![Apple logo]

Using Speech Recognition
Version 1.5.3

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The English Speech Recognition package contains the Speech Recognition extension and a utility called Speakable Items.

This document explains how to set up and use Speech Recognition and the Speakable Items software. For further information, look up Speech in Apple Help.

What is Speakable Items?

Speakable Items is a utility that lets you speak commands to your computer. It enables the computer to understand commands that do such things as close windows, tell what time it is, open applications and folders, or tell a joke. Speakable Items comes with a set of commands ("speakable items") the computer already understands. You can also create your own speakable items.

The instructions in this document tell you:

— what you need to use this software
— how to install the software
— what parts of the software you will interact with
— how to prepare the microphone and sound software on your Macintosh
— how to control your Macintosh by voice, using Speakable Items
— how to solve common problems

What you need to use Speech Recognition 1.5.3

To use Speech Recognition 1.5.3 , you need these pieces of hardware and software:

• a Power Macintosh computer

• system software version 8.5 or later

• a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audio-visual monitors

It is also a good idea to install the English Text-to-Speech software, if it is not already installed, so you can hear spoken replies to many of your commands.

Installing the Speech Recognition software

You install the Speech Recognition software (and the Speakable Items utility) by using the Installer programs, as described in these steps:

1. You may want to print these instructions before you start, because you won't be able to view them on screen during the procedure.

2. Quit any programs you are running.

3. To start the Installer program, double-click its icon. You can find the Installer icon in the same place you found these instructions.

4. In the initial screen that appears, click Continue.

6. In the next screen, click Install. The installation takes a while.

7. When you see a message that installation was successful, click Restart.

8. After the computer restarts, Speech Recognition will be installed but Speakable Items will not yet be turned on. To turn it on, use the Speakable Items panel in the Speech control panel.
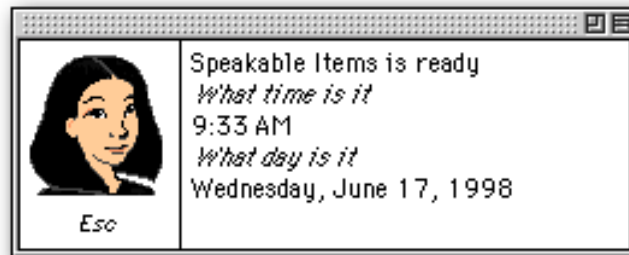
The first time you turn it on, and you will see two windows on the screen at once: the feedback window and an Apple Guide window containing the first panel of a brief introduction to Speech Recognition.

Note: You may also see a message telling you the standard microphone is not selected. If so, you need to click OK to dismiss that message, turn Speakable Items off using the Speech control panel, and check your sound input settings, as described in "Preparing the Sound Software," in this document. To go through the introduction, follow the instructions in the Apple Guide window.

The Speakable Items software has three parts you'll often use: the Speech control panel (also used with Apple's text-to-speech software), the feedback window, and the Speakable Items folder.

• You use the Speech control panel to turn Speakable Items on and off and specify when the computer listens and how it gives you feedback.

• You use the feedback window (which is open whenever Speakable Items is turned on or another application uses Speech Recognition) to check whether the computer is listening and how it has responded to your command. The 'Esc' below the character in the following illustration of the feedback window indicates that the current listening method requires you to hold the Escape key down as you speak each command. This option can be changed, as discussed later in this document. The computer displays the command you speak in italics, and displays its own responses in plain text..

• The Speakable Items folder contains all the items whose names the computer can recognize. The Speakable Items folder is in the Apple Menu Items folder, which is in the System Folder. You can open it quickly by choosing the Speakable Items command from the Apple () menu. When you say the name of an item in this folder, the computer acts as if you double-clicked its icon. You can add to or delete the items in this folder, or change their names.

Tip: to add an application or other item to the Speakable Items folder, select that item's icon in the Finder and say "Make this speakable".

Tip: Speakable Items currently ignores numbers and punctuation. You can speak them all as words — for example, say "open draft three point four" to open an item called "draft 3.4". Or you can re-name speakable items so they do not contain punctuation or numbers — for example, creating an alias named "open draft" to a document named "draft 3.4" and adding the alias to the Speakable Items folder. Or you can simply omit saying the numbers and punctuation in the speakable item names, — for example, say "open draft" to open an item named "draft 3.4".

