NUMBERS or SYMBOLS at the beginning of the program. When you select this option, the program builds a practice paragraph using the letters you know and the letters in your current lesson. If you ask for a practice paragraph at the beginning of the program, the program will be made up of all the keys in the category you select.

When the computer has completed generating the paragraph, it will indicate BEGIN.

Begin typing the words as they appear on the screen. Include a space between each word and hit RETURN at the end of each line. As you type, your letters will appear on the screen under the computer generated letters. Be sure to keep your eyes on the screen as you type. Your typing should match the computer generated paragraph above it.

If you make a mistake, the computer will make a small "beep" sound. If you have made a spacing error and your letters aren't directly underneath the corresponding letters on the computer, it will continue to beep. When this happens, correct your typing so that you are typing the letter directly above the cursor. When you have finished typing the paragraph, press RETURN and the computer will analyze your performance.

Paragraph Analysis

After each paragraph drill, the computer displays an analysis of your typing so you can see your progress and make any adjustments you wish in your learning rate. The computer will show your progress in the following way:

YOU MISSED 3 KEYSTROKES ON THE FOLLOWING LETTERS.

K R P

YOU WERE SLOWER ON THESE KEYS.

K P

YOUR ACCURACY IS 97 PERCENT.

YOUR RATE IS 45 WORDS PER MINUTE.

1. TYPING LESSONS

2. ANOTHER PARAGRAPH

SELECT (1, 2)

Your rate of accuracy and your typing speed are the best indicators of your progress. While most typing tests subtract for errors in arriving at your rate in words per minute, Typing Tutor does not, so this words-per-minute figure may be higher than you would get on a standard typing test.

Remember that typing accuracy, not just speed, will help you communicate your ideas quickly and clearly. If you are getting more than three or four errors, you may be pushing too fast. Try another paragraph and see if you can type more carefully. If you are still having problems, you may wish to select option three (3. REQUIRE FASTER RESPONSE) in the lesson choices to get more practice on all the keys. (See Your Options, page 15.)

After you receive the analysis, you may select to do another paragraph drill or return to the typing lessons.

The Shift Key

The lessons and paragraph drills for learning the Numbers and the Symbols work the same way as those for learning Letters with one exception. To type some of the symbols, you must use the **SHIFT** key.

To tell which symbols will require use of the **SHIFT** key, look at the keyboard. On some keys you will see more than one character. The lower character on these keys is typed without the **SHIFT** key; the upper characters require use of the **SHIFT** key.

There are two **SHIFT** keys, at the lower right and left hand corners of the keyboard. Both serve the same purpose. When you wish to type a symbol that requires using the **SHIFT** key, for example "#", first press the **SHIFT** key with the little finger of the hand you won't be using to type the symbol. In the case of "#", press the right **SHIFT** key with the little finger of your right hand. While holding the **SHIFT** key down, press the desired key with the appropriate finger. Then release both the **SHIFT** key and the symbol key and continue typing. Repeat this process each time a shift-key character is required.

Using the Escape Key

If at any time during a session, you wish to interrupt a lesson or return to another set of lesson choices, press the **ESC** or escape key that is located in the upper left corner of your keyboard.

Pressing **ESC** during any lesson will end the lesson and offer you the choices of adjusting response time or changing to a practice paragraph. Pressing the **ESC** key again will return to the frame where you select a lesson or a paragraph. Press **ESC** a third time and you will return to the first frame in the program where you can select the type of lesson you prefer—LETTERS, NUMBERS or SYMBOLS.

NOTE: The **ESC** function will not work while a practice paragraph is being generated. You must wait for the entire paragraph to be printed before the **ESC** key will respond.

If You Get An Error Message

The message ***32767 ERR STOPPED AT 15 can appear on your monitor any time you pause for more than a couple of minutes. It simply means that the computer has given up waiting for you to type the next key. If this happens, type **RUN** on the keyboard and press the **RETURN** key to restart the program.

Why this happens. There is a counter in the program that measures your response time in 50 millisecond units. The counter overflows when the number in the counter is larger than this computer can handle. The limit is 2 to the 15th power; when this limit is reached the message appears.

Sans Sound Effects

If you wish to eliminate the sound effects of Typing Tutor, you can alter the program by changing a variable in it and continuing as before. To turn off the sound in the Apple speaker, follow this procedure.

1. Load Typing Tutor
2. Press **CTRL** key and **C**
3. Type **KM=0** and press **RETURN**
4. Type **CON** and press **RETURN**

Now continue with the program as normal.

What's Inside

If you wish to see how Typing Tutor is teaching you, you can stop the program and look at parts of it. To stop the program, press the **CTRL** key and **C**.

Then type:

LIST 12,15 and press RETURN to see the counting loop that times your response. The **PEEK** is the number in the computer that matches the key that's pressed. **J** is a number that increases to show how long it's been since any key was pressed.

LIST 8930 and press RETURN to see the list of keys in the order they are introduced in Typing Tutor.

LIST 8940,8980 or LIST 8990,9024 or LIST 9030,9060 and press RETURN to see the words Typing Tutor uses in composing practice paragraphs. The words are arranged in the same order as the letters so that paragraphs matching any lesson can be easily constructed. The program determines which range to use and then selects these words at random to make a unique practice session.

To return to the Typing Tutor program at the place where you stopped it, type **CON** and press **RETURN**.

Play It Again Sam

When you return to Typing Tutor for successive lessons, you will see that it quickly discovers what keys you know and what keys you don't. Just begin with LETTERS, NUMBERS or SYMBOLS and the program will rapidly adjust to your skill level. You can personalize your lessons even faster by adjusting the response time twenty percent in either direction, using the options at the end of every ten lessons. (See Your Options, page 15.)

