WinDAT The Windows Digital Audio Transport

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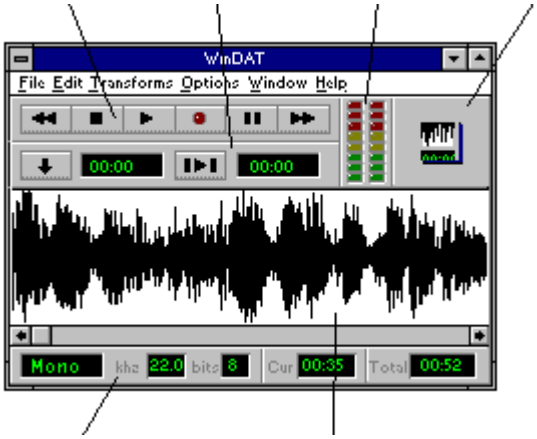

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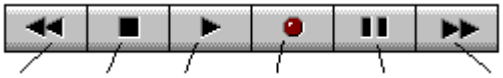

Rewind Stop Play Record Pause Fast Forward

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Mark Range button Play Range button

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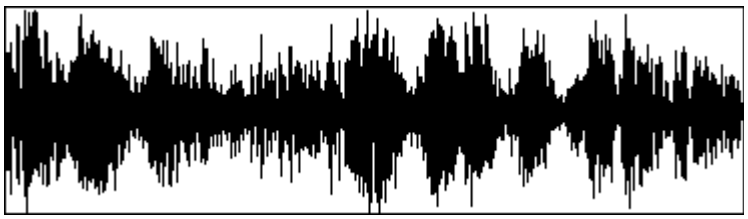
Graphic File Display



The bottom portion of the main window contains the Graphic File Display, which provides a visual representation of the digital audio file that is currently loaded into WinDat.
The horizontal axis represents time (moving from left to right), and the vertical axis represents amplitude, or loudness.
The Graphic File Display also provides a visual representation of the selected range by displaying it in reverse highlight.
If you do not want to see the Graphic File Display, enable the No Wave option from WinDAT's Options menu.

Status Area

The Status Area, located below the Graphic File Display, contains information about the current audio file:

***Mono/Stereo** - Indicates whether the audio file is mono or stereo.

***Sample Rate** - Displays the sample rate of the audio file, in kHz.

***Bit Length** - Displays the bit length of the audio file.

***Cur** (Current) - Displays the current position in the audio file in the format: **[Minutes:Seconds.Hundredths of seconds]**.

***File** - Displays the length of the audio file in the format: **[Minutes:Seconds.Hundredths of seconds]**.

New

Creates a new, empty file based on the settings in the Setup window.

New does not erase the contents of the Clipboard.

Open

Presents a dialog box to select the file that you wish to load. The Files dialog box also lets you select the file format that you wish to look for (.WAV or .VOC).

Save

Saves the currently loaded file to disk. If the file already has a name, it will be saved with that name. Otherwise, the Save As... dialog box will appear.

Save As...

Presents a dialog box for naming and saving the current file to disk.

Exit

Quits WinDAT.

File List

The bottom portion of WinDAT's File menu lists the last four audio files that you have opened or saved, with the most recently-opened file listed at position 1. This makes it easy to re-open any of the last four files you've worked on.

To open an audio file in the Files List, simply click on the desired file name.

Undo

Restores the file to the state it was in before the last Edit or Transform operation.

Cut

Removes the selected range and shifts the rest of the file back to fill in the gap, similar to deleting text in a word processor. The deleted data is placed in WinDAT's Clipboard.

Copy

Puts a copy of the selected range in the Clipboard without altering the file.

Paste

Inserts the contents of the Clipboard at the start of the currently-selected range (as indicated by the Start Marker), and shifts the data after that point to the right.

Mix Paste

Mixes the contents of the Clipboard with the data in the current file, beginning at the Start point of the currently-selected range (as indicated by the Start Marker).