Preparing the microphone

If you don't have an audio-visual monitor with a built-in microphone, you must plug in an Apple PlainTalk Microphone or similar microphone into the microphone jack on your computer. Position the microphone as follows:
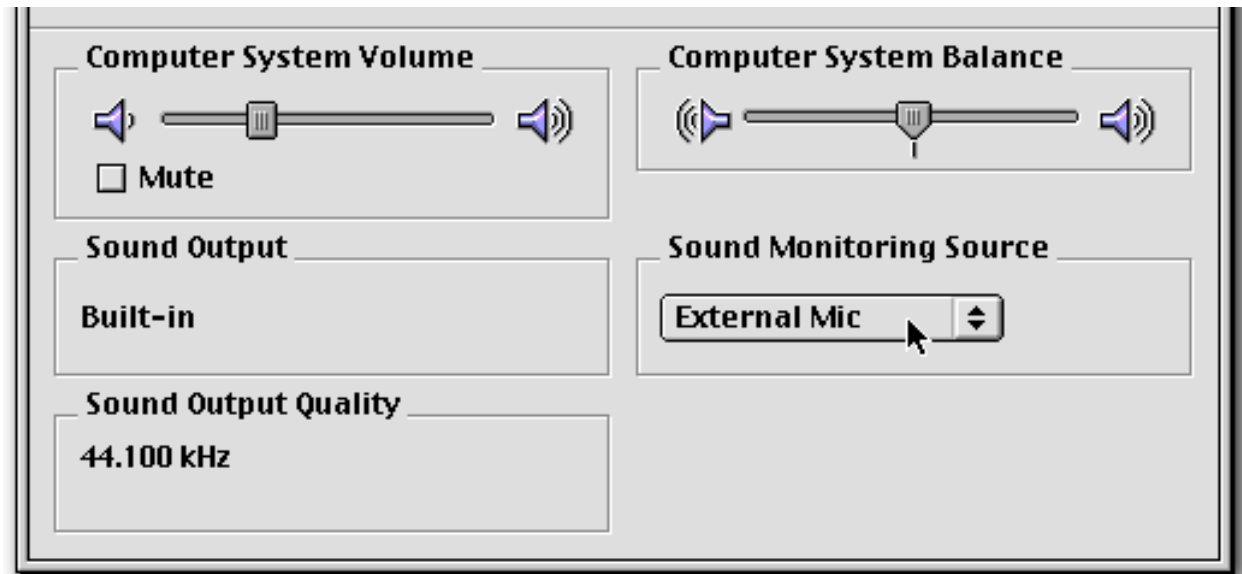
• Center the microphone on top of your monitor (if possible), with the microphone's Apple (<img_ref id="1" />) icon facing you.

• Make sure that the microphone is between 1 and 3 feet directly in front of you when you're giving spoken commands.

• Adjust the microphone cord so it is not looped around itself or other cords.

Preparing the sound software

To make sure the microphone is turned on and set up correctly, you must use the Monitors and Sound control panel (or the Control Strip) to select your microphone as the sound input source:

1. Pull down the Apple (<img_ref id="2" />) menu and choose Control Panels.

2. Open the Monitors and Sound control panel by double-clicking its icon in the Control Panels window.

3. Select the Sound panel, and make sure the Sound Monitoring Source is set to the microphone you are using (External Mic or Built-in Mic).

4. Close the Monitors and Sound control panel.

Speaking commands

To make the computer respond to your spoken commands, follow these steps:

• Make sure the computer is listening and that, while you are speaking the command, you are holding down the key displayed under the character in the feedback window. When you first install the software, it's set up so the computer only listens while you hold down the escape ('esc') key. You can change the key, or choose to have the computer listen all the time instead of only while a key is held down. These other listening method options are described in "Determining how the computer listens," below.

• Speak clearly. Wait for a moment of silence, then speak in a normal tone of voice at a normal rate of speed. For more information, see "Tips on speaking to your computer," below.

• Use a spoken command that the computer understands. The computer can understand the name of any item in the Speakable Items folder.

