



## Contents for Media Vision Pocket Recorder Help

Pocket Recorder is a simple, easy to use Windows 3.1 based application for recording waveform data in an 8 or 16-bit format. Pocket Recorder is the first in a family of multimedia Pocket Tools from Media Vision. You can use Pocket Recorder to record and playback waveform files (\*.WAV) from any Windows application. You can also splice and blend files together for interesting audio effects. By default your view of the file being displayed is an outline of the entire file. The total length of your file is also conveniently displayed in seconds format in the status area.

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## **File Menu Commands**

### **New**

Creates a new file,

### **Open**

Opens an existing waveform file for playback, recording and/or editing (including modifications performed using Pocket Recorders sound effects options).

### **Save**

Saves the current waveform file. If the current waveform is untitled you will be prompted to input a standard file name.

### **Save As...**

Lets you save your file under a different name and extension. "Save As.." saves the current contents of the file being edited to a new file, without affecting either the contents or state of the current file. You can also choose to save the file in a compressed state, choosing 2 to 1 or 4 to 1 compression, thereby conserving disk space.

### **Revert**

Causes the current waveform file to revert to the last saved version. This feature is helpful when you accidentally edit a wavefile. The revert selection actually recalls a temporary file in which all edits are stored.

### **Set Temp Directory...**

You can use the Set Temp Directory command to define where Pocket Recorder stores its temporary files. This temporary directory is only used by Pocket Recorder and is not related to DOS' TEMP environment variable. This command is useful if your DOS TEMP variable is set to a RAM drive of limited size (which constrains the size of recordings and/or file editing operations). To use this command perform the following steps:

1. Select the Set Temp Drive option in the File menu.
2. If a file is loaded and has been modified, a message box appears asking whether the modification(s) should be saved or discarded. Select either Yes or No.
3. Next, a Set Temp Directory dialog box appears. In this dialog box you can choose the current drive and directory for the applications temporary files.

Selecting the OK button causes the application's temporary files to be recreated on the newly specified drive and directory.

Select the Remember check box to have Pocket Recorder permanently retain the new path to the temporary drive and directory. It will remember this information the next time you open your Pocket Recorder application.

Calculating TEMP File Size

The TEMP (temporary) file size is not dependent upon how much free space is available on your hard disk. When the TEMP file reaches its maximum file size a message box appears. You must save the file at this point. Any edits which increase the file size will not be saved. To calculate the amount of disk space which can be used to record a file, take the total free space of your temporary drive, subtract the size of the file (if any) currently loaded and divide by two.

### **Exit**

The Exit command allows you to properly exit from the Pocket Recorder application. If there is an open waveform file currently being edited, you will be prompted to save changes.

### **About...**

Displays information on which version of Pocket Recorder you are using and also displays the Media Vision logo.

## **Edit Menu Commands**

In general, you can insert a file at any location within a waveform file, or if the current insertion point is at the end you can append to the end of the file. However, you cannot mix two files which were recorded at different sample rates. The two files to be joined must be of the same sample rate. Pocket Recorder does not currently support sample rate conversion.

### **Insert File**

Lets you place a file within your current file. The placement of the file is after the position of the current insertion point. If there is no current insertion point, the file is inserted at the beginning. This operation will increase the length of the file being edited by the amount of the file being inserted.

### **Blend File**

This operation overlays one file on top of another (provided they are of the same sample rate and type). The length of the resulting file will be the same as the longest of the file used. This feature essentially merges two waveforms into one file.

**NOTE:** Saturation levels must be monitored while blending files. Saturation is another form of distortion that occurs when the amplitude of a blended file is excessive. This is sometimes referred to as clipping.

### **Cut**

Choose the Cut command to remove a selected part of a waveform. When you choose Cut, Pocket Recorder removes the current selection from the file and places it in the clipboard (which replaces the clipboard's previous contents).

### **Copy**

The Copy command copies the selected area of the waveform and places it in the clipboard ( although the selection still remains in the waveform view area).

### **Paste**

The Paste command inserts the contents of the clipboard into the waveform file. You can choose Paste several times to paste several copies of the same information.