Select All

Selects the entire length of the file as the range. This is useful for executing an Edit or Transform on the entire file.

Delete

Deletes the selected range , but does not move the data to the Clipboard .

Erase

Puts a copy of the selected range in the Clipboard and replaces it with silence.

Trim

Deletes all data **except** the selected range . The contents of the Clipboard remain unchanged.

Trim is useful for eliminating unwanted data at the beginning and end of a file you've just recorded.

Insert Silence

Inserts a specified amount of silence at the Start Marker, shifting everything after the Start Marker to the right.

Normalize

Scales the amplitudes in the selected range so that the peak value is converted to the maximum possible amplitude; the rest of the amplitudes are scaled proportionally.

Normalize lets you optimize the loudness of files that have been recorded at too low a level, without introducing distortion.

Find Peak

The Find Peak Transform locates the highest level (amplitude) within the selected range, and then displays a dialog box with information about the peak.

Find Peak gives you a convenient way to locate unwanted peaks that may be causing distortion so that they can be Scaled, Deleted, etc.

Scale

The Scale Transform is used to increase or decrease the loudness (amplitude) of the selected range by a specified factor between .01 and 10.00. For example, a scaling factor of 2.0 will double the amplitude, and a factor of 0.5 will halve the amplitude.

Scale is useful for matching the loudness between different files when cutting and pasting between them.

Auto Audition

The Auto Audition option lets you automatically preview audio files simply by clicking on them from the Files list box.

Enable Auto Audition in the Options menu, then choose Open or Save As from the Files menu. When you click on a file in the Files list box, WinDAT will play that file until you click on another file or another control.

Auto Rewind

When the Auto Rewind option is enabled, WinDAT will automatically rewind to the beginning of the file after it stops playing.

No Wave

When the No Wave option is enabled, the Graphic File Display will disappear and WinDAT's entire window will shrink vertically.

The No Wave option is handy if you want to reduce WinDAT's size so that it can share your desktop with other applications. Additionally, it can help save time by eliminating the wait normally required for re-drawing the graphic file display (especially when you're working with large files), and it can help reduce the amount of system overhead when playing back files at high data rates.

When you click on No Wave again to disable it, the Graphic File Display will return and WinDAT will be restored to its previous window height.

Playback VU

When the Playback VU option is enabled, WinDAT's VU Meters will be active during playback.

Disabling the VU meters can help to reduce system overhead if you're experiencing problems playing back files at high data rates.

Record VU

When the Record VU option is enabled, WinDAT's VU Meters will be active during recording.

Disabling the VU meters can help to reduce system overhead if you're experiencing problems recording at high data rates.

Always on Top

When the Always on Top option is enabled, WinDAT will always appear on top of any other applications that are running. This prevents WinDAT from getting "lost" when you're running several different programs.

Setup

Displays the Setup dialog box for selecting the File Format (VOC or WAV), Sample Rate , Stereo/Mono , Bit Length/Data Format ,Temp Directory and Work Directory .

When a file is loaded, the Setup dialog box will always display the sample rate that the file was saved with.

When you choose OK from the Setup window, its settings are saved as WinDAT's new defaults.

Clipboard Window

Activates a window containing information about the contents of WinDAT's Clipboard, such as what file the data came from, the duration of the data, etc.

Clicking on the Clipboard window's Play button lets you audition the contents of the Clipboard before performing a Paste or MixPaste operation.

NOTE: WinDAT uses its own Clipboard format, which allows it to share data with OLE Client applications and other Voyetra programs, such as AudioView, Annotator, etc. It is not to be confused with the regular "Windows Clipboard".

Performance Tune

The Performance Tune window lets you adjust various WinDAT parameters to eliminate problems playing or recording at high data rates. In general, you should only modify the default Performance Tune settings if you experience data rate problems. Such problems are indicated either by a file that cuts-off abruptly, or by a "Disk Could Not Keep Up With Digital Audio" error message.