Determining how the computer listens

The computer recognizes spoken commands only when it is listening for them. You use the Speech control panel to determine which of these listening methods it will use:

• The computer listens only while you are holding down the listening key. This method,
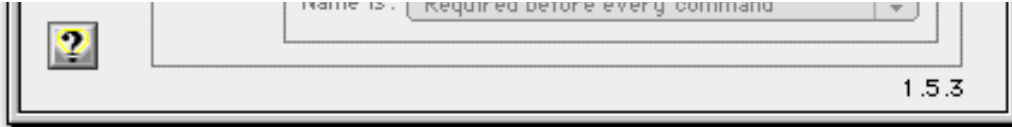
which we sometimes call the "push-to-talk" method, is the default. It is recommended because it is the most reliable method. When using the push-to-talk method, misfires due to conversations and background noise are completely eliminated.

• The computer listens all the time, but it tries to only recognize commands preceded with its name (like "Computer, what time is it?"). The default name is "Computer", but you can change the name. You should use a word or phrase that is not likely to arise in normal conversation, such as "Hey Computer". This method allows you to speak commands without holding a key down, but is less reliable than the "push-to-talk" method, because the computer may occasionally misinterpret conversation or other sounds as commands.

• The computer listens all the time for commands, without requiring you to hold a key down or precede commands with "Computer". This is the least reliable method, because the computer may frequently misinterpret conversation or other sounds as commands.

When the Speakable Items software is first installed, it is set up so the computer will listen only while you hold the Escape key down ('esc'). If you want to change it to another method, follow these steps:

1. Pull down the Apple (⌘) menu and choose Control Panels.

2. Open the Speech control panel by double-clicking its icon in the Control Panels window.

3. Open the Options pop-up menu and choose Listening.

4. Within the Listening option, you can choose a listening key by pressing a key. You may combine the key you choose with any combination of the Shift, Option, or Control keys. Do not choose a key or key combination that you use in any of your application programs. If accepted, the listening key you choose appears in the Key(s) box.

5. Click the button labeled "Listen only while key(s) are pressed" or the button labeled "Key(s) toggle listening on and off". The control panel will look like this:

6. To change the name that precedes each spoken command, select the radio button labeled "Key(s) toggle listening on and off." (The default is "Computer".) You can also use the "Name is:" popup menu to require that name before each command, to make it optional before each command, or to make it optional for a while after it is used with a successful command.

For more information, see "Speech" in Mac OS Help.

Tips on speaking to your computer

When you talk to your computer, keep the following tips in mind:

• Speak at a normal volume. Don't shout or speak loudly.

• Speak naturally. Don't exaggerate the pronunciation of words.

• Leave a little silence before giving a command. If there are no sound waves drawn next to the feedback character (and you are holding the push-to-talk key down, if that is the current listening method), the computer is ready to hear the command.

• Speak the name of items in the Speakable Items folder only. If you speak a phrase that does not correspond to the name of an item in the Speakable Items folder, Speakable Items might mistakenly recognize your utterance as one of those item names anyway.

Finding out more about Speakable Items

You may be able to find out more information about how to use Speech Recognition by clicking the Question Mark button in the Speech control panel, or by looking up "Speech" in Apple Help.

If you see a message that there isn't enough memory available

If you see a message that Speech Recognition is having trouble due to lack of memory, save all your open documents and quit the application programs you have open.

To avoid running out of memory while using speech recognition

• Use the Speech control panel to choose a voice that requires less memory, or turn off voice feedback altogether. The voices with "high quality" in their names use the most memory. "Fred" uses the least. To see how much space a voice needs, look at the size of the voice files in the Voices folder in the Extensions folder.

• Use the Memory control panel to turn on virtual memory. (With virtual memory on, voices may be slightly distorted and, with some programs, speech performance may decrease.)

• Add more memory to your computer. If you are running System 8.5 or later on a Power Macintosh with English Text to Speech and English Speech Recognition installed, then it is recommended that your computer have at least 32 megabytes of RAM.

Notes on problems using the speech recognition software

A few applications may interfere with Speech Recognition. For example, Speech Recognition may not work with programs that use the microphone themselves, such as software that lets you record and edit sound.

The built-in microphone on some Macintosh computers does not have sufficient audio quality to work well with Apple's Speech Recognition Software. This is most likely to happen in those Macintoshes where the monitor, microphone, and computer are all built into one single enclosure. If you experiencing problems with the accuracy of the Speech Recognition, we recommend plugging an Apple PlainTalk microphone into the external microphone socket.

Last update: 16th July, 1998.
Speech (n): Vocal articulation of thoughts and ideas.