Pocket Recorder's Paste command inserts the waveform data from the clipboard at the current position indicated in view area of the waveform file. It is only possible to paste data which is of the exact format ( e.g., sampling rates, bits per sample, and number of channels) as the waveform file which is currently displayed. For example, you cannot paste a 44 KHz, 16-bit , stereo region into a 22 KHz, 8-bit, mono waveform file.

### **Delete**

Deletes the waveform data contained in the highlighted region. Unlike Copy and Cut, the Delete command does not place the selection in the clipboard.

## Effects Menu Commands

Sound effects modify and/or change the waveform data. If an unwanted or undesirable effect is performed use the "Revert" command to reload the last saved version of the waveform.

It should be noted that all of the sound wave effects found on the "Effects" pull-down menu will irreversibly modify the sound wave data. Either of the file menu's "Save" or "Save As" commands may be used to save the original wave data before applying a wave effect. Please see the File menu section for more information on saving and loading wave files.

### Louder

Each successive selection of the Louder command increases the sound wave's loudness (or amplitude) by fifty percent (a multiplier of three halves).

### Softer

Each successive selection of the Softer command decreases the sound wave's loudness (or amplitude) by one third (a multiplier of two thirds). Note that a "Louder" effect leaves the waveform file at its original loudness. This is true, unless some of the values (or samples) surpass their maximum value. In this case it is possible to determine the original values at those points.

### Faster

Each successive selection of the Faster command doubles the speed (or rate) of the waveform file.

### Slower

Each successive selection of the Slower command halves the speed (or rate) of the waveform file. In both the Faster and Slower commands, the waveform file's pitch is held constant. This is achieved by either removing (for Faster) or doubling (for Slower) small chunks of the wave throughout the waveform file. The size of these wave chunks is chosen to be much larger than a single sound oscillation so that the frequency (or pitch) of the waveform file remains the same. The value of the wave chunk size may be set by the use of the Voice command dialog box. For more information on this topic, refer to the Voice... command section.

### Higher

Each successive selection of the Higher command increases the pitch (or frequency) of the sound wave by a factor of two.

### Lower

Each successive selection of the Lower command decreases the pitch (or frequency) of the sound wave by a factor of one half.

In both the Higher and Lower commands, the total duration of the sound wave is held constant. The pitch alteration is achieved by either removing every other wave sample to raise the pitch, or by doubling each wave sample to lower the pitch. In both cases, this process changes the sound wave's duration. The technique used in the Faster and Slower commands is applied here to restore the sound wave to its original duration, with its new modified pitch.

By using the Higher and Lower command, in conjunction with the Faster and Slower command, the pitch and duration may be changed together. This is a more common feature found in other sound wave applications. To get these effects with Pocket Recorder the best results are obtained by applying the

combinations in the following sequences:

For increased rate and pitch, use first Higher followed by Faster.

For decreased rate and pitch, use first Slower followed by Lower.

### **Voice...**

The slider in the dialog box indicates the current wave chunk size used to modify the sound wave in the Faster, Slower, Higher and Lower commands. The value denoted by "Decimate the File at 1/125 of a second" is the actual size of the wave chunk. This value may be set within a range between 1/50th of a second and 1/200th of a second. These limits have been set experimentally to work best in the modification of sound waves of human voices. It is not necessary to know how these values change the wave effects. It is sufficient to know that different wave chunk sizes work better for different voices (of different frequencies). The optimal value (or chunk size) for a particular voice must be found through experimentation.

### **Echo**

The Echo command adds an echo to the sound wave. Note that the sound wave duration is extended by two seconds to provide room for the trailing echoes. Multiple invocations of the Echo command causes the initial wave loudness to increase since the echoes always fall on a consistent wave alignment.

### **Reverb**

The Reverb command applies a reverberation to the sound wave. The wave duration is extended by two seconds to provide room for the trailing reverberation. This is an attempt to simulate the sound as if it were emitted in a room with successive echoes bouncing off of three walls at three different distances from the source of the sound. As in the echo effect, multiple invocations of the Reverb command increase the initial loudness of the sound file. In this case, however, the results become more and more interesting, albeit less and less audible.