Play Buffer (default=4 seconds) - Determines the size of the memory buffer that WinDAT will use during playback.

Record Buffer (default=8 seconds) - Determines the size of the memory buffer that WinDAT will use during recording.

Pre-Write (default=128 K Bytes) - When you are preparing to record, the Pre-Write setting will determine the size of the area on your hard drive that WinDAT will "pre-allocate" for the digital audio data (in kBytes). This gives WinDAT access to a contiguous area of the disk, minimizing the overhead required to record the data.

Tips:

If you are experiencing problems during playback of a high data rate file (i.e. 44k, 16 bit, stereo), try increasing the value of the Play Buffer.

If you are experiencing problems while recording, try increasing the value of the Record Buffer. You can also try increasing the size of the Pre-Write value. It should be equal to the maximum size of the file you will be recording (in Kilobytes).

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Activates WinDAT's on-line Help system.

About WinDAT

Displays information about WinDAT's date and revision.

Loading a File

To load a digital audio file into WinDAT:

1. Choose Open from WinDAT's File menu.
2. From the Files dialog box, choose the file format you want to load: VOC or WAV.
3. Move to the Files list box and select the file you want.

Playing a File

To play a digital audio file with WinDAT:

1. Make sure that your sound card is properly connected to your headphones, speakers and/or amplifier.

2. Load the file you want to play.

3. If necessary, use your sound card's Windows mixer utility to adjust the digital audio playback level.

4. Click the PLAY button in the Transport Controls area.

Rewinding

To rewind a file to the beginning (0.00), double-click the REWIND button in the Transport Controls area.

Configuring the Setup Window

Before recording a file, you may want to set some of its parameters, such as Sample Rate , File Format , Stereo/ Mono , and Bit Length/Data Format. This is done in WinDAT's Setup Window.

To setup WinDAT for recording:

1. Choose Setup from the Windows menu.

2. Select the desired Sample Rate. Higher sample rates result in better audio quality, lower sample rates result in a significantly smaller file size.

3. Select the desired File Format (WAV or VOC); select Stereo/ Mono (if your sound hardware supports stereo); and select the Bit Length and/or Data Format .

4. Choose OK to return to WinDAT's main window.

Recording

WinDAT can be used in conjunction with your digital audio hardware to record any Microphone - or Line-level audio source.

To record with WinDAT:

1. Configure the Setup Window as needed.
2. If you're recording from a CD or tape, "cue up" the material as needed.
3. If necessary, use your sound card's Windows mixer utility to set the record level(s).
4. Click the RECORD button. WinDAT will go into Record Standby mode, as indicated by the blinking red LED on the Record button.
5. Click the PLAY button and WinDAT will start recording.
6. Begin speaking into the microphone, or start the CD player or tape deck.
7. Click the STOP button to stop recording.

Saving a File

To save a file, choose Save from the File menu.

If you're saving a new file, you will be prompted to type in a file name.

Selecting the Range

Most of WinDAT's Edit and Transform functions require that you specify the section or "range" of the file that you wish to edit.

Method 1:

Click on the desired Start point in the graphic file display, drag to the desired End point, and then let go. This will highlight the selected range and load the appropriate values into the Start and End markers.

Method 2:

You can mark the range Start and End points "on-the-fly" while listening. Play the file and when you hear the beginning of the section you want to select, click on the Mark Range Button . Hold the button down as the file plays, and release it when you come to the end of the section.

Method 3:

Click and drag on the Start or End Marker box and drag up or down to reach the desired Start or End time.

Adjusting the Start or End Points of the Range

Method 1:

Use the Start or End Marker boxes:

Click on the appropriate Marker box and drag up or down to increase or decrease the Start or End time.

Or, click anywhere on the upper half of the appropriate Marker box to increase the Start or End time by 1/100th of a second. Click anywhere on the lower half of the appropriate Marker box to decrease the Start or End time by 1/100th of a second.

Method 2:

Point and Shift-click in the Graphic File Display to adjust the Start or End point (whichever is nearer) without affecting the other point.

Auditioning the Range

To hear the range, press the PLAY RANGE button.

Removing a Section of a File and Placing it in the Clipboard

Cut deletes the selected range from the file and places it in the Clipboard. The rest of the file is shifted back to fill in the gap, similar to what happens when you delete text in a word processor.

To remove a section of a file:

1. Select the range of the file that you wish to remove.
2. Choose Cut from the Edit menu.

Auditioning the Contents of the Clipboard

To audition the contents of WinDAT's Clipboard, choose Clipboard from the Windows menu and click on the Clipboard window's Play button.

Pasting the Contents of the Clipboard

The Paste command is used to insert the contents of the Clipboard at a specified point in either the current file or a different file.

To paste the contents of the Clipboard into a file:

1. Choose Clipboard from the Windows menu to verify that the desired data has been placed in the Clipboard.

2. If you want to Paste into a different file, load that file. Or, choose New from the files menu to paste into a new file.

3. If you're pasting to an existing file, select the point where you want to paste the Clipboard contents by designating it as the range Start point . Or, if you're pasting into a new file, the data will be pasted starting at 0.00.

4. Choose Paste from the Edit menu.

The contents of the Clipboard will be inserted at the desired point. Data after that point will be shifted to the right, similar to inserting text in a word processor.

Creating Composite Sound Files

You can use Cut, Paste, and Mix Paste in conjunction with WinDAT's Clipboard, to create a new file made up of sections from existing files. A typical use for this method would be to create a complete digital audio "soundtrack" for a presentation or other multimedia application. The finished soundtrack created in WinDAT could consist of different elements, such as speech, music, or sound effects, recorded digitally from a variety of sources.

Executing an Edit Command

The method for using most of WinDAT's Edit and Transform functions is essentially the same.

To execute any Edit or Transform function:

1. Select the range .
2. Choose the desired menu item from the Edit or Transforms menu.

Some commands (like Scale or Insert Silence) also present a dialog box that prompts you to enter specific information, such as scaling factor or amount of silence.

Modifying Files with the Transforms

WinDAT includes several functions called "Transforms" that allow you to efficiently work with and modify your digital audio files. Like the Edit functions, the Transforms operate on a selected range.

The Transform functions are:

Normalize

Find Peak

Scale

Scaling the Amplitude (Loudness)

Scale is a very useful Transform that can be used to increase or decrease the loudness (amplitude) of the selected range by a specified factor between .01 and 10.00.

For example, a scaling factor of 2.0 will double the amplitude, and a factor of 0.5 will half the amplitude. This feature is useful for matching loudness between different files when cutting and pasting between them.

To Scale the loudness (amplitude) of a selected range:

1. Select the range you wish to scale. Or, choose Select All from the Edit Menu to select the entire file.

2. Choose Scale from the Transforms menu.

3. Type the desired scaling factor (between .01 and 10) into the Scale dialog box; then choose OK.

Using Drag-and-Drop File Loading

WinDAT supports drag-and-drop file loading from the File Manager or other applications that support drag-and-drop sourcing, such as Norton Desktop for Windows, XTree for Windows, etc. This feature lets you load a digital audio file by simply clicking on the file name and dragging it into WinDAT.

To load a file into WinDAT with drag-and-drop:

1. Run the Windows File Manager (or other drag-and-drop compatible application).

2. From the File Manager, navigate to the directory where the desired file is located so that the file name is displayed.

3. Click and hold on the file name, and drag it into WinDAT.

4. Release the mouse button anywhere inside WinDAT's Graphic File Display.

Using WinDAT's OLE Features

WinDAT is capable of functioning as an OLE Server application - you can use to link or embed sound files into OLE-compatible documents. You can also use WinDAT to edit your sound files after they have been inserted into the document.

WinDAT supports two different methods for inserting sound files into OLE-compatible documents:

Method 1:

In most cases, you'll simply want to **embed** an entire sound file into a document. The easiest way to embed an entire sound file is to use WinDAT's drag-and-drop OLE icon.