### **Reverse**

The Reverse command simply reverses the sound wave. The wave is then played starting at its end, and concluding at what was originally its beginning. Two successive invocations of the Reverse command returns the sound wave to precisely its original state. It seems Reverse is the only truly reversible command.

### **Convert to 8-bit**

This command allows you to convert (i.e., downsample) a 16-bit file into an 8-bit file. Some versions of 16-bit capable hardware allow you to record in an 8-bit format, but also record a large amount of noise as well. The solution to this problem is to record your waveform file in a 16-bit format and then use the Convert to 8-bit command to convert the waveform file. You can also use this command to reduce the size (by one-half) of any 16-bit waveform file which you feel doesn't justify the extra disk space needed to store the file.

## Selecting A Region of a Wavefile

To edit a portion of a wavefile you must select a portion of the wavefile from within the view area. You can do this in one of two methods. (1) Click on the mouse button while the insertion point is in the waveform view area and drag the mouse until a portion of the waveform is highlighted. Dragging means pressing and holding down the mouse button and moving the mouse to a new position in the view area and then releasing the mouse button.(2) The second method involves a shifting and clicking motion. Hold down the SHIFT key and then click the mouse button at a point in the view area. This method selects a region between the current insertion point (if no position has been selected the selection begins at the beginning of the view area) and the position where the mouse is clicked.


In addition to the two methods described above, you can zoom-in on a portion of the waveform file by placing the mouse within the view area and double-clicking. Once you have this zoom view, it is possible to select a portion of the wavefile larger than can be normally displayed in the view area. Perform the following steps:

1. Place the current position cursor ( the red line in the waveform view area) to the beginning of the region you wish to select. Next, scroll the view area to the part of the waveform region where you want the region to stop.
2. Press the SHIFT key and simultaneously click on the mouse button. The region between the two selection points becomes highlighted.

**NOTE:** If a region is currently selected before performing the above steps, that region will be un-selected. You cannot select a region in the zoomed-in mode, then zoom-out while maintaining that selection; consequently, in order to zoom-out you must double-click on the waveform view window, which removes any defined selection.




## To Play a Waveform File

1. Select "Open" from the File menu.
2. Once the Open Wave File dialog box appears click on the disk drive or subdirectory where you have stored your waveform (\*.WAV) files.
3. Highlight the waveform file you want to open. Click on the OK button. The waveform file is automatically loaded into Pocket Recorder's view area.
4. Click on the Play button  to playback the waveform file (or, if using the keyboard, tab to the Play button and hit the spacebar). As it is played back, notice the activity of the VU meter. Both bars moving confirms that you have selected a waveform that was recorded in stereo. The green bar represents channel 1 and the blue bar represents channel 2.

## To Record a Waveform File

Several options are available when recording waveform files. However, if a selection appears grayed-out, it simply means that it is not available with your version. Before proceeding with these steps, ensure that your microphone or audio device is plugged into either the microphone or line-in input plug on your sound card.

1. Select "New" from the File menu. Then click on the Record button . The Record Data dialog box will appear: It has the following controls:

**Sample Rate:** Select either 44.1 kHz, 32.0 kHz, 22.05 kHz, 11.025 kHz, 8.0 kHz or a custom rate.. Keep in mind that the larger the sampling rate, the more disk space is required to store the waveform file.

**Channels:** Stereo. If you are going to record in stereo, click on this button. Otherwise select Mono.

**Sample:** Select the 8-bit or 16-bit mode. Pocket Recorder does not convert waveform files from different formats.

**Record Source:** You can choose the source from which you want to record or use Pocket Mixer to select the source. You adjust the recording volume by using the slider in this box or using the Pocket Mixer sliders.

**Peak Meter:** The Peak meter shows you the recording level if the audio source from which you are going to record is currently in use (for example, a CD). Adjust the recording level by moving the slider with the mouse. You will see the changes in the recording level reflected in the Peak meter. To obtain the highest fidelity recording the recording level should be adjusted so that the meter occasionally hits the red zone, but without remaining there for a sustained period of time.