1. Load or record the desired sound file into WinDAT.

2. Drag WinDAT's drag-and-drop OLE icon to the desired point in the destination document and release the mouse button.

Method 2:

If you want to use WinDAT to create an OLE **link**, or if you want to embed only a **portion** of a sound file, you can use the standard OLE methods, as further detailed in your Windows Users Guide.

1. Load or record the desired sound file into WinDAT.

2. If you want to embed a portion of the sound file into your document, highlight the desired area in the Graphic File Display, and then choose Copy from WinDAT's Edit menu.

3. Click on the desired insertion point in the destination document.

4. If you want to **embed** the sound data that was copied to WinDAT's Clipboard in Step #2, choose Paste from the document's Edit menu.

Or, If you want to create an OLE **link**, save the file if necessary, then choose Paste Link from the document's Edit menu.

To play a sound object:

From within the destination document, double-click on the WinDAT icon representing the embedded or linked sound object you wish to play.

Or, choose Sound [VOY] Object, Play from the document's Edit menu.

To edit a sound object:

1. From the destination document, click on the WinDAT icon representing the embedded or linked sound object you wish to edit.

2. From the document's Edit menu, choose Sound [VOY] Object, Edit.

This will cause WinDAT to run, with the sound object already loaded.

3. From WinDAT, edit the sound object as desired.

4. If you're editing an **embedded** sound object, choose Update [application name] from WinDAT's File menu.

If you're editing a **linked** sound object, choose Save from WinDAT's File menu. NOTE: This will overwrite the original sound file.

Quitting WinDAT

To quit WinDAT, choose Exit from the File menu.

Bit Length/Data Format

Bit Length

Bit Length (also called "bit resolution" or "sample size") is the number of bits that are used to store each sample as a number. In general, the greater the bit length, the better the quality of the digital audio.

8- bit digital audio is adequate for speech and for some music applications. However, 16 bit digital audio is preferable where more accurate reproduction is required.

NOTE: WinDAT cannot convert files between 8- and 16- bit formats.

Data Format

Some sound hardware also supports various data formats and/or compression schemes, such as ADPCM, ALaw, etc. For this type of hardware, WinDAT allows you to choose from a list of supported data formats from the Setup window.

For more information on the data formats and compression schemes supported by your sound hardware, refer to the WinDAT Users Guide.

Clipboard

When you Cut or Copy data, it is stored in a temporary "holding place" called the **Clipboard**. The contents of the Clipboard can then be inserted into the same file or a different file by using the Paste or MixPaste command.

File Format

WinDAT supports the two most common types of digital audio files for PC-based sound cards: VOC and WAV format. A digital audio file's format is indicated by its file extension (*.VOC or *.WAV).

Line-level

Line-level refers to the level of a signal from a device such as a tape deck, CD player, etc. WinDAT can record audio from either a line- or microphone- level device.

Microphone-level

Microphone-level refers to the level of a signal from a microphone, which is significantly lower than that of a line-level device. WinDAT can record audio from either a line- or microphone- level device.

OLE

Windows supports a feature called **O**bject **L**inking and **E**mbedding, or **OLE**. OLE allows you to insert objects from one application (called the OLE Server) into documents created with another application (the OLE Client). OLE Client applications include Windows Write, Word for Windows, Microsoft Excel, and many others.

WinDAT is capable of functioning as an OLE Server, allowing you to embed or link sound objects into OLE-compatible documents. This feature lets you add voice or sound annotation to your text documents, spreadsheets, etc.

For more information on OLE, refer to your Windows Users Guide.

Range

Most of WinDAT's Edit and Transform functions operate on a selected area of the file, called the "range".

Record Standby

Clicking the RECORD button puts WinDAT in "Record Standby " mode, as indicated by the Record button's blinking red LED.

When in Record Standby mode, WinDAT will start recording as soon as the PLAY button is clicked.

Sample Rate

The rate at which the digital audio hardware reads the analog signal is called the "sample rate". Higher sample rates result in better audio quality, while lower sample rates result in a significantly smaller file size. For information on the sample rates supported by your sound hardware, refer to its hardware documentation.

WinDAT displays its current sample rate setting in the Setup Window .

Stereo/Mono

WinDAT can be configured to record and playback digital audio in either stereo or mono (provided your sound hardware supports stereo).

The current setting is displayed in the Setup Window .

Transform

WinDAT includes a number of functions, called "Transforms", that make it easy to work with and modify your digital audio files. The Transform functions are: Normalize , Find Peak , and Scale .

Temp Directory

WinDAT stores the contents of the Clipboard as a *.TMP file in the directory that you specify as your "Temp Directory". The Temp Directory is selected in the Setup Window .

Work Directory

WinDAT uses a default directory called the "Work Directory" for storing your digital audio files.

The Work Directory is selected in the Setup Window .

Rewind button

Clicking the REWIND button scrolls backward by either 1 second or 1/10th of the file length, whichever is smaller.

Double-clicking the REWIND button scrolls backward to the beginning of the file (0.00).

Stop button

Clicking the STOP button stops playback or recording.

Play button

Clicking the PLAY button initiates playback of the file.

Playback always starts from the current position in the file, as displayed by the Current position marker in the Range Controls area.

When WinDAT is in Record Standby mode, clicking the PLAY button initiates recording.

Since WinDAT overwrites the entire file when it records, recording always starts at position 0.00.

Record button

Clicking the RECORD button toggles WinDAT in and out of Record Standby mode.

Record Standby mode is indicated by the RECORD button's blinking red LED.

When in Record Standby mode, clicking the PLAY button initiates recording.

Fast Forward button

Clicking the FAST FORWARD button scrolls forward by either 1 second or 1/10th of the file length, whichever is smaller.

Double-clicking the FAST FORWARD button scrolls forward to the end of the file.

Play Range button

Clicking the Play Range button initiates playback of the selected range.

Start Marker

Displays the Start time of the currently-selected range in the format: **[Minutes:Seconds.Hundredths of seconds]**.

Click on the Start Marker box and drag up or down to increase or decrease the Start time.

Or...

Click anywhere on the upper half of the Start Marker box to increase the Start time by 1/100th of a second.

Or...

Click anywhere on the lower half of the Start Marker box to decrease the Start time by 1/100th of a second.

End Marker

Displays the End time of the currently-selected range in the format: **[Minutes:Seconds.Hundredths of seconds]**.

Click on the End Marker box and drag up or down to increase or decrease the End time.

Or...

Click anywhere on the upper half of the End Marker box to increase the End time by 1/100th of a second.

Or...

Click anywhere on the lower half of the End Marker box to decrease the End time by 1/100th of a second.

Mark Range button

This button lets you mark a range "on-the-fly" as you listen.

When you hear the beginning of the section you want to select, click on the Mark Range Button. Hold the button down as the file plays, and release it when you come to the end of the section.

VU Meters

The VU meters provide a graphic display of your record and playback levels.

To prevent distortion when recording, reduce your record levels if the signal reaches the top red LED.

OLE Drag-and-Drop Icon

With WinDAT's unique drag-and-drop icon, you can conveniently embed sound files into OLE Client applications (Windows Write, Word for Windows, Microsoft Excel, etc.) by simply dragging and dropping this icon at the desired point in the document.

Pause button

Pauses playback at the current location. When you press pause again it resumes playing from the same location.

WAV -> VOC

Converts the current file from the Microsoft .WAV format to the Creative Labs .VOC format.

Change Speed

Allows you to change the apparent speed of the current file by converting the sample rate.
Higher sample rates will make the file playback faster and at a higher pitch, and lower sample rates will produce slower and lower pitched playback.

File Info

Provides statistical information for the currently loaded file including; sample rate, bit resolution, length, size, format, etc.