2. When you are satisfied with the settings select **Start Recording**.

3. Choose **Stop Recording** to stop recording.

4. If you want to hear your recording select **Play Recording** to playback the recording you just made. If you are satisfied with the recording choose **Insert Recording**. This will close the dialog box and insert a graphical representation of the recording in Pocket Recorder window.

**NOTE:** Pocket Recorder will not allow you to produce a recording larger in size than the temporary recording file. Pocket Recorder always creates a temporary recording for use with the revert command. It is this temporary file that is recalled when you select "Revert" from under the File menu.

5. If you want to save the recording selecting **Save As . . .** from the File menu.

**NOTE:** Pocket Recorder uses an Auto-Stop feature when your temporary recording file becomes too large to be saved. A message box appears indicating that the recording will be stopped. At this point, it is a good idea to save the file if any editing is to be performed which may increase the file's size.

## Using OLE and Pocket Recorder

Object linking and embedding (OLE) is a Windows 3.1 system that enables applications to transfer data and to share data by establishing a common link between them. In OLE the requesting application is called a client, while the application that provides data is called the server. Among the applications included with Windows 3.1, Paintbrush, Excel and Sound Recorder are OLE servers while Cardfile and Write are considered OLE clients. Pocket Recorder is an OLE server.

The most common use of OLE is inserting voice annotations into your favorite word processor. The following example shows how to place a voice annotation within a Microsoft Word document. Refer to your Windows 3.1 application documentation for specific requirements on using OLE. The instructions below assume that you have a microphone plugged into the external microphone jack of your sound card.


1. From within Microsoft Word select the Insert menu and choose Object...
2. Select "Pocket Recorder Wave" from within the Object dialog box and click on the OK button.
3. Once Pocket Recorder appears, click on the record button and record your voice annotation. Click on the stop button to halt the recording (alternatively, you can select Pocket Recorder's File menu and open a pre-recorded WAV file).
4. From within the File menu choose the "Return to Microsoft Word" selection (or double click on the control box - the little square with a horizontal bar at the upper left hand corner of Pocket Recorder).
5. Next, a message box appears asking "Do You Want to Update the Changes in Microsoft Word?". Select "Yes" to continue. Once the Pocket Recorder icon appears in your document, all you have to do is double-click on it and Pocket Recorder will automatically play the voice annotation or WAV file.


## **Using Drag and Drop**


Pocket Recorder supports drag and drop of waveform files. To use this feature start Pocket Recorder and place it in a minimized state on the Windows desktop. Then, select one or more waveform files, e.g., using the Windows File Manager, and drag and drop the selected group to Pocket Recorder and release. Pocket Recorder will now play each file. If Pocket Recorder is in a maximized state the file will be opened but will not be automatically played.


## Pocket Recorder Controls and Status Fields

 Play - Press to start playback of wavefile.


 Move to start of wavefile.

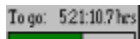
 Advance to end of file.


 Stop.


 Record - brings up the record data dialog box..

 Erase - clears window of current file (same as choosing File New)

 Status Bar - describes the current status, i.e., recording , playing , stopped, etc.

 Amount of hard disk storage remaining on the volume where Pocket Recorder's temp directory is located.

 Displays the sampling frequency of the data in khz, and the sample size size as a superscript. Also displays either one speaker (mono) or two speakers (stereo) and the compression status.

 VU Meter - Displays the amplitude of the waveform (both left and right channels if the waveform data is stereo) during playback.

## Using Compression/Decompression

In order to conserve disk space you can save your recorded files in compressed format. To do so select Save As in the File menu and choose one of the compression options.



Note that you can only select compression options for recordings sampled at 16 bits. These buttons are disabled (grayed out) if the file was recorded at 8 bits or if you have a 8-bit sound card. Compressed files are automatically decompressed when opened. Keep in mind that the audio quality will deteriorate over time as a file is compressed and decompressed. Also note the compression indicator on the main window to the right of the stereo/mono indicators:



When opening a file the compression format of the file will be shown by this indicator. In the example above no compression is used.

